



# **ECONOMIC AND SOCIAL COUNCIL**

## **OFFICIAL RECORDS**

**FORTY-SECOND SESSION**

**8 May - 6 June 1967**

**ANNEXES**

**UNITED NATIONS**



*Prefatory fascicle*



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**New York, 1968**

## INTRODUCTORY NOTE

The *Official Records of the Economic and Social Council* include the records of the meetings, the annexes to those records and the supplements. The annexes are printed in fascicles, by agenda item. The present volume contains the annex fascicles of the forty-second session.

\* \* \*

Symbols of United Nations documents are composed of capital letters combined with figures. Mention of such a symbol indicates a reference to a United Nations document.



## LIST OF FASCICLES\*

<i>Agenda item</i>	<i>Title</i>
3.	Development of natural resources: (a) Water desalination; (b) New sources of energy; (c) Five-year survey programme.
4.	Transport development.
5.	Application of science and technology to development: (a) Report of the Advisory Committee on the Application of Science and Technology to Development; (b) Arrangements for the transfer of operative technology to developing countries.
6.	United Nations programme in public administration.
7.	Report of the Statistical Commission.
8.	Land reform.
9.	Report of the Committee on Housing, Building and Planning.
10.	Report of the Commission for Social Development.
11.	Report of the Commission on Human Rights.
12.	Report of the Commission on the Status of Women.
13.	Advisory services in the field of human rights.
14.	Allegations regarding infringements of trade union rights.
15.	Measures taken in implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination.
16.	Question of the punishment of war criminals and of persons who have committed crimes against humanity.
17.	International control of narcotic drugs.
18.	Town twinning as a means of international co-operation.
20.	Applications and reapplications of non-governmental organizations for consultative status.
21.	Review and reappraisal of the Council's role and functions.
22.	Documentation of the Council.
23.	Implementation of the recommendations of the <i>Ad Hoc</i> Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies.
28.	Arrangements for the convening of an international conference to replace the Convention on Road Traffic and the Protocol on Road Signs and Signals, done at Geneva, 19 September 1949.
29.	Action to be taken following the flooding of the river Euphrates.

\* No fascicles were issued on agenda items 1, 2, 25, 26 and 27 as there were no documents to be annexed. For the documents and the summary records of the meetings pertaining to these items, see *Official Records of the Economic and Social Council, Forty-second Session*, prefatory fascicle, "Check list of documents" and "Contents". The consideration of agenda items 19 (Transfer to the United Nations of the responsibilities and assets of the International Relief Union), 23 (Implementation of the recommendations of the *Ad Hoc* Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies) and 24 (Work programme of the United Nations in the economic, social and human rights fields and its budgetary requirements) has been postponed to the forty-third session.





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 3: Development of natural resources: \*

- (a) Water desalination;
- (b) New sources of energy;
- (c) Five-year survey programme

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## DOCUMENT E/4302 \*

## Implementation of a five-year survey programme for the development of natural resources

## Report of the Secretary-General

[Original text: English]  
[20 March 1967]

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## PREFACE

1. This report is submitted to the Economic and Social Council in conformity with its resolution 1127 (XLI) of 26 July 1966, in which the Council requested the Secretary-General "to make a full and final report ... on the implementation of a long-term survey programme in the field of natural resources".

2. The report is divided into four chapters. First, a brief review is made of the various stages through which the five-year survey programme has been going since its presentation a year ago. The second chapter deals with the work of three groups of qualified consultants who were entrusted with the task of preparing an objective study of the programme proposals, and with their recommendations. Problems raised by the financing of the programme are examined in chapter III, and a chapter called "Summary and conclusions" terminates the report. Annexes I, II and III give the full text of the reports prepared independently by the three groups of consultants, as well as the lists of the members of those groups and representatives attending their meetings which are appended to each of the annexes.

## I. A brief historical review

3. It may be recalled that the proposal for a five-year survey programme for natural resources development was put before the Council at its fortieth session by the Secretary-General in his periodic report on development of non-agricultural resources (E/4132,<sup>1</sup> chap. V). It was conceived as an important contribution in the second half of the United Nations Development Decade for strengthening the economic basis of the developing countries. The motivation and thinking were further underlined in a statement before the Council, on 28 February 1966, by the Under-Secretary for Economic and Social Affairs.<sup>2</sup> The proposed programme would basically consist of nine surveys — four related to minerals, two to water resources and three to energy — as outlined in the two documents.

4. The Council, in its resolution 1113 (XL) of 7 March 1966, welcomed this initiative and, besides recommending consultation with outside experts, requested the Secretary-General to consult the Advisory Committee on the Application of Science and Technology to Development at its fifth session and to obtain views of Governments on the programme and the possibilities of financing it. The programme was also discussed in the Administrative Committee on Co-ordination (ACC) and, since several

United Nations bodies were interested in the water surveys, in the ACC Sub-Committee on Water Resources Development.

5. In conformity with the above resolution, the Secretary-General submitted a further report (E/4186)<sup>3</sup> to the Council at its forty-first session; it summarized the results of his consultations, with reference to attached statements by a group of six eminent experts and by the Advisory Committee, and included estimates of costs and possible methods of financing. The report was sent with a *note verbale* to Governments on 29 April 1966. While replies from Member States were not received in time for reproduction before the Council session, those received by 24 August 1966 were reproduced in a document of that date.<sup>4</sup> As a result of its debates, the Council unanimously adopted its resolution 1127 (XLI) in which, *inter alia*, it requested the Secretary-General (a) to consult further Governments for views in addition to those in response to his *note verbale*, (b) to consult the regional economic commissions, the specialized agencies concerned, the International Atomic Energy Agency (IAEA) and other bodies, and (c) to consult the Advisory Committee on the Application of Science and Technology to Development at its sixth session as well as (d) to establish three groups of consultants and (e) to examine questions of financing. In addition, the Council also recommended that the General Assembly note the progress and endorse the continuing study by the Council, that an interim report be presented to the resumed forty-first session of the Council, and requested the Secretary-General "to make a full and final report ... on the implementation of a long-term survey programme in the field of natural resources".

6. As recommended by the Council, the General Assembly, which had available an additional note by the Secretary-General,<sup>5</sup> in its resolution 2173 (XXI) of 6 December 1966, noted with satisfaction the progress made and endorsed "the continuing study by the Economic and Social Council of the means of implementing a five-year survey programme for the development of natural resources, intended to strengthen the economic base and the economic independence of the developing countries". In the same resolution, the General Assembly also invited the Secretary-General "to study the technical and financial implications of carrying out surveys of petroleum and natural gas resources in the developing countries and to

<sup>1</sup> *Official Records of the Economic and Social Council, Fortieth Session, Annexes*, agenda item 7.

<sup>2</sup> Document E/L.1107.

<sup>3</sup> *Official Records of the Economic and Social Council, Forty-first Session, Annexes*, agenda item 11.

<sup>4</sup> Document E/4186/Add.1.

<sup>5</sup> *Official Records of the General Assembly, Twenty-first Session, Annexes*, agenda item 94, document A/6460.

submit specific proposals on this subject to the Economic and Social Council". The debates which took place in the Second Committee of the Assembly made clear, however, that the majority of the delegates did not intend this study to affect the timing and organization of the five-year programme, and that it would be considered by the Council at a later session as appropriate.

7. At its resumed forty-first session, the Council had before it the Secretary-General's interim report (E/4281)<sup>6</sup> and the replies from Member States in response to the Secretary-General's *notes verbales* of 29 April and 31 August 1966.<sup>7</sup> The main purpose of the interim report was to inform the Council fully on the results of the consultations undertaken, as requested, with the regional economic commissions, the specialized agencies and the Advisory Committee on the Application of Science and Technology to Development. In a brief Council discussion,<sup>8</sup> representatives observed that the comments of the Advisory Committee were very helpful and should be given full weight in the further study of the proposed programme. Representatives also welcomed the Secretary-General's intention to make full use of the experience of the organizations of the United Nations family in the planning and implementation of the programme. The Council took note of the interim report with appreciation.

## II. A reformulated programme

8. Acting on Council resolution 1127 (XLI), operative paragraph 2 (d), quoted in part below, the Secretary-General established: "three small groups of qualified consultants in the fields of minerals, water resources and energy — within which developing and developed countries would be adequately represented — which would be financed by the present regular budget and offers of experts and other forms of technical assistance by Member States and would be entrusted with the task of preparing an objective study on: (i) The parameters and scope of the objectives of the surveys; (ii) Definition and criteria; (iii) Detailed planning as to organization; (iv) A more precise assessment of the time schedule and cost-benefit".

### CONSULTANTS' MEETINGS AND METHODS OF WORK

9. A number of Governments of industrialized countries which had expressed their willingness to procure specialists at their own expense for the groups mentioned above were approached and responded generously. Seven among the specialists of developing countries who were invited, accepted to participate in the groups.

#### *Members of groups of consultants*

##### *Minerals*

Mr. Ancion, Belgium; Mr. Gumucio, Bolivia; Mr. Legoux, France; Mr. McKelvey, United States of America; Mr. Shaw, United Kingdom; Mr. Snajdr, Czechoslovakia; Mr. Zafimahova, Madagascar.

<sup>6</sup> *Official Records of the Economic and Social Council, Resumed Forty-first Session, Annexes, agenda item 3.*

<sup>7</sup> Document E/4186/Add.1 and 2.

<sup>8</sup> See *Official Records of the Economic and Social Council, Resumed Forty-first Session, 1451st meeting.*

##### *Water resources*

Mr. Anand, India; Mr. Cano, Argentina; Mr. Collier, Canada; Mr. Denk, Austria; Mr. Jamme, France; Mr. Mageed, Sudan; Mr. Mostertman, Netherlands; Mr. O'Brien, United States of America; Mr. Snajdr, Czechoslovakia.

##### *Energy*

Mr. Alpan, Turkey; Mr. Gejrot, Sweden; Mr. Hayashida, Japan; Mr. Lamassiaude, France; Mr. McKelvey, United States of America; Mr. Marchetti, Italy assisted by Mr. Cataldi and Mr. Facca; Mr. Sáez, Chile; Mr. Snajdr, Czechoslovakia.

In addition, in response to the invitation of the Secretary-General to the regional economic commission secretariats and interested specialized agencies, the Economic Commission for Africa (ECA), the Economic Commission for Latin America (ECLA), the United Nations Educational, Scientific and Cultural Organization (UNESCO) and IAEA sent representatives to all three meetings, and the Food and Agriculture Organization of the United Nations (FAO), the World Health Organization (WHO) and the World Meteorological Organization (WMO) to the meetings of the group of consultants dealing with water resources. To all of them the Secretary-General wishes to express his gratitude for the excellent work which resulted from their co-operation.<sup>9</sup> He would also like to take this opportunity to pay a tribute to the memory of Dr. Albert Schaafsma of the Netherlands, an eminent physicist who suffered a heart attack while speaking at the opening meeting of the energy group and died a few minutes later.

10. The meetings took place at Headquarters, New York, from 16 to 24 January 1967 in the case of the group of consultants in the field of minerals, from 26 January to 4 February of the group of consultants in the field of water resources and from 6 to 14 February of the group of consultants in the field of energy. The meetings were serviced by the Director and staff of the Resources and Transport Division of the Department of Economic and Social Affairs.

11. Each group had at its disposal as background documents the previous resolutions and reports bearing on the five-year survey programme, including the comments of the Advisory Committee on the Application of Science and Technology to Development, as well as working papers specially prepared by the Resources and Transport Division. The documentation also included extracts of comments and observations made during the debates of the Council and in the Governments' answers to the Secretary-General's *note verbale* pertaining to particular surveys. In addition, the consultants were informed on activities of United Nations bodies in relevant fields.

12. The Secretary-General's representative made clear to each group that it was expected to present a report entirely on its own responsibility in its particular field; it was free to choose its method of work in the light of the assignment laid down in the Council resolution and to

<sup>9</sup> The lists of consultants and other participants of the meetings are appended to annexes I to III below.

make whatever recommendations the group thought best in its field of competence. The report of each group of consultants — unanimous in each case — is presented in full in annexes I, II and III respectively.

#### CONSOLIDATED APPROACH

13. The group of consultants in the field of minerals discussed at length the four mineral surveys proposed in the five-year programme (see annex I below), covering respectively world iron ore resources, important non-ferrous metals, development and rehabilitation of selected mines in developing countries, and off-shore mineral potential in developing countries. The consultants agreed to the suggestions that the large iron ore survey, previously envisaged, should be now executed under a more restricted scope and budget in the form of a revision and updating of the United Nations 1954 survey in this field. They recommended, however, that fertilizer minerals be added to those submitted to their consideration. While retaining the substance of the mineral surveys originally proposed by the Secretary-General, the group of consultants concluded and recommended that these surveys be consolidated into a single whole based on a geographical-geological rather than a topical approach. In their report, the consultants stressed that the object of the approach they proposed and elaborated was the identification of problems, needs and opportunities. They were of the opinion that such development-oriented analysis — “regional mineral resources analysis” as they call it — had been neglected in many developing areas, although the findings of such analysis would constitute an important basis for development schemes which might be retained by governmental and other organizations. Elimination of the need for separate administrative staff and consultants for each of the four previously proposed surveys, and reduced effort on some elements such as those relating to offshore minerals, would make it possible within the limits of a budget comparable to the one previously envisaged, to expand the scope of the venture which would yield economic benefits many times its cost.

14. The group of consultants in the field of water resources (see annex II below) similarly recommended the combination under unified direction and partial unification of the two surveys earlier proposed in this field, the survey of water needs and water resources in potentially water-short developing countries and the survey of the potential for development of international rivers. The consultants took into full account the complexity of the problems involved, activities already under way, comments made by various bodies, and the need for close co-ordination drawing on available information and expertise. The programme recommended and elaborated in some detail by them, broadened to some extent the scope but essentially incorporated what was intended in the two surveys. Again the focus was on a development-oriented programme, for the direct benefit of the developing countries and to provide a sound basis for further action by the countries themselves and by assistance programmes and organizations. As drawn up by the consultants, this global programme would consist of various interconnected stages. For the water-short areas and international river basins concerned, the end product may be characterized

as pre-investment, stopping just short of the type of work in Special Fund projects but potentially generating many such projects in an orderly manner.

15. In its recommendations, the group of consultants in the field of energy (see annex III below) re-emphasized the crucial role of energy development in general and of electrification in particular as pacemakers for economic development. Feeling, like some earlier commentators, that the three previously proposed surveys — of geothermal energy resources, of oil shale resources and of small-scale power, respectively — in the aggregate were too narrow, the consultants recommended a consolidated programme broadened in scope and deepened in purpose but incorporating the essential elements of the previous proposals in order to give special emphasis to hitherto neglected or little understood energy resources and problems. The broadened programme of energy supply analysis included substantial background studies which should consider all forms of fuels and energy for which there was a potential economic use within the country, including oil, gas, coal and lignite where appropriate. As elaborated in annex III, this programme also focused on analysis, interpretation and recommendations, with emphasis on identification of needs, problems and opportunities in energy resource development and utilization and practical recommendations for development actions.

#### ORGANIZATION

16. As recommended by the three groups of consultants, each of the consolidated parts of the programme would be headed by a manager in charge of a functional unit.<sup>10</sup> While the mineral, water resources and energy units would have their own identities, they should come under a unified direction in order to ensure close liaison and co-operation between them; moreover, unified criteria would have to be decided to allow comparisons and transfer of experience on a world-wide basis. It was recommended by the three groups that such a unified direction be provided by the Resources and Transport Division of the United Nations Secretariat.

17. The closest possible co-operation and liaison — as repeatedly emphasized by the Secretary-General and stressed in the reports of the consultants — with the other organizations of the United Nations family was envisaged and would be actively enlisted. Reference has been made to the consultations already undertaken with the regional economic commissions, the specialized agencies and IAEA. The consultations would be extended, and full advantage taken of the specialized knowledge and the existing facilities of the commissions and agencies. It was assumed that the co-operation of the regional economic commissions, in particular, would play an important role in the execution of the programmes, which would be co-ordinated with other relevant activities of international and national organizations. Last but not least, the co-operation of the agencies and technical and administrative personnel

<sup>10</sup> The requirements of deputy managers, consultants, experts for Headquarters and field work, clerical staff and other facilities are set out in detail in annexes I to III.

within the developing countries would be of fundamental importance to the success of the programme.

18. As to the precise geographical scope of the three parts of the programme, it was the opinion of the consultants that it could be evolved only gradually as the operations progress, through research and consultation between the Secretariat and the Governments of interested developing countries. Similarly, the actual expenditures in the countries finally retained, after the countries contacted in this matter had concurred, would obviously vary from country to country depending on the problems with which they were faced.

#### COST ESTIMATES

19. Cost estimates were worked out by the groups of consultants for each part of the programme to the extent and detail deemed possible and reasonable at the present stage. They amounted to: \$4,000,000 for minerals; \$3,500,000 for water resources and \$3,900,000 for energy, giving a total of \$11,400,000 for the five-year survey programme as a whole. These totals excluded incidental expenditure by the developing countries co-operating with the programme, mainly in the form of the time of their relevant staff in the country rather than cash, and were without deduction for such assistance in cash and/or kind as might be made available by Governments and others. The consultants found that they had no means of evaluating the amount of possible assistance from many Governments and, therefore, were unable to take account of such assistance.

20. The total of \$11.4 million was regarded as essential for an effective programme of the scope proposed. The consultants pointed out that much more funds could be utilized effectively over the period proposed, but they had settled on the estimates as practical and reasonable to achieve the objectives and scope spelled out by them. They believed that the programme would provide a basis for meaningful development actions in the entire field of non-agricultural resources and that, since resource exploration analysis was a never-ending task, the proposed programme was only the beginning of what should be a continuing effort. In the same vein, the consultants urged that the United Nations, and others concerned with economic development, anticipate the need for expeditious follow-up of the opportunities the programme would identify as it moved along.

to exp 21. The consultants had found it difficult or impossible to quantify the economic value of the range of benefits but subjected them to be many times the cost, including of substantial savings through increased efficiency in the use of both funds and manpower in the Special Fund component of the United Nations Development Programme (UNDP) and the development-oriented programmes of other UN organizations as well as the developing countries themselves.

### III. Problem of financing

22. It is the opinion of the Secretary-General that the "further elaboration" considered necessary by the Council in its resolution 1127 (XLI) "as a basis for approval of a

specific programme" has now been completed. The Secretary-General is satisfied with the reformulation suggested by the three groups of consultants as regards the purposes and the scope of the five-year survey programme. It is his feeling that the integrated approach they proposed for the work to be done in each particular field — minerals, water and energy — greatly improves the initial proposal. He shares also the opinion of the consultants that, to achieve the objectives of the programme, the cost estimates now presented to the Council are practical and reasonable. However, the problem of how to make available the financial and other resources for the implementation of the five-year programme still remains.

23. The Council will recall its resolutions 1113 (XL) and 1127 (XLI) in which it requested the Secretary-General to undertake certain steps with a view to providing the Council with information on the ways and means the programme might be financed. Thus, in operative paragraph 6 of Council resolution 1113 (XL), the Secretary-General was asked to seek Governments' views on "the possibilities of financing it [the programme], including, as appropriate, an approach to Governments and organizations which are in a position to make available at their expense, experts, consultants and other resources", and to give detailed information to the Council about possible methods of financing. In operative paragraph 2 (e) of resolution 1127 (XLI), the Council requested the Secretary-General "to examine: (i) the means for organizing and financing the preliminary stages of the proposed new work from the resources of the Secretariat; (ii) all other appropriate means of financing a programme as approved by the Council".

24. The Secretary-General would like to point out that the programme as reformulated by the groups of consultants is conceived as a unified whole without distinct separable "preliminary stages" making sense in themselves operationally and financially. It would therefore appear necessary to view this programme in terms of a total commitment to be spread over five years, rather than one divided into preliminary and subsequent phases each lending themselves to being financed and implemented independently.

#### RESOURCES OF THE SECRETARIAT

25. As already pointed out in earlier reports, the Secretariat is seriously short of funds and staff for the approved and continuing priority programme of research and operational activities in the field of natural resources development. The existing facilities are hard pressed. In addition to being substantively responsible for some eighty approved UNDP (Special Fund) component projects as well as providing support for considerable programmes of technical assistance, the Resources and Transport Division is necessarily engaged in considerable preparatory work for Special Fund projects which still have to receive approval and for which no overhead provision is made. It may also be recalled, as another indicator of the pressure, that in the field of natural resources the ratio between Headquarters and field expenditures is about one to nine, as compared to about one to three in other subject fields. Hence, it would be



unrealistic to envisage that the existing staff resources could materially contribute towards any new programmes of work without detriment to current responsibilities. Consequently, it would be necessary to provide additional staff to the Division to undertake the work under the proposed programme.

26. Whether any part, small or large, of all the required resources for the proposed programme should be financed through the regular budget of the United Nations is a matter for the governing bodies to decide, in particular, the General Assembly on the recommendation of the Council.

#### VOLUNTARY CONTRIBUTIONS BY GOVERNMENTS

27. In his further report to the Council's forty-first session (E/4186, para. 22), the Secretary-General expressed the hope that the possible methods of financing would be clarified through the replies of Governments, particularly those of the industrialized countries, to his *note verbale*, and added:

"Clearly, much of the feasibility of carrying out the five-year programme, as a significant contribution to the United Nations Development Decade and to an orderly and systematic development of natural resources, depends on the response of Governments, with an indication not only of general interest but also — by those in a position to do so — of concrete support in the form of specific financial contributions, experts, consultants and other resources."

28. The replies of Governments<sup>11</sup> as well as statements made in the Council and the General Assembly imply some generous offers "in kind", notably of experts' services and other facilities. However, they are not very concrete and this may have been due to the lack of elaboration, at the time, of the scope and organization of the programme.

29. Now that the scope and organization of the programme have been clarified, it may be worth while to note that Governments' contributions "in kind" could play an important role in the implementation of the programme. Services of professional technical personnel account for more than one half of the cost estimates presented by the consultants, or 56 per cent to be exact, for their salaries taken at standardized *pro forma* rates but excluding travel and *per diem* costs. In the combined programme, this comprises ninety-two experts of various technical specialities (including managers and deputy managers) serving variously from nineteen to sixty months, as well as 130 man-months of consultant services and some local experts. Governments' contributions in kind might also possibly cover some other major items, such as parts of bibliographic research, laboratory analysis, translation and printing. In addition, although the costing has not been made on the basis of commercial subcontracting, certain parts listed under experts' services might be handled under contract such as may be offered by Governments on a non-reimbursable basis.

#### OTHER APPROPRIATE MEANS

30. When referring to "all other appropriate means" some members of the Council may have in mind the resources of the UNDP. Although the five-year survey programme represents a pre-pre-investment venture which should be of great value to the developing countries in their development efforts, it appears, however, that financing of this programme would not fall within the established UNDP terms of reference; UNDP funds have so far been limited to the financing of projects requested by individual countries or groups of countries. Moreover, in various debates, including those directly concerned with the five-year survey programme, references have been made to the financial stringency also in UNDP and the fact that voluntary contributions in recent years have fallen short of UNDP goals. It may be recalled in this connexion that in its debate resulting in resolution 2173 (XXI), the General Assembly decided not to include a reference to UNDP.

31. Finally, now that the objectives and the methods of operation of the programme have been clearly defined by the groups of consultants, it might be worth while to systematically approach foundations and other institutions which might be willing to participate in the expenditures involved.

#### IV. Summary and conclusions

32. The proposed five-year survey programme for the development of natural resources has gone through several stages now culminating in the reports of the three groups of consultants briefly analysed in chapter II above and reproduced in full in annexes I to III below. As now spelt out with regard to scope, plans, organization and execution, the Secretary-General is satisfied that the programme does not duplicate what others are doing or intended to do, and that it will complement and give a boost to various programmes of the United Nations organizations.

33. While the essential concept of the original programme has been retained, its reformulation and streamlining by the groups of consultants greatly improve its effectiveness. In the process of their work, the consultants had taken into due account the comments made by Governments and members of the United Nations family, including the views expressed by the Advisory Committee on the Application of Science and Technology to Development.

34. The new approach concentrates on the identification and analysis of needs and of existing and potential opportunities for development of mineral, water and energy resources in developing countries. The programme is conceived as a dovetailing whole based on a few criteria, and it was the consultants' advice that it needs and need a unified direction provided by the Resource Transport Division in close co-operation in partnership with the regional economic commissions and with interested organizations of the United Nations family.

35. It is the considered opinion of the Secretary-General that, in its course and as a result of it, the programme will greatly assist Governments of developing countries as

<sup>11</sup> Documents E/4186/Add.1 and 2.



well as the United Nations bodies in their efforts to enhance development programmes through various means, including the Special Fund component of the UNDP.

36. The crucial question is now the financing of the \$11.4 million required to implement the programme over five years. As reported above, the Secretary-General has provided observations on financing in terms of the United Nations regular budget, UNDP, voluntary contributions by Governments, foundations and other organizations. The solution to this question rests principally, however, with the Member States themselves and without further guidance from the Council the Secretary-General is unable to formulate a precise financing plan for its consideration and subsequent approval by the General Assembly.

37. In this connexion, it may be recalled that the General Assembly, in its resolution 2173 (XXI), endorsed the continuing study by the Council of the means of implementing the five-year programme. It is also pertinent to recall the statement by the Under-Secretary for Economic and Social Affairs, when originally introducing the programme, that:

"... the Economic and Social Council must, at this juncture, seriously consider giving its endorsement, its encouragement and its support to a programme of this nature and closely supervise its execution: in short, it must agree to assume responsibility for it."<sup>12</sup>

38. The Council may therefore wish as an immediate step to establish at the inter-governmental level a committee to supervise the five-year survey programme and, in the first instance, to study further the financing of the programme from various sources and to submit at an early date a report thereon. The Secretary-General, in turn, will be ready to implement the programme as soon as means are put at his disposal.

## ANNEXES

### ANNEX I

#### Report of the group of consultants in the field of minerals

##### INTRODUCTION

1. Acting on Council resolution 1127 (XLI), the Secretary-General enlisted from Governments of Member States a group of consultants to advise him on the four mineral projects of the proposed five-year survey programme for natural resources development. Together with representatives from ECA, ECLA, UNESCO, IAEA, and the staff of the Resources and Transport Division, they met in New York from 16 to 24 January.<sup>a</sup>

2. As background documents, the consultants had the Secretary-General's programme proposals (E/4132 and E/4281), the report of the earlier group of experts (E/4186), the comments on the proposed programme by member countries,<sup>b</sup> the report of the working group on natural resources of the Advisory Committee on the Application of Science and Technology to Development,<sup>c</sup> the pertinent resolutions of the Economic and Social Council (resolutions 1113 (XL) and 1127 (XLI)), a note by the Secretary-General on the proposed programme and functions to be performed by the *ad hoc* group of

consultants,<sup>d</sup> and detailed descriptions of the proposed surveys prepared as working papers by the staff of the Resources and Transport Division of the Department of Economic and Social Affairs.

#### I. PROGRAMME PROPOSALS UNDER REVIEW

3. The projects under review are as follows:

(a) Survey of world iron ore resources: estimated cost \$861,300. Since this project was proposed, the Secretary-General has decided to proceed with a revision of the 1954 survey, with a greatly restricted scope and budget;

(b) Survey of important non-ferrous metals: estimated cost \$1,465,800. Metals proposed include silver, copper, lead, zinc and tin. The previous group of experts recommended that ferro-alloy metals be added also;

(c) Survey of development and rehabilitation of selected mines in developing countries: estimated cost \$1,925,220;

(d) Survey of off-shore mineral potential in developing countries: estimated cost \$417,175.

#### II. DISCUSSION

4. The consultants fully concur in previous expressions of the Economic and Social Council, the Advisory Committee on the Application of Science and Technology to Development and other bodies, concerning the need for intensified efforts to explore and develop mineral resources for the benefit of developing countries. The proposed surveys would aid in this objective by providing data on the extent of world resources of several important minerals, by identifying promising possibilities for discovery and development of mineral resources and by providing a wider systematic basis for development action.

5. However, since the surveys are conceived on a topical or subject basis rather than on a geographical basis, they apply only indirectly to the development problem (which, after all, is mainly a country or regional problem); they would benefit only some of the developing countries and cover only some of the important minerals, and they would not provide the wide basis needed for planning the development programme of the United Nations and other organizations.

6. In its comments on the five-year surveys, the Advisory Committee on the Application of Science and Technology to Development also expressed some doubt as to whether the proposed surveys would be of much value to the developing countries, and it stressed the need for more field studies and more support for training, institutional development and other steps needed for long-term progress. The consultants agree that these activities should receive the main emphasis in resource development, but point out that they make up the bulk of the much larger United Nations Development Programme already in progress. They agree with the Secretary-General that the first needs in intensified efforts in the field of non-agricultural resources are for synthesis and analysis of present knowledge, which would serve to highlight development opportunities that already exist and to provide a better basis for planning additional field studies.

7. As indicated below, the consultants are recommending that substantial elements of the surveys be combined into a single programme oriented to emphasize regional mineral resource analysis<sup>e</sup> as a basis for identifying opportunities and needs for resource development. To show the background for this recommendation,

<sup>a</sup> Official Records of the General Assembly, Twenty-first Session, Annexes, agenda item 94, document A/6460.

<sup>e</sup> By regional mineral resource analysis, the consultants, here and in the following text, mean compilation and analysis of information, intended for economic development action rather than a mere physical or scientific inventory. It will be designed on a geographic basis, determined primarily by economic and geologic characteristics, and approached in the first instance on a country basis. The word "regional" therefore, used in this economic-geographic-geologic sense, does not have the same meaning in the designations of some United Nations bodies. Nevertheless, the consultants assume that the co-operation of the regional economic commissions will play an important role in the execution of the programme.

<sup>12</sup> Document E/L.1107.

<sup>a</sup> For the list of consultants, see appendix.

<sup>b</sup> Documents E/4186/Add.1 and 2.

<sup>c</sup> See document E/AC.52/L.27, annex V.

reached after considerable debate about the merits of the individual surveys, it may be useful to record some of their observations and conclusions.

8. Reservations concerning the merits of the proposed survey of world iron ore resources had already been expressed during the debate at the forty-first session of the Economic and Social Council, by the Advisory Committee on the Application of Science and Technology to Development, and by the Group of Experts convened in April 1966. It was apparently felt that a revision and updating of the United Nations 1954 report on a *Survey of World Iron Ore Resources: Occurrence, Appraisal and Use*<sup>1</sup> (which itself cost around \$80,000), would suffice, and the Secretary-General accordingly commissioned a group of eight experts to proceed, with a budget of about \$100,000 from available funds. The consultants concurred in the wisdom of this decision, feeling that the project should proceed as now planned, and concluded that the proposal for an enlarged survey be dropped.

9. The consultants pointed out the critical importance of fertilizer minerals to the developing countries and concluded that among the minerals important to developing countries, none was of greater concern. In the course of their discussion of the merits of individual surveys, they agreed, therefore, that a survey of fertilizer minerals should be substituted for the proposed enlarged survey of world iron ore resources.

10. With regard to the proposed assessment of important non-ferrous metals, the consultants agreed that such information would be useful for many purposes, but they pointed out (a) that the metals listed (silver, copper, lead, zinc, and tin) did not include all the non-ferrous metals important in the world markets and did not begin to cover the minerals important to the development of the internal economy of developing countries; (b) that two of the metals — lead and zinc — are not now critical in the world supply situation; (c) that much information on both the reserves and distribution of several of the metals is available in reports already published; (d) that many developing countries do not have known deposits of these metals and hence would not be aided by the surveys; (e) and that the "field work" proposed, while costly in its total, could hardly be adequate for field appraisal of previously unassessed deposits (the field trips, were, in fact, intended only to give the experts opportunity to obtain unpublished information from local sources, to select areas favourable for further exploration in the light of available information, and to give them a feel for local problems). They did not reach a conclusion as to the scope of the non-ferrous metals survey, but while some felt that the surveys, as conceived, would be of little value to the developing countries, they probably would have accepted them if carried out in a scope and manner similar to the iron ore compilation now in progress. All the consultants, of course, would favour much more extensive field work on those and other minerals if funds were available.

11. The survey of development and rehabilitation of selected mines in developing countries was considered to have the potential for high local impact but the consultants were conscious that legal difficulties might arise and they were also concerned over the impracticability of undertaking, within the budget proposed, the field and laboratory work that would be required to prove that an abandoned or marginal mine or an undeveloped prospect could be made workable. They agreed that preparation and publication of an inventory of such deposits in the developing countries would be extremely useful, and that some field visits and limited sampling would be helpful in its preparation. But they considered that in most cases it would not be desirable to attempt at this stage the more extensive field and laboratory studies that would be required to test definitively the merits of individual prospects.

12. Although the consultants recognize the growing importance of sub-sea mining, they were critical of the plan and budget for the

proposed survey of off-shore mineral potential in developing countries and felt it would accomplish little that could not be more easily gained from available sources. They agreed, however, that in the regional mineral resource analysis they were about to recommend, prospects for off-shore resources should be identified where available information suggests their presence.

### III. RECOMMENDATIONS

13. Taking into account the strengths and weaknesses of the proposed surveys, and recalling also the conclusion of the Advisory Committee on the Application of Science and Technology to Development, namely that the conception of a five-year survey programme on natural resources be retained, but that the methods be reconsidered, with a view to adapting the activities and concentrating available funds and other resources on surveys that will be of greatest practical assistance to developing countries (see E/4281), the consultants concluded that the minerals surveys should be consolidated into a single programme, oriented to place greater emphasis on regional mineral resource analysis<sup>2</sup> as a base for development action. The consolidated programme, described more fully below, would have as its prime objective the identification of existing and potential opportunities for mineral resource exploration and development in the developing countries — opportunities that might be followed up by governmental or private organizations, or by United Nations organizations through various means, including projects of the Special Fund component of the UNDP.

14. The task of gathering and synthesizing the data required for resource analysis is in itself a large one, and to accomplish it with the funds proposed would require the volunteered support of many other organizations. The consultants believe, however, that such support could be enlisted from government surveys and inter-governmental bodies, from national or international scientific societies or institutions, and from private organizations. The consultants stress that it is not compilation of data that is the object of the studies proposed, but rather the identification of problems, needs and opportunities.

15. Resource exploration analysis is a never-ending task, for knowledge of the extent of usable resources changes continually with the advance of knowledge of how to find and use them. The consultants believe, therefore, that the programme proposed is only the beginning of what should be a continuing effort. They believe that the United Nations should aim at a leadership role in mineral resource exploration and development, stimulating and co-ordinating efforts of other organizations, and they suggest that the resource analysis programme proposed might provide the technical foundation for such a leadership role within the framework of the Resources and Transport Division. Some of the consultants recommend also that the United Nations consider expanding the programme of resource analysis to include fuels and water, but the proposal here is restricted to minerals.

16. The main elements of the proposed programme for regional mineral resource analysis are as follows.

### IV. REGIONAL MINERAL RESOURCE ANALYSIS

#### *The need*

17. Economic development is basically a local or regional problem that must be approached on a country or regional basis. Its progress depends upon the advance of diverse activities and on the solution to diverse problems, but at its heart lies the constructive use the people are able to make of their internal resources. Among these resources, minerals play a critical role in economic development, for if they are suitable for export they are an important source of foreign exchange and an early means of capital formation; and in the internal economy they provide materials essential for manufacturing, for modern transportation and communication, for construction of buildings and other engineering works, and for modernization of agriculture.

<sup>1</sup> United Nations publication, Sales No. : 54.II.D.5.

<sup>2</sup> See foot-note (e) above for definition of "regional mineral resource analysis".

18. Many kinds of activities are involved in the development of non-agricultural resources, and many of them can and should be pursued simultaneously. Of fundamental importance to the progress of economic development, however, is the analysis of the character of the mineral resource base, the identification of opportunities for discovery and production of materials useful either in the local economy or for export, recognition of internal needs for resources and identification of the opportunities for the development of new industries based on indigenous mineral resources.

19. The consultants are of the opinion that development-oriented mineral resource analysis has been neglected in many developing countries and has not been applied as the important base it can and should be for development decisions. Failure in this respect has led to misuse of scarce manpower and capital, and it may be multiplied in the future in the absence of a systematic approach designed to assist the developing countries and those in a position to help them. Experience indicates that there is a definite need for an outside impartial organization to act as a catalyst in this matter and the consultants consider that the United Nations is in a unique position to act as initiator and galvanizer through the type of programme spelled out below.

#### *Purpose and scope*

20. To fill the indicated need, it is proposed, therefore, to undertake a wide-ranging programme of mineral resource analysis of the geographic areas of the world that include the developing countries (see foot-note (e) above). The purpose of the programme, planned for completion in its initial phase in five years, would be: (a) to compile, with the aid of co-operating organizations, existing information on the extent and distribution of the non-fuel mineral resources of the main sub-regions of the continents, defined on the basis of their geologic, geographic, and economic unity; (b) through analysis of existing geological data and other pertinent information, identify ground favourable for new discoveries and other opportunities for expanded development of mineral resources; (c) with the aid of co-operating government and United Nations organizations, identify those minerals for which there is internal need but not yet adequate production; (d) analyse opportunities for export of raw and refined minerals to foreign markets; and (e) establish liaison with governmental organizations and other United Nations organizations, particularly the United Nations Industrial Development Organization, to help identify opportunities for internal development of new mineral-based industries.

21. The spectrum of resources included would be determined by the opportunities in each region and would vary from one to another. It would include significant occurrences of:

(a) The metals, including not only those named in the previously proposed surveys but others (such as bismuth, molybdenum, manganese, mercury, antimony, gold and others) that could be of particular interest within the region considered, either for region needs or for export;

(b) The fertilizer minerals;

(c) Other metallic and non-metallic minerals useful in the chemical industries, for ceramics, for construction and other purposes.

22. Identification of opportunities to open new prospects and to reopen abandoned mines by the introduction of technological improvements, to increase production in those still operating and to bring into production deposits not yet exploited would be important objectives of the work, although in this initial phase they would not be carried to the stage of extensive field examination and sampling. The technical or economic reasons for which the mines were abandoned would be determined (for example, the grade or chemical composition of the ore, the means of mining and transport, water inflows, weakness of the market, shortage of financing, and so on), and an attempt would be made to establish whether or not they still exist.

23. Efforts would also be made to identify favourable ground in off-shore areas, taking into account existing information on the

nature of the shelf and the geology and mineral deposits of adjacent coastal regions.

#### *Organization*

24. The problem should be attacked by a full-time staff of experts in the several disciplines necessary for comprehensive resource analysis, with provision, of course, for specialists on a part-time basis, as needed. The programme should be headed by a project manager and deputy, with working project leaders for each of the geographic regions named. The consultants hope that the experts enlisted will be qualified to plan their programme, eliminating the necessity for heavy overhead.

25. Visits to the field and to co-operating organizations by the full-time staff would be essential, but investigative field work would not compose a large part of the work. The teams should, of course, work closely with other United Nations organizations, including the projects of the Special Fund component of the UNDP, the regional economic commissions, the agencies and bilateral programmes, but under the direction of headquarters staff.

26. The gathering and compilation of data is, of course, the base from which the analysis must begin. It is thus an extremely important part of the programme, but it is not to be regarded as the end in itself or, in fact, as the principal activity of the staff. Instead, the consultants urge that the United Nations enlist the co-operation of the local and international scientific organizations, both governmental and private, in preparing reports on the extent and distribution of mineral deposits of local and regional interest; that it aid in the publication of such reports where other means of support are not available; that it should not consider it a duty to republish data already satisfactorily published elsewhere and that it should not undertake studies in areas or countries already adequately covered by recent investigations; and that the staff devote its prime attention to the analysis of the data.

27. As the final product of the programme, the consultants envisage reports summarizing the distribution and extent of minerals of local and regional interest via maps and tabulations, capped by the identification of opportunities and needs for exploration and development based on the interpretation of available data.

#### *Cost and time schedule*

28. It should be understood that an analysis of this type can never be completed, for knowledge of resources, technology permitting their use, and need for them change continually. To be most helpful, such analyses should be based on extensive geologic surveys, mapping and exploration. But it is not always necessary to await the acquisition of new knowledge to make important contributions to planning for exploration and development, and the analysis will contribute effectively to planning for the surveys and other field activities which will eventually lead to fuller knowledge of the resource base. Because there is an urgent need for resource analysis now to guide economic development, it is proposed not to launch an exhaustive study that would take a large staff years to complete, but instead to obtain quickly the salient features by use of a small staff completing its initial analysis in five years.

29. Accordingly, the budget proposed is essentially that for the sum of the United Nations share proposed for the consolidated minerals survey — about \$4 million for the five year period. The expanded scope of the project will, of course, necessarily reduce the effort on the individual activities previously proposed, and, as already indicated, reduced effort is desirable in some directions — the off-shore survey, for example — for other reasons. Additional capacity to meet the enlarged scope of the programme will be gained also by the elimination of the need for administrative staff and consultants for each of the previously proposed surveys.

30. The consultants have attempted to draw up a provisional cost estimate to the extent and detail deemed possible and reasonable at the present stage. This is given in the table of cost estimates below. The details add up to \$4,015,200 which, if focused on an analysis of data provided for the most part, by others, should serve to identify

## COST ESTIMATES

	Man-months	Total costs (In US dollars)
<b>A. PERSONNEL</b>		
Professional		
1. Project manager . . . . .	60	131,500
2. Deputy project manager . . . .	54	103,500 <sup>a</sup>
3. Consultants for planning and organization . . . . .	2	6,000
4. Regional teams:		
(a) Economic geologists (6) . .	324	621,000 <sup>a</sup>
(b) Mining engineers (mineral economists) (6) . . . . .	324	621,000
(c) Other specialists (6) . . . .	324	621,000
5. Local experts . . . . .	150	150,000
6. Consultants for special problems . . . . .	24	72,000
7. Technical editor . . . . .	30	50,000
Supporting staff		
1. Secretarial		
(a) Headquarters . . . . .	300	150,000
(b) Duty stations of regional teams . . . . .	324	62,800
2. Clerical — Headquarters . . . .	240	168,000
3. Drafting — Headquarters . . . .	120	96,000
4. Drafting and clerical at duty stations . . . . .	108	32,400
Sub-total		2,885,200
<b>B. CONTRACTS</b>		
1. Bibliographic research . . . . .		150,000
2. Drafting . . . . .		60,000
Sub-total		210,000
<b>C. TRAVEL EXPENSES</b>		
1. Project manager — 10 trips of 2 months each . . . . .		32,000
2. Deputy project manager — 10 trips of 2 months each . . . . .		32,000
3. Regional teams . . . . .		500,000
4. Consultants . . . . .		60,000
Sub-total		624,000
<b>D. OTHER</b>		
1. Cables, postage, supplies etc. — Head- quarters . . . . .		20,000
2. Local expenses in travel status — 360 man- months at \$100 . . . . .		36,000
3. Local expenses at duty station . . . . .		30,000
4. Translation — estimate 2,000 pages at \$30 per page into two languages . . . . .		120,000
5. Publication — on basis of \$10,000 per volume per language . . . . .		90,000
Sub-total		296,000
GRAND TOTAL		4,015,200

<sup>a</sup> Salary and allowances calculated as \$23,000 per year, as the personnel involved should rank between intermediate experts (of previous budgets) and the project manager.

many immediate opportunities for mineral discovery and development and provide a sound basis for further programming. The total shown does not take into account any contributions in cash or

in kind which may be made by Governments or organizations in support of the programme.

31. These costs are based on the following four-step programmes: (1) preliminary collection and evaluation of data including efforts to enlist aid in compilation by other public and private organizations; (2) country visits; (3) analysis of data for purposes of further development-oriented action; and (4) publication. It is expected that as many as sixty countries might be visited during the course of investigation. However, the final selection as to which countries will be visited will rest with the Resources and Transport Division in the light of information obtained by step (1) above, and after the countries concerned have been specifically contacted in this matter. The actual expenditures in the countries selected will obviously vary from country to country depending on the problems revealed as the programme progresses.

32. The proposed regional mineral resource analysis should yield economic benefits many times its cost, in the economic returns to be expected from the development opportunities it should identify, and also in increased efficiency in the use of manpower and funds that should result from the better base it would provide for selecting and planning development programmes, including those assisted by the United Nations and others. As with other kinds of analysis and research, it is not possible to quantify the benefits expected, but as an activity that in the consultants' opinion will direct the exploitation of mineral resources along lines in which the maximum contribution is made to internal economic development, it may lead to the addition of tens of billions of dollars a year to the gross national product of the developing countries.

33. Following the analysis of the data and the preparation of the reports as the culminating phase of the initial programme proposed here, the United Nations should look forward to providing for continuation of resource analysis as a base for selecting and planning many of its development programmes, and it should anticipate and prepare to follow up its recommendations by way of development actions that it undertakes itself or stimulates in other organizations.

## APPENDIX

## List of consultants attending the meeting of the group of consultants in the field of minerals

- Mr. Charles Ancion,  
Chief of the Geological Service of Cockerill-Ougrée S.A.,  
Ex-President of the Belgian Geological Society,  
Liège, Belgium
- Mr. Julio Gumucio,  
Consultant Mining Engineer for the Inter-American Development Bank,  
Corporación Minerva de Bolivia,  
La Paz, Bolivia
- Mr. Pierre Legoux,  
Inspector General of Mines,  
Ministry of Industries,  
Paris, France
- Mr. Vincent E. McKelvey,  
Research Geologist,  
Geological Survey,  
United States Department of the Interior,  
Washington, D.C.,  
United States of America
- Mr. S. H. Shaw,  
Director,  
Overseas Geological Survey,  
London W.C.1,  
England
- Mr. Milan Snajdr,  
Vice-President of the Central Geological Office,  
Prague, Czechoslovakia

Mr. J. A. Zafimahova,  
Director of Mines,  
Department of Geology and Mining,  
Tananarive,  
Madagascar

*Representatives of the regional economic commissions*

Mr. N. M. Shukri,  
Economic Commission for Africa  
Mr. Eduardo García,  
Economic Commission for Latin America

*Representative of the specialized agencies*

Miss B. Thomas,  
United Nations Educational, Scientific and Cultural Organization

*International Atomic Energy Agency*

Mr. Evgueni Piskarev

## ANNEX II

### Report of the group of consultants in the field of water resources

#### BACKGROUND

1. The group of consultants in the field of water resources\* was constituted by the Secretary-General in compliance with Council resolution 1127 (XLI) and taking into consideration General Assembly resolution 2173 (XXI). In operative paragraph 2 of Council resolution 1127 (XLI) the Secretary-General was requested to constitute similar groups in the fields of minerals and in energy. The three groups are to prepare objective studies on:

- "(i) The parameters and scope of the objectives of the surveys;
- "(ii) Definitions and criteria;
- "(iii) Detailed planning as to organization;
- "(iv) A more precise assessment of the time schedule and cost-benefit."

2. The group of consultants was composed of nationals of developed as well as of developing countries, and from different fields involved in the complex process of water resources development.

3. The consultants met in New York from 26 January to 4 February 1967. After discussions with the Secretariat and acquainting themselves with several previously printed documents and with working papers which had especially been prepared for this group, meetings were held with representatives of the regional economic commissions, specialized agencies and the International Atomic Energy Agency. During these meetings the consultants heard expositions on the activities in the field of water by the regional economic commissions and the specialized agencies and had an exchange of views on various subjects concerning the surveys.

4. The proposed surveys which were considered are:

- (a) Survey of water needs and water resources in potentially water-short developing countries, here called "proposed survey No. 5";
- (b) Survey of the potential for development of international rivers, hereafter called "proposed survey No. 6."

5. The assignment given to the consultants is in pursuance of the above paragraph of Council resolution 1127 (XLI) which covers all the three types of natural resources mentioned in document E/4186. In considering their assignment, the consultants came to the conclusion that a quantified assessment of benefits is not feasible for the proposed water resources surveys. Therefore, while considering item (iv) of the objectives, the consultants confined their task to assessment of the cost and its general appraisal of the benefits of the surveys.

6. The consultants took into consideration statements made by Governments, specialized agencies and regional economic commissions either during Economic and Social Council meetings or in correspondence with the Secretary-General. The consultants found the following points relevant to the surveys:

- (a) Interest of small countries should be taken into consideration;
- (b) The need for strengthening of national agencies and personnel in charge of cartographic and geological activities;
- (c) The convenience and benefit that can be gained by the use of multi-purpose field work;
- (d) The need to collect existing but scattered bibliographic information and data and to utilize the information existing in unpublished form;
- (e) The possibility of including in the surveys proposals for specific projects for water development;
- (f) The need for the improvement in institutions and laws regarding water use and management;
- (g) The recognition of sovereignty of the developing countries over their natural resources;
- (h) The need to avoid duplication of activities of the United Nations specialized agencies and other international and national organizations and the need to achieve full co-ordination, taking into account also that the terms of reference of some specialized agencies and other organs of the United Nations are limited to certain fields;
- (i) Whether it is advisable at this stage in United Nations activities to expend funds on the enhancement of technological and scientific knowledge rather than on proposed surveys;
- (j) The use of questionnaires in collecting information;
- (k) The need for conducting field surveys at this stage;
- (l) The need for close co-operation with the interested Governments.

#### I. NEED FOR THE SURVEYS

7. The consultants realized that the demands for water in arid and humid areas alike are growing at a rapid rate. This is due to the increasing populations, and also to increasing *per capita* use resulting from growing domestic, industrial and agricultural water demands in the search for higher living standards. The point has been reached in many regions where action is imperative to cope with the problems of existing or threatening water shortages. It is recognized that, in the developing countries, a number of acute problems exist in water resource development. Difficulties are encountered both in the assessment of the available water resources and in their economic exploitation. These difficulties are often compounded by a lack of satisfactory policies and institutions for the efficient administration of water resources. The problem of water shortage is now so widespread, involving many of the developing countries and regions within those countries, that the haphazard selection of specific areas for action, without an appreciation of the relative urgency, can no longer be considered an adequate approach in planning development. Therefore, the consultants agree that there is need for an over-all survey in developing countries, country by country and region by region, through which the areas of water shortage may be identified and an assessment made of the order of magnitude of the deficiencies. At the same time, the survey could identify possible solutions and, where feasible, estimate the cost involved. The opportunity would also be provided to examine the data collection facilities and administrative frameworks and to formulate recommendations concerning them for the guidance of the respective Governments.

8. In international river basins, close co-operation among the riparian countries is required if the full potential of the water resources is to be developed to mutual advantage. The consultants recognize that the United Nations may be able to play an important role by encouraging and fostering co-operative programmes in such basins. A logical first step would be the broad survey of development possibilities in international river basins in developing countries, its principal objectives being to establish priorities and guidelines for more intensive studies to follow.

\* For the list of consultants, see appendix below.



9. The consultants concur in the opinion that the proposed surveys will stimulate a growing awareness within the countries of the importance of careful planning of water resource development. The benefits in this respect will be directly proportional to the extent that technical and administrative personnel in the countries can be involved in the survey.

## II. COMPLEXITY OF WATER RESOURCES SURVEYS

10. In considering the scope of the proposed surveys, the complex nature of the problems associated with water resource availability and water uses must be fully appreciated. There may be significant variability in the quantity, quality, timing and distribution of the supply and there may be a wide variety of beneficial uses to which the supplies can be put. These may be consumptive or non-consumptive and they may compete for the available supply or be complementary in nature. Water will be required for the successful exploitation of all the other resources of the region and, on the other hand, such exploitation may have significant, and often deleterious effects on the water supply.

11. Having in mind the many aspects which will have to be investigated and weighed in relation to one another, and considering the limited financial and manpower resources available for the surveys, the consultants stress the need for close co-operation with the Resources and Transport Division of the United Nations by the specialized agencies, the International Atomic Energy Agency and also by the regional economic commissions and the water resources agencies and, last but not least, the water resources agencies and technical and administrative personnel within the countries. The surveys should be co-ordinated with other relevant activities of international and national organizations, specially with the activities undertaken for the International Hydrological Decade and for UNDP. Full advantage should be taken of the specialized knowledge and the existing facilities of regional economic commissions, specialized agencies and IAEA and of the information available at other national and international organizations.

## III. COMBINATION OF THE WATER SURVEYS

12. While realizing that the two proposed water surveys have somewhat different basic objectives, the one to identify and assess the water resources and needs and the other to survey the significant development possibilities, the consultants are of the opinion that the two surveys will run parallel in many respects. They will call upon similar expertise and use similar types of data. The same co-operating agencies will likely be associated with both of the surveys. The recommendations for partial unification of the surveys, particularly in respect to the roles of the survey manager and the field teams have been developed with this in view.

13. When an international river forms a major part of a country's water resource, the developmental possibilities of the international river, and the total water picture in the country should be considered in a correlated manner. Furthermore, the consultants recognize that the problems of international river basin development involve certain aspects which fall outside the scope of this survey. It is therefore suggested that the survey in international basins be conducted only with the consent of the riparian countries to examine the potential and use of water within the countries concerned with the objective of initiating international technical co-operation and co-ordination in the field of river basin development.

## IV. GEOGRAPHIC COVERAGE

14. The consultants have suggested criteria to guide the selection of countries or areas for the survey of water-short regions. However, they had at their disposal neither the time nor the information which would be required to make the actual selection of candidate countries. A tentative list suggested by the Secretariat has been used to develop the cost and personnel estimates.

15. Turning to the proposed survey of international river basins,

the consultants have refrained from suggesting either the basins or the criteria upon which they should be selected. There may be many sensitive areas which will have to be explored before the programme can be finalized. It is felt that the only practical approach to the programming would be by consultation between the Secretariat and the countries involved. However, the consultants subscribe to the importance of this survey and the desirability of overcoming obstacles, if any, to its successful prosecution. For cost and personnel estimates, the consultants have used a tentative list of international rivers supplied by the Secretariat.

## V. OBJECTIVES AND DEFINITIONS

16. The proposed survey No. 5 should be for water-short areas. If in the case of small countries, such areas cover a substantial part of the whole, the survey may cover the whole country as the results will be useful to these countries for planning development of their water resources.

17. The proposed survey No. 6 would be for international river basins, and should be conducted only with the concurrence of the countries concerned. There may be difficulties in obtaining such concurrence in cases where such river basins are already subject to controversy. Similarly, cases where the total water resources of such rivers fall short of the country's demands, the problem may present difficulties. Handling of such cases could, with advantage, await experience elsewhere. International river basins (including international lake basins), for the purpose of the present surveys, should connote rivers passing through or across the boundaries of two or more countries in the physical sense only.

18. Water-short areas in developing countries could be classified as follows:

(a) Physical water shortage: there are areas where the physical resources are short of demands where and when these demands arise;

(b) Economical water shortage: there are areas where the development of the water resources is beyond the financial abilities of the country;

(c) Apparent water shortage: there are areas where there is a shortage of water due to the inability of the countries concerned to realize their water resources potential because of lack of technical ability or as a result of misuse or inefficient use of water due to the absence of a sound national water policy and lack of necessary legislation and organizations.

19. The water resources should include such surface and underground resources and possible inter-basin transfers, which are technically feasible, and can be economically achieved for the specific needs.

20. Possibilities of desalination exist where saline waters are present. The cost at present is, however, prohibitive for most users. The possibilities should be considered in cases of high value needs such as those for municipal, industrial and tourism purposes, and where fresh water resources are either non-existent or may be more costly to develop.

21. The main objectives of the surveys may, for the areas covered, be summarized as follows:

(a) To achieve a systematic compilation and analysis of available information;

(b) To assess over-all availabilities and needs in the light of the local economic and social conditions;

(c) To broadly examine matters of water policy, institutions, technical and manpower needs, training programmes, and research;

(d) To identify gaps in the matter of availability, sufficiency, continuity, and reliability of data and methodology;

(e) To recommend, wherever possible, measures for improvement in all the above matters, and for possibilities of further water resource development.

22. In the case of international river basins, the surveys might indicate further work with regard to data collection, co-ordination amongst countries, and possibilities of common action in one or more fields.

23. It is recommended that for the proposed survey No. 5 the water resources and needs at the present time be assessed and that projections to 1975 and 1985 be prepared, according to the available information. The assessments of needs may include: (a) domestic and municipal water supply; (b) industrial; (c) livestock; (d) irrigation; (e) power generation; (f) water transport; (g) water quality control; and (h) tourism and recreation. The assessment of availabilities may be over the same periods, of feasible and economic developments of resources: (i) surface; (ii) inter-basin transfers; (iii) underground supplies; and (iv) desalination. While comparing the development of resources with the needs, the capacity of the users and/or of the Governments to bear the costs should be kept in mind.

24. The consultants also recommend that where, during the progress of the proposed survey No. 5 the teams encounter problems arising out of excess of surface and underground waters, they may give some consideration to that problem also. A more extensive study of water excess areas could perhaps be visualized at some future date.

#### VI. ORGANIZATION, PROGRAMME, AND COST ESTIMATES

25. As stated earlier, the consultants feel that the survey of water needs and water resources in potentially water-short developing countries should, wherever possible, be combined with the survey of the potential for development of international river basins. To assure the co-ordination of the two surveys, they should be placed under the direction of a single survey manager as the head of a functional unit under the Director of the Resources and Transport Division. The survey manager should be assisted by two deputy survey managers, each in principal charge of one of the surveys. The established facilities of the United Nations should be utilized for recruiting, travel, financial control and other service functions. The surveys should be completed and reports thereon made available for distribution within four years following initiation. Separate reports should be prepared for each of the proposed surveys No. 5 and No. 6.

26. It is contemplated that the surveys will be carried out in five progressive stages, as follows: preliminary, adjustment, operations, elaboration and review.

27. Two charts attached to this report illustrate the work programme and personnel requirements for the surveys.

28. Undertakings of this magnitude and complexity pose innumerable problems, all of which cannot be anticipated in advance. It is imperative that organizational and procedural guidelines that are adopted be sufficiently flexible to permit adjustments of subordinate objectives and procedures. It follows that personnel recruited to carry out the surveys must have the facility to adjust to the variety of conditions that will be encountered in conducting identical studies in many different countries, and to make value judgements and decisions to keep the surveys progressing in an orderly manner.

29. The consultants believe that in the scheduling of the programmes the initiation and prosecution of one pilot survey of each type be included in the preliminary stage mentioned above. Experience gained from these pilot studies may then be applied in formulating plans for conducting the whole survey.

30. Both surveys will require special consultants of varying disciplines and for varying lengths of time. The projections of personnel requirements include two consultants for the entire study period as a nominal estimate of this requirement.

31. Significant research should not be undertaken in advance of the time that water-short areas and international river basins to be surveyed have been well defined and concurred in by host countries.

32. Extensive bibliographic and data research should follow immediately after identification of specific areas for survey. The United Nations and the specialized agencies and other international and national organizations should be the first to be researched for usable data and information, and the host countries contacted in this phase only as required to fill gaps and to provide up-dating. Selection and analysis of information and data obtained through this research should be the responsibility of the affected survey team. Compilations and tabulations should be the responsibility of those charged with the research effort. Three experts will be required to assist during the preliminary and adjustment stages.

33. It is quite probable that much of the research effort will be contributed by organizations and agencies who have expressed an interest in and support of the surveys. The cost of this contributed effort has not been included in the costs estimated for the surveys.

34. When approaching prospective host countries to determine interest in and degree of co-operation that can be expected in the surveys, an attempt should be made to have the host countries designate and delegate required authority to agencies or persons who will co-operate with the survey teams. Information solicited from the host countries should be obtained through individual specific correspondence rather than by general questionnaires.

35. Combination of the two surveys under unified direction is expected to produce economy in time, manpower, effort and money. The consultants recommend twelve teams of no fixed size or disciplines. For financial reasons these will have to be restricted to about two or three men per team. When the specifics of the individual surveys have been established, specific teams should be structured to conduct the surveys.

36. Field surveys by each team are predicated on an average of about six weeks per country. Team service would extend over a period of nineteen months, of which about thirteen months will be required for field work and six months at Headquarters. The survey teams, while in the field, should maintain close liaison with the United Nations resident representatives, regional economic commissions and other United Nations bodies that have missions or offices in the survey areas.

37. Reports to Headquarters should be made at the completion of each country visit, advising of progress, problems and future plans. The survey manager and his deputies should make periodic field visits to review work progress in the field, and to assist in the field with problems requiring their guidance. The special consultants referred to in paragraph 30 above are expected to help effectively carry out the field work assignment.

38. The estimated cost of the surveys is \$3,500,000 excluding the expenditure to be incurred by the countries to be surveyed. The consultants consider this a reasonable estimate for the cost of the type of surveys envisaged. A detailed breakdown of the cost is outlined below.

39. It is suggested that the Secretariat explore the possibility of accomplishing part of the work proposed for the survey teams under contract.

40. There could be possible assistance from many Governments, but the consultants at this stage have no means of evaluating its amount and, therefore, are unable to take account of such assistance.

## COST ESTIMATES

## Cost details

	Man-months	Year				Total cost (In US dollars)
		1	2	3	4	
<i>Personnel</i>						
Survey manager . . . . .	48	12	12	12	12	105,200
Deputies (2) . . . . .	96	24	24	24	24	200,000
Experts (3) . . . . .	36	36	—	—	—	69,000
Consultants (2) . . . . .	96	24	24	24	24	288,000
Experts (30) <sup>a</sup> . . . . .	570	36	150	288	96	1,092,500
Secretaries . . . . .	126	30	24	36	36	63,000
Clerks . . . . .	90	30	24	24	12	63,000
Technical editors (2) . . . .	24	—	—	—	24	40,000
Sub-total						1,920,700
<i>Contracts</i>						
Bibliographic research <sup>a</sup> . .						250,000
Drafting . . . . .						18,000
Sub-total						268,000
<i>Services</i>						
<i>International travel</i>						
Manager . . . . .						10,000
Deputies (2) . . . . .						15,000
Consultants (2) . . . . .						15,000
Experts (30) . . . . .						150,000
Sub-total						190,000
<i>Per diem</i>						
Manager						
(4 months in field) . . .						2,400
Deputies (2)						
(12 months in field) . .						7,200
Experts (30)						
(360 months in field) . .						216,000
Sub-total						225,600
Total services						415,600
Local travel . . . . .						100,000
Other local expenses (cables, postage, service, etc.) 360 man-months at \$100 . . . . .						36,000
Headquarters overhead (estimated lump sum) . . . . .						150,000
Publication (estimated lump sum) . . . . .						200,000
Translation (estimated lump sum) . . . . .						100,000
<i>Summary :</i>						
Personnel . . . . .						1,920,700
Contracts . . . . .						268,000
Services . . . . .						415,600
Local travel . . . . .						100,000
Other local expenses . . . . .						36,000
Overhead . . . . .						150,000
Publication . . . . .						200,000
Translation . . . . .						100,000
						3,190,300
Unforeseen expenses . . . . .						309,700
TOTAL						3,500,000

<sup>a</sup> This work can be accomplished in part by other agencies.



## PERSONNEL REQUIREMENTS

	<i>First year</i>				<i>Second year</i>				<i>Third year</i>				<i>Fourth year</i>			
Survey manager	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2 Deputy survey managers	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
2 Consultants	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx
Bibliographical research team	x	xxx	xxx	xxx	xxx	xx										
Technical editors and translators . . . . .													xxx	xxx	xxx	x
3 Experts (Headquarters) . .	xxx	xxx	xxx	xxx												
6 Experts (pilot surveys) . .			xxx	xxx												
30 Experts . . . . .					xxx	xxx	xxx	xxx	xxx	xxx	x					
Office staff . . . . .					Unspecified											

## WORK PROGRAMME

	First year				Second year				Third year				Fourth year			
I. Preliminary stage																
Organization of the programme . . . . .	xxx	xx														
Bibliographical research	x	xxx	xx													
Short visits by manager and deputy managers to various countries .		x	x	x												
II. Adjustment stage																
Selection of countries .			x	xxx												
Field trips by pilot teams to selected countries .				xx	xxx											
Planning field activities				x	xxx											
Further bibliographical and data research . .			x	xxx	xxx	xx										
III. Operations stage																
Contact with host countries . . . . .		xxx	xxx	xxx	xxx	xxx	xxx	xxx								
Field trips by experts and consultants . . .			xx		xxx	xxx	xxx	xxx	xxx	x						
IV. Elaboration stage																
Drafting country and basin reports . . . . .								x	xxx	xxx	xxx	xxx				
Special studies . . . . .									xxx	xxx						
Analysis and evaluation										xxx	xxx	xxx				
V. Review and publication																
Review by host countries of reports . . . . .											xxx	xxx	xxx	xxx		
Editing and printing of reports . . . . .												xxx	xxx	xxx	xxx	

## APPENDIX

*List of consultants attending the meeting of the group of consultants in the field of water resources*

- Mr. D. B. Anand,  
Chairman,  
Central Water and Power Commission of India,  
New Delhi, India
- Mr. Guillermo J. Cano,  
Lawyer, specialist in international rivers,  
Ambassador of Argentina in Belgrade, Yugoslavia
- Mr. E. P. Collier,  
Assistant Chief, Hydraulic Division,  
Department of Mines, Energy and Resources,  
Ottawa, Canada
- Mr. Erwin Denk,  
Deputy Director of Verbund-Plan,  
Consulting Engineer,  
Vienna, Austria
- Mr. Gabriel Jamme,  
Chief of the Central Hydrological Service,  
Ministry of Equipment,  
Paris, France
- Mr. Yaiah Abdel Mageed,  
Assistant Under-Secretary,  
Ministry of Irrigation and Hydro-electric Power for Nile Waters,  
Khartoum, Sudan
- Mr. L. J. Mostertman,  
Professor of Hydraulics,  
Delft, Netherlands
- Mr. James O'Brien,  
Special Projects Development Office,  
Bureau of Reclamation,  
Department of the Interior,  
Washington, D.C., United States of America
- Mr. Milan Snajdr,  
Vice-President of the Central Geological Office,  
Prague, Czechoslovakia

*Representatives of the regional economic commissions*

- Mr. Gerard Dekker,  
Economic Commission for Africa
- Mr. Eduardo Garcia,  
Economic Commission for Latin America

*Representatives of the specialized agencies*

- Mr. Michael Grehan,  
Food and Agriculture Organization of the United Nations
- Mr. J. da Costa,  
Department of Advancement of Science,  
United Nations Education, Scientific and Cultural Organization
- Mr. P. Bierstein,  
Chief Community Water Supply,  
World Health Organization
- Mr. M. G. Tarakanov,  
Technical Adviser to the Secretary-General of WMO,  
World Meteorological Organization

*International Atomic Energy Agency*

- Mr. Evgueni Piskarev

## ANNEX III

## Report of the group of consultants in the field of energy

## INTRODUCTION

1. The group of consultants in the field of energy<sup>a</sup> was formed by

<sup>a</sup> For the list of consultants, see appendix below.

the Secretary-General in compliance with Council resolution 1127 (XLI) and General Assembly resolution 2173 (XXI) to advise him on the proposed five-year surveys, and in particular, as pointed out in operative paragraph 2 of resolution 1127 (XLI), to prepare objective studies on:

- "(i) The parameters and scope of the objectives of the surveys;
- "(ii) Definitions and criteria;
- "(iii) Detailed planning as to organization;
- "(iv) A more precise assessment of the time schedule and cost-benefit."

2. The specific programme proposals under consideration were as follows:

(a) Survey of geothermal energy resources — estimated cost: \$850,190;

(b) Survey of oil shale resources — estimated cost: \$877,928;

(c) Survey of small-scale power — estimated cost: \$1,611,940. The estimates do not take account of possible contributions in staff and services from member Governments.

3. The group of consultants included specialists in various fields from both developed and developing countries. They met in New York from 6 to 14 February 1967 with the Director and members of the staff of the Resources and Transport Division and representatives of ECA and ECLA, UNESCO and IAEA. They had at their disposal as background documents the previous resolutions and reports bearing on the five-year surveys, as well as more detailed drafts of programme proposals and costs prepared by the Resources and Transport Division of the United Nations. They had the benefit too of the reports of the group of consultants in the field of minerals and water.

## I. DISCUSSION

4. There is a close correlation between *per capita* gross national product and *per capita* consumption of energy. Many factors and conditions, of course, determine how much inanimate energy a people can use constructively, but in physical terms it is the use of inanimate energy that permits them to multiply their efforts at low cost and helps them gain the physical and material benefits that contribute to a high level of living. *Per capita* consumption of energy in many developing countries is only a fraction of what it is in the developed countries, and the productive use of inanimate energy in these countries must increase substantially if their level of living is to rise. Known resources are unequally distributed over the world, and many of the developing countries have no commercial sources. For them development of new sources is especially important.

5. For these reasons, the consultants share in previous expressions of the General Assembly, the Economic and Social Council, the Secretary-General and others concerning the great importance of advancing the supply and development of energy for the benefit of the developing countries. Nothing in the entire field of natural resource development, they believe, strikes more directly at the problem of economic growth for the developing countries than attempts to increase their productive consumption of energy and especially of electric power.

6. The consultants believe that the proposed surveys would help advance the supply and development of energy resources in some of the developing countries, but they share also in some of the criticisms of the surveys advanced by the Advisory Committee on the Application of Science and Technology to Development and some of the member countries. More particularly, they feel that by including only two of the several sources of energy and by dealing in the power field only with small-scale plants, the surveys in the aggregate are too narrow in scope. Presented as "surveys", the consultants understand the basis for the impression apparently gained by some that the programmes proposed are ends in themselves and do not provide for the analysis of needs and opportunities for the development of energy so necessary to planning developmental actions. But they do

not share in other criticisms offered by these various bodies regarding the secondary importance of geothermal energy and oil shales, their cost, or the low priority to be assigned to them. As will be discussed more fully later, these sources have growing significance and economic value both in developed and developing countries and for many of the latter they offer promise of providing low cost sources of energy where no indigenous supplies exist now. Therefore, they deserve much more attention than they have received previously. But to provide adequately for the needs of other developing countries in increasing their production and consumption of energy, the proposed studies need to be broadened in scope and deepened in purpose.

7. Like the group of consultants on minerals and water, the group of consultants in the field of energy agree with the Advisory Committee on the Application of Science and Technology to Development on the importance of other activities in the field of resources exploration development, such as institution building, training, field studies in other steps which indeed are the building blocks of long-term and self-sustaining resource development and economic growth. Many constructive developmental actions, however, need not await the advance of such longer-range activities, but can be identified now from analysis of existing information. It is to serve this purpose that a broader programme of energy supply and development analysis is proposed.

## II. RECOMMENDATIONS

8. The consultants accordingly recommend that the essential elements of the three previously proposed surveys be retained, but that the energy programme be enlarged in scope to include an analysis of the needs and opportunities for energy development and utilization in the developing countries. In tandem with the programmes proposed by the group of consultants on minerals and water, they believe that such an analysis of needs and opportunities in the field of energy will provide a basis for meaningful development actions in the entire field of non-agricultural resources.

9. The consultants are under no illusions about the magnitude and complexity of the programme proposed. There could be no hope of completing an energy supply analysis in all conceivable breadth and detail under a budget many times larger than is being proposed. As in the case for mineral and water resources, the task of acquiring information on their extent and analysing their potential use is a never-ending one, and the consultants hope the United Nations will provide for its continuation in the future. The consultants believe, however, that the programme proposed will yield meaningful and highly useful results in the phases outlined here. It will yield practical recommendations for development-oriented actions not only with regard to geothermal energy, oil shales, and small-scale power plants but also with regard to other sources of supply and other means of increasing the productive utilization of energy, and the consultants urge that the United Nations and others concerned with economic development anticipate the need for expeditious follow-up of the opportunities the programme will identify. The recommended programme for energy supply analysis is outlined below.

### *Energy supply analysis*

#### *The need*

10. The consultants are recommending the programme in recognition of the urgent need for a systematic, concerted analysis to help the developing countries identify priority development actions in the crucially important energy field and also to provide a hitherto lacking priority basis for intensified international assistance. They fully recognize that much work has been undertaken in the energy field and that there is much scattered information available on various aspects of the problems involved, but they also wish to re-emphasize the crucial role of energy development in general and of electrification in particular as pacemakers for economic development. No systematic analysis of the type proposed here has ever been undertaken, and they are convinced that it is essential if de-

velopment is to progress with speed and efficiency.

11. A systematic energy analysis has been lacking so far not only at the world-wide level but also in most individual developing countries and regions thereof. In fact, this situation results partly from a diffusion of relevant responsibilities and energy policy-making in Governments, and the proposed programme of energy supply analysis carried out under United Nations leadership should aid Governments in their own plans and decisions for energy resource development. Moreover, through the design indicated below, it provides an opportunity for giving attention to hitherto neglected or little understood energy resources and problems. It is for this reason that special emphasis is laid on geothermal energy and oil shale resources, and on small-scale power plants for areas so far having little or no electricity. The emphasis reflects the primary concern here for the internal productive use of energy, which contributes most directly to economic growth for the populace at large, rather than the development of fuel resources for export.

12. Focusing as it does on country and regional needs and potential supplies, the programme will also draw attention to possibilities for regional developments that call for co-operation of two or more countries in making productive use of regional resources. As previously indicated, energy resources are not uniformly distributed, yet there are few economic and geographic regions that do not possess indigenous resources of one or another form of energy. As with water and mineral resources, development for regional use through the co-operative effort of the countries involved may make the difference between abundance and scarcity for individual countries.

#### *Objectives and scope*

13. The programme of energy supply analysis has as its prime objectives (a) the identification of needs and opportunities for increased energy resource exploration, development and utilization in developing countries and economically and geographically coherent regions and (b) formulation of recommendations for further actions that will help increase the availability of energy on the one hand and foster its wider and more efficient use on the other. These culminating phases of the programme will be based upon analysis of existing information on the pattern of energy consumption and current and potential supply of energy within developing countries, supplemented by field visits to obtain information available locally and to make a preliminary appraisal of previously neglected prospects for geothermal energy, oil shale and other sources for which little information is available.

14. In calling for analysis of the pattern of energy use, the consultants are aware that much information is available on total consumption country by country and on some of its other gross aspects, but they believe that these statistics do not adequately reveal the internal problems and needs for many countries. High consumption of energy for certain local industries that involve only a small portion of the population may distort the picture for the country as a whole, for example, as may statistics on electricity consumption for countries in which there are a few large cities.

15. In their examination of energy sources, the background studies should consider all forms of fuels and energy for which there is a potential economic use within the country — oil, gas, coal, lignite, hydropower, geothermal energy, oil shales, tar sands, and even vegetable fuels, animal wastes and solar energy where appropriate. An exhaustive inventory or search is not conceived here, but considering the interchangeability of most forms of energy for many uses, those concerned with development of one energy source must have some understanding of the potential availability of others. The non-commercial fuels (wood, animal wastes, etc.) will not yield major contributions to economic advance, of course, and no major effort should be devoted to them. But substantial improvements in the efficiency of their use could be achieved by relatively simple means, and the consultants believe that some attention to this problem could lead to an early improvement in the level of living of large segments of the population of many developing countries.

16. The price of fuel on the world market is currently low. The problem for countries without developed sources, however, is not merely what they can purchase it for on the world market but whether or not they can satisfy their requirements at the point of use from indigenous resources at costs that are competitive with imported fuels. For this reason, the consultants strongly endorse the Secretary-General's proposal to analyse the potential for geothermal sources and oil shale in regions, countries and areas in which there are promising prospects and particularly where they promise to be competitive with other sources. Recent technological advances cast a new light on the promise these sources hold for meeting energy requirements in many countries, and they deserve attention.

17. Geothermal energy is becoming better understood, and consequently the search for exploitable sources can be undertaken far more efficiently and at much lower cost. As one authority recently put it, exploration is passing from the oil-seep stage — in which exploration was guided by surface manifestations only — to the anticlinal theory stage in which it is possible to search for wholly concealed deposits, and the recent discovery of one such concealed field in Italy as the result of theory-guided exploration testifies to the importance of these advances. This new understanding of its geologic occurrence opens for exploration many favourable areas over the world — including many developing countries — in which geothermal energy has not been recognized heretofore as having any potential. Individual fields can be expected to have the potential for production capacity of the order of several hundred megawatts over hundreds and perhaps even thousands of years, and the extent of potential geothermal provinces may be of the same order of magnitude as that of the oil provinces. Because geothermal energy under favourable circumstances yields power at low cost even for units of small size, and offers promise of multi-purpose utilization in recovery of mineral by-products and indirect use of heat for other purposes than generating electricity, including both industrial and agricultural uses, it has special significance for developing countries. The consultants recognize that the disposal of effluents may be difficult in a few areas, and that successful exploration and development may often be difficult and costly, as it is indeed in places for other forms of energy also. But promising prospects need to be investigated and one of the purposes of the appraisal proposed should be to identify them. The international symposium on geothermal energy planned for October 1967 under the joint auspices of the International Union of Geodesy and Geophysics and UNESCO, and a seminar on geothermal energy planned by the Resources and Transport Division of the United Nations may be expected to make available additional new information that will aid in prospecting exploration and appraisal of geothermal resources.

18. Similarly, the development of processes in the Union of Soviet Socialist Republics and the Federal Republic of Germany to utilize oil shale directly in the generation of electricity gives new significance in the current scene to oil shale in countries without more economical sources. In spite of its low calorific value compared to coal and even lignite, oil shale-fired plants are producing energy at low costs in the countries named, and in countries in which thick oil shales can be mined by open-cut methods they are a promising source of power. Moreover, there is reason to expect that within a decade or so technology for recovery of oil, non-condensable hydrocarbon gas and other products from oil shale may be within economic reach, and there is a potential also for valuable by-products from many deposits. The consultants point out also that, as with geothermal energy, geologic understanding of the origin and distribution of oil shale has advanced so that it is possible to identify areas favourable for its occurrence that could have been discovered only accidentally before. The potential for oil shale resources in developing countries therefore can and should be identified, and follow-up studies of promising prospects under the auspices of the UNDP or other organizations should be undertaken. There is a great variation in the geologic, physical and chemical characteristics of oil shale and the potential for each deposit requires specific examination. The studies proposed will not be adequate, of course,

to serve as the basis for mining and utilization plans, but they will help to identify deposits with a significant potential for the developing countries.

19. The consultants were pleased to learn of the plans being laid for a United Nations symposium on the development and utilization of oil shale resources for 1968 and also of the efforts being made by the Resources and Transport Division to help disseminate technical knowledge of the direct combustion process, and they hope that its efficacy will be tested and utilized in other areas. Its successful application in a few of the developing countries would have great significance for many of the others.

20. The estimation of the needs for small-scale power plants (tentatively limited here to a unit capacity of 1 MW or less, and for use in areas where the annual consumption *per capita* is of the order of 50-60 kWh or less) proposed by the Secretary-General is considered by the consultants to be of much importance to developing countries. The consultants feel, however, that the quantitative assessment of these needs for all the developing countries would not only be difficult but is of less importance than the qualitative need for assembling such information as may be conducive to the cheapest and most effective means of production and use of electricity in developing countries wherever possible. Equally important is the need to develop some criteria useful in determining the situations in which it is desirable to install isolated small-scale plants in advance of larger, integrated systems. There is no doubt that small-scale power plants can play a vital role in stimulating local economic growth, and opportunities for extending the use of such plants should be examined. Although quantitative assessment of needs and opportunities is not proposed for all the developing countries, the background economic studies proposed will seek to define those areas in each country that are in most need of small-scale power plants, and to provide a rough estimate of the order of magnitude of their requirements.

21. Studies should also be made aimed at establishing practical and economical specifications for small-scale generating plants, distribution systems and house wiring, etc., taking due account of the requirements of early development and of eventual assimilation into larger systems. Case studies of small power systems in several developing countries, by means of field visits, are desirable to help establish these standard specifications and to assemble valuable information relating to costs, technical and administrative problems encountered and benefits achieved.

22. From the first hand experience of some of the consultants, it is recognized that a major problem in the operation of small power systems is lack of training on the part of the operators, and they believe that there is a great need for educational programmes to disseminate the necessary knowledge and develop the competence required. Such programmes are not a part of the work here, but the consultants hope that the case studies of small-scale power systems will provide a better understanding of educational needs and of the ways to meet them.

23. Small-scale electricity supply systems tend to be relatively costly, both in capital outlay and in operation. The consultants recognize the need to achieve, as early as possible, the integration of such small systems with larger, more economical systems, by means of grid supplies and toward this end it is important that frequencies and voltages be standardized to facilitate inter-connections. This point will be given attention in the examination of the small power systems and efforts made to identify areas in which potential growth warrants special concern now in the planning of isolated small power systems. The consultants welcome the proposal of the Secretariat to hold a seminar to cover problems of small-scale power production and distribution, including the technical, economic and administrative aspects. They also consider that the problems of education and training of technical and administrative personnel should be included in such a seminar.

24. Although the analysis of needs and opportunities in energy development and utilization is planned to extend over a three-year period, it should be productive of information useful to the United

Nations almost from its inception. In fact, in the heretofore neglected fields of geothermal energy and oil shale, there can be identified now several countries that have both the prospects and the needs for their development, and projects should be proposed for assistance from UNDP. For geothermal energy, the initial and most critical phase of the problem is mainly one of exploration, and it would be desirable to encourage projects similar to those recently begun in El Salvador, Chile and Turkey. For oil shale, the initial problem in many countries is also one of exploration, but in some countries enough is known about the extent and character of the shales to consider problems of exploitation. Unexploited opportunities for the development of other fuels and energy sources can also be identified without extensive research and should be proposed at an early stage for more detailed field investigations under UNDP or other auspices.

#### *Main lines of action*

25. Focusing on the analysis of available information rather than the acquisition of new field data, the programme proposed will utilize information primarily collected and analysed by others, but field visits to obtain geologic, technical and economic information, and to discuss problems with local authorities, will be an integral part of the programme. This applies particularly to the analysis of patterns of energy consumption and of known and potential supplies of energy in the developing countries.

26. In the analysis of the potential for geothermal energy, the studies will proceed from analysis of the regional geology — using existing information on the location of young orogenic belts, rift valleys, recent magmatic intrusions and thermal springs to define broadly favourable areas — to preliminary appraisal of local areas (in which attempts will be made from study of local stratigraphy, structure, and petrology to determine where geothermal traps occur). Although exploration will have to follow in later stages, some samples will be taken for geochemical analysis, for there are now several methods that help to identify promising prospects.

27. The oil shale studies will focus on countries and regions without other more competitive sources, and they also will begin with an examination of previous reports. Visits to the field will provide supplemental information and preliminary reconnaissance, supplemented by a minor amount of sampling and will help identify prospects and situations that offer promise for utilization of oil shale for power production by direct combustion.

28. The small-scale power studies will be carried out in part by office studies and in large part as case studies through field visits to plants and small systems, selected to provide a sampling of the existing plant and system designs as well as the situations and problems encountered in operation in developing countries.

29. It should be stressed that the compilation of data is not the end objective of the programme. Much information on energy resources and utilization is already published, and for some countries it is adequate for the present purpose. Some wider syntheses and statistics are also available in the publications of the United Nations bodies, the World Power Conference proceedings, the World Petroleum Congress, and other engineering and scientific societies, and the trade journals. Where available data are not adequate, the staff should enlist the aid of other organizations — other United Nations bodies, the professional societies, international scientific institutions, government surveys, and others — and where necessary it should assist in publication of the results. Close co-operation of the regional economic commissions is desirable on all aspects of the work and in this area of data-gathering in particular their help should be of special value.

30. In this connexion, there should be close liaison and co-operation with the minerals and water programme, for many of the basic data — geologic and tectonic maps, for example — and the interpretation of them bear on the appraisal of the extent and potential of many other non-agricultural resources.

31. The final reports of the investigation should be organized primarily by country and region (in the sense of coherent economic, geologic and geographic areas) to highlight needs, problems, and opportunities in energy resource development and utilization and practical recommendations for development actions. Although they should summarize via maps, tables and brief descriptions data on energy resources, consumption and utilization, their prime focus should be on the analysis, interpretation and recommendations. In order to acquire the necessary information, in addition to field visits, it may be possible to approach some of the problems in some areas by sampling or analogic techniques.

32. The identification of such problems about which much more information is needed, however, will count as one of the important benefits of the energy supply analysis proposed.

33. The consultants recommend that regional and local needs and the progress already achieved determine the emphasis given to various energy sources and other problems. Although they believe that there should be some appraisal of the potential for oil, coal, lignite, tar sands, hydropower and gas in all countries and regions, for example, so much has already been undertaken by other organizations that not much effort should be required to satisfy the needs of this programme; for countries in which there has been no exploration, it may be possible to determine from available geologic and hydrologic information whether or not there is broadly favourable ground. For other resources in which there may have been little or no previous interest — geothermal energy and oil shale in many countries but in others coal, lignite, tar sands and hydropower — more effort may be required to determine their potential, and a programme of field visits has been included.

34. Similarly, it should be regional and local needs, problems and opportunities that determine the emphasis to be placed on small-scale power vis-à-vis other means of increasing the availability and use of electricity in the economy. For some countries and regions, small-scale power plants may be the step most critical in the current scene, but for others the need may be for larger plants, transmission systems, or for other forms of energy.

#### *Organization*

35. The consultants recommend that the programme of energy supply analysis be headed by a programme manager and two deputies in charge of a functional unit under the Director of the Resources and Transport Division, and staffed by full-time specialists in the several disciplines involved — geologists competent in the problems of oil shales and other fossil fuels, and geothermal energy; mining and power engineers, economists and other specialists as needed.

36. During the initial, data-gathering and analysis stages there may be advantage to organizing the work on a topical basis with specialists on various problems — such as energy consumption and need, small-scale power studies, geothermal energy, oil shale, and other energy sources — working together under team leaders to develop and follow common approaches and standards. In the culminating phase of the work, however, the focus will become largely country and regional as recommendations are developed that take account of both needs and potential supplies, and in this phase the various lines of attack must be brought together to yield integrated conclusions.

#### *Time schedule and costs*

37. The work is planned to cover all those countries in need of energy development and to extend over approximately three years, with spin-offs expected almost from the beginning in the way of recommendations for more detailed studies and development-oriented actions that cannot be undertaken as a part of this programme but that should be started as quickly as possible. Data-gathering, analysis, formulation of recommendations, and preparation of reports will be the sequence of the studies, and these phases may require differing periods of time for various components of the work. For geothermal energy, for example, the data that can be gained



from the literature are already at hand, and only a few months may be required to analyse them and roughly identify the broadly favourable regions. Field visits will be required to confirm the indications of favourable areas gained from the study of available data and to pave the way for later pre-investment studies. The energy consumption studies should begin as soon as possible because the information may help guide many other studies.

38. The total cost of the work proposed is \$3.9 million, excluding incidental expenditure by the developing countries co-operating with the programme and without deduction for such assistance in cash and/or kind as may be made available by Governments and others. The consultants consider the indicated sum to be essential for an effective programme of the scope proposed.

39. The consultants have not attempted benefit/cost analysis for the programme proposed, for it is difficult if not impossible to quantify the economic value of the range of benefits anticipated. As for minerals, they expect that the recommendations that result from the work should lead to actions that will increase the rate of economic growth of the developing countries, and should yield substantial savings in the form of increased efficiency in the use of both funds and manpower in the Special Fund component of the UNDP and the development-oriented programmes of other organizations as well as the developing countries themselves.

40. More funds could be utilized effectively in these studies over the period proposed, but a much larger programme would be difficult to staff and in the period under consideration it might operate with less efficiency. As previously mentioned, it should be understood at the outset that the programme at either this or a much larger level will not produce an exhaustive inventory of needs, supplies and opportunities, but in the consultants' opinion it is adequate to lay a sound base for development-oriented actions in the energy field, and to identify concrete opportunities to increase the supply and productive utilization of energy in the developing countries.

41. The distribution of funds among the main components of the integrated programme is not shown in detail in the cost estimates below, but as they currently envisage the efforts involved, the consultants anticipate that approximately \$1,400,000 will be devoted to the study of energy consumption and needs, and to the broad studies of energy supply, and about \$800,000 each to small-scale power and oil shale and about \$900,000 to geothermal energy. Operated as an integrated programme there is flexibility to modify the emphasis placed on various problems if warranted by developments during the course of the work. Capacity to attack the problem on a much broader basis at not much greater cost than the total of the cost previously estimated for the three surveys comes from administrative savings in combining the three projects, and in pooling the economic studies formerly envisaged for each project to appraise market potential and competitive sources.

#### COST ESTIMATES

	Man- months	Total cost (in US dollars)
<i>Personnel</i>		
Manager (at \$26,300 p.a.) . . . . .	36	78,900
Deputy managers (2 at \$26,300 p.a. for 36 months each) . . . . .	72	157,800
Senior economists (4 at \$26,300 p.a. for 30 months each) . . . . .	120	263,000
Intermediate expert economists (4 at \$20,000 p.a. for 30 months each) . . . . .	120	200,000
Senior power engineers (5 at \$26,300 p.a. for 30 months each) . . . . .	150	328,750
Intermediate expert power engineers (5 at \$20,000 p.a. for 30 months each) . . . . .	150	250,000

	Man- months	Total cost (in US dollars)
Senior mining engineers (2 at \$26,300 p.a. for 24 months each) . . . . .	48	105,200
Senior geologists, geothermal experts (4 at \$26,300 p.a. for 24 months each) . . . . .	96	210,400
Intermediate expert geologists, geothermal experts (4 at \$20,000 p.a. for 24 months each) . . . . .	96	160,000
Senior geologists, fossil fuel experts (4 at \$26,300 p.a. for 33 months each) . . . . .	132	289,300
Intermediate expert geologists, fossil fuels (4 at \$20,000 p.a. for 33 months each) . . . . .	132	220,000
Consultants (200 days at \$100/day) . . . . .		20,000
Clerks (2 at \$700/month for 36 months each)	72	50,400
Secretaries (10 at \$500/month for 36 months each) . . . . .	360	180,000
		2,513,750
<i>Contracts</i>		
Draftsmen (under contract, 4 at \$1,500/ month) . . . . .	60	90,000
Analysis of samples . . . . .		200,000
		290,000
<i>Services</i>		
Travel (39 experts from New York to field and back) . . . . .		250,000
Per diem (\$20 per day for 39 experts in field, for 12 months each, total 14,040 days) . . . . .		280,800
Local expenses (\$100 per man-month in the field) . . . . .		46,800
Translation . . . . .		72,000
Publication . . . . .		90,000
		739,600
	<i>Sub-total</i>	3,543,350
Add 10 per cent for contingencies . . . . .		354,335
	<i>TOTAL</i>	3,897,685

#### APPENDIX

##### *List of consultants attending the meetings of the group of consultants in the field of energy*

- Mr. Sadrettin Alpan,  
General Director,  
Mineral Research and Exploration Institute,  
Ankara, Turkey
- Mr. Claes Gejrot,  
formerly President of Svenska Skifferolje AB,  
Kvarntorp,  
Sweden
- Mr. Takeichi Hayashida,  
Chief of the Thermal Power Department,  
General Research Laboratories,  
Kyushu Electric Power Co.,  
Japan
- Mr. R. Lamassiaude,  
Chief Engineer,  
Inspector General for Co-operation,  
Electricité de France,  
Paris, France
- Mr. Vincent E. McKelvey,  
Research Geologist,  
U.S. Geological Survey,  
Department of the Interior,  
Washington, D.C.,  
United States of America

Mr. Marco Marchetti,  
Director of the Centre for Geothermal Studies,  
Committee for National Research,  
Pisa, Italy

Mr. Milan Snajdr,  
Vice-President of the Central Geological Office,  
Prague,  
Czechoslovakia

*assisted by:*

Mr. R. Cataldi,  
National Institute for Electric Energy,  
Division of Studies and Research,  
Rome, Italy  
*and*

Mr. Giancarlo Facca,  
Technical Director,  
Worldwide Geothermal Exploration Co.,  
Rome, Italy

Mr. Raúl Sáez,  
Executive Vice-President,  
Corporación de Fomento,  
Santiago,  
Chile

*Representatives of the regional economic commissions*

Mr. M. Diallo,  
Economic Commission for Africa

Mr. Eduardo García,  
Economic Commission for Latin America

*Representative of the specialized agencies*

Miss B. Thomas,  
United Nations Educational, Scientific and Cultural Organization

*International Atomic Energy Agency*

Mr. Evgueni Piskarev

## DOCUMENT E/4303

### Progress report of the Secretary-General on new sources of energy

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## INTRODUCTION

In its resolution 1033 B (XXXVII) on new sources of energy, the Economic and Social Council requested the Secretary-General "to prepare periodic reports on new sources of energy" in continuation of his report on recent developments relating to new sources of energy (E/3903)<sup>13</sup> which had been submitted to the thirty-seventh session of the Council.

The present report is submitted in response to this request and is based partly on replies to questionnaires and to a somewhat larger extent, upon studies made by consultants and advisers who are specialists in the various new sources of energy.

The report covers developments that have taken place since the Secretary-General last reported to the Economic and Social Council in the summer of 1964.

## PART I

### SUMMARY OF RECENT DEVELOPMENTS IN NEW SOURCES OF ENERGY

1. In reviewing recent developments, it has been noted that, of the new sources (i.e., solar energy, geothermal energy and wind power) originally discussed at the United Nations Conference on New Sources of Energy held in Rome in 1961, not all have fulfilled the earlier promise that they had demonstrated at that time. In particular, wind power has so far proven to be too unreliable and erratic a source of energy, and replies to questionnaires sent out by the United Nations have indicated that during the course of the past three years, much of the research and development work that had been taking place on the harnessing of wind power has been terminated at least temporarily in some cases, but permanently in others. There is thus nothing of significance to report on progress in the utilization of this new source of energy.

2. Solar research has made big strides in recent years

and, while the practical applications for terrestrial use have so far been relatively limited, this new source of energy still holds great promise for the future.

3. The third new source of energy reviewed at the Rome Conference, geothermal energy, has reached the stage of practical and economic application in several countries and the United Nations, through its development programme, is making a major effort to expand the number of countries benefiting from the utilization of this source of energy.

4. In reporting to the Economic and Social Council on recent developments in new sources of energy, it is felt that the Secretariat should not necessarily confine itself to solar energy, geothermal energy and wind power (regardless of whether there had been significant developments or not) to the exclusion of other promising new sources of energy which were not covered by the Rome Conference. Consequently, while the Secretariat have nothing new to report on developments in wind power, this report contains for the first time a review of recent developments in oil shale and fuel cells.

### A. Solar energy

5. Since the last report to the Economic and Social Council in 1964 on this subject (see E/3903, part I), several significant developments have occurred, notably in the applications of solar water heating and solar distillation and the continuation of research and development on these and other solar utilization processes.

6. Prior to 1964, widespread use of solar water heaters was an accomplished fact in Japan, and was well under way in Israel and Australia. By 1966, the extent of applications of solar water heaters in the latter two countries had significantly increased. In Australia, solar water heating systems are now being sold in quantities valued at about \$A1,000,000 annually, and they are also being used in Papua — New Guinea. Their use is also extending to larger installations, some of several hundreds of square feet. In Israel, a manufacturer has established a new factory to produce selectively blackened plates for water heaters. These are widely sold (as assembled water

<sup>13</sup> *Official Records of the Economic and Social Council, Thirty-seventh Session, Annexes, agenda item 14.*



heaters) in Israel, and about 100,000 domestic units are in use in that country. In addition, the plates or complete systems are exported to about sixty countries for completion and for installation. Use of solar water heaters is continuing to expand in Japan, where an estimated one and a half million are in use. Thus, solar water heating is achieving substantial growth in those regions well suited to its use.

7. Notable progress has also been made in the application of solar distillation of saline water to the water supply problems of small communities. Prior to 1964, no such applications had been made. In 1966, seven communities relied partially or entirely on solar distilled water for drinking and cooking. The aggregate production capacity of these stills is over 10,000 cubic metres per year. These installations are located in Australia, Greece, Spain and the Cape Verde Islands (Portugal). Additional solar stills planned or under construction will triple this aggregate output. Economic studies indicate that for small community water supply, in daily capacities of up to about one hundred cubic metres, solar distillation is now the most economical means of desalting sea water in areas of favourable climate where fuel costs are relatively high.

8. In other applications, progress is largely in research and development, with little use of solar energy other than for experimental purposes. However, developments are occurring which are bringing closer the possibility of economic applications. In particular, interesting developments are occurring in solar power for small-scale use, with the possibility of economic conversion to mechanical energy by thermal processes, or the economic conversion to electrical energy by thin film photovoltaic processes.

9. There has been no known successful widespread use of any "do-it-yourself" household-scale solar energy devices or systems in either the industrialized or the developing nations. While there is some research and development activity in this direction, much of the work in progress is aimed at larger, community scale, applications.

10. The problem of financing solar energy applications remains a significant one. The use of an inexhaustible energy resource, such as solar radiation, is characterized by high investment and low operating cost. Thus, the need for capital for investment, in processes which show long-term economic advantage, remains important.

11. Research and development on terrestrial applications of solar energy remains at about the same total level as three years ago, with some decrease in the United States of America and apparent increases in Australia, France, and the Union of Soviet Socialist Republics. Australia and Israel continue with strong programmes, and several smaller developments are in progress in Chile, Japan, Pakistan, Turkey and the United Arab Republic, for example. The aggregate total of these efforts remains very small compared, for instance, with the efforts expended on atomic energy, but as noted above, they are leading to significant progress.

12. The pattern of applications of solar energy appears to be following that of many other economic developments. That is, most of the technology is being developed in

industrialized nations where the first practical applications are also made under favourable geographic, economic and climatic conditions. Transfer of the technology to the developing nations then occurs. This pattern is evident with both solar water heaters and solar stills.

13. The United Nations is endeavouring to bridge the gap between the type of technological research being carried out in the industrialized nations and the needs of the developing nations by facilitating the exchange of information and ideas. This has to some extent been achieved by participation in international meetings on solar energy, but it is believed that a United Nations symposium would achieve this objective more effectively. The Solar Energy Research Centre in Niamey, Niger, the establishment of which was endorsed in Council resolution 1033 B (XXXVII), is also working towards this end. The Centre, which is now operational, is receiving assistance from the United Nations in the form of radiation measurement equipment and technical assistance experts. This is the first such Centre established in a developing area with the object of carrying out applied research and testing, under field conditions, of solar powered appliances developed in industrialized countries. It is hoped that with sufficient support this Centre can serve the whole of west Africa.

#### *B. Geothermal energy*

14. The following are considered to be the most significant advances in the field of geothermal resources development made during the period under review:

(a) With the commissioning of its 20 MW Matsukawa plant in October 1966, Japan became the fourth country to produce geothermal power on a commercial basis;

(b) Development of new research techniques in Italy made it possible to discover a new steam field which had no surface manifestations;

(c) Pressure in New Zealand's major geothermal field at Wairakei is stabilizing and the decision has been made to continue geothermal development in other areas of New Zealand's north island;

(d) In the United States of America, development drilling at The Geysers, the important geothermal area in California has proven a firm steam potential of 200 MW and construction of additional generating plants is well under way;

(e) Based on the result of pilot plant studies, the decision has been made to construct facilities for extraction of salts from the Salton Sea geothermal brines in California (United States of America);

(f) Construction has begun on a 25 MW generating unit near Petropavlovsk in Kamchatka (Union of Soviet Socialist Republics).

15. United Nations activities during the report period include the initiation of projects of the Special Fund component of the United Nations Development Programme (UNDP) for geothermal resources exploration in El Salvador and Turkey and the signing of a plan of operation for a Special Fund project in Chile. In addition, technical assistance missions were sent to the Republic of China (Taiwan) and to the Republic of the Philippines, which is preparing a request for assistance from UNDP

(Special Fund component) for the development of its geothermal resources. The United Nations is playing a co-ordinating role in promoting geothermal development in various parts of the world. Under the auspices of UNDP, experts from such developed geothermal areas as Iceland, Italy and New Zealand are assisting the development of the new geothermal areas in Chile, El Salvador and Turkey, and this programme is expanding rapidly as far as resources permit.

16. The wide variety of geothermal experience in the different regions of the world makes the exchange of information particularly valuable, and the United Nations is proposing to organize a symposium in 1968 to facilitate the dissemination of the latest findings in this promising field. Discussions have been taking place with several countries interested in offering host facilities for this symposium.

### *C. Oil shale*

17. It is not generally realized that oil shale utilization can look back on more than a century of development. Oil shale distillation was an already established process when the first petroleum well was drilled in 1859. But, after several decades, petroleum became the dominant source of liquid fuel and interest in oil shale utilization diminished as liquid petroleum became more and more plentiful.

18. Vast deposits of oil shale are known to exist throughout the world and additional deposits continue to be discovered. Estimates of known oil shale resources have increased sharply from several tens of million metric tons in the 1920s to a figure exceeding 300 billion metric tons at the present time, the calorific content of which is equivalent to 18,000 times the present annual world-wide consumption of energy.

19. Until now, the utilization of these oil shale deposits has been restricted to a few limited areas of the world where specially favourable conditions existed in China (Mainland), the Federal Republic of Germany, Spain, Sweden and the Union of Soviet Socialist Republics. In recent years, however, rapid technological progress has been made in all aspects of the mining and utilization of oil shales. This progress has concerned the geology of oil shales, the character of the organic material in the shales, and the composition of shale oil. Very significant technological advances have also been made in mining methods for different types of oil shale deposits and in the technology needed to produce liquid and gaseous fuels from oil shales. Similarly, the shale oil refining process has been developed further by adapting modern petroleum refining techniques to the characteristics of shale oil and by developing new processes more suitable to this type of oil. Of particular interest is the development of direct combustion processes which have made it possible for sufficiently rich oil shales which can be cheaply mined to be used as fuel in thermal electric power stations.

20. As a result of these scientific and technological advances, the economics of the utilization of oil shale has improved considerably, and the United Nations has taken an active interest in the new possibilities that this potential source of energy may offer to developing countries in

particular. A study on the progress and prospects in the utilization of oil shale was prepared by the Department of Economic and Social Affairs for submission to the Advisory Committee on the Application of Science and Technology to Development, and the United Nations has received a number of requests from developing countries for technical assistance in the evaluation of their oil shale reserves and the possibilities for their utilization. Such technical assistance missions have been provided to Israel, Mali, Somalia, Trinidad and Tobago, Turkey and Yugoslavia, and similar assistance will be provided to additional countries in the near future.

21. In spite of the significant progress made in the technology of processing and utilization of oil shale in recent years, there has been no major international meeting in this field since 1950. The Secretariat is therefore proposing to convene a symposium on the development and utilization of oil shale with the co-operation of the Government of the Union of Soviet Socialist Republics which has offered to provide host facilities in the Soviet Union in 1968.

### *D. Fuel cells*

22. The fuel cell is an energy converter; that is to say, it converts the chemical energy of a fuel directly into electrical energy. Thus, a fuel cell may be considered as an alternative to supplying fuel to a heat engine which converts chemical energy into mechanical energy that may be used to drive a generator to produce electricity. The principle of the fuel cell has been understood for well over a century. In recent years, however, technological advances have brought the practical application of the fuel cell principle close to reality. Although a casual reading of the lay Press might give the impression that fuel cells are ripe for commercial exploitation, there are, in fact, a number of real obstacles to be overcome before fuel cells can become suitable for widespread application.

23. Recently, in addition to fuel cells, storage batteries have received considerable publicity. Whereas a fuel cell needs a supply of fuel to provide a complete source of energy, a storage battery will release the electrical energy stored in it directly without additional equipment. However, while a pound weight of hydrocarbon fuel may release two or three thousand watt hours of energy when consumed by a fuel cell, a typical storage battery will release only ten watt hours per pound, the most expensive system perhaps forty watt hours per pound and even the most optimistic predictions of systems yet to be developed are only of the order of two hundred watt hours per pound.

24. Thus, where substantial amounts of energy have to be transported, storage batteries are likely to be inferior to alternatives using conventional fuels.

25. The interesting possibilities that would be opened up for small-scale power generation in developing countries if commercially practical fuel cells can be produced in the near future has induced the United Nations to investigate the possibilities of this new source of energy. While it is clear that the prospect of an imminent break-through in fuel cell technology is unlikely, the prospects are sufficiently encouraging to make it worthwhile for the United Nations to take a continuing interest in this field.

## PART II

## RESEARCH, DEVELOPMENT AND APPLICATIONS

*A. Review of present activities in solar energy**1. Energy availability, measurements and instruments*

26. Continuing progress has been made in the collection of data on the extent of solar energy as a natural resource and on the means for its measurement and estimation.

27. Several new compilations of solar radiation data have become available. A statistical summary of solar radiation data recorded by twenty-seven stations in the United States of America over a period of eleven years has been published (United States Weather Bureau). Monthly means of daily radiation have been mapped for the United States of America. A comprehensive collection and analysis of world radiation data has led to the publication of the statistics in the form of tables of monthly averages of daily solar radiation and a series of twelve world maps, one for each month, showing iso-lines of average total daily radiation. The Union of Soviet Socialist Republics has published an up-dated compilation of solar radiation data.

28. Regional radiation studies have also been made. Annual hours of insolation for much of the Sub-Saharan region have been mapped in a study in Senegal (Faculty of Science, Dakar), and additional solar radiation measurement is being undertaken in this region by the Solar Energy Centre in Niamey with the assistance of the United Nations which has provided an expert in solar radiation measurement as well as much of the equipment needed for the programme. Similar annual maps are available for Japan, Spain and, in Chile, a national radiation measurement network of forty stations is in operation.

29. Further work has been done in Australia and in the United Kingdom of Great Britain and Northern Ireland (Heywood, Woolwich Polytechnic), on the problems of determining the radiation on tilted surfaces from measurements of radiation on a horizontal surface (the form in which solar radiation data are most commonly available). Methods of estimating radiation from duration of sunshine data have been further developed in Senegal and Spain (Meteorological Service of Spain). In Israel, measurements of diffuse and total radiation have been reported, and Indian scientists have further defined the relationships between total, direct and diffuse solar radiation in the tropics.

30. Research and development on instruments for measuring and integrating radiation have continued, in order to meet the need for reliable and accurate radiation measurements required in the planning of solar installations. Photovoltaic detectors, usually silicon solar cells, are being studied in Australia (University of New South Wales) to determine the effects on accuracy of their particular spectral response to changes in atmospheric conditions. A commercial laboratory in the United States of America is marketing radiation measuring equipment based on silicon cell detectors. A modification of the silver disc calorimeter-type pyroheliometer has been developed and used in Chile for beam radiation measurement (University of Chile).

31. Integration of radiation intensity data to obtain energy quantities, over daily or longer periods, is being approached in several ways. As indicated in the 1964 report, electronic integrators for this purpose have been developed in Australia and the United States of America. New work at the Brace Institute in Barbados is based on the use of a conventional d.c. ampere-hour meter with a silicon-cell radiation detector; the result is a portable, robust, and relatively inexpensive instrument which does not require electric power for its operation. An electro-mechanical integrator has been developed in Israel (Hebrew University). A combined measuring-integrating device based on evaporation of a liquid in black bulbs provides measurements, of somewhat lower accuracy, of radiation on spherical surfaces (Hawaii Sugar Growers).

32. A Chilean study of solar radiation on the Pacific Ocean has been made for the purpose of determining possible relationships between solar radiation and the formation of phytoplankton and migration of certain species of fish.

*2. Use of solar energy for production of fresh water — small and large-scale solar distillers*

33. As predicted in the 1964 report of recent developments relating to new sources of energy (see E/3903, part II), the provision of potable water supplies by solar distillation of saline water has commenced in several countries. Research and development in Australia (Commonwealth Scientific and Industrial Research Organization), Greece (Technical University of Athens), Spain (National Commission for Special Energies), and the United States of America (Battelle Memorial Institute; Church World Service) have led to the design and construction of seven solar stills with a combined annual capacity of approximately 11,000 cubic metres (2.9 million U.S. gallons) of distilled water. Additional solar stills definitely planned or under construction will bring the annual capacity to about 30,000 cubic metres (7.6 million U.S. gallons). It is anticipated that this application will continue to grow in regions where suitable conditions exist, namely where fresh water is limited and expensive; where quantities needed are less than about 100 cubic metres per day; where solar energy and saline water are in adequate supply; and where fuel costs are relatively high.

34. The following solar distillers have been completed during the past three years: Muresk, Western Australia, December 1963, 430 sq. m. (glass cover); Symi, Greece, October 1964, 2,660 sq. m. (plastic cover); Aegina, Greece, October 1965, 1,500 sq. m. (plastic cover); Salamis, Greece, October 1965, 380 sq. m. (plastic cover); Las Marinas, Spain, March 1966, 870 sq. m. (glass cover); Santa Maria do Sal, Cape Verde Islands (Portugal), April 1966, 710 sq. m. (plastic cover); Coober Pedy, South Australia, November 1966, 3,800 sq. m. (glass cover).

35. These installations are all furnishing water for use by the inhabitants of the communities where located. They are also providing additional information leading to subsequent design and operating improvements.

36. In addition to the above facilities, solar stills are known to be in the final planning or construction stages

in the following locations : Kimolos, Greece, 2,560 sq. m. (glass cover) ; Nisyros, Greece, 2,560 sq. m. (glass cover) ; Patmos, Greece, 8,200 sq. m. (glass cover) ; Coober Pedy, South Australia (expansion), 3,300 sq. m. (glass cover) ; Tabarca Island, Spain, 2,660 sq. m. (glass cover).

37. Of the 29,500 sq. m. of solar distillers planned or built, 5,200 sq. m. are provided with plastic film as the cover surface and 24,300 sq. m. are glass-covered. The more recently built plastic film solar stills are based on a new design involving a V-shaped cover held in place by a longitudinal weight, whereas the earlier design required an air supply for supporting the arch-shaped cover. A number of design problems are known to require further attention before these stills can be considered fully operational and trouble-free.

38. The international aspects of this development are notable. The plastic-covered distillers in Greece and the Cape Verde Islands are the outgrowth of research in the United States of America. The solar distillation projects in Spain have been aided by the Organisation for Economic Co-operation and Development (OECD) and have had technical collaboration with specialists from France and the United States of America. Exchange of information between experimenters in Australia, Greece and the Union of Soviet Socialist Republics, has contributed to the solution of problems and the improvements in design.

39. The large solar distiller development programme of the Battelle Memorial Institute and the Office of Saline Water (United States of America) was concluded in 1965. Studies are continuing in Australia, Greece, Spain, and the Union of Soviet Socialist Republics. There has been a continuing effort of considerably smaller scope in the development of small solar stills for individual or family use. All-plastic stills for emergency or temporary use have been tested in several countries, but practical use has not developed. Small, durable, inclined-tray distillers have been improved, but commercial application appears very limited.

### 3. *Use of solar energy for heating purposes*

#### (a) *Water heating*

40. In the past three years, significant progress has been made in developmental studies for improving solar water heaters, and in commercial manufacture of solar water heaters. They are continuing to be widely used in Japan, their use is expanding rapidly in Australia and Israel, and they are beginning to be used in many other countries. They have their major applications in providing domestic hot water, and some recent installations have been made in hospitals, hotels, apartment houses, and commercial buildings. Among the countries in which water heaters are commercially manufactured are Australia, Israel, Japan, the United States of America and the Union of Soviet Socialist Republics.

41. Solar water heating in Australia has become an industry with sales of \$A1 million per year. Domestic installations in that country and in Papua New Guinea total several thousand per year. A significant number of

larger systems for community use have gone into service, ranging in collector area from twenty to seventy square metres. This method of providing hot water is commonly used in the northern part of the country and is beginning to find applications in the more heavily populated south. Selective surfaces are used on many of the heaters.

42. In Israel a new plant for selectively blackening absorber panels for solar heaters has been put into operation. In that country, approximately 100,000 domestic water heaters had been installed by 1965. These units are exported to, and partially manufactured in, about sixty other countries, principally in Brazil, Kenya and Portugal. Heaters continue to be manufactured on a large scale in Japan at a rate of about 400,000 units per year. Small-scale production has been commenced in a number of countries, including Chile and Spain. A number of "do-it-yourself" plans are available for making water heaters (prepared by the Brace Institute in Barbados and the Commonwealth Scientific and Industrial Research Organization in Australia, and others); as yet there is no way to estimate the extent of use of these plans.

43. In research and development activities, significant studies have set criteria for heater design which are leading to improved performance. The studies have included: thermal resistances of the bonds between the water tubes and the absorber sheet (Brace Institute, Barbados); methods of assuring good flow distribution, and means of controlling solar water heaters which use forced water circulation (Commonwealth Scientific and Industrial Research Organization, Australia). These research efforts will tend to improve the performance of commercially manufactured heaters.

44. Solar water heaters have other uses. They supply energy for solar house heating in several experimental houses in Japan and the United States of America. In experimental installations they have also provided heat for stock watering tanks to prevent freezing during winter months. They continue to be used to supply heat for some experimental building heating and air-conditioning systems in Australia (University of Queensland) and the United States of America, and solar power systems in Israel (National Physical Laboratory) and Senegal (Institute of Meteorological Physics).

#### (b) *House heating*

45. Activities in solar heating of houses have not been increasing. Several solar houses have continued in operation, notably those in the United States of America (Denver, Colorado; Washington, D.C.), which have operated in a routine manner for about eight years and seven years, respectively. Two new solar-heated houses have been constructed in Washington, D.C. during the past four years. These are serving both as experimental units and as rented homes. Claims of good performance have been made, but reliable economic data have not been made available.

46. It appears that most of the technical problems associated with solar house heating have been reasonably well solved but that the cost of the solar heating facilities is generally too high for wide application.



#### 4. *Use of solar energy for mechanical power and electricity production*

47. The importance of motive power and electricity throughout the world continues to stimulate the development of methods for utilizing solar energy for this purpose. The use of thermal cycles and various types of engines is receiving attention in Israel, Senegal, the United States of America and the Union of Soviet Socialist Republics, and development of direct conversion systems continues in Japan, the United States of America, the Union of Soviet Socialist Republics and France. Applications are still limited to the photovoltaic devices used in space vehicles, and in certain terrestrial systems such as remote lighthouses, radio relay stations, and the like.

##### (a) *Power from thermal cycles employing heat engines*

48. Development activity in small-scale power generation by use of expansion engines has remained at approximately the same level for the past several years. Small engines have been studied in Israel and the United States of America, solar concentrators and flat collectors in Israel, Senegal and the Union of Soviet Socialist Republics, and complete systems in all these countries.

49. Small turbo-generators of 150 watts to several kilowatts capacity have been developed in Israel (National Physical Laboratory) to the point of commercial application. The plants may be operated by fuel or by solar heat from flat-plate collectors (now considered superior to the cylindrical plastic concentrators previously developed).

50. Research is continuing in Israel (National Physical Laboratory) on power from solar heated non-convective brine ponds. During the past three years, various problems have been investigated in large experimental ponds. Power production has not yet been attempted, but satisfactory operation of the pond itself has been approached. Analytical studies of these ponds have been carried out in Chile (University Federico Santa Maria) with particular reference to their use in distillation.

51. In Senegal (Institute of Meteorological Physics), a small (50–100 watt) piston engine has been experimentally operated since 1962 with a flat-plate solar collector. Hot water from the solar collector is passed through a heat exchanger where methyl chloride or Freon-12 is vaporized under pressure, then expanded in the engine. The output of the engine is used for water pumping. In 1966, a much larger system was built, comprising a 300 m<sup>2</sup> solar collector, 3–10 kW turbo-generator unit, heat exchanger (Freon-12 boiler), condenser, and water pump. Although presently operating at over-all efficiencies below 1 per cent, the system is believed competitive with small (below 5 kW) engine-driven water pumps.

52. Development of small, low-cost hot-air engines (one-half kilowatt) operated by heat from a 1.5-metre diameter solar concentrator continues in the United States of America (University of Florida). The engine itself could apparently be produced at considerably lower cost if made in large quantities and over-all efficiencies approaching 10 per cent are claimed. Improvements in design and performance are being investigated.

53. Extensive studies of solar concentrators up to fifteen metres diameter are being made in the Union of Soviet Socialist Republics. The primary purpose of these investigations is the development of low-cost heat supplies to various types of energy conversion units, including heat engines.

##### (b) *Power from direct converters of solar energy*

54. Considerable efforts of a research and development nature continue in several direct energy conversion processes for obtaining electrical energy from solar energy. The three major processes are photovoltaic, thermionic and thermoelectric. Much of the work continues to be directed at space applications but some is potentially applicable to terrestrial uses. These processes are characterized by static converters (no moving parts); they are not economically feasible for terrestrial use now, but significant cost reductions are in prospect in some cases. This continues to be a field to be watched with great interest.

55. In the field of photovoltaic energy conversion, the cost of electrical energy from "conventional" solar cells is still hundreds of times higher than that from conventional power plants. However, two developments are in progress which may significantly reduce these energy costs.

56. In the Union of Soviet Socialist Republics (Uzbek Academy of Science) and the United States of America (University of Wisconsin), experimental power systems have been built and operated in which relatively small areas of water-cooled photovoltaic cells are operated at the focal areas of reflectors, resulting in greatly increased outputs per unit area of cell. The solar radiation levels used have been from 10 to 300 times normal, and the maximum power of the experimental units have been in the 50 to 450 watt range. A similar experiment on a smaller scale has been carried out in Turkey (Middle East Technical University). These systems have the disadvantage of requiring focusing reflectors and orientation systems, but they may reduce the cost of photovoltaic power generation to less than one-tenth the present cost, and even greater reductions may be possible.

57. At the United Nations Conference in Rome in 1961, optimism expressed in the developments of thin film solar cells appears to have been justified by recent developments. Thin film cadmium sulphide solar cells are now available in experimental quantities in the United States of America, having efficiencies of 5 per cent to 8 per cent. The manufacturing processes and raw materials are inherently less expensive than are those for conventional silicon cells. In reasonable quantity production, a selling price of \$5 per watt is confidently predicted, and further reduction appears possible for large-scale production. By comparison, present silicon cell costs are in the range of \$50 to \$150 per watt. This development is occurring in the United States of America; similar efforts are under way in the Union of Soviet Socialist Republics (a recent paper reports encouraging results of testing thin film cells of cadmium telluride); and in France.

58. To date, applications of photovoltaic devices have been limited to small-capacity plants for inaccessible locations, such as telephone repeaters, instrument power supplies, and the like. Typically, the cell output charges a

storage battery, which in turn supplies energy to the instruments or lights. The largest extent of these applications have been made in Japan, where a number of navigational lighthouses have been so equipped.

59. Further research and development of thermoelectric generators is continuing, notably in several institutions in the Union of Soviet Socialist Republics and in France and the United States of America. By combination with focusing collectors, thermoelectric devices can convert solar to electrical energy. Silicon-germanium and lead telluride systems have been used experimentally (with energy sources other than solar). Successful solar application has not yet been made, primarily because of the requirements for high hot junction temperatures ( $500^{\circ}\text{C}$ ,  $1,000^{\circ}\text{C}$ ), limited durability, and high present cost of thermoelectric elements. In several of the studies in the Soviet Union, particular emphasis has been placed on improving the commutation (electrical contacts) of the thermoelectric elements, in order to increase efficiency and prolong life.

60. Other recent research in the Union of Soviet Socialist Republics has dealt with improving the heat distribution throughout the thermoelectric generator and the use of air-cooling of the cold junctions. At the Krzhizhanovskiy Power Institute (Union of Soviet Socialist Republics), an experimental  $\frac{1}{2}$  kilowatt solar thermoelectric generator has operated a water pump. A paraboloidal concentrator of 4.86 metres diameter, constructed of polished aluminium sheets supported on a rigid framework, was used as the heat source.

61. Research and development on thermoelectric materials, primarily for use with conventional fuels, continues at a substantial level, mainly in the United States of America and the Union of Soviet Socialist Republics.

62. Thermionic converters can also be heated with focusing collectors. The requirement for very high emitter temperatures ( $1,500^{\circ}\text{K}$  or more) makes the extensive current research on this process (for possible use in space) of little current interest for terrestrial application.

63. In Chile, an experimental study is being made of the use of solar energy to heat one electrode of a  $\text{CuSO}_4$  electrolysis unit. The temperature difference between electrodes causes a potential difference and results in electrodeposition of copper. No economic studies have yet been made and the feasibility of the process is not now known.

#### 5. Use of solar energy for cooling purposes

64. The level of activity in research and development of solar cooling has remained at a modest level, with probably the most active current work in Australia and the Union of Soviet Socialist Republics. The approaches to solar operation of cooling equipment are largely as previously reported at the Rome Conference in 1961 and in the 1964 report (E/3903); considerable development work remains to be done before widespread applications can be made.

65. Operation of a continuous absorption air conditioner from flat-plate collectors is being experimentally studied in a new solar house in Brisbane (University of

Queensland), Australia. The house is provided with a lithium bromide-water air conditioner operated by a water heating collector; some energy storage is also provided. The system will have its first full operation during the summer of 1966-1967. In the United States of America (University of Florida), an experimental ammonia-water cooling unit has been operated at levels of 2 to 3.7 tons of refrigeration (6,000 to 11,000 Kcal/h) by flat-plate water heaters of forty-square-metre area.

66. A solar operated jet compression type of air conditioner is under development in the Union of Soviet Socialist Republics (Turkmen Academy of Sciences). Heat is supplied to the working fluid, Freon-12 in a parabolic cylinder solar reflector, vaporization occurs, and the vapour is used in a jet compressor to raise the pressure, prior to condensation, of recycled Freon from the cooling chamber (evaporator). "Room-size" and "house-size" units have been tested, with satisfactory results.

#### 6. Cooking and drying with solar energy

67. Interest in solar cooking has diminished in most countries since 1963. Three new designs have been suggested, in Barbados, Israel, and the United States of America, one of which has been produced on limited scale for recreational use. Several studies of solar drying have been reported in Barbados, Canada, Puerto Rico, Portugal and Turkey. Genuine commercial application of solar cookers and driers has not yet occurred, but development efforts are continuing, although some pessimism has been expressed (Professor Hirschmann in Chile and Professor Duffie in the United States of America) regarding the social problems of acceptance of solar cookers.

##### (a) Cooking

68. In Barbados (Brace Experiment Station), a new type of solar cooker has been designed and tested. The concentrator comprises a hardboard cylindrical reflector of circular cross-section, lined with aluminium foil, focusing on a central pipe in which steam is generated. A transparent plastic film cover protects this system from dirt and reduces thermal losses. The steam passes to a separate insulated vessel where it condenses around a covered cooking vessel. It is estimated that quantity production could be accomplished at \$20 each.

69. The Israel cooker (National Physical Laboratory) employs an array of twelve identical concave glass mirrors, each about 30 cm diameter, focusing on a conventional cooking vessel. The entire assembly is mounted on movable pipe supports. It has a heat delivery capacity of about 600 watts and an estimated material and labour cost, in quantity, of about \$10.

70. A portable folding cooker for picnic use in the United States of America (the "Solar Chef") is a combination reflector-oven type, of foil-coated paper board. When erected, the reflector is of pyramidal shape, with a small plastic film-covered chamber at the apex. Performance is not adequate for routine cooking use, but several thousand were sold at a retail price below \$5.

##### (b) Drying

71. A study in Barbados and Canada (Brace Research

Institute) has been concerned with the design and testing of a solar cabinet drier for fruits and vegetables, particularly for use in the developing countries. In a one-square-metre chamber covered with glass or plastic, extensive tests and economic evaluations indicate promise for use. Costs of about \$13 per square metre are estimated. A solar wind ventilator drier, in which air is heated in a separate flat-plate collector and drawn by a rotary wind ventilator into a stack containing trays of fruit or vegetables, has also been investigated.

72. Coffee has been experimentally dried in Puerto Rico (University of Puerto Rico) in a coffee-processing building provided with a flat-plate solar air heater built into the roof. Substantial reduction in power consumption was achieved.

73. Hardwoods of various species have been experimentally dried in Puerto Rico (Institute of Tropical Forestry) and elsewhere in plastic-covered frames having capacities of about 150 square metres of lumber 5 cm thick. The speed of drying and the quality of the product were in some experiments superior to ordinary air-dried lumber.

74. A combination one-square-metre solar air heater (of the slit-and-expanded sheet-metal type) and sloping glass-covered tray drier for fruits has been designed in Turkey (Middle East Technical University). Prunes and raisins have been produced in a new type of experimental solar drier in Portugal (Laboratory of Civil Engineering). Hot air from a plastic-covered horizontal two-square-metre solar air heater is drawn by a chimney through a plastic-covered four-square-metre drying chamber in which the fruit is supported on screens. Accelerated drying and improved fruit quality are indicated.

#### 7. High temperature processing

75. During the past three years, solar furnaces have continued to be used for research purposes. There have been no major new installations, and most of the research is being performed in comparatively small furnaces of approximately two-metre diameter. Solar furnaces have not been employed in the production or processing of materials for subsequent use, undoubtedly because of high cost.

76. Construction is continuing on the very large solar furnace of the CNRS (National Centre for Scientific Research) in France, and completion is expected in 1967 or 1968. Heliostats mounted on a terraced hillside near Font Romeu in the Pyrénées will reflect solar radiation to a 2,000 m<sup>2</sup> concentrator which will deliver heat to the focus at a rate of about 1,000 kW. High temperature research is continuing in the large furnaces at Natick (United States of America) and Montlouis (France).

77. Many studies of the properties of materials and of chemical and physical changes in materials at high temperature have recently been performed by means of solar furnaces. Melting points of refractory oxides have been measured in France and Japan. Equipment and instruments for solar furnaces have been developed in Australia, Canada, the United States of America, and the Union of Soviet Socialist Republics. Studies of various

properties of materials were made in the United States of America, Japan, and the Union of Soviet Socialist Republics. New designs for solar furnaces and their accessories were reported in the Union of Soviet Socialist Republics (Turkmen, Uzbek Academy of Science), while several solar furnaces have been installed in Chile (University Federico Santa Maria). Notable in these developments was a small solar furnace employing a very low-cost reflector of metallized plastic film, its dish shape being maintained by partial evacuation of a closed air space behind it. A concentration ratio of over 2,000 was measured.

78. Other studies of materials at high temperature have been made in these and other solar furnaces, so this very specialized use of solar energy continues to be important in research.

#### 8. New designs and new materials in solar energy collectors

79. There have been numerous developments in materials for solar collectors during the last three years, and there have been several interesting and potentially important steps in the use of existing materials in new types of solar concentrators. There has been considerable experimentation with plastic films for transparent covers of flat collectors, and three large solar stills have been covered with polyvinyl fluoride film. Japanese solar water heaters continue to employ polyvinyl chloride (PVC or "vinyl") film.

80. Probably the most important developments in solar concentrator design, and indirectly in the materials used, have been made in the Union of Soviet Socialist Republics, principally in the Tashkent laboratories of Physico-Technical Institute, Uzbek Academy of Science. There has been extensive research and development on solar concentrators up to fifteen metres diameter, involving the use of reflecting surfaces of thin aluminized plastic film held in dish-shape form by partial vacuum behind the film. Much of this work is in progress and cannot yet be appraised from economic standpoints. However, there appear to be good prospects for large reduction in the costs of concentrators for generating electric power by means of high temperature boilers and thermoelectric elements.

81. The fabrication of precise moulds for paraboloidal reflectors has been accomplished in the Union of Soviet Socialist Republics (Physico-Technical Institute, Tashkent). Sizes up to fifteen metres diameter appear possible. Less precise and much cheaper concentrators have been made, in the same laboratory.

82. The partial vacuum, plastic film type of concentrator has been fabricated in sizes at least 2.7 m diameter (also in the same laboratory). Studies with a one-metre concentrator of this type have shown that concentration ratios of 1,500 can be readily obtained.

83. Another type of plastic film concentrator is made up of individual hexagonal facets formed of thin metal frames to which metallized plastic film is cemented. These facets are wired together to form a "honeycomb" of paraboloidal contour.

84. Light-weight glass concentrators have been built in the Union of Soviet Socialist Republics (State Optical

Institute) by cementing thin glass mirror segments to paraboloidal shells of foam-glass. Pyroceramic materials have also been used.

85. A faceted concentrator (Union of Soviet Socialist Republics, All-Union Scientific Research Institute of Sources of Current) in parabolic cylinder contour has been employed in an experimental 50-watt photoelectric generator system, in which the solar concentration ratio is 8.5.

86. The largest reflector reported tested in a power unit was 4.86 m diameter, fabricated of polished aluminium sheets. Motion of the reflector is accomplished by a gravity device.

87. Flat-plate solar collector development, other than that directly associated with solar water heaters and solar driers, has been limited. The matrix, or slit-and-expanded metal, type has been designed and studied in the United States of America (University of Wisconsin) and Turkey (Middle East Technical University). Good experimental performance has been achieved in a simple system of stacked, blackened low-cost metallic screening material in a glass-covered collector, down through which air is circulated. The heated air can be used for a variety of purposes, including house heating, drying, or possibly for operating an absorption cooling unit.

88. A recent report of a flat-plate, solar air heater development in Australia (Commonwealth Scientific and Industrial Research Organization) involves experimental use of glass-covered panels containing V-grooved black metal absorbing surfaces. Air is heated by circulating it in contact with these surfaces. Development for house heating is continuing.

89. In solar distillation, sheet butyl rubber has become a preferred basin lining material in several installations. Its excellent strength, durability, and reasonable cost are advantages. Although no new polymers have been developed for distiller covers, wide (about five-metre) polyvinyl fluoride films are being used in several installations.

90. The durability of plastic films in outdoor exposures typical of several solar applications has been studied and reported in the United States of America (Battelle Memorial Institute) and the Union of Soviet Socialist Republics (Armenian Base Laboratory). Radiation absorption properties of a large list of building materials has been investigated in the Union of Soviet Socialist Republics (Physico-Technical Institute, Ashkabad). Properties of reflecting surfaces have been studied in France (Solar Laboratory, Marseille), Union of Soviet Socialist Republics (Physico-Technical Institute, Tashkent), the United States of America (Army R and D Laboratories).

## 9. Energy storages

91. There has been very little progress with storage of solar heat or the storage of power from a solar source. No new materials or techniques have been reported, although a detailed report of lithium-hydride heat storage experiments has been made in the United States of America. This material has a good thermal storage capacity at its melting point, about 680°C, which makes it

usable only for very high temperature applications, such as for power units in space.

92. A limited amount of thermal storage is used in the Israeli power generator ( $\frac{1}{2}$ -5 kW), through which heat is exchanged from the collector fluid to boiling chlorobenzene (National Physical Laboratory). The "solar pond" concept being developed by this institution has thermal storage as an integral part of the system.

93. House heating experiments continue to use water or rock as thermal storage materials. In Australia (Commonwealth Scientific and Industrial Research Organization), experimental use of 1,000 cu. ft. (30 cu. m) rock storage for solar air heating and evaporative cooling of 1,400 sq. ft. (135 m<sup>2</sup>) of office space has been satisfactory, and further development is being undertaken.

## B. Review of present activities in geothermal resources

94. In contrast to solar and wind energy, which are meteorological phenomena, geothermal resources originate from within the earth and, consequently, their development depends primarily on advancements in the geologic sciences, rather than on engineering innovations which are so necessary for advancing the utilization of solar and wind energy. Because these problems are essentially geological, solutions having a general application cannot be found by experimenting under controlled laboratory conditions, but must await geologic discoveries, which are traditionally long in coming and expensive to achieve. In addition, these discoveries are often only significant for a limited area and it is possible to arrive at general conclusions only by collecting and synthesizing large amounts of data from many areas. Although these data are being collected at an ever increasing rate, it is still necessary to equate advancements in geothermal development to specific discoveries in specific areas. For this reason progress in geothermal development will be reported here on a country by country basis. The new discoveries in some of these countries are indeed encouraging, but to what extent they will be duplicated in yet untested areas is still a matter for speculation.

95. Before describing activities in individual countries, however, it should be noted that in recent years there has been a series of related scientific discoveries, which although at the present time are somewhat incidental to geothermal exploration, in the not far distant future may play a very important role in the development of geothermal resources.

96. There is increasing evidence that thermal areas are related to occurrences of highly concentrated brines. Although these brines are mainly sodium-chloride solutions, they also contain economically interesting amounts of potassium, and what may be economically interesting concentrations of ferrous and non-ferrous metals. Because of their high density, approximately ten times that of sea water, they do not occur as surface springs, but there is now evidence indicating that they may exist at depths below many thermal areas.

97. Too little is yet known about these brines to make predictions about their origin or frequency of occurrence. They were first discovered at 3,000 to 5,000 foot depths



below a California steam field, and at that time were thought to be unique. Since then, however, similar brines or indirect evidence for the presence of such brines, have been discovered in the Red Sea and over the East Pacific Rise. In both these occurrences, as in California, the brines are associated with areas of high heat flow. If such brines exist at economically exploitable depths below geothermal fields, they could greatly increase the value of the thermal fluid in which they are contained.

### 1. *Operational developments*

#### (a) *Italy*

98. During the period under consideration, exploration has continued around the margins of the Larderello (Boraciferous) region and in the Mt. Amiata region. Exploration methods include detailed geologic mapping, resistivity surveys, thermal gradient measurements in thirty to thirty-five metre drill holes from which heat-flow maps are being constructed, and deep exploration drilling.

99. In the 1964 to 1966 period, sixty-two exploratory holes were drilled to an average depth of about 900 metres. Forty-six of these wells were drilled in the Larderello region and sixteen in the Mt. Amiata region.

100. Total geothermal energy production has shown the following expansion over the report period:

1963	—	2,427,000,000 kWh
1964	—	2,527,000,000 kWh
1965	—	2,576,000,000 kWh

101. The total installed geothermal capacity in October 1966 was 340,000 kW (319,600 kW in Larderello region and 20,500 kW in Mt. Amiata region), which is an increase of twenty-five MW over the installed geothermal capacity in 1963.

#### (b) *New Zealand*

102. Generating capacity is still 192 MW at the Wairakei plant, no additional capacity having been added since October 1963. Annual production of electricity for the period 1963 to 1966 was as follows:

1963	—	761,355,440 kWh
1964	—	1,004,089,500 kWh
1965	—	1,193,583,000 kWh
1966	—	1,225,424,000 kWh

103. The cost per kWh generated for the year ending 31 March 1966 was 6.2 US mills.

104. Sixty wells are now supplying the power station, and it has been found necessary to drill four to six new wells per year in order to compensate for a gradual decline in well output. This decline is attributed to at least two factors, mineral encrustation and declining aquifer pressure. Both these conditions are believed to be due to reservoir draw-down which decreases hydrostatic pressure in the field and causes boiling at lower and lower levels. During the past two years, however, the field pressures have shown an increasing tendency to stabilize under conditions of continuous production.

105. The tendency of the Wairakei field toward stabilization has been an important factor in reaching the recent

decision to begin an intensive investigation for geothermal resources in other areas of the North Island volcanic zone. While the Wairakei field was undergoing close observation, preliminary investigations were being carried out in seven other thermal areas. These investigations included geologic mapping, one-metre probe surveys and horizontal and vertical resistivity profiling. From one to four deep exploratory holes were drilled in each of the seven areas. Quite encouraging results have been obtained in two of these areas: Tauhara, which is adjacent to the Wairakei field on the south, and Broadlands, which is about twenty-five kilometres north-east of Wairakei. Further investigation of these areas is being planned for the immediate future.

106. The period under review witnessed the first application of deep resistivity prospecting in the New Zealand thermal fields. Vertical profiling to maximum electrode spacings of 3,200 feet indicated an optimum spacing of 1,800 feet for traversing (Wenner configuration). Results were very good in that high temperatures were found on drilling resistivity lows. Unfortunately, however, this method does not discriminate clearly between zones of low and high permeability, and some of the low resistivity areas were found on drilling to have high temperature but too low a permeability for significant production.

#### (c) *United States of America*

107. Geothermal exploration has not proceeded at the rate anticipated three years ago principally because there is still no legislation dealing with the leasing of Federal lands for geothermal energy development. The lack of such legislation has greatly hindered growth of the industry because many of the potentially productive geothermal areas in the western United States of America are located on Federal Government land. A Geothermal Act was passed by the United States Senate in 1966, but was vetoed by the President mainly because of a clause which permitted the conversion of mineral leases to geothermal leases. This, in the President's view, would have given the mineral lease-holders "undue advantage over other prospective holders". It is believed that a modified bill may be passed this year, but because of this still unresolved problem most geothermal work in the United States of America has been restricted to further development of The Geysers area.

108. Although installed capacity at The Geysers remains at the 1963 level of 26 MW, construction of a 27.5 MW unit is nearing completion. This unit will go on line in a month or two and another 27.5 MW unit is planned to be operative late in 1968, by which time the total capacity at The Geysers will be 81 MW.

109. The rate at which generating capacity is being installed at The Geysers, however, does not adequately reflect the remarkable success of exploration during the period under review. A total of forty-one wells have now been drilled in The Geysers steam zone. These wells, which include the ones already feeding the present power station, are capable of producing 4 million pounds of steam per hour. This is equivalent to a generating capacity of approximately 200 MW, eight times larger than the

present installed capacity. This large gap between actual and potential capacity is due partly to the unforeseen success of recent exploration and also to the fact that there is approximately a thirty-month time lag between discovery of the steam and its utilization, which is the time required for well testing, plant design and construction.

110. Pilot plant studies in the Salton Sea geothermal brine field have been completed and plans were recently announced for commercial development, which will take place in stages. The first plant will start producing sodium chloride and calcium chloride solution in 1968. The company will use a vacuum pan operation on sodium chloride and solar evaporation for the calcium chloride. The second stage of development will include the production of potash and possibly anhydrous calcium chloride. Other possibilities at an even later stage include manganese and lithium. Work is still continuing on the problem of utilizing the steam which accompanies the brine. The steam corrodes some parts of the generating equipment in the pilot plant, and this problem has not yet been solved.

#### (d) Japan

111. One of the most significant advancements in geothermal development since the previous report to the Economic and Social Council (E/3903) is that Japan has become the fourth country to generate geothermal power on a commercial basis. A 20 MW generating unit was commissioned at Matsukawa in October 1966.

112. Matsukawa is a small hot spring resort located at the north-east foot of Mt. Iwate, an active volcano in northern Honshu. In 1953, shallow wells were drilled in order to increase the hot water supply for the resort. In four of the wells, steam, rather than hot water, was produced from depths between 160 and 300 metres. Extensive geologic, geophysical and geochemical investigations began in 1957 and finally, four deep test holes were drilled in the period from 1963 through 1965.

113. These wells range from 945 to 1,501 metres in depth and produced a total of approximately 200 tons of steam per hour, sufficient for a generating capacity of 20 MW. Plant construction began in March 1965 and was completed in September 1966. Unfortunately, during the construction period, a casing break occurred in one of the wells and another well began to geyser. Only two wells, therefore, are supplying the plant, which is operating at a capacity of 9.5 MW. Work is now in progress to provide sufficient steam to bring the plant up to its originally designed capacity of 20 MW.

114. Production costs, based on operation at the full 20 MW capacity, have been calculated at seven mills per kWh. Power is being sold to the local electrical utility for 8.3 mills per kWh, which, considering the small size of the plant and its amortization period of only eight years, compares very favourably with the cost of energy from hydro and fuel oil sources in that area.

115. Construction is under way on Japan's second geothermal plant located at Otake in central Kyushu, and is expected to be completed by October 1967. The Otake plant will have a capacity of 10 MW, and will be fed by four wells delivering a total of 118 tons of steam per hour.

These wells were drilled to depths ranging from 346 to 550 metres in the period 1963 through 1965.

116. An interesting aspect of the Otake project is that the successful wells were drilled only 200 to 300 metres away from a series of relatively unpromising wells drilled in 1954 and 1955.

#### (e) Iceland

117. The main utilization of geothermal energy in Iceland is for space heating, using natural hot water at temperatures below boiling. This utilization is steadily increasing. At present, about 55,000 people live in houses heated this way.

118. The use of geothermal energy for process heating has been studied in Iceland for many years. At the present time a diatomite plant is being built in northern Iceland, using geothermal steam for drying of diatomaceous earth, which is obtained from nearby underwater deposits. The plant is scheduled to start operating in the summer of 1967 at an initial production rate of 6,000 tons per year, increasing later to 30,000 tons per year.

119. Due to the abundant hydropower in Iceland, there are still no plans to utilize geothermal power, at least in the near future.

#### (f) Union of Soviet Socialist Republics

120. A 5 MW generating station is now operating and a 25 MW station is under construction near Petropavlovsk in south-eastern Kamchatka. No further details concerning these activities have been made available as yet.

### 2. United Nations activities

121. During the report period UNDP (Special Fund component) projects for geothermal resources exploration have been initiated in El Salvador and Turkey and a plan of operation has been signed for a project in Chile. In addition, technical assistance missions have been sent to China (Taiwan) and the Philippines. Although not yet acted upon, requests for technical assistance missions have been received from Ecuador, Guatemala, Israel, Kenya and Tunisia.

#### (a) El Salvador

122. The UNDP (Special Fund component) project became operative in January 1966. Activities during the year included geologic mapping and one-metre probe, gravity and magnetic surveys. A shallow drilling programme to depths of 100 metres was initiated in order to obtain temperature gradient data, and approximately a dozen holes have been completed. These activities have been mainly concentrated in western El Salvador, at Ahuachapan, but other thermal areas in the volcanic chain are also being investigated. Present plans are to begin deep exploratory drilling in November 1967.

#### (b) Turkey

123. The UNDP (Special Fund component) geothermal exploration project became operative in January 1967. The project area includes the entire western half of Turkey and the first phase of the work will be to select from the numerous thermal occurrences in this region the most promising hot spring areas for detailed investigation.

A great deal of preliminary exploration work had already been completed before initiation of this project which, hopefully, will make it possible to begin deep test drilling in the latter part of 1967.

(c) *Chile*

124. Although the UNDP (Special Fund component) geothermal project in northern Chile is not yet operative, agreement of the plan of operation has been reached, and the document was signed by all parties concerned in January 1967. While negotiating the plan of operation, agreement was also reached with the Government of New Zealand to supply staff and some services for the Chilean project. It is hoped that the project will become operative in the early part of 1967.

(d) *Philippines*

125. Under a UNDP (Special Fund component) project for a pre-investment study on power, including nuclear power in Luzon, three specialists in geothermal energy were sent to the Philippines, one in December 1963, one in November 1964 and one in May 1965. As a result of these experts' work, it was concluded in the final report of the Special Fund project that geothermal energy sources "could be of significance in the total energy economy of the island (Luzon)". Consequent to this recommendation, a technical assistance mission of two specialists was sent in November-December 1966 to assist the Government of the Philippines in preparing a formal request for a UNDP (Special Fund component) project. It is hoped that this request will be submitted in the first half of 1967.

126. As a result of recommendations of the United Nations experts mentioned above, geothermal exploration programmes are already well under way. Gravity, magnetic, resistivity and one-metre probe surveys have been completed at the Tiwi thermal area, which is located in south-eastern Luzon. Six shallow exploratory holes were drilled, the last producing a continuous flow of steam, with a small amount of water, from a depth of only 550 feet. As yet, there are no temperature, pressure or flow data available from this well.

127. In addition to the work done at Tiwi, extensive geologic and geophysical investigations have been carried out at the Tongonan thermal area, located in north-western Leyte. The results of this work are encouraging, but so far no drilling has been attempted.

(e) *China (Taiwan)*

128. At the request of the Republic of China, a technical assistance mission was sent in November 1966 to review the geothermal exploration work in progress and advise on what further assistance the United Nations may be able to offer in the pursuit of this work.

129. Geothermal exploration began in July 1965 and is centred in the north-western corner of Taiwan, in the Pleistocene volcanic district of Tatunshan. An area of approximately seventy-five square kilometres has been surveyed by the one-metre probe method, and approximately twenty shallow exploration holes have been drilled to depths ranging from 50 to 160 metres. In spite of this shallow depth, the results of the drilling programme have

been very encouraging. The highest temperature recorded so far is 161°C at ninety-six-metre depth. Both dry steam and saturated steam-hot water production have been obtained from these holes. Plans for further exploration include the continuation of the shallow drilling programme, which will be supplemented by deeper, wire-line core drilling and the initiation of resistivity and magnetic surveys. It is hoped that deep, large-bore exploratory drilling can start late in 1967 or early 1968.

(f) *Mexico*

130. In December 1964, a technical assistance mission was sent at the request of the Government to advise on the further development of the Mexicali field, and to discuss possible United Nations assistance. As a result of this mission, a bilateral agreement was arranged between Mexico and New Zealand under which three Mexican specialists were accepted for training at Wairakei, New Zealand, in 1965. There are now five producing steam wells and a contract was signed with a consulting firm to undertake further development of the Mexicali field. Although confirmatory measurements are not yet available, preliminary measurements indicate that these wells are so far the most productive of any drilled in the world.

*C. Review of present activities in oil shale development*

131. There has been a notable increase in research and development activities relating to oil shale in many parts of the world as the prospects of economic exploitation of oil shales has come closer to realization. In those countries such as the Federal Republic of Germany, China (Mainland), Spain, Sweden and the Union of Soviet Socialist Republics which have, or have had, commercial oil shale industries, pilot plant and experimental work is proceeding concurrently with studies based upon their operational experience. In addition, there has been a significant expansion of research activities in a number of other countries — notably Brazil, and the United States of America — where serious efforts are being made to lower the costs of oil shale processing and utilization in order to establish oil shale industries on a commercial basis.

132. Research work on the use of oil shale is proceeding mainly in two broad directions: (1) destructive utilization in which the product is used as a fuel in the same manner as petroleum; and (2) direct combustion in which the raw shale is burnt to produce steam for the generation of electricity.

*1. Destructive utilization*

(a) *Retorting*

133. Application of heat is the only means that has been found for producing shale-oil, and numerous heating processes and mechanical devices, known as retorts, in which the oil shale is heated, have been developed for this purpose.

134. The work in the United States of America and the Union of Soviet Socialist Republics is aimed at the development of large-capacity retorts to serve large-capacity plants.

135. In the Union of Soviet Socialist Republics con-

siderable progress has been made in developing a retort with a solid refractory heat carrier outside the shale bed. Ash, which is produced by burning the retorted oil shale, has been used as a solid refractory heat carrier. The results from the retort were so encouraging that an industrial plant was built with a retorting capacity of 500 tons oil shale per day. Subsequent tests indicated that a 1,000 ton per day retort, and larger, could be made a major tool of the oil shale industry.

136. In the United States of America several companies are experimenting with possible methods of reducing the cost of producing shale-oil. Two of these methods appear to be most promising. One method also uses a solid refractory heat carrier. In this process the residual carbon in spent shale is burned off to heat and reheat ceramic balls used as the solid refractory heat carrier. It is claimed that this method will eventually be producing oil for \$1.25 to \$1.30 a barrel.

137. In the second method, the retort chamber is a vertical truncated inverted cone. Shale is fed into the lower small end by a hydraulic piston. Spent shale is discharged by overflowing the upper lip of the cone. The shale charge is first ignited on the upper surface, and air is drawn downward through the shale causing the combustion zone to progress downward countercurrent to the flow of shale. The resulting hot flue gases pyrolyze the upward moving shale. The resulting oil vapours are condensed on the incoming raw shale and withdrawn.

138. The equipment and procedures were first tried on a small scale (twenty-five tons per day) and then a retort was built which reportedly handled more than 1,200 tons per day satisfactorily. Some engineers now believe that single units can be built to handle three times that tonnage.

139. Having had pilot plant, engineering-size and industrial plant experience and comprehensive testing, the gas combustion process is now undergoing revolutionary advances in the United States of America and the Union of Soviet Socialist Republics. Indeed, it is rapidly becoming one of the major retorts of the oil shale industry. The limited size of the retort was, until recently, a serious problem. Now, however, retorts equipped with an anti-segregation feeder and a special hydraulic discharger for the spent shale can have a capacity as large as 1,500 tons shale per day (as compared with the present maximum capacity of kilns of about 200 tons shale per day).

140. The mining of oil shale still accounts for 50-60 per cent of total processing costs. These costs can be eliminated by *in situ* retorting. The United States Atomic Energy Commission has developed an understanding of the technical and economic feasibility of fracturing oil shales with nuclear explosives for an *in situ* combustion-extraction process. Costs of breaking oil shale with nuclear explosives on a large scale are estimated at a few cents per ton. Extracting the oil from the broken shale would be similar to operating a large-scale batch retorting process depending on the combustion of the carbon on the retorted shale. Recovery is estimated at 50 per cent of the in-place oil. The United States Atomic Energy Commission and Bureau of Mines are currently collaborating on studies of the technical and economic feasibility of the nuclear

technique, and in the design and execution of laboratory and field experiments to further develop the concept.

#### (b) Refining

141. At the present time, basically two economically and technically feasible methods for utilizing shale-oil have been developed.

142. The first is to refine the material partially, to produce an acceptable pipeline crude and transport this to the marketing area. Two series of partial refining operations have been proposed. In the first case, the shale-oil is coked, and the resulting gasoline fraction is catalytically reformed. Higher boiling coke distillate is hydrogenated to remove sulphur and nitrogen and to partially saturate olefins present. The hydrogen sulphide and ammonia produced are recovered. The gasoline fractions obtained by hydro-cracking are sent to the catalytic reforming unit. The remaining hydrogenated liquid product is hydrogenated diesel fuel. Hydrogen for the process is obtained by the steam-methane reaction with refinery gas from the coking unit. The raw catalytic reformed gasoline and hydrogenated diesel stocks are sent via pipeline for finishing by conventional refinery processing.

143. In the United States Bureau of Mines process, the raw shale-oil is submitted to a vis-breaking treatment (gas loss 2 to 6 per cent) at the retorting site and delivered by pipeline for refining by conventional recycle thermal cracking, catalytic reforming, and acid treatment of gasoline stock to produce gasoline and heavy fuel oil as the main products.

144. The second method is to treat the material to produce chemical products. This scheme is under development in the Union of Soviet Socialist Republics, and foresees the production of detergents, phenols, coke for the electrode industry, impregnation oil and chemical products.

145. A process combining oil shale retorting and shale-oil refining into one single cracking process is under development. This process, called the Huntington-Pyrochem Single Cracking Principle, improves the economic aspect of oil shale exploitation. It is based on concurrent contacting of preheated shale with preheated hydrogen. The products obtained are low boiling hydrocarbons (similar to gasoline) essentially free of nitrogen and sulphur.

#### (c) Production of kerochemicals

146. One further new development in oil shale technology deserves mention. This is the production of organic acids from the kerogen of oil shales. This new method was developed by the Academy of Science of Estonia, Union of Soviet Socialist Republics. In this process the organic matter in the shale is oxidized by treatment with nitric acid to organic dibasic acids (succinic, glutaric, adipic, pimelic, suberic and azelaic). The kerogen yields about 60 per cent dibasic acids.

147. The special advantage of this method lies in the fact that it permits converting a high-molecular weight organic substance into a well-defined chemical raw material usable for further chemical synthesis.

148. An engineering-size plant is now being built in Estonia in the Soviet Union.

## 2. Direct combustion

149. In the Union of Soviet Socialist Republics since 1948, mechanical stoking of oil shale has been replaced by the use of pulverized oil shale for firing large central station boilers. The oil shale-burning Baltic Steam Electric Generating Plant (Estonia, Union of Soviet Socialist Republics), is a 1,625 MW plant consisting of a number of units of 100 and 200 MW. In the near future another oil shale burning 1,500 MW plant will be built with unit sizes of 200 MW with the possibility of installing even larger units. The cost of thermal power at the plant is about 3.9-4.5 mills per kWh, without ash utilization.

150. The latest technical developments also permit the economic utilization of low-grade oil shale (heating value about 1,000 kcal per kg) by combustion in the turbulent layer furnace. In Dotternhausen (Württemberg, Federal Republic of Germany), such a method is being used. The normal size of the combustion plant ranges from approximately 100 tons per day up to more than 1,000 tons per day per unit. The cost of power, for a 10 MW plant, is about 10 mills per kWh, without ash utilization.

151. Shale ash obtained by combustion is not an inert material, but possesses certain hydraulic properties. Attempts have therefore been made to use it for bricks and as a cement extender (Sweden, Federal Republic of Germany and the Union of Soviet Socialist Republics). Fine-ground fly-ash from steam-electric plants burning pulverized oil shale has been used instead of cement or lime for stabilization of clayey road substrata. Fly-ash has also been used as an addition to Portland cement clinker. The attempts made have yielded promising results, and there may in certain situations be a market for part of the ash for cement, road material or building blocks. Some oil shales contain such useful minerals as uranium (Swedish oil shale) and vanadium and attempts have been made to separate and recover these minerals from the ash. In Sweden, for example, a plant was built in 1956 to extract uranium from oil shale ash.

## 3. Oil shale industries in selected countries

152. Commercial oil shale industries exist in China (Mainland), Federal Republic of Germany, Spain and the Union of Soviet Socialist Republics.

### (a) Federal Republic of Germany

153. In 1952, in Dotternhausen (Württemberg) there was a research programme initiated aimed at developing, on a commercial level, the technology needed to process oil shale for the production of cement and electricity. As a result of the success of this research programme, a pilot plant began operation in 1959. Knowledge gained in the operation of this pilot plant made it possible to start an industrial power plant in 1961.

### (b) Spain

154. A small scale oil shale industry has existed since 1922 and major expansion of the Calvo Sotelo plant at Puertollano was completed in 1955. A newly-installed hydro-

genation plant permits the production of more valuable end-products, such as lubricating oils.

### (c) China (Mainland)

155. Production in China (Mainland) has almost tripled in the last few years from 12 million tons in 1956 to about 35 million tons in 1964. A new oil shale district came into production in Kwantung in 1960, and another large one in Manchuria is currently under investigation. The oilshale district of Fushun, Manchuria, from which the largest part of the current production originates, was opened in 1929 and is perhaps the largest and most successful low-grade oil shale (Fisher assay — 3 per cent oil) operation in the world. This is partly due to the unique fact that the oil shales form the overburden of bituminous coal. The removal of the shale permits open cut mining of the coal, thus considerably improving the economics of the operation.

### (d) Union of Soviet Socialist Republics

156. In the Union of Soviet Socialist Republics in recent years, a tremendous increase in oil shale consumption for electric power generation has been experienced. The Baltic Thermal-Electric Power Plant at Narva, using oil shale as fuel, is now fully completed, with a capacity of 1,625 MW. As indicated in paragraph 149 above, an additional oil shale-burning 1,500 MW plant will be built. In the Estonian SSR the retorting capacity for shale-oil production was also increased to about 4.3 million tons of oil shale in 1965.

## D. Review of present activities in fuel cell development

### 1. Definition

157. The fuel cell is inherently a low voltage device which supplies direct current electricity as long as it is supplied with fuel and oxygen, the oxygen normally being supplied from the surrounding air. As the output of a fuel cell is normally one volt or less, in order to obtain a convenient output, a number of fuel cells are mounted together to form a fuel battery. While the best electricity generating stations have a thermal efficiency of about 40 per cent — and there are sound reasons why little further improvement is possible — fuel cells have been built with a thermal efficiency of 70 per cent. In other words, for a given fuel consumption, the fuel cell will provide more kilowatt hours of electricity than the combination of a heat engine — whether steam, gasoline or diesel — and a generator. And because the fuel cell uses less fuel and oxygen for a given output of energy than do alternative power sources, the over-all weight of the system is less. It is this high efficiency of fuel cells which led to their development for the space programme.

158. In addition to their efficiency, fuel cells are silent in operation, since they have no moving parts, and they cause less atmospheric pollution than gasoline or diesel engines. However, the fact that the principle of the fuel cell has been known for over 120 years without its being commercially applied gives some idea of the magnitude of the difficulties involved. These difficulties stem from the construction of a fuel cell in which the fuel electrode is separated from the air electrode by an electrolyte. Most

of the fundamental problems encountered with fuel cells result from the difficulties in maintaining this apparently simple system invariant since the electrodes deteriorate with use and the composition of the electrolyte is liable to alter with time. In addition, one of the most suitable materials for electrode manufacture, platinum, is expensive and occurs in only very limited quantities in the earth's crust. However, the potential rewards for the successful development of a commercial fuel cell are so great that, in addition to government expenditures, many millions of dollars have been spent on fuel cell development by commercial interests in Western Europe and North America.

## 2. *Fuels for fuel cells*

159. In principle, any fuel is capable of being oxidized by a fuel cell of appropriate design. By fuel is meant a material that will yield energy when it reacts with oxygen and many metals fall into this category. However, the choice of useful fuels is severely restricted by practical considerations of fuel cell design.

160. A suitable fuel must be capable of being introduced readily to the fuel cell electrode and the reaction products must be easily removed so that the system remains in an equilibrium condition.

161. Since they are readily available and are relatively inexpensive, petroleum fuels are an obvious choice. However, it is already clear that fuel cells will require relatively pure hydrocarbons whether they are consumed directly in the fuel cell or first converted to hydrogen. Natural gas (methane) and liquefied petroleum gas (LPG, i.e., propane and butane) should, in general, be suitable. Similarly in the case of liquid hydrocarbons only the lighter fractions from the refinery will be useful. Thus the fuel cell is likely to require a premium fuel but not an unusual one. There seems little prospect of satisfactory long-term operation on normal gas oils and certainly not on bunker fuel.

## 3. *Possible alternative fuel sources in developing countries*

162. When the slender resources of foreign exchange of many developing countries are borne in mind it is highly desirable that the fuel to generate their electricity should come from indigenous resources. Methane is the most suitable fuel for operation of fuel cells which may occur or be made in developing countries. Some lakes offer a source of natural gas which may be tapped for modest local needs of energy. Additionally, "Biogas" would seem to offer distinct possibilities as a source of fuel which could be converted by fuel cells into electrical energy.

163. "Biogas" is produced by the anaerobic fermentation of organic matter such as human and animal excreta, in suitable chambers. "Biogas" is two-thirds methane and one-third carbon dioxide and one ton of animal and vegetable solids will produce 50-70 cu. m. of gas. On this basis, one ton of solid refuse would produce about 175 kilowatt hours of energy when the gas is fed to a suitable fuel cell. Thus, the initial annual requirements of a rural community could be met by the use of sixty-five lbs. per annum of organic refuse per head, or roughly 1/5 lb. per day. Bearing in mind that the "Biogas"

process also produces a valuable fertilizer free from pathogenic organisms, it would seem worth while to consider the "Biogas" plant-fuel cell combination further.

## 4. *Other fuels*

164. Because of the difficulties encountered with hydrocarbons, fuel cell power systems have been built to use more reactive fuels.

165. By far the greatest number of fuel cell power systems built to date have used hydrogen as the fuel and pure oxygen as the oxidant. Perhaps the most noteworthy are the original 5kW system shown by Bacon in 1959 and the developments of this system; the system built for the Apollo space mission and the power system used successfully in the Gemini spaceflights.

166. Methanol is an attractive compromise and was successfully used in a 5kW system in which methanol was reformed with steam and the hydrogen purified by a palladium-silver diffuser.

167. For compact power sources, zinc-air cells and magnesium-air cells are finding application. Although these metals are relatively expensive fuels, the cells are simple to operate. Such power units are most likely to be used where a few watts to a few hundred watts are required for a relatively short duration.

168. To summarize then, it is not possible to be dogmatic about fuel requirements as fuel cells are still in the process of intensive development and no system has been shown to have a clear advantage over all others.

## 5. *The cost of power from fuel cell systems*

169. The total cost of power from a fuel cell power system is given by the sum of the fuel, capital and maintenance charges.

170. It is difficult to provide reference points at the present time, but it is doubtful if a hydrocarbon power system could be built for less than \$1,000/kW and this figure is probably optimistic. With a life of a year, if the unit were 30 per cent efficient and the hydrocarbon fuel cost 15¢/gallon (3¢/litre) the total cost of electricity would be 13.2¢/kWh if the cell were operating continuously, and 48.9¢/kWh if the cell were operative 25 per cent of the time. These figures would only be altered to 12.9¢ and 48.6¢/kWh respectively if the fuel cell were 40 per cent efficient. However, it is highly unlikely that any fuel cell system which reached the market would have to be written off in one year. With a five-year life, a cost of \$1,000/kW and 50 per cent utilization, the total cost of electricity would be 6.8¢/kWh of a 40 per cent efficient system. Clearly then, at the present stage of development of hydrocarbon fuel cells, capital cost and life are of much greater importance than efficiency. It will only be when capital costs are drastically reduced that the fuel cost will assume more significance and efficiency will increase in importance.

171. Until viable fuel cell power systems are produced, this exercise is largely academic, but many organizations are already committed to the realization of commercially viable fuel cell power systems. Where electricity costs of



10¢/kWh are acceptable (and this figure is no unrealistic for some rural areas in developing countries) fuel cells may not be too far from meeting a real requirement. Thus, relatively modest improvements should bring the fuel cell into consideration as a power source for some applications.

#### 6. Possible applications of fuel cells

172. Before the potential applications of fuel cells are considered, it is useful to recapitulate their characteristics. A fuel cell power system is a source of direct current (d.c.) electricity. The thermal efficiency of a small power system is likely to be as high as that of a large system. This contrasts with heat engines where maximum efficiencies are achieved only in the very largest sizes. In practice, a small fuel cell power system could well be at least as efficient as the largest heat engines. Fuel cell fuels, both gas and liquid, are far cheaper to distribute than electricity. For example, it costs roughly four times as much to distribute electricity as to distribute natural gas. The fuel cell is inherently silent in operation, and it may be run without its giving rise to noxious exhaust products. A characteristic of the fuel cell which is not always desirable is that the output voltage falls as the power drawn from the unit is increased.

173. The potential applications of fuel cells may be divided into two main classes, those requiring electrical power and those requiring mechanical power. Where electricity is required, either the d.c. output of the fuel cell must be accepted as such or it must be converted to alternating current (a.c.). This latter process is possible with modern semi-conductor-type circuits which operate at high efficiency. They are, however, expensive and usually cost \$2.00/watt of installed capacity or more. The cost of electricity from such a source has been discussed in the previous section of this report where it was shown that capital cost of the fuel cell is likely to dominate operating costs. Where a constant output is required, for example, to operate a beacon or relay station then the fuel cell may well be satisfactory by itself. On the other hand, where widely fluctuating loads occur, such as in a household, it may well be best to use the fuel cell to charge a secondary battery which will serve the dual purpose of absorbing high peak loadings and stabilizing the output voltage. The advantages of a fuel cell system over a gasoline or diesel electric generator would be in silence, greater reliability and much reduced maintenance costs.

174. Turning now to the needs of developing countries, it is clear that fuel cells are most likely to be of use in the "micropower plant" range of 100 kW or less. The potential advantages of the fuel cell vis-à-vis high-speed diesel generating sets are:

(a) The absence of moving parts should make the fuel cell more reliable and less subject to deterioration, and maintenance would be much reduced. It does not seem unreasonable to expect a fuel cell power plant to run for a year without servicing — indeed this has already been achieved in hydrogen-oxygen batteries;

(b) The fuel cell efficiency increases as the load decreases. This would mean that there should be no fuel consumption penalty for intermittent as opposed to continuous power supply;

(c) The fuel cell is silent; it could be located close to a house without annoyance;

(d) The efficiency of a fuel cell is largely independent of its size. Thus it would be perfectly feasible to make a 5 kW fuel cell module of which twenty could be used to make power units of from 5 to 100 kW. This would be far simpler and entail fewer different components than a range of diesel generators.

175. Against these real advantages must be set the fact that the fuel cell produces direct current and the terminal voltage varies with load. If the fuel cell is operated at somewhat less than its peak power output (i.e., it is under-run) then its voltage regulation may be adequate. However, it is usually necessary to incorporate some form of "power-conditioning" to give a stable power source. In its simplest form this power-conditioning can, as already mentioned, consist of a secondary battery which is "floated" across the fuel cell. This combination has the advantage that it is capable of absorbing very high peak loads with good voltage regulation. If fuel cell supplies were chosen for rural areas in developing countries there would seem to be much in favour of accepting a d.c. supply.

176. Clearly, the fuel cell power plant has interesting possibilities for dispersed communities such as exist in many developing countries. Thus, while it is quite possible that, within the next year or two, power systems may be built which seem attractive for use in such communities, they will probably use platinum catalysts in a low temperature system. Should another system such as that with an oxide electrolyte then be developed, a considerable reduction in capital cost would result. In these circumstances, it would be unwise for a developing country to be committed to a particular fuel cell system until the situation has stabilized.

177. Fuel cell development and production calls for a considerable investment of technical skill and capital on which the returns are at the moment uncertain. The burden of such development costs will probably be borne by the industrially-advanced countries where many research teams are now vigorously working towards the achievement of fuel cells possessing a combination of features such as reliability, freedom from maintenance, low capital cost and the ability to operate on inexpensive fuels. When satisfactory systems have been made such fuel cells will be available to developing countries which will be able to purchase them or to negotiate licences for them to be built in their own territories.

178. Returning to more general observations on the application of fuel cells, where a mean power of a few watts only is required for long periods, then hydrogen-air or hydrogen-oxygen cells fed from bottled gases or chemical gas generators may be the most economical solution to the problem. For higher power levels, as mentioned already, hydrocarbons or possibly methanol seem to be the more appropriate fuels. So far consideration has been limited to power levels of a few kilowatts and at the present state of fuel cell development this seems prudent. The maximum power level at which fuel cells can be expected to compete with other electrical generators will depend largely on the extent to which the cost of

fuel cells can be reduced. However, there are strong incentives to continue the development of fuel cells. For example, the large areas of land required by conventional electrical sub-stations are extremely expensive in cities. It would be convenient if natural-gas-fed fuel cells could be used to provide individual buildings with electricity. If capital can be saved in power distribution schemes by this means, then obviously they will be attractive.

179. Much thought has been given to the potential application of fuel cells to vehicle propulsion; railroad locomotives, buses, trucks, earth-moving equipment and private cars have all been suggested as suited to fuel cell propulsion. In such systems, the fuel cell will have to be associated with electric motors. Although electric transmissions would have to be developed considerably to take full advantage of a lightweight fuel cell, no insuperable obstacles to their development exist. Certainly an economically attractive fuel cell with its quietness and freedom from atmospheric pollution would commend itself to many. There is much more freedom in vehicle styling with a fuel cell than with a gasoline or diesel engine, since a rigid connexion between transmission and power unit is not required. These same advantages would apply to battery vehicles but, as has already been shown, they are likely to be of importance only in highly developed countries. However, until fuel cells suitable for vehicle propulsion are produced, speculation is not very fruitful. What can be asserted is that diesel engines with their relatively high cost and weight will be easier for the fuel cell to compete with than gasoline engines. Indeed if the fuel cell is ever able to compete with the low cost and weight of the gasoline engine, the prospects for reciprocating engines will be dim. Such are the economic and social implications of the substitution of reciprocating engines by an alternative that the change-over would be bound to take many years.

### 7. Conclusions

180. It is evident that fuel cells are still under development and that no one system is clearly superior to others. Electricity costs are likely to be such that fuel cell systems could well find application in the rural areas in developing countries. Whether natural gas, "Biogas", liquified petroleum gas (LPG), liquid hydrocarbon or methanol is the most suitable fuel will depend upon the conditions obtaining in a particular country. If the fuel has to be imported, a liquid hydrocarbon might be most suitable; on the other hand, if such a fuel were subject to fairly high taxation, methanol might be more attractive to the consumer. Indeed, fuel taxation policies could well influence both the type of fuel cells used in a country and the extent to which they found application. "Biogas" has economic attraction; whether it would be feasible to generate it reliably under the conditions existing in the areas where it is of economic interest would have to be the subject of further investigations.

181. Until such time as one or other of the fuel cell systems shows to clear advantage over the others, it is suggested that developing countries should try to benefit from the research being carried out in the more developed nations and should maintain a watching brief on the

situation. It is believed that the solid oxide electrolyte type of high temperature fuel cell could well prove to be useful in rural areas of developing countries. However, to develop a proven, reliable unit is bound to take some years.

## PART III

### INTERNATIONAL CO-OPERATION IN RESEARCH AND DEVELOPMENT OF NEW SOURCES OF ENERGY

#### A. Solar energy

182. There continues to be a reasonable level of exchange of information on solar technology through international exchanges of scientists and engineers, through meetings, and through a variety of publications. The visits of scientists and engineers can be illustrated by examples: Australia and the United States of America have exchanged engineers for solar energy research; visitors to solar laboratories in the United States have included engineers from Canada, Greece, Israel, the Union of Soviet Socialist Republics; and a United States solar engineer has toured the Union of Soviet Socialist Republics' solar energy research centres.

183. Several meetings of scientists and engineers working in the solar energy field have had international character. The Solar Energy Society annual conferences in 1965 and 1966 in the United States were attended by nationals of about ten countries and included United Nations representation. COMPLES (Coopération méditerranéenne pour l'énergie solaire) holds annual meetings of its members who are from the Mediterranean area; meetings were held in Lisbon in 1964, Istanbul in 1965, and Marseille in 1966. The first International Symposium on Water Desalination in the United States in 1965 was attended by participants from many countries, and included several papers on solar distillation. The India Arid Zone Conference of 1964 included consideration of solar energy applications and was international in character. Symposia with attendance primarily from the country of occurrence have been arranged by the American Society of Mechanical Engineers each year. The Union of Soviet Socialist Republics held a Conference on Solar Energy Applications in Ashkabad in 1965.

184. It is to be noted that these visits and meetings have to a large extent concerned those whose interests are in research and development, and to a much lesser extent in applications. There has been no equivalent of the United Nations Conference on New Sources of Energy of 1961, a major purpose of which was to set forth the status of solar energy developments for representatives of the developing nations.

185. Several societies continue to serve in developing solar energy technology. The Solar Energy Society, headquartered in the United States, has about a third of its one thousand members from sixty other countries. International secretaries of the Society have been recently appointed for Israel, Mexico and the United Arab Republic; ten other international secretaries had previously been appointed. Affiliated organizations of the Society are now active in Australia, Chile, Italy and

New Zealand. COMPLES includes members from most of the countries bordering on the Mediterranean, is organized into commissions to deal with various aspects of solar energy technology, and provides a forum for discussion of technical developments. In 1963, the Asociación Chilena de Energía Solar Aplicada was formed to strengthen Chilean research in solar energy. The Japan Association for Applied Solar Energy serves active research, development and applications in Japan.

186. There have been ten issues of the *COMPLES Bulletins*, over a period of five years, and forty issues of a Solar Energy Society *Journal of Solar Energy*, covering a ten-year period. A new solar journal, *Helio-technology*, started publication in 1965 in the Union of Soviet Socialist Republics; it is a bi-monthly publication of important Soviet research and development work on solar energy conversion and use. The Japan Association for Applied Solar Energy publishes a journal called *Solar Energy*.

187. There are a few examples of international co-operative programmes, going beyond the exchange of scientific and engineering information. OECD has sponsored the installation of the solar distiller in Spain, at Las Marinas, and the development was carried out by engineers from France and Spain, and, finally, the Solar Energy Experimental Centre which was proposed in the previous report on new sources of energy has now been established at Niamey, Niger, with the help of the United Nations which has, through its technical assistance programme supplied an Australian expert in solar radiation measurement who will be succeeded by a French expert. Equipment for solar radiation measurement has been provided by the United Nations and additional equipment will be made available. This research Centre is intended to serve the whole of West Africa.

### B. Geothermal energy

188. In addition to the United Nations activities mentioned earlier in this report, there have been a number of interesting examples of international co-operation in the field of geothermal resources development.

189. In the area of international co-operation, Japan has provided technical assistance to China (Taiwan) under the Colombo Plan in the fields of geologic and geophysical exploration for geothermal resources.

190. New Zealand has been particularly active in providing training in all phases of geothermal development. During the period under review, students from Japan, Mexico and the Philippines have received training in New Zealand under bilateral agreements. New Zealand's role in international co-operation will greatly increase with the initiation of the UNDP (Special Fund component) project in Chile for which the New Zealand Government has agreed to provide staff and some laboratory services.

191. A Turkish geophysicist has recently completed a United Nations fellowship in Italy where he studied exploration techniques at Larderello and Mt. Amiata.

192. On two occasions during the period covered by this report, a geophysicist specialized in geothermal exploration was made available to the United Nations by

the Government of Iceland for United Nations technical assistance missions to Mali and the Philippines.

193. The importance of geothermal energy research which is currently expanding in Italy and in some other countries has been fully realized by the Italian Government. The Consiglio Nazionale delle Ricerche, in co-operation with the State Power Company, the Ente Nazionale per l'Energia Elettrica (ENEL) established a research institute (Centro Studi Geotermici) in Pisa to extend and co-ordinate both fundamental and applied research. More than \$3 million have been budgeted for the first five-year period to be spent mainly in fundamental research and in the improvement of research tools and techniques. The co-operation of ENEL, which involves expenditures of the same order of magnitude, represents a major contribution to the project to which universities, specialized institutes, laboratories, and several scientists are associated.

194. In order to transfer to the developing countries the benefits of the advanced techniques, scholarships have been offered to UNESCO and, starting from this year, students coming from developing countries will be associated with the CNR working groups.

195. The New Zealand Government was host to a major international meeting held in November 1965 under the auspices of the International Association of Volcanology. In addition to many papers on volcanology, over twenty-five papers concerning geothermal resources were given by representatives from Iceland, Japan, New Zealand, the United States of America and the Union of Soviet Socialist Republics. The United Nations could not be represented at this meeting because of financial considerations.

### C. Oil shale

196. The United Nations has taken an active role in the promotion and development of oil shale research and exploration and is attempting to act as a clearing house for information in this field.

197. A paper entitled *Progress and Prospects in the Utilization of Oil Shale* was prepared by the Department of Economic and Social Affairs for submission to the fourth session of the Advisory Committee on the Application of Science and Technology to Development. The paper was reviewed by a leading technical journal, it attracted a very considerable amount of attention in many parts of the world and it has since been widely quoted in various technical and business journals. As a result of the unusual number of requests for copies of this report, it has been revised and expanded in the light of the latest research and on the basis of recent United Nations technical assistance missions.<sup>14</sup>

198. The growth of interest in the possibilities of oil shale exploitation and the fact that the United Nations is taking an active interest in this field, has led to a number of requests from developing countries for technical assistance missions to evaluate their oil shale reserves and the possibility for their utilization. Such technical assist-

<sup>14</sup> United Nations publication, Sales No.: 67.II.B.20.

ance missions have recently been provided to Israel, Mali, Somalia, Trinidad and Tobago, Turkey and Yugoslavia, and it is expected that similar technical assistance will be provided to Costa Rica, Cyprus, Ecuador, Greece and Madagascar in the near future.

199. The Union of Soviet Socialist Republics, which has been in the forefront of technological developments associated with the utilization of oil shale, has offered to provide host facilities to enable the United Nations to hold a symposium on the development and utilization of oil shale resources in the Union of Soviet Socialist Republics in the autumn of 1968. This symposium, which would be organized by the United Nations in collaboration with the Government of the Union of Soviet Socialist Republics is expected to be one of the major international meetings on oil shale and will further emphasize the role of the United Nations in co-ordinating world-wide activities in this field and will, it is hoped, facilitate the exchange of information and experience relating to the latest research and development techniques for the benefit of both developed and developing countries.

200. In addition to this forthcoming meeting, the United Nations endeavours to maintain contact with other international and national organizations and to participate in meetings convened by them.

#### D. Fuel cells

201. As far as is known there is at this time no formal international co-operation in fuel cell research and development. There has been an exchange of information between scientists and technicians and also exchanges of visits between research establishments. There is, however, no organized basis for international co-operation and the United Nations is therefore attempting to initiate some method of facilitating international collaboration as a means to expedite the development of the fuel cell. To this end, the Secretariat has prepared a report on the present status and future prospects of fuel cells, which will be submitted to the next session of the United Nations Advisory Committee on the Application of Science and Technology to Development.

### PART IV

#### CONCLUSIONS AND RECOMMENDATIONS

202. In its resolution 1033 B (XXXVII), the Economic and Social Council authorized the Secretary-General to proceed as envisaged in the recommendations contained in document E/3903 on recent developments relating to new sources of energy. These recommendations included, *inter alia*, the establishment of close contact with bodies active in solar energy; the convening of a solar energy symposium; the strengthening of United Nations activities in the field of geothermal energy and the possibility of convening a symposium on geothermal energy.

203. The Secretariat has endeavoured to comply with the directives of the Economic and Social Council within the limits of the budgetary constraints that have prevailed during the past three years, and some achievements have been made in this direction as follows:

(a) Preliminary discussions have been held with a number of Governments regarding the convening of a symposium on geothermal energy, and it is expected that one of these Governments will offer host facilities so as to enable this symposium to take place.

(b) Close contact has been maintained with various bodies dealing with new sources of energy, such as the Solar Energy Society and the International Union of Geologists and Geophysicists, dealing with geothermal energy. However, the extent of this collaboration has been severely limited by financial restrictions. In particular, the Solar Energy Society had offered to convene a solar energy symposium jointly with the United Nations, preferably in a developing country, but the United Nations was unable to accept the invitation for financial considerations. Furthermore, the United Nations was unable to participate in the important meeting on geothermal energy held in New Zealand under the auspices of the International Association of Volcanology in November 1965.

204. It is therefore felt that, in endorsing the activities of the Secretariat in promoting international co-operation in the development of new sources of energy, the Economic and Social Council may wish to recommend the approval of the necessary funds so that the following recommendations can be effectively implemented:

(1) The strengthening of the United Nations activities in the sphere of new sources of energy in order to enable the United Nations to take an active co-ordinating role, to increase its assistance to developing countries and other bodies working in these fields.

(2) The convening of a geothermal energy symposium, possibly with the assistance of a host country.

(3) Following the Economic and Social Council recommendation made in 1964, the Secretariat has investigated the need for a solar energy symposium and has come to the conclusion that a United Nations symposium on solar energy should be convened in 1968 or 1969 with the objective of (a) achieving a better exchange of scientific and technological information; (b) informing developing nations of new solar technology which may have potential importance for them; and (c) determining the needs and market potentials for various solar utilization systems.

(4) The convening of a symposium on the development and utilization of oil shale resources in August 1968 for which the Government of the Union of Soviet Socialist Republics has already offered host facilities.

(5) The strengthening of the Solar Energy Experimental Centre which has already been successfully established in Niamey, Niger, so as to enable it to expand its facilities and serve the needs of the Sahelian group of countries in West Africa.

## DOCUMENT E/4303/ADD.1

## Note by the Secretary-General

[Original text: English]  
[18 May 1967]

1. The progress report of the Secretary-General on new sources of energy (E/4303) contains a number of recommendations involving expenditures of different types. In this note, the Secretary-General wishes to indicate the magnitude and the possible sources of financing of these expenditures.

2. As to recommendation 1 (see E/4303, para. 204), the Secretary-General's proposals for the 1968 budget contain the provision of one additional staff member in the Resources and Transport Division, who is expected to deal with problems of new sources of energy.

3. One of the methods of fostering United Nations activities in the field of new sources of energy consists in the organizing and convening of symposia intended to facilitate the exchange of experience and transfer of technology.

4. For the convening of a United Nations symposium on the development and utilization of oil shale resources mentioned in recommendation 4 of the same report, the Government of the USSR has kindly offered to provide host facilities and the meeting is scheduled to be held in Leningrad in September 1968. The cost for this symposium, which has been estimated at \$75,000, has already been included in the 1968 programme of the Technical Assistance component of the United Nations Development Programme (UNDP).

5. The proposed United Nations geothermal energy symposium (recommendation 2, para. 204) scheduled for 1969 will entail the following expenditures:

Travel of 30 participants from developing countries . . . . .	\$U.S. 27,000
Subsistence for the participants from developing countries . . . . .	7,000

Travel and subsistence of United Nations staff . . . . .	\$U.S. 3,000
Salaries, travel and subsistence of interpreters . . . . .	10,000
Salaries, <i>per diem</i> and travel of lecturers . . . . .	15,000
Preparation of final documentation . . . . .	30,000
TOTAL	92,000

6. The Secretary-General hopes that the Member country which will offer the host facilities would also contribute, either in cash or in kind (board and lodging for participants, certain services such as interpretation), towards meeting the cost of this symposium. As to the balance of the expenditures, the Secretary-General intends to explore other possibilities of financing, such as the regular programme or the Technical Assistance component of the UNDP. It is also hoped that some of the lecturers and documentation may be made available by Member States at no cost to the United Nations.

7. A solar energy symposium, already endorsed by Council resolution 1033 B (XXXVII), is proposed to be held in co-operation with the Solar Energy Society in 1969. The cost structure for this symposium follows closely the one above, but instead of thirty participants from developing countries, only twenty-five are expected, and the lecturers will be offered by the Solar Energy Society. This would reduce the cost to approximately \$70,000.

8. As to the strengthening of the Solar Energy Experimental Centre in Niamey, Niger, it is understood that this matter would be considered by the Governing Council of the UNDP at the request of the interested Governments.

9. It will be seen from the aforementioned presentation that the recommendations of the Secretary-General do not give rise to a request for new credits on the regular budget.

## DOCUMENT E/4307

Water desalination, with special reference to major developments in 1966:  
Report of the Secretary-General

[Original text: English]  
[27 March 1967]

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## I. Introduction

1. This report is submitted pursuant to Council resolution 1114 (XL) of 7 March 1966 which the Council adopted unanimously after having considered a similar report (E/4142)<sup>15</sup> on developments in 1965 in the field of water desalination.

2. After a brief review of the recent increase in desalination plant capacity, the report discusses some significant problems and possibilities of desalination schemes. This report summarizes major international developments and the activities of the United Nations during 1966, in chapters IV and V, respectively, and concludes with some recommendations concerning further activities of the United Nations in this field.

## II. Growth in desalination plant capacity

3. The acute water shortage in a number of developing countries during the past few years, caused in part by the growth in population and in economic activity, has led to a rapid and significant increase in the number and total capacity of desalination plants. The total capacity of such plants known to be in operation in developing countries thus has increased from approximately 20 million gallons per day by the end of 1962 to about 86 million gallons per day by the end of 1965.

### Desalination plant capacity in 1966

#### (a) Plants completed

4. The total number of desalination plants known to have been completed in 1966 was seventeen with a total capacity of 11,075,000 gallons per day<sup>16</sup> (see table below). Most of these plants were of the flash distillation type using fuel oil and having capacities ranging from less than 1 million gallons to 5 million gallons per day. The largest plants put into operation in 1966 were in Kuwait (5 million gallons) followed by Malta (1.2 million gallons), Israel (1 million gallons) and the Virgin Islands (750,000 gallons). An interesting development was the completion in 1966 of three solar distillation plants with a combined total output of roughly 5,800 gallons per day.<sup>17</sup>

#### (b) Plants approved or under construction

5. As can be seen from the table below, the capacity of plants approved or under construction in 1966 is estimated at 203,683,800 gallons per day, and exceeds by far the total capacity of all desalination plants in operation throughout the world. The year 1966 marks a record in the approval or construction of desalination plants. It should be noted, however, that most of this total is accounted for mainly by two large plants, one in the Soviet

Union and the other in the United States, which will have a combined capacity when completed of 175 million gallons per day. Desalination plants under construction in developing countries was much smaller and amounted to a total of about 21.6 million gallons per day.

6. The majority of the twenty-nine desalination plants approved or under construction are conventional and of the flash distillation type; three are dual-purpose plants using nuclear energy, and five are solar distillation plants, which indicates a growing interest also in such plants.

7. One of the important developments is the construction or approval of nuclear desalination plants for the first time in the history of desalination. The major projects are the two large nuclear power-desalination plants in the United States and the Soviet Union.

8. The desalination plant in the United States was approved in 1966 and will be located in Los Angeles, California. It will have a capacity of 150 million gallons per day and a 1,800-megawatt power station and is the first of its kind and size in the world. Initially, a 50-million gallon per day evaporator will be constructed, to be followed five years later by two additional evaporators of equal size. The total capital cost of the project is estimated at \$444 million, and the cost of desalinated water at 21.9 cents per 1,000 gallons. It should be stressed that the relatively low cost of desalination is possible only because of the very large size of the power station and federal financial support. The influence of the large desalination plant on lowering cost is minor.

9. The large nuclear power-desalination plant in the Soviet Union is being constructed at Schevchenko on the Caspian Sea. It will have a capacity of 25 million gallons per day and a 150-MW(e) power station with a fast breeder reactor as a heat source. No reliable estimates are available to the Secretariat regarding the total capital cost of the project or the cost of desalinated water to be produced.

#### (c) Plants planned or under study

10. Desalination plants which are known to be planned or under study have an estimated total capacity of about 147,347,000 gallons per day. These plants are, for the most part, of the dual-purpose and flash distillation type. The most important project is the nuclear power-desalination plant in Israel having a capacity of 100 million gallons per day. A nuclear power-desalination plant is also planned in the United Arab Republic, with a capacity of about 5.2 million gallons per day. Nine of the eleven desalination plants listed as planned or under study are conventional. This is in line with the fact that in most of the developing countries the need is for conventional desalination plants using fuel oil, natural gas (if available) or electric power as energy sources and having capacities ranging from less than 1 million gallons to about 10 million gallons per day, whereas the present application of large nuclear power desalination plants appears to be limited mainly to a few advanced countries.

<sup>15</sup> Official Records of the Economic and Social Council, Fortieth Session, Annexes, agenda item 7(c).

<sup>16</sup> Excluding output of solar distillation plants.

<sup>17</sup> Based on a total area of 58,104 square feet for the three plants and on an assumed area/capacity ratio of 10 : 1. Information concerning the actual output of the solar plants is not available.



## DESALINATION PROJECTS IN 1966

Region and country	Capacity <sup>a</sup> (gallons/day)	Type	Source of energy	Completed	Approved or under construction	Planned or under study
<i>Africa</i>						
Libya . . . . .	400,000	Flash	Fuel oil		X	
Mauritania . . . .	790,000 <sup>b</sup>	Flash	Fuel oil		X	
Tunisia . . . . .	28,800	Electrodialysis	Electric power		X	
United Arab Rep .	5,280,000 <sup>b</sup>	Flash	Nuclear			X
<i>Asia</i>						
Iran . . . . .	86,000	Flash	Fuel oil	X		
	300,000	Flash	Fuel oil	X		
Israel . . . . .	100,000,000 <sup>b</sup>	Flash	Nuclear			X
	1,000,000 <sup>b</sup>	Flash	Fuel oil	X		
	132,000	Electrodialysis	Electric power	X		
Kuwait . . . . .	5,000,000	Flash	Natural gas	X		
	500,000	Flash	Natural gas	X		
	14,000,000	Flash	Natural gas		X	
Oman (trucial) . .	80,000	Flash	Fuel oil		X	
Saudi Arabia . . .	5,000,000 <sup>b</sup>	Flash	Fuel oil		X	
	50,000	...	...		X	
	120,000	...	...			X
	50,000	...	...			X
<i>Caribbean and Latin America</i>						
Antigua (British) .	150,000	Flash	Fuel oil		X	
Bermuda . . . . .	48,000	Electrodialysis	Electric power		X	
	13,000	Electrodialysis	Electric power	X		
Brazil . . . . .	357,000	...	...			X
Ecuador . . . . .	120,000	Flash	Fuel oil	X		
Virgin Islands (U.S.)	20,000	Electrodialysis	Electric power	X		
	2,500,000	Flash	Fuel oil			X
	750,000	Flash	Fuel oil	X		
Mexico . . . . .	7,500,000 <sup>b</sup>	Flash	Fuel oil			X
Peru . . . . .	720,000 <sup>b</sup>	Flash	°	X		
<i>Europe</i>						
Fed. Rep. of Germany	132,000	Flash	Fuel oil		X	
Greece . . . . .	(88,560 sq. ft.)	Solar	Solar		X	
	(27,648 sq. ft.)	Solar	Solar		X	
	(27,648 sq. ft.)	Solar	Solar		X	
Italy . . . . .	600,000	Flash	Fuel oil	X		
	1,000,000	Flash	Fuel oil			X
Malta . . . . .	1,200,000 <sup>b</sup>	Flash	Fuel oil	X		
Portugal . . . . .	(7,668 sq. ft.)	Solar	Solar	X		
Spain . . . . .	5,300,000 <sup>b</sup>	...	...			X
	25,000,000	...	...			X
	(9,396 sq. ft.)	Solar	Solar	X		
	650,000	Flash	Fuel oil		X	
	(28,728 sq. ft.)	Solar	Solar		X	
Spanish Sahara . .	26,000	Flash	Fuel oil		X	
	26,000	Electrodialysis	Electric power		X	
United Kingdom .	634,000	LTV	Fuel oil	X		
USSR . . . . .	25,000,000 <sup>b</sup>	Flash	Nuclear		X	
<i>North America</i>						
United States . . .	150,000,000 <sup>b</sup>	Flash	Nuclear		X	
	1,000,000	Flash	Fuel oil		X	
	2,160,000	Flash	Fuel oil		X	
	72,000	Flash	Fuel oil		X	
	172,000	Flash	Fuel oil		X	
	2,620,000	Flash	Fuel oil		X	
	60,000	Distillation	Fuel oil		X	
	1,000,000 <sup>b</sup>	Flash	Nuclear		X	
	158,500	Flash	Fuel oil		X	

(Continued overleaf)

DESALINATION PROJECTS IN 1966 (*continued*)

<i>Region and country</i>	<i>Capacity<sup>a</sup> (gallons/day)</i>	<i>Type</i>	<i>Source of energy</i>	<i>Completed</i>	<i>Approved or under construction</i>	<i>Planned or under study</i>
<i>Oceania</i>						
Australia . . . .	240,000	...	...			X
	60,000	Electrodialysis	Electric power		X	
	(41,040 sq. ft.)	Solar	Solar	X		
	(35,640 sq. ft.)	Solar	Solar		X	
TOTAL						
Completed . . . .				11,075,000		
Approved or under construction . . .				203,683,800		
Planned . . . .				147,347,000		

<sup>a</sup> The capacity of solar distillation plants is not included in the total. Excluding electrodialysis plants with capacities of less than 13,000 gallons per day.

<sup>b</sup> Dual-purpose desalination plant producing water and power.

<sup>c</sup> Waste heat from copper smelter.

### III. Some significant problems and possibilities of desalination schemes

11. The systematic collection of experience in the operation of the increasing number of desalination plants of different sizes and designs — which is now being carried out through questionnaires pursuant to Council resolution 1114 (XL) — indicates some significant problems and possibilities which deserve not only attention but in some cases further detailed studies.

#### THE IMPORTANCE OF RELIABLE FORECASTS OF WATER DEMAND

12. The forecasting of water demand is one of the most important factors in determining the investment required for a water supply scheme. For desalination projects, in which investments per unit of supply are much higher than in conventional water projects, the reliability of demand forecasts is of particular importance. The information already at hand indicates, however, that few plants fully utilize their design capacity. The result in such cases is that the unit cost of desalinated water is higher, sometimes very much higher, than when the plant can operate on base load at or near capacity.

13. When demand forecasts are being made for desalinated water, a number of problems are encountered. In the past, water supplies in water-short areas may have either been available from inexpensive conventional sources or been transported from distant locations at very high cost; the introduction of desalinated water will in both cases bring about a major cost change. In the first case it will raise water costs suddenly, in the latter it will lower them significantly. In the face of such major changes, and if the costs are to be reflected by prices, the price elasticity of water demand will need to be considered. The problem of demand forecasting is further complicated by the fact that the introduction of desalinated water involves sudden changes in both the cost and quality of the water. In most cases, there is no local historical precedent in the light of which the response of the popu-

lation to such changes might be predicted.<sup>18</sup>

14. The absence of adequate data and basic studies on the determination of present and future demand for desalinated water in water-short areas makes it difficult to design desalination plants of the proper capacity which will be operated at a high load factor and therefore at minimum costs. This holds true especially in areas where there are no water grids and where desalinated water is the sole or major source of supply.

15. At a recent meeting of a panel of experts organized by the United Nations (see para. 35 below), studies on water demand and water demand forecasting were recommended. It appears that there is need for the development and application of improved techniques to determine (a) water demand and (b) the elasticity of water demand in response to changes in the price and quality of water.

#### THE UTILIZATION OF LOCAL ENERGY SOURCES FOR DESALINATION

16. Many developing countries which depend on fuel imports find desalination not only foreign exchange-intensive but also more expensive than it need be. There is now some experience in the utilization of local energy sources which deserves further study. For instance, a plant has been in operation since January 1966 on Long Island, New York, which utilizes for the distillation of sea water the heat obtained from the burning of refuse. As pointed out in another part of this report, a growing number of small distillation plants using solar energy are coming into operation and, in appropriate areas where small quantities of water are needed and fuel costs are very high, solar distillation may prove to be economic. The possible use of oil-shale deserves consideration as a source of energy in certain countries where alternative energy sources are more costly.

<sup>18</sup> It is interesting to note that the introduction of desalinated water in Eilat, Israel, and in Buckley, United States of America, resulted in a drop in water demand. The reason for this is partly due to the increase in water prices as compared to the low prices previously charged.

17. Studies by the Resources and Transport Division have shown that geothermal energy, when it is located near a saline water body in areas in need of desalinated water, can produce heat for this purpose at a lower cost than any other known source of energy, probably lower than that produced by giant nuclear plants. These are examples of local sources of energy which might be usefully employed where local conditions are favourable for desalination, but which are still disregarded in many cases probably because the potential of their utilization is not recognized.

#### MULTIPURPOSE SCHEMES

18. Among possible multipurpose schemes including the desalination of water, only dual-purpose plants producing power and water have been applied in a number of cases. This one form of multipurpose development has, however, a number of problems and is ideally applicable only in areas where there is both a water grid and a power grid and where the power and water output can be fed into their respective grid systems. But there are a number of other possibilities of combined development; they both need more study and application and deserve to be publicized more. Thus, for instance, a vapour compression dual-purpose plant has been operating in Japan for about ten years for the production of salt and water. This combined type of plant might perhaps be applicable in other countries. There are obvious possibilities of combining the extraction of minerals from sea water with the production of drinking water but this has not yet been done on an industrial scale. There are a number of plants which extract magnesium and bromine from sea water, but all such plants are located in industrial countries where the need for water is not pressing. Possibilities of combined multipurpose schemes are offered by geothermal energy, where the low-cost production of power and water is feasible and, in addition, the minerals in the steam, if available, might also make mineral production possible.

#### THE FOREIGN EXCHANGE ASPECTS OF DIFFERENT DESALINATION PROCESSES

19. Many developing countries in need of desalination are handicapped by the high foreign exchange cost of desalination equipment. The foreign exchange requirements vary according to various desalination processes and according to the ability of the countries concerned to produce some of their materials at home. No study has been undertaken so far in order to determine the foreign exchange aspects of the different desalination processes and it therefore appears advisable to undertake such a study in the near future.

#### THE COST OF WATER STORAGE

20. The panel of experts which at the end of last year studied the relationship between the design of a desalination plant and storage requirements has found that a considerable storage capacity is required in all cases where desalination is the sole or main source of water supply. It also found that conventional storage is very capital-intensive and that, therefore, the provision of sufficient storage capacity based on conventional design would considerably add to the cost of water. The panel

has suggested that, where the geological conditions are appropriate, underground storage of desalinated water may become feasible. There will, however, be a number of cases where the underground storage of desalinated water will not be feasible and the need exists, therefore, to develop new materials and new methods for the storage of desalinated water. Among the ideas put forward by the panel is storage in big plastic or rubber bags, off-shore or on land, and this as well as other similar ideas deserves the attention of industry and applied research institutes.

#### IV. International co-operation for water desalination in 1966

21. Several previous activities involving international co-operation in this field were continued in 1966, and some new ones were added. The year was also one of moderation after the First International Symposium on Water Desalination, held in Washington D.C. in October 1965, and of preparation for two conferences of major importance in this field, namely, the Second European Symposium on Fresh Water from the Sea, in Athens, Greece, from 17 to 22 May 1967, and the International Conference on Water for Peace, in Washington, D.C., from 23 to 31 May 1967.

22. Bilateral activities and those spearheaded by the International Atomic Energy Agency (IAEA) are reviewed briefly below, while United Nations activities are dealt with in the next section.

#### INTERNATIONAL ATOMIC ENERGY AGENCY

23. A desalination mission organized by IAEA in co-operation with the United Nations Department of Economic and Social Affairs visited Chile and Peru during the period from 13 March to 8 April 1966. The mission prepared two preliminary reports on water and power problems including the possibilities of nuclear desalination in the Antofagasta region in Chile and on the Peruvian coast. Final reports on the findings and recommendations were subsequently submitted by IAEA to the Governments of Chile and Peru.

24. An international panel of experts, including a United Nations staff member, met in Vienna from 18 to 22 April 1966 to receive a report prepared by the Agency on costing methods for nuclear desalination, among them the costing procedure proposed by the United Nations.<sup>19</sup>

25. The types of nuclear reactors and their suitability for desalination were discussed by a panel of experts organized by IAEA which met in Vienna from 14 to 18 November 1966.

26. The IAEA continued to take part as an observer in the Israel - United States Joint Board, and provided the Scientific Secretary and Chairman for the joint Mexico - United States of America Study Group, mentioned below (see paras. 28 and 29). It continued also to be a party to the United States - USSR agreement on the exchange of information on the use of nuclear power for water desalination, by receiving material relating to this subject from both countries.

<sup>19</sup> *Water Desalination: Proposals for a Costing Procedure and Related Technical and Economic Considerations* (United Nations publication, Sales No.: 65.II.B.5).

## GREECE - UNITED STATES OF AMERICA

27. A United States desalination team visited Greece in September 1966 to undertake a preliminary survey of the water use and power needs in Athens and to investigate the possibility of meeting such needs through the construction of a dual purpose desalination plant. In October 1966, the team visited United Nations Headquarters to discuss their preliminary findings with staff members in the Resources and Transport Division.

## ISRAEL - UNITED STATES OF AMERICA

28. The Joint Board of the Israel-United States Nuclear Desalting Project received the feasibility study — which was jointly sponsored by the Government of Israel, the United States Atomic Energy Commission and the United States Office of Saline Water — of a dual-purpose nuclear power desalination plant. In January 1966, the Joint Board recommended the construction in Israel of the plant, which would have an output capacity of 100 million gallons per day and 200 MW(e), cost \$200 million and produce fresh water at a cost ranging from \$0.29 to \$0.67 per thousand gallons depending on the rates applied for fixed charges. Final decision concerning the implementation of this project has not been taken.

## MEXICO - UNITED STATES OF AMERICA - INTERNATIONAL ATOMIC ENERGY AGENCY

29. The joint Mexico-United States-IAEA Study Group continued its investigation of the economic and technical feasibility of a dual-purpose plant to produce water and power for parts of the States of California and Arizona in the United States and Baja California and Sonora in Mexico. Meetings were held in December 1965 and April 1966 to discuss, among other subjects, water and power resources and needs of the area, nuclear and desalting technology and possible sites for the plant.

## SAUDI ARABIA - UNITED STATES OF AMERICA

30. In accordance with the agreement signed in 1965 between the United States and the Kingdom of Saudi Arabia, a contract for the design of a dual-purpose water desalination plant was awarded by the United States Office of Saline Water to a private consulting firm. This design will be used for the construction of a 5 million gallons per day plant and a 36,000-kilowatt power station at Jidda. The project, which is expected to be completed within three years will cost about \$14 million.

## V. United Nations activities

31. The research and operational activities of the United Nations in the field of desalination, which is handled by the Department of Economic and Social Affairs through its Resources and Transport Division, have evolved over a number of years and pursuant to a series of Economic and Social Council resolutions. The most recent of the latter are Council resolutions 1069 (XXXIX) of 16 July 1965 and 1114 (XL) of 7 March 1966. In the former, the Council, *inter alia*, requested the Secretary-General to intensify the role of the Secretariat in this field and to participate in accelerating progress in the over-all desalination effort; and in 1966, the Council approved a

desalination work programme proposed in the Secretary-General's report (E/4142, paras. 27-30).

32. In resolution 1114 (XL), the Council also requested the Secretary-General to take steps to marshal the resources necessary to implement the United Nations work programme in desalination, "including, as appropriate, an approach to Governments and organizations that might make the services of experts and consultants, as well as other resources, available at their expense". The Secretary-General is pleased to announce a concrete response from the Government of the United Kingdom, which has generously agreed to provide at its expense two desalination experts for two years and a sum of \$15,000 for assistance missions to developing countries short of water.

33. The United Nations activities in 1966 may be described under three headings: research and publications, technical assistance, and projects of the UNDP (Special Fund component).

## RESEARCH AND PUBLICATIONS

34. Activities in this category included implementation of two items in the work programme specifically approved in 1966, as well as other activities.

## (a) Desalination and water storage

35. A panel of six experts was convened at United Nations Headquarters, from 7 to 18 November 1966, to discuss the relationship between optimum size and load factor of desalination plants and the capacity and cost of storage facilities required. The major subjects reviewed by the experts included water storage requirements in order to safeguard supplies in case of breakdowns in desalination plants, the use of storage as a means of lowering the cost of desalination and the use of various types of storage facilities, including the feasibility of storing desalinated water underground.

36. The findings of the experts will be presented in a report to be issued in 1967. Among the major conclusions reached by the experts are the following:

- (i) Water storage facilities can be used to improve the load factor of desalination plants and lower the over-all cost of water;
- (ii) Water storage can make possible the installation of a smaller desalination plant with a lower total initial investment;
- (iii) The installation of desalination plants must be preceded by careful and detailed forecasts of future demand. Errors in demand forecasting will result either in water shortages if it is too low, or unnecessary capital expenditures in the rebuilding of production capacity if it is too high;
- (iv) In areas where desalinated water is the only source of water supply, water storage facilities adequate to supply water during both the planned and unplanned shutdowns of desalination plants are essential;
- (v) The optimum combination of storage capacity and desalination plant capacity depends on the relative costs of each and, beyond storage to cover shutdowns, may range from a desalination capacity

equalling the peak water demand to a much smaller plant capacity nearer the minimum demand;

- (vi) The rate of interest and the rate of growth in water demand are decisive factors in the determination of the prebuilding phasing pattern;
- (vii) Under certain favourable local conditions the storing of desalinated water underground or in plastic containers provides possibilities for cheap storage and could lead to a substantial reduction in the over-all cost of desalinated water. Application of these two techniques, however, requires further investigation and testing to determine their technical and economic feasibility and the areas where they could have application.

#### (b) *Data on desalination plants*

37. A comprehensive technical and economic questionnaire was sent to authorities in advanced and developing countries who are charged with the responsibility of operating desalination plants, in order to assemble and maintain up-to-date design and operational data on desalination plants. The questionnaire was sent to fifty-nine countries and territories and to twenty-nine oil companies. A report based on the evaluation of information extracted from the replies received will be ready for publication by the end of 1967.

#### (c) *Other activities*

38. The United Nations, through its Resources and Transport Division, contributed a paper on desalination to the Second International Meeting on Fresh Water from the Sea, held in Milan from 18 to 20 April 1966.

39. The Proceedings of the United Nations Interregional Seminar on the Economic Application of Water Desalination were prepared in 1966 for printing and it is proposed to issue them in the spring of 1967. The Proceedings contain the main points of the Seminar and recommendations, a summary of the findings and the texts of nineteen lectures and three reports.

40. Desalination will be among the subjects to be considered in one part of the Secretary-General's five-year survey programme for the development of natural resources also put before the Council at this session (E/4302).

41. The implementation of the other items in the United Nations desalination work programme by the Resources and Transport Division is continuing within the limits of available funds. The remaining studies which have not as yet been undertaken because of lack of funds are the following: the problems of water distribution in areas dependent upon desalinated water; water rate schedules applicable to desalinated water; the cost and possible use of contaminated water after treatment for non-drinking purposes, and the economics and techniques of solar distillation.

#### TECHNICAL ASSISTANCE

42. Since 1963, technical assistance missions in the field of desalination have been undertaken by twenty-two experts in the following countries: Argentina, Chile,

India, Israel, Netherland Antilles, Peru, Saudi Arabia, Tunisia and the United Arab Republic.

43. During 1966, a staff member from the United Nations Resources and Transport Division participated in the IAEA desalination mission in Chile and Peru. In addition, new requests for technical assistance were received from Argentina, Libya, Peru, the United Arab Republic and Yugoslavia.

44. Following a technical assistance desalination mission in Saudi Arabia, a report entitled "Desalination in the Eastern Province of Saudi Arabia"<sup>20</sup> was published in March 1966 and is available for distribution, free of charge, to Governments and institutions.

45. Another report containing the findings and recommendations of a technical assistance desalination mission in the United Arab Republic will be issued in 1967.

#### SPECIAL FUND PROJECTS

46. The first project of the Special Fund component of the UNDP in the field of desalination was approved by the Governing Council in June 1966. This project will provide assistance to the Government of Israel in the establishment of an electrodialysis demonstration plant for the desalination of brackish water. The purpose of the demonstration plant is to improve the technology and test various equipment components of the electrodialysis process, with the object of reducing costs and producing an optimum configuration for use in the construction of still larger desalination plants with a productive capacity of 1 million gallons per day. The first-stage plant will have an estimated capacity of 250,000-300,000 gallons per day and will be located at Mashabei Sade in Israel. The project will be implemented in 1967 and is expected to be completed in about three years.

47. It is expected that other Special Fund projects in the field of desalination will be requested by Governments in 1967.

#### VI. Recommendations

48. The acute water shortage in many developing countries is likely to become more severe in the future as a result of the increase in population, of irrigation and industrialization. In view of the urgent need for additional water in many water-short developing countries, the growing importance of desalination and the new emphasis given to the resources of the sea,<sup>21</sup> it appears desirable to intensify United Nations activities in this important field, in line with the role already assigned to the Secretariat by the Council.

49. In addition to the implementation of projects already under way or approved, it is therefore proposed that the following three priority studies now be added to the work programme:

- (i) Study of the methods for the determination of water demand and water demand forecasting, with particular reference to desalination. Among the

<sup>20</sup> Document TAO/SAU/6.

<sup>21</sup> See Council resolution 1112 (XL) and General Assembly resolution 2172 (XXI).

important questions to be considered in this study is the elasticity of water demand in response to changes in the price and quality of water. It is suggested that such a study be carried out with the assistance of consultants;

- (ii) Study of the utilization of local energy sources for desalination. Undertaken with some outside assistance, this study will consider hitherto neglected economic possibilities of utilizing such sources as geothermal and oilshale energy and burning of refuse for desalination in developing countries;
- (iii) Study of foreign exchange aspects of different desalination processes. This study will also investigate the possible use of local construction materials and it will determine ultimately the magnitude of the foreign exchange required under different conditions in developing countries. The assis-

tance of outside consultants will be required.

50. In submitting these recommendations, the Secretary-General is aware that additional funds would be required. In this context it should be recalled that the Council, in its resolution 1114 (XL),

*“Requests the Secretary-General to . . . marshal the resources necessary for implementing this work programme, including, as appropriate, an approach to Governments and organizations that might make the services of experts and consultants, as well as other resources, available at their expense.”*

In the light of the encouraging example set by the United Kingdom, the Secretary-General hopes that broad support from Governments will be forthcoming so as to make it possible to fulfil the intensified role expected of the United Nations.

## DOCUMENT E/4368

### Report of the Economic Committee

[Original text: English]  
[23 May 1967]

1. At its 1460th meeting, on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 3: “Development of natural resources: (a) Water desalination; (b) New sources of energy; (c) Five-year survey programme.”

#### (a) *Water desalination*

2. The Economic Committee, under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, considered sub-item (a): “Water desalination”, at its 403rd, 405th and 406th meetings, held between 12 and 16 May 1967.

3. In considering the item, the Committee had before it a report of the Secretary-General (E/4307).

4. At the 403rd meeting, the representative of the United Kingdom, on behalf of Kuwait, Libya, Mexico, Morocco and the United Kingdom, introduced a draft resolution (E/AC.6/L.354).

5. At the 405th meeting several delegations proposed orally a number of changes to the draft resolution for the consideration of the sponsors. Following consultations, the sponsors revised the draft resolution and introduced it at the 406th meeting. The revised text (E/AC.6/L.354/Rev.1) was then approved unanimously. (See para. 13 below, draft resolution A).

#### (b) *New sources of energy*

6. Under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, the Economic Committee considered sub-item (b): “New sources of energy” at its 403rd, 405th to 409th meetings, held between 12 and 19 May 1967.

7. The Committee had before it a report of the Secretary-General (E/4303 and Add.1).

8. At the 409th meeting, the representative of Dahomey introduced a draft resolution submitted by Dahomey, Kuwait, Libya, Pakistan and Panama (E/AC.6/L.359). The representatives of Belgium, Canada and the United States of America orally proposed several amendments to the draft resolution. The representative of Dahomey, on behalf of the sponsors, accepted the amendments and revised the draft resolution accordingly. The Committee then unanimously adopted the draft resolution as revised. (See para. 13 below, draft resolution B.)

9. On the proposal of the representative of France, the Committee agreed to include in its report the following statement:

*“In future, the Secretary-General should refer all proposals in the field of science and technology to the Advisory Committee on the Application of Science and Technology to Development for the purpose of advising the Council on the technical or scientific aspects of such proposals. The views of the Advisory Committee should accompany the Secretary-General’s proposals to the Council.”*

#### (c) *Five-year survey programme*

10. The Economic Committee, under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, considered sub-item (c) “Five-year survey programme” at its 400th to 403rd, 406th and 407th, 412th and 413th meetings, held between 10 and 12, 16 and 17, 22 and 23 May 1967. The Committee had before it a report of the Secretary-General (E/4302 and Corr.1). It later had before it also a draft resolution (E/AC.6/L.358) submitted by Cameroon, Dahomey, Gabon, Guatemala, India, Iran, Kuwait, Libya, Mexico, Morocco, Pakistan, Panama, Peru, Philippines, Sierra Leone, United Republic of Tanzania and Venezuela.



11. The sponsors later revised the draft resolution and at the 412th meeting the representative of India, on behalf of the sponsors, introduced the revised text (E/AC.6/L.358/Rev.1). A statement of the financial implications of the draft resolution as revised (E/AC.6/L.358/Rev.1/Add.1) was laid before the Committee. Turkey and the United States of America then joined as sponsors of the revised draft resolution. The sponsors made further revisions to the text and also accepted amendments proposed orally by the representative of Czechoslovakia.

12. On the proposal of the delegation of Belgium, supported by France, the Committee, at its 413th meeting, decided that the composition of the *Ad Hoc* Committee of the Council proposed in operative paragraph 3 of the draft resolution should be left for the decision of the Council in plenary session. At the same meeting, Canada joined as a sponsor of the revised draft resolution. The Committee then unanimously approved the revised draft resolution as amended. (See para. 13 below, draft resolution C).

#### Recommendations of the Committee

13. The Committee therefore recommends to the Council the adoption of the following draft resolutions:

### DOCUMENT E/AC.6/L.358/Rev.1/Add.1

#### Financial implications of the draft resolution contained in document E/AC.6/L.358/Rev.1 Note by the Secretary-General

[Original text: English]  
[22 May 1967]

1. In accordance with rule 34 of the rules of procedure of the Economic and Social Council, the Secretary-General would advise the Economic Committee as follows in regard to the financial implications of the draft resolution contained in document E/AC.6/L.358/Rev.1 on the survey programme for the development of natural resources.

#### A. Initiation of preparatory work for the execution of the survey programme

2. Operative paragraph 2 requests the Secretary-General to:

“... initiate preparatory work for the execution of the programme to the extent that funds from various sources, including the United Nations Development Programme permit, drawing upon the data available from States Members of the United Nations and from the United Nations system of organizations.”

3. The minimum costs involved in undertaking the preparatory work in the initial year are estimated as follows:

	\$ U.S.
One technical adviser to head each of the three components of the programme (total 3 at level 6) . . . .	61,500
One officer in the professional category to assist the head of each component (total 3 at P-3 level) . . . .	39,300
Three secretaries . . . . .	16,200

#### A

##### WATER DESALINATION

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1204 (XLII).]<sup>22</sup>

#### B

##### NEW SOURCES OF ENERGY

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1205 (XLII).]<sup>22</sup>

#### C

##### SURVEY PROGRAMME FOR THE DEVELOPMENT OF NATURAL RESOURCES

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1218 (XLII).]<sup>22</sup>

<sup>22</sup> Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.

	\$ U.S.
Brought forward	117,000
Temporary assistance for research and collection of library data for the programme . . . . .	20,000
Travel for the collection of data and consultations with governmental and inter-governmental organizations interested: Travel of staff . . . 6,000	
Subsistence . . . . .	3,000
	9,000
TOTAL	146,000

4. To the extent that contributions in cash and in kind acceptable to the Secretary-General are available for use during the initial year these figures would be appropriately modified.

#### B. Ad Hoc Committee of the Council on the survey programme for the development of natural resources

5. Since the *Ad Hoc* Committee will be composed of representatives of Governments, they will not be entitled to either travel or subsistence from the United Nations budget for their attendance at the meetings. It is assumed that the *Ad Hoc* Committee will hold a maximum of fifteen meetings in 1967 over a period of four months and that the meetings will be convened at Headquarters in such a manner as would fit in with the regular programme of meetings. On the basis of these assumptions, there would be no additional costs in respect of the meetings of the *Ad Hoc* Committee.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 3 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/AC.6/L.354/Rev.1	Kuwait, Libya, Mexico, Morocco and United Kingdom of Great Britain and Northern Ireland: revised draft resolution	Mimeographed
E/AC.6/L.358	Cameroon, Dahomey, Gabon, Guatemala, India, Iran, Kuwait, Libya, Mexico, Morocco, Pakistan, Panama, Peru, Philippines, Sierra Leone, United Republic of Tanzania and Venezuela: draft resolution	Ditto
E/AC.6/L.358/Rev.1	Cameroon, Guatemala, India, Iran, Kuwait, Libya, Mexico, Morocco, Pakistan, Panama, Peru, Philippines, Sierra Leone, United Republic of Tanzania and Venezuela: revised draft resolution	Ditto
E/AC.6/L.359	Dahomey, Kuwait, Libya, Pakistan and Panama: draft resolution	Ditto
E/RES/1204 (XLII) and 1205 (XLII)	Resolutions adopted by the Council at its 1469th plenary meeting, on 26 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1204 (XLII) and 1205 (XLII)
E/RES/1218 (XLII)	Resolution adopted by the Council at its 1474th plenary meeting, on 1 June 1967	<i>Idem.</i> , resolution 1218 (XLII)



## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 4: Transport development\*

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## Abbreviations

ACC	Administrative Committee on Co-ordination
ECA	Economic Commission for Africa
ECAFE	Economic Commission for Asia and the Far East
ECE	Economic Commission for Europe
ECLA	Economic Commission for Latin America
FAO	Food and Agriculture Organization of the United Nations
IAEA	International Atomic Energy Agency
IBRD	International Bank for Reconstruction and Development
ICAO	International Civil Aviation Organization
ILO	International Labour Organisation
IMCO	Inter-Governmental Maritime Consultative Organization
LAFTA	Latin American Free Trade Association
OAS	Organization of American States
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WMO	World Meteorological Organization

## DOCUMENTS E/4304\*\* AND ADD.1\*\*\*

## Progress report of the Secretary-General

[Original text: English]  
[23 March 1967]

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\*\* Incorporating document E/4304/Corr.1.

\*\*\* Incorporating document E/4304/Add.1/Corr.1.

## INTRODUCTION

1. This report is submitted in compliance with Economic and Social Council resolutions 935 (XXXV) and 1082 A (XXXIX) of 9 April 1963 and 30 July 1965 respectively, which requested the Secretary-General to inform the Council periodically on the progress of work in the field of transport.

2. In the last report of this series submitted to the

Council at its thirty-ninth session,<sup>1</sup> reference was made to the expansion of work of the United Nations Secretariat in the field of transport arising from the programmes of technical co-operation. This expansion of operational activities continued in the period under review, along with research into the problems of transport develop-

<sup>1</sup> *Official Records of the Economic and Social Council, Thirty-ninth Session, Annexes*, agenda item 23, document E/4063.

ment in developing countries and intensified liaison and co-ordination of activities in the field of transport in the United Nations and its family.

3. The present report attempts to set the review of work in a broader framework than its predecessor. The Secretary-General feels that the time has come for the Council to initiate a thorough review not only of the work in the recent past and currently under way, but also of what may be characterized as an inadequacy of effort and fragmentation of organization, with a view to strengthening this sector of vital importance to economic development.

4. Drawing on the growing experience of the United Nations Secretariat through relevant research and operational activities, the report — which is divided into five chapters — first highlights the nature and problems of transport development in developing countries. Chapter II deals with new approaches and technology to help solve transport problems. Chapter III covers briefly the efforts of developing countries in solving their transport problems. Chapter IV reviews the role of the United Nations and its specialized agencies, including in some detail the activities of the United Nations Headquarters Secretariat since 1964, and briefly (but with reference to annexes I to VIII prepared by the organizations themselves) activities of the regional economic commissions, the United Nations Conference on Trade and Development (UNCTAD) and the specialized agencies in the transport field; chapter V summarizes conclusions regarding inadequacy of efforts and fragmentation of organization and contains recommendations regarding the continuing programme as well as increasing efforts and improving organization at the international level. In addition, there are summary statistics on the world's roads, motor vehicles and merchant shipping fleets (tables 1 to 5) and on relevant technical assistance activities (tables 6 and 7), as well as a list of United Nations Development Programme (UNDP) projects (Special Fund component).

#### I. NATURE AND PROBLEMS OF TRANSPORT DEVELOPMENT IN DEVELOPING COUNTRIES

5. More than half-way through the United Nations Development Decade it appears that in most developing countries a lack of transport facilities is one of the major factors in world poverty and a major deterrent to rapid economic growth and social progress. Transport difficulties have considerably retarded the exploitation of natural resources, industrialization, expansion of trade, education and training as well as — in some cases — the achievement of national unity.

6. While growing recognition is being given, at least at the national level, to the fundamental role of an adequate transport infra-structure making cheap and efficient transport possible, it must also be recognized that transport development exhibits some distinct features inherent in its nature and poses major problems beyond the general ones of capital investment and education.

7. The transport sector has some distinct characteristics: it is one of the important sectors which function under monopolistic conditions not governed by normal laws

of supply and demand, its market structure calls for a specially geared pricing policy, its "system" aspect requires treatment as an integrated entity; and it necessitates protection of public interests in ways peculiar to itself. All these characteristics have been reflected in a variety of institutional approaches to transport problems in different countries, which differ according to the policies pursued.

8. A transportation policy, however, is the outcome of continuous study and evolution. In this respect, Governments are faced with many conflicting and difficult policy decisions: for instance, on the character and shape of government ownership of transport infra-structure; the relationship between public, semi-public and private sectors of the economy within the transport field; the degree of financial autonomy in State-owned transport undertakings; the pros and cons of subsidy to private operators of transport, measures for regulation and co-ordination of transport, etc. Institutions should thus be forged, capable not only of implementing the policy decisions, but also of suggesting and initiating policies and plans when required.

9. After the necessary policy decisions have been made and executive action has been authorized to ensure efficiency of planned economic development, changes occurring in the transport pattern and those brought about deliberately must be simultaneously adjusted and co-ordinated. The introduction of advanced "know-how", facilities and institutions must go hand in hand with favourable changes in the character and magnitude of the local elements. Changes in technology have to be supported by continually adjusting institutions and organizations. But these can be brought about only as fast as national behaviour, thought pattern and the value system can adjust to them. Without systematic and regularized planning, a balance between these elements cannot be maintained.

10. Most of the developing countries, with their ever-increasing populations, are now faced with vast problems which beset them in trying to compress into as short a time as possible the development and sophistication of transport, which has taken the developed nations centuries to achieve. Their problems are further compounded and aggravated, as well as facilitated, by the increasing momentum and far-reaching effects of the advances, primarily in the developed countries, in science and technology which are taking place with each passing year.

11. In the development of transport infra-structures, the developing countries have yet a long and arduous task awaiting them in providing the requisite highways, railroad, marine and aviation facilities to fill the gap in relation to their needs in the context of their own economic structures now and in the prospective future, let alone in relation to the standards achieved in the developed countries. Statistical tables are presented at the end of this report to show the relative position of the transport availability and accessibility, area-wise and population-wise, between the developing and the developed countries.

12. In the field of roads and highway transport, it

may be of interest to note that in 1964 for instance, out of over 10.3 million kilometres of the surfaced roads (see table 1, below), Africa had only 4.4 per cent, Latin America, 3.2 per cent and Asia — China (mainland), Mongolia and the USSR excluded — 14.9 per cent, in spite of the fact that of the total area concerned they accounted for 29.9, 20.3 and 16.3 per cent, respectively; and of the total population 13.2, 10.3 and 47.6 per cent, respectively. Similarly, only about one sixth of the total highway expenditures in 1964 (see table 2 below), occurred in the developing countries concerned, which account for almost two thirds of the total area and contain almost three quarters of its population. In respect of commercial motor vehicles (trucks, buses, as well as tractors and semi-trailer combinations), a similar disparity can be seen: in 1964, Africa, Latin America and the above-mentioned part of Asia had together only 29 per cent of the total number of commercial motor vehicles, and about one third less than the North American continent. In 1964, there were only 2.6 commercial vehicles for every thousand Africans while in western Europe there were almost twenty-two, i.e., about 8.5 times as many; and in North America 65.4, i.e., about twenty-five times as many. Apart from an insufficient quantum, there are formidable problems of balancing the relatively sharpening needs of rural, urban and regional interests, which call for a judicious use of all forms of inland transport, motorized and non-motorized, and for the optimum utilization of available facilities in the developing countries.

13. In maritime transport, the total tonnage of goods of all kinds, including oil, handled through the ports of the world in international sea-borne trade, has doubled during the last ten years. The parts of this total tonnage that have been handled through the ports of the developing countries in Asia, Africa and Latin America have increased by considerably more than the world's average, while Europe and North America are below the average. However, in spite of this fact, there does not appear to have been a corresponding increase in the efforts to adequately develop port facilities, either by the physical expansion of the ports themselves and creation of new ports, or by the introduction of more sophisticated equipment, methods of operation and administrative procedures. The chronic congestion in many ports throughout the world is causing costly delays in the turnaround of ships.

14. Many developing countries are yet faced with difficult problems of reconstructing and rehabilitating their railways designed dozens of years ago to serve military and export interests. This necessity has also accentuated problems concerning adequate and satisfactory standards of railroad operation, track maintenance, staff training and efficient business-oriented management.

15. International air transport is perhaps the most technologically progressive element in the transport sector, but the relative neglect of internal or domestic air transport in developing countries requires energetic supporting measures. Air transport offers great possibilities for the developing countries, particularly where distances are great, where consuming and producing centres are widely separated, where terrain and climatic

problems are hostile, and where the flow of traffic is initially too low to justify heavy investment in inland transport infra-structures. It is, therefore, essential to supplement and promote air traffic within the country, besides devoting greater attention to the provision of navigational aids, airport facilities and local ground environments in keeping with technological advances in the field of air transport. Pipeline transportation, a relative newcomer in the field, also offers great scope for exploitation of natural resources beyond its traditional role as an oil products carrier.

16. The striking comparison of transport capabilities available in developed and developing areas of the world given above, including the figures shown in tables 1 to 5, give a rough indication of how far behind the developing countries are lagging. In the absence of accepted standards or norms, which would be difficult to set, the gap to be filled has to be defined, however, from case to case, along with analyses of over-all economic and social development of individual countries.

## II. NEW APPROACHES AND TECHNOLOGY AVAILABLE TO HELP SOLVE THE TRANSPORT PROBLEMS

17. One of the key issues in devising sound transport policies in developing countries is to know under which conditions transport makes a net contribution to economic development. It is not easy to provide transport planners with guidance on how to make decisions in this respect. However, the principle has been proven that transport policies should be derived from development objectives. Transport must not be developed in isolation, in other words, programmes for transport development should be based on economic and social goals and trends translated into transport demand. Some correlation has been found between the trends of gross national product (GNP) and volumes of transport of goods. Such a transport, expressed in ton-kilometres, appears to increase faster than GNP in developing countries, with the rate of increase slowing down as the economy advances to higher levels of development. However, such functional relationships, though useful, do not identify how much growth would be generated by a certain amount of capital used for transport investment. Obviously, there are many other unidentified factors which may be of crucial importance in individual cases of transport development.

18. While transport economists sharpen the tools of analysis and help to devise new approaches, which cannot be dealt with in detail here, the inexorable march of science and technology results in transport innovations with accelerating frequency. These achievements may offer much hope of help in solving the transport problems of developing countries, with many short-cuts, but the hopes have to be tempered by the economic reality of the local setting and by the necessity of adaptation and sound application in considering the jump from the leisurely pace of the camel or donkey to supersonic travel, or from traditional river craft to hydrofoils.

19. Surface travel at more than 200 miles per hour, giant tankers of over 250,000 tons deadweight manned by a crew of only about forty men, nuclear ships which travel months without refueling, supersonic commercial



aviation and vertical take-off and landing aircraft are of course no longer dreams. Hydrofoil ships are at present in a relatively advanced stage of development and practical use.

20. Pipeline systems are now available to move not only liquids and gases, but also solids — such as coal, iron ore, gilsonite, kaolin and phosphates — which are crushed into small pieces and suspended in water or in other liquid. A new method of pipeline transport has recently been the object of an intensive research effort, namely, conveyance of loose materials in sealed spherical containers rolling in the driving fluid. Pipelines can cross mountains, as well as rivers, lakes and seas by floating arrangements either above or under water.

21. So-called ground effect vehicles, or "hovercraft", which operate on an air cushion created by fans in the immediate proximity of the ground, are now used for the transport of passengers and goods on rivers, lakes and seas. However, they are also suitable for special services, such as hydrographic surveys. These vehicles can be of considerable importance for developing countries because of their ability to move over terrain without expensive roads and bridges, over swamps, shallows, marshes, snow and ice, rivers and seas, and make overland detours around natural obstacles. Research and tests of models are under way to prove the technical and economic feasibility of air-cushion vehicles moving over a track or monorail. The vehicles use jet air-cushion pads for suspension and an electric linear induction motor, or a propeller, for propulsion.

22. The concept of a container as a means of moving goods by road, rail, sea and air, with interchange between them, also offers considerable advantages. Goods, as well as vehicles and ships which move containers, can be turned around fast. Containers enable a door-to-door delivery, cheap packaging of merchandise and good protection against weather, pilfering and contamination; they can also simplify international transport of freight and take hard labour out of loading and discharging operations. Very efficient facilities have been developed for the transfer of containers in ports, terminals and storerooms. Large containers can frequently be used as semi-trailers pulled by trucks, or even as parts of railway carriages. Special container ships are now being built and put into operation. Containers are moved into and out of cells in the ships by special cranes so that 600 containers can be loaded and discharged in less than twenty hours. However, the necessary port installations are costly. A variant of the container is a towed flexible plastic bag, which floats almost totally submerged in water; present indications are that this is a very economical form of river, canal and coastal transport for petroleum products. There exist some other unitized methods of cargo handling and modern special handling facilities, as well as many new types of cargo packing and stowage equipment, which also offer considerable advantages.

23. Some of the large maritime ports suffering from continual silting could be saved from the loss of trade by construction of an artificial or floating island near the coast, with piers allowing the berthing of very large ships and tankers. Large hovercraft and specially designed

barges, possibly amphibian, may also reduce the need for costly ports.

24. Transport operations and management can often be improved and made more efficient by using computers for data processing and facilitation of decision making.

25. As developing countries, compared with developed countries, are much less committed to traditional transport structures, techniques and procedures, they can more easily apply new solutions provided by science and technology. This, in some cases, might enable them to avoid the capital-intensive evolutionary process of transport improvement which is characteristic of industrialized countries.

26. The designers of transport programmes and experts engaged in transport studies and surveys should make full use of this possibility. They also have to take into consideration new technology available outside transport, such as processing techniques for raw materials, preservation of food and improvement of communications, which — along with the appropriate location of industries — can considerably reduce transport requirements. As a rule, two or more feasible solutions of a certain problem of transport development can be found. The optimum variant should be selected on the basis of its estimated future economic benefit compared with the estimated investment and operating costs, also taking into account the necessary social, cultural and political aspects.

27. However, much work — that could, and perhaps should, be carried out largely in the industrial countries — remains to be done to adapt and to direct scientific and technological advances to the needs of the developing countries. The same applies to the development of efficient approaches and of tools of analysis of investment and other problems, as well as to the problem of co-ordinating different modes of transport and establishing large integrated transport co-operation. In these connexions, stress should be laid on the needs for less capital-intensive methods and transport means and for simplicity of operation and maintenance, taking into account labour availability, and for training.

### III. EFFORTS OF DEVELOPING COUNTRIES IN SOLVING THEIR TRANSPORT DEVELOPMENT PROBLEMS

28. Developing countries now realize that transport is a common denominator to, and a necessary ingredient of, nearly every kind of economic and social activity and that great efforts and departures from tradition are required to break the barrier of immobility. The Governments of most of the developing countries are trying hard to overcome transport difficulties by applying simultaneously various organizational, administrative and financial means.

29. In the field of organization and administration, many developing countries have already made, or are in the process of establishing, institutional arrangements for transport planning, devising transport policies and supervising transport activities.<sup>2</sup> Public responsibilities are lodged, as a rule, in a ministry of transport — in some cases in a ministry or department of transport,

communications and public works — which is in charge of administering policy matters of all forms of transport, co-ordinating transport planning and synchronizing it with other planning programmes, and regulating transport by establishing its legal framework. Larger countries have also established regional and municipal transport authorities. New legislation is now under way in many developing countries, aimed at the solution of such problems as transport co-ordination, public/private competition, rate and fare setting regulation of traffic, etc.

30. The amount and share of public investment devoted to transport in developing countries are other indicators of their efforts and the importance attached to transport development. During the past ten years, the transport share has mostly been more than 15 per cent, in some countries as high as 25 to 30 per cent,<sup>3</sup> yet in view of the limited absolute amounts involved, apparently far below what could be usefully spent in this field. The interest of developing countries is also reflected in the figures showing loans made by the International Bank for Reconstruction and Development (IBRD) for transport development.<sup>4</sup>

31. Among the encouraging factors of recent progress in transport development of developing countries, the following may be mentioned as illustrations. First, the volume of knowledge and experience in the transport field has considerably increased. Second, in most countries the government bodies responsible for devising transport policies and programming transport development have realized that a haphazard transfer of skills, money and equipment should be replaced by a planning approach towards the strengthening of the economic, social and political structure of each country concerned. Third, a number of developing countries have made good progress in the improvement of their transport systems. Tables 3, 4 and 5 below, for example, show that during the period 1960-1964 the number of commercial motor vehicles and

passenger cars increased in Latin America by 80 and 37 per cent, respectively, and in Asia by 104 and 94 per cent, respectively. The capacity of merchant shipping fleets under African and Asian flags increased during the same period by 31 and 69 per cent respectively (see table 5). These figures are much higher than corresponding indexes in developed areas. Nevertheless, since the growth percentages are from a low absolute base, in almost all developing countries the transport systems are still not adequate to meet the development needs. The lack of sufficient transport facilities, and the low degree of their exploitation, hamper the efficient provision of transport services; transport costs are often very high.

32. The problem of maintenance in the field of transport has also become increasingly pressing. There are often deficiencies in the inspection and periodic overhauling of transport facilities, shops and stores are inadequate, and the lack of spare parts is the cause of considerable delays in repairs.

33. There is a serious shortage of trained personnel in the transport field in many developing countries. In some of them, the need for the training of nationals to establish a solid basis for transport operations, maintenance and administration is very urgent. In some others, the training requirements are limited mostly to areas of more sophisticated techniques.

34. The developing countries have undoubtedly made great efforts toward the improvement of their transportation during the last few years and achieved good progress in mobilizing, in this connexion, their own resources and capabilities. However, most of them do not have a domestic supply of transport equipment, such as locomotives, motor vehicles, ships and aircraft; some countries also lack materials and products needed for the operation of transport facilities and the construction of roads, airports, harbours, etc. As the foreign exchange earned by most of the developing countries falls short of the cost of needed imports, much of what is necessary in the field of transport must be obtained through loans and grants.<sup>5</sup> Developing countries also depend on the developed countries in respect of the transfer of knowledge and skill in the transport field. For all this, they have needed and will need external assistance.

#### IV. ROLE OF THE UNITED NATIONS AND OTHER INTERNATIONAL ORGANIZATIONS

35. Outside assistance, from bilateral and multilateral sources, has played a significant role in the progress of transport development in developing countries. There can hardly be any doubt about the need for continuing and increasing outside assistance in this field, geared to well-balanced development programmes of the recipient countries and to what is best for them.

36. Aid to less-developed countries includes, as a rule, both skills and capital. In programming transport development and conducting specific surveys, the aspects of know-how represent the crucial point. In respect of ensuring an objective and impartial appraisal of transport

<sup>2</sup> There is a trend toward integration moves also in the developed countries, as in the United States of America, which in 1966 established a Cabinet-level Department of Transportation. The main role of this Department is to co-ordinate the principal existing programmes that promote the country's transportation; among other functions are bringing new technology to a total transportation system, improving safety in every means of transportation, encouraging high quality, low-cost services to the public, and developing investment criteria and standards and analytical techniques in the area of transportation investment.

<sup>3</sup> Wilfred Owen, *Strategy for Mobility* (Washington, D.C., The Brookings Institution, 1964), p. 45.

<sup>4</sup> During 1963, for example, IBRD made thirty-eight loans in twenty-six countries, aggregating \$US788 million, of which nine loans in eight countries, amounting to \$US304 million, i.e., 38 per cent, were for the improvement of transport facilities. During 1964, IBRD approved \$US355.6 million, i.e. 49 per cent of the total amount of loans, for fifteen loans made for transport development in thirteen countries. In 1965, IBRD loans in the field of transport amounted to \$US423.7 million, i.e., 36.3 per cent of the total. Most of the loans were devoted to financing the improvement and construction of roads, for example in Ecuador, Finland, Gabon, Iran, Jamaica, Japan, Liberia, Mexico, Nigeria, Paraguay and Zambia. Some loans helped finance railway development, for example in Kenya, New Zealand, Spain, the Sudan, the United Republic of Tanzania, Uganda and Yugoslavia. Pakistan, Peru and Tunisia received loans for the construction of new ports; and a loan was made to Pakistan to cover a part of the foreign exchange costs of the construction of a pipeline to carry natural gas.

<sup>5</sup> Wilfred Owen, *op. cit.*, p. 153.

development goals, means, specific projects and priorities in a developing country, multilateral aid seems to have some advantages. Internationally sponsored programmes, for example, can recruit on a world-wide basis experts in the specialities concerned and guide them on the basis of accumulated experience with similar problems all over the world. The United Nations and its family are, in principle, and should be in practice, in a unique position to help with many of the problems requiring outside assistance.

37. The problems of transport in developing countries which call for international assistance fall into two categories: problems of domestic transport and problems of international transport. The domestic transport problems present themselves in varied forms. As shown in previous chapters, in a number of countries, especially the new countries, the pressing problem is to design the improvement and extension of the transport system within a sound programme of economic and social development. In some other countries, where economic development has gathered momentum, the question is to implement the various specific transport projects. In still other countries, transport institutions have to be established or the work of existing institutions improved.

38. The problems of international transport consist mostly in the establishment, facilitation and standardization of international transport relations, as well as in the expansion of international transport facilities and operations. The solution of the former problems requires the creation of adequate regulatory framework of transport by means of conventions and similar arrangements; the latter problems are closely connected with the extension of trade routes and economic areas. Certain types of problems, such as international transport conventions, agreements and protocols, require world-wide concerted action; some other actions, for example, standardization of transport facilities, call for global uniformity; and some activities need the widest participation of nations, such as world-wide conferences on transport matters and interregional seminars and symposia. In all these areas, the United Nations bodies have been active.

39. As shown above, transport plays an essential role in almost all other sectors of economic, social and cultural development. Each sector — be it natural resources, industry, agriculture, trade, housing, urbanization, health or education — is dependent on transport in some form or other for its efficient growth. Various United Nations bodies are inevitably involved in these and other sectors, as such, but it may not be equally well known that in the process many of them have come to deal with, and engage themselves sometimes heavily in, problems of transport development considered as relevant to their main activity. The proliferation of transport development activities will be dealt with later on in this report.

40. Besides the Department of Economic and Social Affairs at Headquarters, and primarily its Resources and Transport Division with broad substantive responsibility in the transport field, as summarized in paragraph 43, there are offices in charge of transport in the secretariats of the regional economic commissions which work under

the guidance of the relevant committees.<sup>6</sup> The secretariat of UNCTAD has looked into a great many problems of shipping and ports under the guidance of the Committee on Shipping of the Trade and Development Board. The International Civil Aviation Organization (ICAO) and the Inter-Governmental Maritime Consultative Organization (IMCO) are active in their respective fields; UNDP, IBRD, FAO, the World Food Programme, ILO, WMO, as well as IAEA also develop activities closely connected with transportation. Some transport problems have been studied by the Advisory Committee on the Application of Science and Technology to Development.

41. The following sections of this report deal mainly with the recent work of the United Nations organizations, with concentration on the Secretariat at Headquarters and the Department of Economic and Social Affairs with its Resources and Transport Division in particular, since other United Nations organizations give details in their respective reports, as well as in the annexes prepared by them for this report. It has not been possible in the present report to cover other international organizations,<sup>7</sup> much less the substantial bilateral activities in this field. Such an extensive inventory and analysis, which is beyond the present manpower capability of the Secretariat, and would require the co-operation of a great many Governments and organizations.

#### A. REVIEW OF THE ACTIVITIES OF THE UNITED NATIONS

##### 1. *The Department of Economic and Social Affairs*

42. The Department of Economic and Social Affairs at United Nations Headquarters has been active in areas of both domestic and international transport. The efforts have been carried out along the following lines: provision of direct assistance to developing countries, organization and servicing of world-wide or interregional actions, research into the technical and economic problems of transport development in developing countries, and improving liaison and co-ordination among members of the United Nations family in the field of transport.

43. Within the Department of Economic and Social Affairs, the substantive work in the field of transport has been done by the Resources and Transport Division, which includes a Transport Section. It is responsible for preparing studies and reports on transport development, as well as on specific economic and technical aspects of surface transport, i.e., excluding aviation; collecting and keeping under review other pertinent studies and reports of this kind; providing substantive support for various United Nations programmes of technical co-operation in the field of surface transport; organizing interregional meetings of experts, seminars and other training activities on surface transport; and initiating co-ordination of

<sup>6</sup> The Inland Transport Committee of ECE, the Inland Transport and Communications Committee of ECAFE, and the Standing Committee on Industry, Natural Resources and Transport of ECA.

<sup>7</sup> Detailed description of the set-up and functions of the transport organizations outside the United Nations was covered in a previous report to the Economic and Social Council. See *Official Records of the Economic and Social Council, Thirty-fifth Session, Annexes*, agenda item 9, document E/3721.

activities in the transport field within the United Nations family. In the period under review, the Division has focused its attention particularly on questions of assessment and projection of transport needs in developing countries, transport programming, improving transport institutions, better utilization of transport facilities, allocation of resources to transport development, and application of new techniques to developing countries. A considerable part of its activities has been devoted to the support of technical co-operation projects and to providing substantive guidance to experts sent in the field.

#### *Technical co-operation activities*

44. Technical co-operation activities of the United Nations in the field of transport and related public works have increased since 1962, as can be seen in tables 6 and 7. Table 6 shows United Nations operational expenditures in this field under the regular and expanded programmes, Special Fund, and extra-budgetary funds for the years 1963, 1964 and 1965. In table 7, numbers of experts and fellows are listed.

45. The substantive servicing of technical co-operation programmes has covered a wide range of aspects of the development of surface transport, for example, questions of transport organization, planning, management, operation and administration; questions of transport co-ordination; and technical and technological questions. Individual experts, teams of experts and, in the case of UNDP (Special Fund component) projects, engineering firms have been sent to many developing countries to assist them in establishing transport policy and drafting transport development plans, surveying future transport needs and undertaking feasibility and pre-investment studies of specific transport projects.

46. In early 1965, the Secretariat helped prepare three large transport projects to be undertaken under the Fund of the United Nations for the Development of West Irian. These projects were suspended in April 1965 in connexion with Indonesia's withdrawal from the United Nations. Following the country's decision in late 1966 to re-establish its relations with the United Nations, the projects are now being reconsidered with the view to implement them as soon as possible.

47. During 1965 and 1966, the Secretariat acted as executing agency for five UNDP transport projects (Special Fund component): one for Afghanistan (Kabul-Herat direct-road survey); one for China, Taiwan, (establishment of a National Maritime Development Institute, Taipei); one for Fiji (survey of the transport system); one for Madagascar (railway survey); and one for Paraguay (navigation study of the Paraguay River south of Asunción). In addition, the Secretariat is in charge of a project in the Upper Volta (mineral development in the north-east), a considerable part of which involves transport problems. In January 1967, two additional transport projects were added to this list, both of them regional projects in Africa: one for a trans-Sahara road study, and one for navigability and port studies on the Senegal River. A list of projects of the Special Fund component of the UNDP, approved so far, is attached at the end of this report.

48. In respect of specific technical assistance projects in the area of transport and related public works for which the Resources and Transport Division has provided substantive guidance and servicing since 1964, the following examples are aimed at illustrating the kinds of problems tackled.

49. Transport economics, planning and administration have been dealt with in several countries, establishing or reorganizing their ministries of transport, synchronizing their development plans, or supplementing their institution set-up. Accordingly, experts have been assigned to several countries in the Latin American region, particularly to El Salvador for transport economics, Paraguay for transport analysis and Peru for transport programming. Transport economists have also been provided for both wings of Pakistan to assist in the drawing up of a transport development plan. Mali has been provided with assistance focused on the strengthening of its transport administration, and Mauritania has been advised on co-ordination of different modes of transport.

50. As regards highway transport, assistance has been provided to numerous countries whose road development programmes have assumed an increasingly important role in the plans for economic development. Experts have been provided to British Honduras for highway engineering; Guyana and Iran, for road construction; Jamaica, for road engineering; Kuwait, for road asphaltting technology; Mali, for a road research laboratory; Saudi Arabia, for manning different branches of a road research laboratory and highway planning and administration; Sierra Leone, for soils and foundations analysis; Singapore, for urban traffic and transport works; Syria, for bituminous analysis; and Trinidad and Tobago, for highway construction and design. Under the World Food Programme, substantive support was provided to the Republic of Korea in its Cheju Island road construction project, which aimed at completion of a peripheral road totalling 195 kilometres to develop hitherto inaccessible areas. Evaluations of various approved road construction projects under the same programme were undertaken, which included road building in Chad, road improvements in the Gonaïves Peninsula in Haiti, secondary roads in Syria, village roads in the eastern provinces of Turkey, and construction of approach roads to various community development projects in Peru. Considerable administrative support has been rendered to the Democratic Republic of Congo, where about fifty experts, under the direction of a principal adviser, have been working in different branches on an extensive public works programme. In addition, the public works departments of Afghanistan, Malta, Nepal, Somalia and Western Samoa have been strengthened with staff provided under various technical assistance programmes.

51. In the area of railways, assistance has been provided to help Bolivia select an appropriate transport mode, notably a cable-way or a funicular railway, between the city of La Paz and the neighbouring Altiplano area, which involves a difference of altitude of some 1,500 feet; and to Jordan, for reconstruction and maintenance of the Hedjaz Railway, which would facilitate direct transit arrangements between Jordan, Lebanon, Syria and

Saudi Arabia, and also provide a railhead at the port in the Gulf of Aqaba. This work has been supplemented by assistance from the World Food Programme to Syria and Jordan, which has facilitated the solving of ballast and maintenance problems of the existing railway track within these countries. Assistance has also been provided to Gabon for its railway construction project.

52. In Nepal, a general survey of the rivers Kosi, Gandaki and Karnali has been undertaken, aiming at investigation of the potential for the development of waterborne transport and the possibility of a direct link with the river system of India and to the port of Calcutta.

53. In the area of maritime transport, the Government of Dahomey has been advised on maritime administration, the Philippine Government on the establishment of a port authority, and the Government of Singapore on the expansion of the port taking into account facilities and services necessary for the establishment of a container port. Advice has been provided to the Governments of Kenya and Madagascar in the field of shipping and port development, including cargo handling. In Ceylon, experts have advised on the establishment of a Ceylonese merchant marine. Draft legislation for the creation of a national port authority has been prepared in the Dominican Republic.

54. Of the eight UNDP transport projects mentioned in paragraph 47, the purpose of the one being executed in Afghanistan is to undertake economic feasibility and pre-investment engineering surveys of a direct road from Kabul to Herat in Afghanistan. The first phase of the project, completed in the spring of 1966, proved that two sections of the road close to Kabul and Herat, the total length of which is approximately 180 miles, were economically well justified. Therefore, the undertaking of the project's second phase aiming at an engineering survey and design is being considered. The second project mentioned is currently being executed in China (Taiwan). Its aim is to establish a national maritime development institute, designed to assist the Government in the reorganization and modernization of all marine transport. Under a four-year programme of research and training conducted by a large team of international experts, the institute is expected to provide competent advisory services and well-trained technical personnel. In 1966, a three-year project was commenced in Fiji to assist the Government in conducting an integrated study of the island's land transport, shipping and port facilities, with a view to establishing a transport programme within the over-all development plans. In the Malagasy Republic, where the existing railway system is divided into two separated sections, the purpose of this project is to determine technical and economic measures for the improvement of the efficiency of the railways, as well as to verify the economic and technical feasibility of the proposed unification of both railway sections with the addition of a new railway link. The survey in the field was completed in late 1966, and the final report will be ready in early 1967. The purpose of the project in Paraguay is to determine the most suitable methods to channel and regulate the flow of the Paraguay River in shallow sections, in order to develop its navigability between Asunción and

its confluence with the Paraná. The Upper Volta mining project includes an examination of the technical and economic factors affecting the feasibility of the proposed 350-kilometre railway extension linking the manganese deposits with Ouagadougou. Preparations are under way for starting operation of two new regional projects in Africa. One of them is to undertake a preliminary economic feasibility study of a north-south road across the Sahara Desert; the second project aims at increasing transport on the Senegal River between Kayes (Mali) and St. Louis (Senegal).

55. The United Nations has provided experts, some of them Headquarters staff members, to assist Governments of developing countries in drafting requests for UNDP assistance. Such assistance has been given, for instance to Guinea, Mali, Mauritania and Senegal in respect of the Senegal River project mentioned above; and to Costa Rica, El Salvador, Honduras, Nicaragua, Panama and Guatemala in connexion with a coastal hydrographic survey and the establishment of a regional hydrographic commission. In addition, a number of government requests for technical assistance have been evaluated with inquiries into the economic justification of the proposed project and the formulation of the plans of execution.

56. The Resources and Transport Division has also been active in the organization of interregional seminars, held on an annual basis for several years with considerable financial support by the Danish Government. The fifth session of the Seminar of the United Nations Ports and Shipping Training Centre was convened in Lagos, Nigeria, in 1965; the sixth session, in 1966 in Copenhagen, Denmark; and the seventh session, in February-March 1967 in Lima, Peru, including a three-day study tour to Ecuador at the invitation of the Government of Ecuador. The participants of the seminars were senior officials from developing countries with practical experience in ports, shipping or the merchant marine fields.

57. Preparations were made for an interregional seminar on containerization and other unitized methods for the intermodal movement of freight, scheduled for 1-19 May 1967 in London, United Kingdom. At this seminar, the economic and technical implications of these new techniques of freight movement will be analysed and discussed.

#### *Transport research*

58. As part of a programme of studies on the development of transport in the developing countries, the United Nations published in 1966 a study prepared by the Resources and Transport Division entitled, *Transport of Materials in Bulk or in Containers by Pipe-line*.<sup>8</sup> The paper reviews the present state of hydraulic transport of solids through pipes, with particular reference to the physical features of this method, its use, cost and application; indicates some promising results of intensive research into capsule pipelining, a new method of hydraulic transport of materials in containers; and evaluates the possibility of transferring the technique of hydraulic transport of solids to developing countries. Another

<sup>8</sup> United Nations publication, Sales No.: 66.VIII.1.



such study published in 1966, *An Examination of Some Aspects of the Unit-Load System of Cargo Shipments: Application to Developing Countries*,<sup>9</sup> explores aspects of containerization, palletization and other unit-load methods of transport, discusses problems which have been met and means by which these difficulties have been solved, and suggests areas for further study by developing countries.

59. During 1966, two more studies were prepared, a note on the problem of reducing turn-around time of ships in ports and containerization and other unitized methods for the intermodal movement of freight: application to developing countries. The former analyses different factors affecting the delays of ships in ports, the latter evaluates the unitization of cargo as a method which has quickly revolutionized previous aspects of freight movement.

60. A number of transport problems have been analysed since 1965 in the studies now under way in the Resources and Transport Division. These include:

- (a) The evaluation of transport facilities and institutions in the developing countries;
- (b) Effective transport planning;
- (c) The analysis of the allocation of resources to transport development;
- (d) Survey of research activities in the field of transport;
- (e) International movement of cargo by containers;
- (f) Port legislation and administration.

61. The studies mentioned under (a), (c) and (f) are in an advanced stage, and are expected to be published this year. The first will cover transport both as a stimulus to economic and social activity when provided ahead of economic growth, and as a deterrent when it falls behind the requirements of a developing society. The assessment will be statistical and analytical, with a view to elucidating the problems in these aspects facing the developing countries as a group and in certain individual countries. The second study will concentrate on the investment aspects of transport development, especially its financial implications and complications. The third study will review different approaches to the legislation and administration of ports, with special attention to ports in developing countries.

62. Contacts have been established with research institutions and universities in the United States of America and some European countries, in order to mutually review research programmes and exchange papers as well as experience in the field of transport research.

## 2. The regional economic commissions

63. Detailed information about the activities of the regional economic commissions can be found in their annual reports to the Council. However, for easy reference, summaries of such activities prepared by the regional economic commission secretariats are issued as annexes I to IV of this report.

64. It can be seen from the summaries that during

the period under review, the regional economic commissions concentrated their efforts in the field of transport on the undertaking of regional and subregional surveys of transport systems, promotion and facilitation of multinational economic co-operation, standardization of transport facilities and traffic regulations, and solving transit problems of land-locked countries.

## 3. The United Nations Conference on Trade and Development

65. A summary of the activities of UNCTAD in the field of shipping and ports prepared by the secretariat of UNCTAD is attached to this report as annex V.

66. The UNCTAD activities have expanded rapidly under the Committee on Shipping, in whose terms of reference the Trade and Development Board included the provisions that it is:

"8. To review and facilitate the co-ordination of activities of other institutions within the United Nations system and of international or inter-governmental organizations concerning technical assistance and international financing and aid in the field of shipping, port operations and facilities and connected inland transport facilities; and make recommendations".

As may be noted from annex V among the functions of the Division for Invisibles is that of providing substantive support for technical assistance and pre-investment in the field of invisibles (e.g. shipping, insurance and tourism). Several reports were prepared for the second session of the Committee on Shipping, which met in Geneva, from 21 February to 8 March 1967.

## B. REVIEW OF THE ACTIVITIES OF THE SPECIALIZED AGENCIES

67. Among the specialized agencies, ICAO and IMCO are devoted exclusively to transport questions, in their respective fields, while the efforts of the ILO, for instance, included work conditions in urban transport and various labour problems under the ILO Inland Transport Committee, and FAO was active mostly in wood products. Attached annexes VI, VII and VIII are self-explanatory. The ICAO referred to its annual report of 1965 to the Council.<sup>10</sup>

68. It should be added that UNESCO completed in late 1966 a study, "Rural Roads in Developing Countries — A Guide to Planning, Design, Construction and Maintenance". In the period under review, IAEA has amended its regulations for the safe transport of radioactive materials.

## V. CONCLUSIONS AND RECOMMENDATIONS

### A. CONCLUSIONS

#### 1. Inadequacy of efforts

69. As shown above, the activities of the United Nations family in the field of transport are extensive and have been increasing in recent years. Nevertheless, it is obvious that the current assistance to transport development provided by the United Nations bodies to developing

<sup>9</sup> United Nations publication, Sales No. : 66.VIII.2.

<sup>10</sup> Documents E/4185/Rev.1 and E/4185/Rev.1/Add.1; ICAO, document 8572, A16-P/1.



countries has not been commensurate with the great needs and opportunities that exist. Large programmes for the improvement and extension of transport are feasible only if outside aid is intensified, made more concerted and oriented towards helping the countries concerned to use their national resources most effectively and to the optimum extent.

70. Transport is fundamental to economic and social development. The developing countries, however, face many problems in building up, maintaining and running an adequate and efficient transport infra-structure. Some of these problems are inherent in the nature of transport development, and many are in addition to the general ones of scarce capital and skilled manpower. They include economic, institutional, organizational and technical problems. Fortunately, less-developed areas of the world are less committed to traditional techniques and structures and they are freer to apply new transport solutions provided by science and technology.

71. The ability of Governments to mobilize domestic resources and to use external aid effectively depends to a large extent on institutions and agencies having authority to organize, administer and finance economic and social development. Satisfactory functioning of such institutions and agencies depends in turn mostly on the qualifications of their staff. Therefore, adequate transport institutions and training facilities are prerequisites for the creation of a self-generating potential in the transport field.

72. During the United Nations Development Decade, most of the developing countries have tried hard to overcome their transport difficulties by applying simultaneously various organizational, administrative and financial means. In these efforts they have been assisted by developed countries directly or through many multilateral organizations acting at various levels. Nevertheless, despite all this, lack of transport remains a deterrent to rapid economic and social growth in many parts of the world.

73. Developing countries depend predominantly on their own resources and capabilities to develop transportation adequately. However, most of them need external assistance, both skill and capital, for devising sound transport policies, establishing transport institutions, programming transport investment and implementing transport projects. The United Nations and its family can provide such assistance on the basis of accumulated experience and co-operative effort by all nations.

74. The activities of the United Nations Secretariat at Headquarters in the transport field since 1964 have been focused mostly on providing assistance to developing countries, organizing interregional seminars, conducting research, and improving liaison and co-ordination among members of the United Nations family.

75. The volume of direct assistance to improve transport in developing countries has increased under various United Nations programmes in the period under review. Between 1963 and 1965, United Nations assistance expenditures increased from \$700,000 to \$1,704,000, and the number of field experts increased from 70 to

129 (see tables 6 and 7 below). Nevertheless, the current provision of assistance has fallen short of the needs of developing countries and opportunities that exist. Certain insufficiencies in the efforts are apparent in the organization, co-ordination, substantive support and implementation of technical assistance projects in the transport field.

76. In respect to research, a programme of studies on the development of transport in developing countries has been commenced, which is oriented towards transport institutions and institutional arrangements, transport techniques and transport planning.

77. It has been explained in previous parts of this report how important it is to provide developing countries with comprehensive and concerted technical assistance in the field of transport. These countries themselves are indeed deeply interested in being assisted in the most effective way. Therefore, all possible effort should be concentrated on the co-ordination of international aid programmes, technical assistance activities and research in the transport field.

78. A global effort is needed, comprising not only intensified but also better co-ordinated multilateral as well as bilateral assistance based on long-term arrangements that developing countries can rely on. Moreover, such aid may most effectively be rendered in a comprehensive form covering different interrelated aspects of the problems to be solved. Able advice should be available to the Governments of developing countries in determining the best type of aid desired, so that transport barriers can be broken quickly, in accordance with the over-all development goals of the countries and without any costly misallocation of resources.

## *2. Fragmentation of organization*

79. The United Nations and its related agencies should set a model for sound relationships among various organizations at the world-wide level. Co-ordination needs to be stressed since there has been a considerable proliferation of organizations and agencies active in some way or other in the field of transport at the bilateral, subregional, regional and international levels. Such a proliferation in organization and operation exists within the United Nations family. Parallel to the growth of interest in transport development as well as need for help, various bodies have included transport within their activities and responsibilities without always paying sufficient attention to the necessity of harmonizing their efforts. The tendency towards organizational and substantive fragmentation could easily lead to a "parochial" approach to transport development, as has indeed been noticeable, with a consequent danger and disservice resulting from development of transport activities and projects to meet single purpose needs in disregard of the multi-purpose functions of most transport facilities. The fragmentation tends to reflect the situation existing at the national level. It would be a disservice to developing countries if the proliferation of interests, programmes and actions were not arrested, particularly in the United Nations system.

80. This thinking apparently motivated the Economic

and Social Council in its resolution 1082 A (XXXIX), to request the Secretary-General "to intensify the role of the Secretariat as a focal point for liaison and co-ordination of activities in the United Nations and its family in the field of transport". Certain efforts have been made in this direction at Headquarters. For example, the Resources and Transport Division has established, at the working level, some new ties with the corresponding offices in the regional economic commissions, mostly in the execution of specific technical assistance projects. Staff members of the Resources and Transport Division have attended sessions of the UNCTAD Committee on Shipping, maintain permanent contact with the IMCO secretariat and have attended sessions of the IMCO General Assembly and Council. Questions of closer co-operation have been discussed between ICAO and the Department of Economic and Social Affairs; similar discussions are under way between the Department and the International Bank for Reconstruction and Development as well as the African Development Bank.

81. The considerable proliferation of offices and agencies active in the field of transport within the United Nations and its family, as well as fragmentation of their efforts, is clear. Stronger liaison and co-ordination are needed to make all these efforts more effective.

#### B. RECOMMENDATIONS

##### 1. *Continuing programme*

82. The work programme in the field of transport development of the Resources and Transport Division, as well as such programmes of relevant organizational units in the regional economic commissions, were submitted in 1966 to the Council through the Committee for Programme and Co-ordination.<sup>11</sup>

83. In 1967 and 1968, it is expected that the Resources and Transport Division will continue its activities oriented towards the substantive support in the transport field of various United Nations technical co-operation programmes, substantive servicing of interregional seminars and conducting transport research, focused on transport development in developing countries.

84. The programme of studies on transport development in developing countries will be continued as indicated in paragraph 60. It is felt that, in appropriate cases, the studies should not only be available to all concerned as a United Nations sales document, but also be followed up through interregional seminars for officials from developing countries to ensure adequate assimilation in areas where their applicability can have the greatest impact. The present effort in the area of containerization and other unitized methods for the intermodal movement of goods illustrates such an approach. A preliminary study on this topic was prepared in early 1966 followed by another study in depth. They will provide the background for an interregional seminar to be held in London, in May 1967. A possible further follow-up action might be an international conference on containerization sponsored by the United Nations, which would help find means and

procedures to overcome difficulties connected with quick expansion of this method on a world-wide scale.

85. In addition, in order to ensure applicability to local conditions, the Secretary-General proposes as part of the continuing programme the organization of small, individually tailored seminars to be conducted in various developing countries. Such seminars would be oriented towards the needs of, and be designed to benefit, the specific country. A way of implementing this proposal would be the establishment of one or two teams of transport experts assigned on a non-reimbursable basis to the United Nations by various developed countries. These teams would accumulate considerable experience in the course of time and be able also to make a meaningful contribution towards efficient programming of United Nations aid.

##### 2. *Increasing efforts and improving organization at the international level*

86. The time has come, in the view of the Secretary-General, for a review of the adequacy of effort and organization at the international level in transport development. It will be recalled that in 1965 the Council reaffirmed in its resolution 1082 A (XXXIX) "the responsibility of the Council and of the Secretary-General in promoting and co-ordinating activities in the field of transport development" and by the same resolution requested the Secretary-General "to intensify the role of the Secretariat as a focal point for liaison and co-ordination of activities in the United Nations and its family in the field of transport".

87. At the national level, Governments are taking steps to strengthen and improve the co-ordination of their transport development activities. For example, the Government of Canada has recently introduced legislation to establish a top level organization to co-ordinate the work of several government departments which are responsible for various aspects of transport. In the United States of America, the main role of the new Department of Transportation is to co-ordinate the principal existing programmes which promote the country's transportation. Similarly, the need for co-ordination has been recognized in the Union of Soviet Socialist Republics by the recent creation of an institute for combined transport.

88. Such action largely remains to be applied and translated into action at the international level, where the complexity of problems and variety of actions are such that strengthened leadership is also needed. Diversity is good to a certain point, beyond which it may result in undue overlapping and duplication. In particular, great care must be taken with the establishment of a growing number of organizations and programmes. This problem was recognized by the UNCTAD Committee on Shipping, which recently recommended that the Secretary-General be asked to consider ways of avoiding duplication of activities within the United Nations units dealing with shipping and ports. The Secretary-General considers it highly desirable that the interrelated problems and activities of transport development be studied as a whole and set in perspective, in the context of investment, production and other aspects of development of develop-

<sup>11</sup> Document E/4179/Add.7.

ing countries, with a view to improved efficiency of over-all organization as implied in the Council's reaffirmation of responsibility quoted in paragraph 86 above.<sup>12</sup>

<sup>12</sup> In this connexion, it may be noted that the need for firming up the efforts and organization at the international level also is an important conclusion of an independent, comprehensive research programme, on the relation between transportation and the processes of development. This conclusion is to be found in two papers prepared by The Brookings Institution, Washington, D.C., in September 1964 and January 1966 under the titles *A World Transport Center for the United Nations* and *An International Effort to Improve World Transport Capabilities*, respectively, and also under the title *World Transportation Center* in the report of the Committee on Transportation at the White House Conference on International Co-operation held in late 1965. These documents are available for consultation in the Secretariat (Resources and Transport Division) on request.

89. The fragmentation of organization, the problems of liaison and co-ordination, and the need to intensify activities appear to call for thorough examination. The Council may therefore wish in the first instance to request the Secretary-General to convene a panel of experts to advise on the United Nations programme in the field of transport, including substantive and organizational aspects, bearing in mind the Council's previous recommendation in resolution 1082 A (XXXIX) regarding the strengthening of the role of the Secretariat as a "focal point for liaison and co-ordination of activities in the United Nations and its family in the field of transport".

# STATISTICAL TABLES

## World's roads, motor vehicles and merchant shipping fleets\*

TABLE 1. SURFACED ROADS

Continent	Length (thousands of km)			Distribution (per cent)		Length (km)			
	1960	1964	Change 1960-1964 (%)	1960	1964	Per 1,000 persons		Per 100 km <sup>2</sup>	
						1960	1964	1960	1964
Africa . . . . .	388	410 <sup>a</sup>	+ 5.4	4.2	4.0	1.4	1.4	1.3	1.4
North America . .	4,407	4,919	+ 11.7	48.0	47.9	22.0	23.4	20.4	22.8
Latin America . .	258	325	+ 26.3	2.8	3.2	1.3	1.4	1.3	1.6
Asia <sup>b</sup> . . . . .	1,457	1,532	+ 5.2	15.9	15.0	1.7	1.9	8.9	9.3
Europe <sup>c</sup> . . . . .	2,286	2,600	+ 13.7	24.9	25.4	2.3	2.4	58.6	66.7
Oceania . . . . .	386	464	+ 20.0	4.2	4.5	24.6	27.0	4.5	5.5
TOTAL	9,182	10,250	+ 11.2	100.0	100.0	4.5	4.7	9.0	10.1

\* SOURCES FOR TABLES 1 TO 5: International Road Federation, *Highway Expenditures, Roads and Motor Vehicle Statistics for 1964 and World Highway Statistics, 1965*; United Nations, *Statistical Yearbook, 1965*, pp. 24-25 and 428-437; *Grand Larousse Encyclopédique* (Paris, 1960), p. 447. Antarctica was not considered; Greenland was regarded as forming part of the North American continent.

<sup>a</sup> Estimated figure. Owing to reclassification of roads, the statistical data for 1960 and 1964 are incomparable.

<sup>b</sup> The figures do not include China (mainland), Mongolia and the USSR.

<sup>c</sup> The figures do not include Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the USSR.

TABLE 2. HIGHWAY EXPENDITURES <sup>a</sup>

Continent	Amounts (millions of \$US)			Distribution (per cent)		Amounts (United States dollars)			
	1960	1964	Change 1960-1964 (per cent)	1960	1964	Per capita		Per km <sup>2</sup>	
						1960	1964	1960	1964
Africa . . . . .	389	386	—	2.0	1.5	1.4	1.3	12.8	12.8
North America . .	12,524	13,982	+ 11.6	65.7	56.6	62.9	66.3	582.5	650.3
Latin America . .	813	793	— 2.5	4.3	3.2	3.8	3.3	39.7	38.7
Asia <sup>b</sup> . . . . .	1,108	2,401	+ 116.7	5.8	9.7	1.1	2.2	67.2	145.5
Europe <sup>c</sup> . . . . .	3,813	6,664	+ 74.8	20.0	26.9	11.6	19.5	977.7	1,708.7
Oceania . . . . .	424	528	+ 24.5	2.2	2.1	27.0	31.1	49.9	62.1
TOTAL	19,071	24,754	+ 29.8	100.0	100.0	9.3	11.2	188.4	244.5

<sup>a</sup> Estimated figures, including new construction, improvement and maintenance of highways.

<sup>b</sup> The figures do not include China (mainland), Mongolia and the USSR.

<sup>c</sup> The figures do not include Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the USSR.

TABLE 3. COMMERCIAL MOTOR VEHICLES <sup>a</sup>

Continent	Number (millions)			Distribution (per cent)		Number			
	1960	1964	Change 1960-1964 (per cent)	1960	1964	Per 1,000 persons		Per 100 km <sup>2</sup>	
						1960	1964	1960	1964
Africa . . . . .	0.7	0.8	+ 14	2.8	2.5	2.3	2.6	2.3	2.6
North America . .	13.3	13.8	+ 4	52.8	43.9	66.8	65.4	61.9	64.2
Latin America . .	2.0	3.6	+ 80	7.9	11.5	9.4	15.2	9.8	17.6
Asia <sup>b</sup> . . . . .	2.3	4.7	+ 104	9.1	15.0	2.3	4.3	13.9	28.5
Europe <sup>c</sup> . . . . .	6.0	7.5	+ 25	23.8	23.9	18.3	21.9	15.4	19.2
Oceania . . . . .	0.9	1.0	+ 11	3.6	3.2	56.4	58.5	10.6	11.8
TOTAL	25.2	31.4	+ 25	100.0	100.0	12.4	14.3	24.9	31.0

<sup>a</sup> Commercial motor vehicles include trucks, buses, tractors and semi-trailer combinations; exclude trailers and farm tractors.

<sup>c</sup> The figures do not include Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland and the USSR.

<sup>b</sup> The figures do not include China (mainland), Mongolia and the USSR.

TABLE 4. PASSENGER CARS <sup>a</sup>

Continent	Number (millions)			Distribution (per cent)		Number			
	1960	1964	Change 1960-1964 (per cent)	1960	1964	Per 1,000 persons		Per 100 km <sup>2</sup>	
						1960	1964	1960	1964
Africa . . . . .	1.9	2.3	21	1.9	1.8	7	8	6	7
North America . .	65.9	76.7	16	67.4	59.7	331	364	306	357
Latin America . .	2.7	3.7	37	2.8	2.9	13	16	13	18
Asia <sup>b</sup> . . . . .	1.8	3.5	94	1.8	2.7	2	3	11	21
Europe <sup>c</sup> . . . . .	22.9	38.8	69	23.4	30.2	70	113	587	995
Oceania . . . . .	2.6	3.4	31	2.7	2.7	162	200	31	40
TOTAL	97.8	128.4	31	100.0	100.0	48	58	97	127

<sup>a</sup> Passenger cars: motor cars seating less than eight persons, including taxis, jeeps and station wagons.

<sup>c</sup> The figures do not include Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland and the USSR.

<sup>b</sup> The figures do not include China (mainland), Mongolia and the USSR.

TABLE 5. MERCHANT SHIPPING FLEETS <sup>a</sup>

Continent	Capacity (thousands of gr. reg. tons)			Distribution (per cent)		Capacity (gr. reg. tons)			
	1960	1964	Change 1960-1964 (per cent)	1960	1964	Per 1,000 persons		Per 100 km <sup>2</sup>	
						1960	1964	1960	1964
Africa . . . . .	11,700	15,294	30.7	9.4	10.7	46.1	50.4	38.6	50.5
North America . .	26,415	24,253	- 8.2	21.3	16.9	132.7	114.9	122.9	112.8
Latin America . .	7,473	8,708	16.5	5.9	6.1	36.3	36.7	36.5	42.5
Asia <sup>b</sup> . . . . .	10,210	17,227	68.7	8.2	12.0	9.9	15.8	61.9	104.4
Europe <sup>c</sup> . . . . .	67,129	77,002	14.7	54.5	53.7	204.7	225.2	1,721.3	1,974.4
Oceania . . . . .	867	833	- 0.4	0.7	0.6	54.2	49.0	10.8	10.3
TOTAL	123,794	143,317	15.8	100.0	100.0	60.8	65.1	122.3	141.6

<sup>a</sup> The figures relate to merchant fleets registered in the countries concerned on 30 June of the year stated. Vessels without mechanical means of propulsion are excluded, but sailing vessels with auxiliary power are included. Ships trading on the Caspian Sea, not entered in Lloyd's Register, are excluded.

<sup>b</sup> The figures do not include China (mainland), Mongolia and the USSR.

<sup>c</sup> The figures do not include Albania, Bulgaria, Czechoslovakia, the German Democratic Republic, Hungary, Poland, Romania and the USSR.

TABLE 6. UNITED NATIONS TECHNICAL ASSISTANCE EXPENDITURES IN THE FIELDS OF TRANSPORT AND RELATED PUBLIC WORKS <sup>a</sup>

Programme	Expenditures (in thousands of \$US)		
	1963	1964	1965
Regular programme . . . . .	172.9	168.1	173.2
Expanded programme . . . . .	428.2	560.9	325.2
Special Fund activities . . . . .	—	3.6	233.9
Extra-budgetary operations <sup>b</sup> . . . . .	98.8	623.8	971.9
TOTAL	699.9	1,356.4	1,704.2

<sup>a</sup> See DP/RP/1/Add.1, table 2.

<sup>b</sup> A part of the extra-budgetary programme was accounted for by technical assistance on a payment basis, whereby Governments receiving aid reimbursed the United Nations for the costs of projects; another part included projects financed by donor Governments and other donors, in particular projects in the Democratic Republic of the Congo, financed under the United States Agreement and the United Nations Congo Fund.

TABLE 7. NUMBER OF TECHNICAL ASSISTANCE EXPERTS AND FELLOWS<sup>a</sup> IN THE FIELDS OF TRANSPORT AND RELATED PUBLIC WORKS

Programme	1963 <sup>b</sup>		1964 <sup>c</sup>		1965 <sup>d</sup>	
	Experts	Fellows	Experts	Fellows	Experts	Fellows
Regular programme . . . . .	19	13	23	2	20	4
Expanded programme . . . . .	41	13	60	18	47	10
Special Fund activities . . . . .	—	—	—	—	9	—
Extra-budgetary operations <sup>a</sup> . . . . .	10	—	47	4	53	—
TOTAL	70	26	130	24	129	14

<sup>a</sup> Awards for participants in seminars and study tours not included.

<sup>b</sup> See *Official Records of the Economic and Social Council, Thirty-seventh Session, Annexes*, agenda item 19, document E/3870, tables 5 and 8.

<sup>c</sup> *Ibid.*, *Thirty-Ninth Session, Annexes*, agenda item 15, document E/4016, tables 5 and 8.

<sup>d</sup> See DP/RP/1/Add.1, tables 4 and 8.

## LIST OF PROJECTS

*Operational and newly approved United Nations Development Programme (Special Fund Component) projects in the field of transport\**

On 31 December 1966, of 657 operational projects, thirty-five dealt with transport. At its third session held in January 1967, the Governing Council of the UNDP approved seventy new projects for implementation, six of which were in the transport field. The forty-one transport projects are as follows:

Country	Title of project	Approved	Executing agency
1. Afghanistan . . . . .	Survey of a direct road from Kabul to Herat	June 1964	United Nations
2. Argentina . . . . .	Transportation study	May 1960	IBRD
3. Bolivia . . . . .	Integrated transport survey	June 1966	IBRD
4. Chile . . . . .	Naval Construction Training and Research Centre, Valdivia	January 1966	UNESCO
5. China (Taiwan) . . . . .	Auto technician and instructor training	May 1962	ILO
6. China (Taiwan) . . . . .	National Maritime Development Institute, Taipei	January 1965	United Nations
7. Congo (Democratic Republic of) . . . . .	Civil Aviation Training Institute, Kinshasa	June 1964	ICAO
8. Costa Rica . . . . .	Port and railway study	June 1963	IBRD
9. Costa Rica . . . . .	Transport study of the metropolitan region of San José	January 1967	IBRD
10. United Kingdom (Fiji) . . . . .	Survey of the transport system	January 1966	United Nations
11. Gabon . . . . .	Iron ore transport survey	January 1963	IBRD

\* Source: UNDP/SF/Reports, *Series A, No. 12*, and *Series B, No. 3*.

	<i>Country</i>	<i>Title of project</i>	<i>Approved</i>	<i>Executing agency</i>
12.	Gabon . . . . .	Engineering study of the Owendo-Belinga Railway	January 1966	IBRD
13.	Guinea . . . . .	Highway feasibility studies	June 1966	IBRD
14.	India . . . . .	National Aeronautical Laboratory, Bangalore	December 1960	ICAO
15.	India . . . . .	Pre-Investment survey of fishing harbours	January 1966	FAO
16.	Lebanon . . . . .	Civil Aviation Safety Centre	May 1962	ICAO
17.	Madagascar . . . . .	Railway survey	June 1964	United Nations
18.	Mexico . . . . .	International Civil Aviation Training Centre	December 1960	ICAO
19.	Morocco . . . . .	Training Centre for Civil Aviation and Meteorology	December 1960	ICAO
20.	Nicaragua . . . . .	Highway and port survey on the southern atlantic coast	June 1965	IBRD
21.	Nigeria . . . . .	Federal Civil Aviation Training Centre, Zaria	January 1963	ICAO
22.	Nigeria . . . . .	Highway development study in western Nigeria	January 1965	IBRD
23.	Nigeria . . . . .	Road development survey in northern Nigeria	January 1966	IBRD
24.	Pakistan . . . . .	Feasibility studies for the construction of a maritime port on the Pussur River, East Pakistan	January 1967	IBRD
25.	Paraguay . . . . .	Road survey study in southern Paraguay	June 1963	IBRD
26.	Paraguay . . . . .	Navigation study of the Paraguay River	January 1965	United Nations
27.	Sierra Leone . . . . .	Land transport survey	January 1966	IBRD
28.	Somalia . . . . .	Highway development programme	January 1965	IBRD
29.	Surinam . . . . .	Transportation Study	January 1964	IBRD
30.	Thailand . . . . .	Studies of Bangkok port siltation and Sriracha port feasibility	May 1959	IBRD
31.	Thailand . . . . .	Civil Aviation Training Centre	May 1960	ICAO
32.	Tunisia . . . . .	Training Centre for Civil Aviation and Meteorology	December 1960	ICAO
33.	United Arab Republic . . . . .	Civil Aviation Training Institute	May 1960	ICAO
34.	United Arab Republic . . . . .	Vocational training for the Egyptian railways	June 1964	ILO
35.	Upper Volta . . . . .	Feasibility Surveys for mineral development in the North-East and associated transport factors	June 1966	United Nations
36.	Cameroon and the Central African Republic . . . . .	Transport survey of the southern regions	January 1965	IVRD
37.	Kenya, Uganda and the United Republic of Tanzania	East African School of Aviation, Nairobi	June 1966	ICAO
38.	Algeria, Mali, Niger and Tunisia . . . . .	Trans-Saharan road study	January 1967	United Nations
39.	Guinea, Mali, Mauritania and Senegal . . . . .	Navigability and port studies on the Senegal River	January 1967	United Nations
40.	Kenya, Uganda and the United Republic of Tanzania	Rail and road transport studies	January 1967	IBRD
41.	Afghanistan, India, Iran, Laos, Malaysia, the Republic of Viet-Nam, Singapore and Thailand . . . . .	Institutional support for the Asian highway	January 1967	United Nations (ECAFE)

## ANNEXES

### ANNEX I

#### Summary of activities in the field of transport

##### *Economic Commission for Africa*

##### GENERAL

1. The transport work of ECA during the two-year period has been directed towards the integration of transport development, both as between neighbouring countries in subregional or other appropriate groups and as between different modes of transport, and also towards the integration of transport with the other sectors of economic development. Particular attention has been paid to the co-ordination and rationalization of air transport services on a subregional scale and to the study of factors affecting the development

of African shipping. The transport needs of the land-locked countries, of which there are now fourteen in the ECA membership, including two associate members, have received special attention, as has the interest of the African countries in the forthcoming revision of the Convention on Road Traffic and the associated Protocol on Road Signs and Signals (Geneva, 1949). A start was made on the study of the future manpower needs of the transport industry in Africa, particularly at the managerial level.

2. The unsatisfactory state of the economies of most African countries and an astringent scarcity of capital have precluded advance on a spectacular scale. But some progress has been made in building the foundations on which the expanded and improved transport systems of the future must stand. More detailed comments below have been grouped under the headings used in the 1965 progress report of the Secretary-General,<sup>a</sup> amended in respect of inland

<sup>a</sup> See *Official Records of the Economic and Social Council, Thirty-ninth Session, Annexes*, agenda item 23, document E/4063.



water transport, and with the addition of a paragraph on air transport.

#### TRANSPORT ECONOMICS, PLANNING AND ADMINISTRATION

3. Transport studies carried out under bilateral aid in West Africa by experts provided by the French Government and the Government of the Federal Republic of Germany and by the Belgian Government in Central Africa have been substantially completed, and three valuable interim reports have been received and are under study. A fourth study in the Sudan, Ethiopia and Somalia, carried out by experts provided by the Italian Government, is at a less advanced stage. Negotiations are in progress with the United States Government for a further expert study to co-ordinate the four plans, and a transport economist from The Brookings Institution of Washington, D.C., has visited Addis Ababa to make a preliminary assessment of what is required. When these studies have been completed, work will start on planning the implementation of their recommendations in conjunction with the countries concerned and financial sources. This is expected to be a major transport task in the next biennium.

4. The decision taken at the seventh session of ECA to set up a working party on transport has been implemented, and the first meeting of this group will be held shortly. On the subregional scale, transport co-ordinating machinery has been set up by the four Maghreb countries, and preliminary work has been done on the constitution of similar co-ordinating machinery in the East African subregion. At the Subregional Meeting on Economic Co-operation in West Africa, held at Niamey in October, it was decided to establish a Permanent Transport committee for West Africa and plans are under way to hold its first meeting in Lagos at the time of the eighth session in February 1967.

5. A study of the transport elements in national development plans and of the bilateral reports referred to above, highlights the existing serious shortage of skilled African manpower in the transport field, particularly at the higher executive and management levels. It is clear that these shortages will become critical when the major development of the transport infra-structure takes place. Work has, therefore, started on the planning of an African transport institute to provide facilities to meet these deficiencies, and a preliminary paper has been sent out to the African Governments and to selected agencies for comment.

#### REGULATORY QUESTIONS

6. The transport problems of the land-locked States, of which there are fourteen, accounting for nearly one third of the membership of ECA in Africa, continued to be studied during the biennium, and a background paper was provided for the United Nations Conference on Transit Trade of Land-locked Countries, which was held in New York on 8 July 1965. Further papers were prepared for the information of certain African countries, and so far seven of our member countries have adhered to the Convention that was adopted by the New York meeting. The Commission's work on this project has now been completed.

7. Progress has been made in obtaining the views of the African countries regarding the forthcoming revision of the Convention on Road Traffic and the associated protocol on road signs and signals and a substantial consensus of African countries' views will be provided to ECE, which is handling this revision.

#### TRANSPORT TECHNOLOGY

8. Despite the dynamic nature of modern transport, there has been negligible technological development in this field in Africa during the biennium. It is nevertheless necessary that African countries should be aware of what is taking place elsewhere, particularly with such concepts as containerization and the development of special vehicles, both of which may have application in African conditions. The secretariat has, therefore, planned for a seminar on non-conventional forms of transport which will be held in the coming biennium.

9. In the technological field of road construction, the need for research into improved methods of utilizing locally available materials particularly through the stabilization of local soils, was emphasized in a paper recently read at the fifth world meeting of the International Road Federation.

#### HIGHWAY TRANSPORT

10. Although the availability and use of road transport continued to grow in most parts of Africa, with roads improved and new roads built in increasing mileage, this is mainly taking place on a local and national scale. Except for the planning of an international road to connect the capitals of Ethiopia and Kenya, little has been done on a practical scale to develop subregional networks, and the improvement of the road link between Zambia and the United Republic of Tanzania is a by-product of recent developments in Rhodesia. Work has continued, as already explained above under the heading "Transport economics, planning and administration", to break down over-concentration on the narrow view and lift the development of road transport to a higher and more co-operative level in conjunction with industrial or agricultural development.

#### RAILWAYS

11. Except for the northward extension of the Cameroon Railway towards Chad, little railway development has actually taken place during the biennium, and the problem of linkages between rail systems of differing gauges, braking and coupling systems remains formidable. This problem has been under constant study, and work was continued on the compilation of an inventory of technical features of the existing African systems. An expert consultant, provided under bilateral aid by the Government of the Federal Republic of Germany has assisted in this work. International studies have also been made by the secretariat of the effect of deficiencies of rail links and tariff policies on the location, market areas and output capacities of major industrial plants under study in connexion with the planning of industrial development.

#### INLAND WATER TRANSPORT

12. During the biennium, ECA strengthened its association with the four-Power inter-State Committee which is studying the multi-purpose development of the Senegal River. Negotiations were continued with the Netherlands Government for the expert study under bilateral aid of the navigability of the middle Niger River.

#### MARITIME TRANSPORT

13. The biennium has seen a noticeable, if as yet small, increase in the African participation in international shipping, and new African fleets have been formed with government control or participation. In Ethiopia, the Government has formed a national shipping line; also, in participation with the British Southern Lines, the Governments of Kenya, the United Republic of Tanzania, Uganda and Zambia established a multinational shipping company. Studies of factors affecting the level of freight rates in Africa's sea-borne trade, and of factors affecting the development of African shipping, were completed by the secretariat, with the assistance of a shipping expert provided by the Israeli Government, for both West and East Africa. Two reports have been prepared, which will be studied by the Governments concerned, and sub-regional seminars on ports and harbours have been planned for West and East Africa, respectively.

#### AIR TRANSPORT

14. Air transport has expanded rapidly in Africa during the biennium, with growth rates, particularly for passenger transport, approximating European levels. Following the joint ECA/ICAO African Air Transport Conference held at Addis Ababa in November 1964, subregional meetings were held at Lagos and Nairobi to consider the practicability of co-ordinating and rationalizing African Air Lines on a subregional or similar basis. The programme of detailed studies in East Africa, recommended at the Nairobi sub-regional meeting, has been moving forward steadily. Events in

West Africa delayed progress there for some time, but there is now a resumption of active interest among the key countries concerned, and discussions, aimed at integration of organizational networks, have been resumed on a local basis. A similar move is taking place in North Africa.

15. The formation of an African civil aviation organ has also been under study in co-operation with ICAO and the Organization for African Unity. A draft of the constitution, terms of reference and rules of procedure for the formation of the organ have been circulated to the African States in December 1966.

## ANNEX II

### Summary of activities in the field of transport

#### *Economic Commission for Asia and the Far East*

#### INTRODUCTION

1. During the period under review, the substantive activities of the secretariat in the field of transport were characterized by the increasing emphasis being given to projects with a major element of regional co-operation. The Inland Transport and Communications Committee (ITCC) met three times during this period. It gave special importance to the action-oriented work programme and recommended a number of projects of immediate interest to the countries of the region. Aside from this, there was also an increasing trend towards projects involving advisory technical assistance to Governments of the region, and the secretariat continued to play a more effective role in this field.

2. Fresh ground has been broken in the secretariat's work, as a new trend has been established by the inclusion in the work programme of a project on facilitation of international traffic by all modes of transport and the eventual creation of facilitation machinery at the regional level, with the possibility of drawing up conventions and agreements in this context. It is hoped that the means of regional and inter-regional regulatory and technical agreements will go a long way for facilitation of international transport.

3. Keeping in view the objective of developing action-oriented regional programmes, the fifteenth session of the ITCC, held at Bangkok, in December 1966, recommended that the secretariat undertake preliminary studies on the feasibility of creating regional pools of: (a) Specialized and expensive road-building machinery; (b) Dredging equipment; (c) Salvage equipment for vessels; (d) Air-sea search and rescue equipment. A new project on inter-island communications for archipelagic countries was also included in the work programme.

#### GENERAL TRANSPORT PROJECTS

4. The secretariat has continued its activities regarding collection, analysis and dissemination of information, particularly on the application of science and technology, research and allied problems through its *Transport and Communications Bulletin for Asia and the Far East*. Besides providing a fairly comprehensive coverage of important technical publications, it serves to focus attention on the current developments in the transport and communications field.

5. Governmental policies concerning co-ordination of transport and the progress made in the implementation of the recommendations of the working party on co-ordination of transport (1958) have been under regular review. Though the establishment of a unified statutory regulatory authority for all modes of transport has been generally accepted in principle, many countries in the region have not fully implemented it. Co-ordination and regulation is, however, ensured in some countries of the region where a single ministry is frequently responsible for all forms of transport, while in others various modes of transport are controlled by many administrative units complicating the establishment of a unified regulatory authority.

6. A revised draft of the Guide to Transport Planning was re-

viewed by an expert group which met in New Delhi in July 1965. This was further revised with the assistance of a senior consultant on transport economics. It has now been processed for printing under its new title, "Introduction to Transport Planning".

7. The ITCC, at its fifteenth session, included studies on current problems and trends in transport and communications development and planning, including investment aspects. In reviewing the possibility of establishing a regional transport research institute for studies on techno-economic aspects of transport planning and development in the ECAFE region, it included the study of feasibility of establishing such a centre by the Transport and Communications Division in co-operation with other organizations concerned.

8. A regional seminar on evaluation of transport requirements and institutional arrangements for development of transport for programming of economic and social development has been included in the regional technical assistance for Asia and the Far East. The Bureau of Technical Assistance Operations has made provisions for this project in 1968. Preparatory work concerning this project has been undertaken in 1966 and will be continued in 1967 with the following outline:

- (a) Economic studies including cost benefit analysis for project preparation and appraisal of major transportation projects;
- (b) Impact of investment in highways on economic development;
- (c) Role and scope of transport in the economic and social integration of the ECAFE region;
- (d) Urban transportation with reference to cost of transport (if a separate seminar is not to be organized);
- (e) Special studies both on the notion of capacity in transport and on the concept and results of transport by different modes of transport, as well as the role of total "distribution costs" in transport co-ordination.

9. The ITCC, at its fifteenth session (December 1966), while reviewing the progress made in regional co-operation in the field of transport and communications, requested the secretariat to elicit the views of the Governments of the region on a proposal to establish a conference of transport ministers, along the lines of the Permanent Council of Transport Ministers in Europe, to constitute a policy co-ordinating body at the highest level, dealing with major problems involving co-operative and integrated development of transportation in the region, including zonal, subregional, regional or international movements. The Asian Highway Co-ordinating Committee at ministerial level (second session), meeting in September 1966, had also felt that it might become necessary at the termination of the Asian Highway project to develop one or more ministerial bodies competent to consider all modes of transport on the lines of the Permanent Council of Transport Ministers in Europe. If response from Governments is encouraging, this Council of Transport Ministers of the region could well be set up at an early date. The trends have already been established and a regional conference of transport ministers of seven South-East Asian countries has been called in Malaysia in March 1967 by the countries themselves.

10. Acting on the initiative taken by the Secretary-General of IMCO, the secretariat prepared a tentative plan for the possible establishment of a suitable machinery at regional level for facilitating international traffic. The ITCC, at its fifteenth session, agreed in principle to the desirability of establishing appropriate regional machinery for facilitating all forms of international traffic in the ECAFE region. To avoid duplication of effort, it was recommended that further studies be initiated in regard to the structure, composition, terms of reference and other relevant aspects of the constitution of a body appropriate to the ECAFE region. It also felt that interagency consultations between IMCO and other interested specialized agencies and non-governmental organizations could be initiated for preparation of studies for submission to an *ad hoc* working party as soon as possible, for making appropriate recommendations to the ITCC at its next session. It was also emphasized that further consideration of this question would be within the framework and objectives of the work of the next session of the Chicago Convention

on Facilitation of Civil Aviation, the IMCO Convention on Facilitation of International Maritime Traffic, held in 1965, and recommendations contained in the final act of the United Nations Conference on International Travel and Tourism, Rome, 1963, and related international conventions, agreements or other regional arrangements for facilitation.

#### WATER TRANSPORT AND PORTS

11. During the period under review, the port survey team, comprising four experts, carried out surveys of sixteen ports in Thailand, the Philippines, Korea, China, Iran and Ceylon. The survey covered port problems of administration and management, operations, planning and engineering, marine operations, cargo handling and labour, and remedial solutions were recommended for improving the efficiency of the ports in the region in order to reduce delays to shipping in ports, which in turn affected the level of freight rates and had a direct bearing on the international trade and economic development of the countries concerned.

12. As the survey programme develops, the common identifiable problems would be listed for the general benefit of the port administrations throughout the region and these might well indicate the need for further regional action to deal with slow turnaround of the shipping in ports, particularly for establishing close interrelationship between port and hinterland transport capacities. Implementation programmes have been undertaken in some of the countries, based on the advisory services rendered by the survey team.

13. Advisory services were provided to Thailand on problems of dredging of inland waterways and inland ports and on improvement of navigational channels on the rivers and estuarine ports. The team of French experts on bottom panels also assisted the Governments of India, Pakistan and Thailand. Another team is being formed in co-operation with the Government of France on port economy and hydrology to assist the countries of the region on request. Initial work was done for regular collection, compilation, analysis and interpretation of inland water transport statistics. The studies on hydraulics and of waterways and ports are to cover, under the work programme, the applications of radioisotopes in studies of silt load, volume transported, movement of bottom sediment and flow pattern of water masses along the coast, estuaries, waterways and ports, in co-operation with IAEA and other interested agencies and countries.

14. Information on the development of hydrofoil and hovercraft for commercial use was collected and evaluated. Preparatory work for the technical studies of the existing craft (country boat) was also made with a view to improve their efficiency and mechanization. Studies were also made on barges used for inland waterways and along the coast.

15. Preliminary studies were made on the new trends in cargo handling, especially containerization and unitization. Further work concerning the techno-economic aspects with special reference to Asian experience is under way in connexion with the interregional seminar on containerization to be convened in London, England, in May 1967.

16. Some initial work has been done to review the present status of coastal shipping in the countries of the region and with a view to making further recommendations for improvements and developments with special reference to the economic aspects in the context of operational problems vis-à-vis the ports and terminal facilities.

17. The fifteenth session of the ITCC, which endorsed the recommendation of the second session of the Asian Highway Coordinating Committee, included in the programme of work and priorities a preliminary study of inter-island communications for the preparation of an inter-island project. Initial work has been started on the study to include types of vessels, terminal facilities and inland communications.

18. Some of the countries of the ECAFE region have experienced

difficulties in connexion with the procurement of equipment for dredging inland waterways and estuaries and, in certain cases, where an emergency has arisen, some Governments also had difficulties in obtaining it in time. Work has been initiated on preliminary studies of the feasibility of creating regional pool or pools of dredging equipment, which could be at the disposal for the region as a whole. This project has now been included in the current programme of work and priorities of the Transport and Communications Division. On the lines of the dredging equipment pool, regional pool of equipment for salvage of vessels is also proposed and is included in the work programme.

19. Unlike other regions in the world, the ECAFE region is singularly lacking in coast guard services, weather stations and weather ships acting as observation points and other facilities for expediting air-sea search and rescue operations. One or two reasons, such as disastrous events, for example, a cyclonic depression and typhoons, have served to highlight deficiencies; and consequently, ITCC felt that it might be useful if preliminary studies were initiated regarding the feasibility of establishing regional pools of air-sea search and rescue equipment which could be generally available to all the countries of the region. Little work has so far been done during the period, except to collect some information, as the project was included in the programme for the first time by the ITCC only in December 1966.

20. An *ad hoc* working group of experts on shipping and ocean freight rates was convened by the Executive Secretary of ECAFE at Bangkok in February 1965. The group examined in detail problems of shipping and ocean freight rates in countries of the region and the working of international shipping. It gave particular attention to methods and machinery for consultation and negotiation between shippers and shipowners, the establishment of national and regional shippers' councils, measures for the development of national merchant fleets and government assistance to sea transport.

21. In April 1965, ECAFE engaged the services of a regional adviser on shipping and ocean freight rates with the assistance of the Bureau of Technical Assistance Operations. The adviser's main assignment was to assist member countries of the region in the implementation of various recommendations. The following Governments have availed themselves of the services of the regional adviser: India, Iran, Malaysia, the Philippines, Singapore, Thailand and Western Samoa. Requests from the following Governments are outstanding: Cambodia, Ceylon, Indonesia, Pakistan, the Republic of Korea and the Republic of Viet-Nam. The requests for advisory services were for a period of one week up to three months.

22. In September 1965, questionnaires were sent to regional member countries regarding the implementation of ECAFE recommendations on shipping. The replies of Governments were compiled and analysed in an ECAFE document, "Shipping and Ocean Freight Rates".<sup>a</sup> The document will be presented as a background paper for one of the agenda items of the tenth session of the Committee on Trade, which will be held at Bangkok from 15-24 February 1967.

#### RAILWAYS

23. During the period under review, the secretariat stepped up its activities in regard to assisting Governments for study, investigation, experimentation and research of railway technical problems which were studied at the regional research centres in Japan and India, with research facilities of the Government of Australia and New Zealand also placed at the disposal of the ECAFE region, thus augmenting the resources available within the region. The International Union of Railways also extended the facilities, thus enabling a wider coverage of railway studies and investigations.

24. Technical advisory services continued to flow from the advanced countries to interested railway administrations of the ECAFE region through the good offices of the secretariat.

<sup>a</sup> Document E/CN.11/TRADE/L.104.

25. In the field of railways, one of the most significant events was the workshop-cum-study tour on railway diesel locomotive operation and maintenance, which was organized by the Government of the USSR, with the co-operation of the Bureau of Technical Assistance Operations of the United Nations. The workshop, which was held in April 1966, in Tashkent, was attended by many high-level railway engineers, who studied and exchanged views and ideas on current developments on the railways of the USSR, especially the operation and maintenance of diesel locomotives. The workshop was followed by a study tour of locomotive depots, repair sheds, railway school and research centres in Tashkent, Samarkand, Leningrad and Moscow. A number of important recommendations were made by this group, for example, on the economic life of diesel locomotives, reconditioning of fuel, spare parts procurements and reclamation and staff training.

26. The Pakistan Regional Railway Training Centre at Lahore continued with the assistance of a United Nations expert to provide training facilities in railway signalling and operating to railway officials of the region. So far nearly 600 trainees have received training at this Centre. The Advanced Permanent Way Engineering School at Poona, India, continued to offer its facilities to railway officials of the region. A group training course in diesel traction was organized by the French National Railways during September-November 1966 in France.

27. The secretariat has been keeping under constant review the question of increasing single line capacity on the railways of the region. A number of basic studies have already been completed, including the preparation, publication and distribution of a handbook on single line railway operations.

28. Comparative studies of railway accounting and budgetary procedures on the railways of the region had been undertaken with a view to assist in introducing modern practices and procedures, taking into account socio-economic factors of rail transport including procedures relating to publicly and privately owned enterprises. The use of modern computerized techniques would also be included in the study. Studies of techno-economic aspects of different types of motive power are primarily included to assist railway administration to improve operation efficiency and locomotive management, as well as in planning a future motive power policy.

#### HIGHWAYS AND HIGHWAY TRANSPORT

29. During the period under review, the Asian Highway Co-ordinating Committee at ministerial level assisted by the Asian Highway experts held two meetings. The following progress has been achieved.

(a) The Asian Highway five-year plan was finalized and a checklist of requirements of experts, materials and foreign exchange and local currency requirements was approved;

(b) A United Nations preparatory assistance mission carried out surveys of the research and training facilities in the Asian Highway countries and prepared an application of the institutional support to the Asian Highway by setting up the Transport Technical Bureau;

(c) The objectives of opening one direct east-west route by the end of the United Nations Development Decade (1970) was specified.

(d) The survey of the Kabul-Herat direct route of UNDP was taken into two phases.

(e) The Transport Technical Bureau was set up by the secretariat in co-operation with the Bureau of Technical Assistance Operations of the United Nations.

(f) Recommendations were made for seeking the assistance of the World Food Programme and Colombo Plan Bureau and other organizations, such as the Regional Co-operation for Development and the Association of South-East Asia.

(g) An application for institutional support to the Asian Highway Co-ordinating Committee was approved by the UNDP Governing Council in January 1967.

30. During the period under review, two draft manuals on highway ribbon development and on highway ancillary services have been

completed, and the secretariat continued to collect statistics on road transport from the countries of the region. The coverage of the basic statistics on roads and road transport is being expanded.

31. Considerable amount of work has been done in preparing a manual, in two parts, on traffic surveys for the countries of the region; the first dealing with practical methods of carrying out traffic surveys and investigations in the field, and the second dealing with the projections of future traffic growth.

32. The first part of a manual on road safety for schools and colleges was prepared and copies of a road safety manual for cyclists were distributed to Governments and other interested non-governmental organizations and institutions in the region.

33. Studies have been continuing on the role and promotion of co-operatives in road transport industry, with the objective of reviewing, analysing and evaluating current practices in relation to road transport co-operatives in some countries and recommending measures required for establishing and promoting the system in the ECAFE region, keeping in view the prevailing conditions affecting their road transport industry.

34. Work has been initiated on preliminary studies on the feasibility of establishing a regional pool of specialized and expensive road-building equipment and machinery for utilization by the various countries of the region.

35. The draft conventions on road signs and signals<sup>b</sup> prepared by the Secretary-General were circulated to all member and associate member Governments of the ECAFE region, with a view to ascertaining their views and comments on the amendments proposed for the technical provisions. Eighteen out of twenty-four Governments have communicated their views. On the basis of these communications, the secretariat prepared a consolidated document incorporating these comments, which were reviewed by the seventh session of the Highways and Highway Transport Sub-Committee convened in Bangkok from 30 January through 9 February 1967. Most of the amendments and suggestions put forward by the Governments were accepted after certain modifications and these will be communicated to the Secretary-General for the preparation of the revised draft conventions, which will be submitted to the International Conference in 1968.

<sup>b</sup> See *Official Records of the Economic and Social Council, Thirty-ninth Session, Annexes*, agenda item 23, documents E/3998 and Add.1 and E/3999 and Add.1.

### ANNEX III

#### Summary of activities in the field of transport

##### *Economic Commission for Europe*

#### TRANSPORT ECONOMICS, PLANNING AND ADMINISTRATION

1. The Economic Commission for Europe (ECE) concluded a study on the methods of determining road track costs and of apportioning them to the various types of traffic. Studies were in progress in respect of the economic aspects of the Danube-Oder and Rhine-Main-Danube links. A seminar was held on urban and suburban travel. Studies were made with a view to determining the statistical data necessary for gaining a better insight of the transport sector.

#### REGULATORY QUESTIONS

2. Work continued on the preparation of the revision of the 1949 Convention on Road Traffic and Protocol on Road Signs and Signals. The Council adopted resolution 1129 (XLI) of July 1966, providing for an international conference to be held for this revision in 1968. Regional economic commissions, in particular ECE, studied the drafts of new world-wide conventions circulated by the Secretary-General to Governments and organizations concerned.<sup>a</sup>

<sup>a</sup> See foot-note b of annex II.



3. In Europe, efforts continued, *inter alia*, in respect of the facilitation of international inland transport and the simplification or unification of national transport regulations, including customs regulations and veterinary phytosanitary and sanitary controls at frontiers. Recommendations were made in respect of special facilities to be granted to tourists and tourist travel in connexion with the International Tourist Year. The adaptation of existing international agreements to meet new requirements resulting from the development of land-sea transport by large containers was studied.

4. Two international conventions were opened to signature, one on the registration of inland navigation vessels, the other on the measurement of such vessels.

5. Comprehensive recommendations were made on regulations to be applied to aerial rope-way installations.

6. Studies were initiated on the safety regulations to be applied in the transport of petroleum and petroleum products by pipeline.

7. In respect of highway transport, see paragraphs 11 and 12.

8. New provisions were introduced in the draft European Code for Inland Waterways and in previous recommendations on signalling on inland waterways.

9. The Committee of Experts on the Transport of Dangerous Goods submitted revised recommendations on the classification of dangerous goods which were approved in Council resolution 1110 (XL); it continued its work on furthering the application of these recommendations and on the preparation of recommendations on the packing of such goods. ECE brought up to date the technical annexes to the European Agreement on the Transport of Dangerous Goods by Road and made further progress in the drafting of a similar agreement for the transport of dangerous goods by inland waterways.

#### TRANSPORT TECHNOLOGY

10. In Europe, a symposium on new techniques in inland navigation was held; experts studied the following railway questions: (a) the technical possibilities and economic advantages in increased speeds; (b) automatic train control; (c) automation of the preparation of routes; (d) electric control of pneumatic brakes; (e) the use of silicon rectifiers in motors and plants; (f) track straightening and rail welding. Much work on road safety (see para. 11 below), including technical studies on the equipment of motor vehicles, has been carried out. A revised edition of the catalogue showing the various types of equipment used in combined transport has been prepared.

#### HIGHWAY TRANSPORT

11. The Commission devoted considerable efforts to the promotion of greater road safety, to the abatement of noise and to combating air pollution caused by road vehicles. Several sets of regulations were added as annexes to the 1958 agreement concerning the adoption of uniform conditions of approval and reciprocal recognition of approval for motor vehicle equipment and parts. Recommendations were adopted in respect of the periodical inspection of vehicles and of agricultural tractors and their implements.

12. During the period under consideration, the Declaration on the Construction of Main International Traffic Arteries (Geneva, 1950) was amended to provide for various changes in routes. Denmark, Finland and Romania became parties to the Declaration, which aims at improving the standards of the roads covered by the Declaration. Twenty-one European countries are now parties to this instrument (see also paras. 1-9).

#### RAILWAY TRANSPORT

13. Work continued on the introduction of automatic couplings, on electropneumatic brakes and on the standardization of rolling stock. Recommendations were made in respect of the simplification and unification of railway transport documents (see also para. 10).

#### INLAND WATERWAYS

14. Uniform characteristics were adopted for civil engineering structures on some waterways and for the craft to be used on such waterways (see also paras. 1-10).

#### COMBINED TRANSPORT

15. ECE has initiated studies in respect of regulatory and administrative problems raised by the development of land-sea-land transport by container.

### ANNEX IV

#### Summary of activities in the field of transport

##### *Economic Commission for Latin America*

1. During the period under review, the activities of ECLA in the field of transport were primarily related to transport problems and regional economic integration, contributions to the ECLA annual economic survey on current developments in the field of transport in the region, co-operation with the UNCTAD secretariat concerning projects in the work programme of UNCTAD in the field of ocean shipping in the region, and the establishment of consultative machinery between shippers' councils and shipping conferences in various countries in the region.

#### TRANSPORT AND REGIONAL ECONOMIC INTEGRATION

##### *General*

2. A number of internal studies on the matter were included in condensed form in a chapter on transport in relation to regional economic integration (chap. VIII) of an ECLA document entitled: "A contribution to economic integration policy in Latin America".<sup>a</sup> In May 1966, a meeting was convened in Montevideo, with the participation of officials in charge of transport problems in ECLA, the Latin American Free Trade Association (LAFTA), the Organization of American States and other regional bodies, to examine problems related to co-operation and co-ordination of their programmes of work in the field of transport in the region.

3. Later in the year 1966, the ECLA Transport Programme co-operated in the preparation of draft proposals for the first programme of work of the Pre-Investment Fund for Latin American Integration, recently established by the Inter-American Development Bank. These draft proposals were examined at a meeting of the Institute for Latin American Integration of the Inter-American Development Bank in Buenos Aires in October 1966. In November 1966, suggestions were prepared concerning transport and communications projects related to regional economic integration, for the group of experts invited by the Preparatory Commission of the OAS for the forthcoming meeting of the Presidents of the American republics. Finally, preliminary work was undertaken in 1966 with regard to transport problems of relatively less-developed countries in the region. Study of these problems will continue in 1967.

##### *Maritime transport*

4. During the period under review, there was considerable co-operation with LAFTA in the field of maritime transport. Two special studies, undertaken in compliance with a resolution of a conference of LAFTA member States, were completed in the beginning of 1966 and submitted to that organization. These studies were concerned with consular requirements for the dispatch of vessels and a survey of various taxes and similar burdens on ocean freight payments in countries in the region.

5. Particular attention was given to matters related to the draft regional convention on water-borne transportation of LAFTA. Officials of the ECLA Transport Programme participated in various meetings related thereto, in particular the meeting of the Council of

<sup>a</sup> Document E/CN.12/728.

Transport and Communications of LAFTA, in May 1966, where final agreement was reached on the draft convention in question. The convention was recently signed by all LAFTA member States, except Venezuela, who is expected to sign it in due course. The entry into force of the convention is subject to its ratification by the signatory States.

6. The ECLA Transport Programme also actively participated in various meetings of the Latin American Shipowners' Association, where the proposed regional convention was discussed.

7. In the beginning of 1966, a study was completed for submission to the Inter-American Port and Harbour Conference of the OAS, which met in Washington in April 1966. The study was concerned with suggestions and draft proposals for model forms of documents related to the dispatch of vessels and cargo, to be included in the annex to the Inter-American Convention on Facilitation of International Waterborne Transportation, adopted at the Inter-American Port and Harbour Conference in 1963.

8. In August 1966, work was started, with the co-operation of a consultant, on a study on shipping freight rates between Latin American ports and between these and ports in other parts of the world. The study will cover a selected and representative group of commodities covering traditional trade flows and new, expanding or potential trade flows, both in regional trade and world trade of the region. By the end of 1966, considerable data and information had been collected from shipping companies and conferences for the purpose.

#### *Regional inland transport*

9. Considerable attention was also given to regional inland transport. The ECLA transport programme actively participated in the establishment in September 1965 of the Latin American Railways Association. The Association, which held its second assembly in La Paz, Bolivia, in November 1966, is now well on the way to playing an important role in the promotion and co-ordination of regional railway transport. Towards the end of 1966, steps were taken for the recruitment of a regional adviser, who will prepare in 1967 a study on regional railways and their possible contribution to economic integration.

10. In August 1965 a first study was completed on regional inland transport (railways and roads) between Brazil, Uruguay and Argentina, and submitted to a meeting in August-September 1965 of the Advisory Transport Commission of LAFTA, where these problems were examined for the first time from a regional point of view. By the end of 1966, a draft general study was completed on problems of international road transport. This study includes a complete survey of problems related to the facilitation, promotion and organization of international road transport. Considerable attention was given in this connexion to the experience with regard to conventions, agreements etc., in the field of international road transport in ECE.

#### CONTRIBUTIONS ON CURRENT TRANSPORT DEVELOPMENTS

11. Contributions were prepared on current transport developments related to ocean shipping and ports, railways, roads, civil aviation and international financing in the field of transport in the region, for the ECLA annual economic surveys for the years 1964 and 1965. Work is at present under way in connexion with a similar survey for the year 1966. With regard to civil aviation, co-operation was obtained for the purpose from the secretariat of ICAO.

#### CO-OPERATION WITH THE UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT IN THE FIELD OF OCEAN SHIPPING

12. During the period under review, the chief of the ECLA transport programme closely co-operated with the secretariat of UNCTAD, in particular in connexion with the preparation of documentation for the first meeting of the UNCTAD Committee on Shipping in November 1965 and, subsequently, with preparatory

work related to various studies on freight rates and merchant marines in Argentina, Brazil and Colombia, undertaken by UNCTAD consultants in the region. During the year 1966, these studies proceeded in close contact and consultation with the ECLA transport programme. The chief of the transport programme also participated in an UNCTAD seminar on shipping economics in Geneva, in August 1966.

#### SHIPPERS' COUNCILS AND CONSULTATION MACHINERY

13. In accordance with recommendation A.IV.12<sup>b</sup> of the first session of UNCTAD and the recommendations of the ECLA Trade Committee at its fourth session in November 1964, considerable attention was given during the second part of 1965 and in 1966, with the co-operation of a regional technical assistance adviser, to the establishment, in various countries in the region, of shippers' councils and consultation machinery with liner shipping conferences. Shippers' councils or similar bodies have meanwhile been set up in eight countries in the area: Argentina, Brazil, Chile, Ecuador, Mexico, Peru, Uruguay and Venezuela. Steps towards regular consultation and negotiations between shippers' councils and liner conferences were taken in three countries, and efforts are at present under way to develop similar machinery in other countries. Close contact was maintained with the existing shippers' councils, which were supplied with information on developments and experience in the matter in other parts of the world.

<sup>b</sup> See *Proceedings of the United Nations Conference on Trade and Development*, vol. I, *Final Act and Report* (United Nations publication, Sales No.: 64.II.B.11).

#### ANNEX V

##### Summary of activities in the field of shipping (including ports)

##### *United Nations Conference on Trade and Development*

##### INTRODUCTION

1. Because of its importance to the development of international trade, shipping has become an integral part of UNCTAD activities. The first session of UNCTAD in 1964 adopted a recommendation entitled "Common Measure of Understanding on Shipping Questions".<sup>a</sup> The Trade and Development Board, *inter alia* taking into account a recommendation adopted by the Conference concerning "Shipping Questions",<sup>b</sup> established the Committee on Shipping, which is composed of forty-five States, and adopted the Committee's terms of reference.<sup>c</sup>

##### *United Nations Conference on Trade and Development*

2. The Committee on Shipping adopted its programme of work at its first session and its special sessions held in November 1965 and July 1966, respectively.<sup>d</sup> Its second session was held from 21 February to 8 March 1967. The resolutions which were adopted unanimously by the Committee at its second session have been appended to this annex (see appendix).

3. In order to service the Committee and to carry out its work programme, a Shipping Branch was established in the Division for Invisibles of the UNCTAD secretariat. At present the Shipping Branch comprises eleven professional and eleven general service posts (including general service staff of the annual review and reference unit and statistical clerks).<sup>e</sup> Several projects are being

<sup>a</sup> See *Proceedings of the United Nations Conference on Trade and Development* vol. I, *Final Act and Report* (United Nations publication, Sales No.: 64.II.B.11), annex A.IV.22.

<sup>b</sup> *Ibid.*, annex A.IV.21.

<sup>c</sup> See *Official Records of the Trade and Development Board, First Session, Supplement No. 1*, resolution 12 (1).

<sup>d</sup> *Ibid.*, *Third Session, Supplement No. 2*, annex I (a) and *ibid.*, *Fourth Session Supplement No. 4*, para. 29.

<sup>e</sup> The additional eight professional posts and the appropriate number of general service posts for the freight rate studies have not been included in the 1967 budget appropriation. See *Official Records of the Trade and Development Board, Fourth Session, Supplement No. 4*, annex IV and *Official Records of the General Assembly, Supplement No. 15*, chap. IX.



undertaken, some with the assistance of expert consultants. The work of the Shipping Branch is organized under the following headings:

- (a) Freight rates section;
- (b) Merchant marine section;
- (c) Port section;
- (d) Consultation machinery unit;
- (e) Annual review and reference unit;
- (f) Containerization programme.

#### THE WORK PROGRAMME AND ACTIVITIES

4. The work programme provides for research and related activities to be undertaken in the following broad areas:

- (a) Establishment of national and regional consultation machinery;
- (b) Level and structure of freight rates, conference practices and adequacy of shipping services:

- (i) Country studies;
- (ii) Commodity studies;
- (iii) Route studies;
- (iv) Aggregative studies;
- (v) Studies of conference practices;
- (c) Improvement of port operations and connected facilities;
- (d) Establishment or expansion of merchant marines in developing countries;

(e) Reviews of current and long-term aspects of maritime transport; containerization programme (see para. 30);

(f) Other questions (comprising reporting on activities of other institutions in order to facilitate the co-ordinating function of the Committee on Shipping as provided in its terms of reference, and improvement of shipping statistics).

5. Research into shipping economics and the formulation of related policy conclusions have received scant attention, both in the international organizations and in the academic world. Furthermore, various aspects of the work programme of the Committee on Shipping are closely interrelated and need to form the subject of integrated studies. It was for these reasons that the secretariat of UNCTAD, in August 1966, convened a seminar which was attended by some of the world's leading economists interested in shipping.<sup>f</sup> The report of the seminar has been published under the title *Shipping and the World Economy*,<sup>g</sup> and contains chapters on world trade and shipping, freight rates, conferences, consultation machinery, freight rates and development, adequacy of shipping services, ports and shipping costs, and future developments.

6. A short outline of the work carried out by or on behalf of the UNCTAD secretariat in respect of each of the major areas of activities in the field of shipping is given below.

#### (a) Establishment of national and regional consultation machinery

7. A report by the Secretary-General of UNCTAD on this subject was issued under the title "Consultation in shipping. Establishment of national and regional shippers' bodies, consultation and negotiation between shippers and shipowners".<sup>h</sup> This report is the first comprehensive study of the subject undertaken at the international level referred to in UNCTAD recommendation A.IV.22 entitled: "Common Measure of Understanding on Shipping Questions".

8. The report consists of two volumes. Volume I contains an

analysis of the existing consultative bodies and procedures for consultation between shippers and shipowners. Volume II includes detailed case studies of the history, organization and functioning of the existing consultative bodies and consultation procedures. It also contains certain documentary material: reports from the secretariats of ECLA and of ECAFE on consultation machinery in their respective regions. The last part of volume II reproduces replies of Governments to a list of questions circulated by the Secretary-General of UNCTAD.

#### (b) Level and structure of freight rates, conference practices and adequacy of shipping services

##### (i) Country studies

9. After the first session of the Conference in 1964 and before drawing up proposals for the programme of work of the Committee on Shipping, the secretariat commissioned a number of preliminary inquiries into the shipping problems of particular countries and regions. Now that the Committee has adopted a programme of work which makes provision for country studies, it is considered that the reports on certain of these inquiries are sufficiently relevant to the Committee's work programme to justify their publication. The secretariat therefore expects to publish the following three studies in the first half of 1967: a case study on India, "Liner Shipping in India's Overseas Trade", which was prepared by a consultant, Mr. T. K. Sarangan, Deputy Director General of Shipping in India, with the support of the Government of India; a study on shipping problems in the West African trades, "The West African Shipping Range" which was prepared by a shipping economist, Mr. Dag Tresselt, at the Institute for Shipping Research, Bergen, Norway, and will be published by UNCTAD by arrangement with this Institute; and a progress report on the study, "Cost of Ocean Transport and the Trade of Developing Asia", which is being prepared by arrangement with the Department of Applied Economics of the University of Cambridge, England.

10. The secretariat has considered the range of questions that should be reviewed in future country studies and has drawn up an outline of a typical country study that will be used flexibly as a basis for further studies in this field. The question of the adequacy of shipping services is being considered within the context of particular country studies for the time being.

##### (ii) Commodity studies

11. These studies have the dual purpose of making the best possible estimate of the effect of the level and structure of freight rates on trade in selected commodities and of assembling information that will, it is hoped, throw light on factors influencing rates charged for the same or comparable commodities shipped on different routes by different shippers. They should make possible some international and interconference comparisons of freight rates.

12. Extensive consideration has been given to questions of methodology, particularly with regard to the first of these two objectives. The incidence of freight costs on landed prices of goods will be calculated for each of the main existing trade routes concerned over a number of years. In addition to these actual trade movements, important potential trade routes will also be examined.

13. Any estimate of the effect of rates on trade has to be made by assuming some alternative level or levels of rates. Various hypotheses could be considered, but attention will be directed mainly to those that might have a practical implication. For example, rates on certain bulk cargoes might be reduced if they were available for shipment as full loads; and certain liner rates might be susceptible to reductions as a consequence of improved loading and unloading conditions or of a more regular flow of cargo to the ships. A detailed study of the characteristics of maritime transport on the principal routes in which the commodity selected for study is moving may be expected to draw attention to the factors affecting the cost of transport. Such a study will not be purely static, but will consider the possible implications for trade of technological changes that might affect the costs of carriage of various commodities.

<sup>f</sup> The persons attending the seminar included Professor Saiyid A. Abbas, Chairman, Department of Economics, Punjab University; Professor Frederick W. Anderson, Chairman of the Economics Committee, University of Saskatchewan, Regina; Professor H. W. Arndt, The Research School of Pacific Studies, Australian National University; Mr. Esra Bannathan, Fellow of Jesus College, Cambridge, and Senior Research Officer, Department of Applied Economics, University of Cambridge; Mr. Allan R. Ferguson, Manager, Systems Economics Division, Planning Research Corporation, Washington, D.C.; Professor Arnljot Strømme Svendsen, Institute for Shipping Research, Norwegian School of Economics and Business Administration, Bergen; Professor S. G. Sturme, Department of Economics, University of Lancaster; Professor Thomas Thorburn, Stockholm School of Economics; Professor A. A. Walters, Professor of Econometrics and Statistics, University of Birmingham.

<sup>g</sup> United Nations publication, Sales No.: 67.II.D.12.

<sup>h</sup> Documents TD/B/C.4/20 and Corr.1 and Add.1 and Add.2 and Corr.1 and 2 and Add.3 and Add.4 and Corr.1 and Add.5.

14. The effects of possible rate reductions on trade in a particular commodity can be inferred from a study of the general conditions of market demand for the commodity concerned. In assessing this factor, the Shipping Branch will co-operate, as may appear appropriate, with other divisions of UNCTAD, the regional economic commissions of the United Nations and FAO, and draw upon their specialized knowledge.

15. The secretariat has now initiated the first commodity study, which deals with the carriage by sea of timber.

(iii) *Route studies*

16. Although it is possible to speak generally of factors that influence liner freight rates, it is impossible to go beyond generalities and show how these factors operate in practice unless they are studied in the context of a particular route. It would, of course, be possible to build up a model of an entirely hypothetical trade and study how liner freight rates might be determined in such a model, using various assumptions about business behaviour, ports, ships and the commodities moving on the route. Such a simulated version of rate-making would be useful for illustrating the complex interrelationships between the many variables involved in liner freight rate making.

17. The secretariat is, however, in the first instance endeavouring to follow a more practical approach. This involves finding an actual liner route that is sufficiently simple to enable this analysis to be carried out in practice, but which, nevertheless, does not differ unduly in its essentials from more complicated liner routes. The results of such a study would therefore have certain general implications.

18. Two main conditions have to be satisfied for a route to be regarded as of possible use for this purpose. The first is that the number of commodities moving on the route, considered as a round voyage, should not be excessive. The second is that the number of loading and discharging ports at both ends of the route should be small. A third condition, indispensable for the purposes of the UNCTAD study, is that at least one of the countries involved in the route should be a developing country. The work of the secretariat in the initial stage involves therefore the study of various routes to find those that satisfy the above conditions.

19. Thus, considerable preliminary research will be needed to find a suitable route for analysis. After the route had been defined as appropriate for study in depth, then the analysis proper can begin. This will involve the detailed study of port conditions at both ends of the route, operating expenses of the vessels serving the route, quantity and regularity of flow of the main cargoes and an estimate of market conditions facing shippers. On the assumption that in the light of these and other factors the liner conference tends to fix rates that maximize its own net revenue, it would then be possible to construct a simplified version of an "ideal" tariff. Existing rates in the actual tariff could then be compared with these theoretically derived rates, and the special factors accounting for any really large deviations of the former from the latter could be described. The analysis would make it possible to consider impartially the question of "discrimination" in shipping rates and would also throw light on possible consequences of changes in conference rate-making policy such as quoting rates for individual ports instead of the current practice of quoting rates for whole ranges.

(iv) *Aggregative studies*

20. The purpose of aggregative studies is to collect and utilize data on the economic aspects of shipping and trade in such a manner as to throw light on certain wider economic questions, whose analysis in the past has been complicated by the comparative lack of material on the shipping side. As in other parts of UNCTAD freight rate studies, as indeed in all items of the work programme, the work under this heading is closely integrated with the rest of the programme.

(v) *Studies of Conference practices*<sup>1</sup>

21. The study of conference practices is considered as an essential

complement to the various freight rate studies. The secretariat is examining the economic background to the evolution of various conference practices and their likely effects on the volume, pattern and flow of international trade. Possible modifications of any conference practices that appear to have deleterious effects on world trade will be considered with a view to contributing to the expansion of world trade, in particular the trade of developing countries.

(c) *Improvement of port operations and connected facilities*

22. A report on the activities of the secretariat in this field has been issued under the title "Development of ports".<sup>2</sup> This report also covers, in a preliminary way, some of the important substantive matters involved in port development.

23. Although every port is unique in its structure and location, all ports have a common characteristic: they are places in which goods are transferred from one form of transport to another. It follows, by reason of this common characteristic, that certain general principles can be established which are applicable to all ports. Owing to the uniqueness of each port, however, the general principles cannot be applied indiscriminately to all ports and to the solution of their problems. It is the first object of research into the operation of ports to determine the principles which are generally valid. Then, in the light of these general principles, the problems of individual ports have to be studied with a view to their solution and to the improvement of the operation of the ports in question. The two lines of inquiry are inseparable. It is the main weakness of much of the work on ports done in the past that it has separated the two. Much of the academic type of work has lacked an adequate practical base, with the result that the validity of the principle derived from the research has not been substantiated. Furthermore, much of this work has related to ports in developed countries. The advice given to port authorities has often been deficient because it has lacked the firm basis which general principles provide. The United Nations in the course of many years, has rendered technical assistance to a number of port authorities in developing countries, but until the establishment of UNCTAD it had not engaged in research in this field.

24. The research into port operations which is being undertaken by the UNCTAD secretariat is designed to remedy these two defects. It is intended that the work should concentrate on ports in developing countries. By an intensive study of a few selected ports and the use of advanced methods of systems analysis, it is hoped to establish general principles which would constitute practical tools for the analysis of port operations and for the determination of optimum solutions to particular problems of individual ports. In this way, the accepted scientific principle of proceeding from the general to the particular would be applied to the important practical problems of port development. Another object of the research would be to inquire where the benefits of savings in port costs and of reductions in costs of ship's time will accrue. As the research advances in the manner indicated, the UNCTAD secretariat will be able to produce a set of operational "tools" to help individual port authorities, inland transport authorities and national planners.

(d) *Establishment or expansion of merchant marines in developing countries*

25. The work on this topic is being carried out in accordance with the draft provisional agenda for the second session of UNCTAD, as approved at the fourth session of the Trade and Development Board<sup>3</sup> and with the work programme of the Committee on Shipping. A preliminary report will be submitted to the Conference together with such factual material as may be available.

<sup>1</sup> The question of adequacy of shipping services is considered within the framework of country studies (see (b) (i) above) at the present preliminary stage of the work.

<sup>2</sup> Document TD/B/C.4/23.

<sup>3</sup> Agenda item V (c) reads: "Shipping industry in developing countries, including expansion of merchant marines of developing countries" (see *Official Records of the General Assembly, Twenty-first Session, Supplement No. 15*, Part two, annex A, decision 34 (IV)).

26. The purpose is to evaluate the role of a merchant fleet in the process of economic development. The establishment of a merchant fleet is one among many of the investment possibilities open to a developing country and needs to be considered in that context. The problems associated with economic growth and with the choice of investments have certain similarities in both developed and developing economies. The study of national merchant marines will be primarily related to developing economies, although it will be seen that a number of the issues to be discussed are also relevant to developed economies which do not possess a merchant marine or where the extension of an existing merchant fleet is possible.

27. The study will first describe briefly the general socio-economic characteristics of developing economies and the various aims of development policy. Among other factors, the study will consider the often crucial limitations imposed on development programmes by shortages of foreign exchange, and the heavy dependence of many developing economies upon overseas trade, especially sea-borne trade.

28. In addition, it will consider the factors entering into an assessment of the commercial viability of shipping enterprises and also the possible wider impact of a national merchant fleet upon the national economy as a whole.

(e) *Reviews of current and long-term aspects of maritime transport*

29. In conformity with a provision in the Committee's programme of work, an "Outline of reviews of current and long-term aspects of maritime transport" has been issued.<sup>1</sup> These annual reviews are expected to include the following sections:

- (a) World merchant fleet and its future development;
- (b) World sea-borne trade and trends in recent years;
- (c) Utilization of shipping space;
- (d) Movement of freight rates;
- (e) Review of selected items of shipping costs;
- (f) Port developments;
- (g) General (summary of changes occurring during recent years and review of long-term developments deserving the particular attention of developing countries; institutional changes, including government legislation and developments in the field of consultation machinery);
- (h) Bibliography.

The UNCTAD secretariat has already circulated a report entitled: "Review of developments in world shipping",<sup>2</sup> which covers certain matters touched on in the outline.

*Containerization programme*

30. The UNCTAD secretariat is engaged on a study of the economic implications of containerization and other unit load methods of cargo handling in ocean transport.<sup>3</sup> The work being carried out is regarded as an indispensable component and complement of the main research projects on freight rates, port development and merchant marines. In all these fields, containerization and unitization will be an important influence. A broader study on the general implications of technological changes in shipping in the widest sense is being undertaken.

(f) *Other questions*<sup>4</sup>

31. As indicated above, the activities carried out under the auspices of the Committee on Shipping enlist the co-operation at the research level of shipping economists and research institutions (for example, the Institute for Shipping Research, Bergen, Norway, the Department of Applied Economics of the University of Cambridge, England, and the Maritime Institute, Gdansk, Poland); in addition, it would seem essential that these activities should be integrated with those at present undertaken at United Nations Headquarters in connexion with the technical assistance and pre-

investment projects of UNDP and the regular technical assistance programme of the United Nations. This integration would orient research into shipping questions towards the solution of practical problems with which Member States are primarily concerned, and at the same time provide the necessary substantive support and guidance for technical assistance and pre-investment activities. Continuous mutual support between these activities and research is required to achieve the objectives of the Committee on Shipping under its terms of reference, to secure the best utilization of limited resources and to eliminate any duplication and overlapping of activities. In this connexion, the UNCTAD secretariat has drawn up a review of studies and activities in the field of shipping and ports carried out by other institutions within the United Nations system and by inter-governmental and non-governmental organizations.<sup>5</sup> In the same context, it may be recalled that the Trade and Development Board, at its fourth session, unanimously adopted resolution 31 (IV) on technical assistance in trade and related fields, the relevant part of which reads:

"1. *Invites* the United Nations Development Programme and the Secretary-General of the United Nations to give all due consideration to requests from the developing countries for technical assistance in the fields of export promotion and invisibles, including shipping, insurance and tourism;

"2. *Welcomes* the statements of the Secretary-General of UNCTAD that the secretariat is ready to play an effective role in technical assistance activities by providing substantive support to such activities and not by adding further machinery to what already exists;

"3. *Recommends* to the Secretary-General of the United Nations and to the UNDP to ensure that the services available in UNCTAD are so utilized in the consideration of requests from developing countries, and in the execution of such requests, in the field of export promotion and invisibles, including shipping, insurance and tourism."<sup>6</sup>

32. It may be noted that among the functions of the Division for Invisibles, as defined in the United Nations guide, *Organization of the Secretariat*,<sup>7</sup> is that of providing substantive support for technical assistance and pre-investment in the field of invisibles (e.g., shipping, insurance and tourism).

33. The secretariat has succeeded in establishing collaboration and in co-ordinating its work with the regional economic commissions and with the IMCO and the ILO. In August 1966, consultations were held with the staff of the regional economic commissions with a view to co-ordinating, and if possible integrating, the activities of the commissions and of UNCTAD relating to shipping, and it was agreed that for this purpose officials of ECAFE, ECLA, ECA and UNCTAD should meet from time to time. At its first session, the Committee endorsed the joint statement by the Secretary-General of IMCO and the Secretary-General of UNCTAD.<sup>8</sup> Since that time, collaboration with IMCO has further advanced and a number of meetings have been held between the secretariats of IMCO and UNCTAD. Similar meetings have also been held between the secretariats of ILO and UNCTAD. The working relations and mutual understanding already established are expected to facilitate co-operation between these two agencies and the UNCTAD secretariat in the carrying out of specific projects in the work programme that involve matters within the competence of these agencies.

34. Useful contacts have also been established with a number of international non-governmental organizations in the field of shipping (e.g., Latin American Shipowners' Association, the Committee of European National Shipowners' Associations and the International

<sup>1</sup> Document TD/B/C.4/24.

<sup>2</sup> Document TD/B/C.4/25 and Corr.1 and 2.

<sup>3</sup> See "Progress report on the work programme in the field of shipping" (TD/B/C.4/22), paras. 21 and 36.

<sup>4</sup> *Ibid.*, paras. 3-7.

<sup>5</sup> Document TD/V/C.4/26 and Corr.1 and Add.1.

<sup>6</sup> See *Official Records of the General Assembly, Twenty-first Session, Supplement No. 15*, part two, annex A, resolution 31 (IV).

<sup>7</sup> Document ST/SGB/131.

<sup>8</sup> See *Official Records of the Trade and Development Board, Third Session, Supplement No. 2*, para. 9.

Chamber of Shipping) and with a number of national and private organizations and institutions.

35. A fuller account of the activities of these organizations related to shipping is given in the UNCTAD document referred to in paragraph 31. It includes a description of the activities of the following institutions: the United Nations Secretariat at Headquarters; the United Nations regional economic commissions: ECAFE, ECLA, and ECA; certain United Nations specialized agencies: ILO, IBRD, IFC, IDA and IMCO; certain other intergovernmental and certain non-governmental organizations: the Council for Mutual Economic Assistance, the Inter-American Development Bank, the Latin American Free Trade Association, the Organization of American States, the Organization for Economic Co-operation and Development, the Committee of European National Shipowners' Associations, the International Chamber of Shipping, and the Latin American Shipowners' Association.

#### PUBLICATIONS

36. Apart from the reports and studies issued by UNCTAD concerning shipping questions which were already mentioned in the text of this annex, a "provisional outline for a maritime transport study on timber"<sup>t</sup> has also been issued and a preliminary report entitled "Establishment of merchant marines in developing countries" is being prepared for publication in 1967.

#### Appendix

RESOLUTIONS ADOPTED BY THE COMMITTEE ON SHIPPING AT ITS SECOND SESSION FROM 21 FEBRUARY TO 8 MARCH 1967

[For the resolutions adopted by the Committee on Shipping at its second session, see Official Records of the Trade and Development Board, Fifth Session, Supplement No. 2, annex I.]

<sup>t</sup> Document TD/B/C.2/AC.2/6-TD/B/C.4/18.

#### ANNEX VI

##### Summary of activities in the field of transport

##### *Inter-Governmental Maritime Consultative Organization*

1. The following report is limited to a concise analysis of developments of major importance in some aspects of the work of IMCO, which have been selected as being of general interest.

##### FIRE SAFETY MEASURES IN PASSENGER SHIPS

2. Serious fire casualties in recent years to old passenger ships, including the *Lakonia* and the *Yarmouth Castle*, which involved heavy loss of life, aroused the attention of maritime countries, and in May 1966 a special meeting of the Maritime Safety Committee of the Organization was summoned to consider measures for improving the fire safety of passenger ships.

3. The Committee directed particular attention to the problem of fire safety in older passenger ships; and after thorough consideration of the problems, agreed upon a series of proposed amendments to the fire safety regulations in the International Convention for the Safety of Life at Sea, 1960 for existing passenger ships. These proposed amendments contain specific provisions for improvements to be made to different categories of such ships to ensure that old passenger ships are brought into close conformity with one of the methods of fire protection laid down in the 1960 Convention.

4. The Maritime Safety Committee also adopted certain other proposed amendments to the 1960 Convention and recommendations to administrations, some of which are applicable to future passenger ships, while others should be applied to new and existing passenger ships and cargo ships.

5. The Assembly of IMCO, at its third extraordinary session, convened in November-December 1966 for the sole purpose of

considering this subject, adopted the proposed amendments and recommendations submitted by the Maritime Safety Committee. The amendments adopted by the Assembly will become effective a year after they have been formally accepted by at least two-thirds of the contracting Governments to the 1960 Convention. However, having regard to the time lag between the adoption of the amendments by the Assembly and their formal entry into force, the Assembly adopted a resolution recommending Governments concerned to take immediate action to put fire safety measures into effect to the maximum extent as soon as possible.

6. As regards the fire safety measures for future passenger ships, the IMCO Sub-Committee on Fire Protection gave urgent consideration to the development of new regulations for structural fire protection, fire detection and fire extinction which are to apply to future passenger ships and replace the provisions of the existing Convention. At its December meeting, the Sub-Committee succeeded in developing such regulations, which were presented in the form of amendments to the 1960 Convention.

7. The proposed new regulations set out a single unified method of fire protection, fire safety measures for machinery spaces and for spaces containing motor vehicles with fuel in their tanks, and crew training and equipment for fire fighting. The Sub-Committee also agreed upon certain proposed recommendations to administrations relating to the training of seafarers and to fixed-fire extinguishing systems in passenger ships carrying vehicles.

8. The proposed regulations and recommendations will be considered by the Maritime Safety Committee in February 1967, and if adopted by that Committee, will receive final consideration by the IMCO Assembly in October 1967.

##### TONNAGE MEASUREMENT

9. IMCO has been engaged for some years in the study of tonnage measurement, with a view to drawing up a universal system which will be acceptable to all maritime countries. In order to assess the relative merit of proposed formulae of tonnage measurement put forward by different countries, a thorough study was made of those formulae by means of a computer. Results obtained showed that none of the proposed formulae would be an adequate basis for the development of a universal system. Work was therefore directed towards the development of a system based on unification and simplification of existing systems of tonnage measurement.

10. As a basis for developing such a system, a proposal was submitted for the draft text of a universal system based on the existing systems. The proposed text contains two alternatives: the first based on the measurement of spaces to moulded lines of the ship in association with the use of suitable conversion factors to bring the tonnages under the new system as close as possible to the existing tonnage values, and the second based on the measurement of internal volumes to the inside of frames and top of floors and double bottoms, as provided for in the existing regulations. This proposed text will be further considered and developed in the near future.

11. It was recognized that the most appropriate instrument for establishing any universal system to be finally adopted would be an international convention; and, to this end, efforts were made to finalize the draft text of a universal system as soon as possible so that appropriate arrangements could be made to hold such a conference.

12. The Assembly of IMCO adopted, in October 1963, recommendations on the treatment of shelter-deck and other "open" spaces, the aim being to eliminate temporary closing appliances on openings provided for tonnage purposes while retaining the existing values of tonnages.

13. In this connexion, the Maritime Safety Committee decided to invite Governments to take measures to ensure that their ports and other authorities accept tonnage certificates of ships which comply with the recommendations and are registered in countries

where the recommendations have been implemented. Such measures have been taken by several Governments.

#### INTERNATIONAL LOAD-LINE CONFERENCE

14. The International Load-Line Conference, convened by IMCO and attended by sixty countries, ended on 5 April 1966 with the signing of the International Convention on Load-Lines. The Conference was motivated by the recognition that the establishment of an international agreement of minimum free-boards for ships engaged on international voyages constitutes a most important contribution to the safety of life and property at sea.

15. Since 1930, when the existing Convention on Load-Lines was signed, there have been extensive changes in ship design and construction. Welding is now extensively used in the shipyards; new types of closing appliances — in particular, metal hatch covers — have improved ships' watertight integrity and reduced the risk of water penetrating into the hold. The increase in the size of ships, particularly tankers and bulk carriers, has necessitated an extension of existing free-board tables to cover ships of up to 1,200 feet in length. These factors indicate the need for an up-to-date convention for load-lines.

16. The 1966 Convention, which consists of thirty-four articles and fifty-two regulations annexed to the Convention, maintains the same basic principles for the computation and assignment of load-lines as those in the 1930 Convention, but introduces a number of important changes, the most significant of which is the reduction in free-boards for large ships. Large tankers, ore carriers and bulk carriers will have their free-ports reduced by up to 15 per cent; dry-cargo ships, if fitted with steel weather-tight hatch covers will also benefit by a reduction of up to 10 per cent. On the other hand, the free-board on small ships will be slightly increased if they are not fitted with steel weather-tight covers, in order to improve the stability and other safety conditions.

17. Another important improvement in the safety of ships is the complete elimination of the provisions for class 2 closing appliances and tonnage openings. Secondly, only superstructures fitted with gasketed steel weather-tight doors are taken into account in the free-board computation.

18. There was a lengthy discussion on the relationship between free-boards and subdivision and stability and, as a result, the subdivision concept has been introduced into the assignment of free-boards for large ships. In this connexion, the Conference, recognizing that the International Convention for the Safety of Life at Sea and the International Convention on Load-Lines had common aims concerning the safety of life and property at sea, considered that at some future date these two agreements should be combined into a single international convention.

19. The Conference also considered the possibility of assigning load-lines to fishing vessels. While deciding that fishing vessels should not be included in the Convention, it was agreed that IMCO should pursue studies on the minimum free-board for such vessels with a view to establishing recommended international standards.

20. The 1966 International Convention on Load-Lines will come into force twelve months after it has been accepted by at least fifteen Governments of States, including seven possessing not less than one million gross tons of shipping. As at the end of January 1967, nine Governments, including four with not less than one million gross tons of shipping have accepted the Convention.

#### STABILITY OF FISHING VESSELS

21. IMCO is paying special attention to the safety of fishing vessels, in particular to the studies on stability, in view of the fact that the major part of the requirements of the 1960 International Convention for the Safety of Life at Sea is not applicable to fishing vessels. Studies on stability of fishing vessels, aimed at the establishment of stability criteria, are carried out by a working group, run by IMCO in close co-operation with FAO.

22. This group had already drawn up some practical suggestions to fishermen, setting out, in simple terms, precautionary measures for ensuring adequate stability, and has prepared recommendations on the use of the rolling period test for approximate determination of initial stability of fishing vessels. The group has also issued recommendations on practices for freeing ports, external hatch coamings and door sills.

23. The group studied a number of parameters as possible stability criteria and proposed numerical values for them, which should be tested against seagoing decked fishing vessels in any condition of loading, except ice accumulation, likely to occur during any stage of a fishing trip.

24. The group is endeavouring to establish a simple formula for judging stability, and in this connexion is examining various proposed formulae.

25. The group is continuing its studies on the effect of icing on stability of fishing vessels, and for the time being has recommended the use of certain minimum requirements on icing to those administrations which, not yet having established such requirements, were interested in the problem.

#### SAFETY OF NUCLEAR SHIPS

26. The International Convention for the Safety of Life at Sea of 1960, contains a number of safety requirements of a general nature for nuclear ships. The recommendations of the 1960 Safety Conference provided for the development of more detailed requirements for nuclear ships, and the preparation of these is one of the tasks which IMCO will face in the future.

27. The safety of nuclear ships covers both the aspects connected with nuclear reactors and the high standard of general safety required to protect the nuclear plant from damage and to prevent radioactive contamination of the environment. The first aspect falls more within the scope of IAEA, and the second predominantly within that of IMCO.

28. Up to now, IMCO has not yet initiated any work in this respect, but it maintains close co-operation with IAEA.

29. In May 1966, the consultative group of experts convened by IAEA, in which an IMCO representative took part, prepared a document entitled "Safety considerations in the use of ports and approaches by nuclear merchant ships",<sup>a</sup> which is a summary of existing practice in this field. The IMCO Maritime Safety Committee considered this document and will be commenting on it at its fifteenth session in February-March 1967.

30. In April 1967, another meeting of the consultative group of experts will be finalizing the document concerned.

31. A symposium on nuclear ship propulsion to review the design, construction, operation and safety problems of ship propulsion reactors will be convened by IAEA in 1968, and IMCO will be taking part both in the symposium and in its preparation.

#### MARINE POLLUTION

32. At its fifth session, the Sub-Committee on Oceanography of the Administrative Committee on Co-ordination (ACC) — whose name was subsequently changed into the ACC Sub-Committee on Marine Science and its Applications — recommended that a questionnaire on marine pollution should be sent to Governments with a view to establishing, on the basis of the information received, whether any further international action is required. The ACC at its thirty-ninth session endorsed this recommendation.

33. A questionnaire finally agreed upon at the sixth session of the Sub-Committee was circulated in May 1966 by the Secretary-General of IMCO, on behalf of the Chairman of ACC, to Member Governments of the United Nations system. The replies were to be addressed to IMCO, which is now providing the secretarial services for the

<sup>a</sup> IMCO document, MSC XIV/7/Add.1.



Sub-Committee on Marine Science and its Applications, and these are being compiled for consideration at the seventh session of the Sub-Committee, which has been tentatively scheduled for 2-4 March 1967 at IMCO headquarters.

34. Together with problems of marine pollution, the Sub-Committee will have on its agenda a number of other questions in the field of marine science and its applications, requiring co-operation and co-ordination of effort of the participating agencies.

#### CERTAIN ASPECTS OF WORLD WEATHER WATCH PLANNING

35. It is recognized that weather data on a global scale and the ability to communicate them rapidly are essential to weather forecasting. These are among the aims of the World Weather Watch to which IMCO's interest has been drawn since the early stages. Because of the contribution and benefits to safety at sea which are expected from increased knowledge of conditions over the oceans, IMCO has actively participated in the planning of this project.

36. While the North Atlantic is adequately covered both by ships, which return information while plying in the busy lanes, and also by the NAOS stations, other oceans of the world have very sparse coverage. Marine observations will have to be made by an increased number of ships, and ways and means have therefore been considered for achieving this purpose.

37. The contribution of ships taking part in a wider scheme of upper-air observations essential for long-range forecasting has been explored, and certain difficulties have been examined. In this respect, the availability of helium as a substitute for hydrogen for filling upper-air balloons seems to be a welcome solution, since it removes the dangers associated with the use of hydrogen on board.

38. Requirements for additional transmissions from ships could pose a problem, not only with regard to the volume of traffic, but also from the standpoint of the adequacy of equipment.

39. The use of fishing vessels has also been considered as a valuable aid in filling the gaps in the existing system of sea observations.

40. The benefits which shipping is expected to derive from the operations of the World Weather Watch include the possibility it provides of avoiding bad weather — which leads to greater safety, increased comfort and convenience, and better cargo control. It could also help in a better choice of fishing grounds, and in the efficient conduct of other shipping and marine operations.

41. The Maritime Safety Committee of IMCO has considered the problems relating to the maritime aspects of the World Weather Watch, and has endorsed the value both of the plans discussed and of certain parameters directly related to safety, such as the surface wind, the isobaric pattern, waves, surface visibility, freezing rain or sea spray, and sea ice.

#### ANNEX VII

##### Summary of activities in the field of transport

###### *International Labour Organisation*

1. The ILO exercises a twofold activity in the field of transport. It consists of studies in technical co-operation projects and of preparation and servicing for meetings. As regards transport in general, the ILO published the following studies for specialized meetings during the period under consideration.

2. In 1965, the ILO published a comparative study of the work conditions in urban transport agencies encompassing fifteen major cities in several continents. The data which were gathered were primarily concerned with the length and the scheduling of the work day, with weekly or periodic days off, holidays, paid annual leave, special leave, crew rotations, and the consequences of the intensity

of modern traffic on the health of public transport personnel. In May 1965, fifteen experts from either public urban transport organizations or from labour unions conducted a review of this study with emphasis on the points which were described in the foregoing, as well as on the ulterior measures which were to be taken on an international scale. They formulated conclusions which they unanimously adopted and whose transmittal to all member States of the ILO, as well as to interested organizations dealing with labour and management, was authorized by the ILO Governing Body.

3. In 1966, three documentary reports were prepared for the eighth session of the ILO Inland Transport Committee. The questions which were examined were the following: recent developments in labour problems for transport, other than maritime; follow-up on the ILO conclusions and resolutions of the above-mentioned Committee; collective bargaining methods and regulation of contracts in railway transport; and compensation and salary structure in railway transport. The eighth session of the Committee took place in November and December 1966. It resulted in the adoption of conclusions regarding collective bargaining methods, compensation and salary structure in railway transport. By means of several resolutions it showed which measures should be undertaken by the ILO in the opinion of the Committee in regard to working conditions in such fields as urban transport; technical co-operation for professional training; railway modernization; labour regulation and road transport; labour problems in docks and inland navigation systems, notably in developing countries; and the consequences of the extremely rapid evolution of civil aviation on crews. These various conclusions and resolutions will be submitted to the ILO Governing Body during the February-March 1967 session.

#### ANNEX VIII

##### Summary of activities in wood products transport

###### *Food and Agriculture Organization of the United Nations*

1. Transport usually accounts for a very large proportion of the delivered cost of wood products; in the case of those shipped overseas, the combined cost of land transport, ocean carriage and terminal handling, commonly equals one-half or more of the c.i.f. price and thus decisively affects the scope for production and trade.

2. The activities of FAO in the field of wood products transport have consisted in (a) provision of assistance to countries in the solution of problems related to the transport, other than ocean carriage, of wood products, and (b) collection, analysis and exchange of information bearing on such transport.

3. In addition to the above, studies are currently being initiated on some of the economic and technical problems related to the ocean carriage of wood products, including specialized ship design and terminal cargo handling.

###### TECHNICAL ASSISTANCE IN WOOD PRODUCTS TRANSPORT

4. Assistance is being provided under UNDP (Special Fund and Technical Assistance components); it may bear on one or several stages of transport advancement, from the determination of transport desires, through transport policy planning, to feasibility investigations for specific projects. Table 1 below gives an indication of the volume of work carried out during 1965-1966 and of that budgeted for 1967-1968.

5. Assistance through experts is supplemented by provision of specialized training activities in wood products transport: under the UNDP fellowship programme, training is being provided to an increasing, though as yet rather limited, number of professionals from developing countries. Some of the statistics are shown in table 2 below.



TABLE 1. EXPERTS WORKING WHOLLY OR LARGELY ON PROBLEMS RELATED TO WOOD PRODUCTS TRANSPORT

	<i>Posts filled in 1965-1966</i>	<i>Posts budgeted for 1967-1968</i>
Number of experts . . . . .	33	50
Number of man-months . . . .	444	748
Countries serviced . . . . .	Twenty countries	Thirty countries
	Argentina, Brazil, Burma, the Central African Republic, Ceylon, Chile, Ecuador, Greece, Guatemala, Guinea, India, Iran, Jordan, the Republic of Korea, Nicaragua, Nigeria, Peru, Thailand, Yugoslavia and Venezuela	Argentina, Brazil, Burma, Cambodia, the Central African Republic, Ceylon, Chile, China (Taiwan), Colombia, Congo (Brazzaville), Costa Rica, Cuba, Ecuador, Greece, Guatemala, Guinea, Guyana, India, Iran, Mexico, Morocco, Nepal, Nigeria, Panama, Paraguay, Peru, the Philippines, Tunisia, Turkey and Venezuela

TABLE 2. FELLOWSHIPS IN WOOD PRODUCTS TRANSPORT AND RELATED FIELDS

	<i>Training effected in 1965-1966</i>	<i>Fellowships budgeted for 1967-1968</i>
Number of fellows . . . . .	7	12
Number of man-months . . . .	42	66
Countries of origin (number of fellows from country) . . . .	Argentina (1), Ceylon (2), India (2), Yugoslavia (2)	Burma (1), Ceylon (1), India (6), Romania (2), Venezuela (1), Yugoslavia (1)

## COLLECTION, ANALYSIS AND EXCHANGE OF INFORMATION ON WOOD PRODUCTS TRANSPORT

6. Emphasis in this work has so far been on Europe, in collaboration with the ILO and ECE. During the biennium under review, several groups of experts working under the auspices of the Committee on Forest Working Techniques and Training of Forest Workers have carried out studies on (a) the application of mathematical techniques to the planning of wood products transport; (b) available techniques of forest road construction; (c) tractor usage in short and

medium-distance transport of wood; (d) whole-tree transport; (e) transport of wood waste and of small-dimension wood; (f) rafting technology; and (g) cable-way transport of wood.

7. Item (c) was the subject of a symposium, in Stockholm, in 1966, while item (e) is to be discussed at a symposium to be held in Poland in 1968. In the course of the biennium, several reports were completed on items (d) and (f). Planning of forest communications networks (roads and cables) was the subject of a major publication issued in 1965.

## DOCUMENT E/4304/ADD.2

## Financial implications of the progress report of the Secretary-General

[Original text: English]  
[16 May 1967]

1. The progress report of the Secretary-General on transport development (E/4304) contains, in chapter V, part B, recommendations on the continuing programme and for increasing efforts and improving organization at the international level. While the recommendations mentioned in paragraphs 82 through 88 of chapter V

could be implemented within the normal resources available to the Resources and Transport Division, there would arise additional costs in so far as the recommendation in paragraph 89 was concerned, namely, the convening of a panel of experts to advise on the United Nations programme in the field of transport, including

substantive and organizational aspects, bearing in mind the previous recommendation of the Economic and Social Council in its resolution 1082 A (XXXIX) regarding the strengthening of the role of the Secretariat as a "focal point for liaison and co-ordination of activities in the United Nations and its family in the field of transport".

2. Should the Council approve these recommendations, the Secretary-General would advise, in accordance with regulation 13.1 of the Financial Regulations and Rules, that the following costs would arise in connexion with the convening of the panel of experts proposed in paragraph 89. The panel would consist of ten transportation experts appointed by the Secretary-General in con-

sultation with Governments, due consideration being given to geographical distribution, to a balance between developed and developing countries, and to a balanced coverage in expertise; it would be convened for two weeks in early 1968 at Headquarters and its report would be presented to the Council at its forty-fourth session. The costs of the meeting are estimated at \$18,000, details of which follow:

	(United States dollars)	
Travel (air economy),	10 × \$900 . . . . .	9,000
Per diem, 12 days	× 10 × \$ 25 . . . . .	3,000
Fees, 12 days	× 10 × \$ 50 . . . . .	6,000
	TOTAL	18,000

## DOCUMENT E/4372\*

### Report of the Economic Committee

[Original text: English]  
[22 May 1967]

1. At its 1460th meeting on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 4, entitled "Transport development".

2. The Economic Committee, under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council and Mr. Daniel Cosío Villegas (Mexico), acting chairman, considered the item at its 404th to 406th, 408th and 409th meetings held between 12 and 16 May and, 18 and 19 May 1967.

3. In considering the item, the Committee had before it a report of the Secretary-General (E/4304 and Corr.1, E/4304/Add.1 and Corr.1) and a note by the Secretary-General on the financial implications of his report (E/4304/Add.2).

4. At its 408th meeting the representative of Pakistan, on behalf of the sponsors, Cameroon, Dahomey, Guate-

mala, India, Iran, Kuwait, Libya, Mexico, Pakistan, Peru, the Philippines and the United Republic of Tanzania, introduced a draft resolution (E/AC.6/L.357). At its 409th meeting, the representative of Pakistan, on behalf of the sponsors, proposed orally several revisions in the draft resolution which had been suggested by the representatives of Canada, United Kingdom and the United States. The Committee then unanimously approved the draft resolution.

#### Recommendation of the Committee

5. The Committee therefore recommends to the Council the adoption of the following draft resolution:

#### TRANSPORT DEVELOPMENT

[Text adopted by the Council without change. For the final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1202 (XLII).]

\* Incorporating document E/4372/Corr.1.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 4 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/AC.6/L.355	Statement made by Mr. Philippe de Seynes, Under-Secretary for Economic and Social Affairs, at the 404th meeting of the Economic Committee, held on 12 May 1967	Mimeographed

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/AC.6/L.357	Cameroon, Dahomey, Guatemala, India, Iran, Kuwait, Libya, Mexico, Pakistan, Peru, Philippines and United Republic of Tanzania: draft resolution	Mimeographed
E/RES/1202 (XLII)	Resolution adopted by the Council at its 1469th plenary meeting, on 26 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolution 1202 (XLII)





## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 5: Application of science and technology to development : \*

- (a) Report of the Advisory Committee on the Application of Science and Technology to Development ;  
 (b) Arrangements for the transfer of operative technology to developing countries

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Document No.	Title	Page
<b>(a) Report of the Advisory Committee on the Application of Science and Technology to Development</b>		
E/4300/Add.1	Addendum to the fourth report of the Advisory Committee on the Application of Science and Technology to Development . . . . .	1
<b>(b) Arrangements for the transfer of operative technology to developing countries</b>		
E/4319	Progress report of the Secretary-General . . . . .	2
E/4377	Report of the Economic Committee . . . . .	10
<b>Check list of documents</b> . . . . .		<b>10</b>

\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1468th meeting ; see also the records of the 413th and 414th meetings of the Economic Committee (E/AC.6/SR.413 and 414).

**(a) Report of the Advisory Committee on the Application of Science and Technology to Development ;****DOCUMENT E/4300/ADD.1**

**Addendum to the fourth report of the Advisory Committee on the Application of  
 Science and Technology to Development**

[Original text : English]  
 [15 May 1967]

1. In considering the fourth report of the Advisory Committee on the Application of Science and Technology to Development (E/4300), members of the Economic and Social Council may be interested to be brought up to date about some matters covered in the fourth report which have received further consideration since the report was issued, at the recently concluded seventh session of the Advisory Committee (1 - 5 May 1967). This brief note has been prepared for information only — each of the items will be duly reported in the next annual report of the Advisory Committee to the Council.

*Edible protein* (E/4300, para. 5)

2. The Advisory Committee considered the report of its *Ad Hoc* Working Group on Edible Protein<sup>1</sup> which in turn had used the report of the *Ad Hoc* Panel of Experts on Protein as a basis for its proposals. The Advisory Com-

mittee adopted unanimously the report of its *Ad Hoc* Working Group taking into account a number of points raised in discussion, and requested that the report be transmitted to the Economic and Social Council for consideration at its forty-third session. The Advisory Committee expressed the hope that this report — the first of a series of detailed reports dealing with specific problems meriting concerted attack by the international community — would receive close attention by the Economic and Social Council and the General Assembly, and would lead to action being taken on its recommendations commensurate with the urgency and importance of the subject. The report is at present being produced in its final form for presentation to the forty-third session.

*Natural resources* (E/4300, para. 25)

3. The Advisory Committee considered a report from its *Ad Hoc* Working Group on Natural Resources relating to the decision to prepare a comprehensive report on

<sup>1</sup> Document STD/7/1A/Rev.1.

natural resources and adopted a modified and elaborated outline for the proposed report.<sup>2</sup> The Committee further clarified the objectives of the report and it indicated that its preparation was now a matter of considerable urgency. It was essential that the draft text should be available for the Committee's consideration at its eighth session.

*Science education* (E/4300, para. 27)

4. The Advisory Committee had previously decided that science education should be a principal item for consideration at its eighth session. During its recent session the Advisory Committee's informal advisory group on science education met to review the arrangements and made specific proposals relating to the papers to be prepared for the consideration of the item at the eighth session.

*The World Plan of Action* (E/4300, para. 23)

5. At the recent session of the Advisory Committee, it was reported that United Nations organizations concerned were at present engaged in preparing the material for the first stage of the drafting of the World Plan of Action. The Advisory Committee emphasized the importance it attached to the formulation of the Plan in time for its consideration by the Committee at its ninth session, and requested that the project should be given

<sup>2</sup> A first outline was adopted by the Advisory Committee at its sixth session, see E/AC.52/L.27, annex V.

the highest priority.

*Measurement of expenditures on science and technology* (E/4300, para. 26)

6. In following up Economic and Social Council resolution 1155 (XLI), the Advisory Committee agreed in principle to the proposals put forward by its secretariat for the appointment of an *ad hoc* panel of experts working in the closest collaboration with the members of the United Nations family to report on a methodology for the examination of expenditures on the application of science and technology to development for possible adoption by the United Nations family. In the preparation of its report, advantage would be taken of related studies carried out by other bodies.

*Regional activities* (E/4300, para. 28)

7. The regional groups for Africa and Latin America of the Advisory Committee submitted reports on recent meetings to the Committee. In the light of these and other documents it was agreed that it would be useful if a statement could be drafted for adoption by the Advisory Committee which would outline its considered views on the advantages and disadvantages of a regional approach to the application of science and technology to development as compared to a national approach. It was decided to assign the drafting of this statement to an *ad hoc* working group on regional activities set up by the Advisory Committee for the purpose.

(b) Arrangements for the transfer of operative technology to developing countries

DOCUMENT E/4319

Progress report by the Secretary-General

[Original text: English]  
[27 March 1967]

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## PREFATORY NOTE

1. An evaluation of the actual experience of developing countries regarding the effectiveness and cost of the transfer of foreign patented and non-patented know-how and technology has been requested in General Assembly resolution 2091 (XX) of 20 December 1965, and the third report of the Advisory Committee on the Application of Science and Technology to Development.<sup>3</sup> This progress report is submitted to the Advisory Committee, the Economic and Social Council and the General Assembly in response to the specific request included in operative paragraph 6 of the above resolution.

2. The increasing concern of Governments with this entire area found its expression in General Assembly resolution 1713 (XVI) of 19 December 1961, which asked the Secretary-General to prepare a study on the role of patents in the transfer of technology to developing countries. This study<sup>4</sup> was submitted to the United Nations Conference on Trade and Development at its first session, the thirty-seventh session of the Economic and Social Council and the twentieth session of the General Assembly. In his study, the Secretary-General pointed out that patents cover only part of the total technology needed for the development of developing countries, and recommended therefore that further study in this field encompass the full range of patented and unpatented know-how. The study proposed a number of technical and financial measures at the national and international level which could be taken to facilitate the transfer of technology to developing countries and reduce its cost; it also contained recommendations for the improvement and adaptation of industrial property legislation and administration.

3. The role of foreign enterprises in the transfer of operative technology to developing countries was examined in a further report entitled, "The promotion of the international flow of private capital".<sup>5</sup> General Assembly resolution 2091 (XX) called for the continuation of this project, which has also been included in the over-all programme of the Advisory Committee on the Application of Science and Technology to Development.

4. This progress report is accordingly concerned with the following projects which are now in progress:

(a) Selected industry and country case studies designed to trace the actual experience in the transfer of patented and non-patented operative technology to developing countries through enterprise-to-enterprise arrangements;

(b) A study on measures to ease the financial burden of such transfers to developing countries;

(c) Technical assistance and other measures for the improvement of industrial property legislation and administration in developing countries.

These projects are being undertaken by the Fiscal and Financial Branch of the Department of Economic and Social Affairs, the first of them in conjunction with the United Nations Institute for Training and Research.

<sup>3</sup> See *Official Records of the Economic and Social Council, Forty-first Session, Supplement No. 12*, chap. III, sect. D.

<sup>4</sup> United Nations publication, Sales No. : 65.II.B.1.

<sup>5</sup> See *Official Records of the Economic and Social Council, Thirty-ninth Session, Annexes*, agenda item 8, document E/4038 and Add.1.

# I. ENTERPRISE-TO-ENTERPRISE ARRANGEMENTS FOR THE TRANSFER OF OPERATIVE TECHNOLOGY: EMPIRICAL CASE STUDIES

5. Managerial and technical know-how in its broadest sense, encompassing entrepreneurial initiative and skills as well as the use of technical processes and products, appears increasingly as an essential factor in the process of economic development. As technological improvements continue to expand the productivity of industry and agriculture in the developed countries, the ability of developing countries to participate in these advances becomes the key to their ability to narrow the growing technological gap between them and the industrialized countries. These problems are not limited to developing countries in the early stages of industrial development; the more advanced among the developing countries, as indeed many of the smaller industrialized countries, are also greatly concerned with the necessity of absorbing new technology, which is generally developed in industrial enterprises in countries with a large economic base justifying expensive research and development programmes.

6. Basic requirements for foreign technology can generally be met through access to published materials, foreign training, the activities of technological research and information centres and institutes, the employment of foreign technicians, and indeed through the straight purchase of foreign know-how (patent licences, etc.). Extensive programmes are under way within the United Nations and outside it to facilitate such access and to reduce its cost.

7. Operative technology for enterprises of more than rudimentary character cannot generally be acquired in this manner. Just as such technology is developed and indeed practised by the teams of managers, researchers, engineers, etc., in the enterprises of the advanced countries, their transfer normally requires the active participation of such enterprises in the industry to be established in the developing countries. It is in this respect that the contribution of foreign enterprises becomes indispensable to the development of similar enterprises in developing countries, and it is for this reason that the arrangements between the foreign and domestic enterprises involved are of the greatest importance to the effectiveness of such transfer and the benefits which will flow from it.

8. The importance of this contribution is not limited to private enterprises either on the technology-supplying or receiving side. The emergence in developing countries of independent local recipients — private enterprise, government bodies, mixed agencies — has created an urgent need to develop a variety of financial and institutional arrangements between them and the suppliers of foreign operative technology. These arrangements commonly take on a vast range of different forms: *ad hoc* arrangements for the sale of machinery and equipment — possibly on extended credit terms — engineering and construction contracts, technical service agreements and possibly "turnkey" contracts under which the supplier hands over the complete plant ready to operate, with or without the continuing management and training services of the suppliers; as well as continuing arrangements such as licensing agreements and joint ventures.

9. The choice of the type of arrangement used in a particular venture is bound to have a direct impact on the effectiveness of the transfer, its cost, adaptation and utilization as well as on the development of local skills and ultimately of local inventiveness.

10. Among the basic considerations in this process is the — immediate and continuing — appropriateness of the price of technology especially in terms of its foreign exchange cost (see chap. II below).

11. Another question refers to the appropriateness of the technology transferred. The likelihood of it being the most appropriate process for the purpose is affected both by the extent of continuing interest in the fate of the venture on the part of the transferor and the ability of the recipient to make a considered selection among the different available sources for technology. Further, there is a question of the recipient's ability to apply the technology without further outside assistance, and indeed of the ability or willingness of the foreign supplier to give due attention to the problems of local adaptation of its traditional machinery and processes.

12. Moreover, there may be involved in this process many political and financial factors related to issues of foreign domination and control which may militate against what would be the most desirable or efficient method from the standpoint of the technology transfer. Thus, in the interest of the independence of the local enterprise, the technology may be secured through the purchase of foreign machinery or the licensing of foreign processes, at the expense of often needed arrangements for long-term technical and managerial assistance and adaptation. On the other hand, where the supplier of the technology participates financially in the venture, and therefore has an interest in its effective transfer, the recipient enterprise may still be denied access to subsequent advances in the technology developed by the foreign enterprise, and may, in any case, find itself hampered by being limited to a single foreign supplier.

13. It is for the examination of these issues that a project has been initiated which will be based on a series of empirical case studies designed to evaluate the nature, operations, costs and effects of direct arrangements for the transfer of managerial and technical know-how between enterprises (public or private) in developed and developing countries.

14. In the planning phase of this project, a survey has been concluded on the over-all plan and methodology for the country case studies. The country studies would be addressed to industries which have already reached a relatively advanced stage of development, and would provide the most useful and indicative results in view of their past and present experience. Preference would also be given to those industries whose general performance and requirements have been previously explored.

15. A number of field missions were undertaken in order to prepare the selection of the countries and industries most appropriate for this first series of studies and to elucidate the interest of the respective Governments. The first studies would be undertaken in a limited number of countries which have achieved a relatively advanced

stage in their industrial development. The plans for implementing the case studies in two countries, Brazil and Mexico, have been formulated in co-operation with the Joint Programme for the Integration of Industrial Development of the Economic Commission for Latin America, the Latin American Institute for Economic and Social Planning and the Inter-American Development Bank. Tentatively, in Brazil these industries would include machine-tool, engineering and steel. It is proposed to expand the study on steel to a number of countries in Latin America (Argentina, Chile, Colombia and, possibly, Mexico). As regards Mexico, it is tentatively proposed that the following three industries be studied: (a) petrochemicals (heavy and intermediate); (b) electric equipment and (c) food processing. Plans for countries in other regions will be considered with the regional economic commissions.

16. The studies would seek to determine as regards each industry:

(a) The contribution of foreign enterprise technology to the initiation and development of the industry in the country, and the arrangements by which such technology was originally acquired and subsequently supplemented (including specific obstacles encountered in this field);

(b) The manner of selection of technology suppliers and of the form of arrangements entered into with them (for example, subsidiaries, joint ventures, licence agreements, engineering contracts etc.);

(c) The effects of this selection, and of the terms and conditions incorporated in the arrangements on the utilization of the transferred technology, on the resulting advance in the development of the industry, and indirectly on the development of indigenous skill and invention in the industry;

(d) The cost of the transfer, in terms of capital cost of the original acquisition of equipment, industrial property rights etc., and the current cost in terms of royalties, dividends, fees, salaries etc. In this context, special attention would be given to the balance of payments aspects, that is, the cost to the developing country as distinguished from the cost to the recipient enterprise (see Chap. II below);

(e) Evaluation of the industry's past growth and future needs and prospects from the viewpoint of technology transfer and absorption.

17. The analysis of these factors related specifically to technology would be placed within the context of a survey of the industry's over-all structure and economic position as well as of the country's institutional framework and economic policies, and their effects on the technology transfer process. The latter would cover the following aspects: régime of foreign investments, taxation, foreign exchange regulations, industrial property legislation and administration, general expenditure on research and development, etc.

18. An international seminar is to be held at the conclusion of this first series of case studies to evaluate their results and to formulate more effective and more economical methods and arrangements for the transfer of foreign technology to developing countries.

## II. COST OF TECHNOLOGY TRANSFER

19. The developing countries' concern over possible excessive financial burdens involved in arrangements for the transfer and licensing of patented and non-patented know-how have been specifically analysed in the Secretary-General's reports, *The Role of Patents in the Transfer of Technology to Developing Countries*<sup>6</sup> and "The promotion of the international flow of private capital".<sup>7</sup>

20. From a balance of payments point of view, the cost of foreign technology acquired through arrangements between business enterprises has to be evaluated in terms not only of the economy as a whole but also of that of the individual firms, including the compensating benefits of the resulting import savings and export gains. In the micro-economic context, the measuring of the cost of technology is further complicated, since it cannot be limited to the global fees and royalties generally quoted in these arrangements. Other factors must be included such as the payments due to the foreign enterprise for materials or components, for services of technicians, for its equity participation, etc. The elucidation of the real cost of foreign technology, especially in terms of the foreign exchange burden involved, will constitute a major element in the pilot case studies and the proposed international seminar on this subject referred to in chapter I above.

21. Regardless of whether in a given case the actual costs are agreed to be "reasonable", it would be desirable for developed and developing countries and international agencies to adopt measures which would reduce the cost to developing countries of securing access to foreign technology. A parallel study will therefore be specifically concerned with the examination of possible means for reducing the cost of the acquisition and practical operation of foreign technology. These measures may include financial assistance to the know-how recipients through loans or aid, by bilateral and multilateral institutions and programmes; compensation provided to the know-how suppliers by their own Governments either in a direct way (for example, out of aid allocations) or in an indirect way (through tax concessions or guarantees) or from international financial resources. Special reference will also be made to the possibilities which may be available in the case of innovations which are in the public domain or have been developed by, or with, support from public, semi-public or non-profit agencies.<sup>8</sup>

22. A number of the measures currently in force have been set out by way of illustration in a note on arrangements for the transfer of operative industrial technology to developing countries<sup>9</sup> submitted to the Advisory Committee on the Application of Science and Technology to Development at its fifth session (see annex I).

23. In order to secure comprehensive information on all relevant measures and arrangements in effect or contemplated on the national or international level by Member Governments, the Secretary-General has circulated a questionnaire on the subject, the text of which is attached in annex II.

## III. INDUSTRIAL PROPERTY LEGISLATION AND ADMINISTRATION

24. General Assembly resolution 2091 (XX) also requested "that the competent international bodies, including United Nations bodies and the Bureau of the International Union for the Protection of Industrial Property, give particular attention to requests from Governments of developing countries for technical assistance in the field of industrial property legislation and administration".

25. Systematic efforts are currently being made to buttress the fellowships and advisory services which are provided in this field to developing countries by the United Nations and the United International Bureaux for the Protection of Intellectual Property (BIRPI). Thus, the Secretary-General submitted his views and comments on the model law on inventions,<sup>10</sup> and his representatives participated in meetings of committees of experts, which were convoked by BIRPI to consider draft model laws on inventions, trade marks etc.<sup>11</sup> These model laws seek to adapt the traditional legislation in these fields to the needs of developing countries.

26. Further, two projects have been initiated by the Secretary-General on the basis of the recommendations in his report which was already cited, entitled: *The Role of Patents in the Transfer of Technology to Developing Countries*: one, for the establishment of regional patent co-operation centres (see annex III to the present document) is intended to enable Governments of developing countries to pool their resources especially for the examination of patent applications and together to tap the vast facilities of the patent offices in the developed countries, possibly through the intermediary of the International Patent Institute at The Hague. Among the developed countries, a major effort at such close co-operation is already being made;<sup>12</sup> this can be of direct benefit to the developing countries, provided their special needs are kept in mind as this effort proceeds. The purpose of the other project is to establish, possibly in co-operation with BIRPI, a central training institute for industrial property administration (see annex IV), which would offer systematic training courses, special workshops, etc., for government officials engaged in industrial property administration.

<sup>10</sup> See document E/4078, annex A.

<sup>6</sup> United Nations publication, Sales No.: 65.II.B.1, paras. 269, 270 and 307-310.

<sup>7</sup> See foot-note 5.

<sup>8</sup> See also the third report of the Advisory Committee on the Application of Science and Technology to Development; *Official Records of the Economic and Social Council, Forty-first Session, Supplement No. 12*, paras. 120 and 121.

<sup>9</sup> Document STD/5/TRANSFER/4.

<sup>11</sup> See *Model Law for Developing Countries on Inventions* (BIRPI publication No. 801 (E), Geneva, December 1965), and "Draft Model Law for Developing Countries on Marks, Trade Names, Indication of Source and Unfair Competition" (BIRPI document PJ/51/3, Geneva, 1966).

<sup>12</sup> See, for example, "Plan for Facilitating the Filing and Examination of Applications for the Protection of the Same Invention in a Number of Countries (Plan for a Patent Co-operation Treaty)" (BIRPI, document PCT/INF/1, February 1967).

## ANNEXES

## ANNEX I

Measures for reducing the cost of foreign technology to developing countries<sup>a</sup>

1. This note relies mainly on the Secretary-General's reports entitled *The Role of Patents in the Transfer of Technology to Developing Countries*,<sup>b</sup> "The Promotion of the International Flow of Private Capital"<sup>c</sup> and "The Promotion of Private Foreign Investment in Developing Countries";<sup>d</sup> it also draws on the special study entitled: "Tax Treatment of Research and Development" which was prepared by J. van Hoorn, Jr. in 1962 for the Organization for Economic Co-operation and Development and which covers its developed member and associate countries.

2. This note — and presumably the study suggested by the Advisory Committee on the Application of Science and Technology to Development — will concentrate on measures which actually reduce the cost of transferring know-how on an enterprise-to-enterprise (private and public) basis — whether these measures are specifically designed for this, or a wider, purpose. The study will not extend, in this context, to general measures which may incidentally contribute to this end; examples of the latter would be advisory services, to Governments and enterprises, for the more effective and economic acquisition and utilization of foreign technology (which will be dealt with in the case studies discussed in the first part of the original note);<sup>e</sup> the provision of soft-loan funds which would put technology, along with other foreign inputs, at the recipient's disposal more cheaply than if he would have to rely on commercial financing.

3. The note presents a summary survey of selected relevant measures. While such measures are in rather wide use, their range is quite limited. In fact they relate primarily to tax incentives and to investment guarantees designed to reduce the risks and costs involved in the transfer of patented and non-patented know-how. Less information is available at present on forms of more direct financial and other assistance, through such measures as those referred to in section II above, and indeed these were put forward more in the nature of proposals for additional action than as representative of policies already in wide use.

4. There is thus a clear need for a systematic enquiry to secure and analyse fuller material on existing and proposed measures in this field with a view to developing specific new proposals for action. As a first step in this direction, it is intended to complement the available information by means of an enquiry, along the lines of this note, to be circulated among Governments and to the appropriate international organizations (see annex II).

5. The bulk of the measures currently available can most readily be divided into three categories:

(a) Measures which reduce the cost of the technology transfer, but at the expense of the developing country thus not reducing its foreign exchange burden. In most frequent use are tax concessions which are offered, in one form or another, in practically all developing countries. These may be granted to the recipient enterprise direct, either as a general incentive to investment (pioneer enterprise schemes) or specifically on their expenditures for new technology, training schemes and the like. Tax concessions are also often given to the foreign technology-supplying enterprise on its revenues earned in the recipient country or to foreign technicians on their fees or salaries earned for activities in the developing country.

Since the technology supplier (whether company or technician)

will fix his demands on the recipient enterprise at that level which, after local taxes, will bring him the net return he expects under prevailing market conditions, any reduction in the local tax will correspondingly reduce the actual payments that have to be made by the recipient enterprise. This, though the country's foreign exchange burden will not thereby be affected, can have a real impact on the ability of local enterprises to utilize foreign technology, since with the lower costs, they enlarge their market and will more readily be able to compete especially with foreign companies that have not been excluded by protective tariffs or direct restrictions.

Of course, where the cost reduction opens up export possibilities, its net effect on the balance of payments will be favourable. On the other hand, in the much more frequent cases, where the tax concession is improvidently granted, the foreign technology-supplier (or inventor) will be able to repatriate larger royalties or profits than he might have required;

(b) Measures which reduce the cost to the technology-supplying enterprise at the expense of their home Governments.

(i) These are primarily tax concessions which advanced countries grant, in some cases specifically to promote the transfer of technology to foreign countries (though not necessarily to developing countries in particular), or, which is more frequent, encourage foreign trade and investment generally. The latter concessions are mostly in the nature of measures to eliminate international double taxation. An example for the former is provided by the Special Taxation Law of Japan under which income from the export of patented and non-patented know-how is included only for half its actual amount in the know-how suppliers' taxable income.

More general, though also here relevant, are the tax incentives to research. Thus the United Kingdom permits accelerated depreciation on so-called scientific "research allowances", for capital expenditures on scientific research, including research carried out abroad. In addition, in the United Kingdom, capital expenditure on new assets (including those to be used in scientific research) are entitled to an extra 20 per cent investment allowance, which thus raises total allowable deductions to 120 per cent of actual costs; similarly, in the United States, scientific research expenditures of a capital nature may be amortized immediately in full.

Tax concessions designed to avoid international double taxation do not normally reduce the cost of the technology transfer, but rather prevent its being excessively increased by the unrelieved accumulation of the full tax demands on the part of both the technology-supplying and the technology-receiving country. Thus, under the most widely used technique, that of the tax credit, the home Government of the technology supplier reduces his tax on his foreign profits by the amount of the tax he pays on these profits to the country where they have arisen. Thus, his resulting tax is equal to that which he would have paid on the same amount of profits arising in his home country.

In a number of countries, however, double taxation relief is provided in a number of cases by outright exemption, so that the know-how supplier is subject only to the usually lower tax rate of the developing country — a clear reduction in his total costs.<sup>e</sup>

Where double taxation relief is provided under tax treaties, royalty income from patents, etc., is usually exempted from taxation in the country where the know-how is used. Thus, the burden of the relief rests on the technology-importing country. In an increasing number of more recent agreements between certain developed and developing countries, however, the latter country's taxing power has been left unimpaired, while the burden of the relief (through tax credit or outright exemption) has been shifted to the former. Under the tax credit mechanism as noted, this shift does not directly alter the total tax burden of

<sup>a</sup> Revised extract from "Arrangements for the Transfer of Operative Industrial Technology to Developing Countries" (STD/S/TRANSFER/4).

<sup>b</sup> United Nations publication, Sales No. : 65 II.B.1.

<sup>c</sup> See documents E/3325 and Corr. 2; E/3492 (*Official Records of the Economic and Social Council, Thirty-second Session, Annexes, agenda items 2 and 5*); E/3665 (*ibid.*, Thirty-fourth Session, Annexes, agenda item 6); E/3905 and Add.1 (*ibid.*, Thirty-seventh Session, Annexes, agenda item 10).

<sup>d</sup> This study will be issued later. For the summary and conclusions, see document E/4293.

<sup>e</sup> It should be noted that this concession is largely limited to dividends from foreign subsidiaries (e.g., under the laws of France, Switzerland, Canada etc.), though such dividends often include profits derived from the transfer of technology.

the royalty-recipient, and thus does not reduce his cost or that of the know-how-using enterprise. Yet, by shifting the tax revenue from the developed to the developing country, it does reduce the cost of the technology to the latter;<sup>f</sup>

- (ii) A number of advanced countries, including the Federal Republic of Germany, Japan and the United States provide guarantee insurance for foreign investments (including technology) against expropriation and other non-business risks, thus reducing the risk factor in the technology suppliers' costs.<sup>g</sup> In the case of at least some of these countries, it may be noted, such insurance is available only for operation in developing countries.

Another type of cost-reducing guarantee is that provided by practically all technology-exporting countries in the form of export credit insurance. This insurance (which covers all business and non-business risks, i.e., all nonpayment) comes into play wherever the technology is supplied not in the form of investment or of direct licences but in the form of the export of machinery and equipment. Under most schemes, the sales price covers the costs of installation including necessary engineering services. The Swiss Export Credit Insurance scheme also extends to transactions involving the rental of Swiss equipment, and the transfer for a fixed sum of patents or technical processes.

While a reduction in the cost of the technology supplier is not necessarily tantamount to a reduction in the cost of the technology to the recipient, this will be the case to the extent to which the supplier's price is affected by competitive pressures (as it normally will be) or by the regulatory or supervisory action of the Government of the developing country;

- (c) Measures available in both developed and developing countries which indirectly tend to reduce the cost or price of foreign technology:

- (i) Anti-monopoly controls — whether applied by the technology-exporting or the technology-importing country — will, in so far as they are effective, enlarge competition and thus impel a reduction in the price demanded by the technology-supplying enterprise — a clear (though difficult) method of reducing the recipient's cost at the direct expense of the supplier;
- (ii) Assurances, guarantees and similar measures — regarding the safety of foreign assets (including technology), the repatriation of profits and capital, etc., — which may be available to technology-suppliers (and foreign investors generally), under policy declarations or investment laws in the developing countries, under bilateral commercial or investment treaties, or under multilateral arrangements such as the International Bank's Convention on the Settlement of Disputes between States and Nationals of Other States (arbitration of investment disputes).<sup>h</sup>

## ANNEX II

### Questionnaire on measures for reducing the cost of foreign technology to developing countries

The Secretary-General of the United Nations presents his compliments to the Permanent Representative of . . . and has the honour to refer to General Assembly resolution 2091 (XX) of 20 December 1965 on "Transfer of technology to developing countries", a copy of which is attached to this note. On the basis of this resolution, the Advisory Committee on the Application of Science and Technology to Development, in its third report to the Economic and Social Council, stated that:

"The Committee attaches special importance to possible means

<sup>f</sup> This is the counterpart of the situation noted in sub-section (a) above, where a tax concession by the developing country reduces the cost of the beneficiary enterprise, but not the burden on the balance of payments of the former.

<sup>g</sup> A multilateral investment insurance scheme (which would make such insurance available for transfers from all developed countries to all developing countries which joined in it) has been tentatively worked out by the Organisation for Economic Co-operation and Development and is at present being studied in the International Bank for Reconstruction and Development.

<sup>h</sup> For a discussion of these and related measures, see document E/4293, paras. 89-94.

for reducing the cost of the acquisition and practical operation of foreign technology to emerging industries and countries . . ."

"The Committee looks forward to a systematic study in this field by the Secretary-General, in consultation with the United International Bureaux for the Protection of Intellectual Property (BIRPI) and other international and national bodies concerned (both public and private), with a view toward formulating specific proposals for remedial action."<sup>a</sup>

For use in the study, the Secretary-General would appreciate receiving full information on the relevant measures and arrangements actually in force, or contemplated by His Excellency's Government on the national or international level. This information should cover all legislative, administrative and treaty provisions or facilities which reduce the cost of technology acquired by developing countries and their enterprises — including provisions which are specifically designed for this purpose, as well as those which produce this effect though applying generally to all foreign investment (including technology) or to all technology (including both foreign and domestic).

For the purposes of this inquiry, technology is understood to cover broadly all patented and unpatented know-how, including secret formulae, blueprints, manuals, etc., designs, trademarks, etc., — whether copyrighted or not — as well as entrepreneurial and managerial methods, processes, techniques, etc., employed in the application of the know-how.

In preparing the requested information, His Excellency's Government may wish to use the following outline which covers the principal categories of such measures, though where others are used, these should also be included.

#### I. Tax concessions:

- (a) These may take the form of:

- (i) Exemption, reduction, deduction, credit, deferral or averaging of tax;
- (ii) Accelerated depreciation or investment allowances;
- (iii) Relief from international double taxation, under domestic law and international agreements etc.;

- (b) They may apply to the tax treatment of:

- (i) Investments in, and operations of, research facilities;
- (ii) Sale and licensing of know-how (for fixed or royalty payments);
- (iii) Engineering and other contractual arrangements for the supply of know-how;
- (iv) Payments to, and income of, technicians;
- (v) Gifts to, income of, or grants by non-profit research organizations, foundations, etc.

#### II. Measures providing direct or indirect financial assistance to the technology-supplier or recipient, through loans or subsidies (especially under bilateral or multilateral aid programmes) for the financing of:

- (a) Capital investments needed in the development or transfer of technology;
- (b) Feasibility studies for the utilization and adaptation of foreign technology;
- (c) Training programmes carried out by enterprises in the technology-supplying country for technical personnel in developing technology-receiving countries.

#### III. Measures making Government-owned technology, or technology developed by Government-sponsored research, available on preferential terms:

- (a) In general;
- (b) Specifically for use in developing countries.

#### IV. Other measures designed to reduce the cost of technology transfers:

- (a) By direct controls:

- (i) Screening of foreign transfer arrangements especially as to the level and terms of payments by the technology-recipient;

<sup>a</sup> See *Official Records of the Economic and Social Council, Forty-first Session, Supplement No. 12*, paras. 120-121.



- (ii) Prevention of restrictive business practices, including those compelling the acquisition from the technology-supplier of high-priced machinery, materials, etc.;
- (b) By assurances and guarantees designed to reduce the risk factor in foreign business operations and provided under a law, concession contract, bilateral treaty or multilateral arrangement, etc.:
  - (i) Investment insurance against non-business risks, especially expropriation, non-transferability of capital and income payments for the foreign use of technology, etc.;
  - (ii) Other guarantees against non-business risks (e.g., undertakings not to expropriate without compensation; assurances of foreign exchange allocations for remittances, possibly at special rates);
  - (iii) Arrangements for the settlement of foreign investment disputes (e.g., by arbitration);
  - (iv) Export credit insurance schemes (extending to the export of patents, technical services, etc.).

It is requested that the description of the provisions be accompanied by the texts of the governing laws, regulations, treaties etc., as well as by any statistical or other information indicating the scope of the actual operation of these measures.

### ANNEX III

#### Note on regional patent co-operation centres

##### BACKGROUND

1. In his report on *The Role of Patents in the Transfer of Technology to Developing Countries*,<sup>a</sup> the Secretary-General of the United Nations concluded that a system of granting patents for inventions was on balance likely to be beneficial to the advancement of industry in developing countries, provided necessary safeguards were taken against abuses of the monopolistic position created by the patent.

2. Clearly one of the basic safeguards is an assurance that patents will not be issued — and monopolies created — except for the benefit of applicants who introduce a new and valuable invention. While it is true that practically all patent laws impose this requirement, the patent offices of many countries, especially of those in the early stages of technological development, are not equipped, and indeed are often not required, to undertake a technical examination of the present state of the art in order to determine the novelty of the invention submitted. In these countries, therefore, patents are, in fact or in law, issued upon application without any search of novelty. Thus many are bound to be granted for processes and products which are already available in the market.

3. Far from promoting the development of useful new inventions through the grant of effective protection, such a system may restrain development, both by the unreliability of patent grants and by the imposition of unjustified monopoly restrictions on commodity imports.<sup>b</sup>

##### OBJECTIVES

4. The Governments of most developing countries thus find themselves caught in a dilemma between the dangers of a distorted patent system and the practical difficulty, if not impossibility, of marshalling the broad range of highly qualified technicians and scientific source materials which would be needed to permit an adequate novelty search.

5. Yet, if the introduction of the patent system in these countries is to be justified, and indeed beneficial to their development, it is necessary to overcome these technical obstacles which stand in the

way of conditioning the issuance of a patent grant upon an effective search and demonstration of the novelty of the invention.

##### INTERNATIONAL CO-OPERATION

6. It is for this reason that the Secretary-General, in paragraph 69 of his above-mentioned report, suggested that:

“Under-developed countries may find it useful to pool their research resources in one regional institute, or to use the services of an international body, such as the IIB (International Patent Institute at the Hague), and thus avoid the great drain in money and scarce technological expertise involved in establishing separate administrations to handle the complex research and examination problems involved in handling patent applications.”

7. In practice, it would be advisable to seek both regional co-operation and over-all association with an international agency like the IIB. The latter is an intergovernmental organization, set up by the Treaty of 6 June 1947, for the purpose of providing at the request of its member Governments authoritative advice on the novelty of inventions or survey of the “state of the art” of a particular area or subject. The latter facility is also available to citizens of any member country of the International Union for the Protection of Industrial Property in Paris (administered by the United International Bureaux for the Protection of Intellectual Property (BIRPI)).

##### REGIONAL PATENT CO-OPERATION CENTRES

8. It would presumably be both more economical and more efficient for developing countries to affiliate with such international agency through regional associations or centres. Individual Governments would find it easier to deal with a regional centre which was closer at hand and familiar with the language, the technological and economic conditions, and the governmental and other relevant institutional structures of regional member countries. The international agency in turn would benefit from the special local know-how, information and materials which regional centres could contribute to its over-all resources.

9. Financially, the extra costs of the regional centres should be more than outweighed by the resulting savings for the regional Governments: not only would the latter avoid the expense of individual membership in the international agency but, since foreign inventors (who constitute the bulk of patent applicants) customarily submit their inventions in several countries simultaneously, one search request to the international agency by the regional centre would suffice for all the member countries in the region. As regards IIB or other international agency, the addition of many developing countries to its membership, even if indirectly, should greatly expand its resources and its usefulness to all its member countries, developed and developing.

10. Initially, the regional centres should be set up on as modest a scale as possible, acting as it were as regional relay stations between the Governments and the international agency. They will, however, gain added usefulness as they take their place, along with the national patent offices, in the emerging international network of automatic information retrieval systems. In a wider context they will be called upon to become integral parts of the broad structure of technology transfer systems through which the various regional and national agencies which need or provide specialized technological personnel and know-how (including patent offices, bureaux of standards, industrial technology institutes, development corporations, technological services in ministries of planning, industry, agriculture, mining, etc.) can pool and co-ordinate their scarce resources for the maximum benefit of the developing countries.<sup>c</sup>

11. Finally, reference might be made to the possible expansion of the scheme beyond the patent field proper into the broader area of industrial property. This would be a logical development, since the needs of the developing countries for an efficient trademark,

<sup>a</sup> United Nations publication, Sales No.: 65.II.B.1.

<sup>b</sup> See the note by the Secretary-General submitted to the Committee of Experts to study a model law for developing countries on inventions and technical know-how (E/4078, annex A).

<sup>c</sup> See *Official Records of the Economic and Social Council, Forty-first Session, Supplement No. 12, chap. III, sect. D.*



design etc., administration, and the technical expertise required to this end, are closely related to those involved in patent administration.

## ANNEX IV

### Note on an international training centre for industrial property administration

#### OBJECTIVES

1. Increased efforts to provide effective technical assistance to member Governments in the administration of their industrial property laws (covering patents, trade marks, designs etc.) have been called for by the United Nations (General Assembly resolution 2091 (XX) of 20 December 1965 and recommendation A.IV.26 of 15 June 1964 of the United Nations Conference on Trade and Development) as well as in the decisions of the Inter-Union Co-ordination Committee of the International Union for the Protection of Industrial Property (especially at its 1964 and 1965 sessions).

2. In this context, efforts are already being made to improve the industrial property laws of developing countries especially through the Model Laws sponsored by the United International Bureaux for the Protection of Intellectual Property (BIRPI), and to strengthen the operation of national industrial property offices through regional and international affiliation (see annex III). These efforts, however, cannot avail unless national offices can count on qualified personnel.

#### LIMITATIONS OF PRESENT TRAINING FACILITIES

3. In the developed countries, patent officers receive their training partly in the universities (especially as lawyers and engineers), and partly in the industrial property offices themselves — largely through on-the-job guidance supplemented by special courses. For persons from the developing countries who cannot obtain the appropriate university training locally, fellowships for foreign study in law, engineering etc., are available under various technical assistance programmes, but such study is not directly related to the needs of industrial property offices.

4. In a limited number of cases such persons have been admitted for training in the patent offices of advanced countries. This, however, has not proved to provide a full solution of the problem (which, it may be noted, to some extent also applies in other areas of public administration). First of all, the personnel of most patent offices cannot spare the time and attention to provide systematic guidance and instruction to foreign visitors. Secondly, it is rarely possible for foreign officials to enrol in such special training programmes as may be offered to local officials, especially where, as is usual, these programmes consist in part-time lecture or correspondence courses combined with a practical work stage spreading over an extended period of time. Indeed, while patent laws internationally have fewer dissimilarities than has legislation in some other areas of public administration, the detailed training in the technicalities of the domestic system designed for local officials cannot readily serve the needs of officials from foreign countries.

5. For all these reasons, it is understandable that the number of requests for such training fellowships from developing countries has been limited, and that even this limited number could not so far be accommodated by the openings offered in the developed countries, or indeed with the funds currently available for this purpose. Even if a larger number of openings could be secured and financed, they could not provide training for more than an occasional few from any given country, thus making the effectiveness of the training for the over-all improvement of such country's system more than doubtful.

#### REQUIREMENTS FOR EFFECTIVE TRAINING

6. What is needed then is a special centre providing systematic training courses on a full-time basis for a sufficient number of officers from each interested country over a period of years, so as to enable them upon their return to set up and operate their home services efficiently and, in turn, to transmit their training to the larger

number of their colleagues who must be trained at home.

7. Correspondingly, such systematic training should be provided by instructors who can devote their full time to the task, and will agree to serve long enough to assure the centre's continuity and proficiency, though not so long as to lose touch with the day-to-day practice of the administrations from which they should chiefly be recruited.

8. The training programme should combine the knowledge and experience of many different national systems so as to present to the trainees not only the best features of each but also a wide choice of alternative techniques and methods among which they could select those most appropriate to their national system.

9. While the training centre would thus be truly international both in its teaching staff and its trainees, and would be wholly independent of any one national office, it should have a close working relationship with an effectively operating industrial property office which would serve both as an example and as a source of working documents and illustrative case materials.

#### PLANS FOR AN INTERNATIONAL CENTRE

##### (a) Content of training programme

10. The subject matters to be taught would fall into two categories: first, those relating to the structure and operation of the industrial property office (including patents, trade marks, designs, etc.) and, secondly, the techniques used in examining applications for patents etc., both as to the patentability of the invention under national law, and as to its novelty under the existing state of the art. As noted above, provision should be included for the teaching of training methods to those trainees who are expected to serve as instructors in the national training programmes to be set up (or reformed) upon their return to their home country.

11. In time, the centre may also come to hold short-term training courses and seminars on specific topics, especially for high-level officers who cannot leave their posts for the longer period required for the comprehensive training course.

##### (b) Training staff

12. The range and content of the training programme would determine the selection of the training staff. As indicated, this staff should be recruited from several countries and should primarily consist of full-time instructors, preferably persons who have experience in more than one system, including those of developing countries. This full-time staff would be complemented by special lecturers drawn largely, but not exclusively, from the staff of the host country's industrial property office.

13. The over-all staff should be equipped to offer general lectures and case-work exercises, as well as tutoring for individual trainees or small groups. Such tutoring is essential in order to facilitate and control the effective absorption of the subject matter by all trainees, and to assist them in determining the selection and adaptation of the techniques best suited to the particular needs of their national systems.

##### (c) Selection of trainees

14. These may be drawn either from among senior patent officers who want to become acquainted with more advanced systems, or from highly qualified new recruits who would take this training course before they started work in their home offices. The latter group offers perhaps better chances to a Government for acquiring, over a period of years, a new core of officers who are free from whatever backward practices may prevail in the existing administration and who can thus make a new beginning, possibly in conjunction with the introduction of new industrial property legislation.

15. In order to secure a reasonably high and uniform level of participants, the centre should pursue an active programme of trainee selection, possibly with the assistance of the sponsoring international organizations.

## DOCUMENT E/4377

## Report of the Economic Committee

[Original text: English]  
[25 May 1967]

1. At its 1460th plenary meeting, on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 5 (b): "Application of Science and Technology to Development: arrangements for the transfer of operative technology to developing countries".

2. The Committee, under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, considered the item at its 413th and 414th meetings, held on 23 and 25 May 1967.

3. In considering the item the Committee had before it a note by the Secretary-General (E/4319).

4. Several delegations referred with appreciation to the work of the United International Bureaux for the Protection of Intellectual Property (BIRPI) in the field of transfer of technology to developing countries, and at the 414th meeting the representative of the Philippines, on behalf of the sponsors, India, Pakistan and the Philippines,

introduced a draft resolution (E/AC.6/L.361). Several delegations proposed orally a number of changes to the draft resolution for the consideration of the sponsors. The representative of the Philippines, on behalf of the sponsors, orally revised the draft resolution, and the Committee subsequently adopted it unanimously.

*Recommendation of the Committee*

5. The Committee therefore recommends to the Council the adoption of the following draft resolution:

ARRANGEMENTS FOR THE TRANSFER OF OPERATIVE  
TECHNOLOGY TO DEVELOPING COUNTRIES

[Text adopted without change by the Council. For the final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1201 (XLII).]

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 5 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4300	Fourth report of the Advisory Committee on the Application of Science and Technology to Development	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 8</i>
E/AC.6/L.361	India, Pakistan and Philippines: draft resolution	Mimeographed
E/RES/1200 (XLII) and 1201 (XLII)	Resolutions adopted by the Economic and Social Council at its 1468th plenary meeting, on 26 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1200 (XLII) and 1201 (XLII)



## ECONOMIC AND SOCIAL COUNCIL

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 6: United Nations programme in public administration\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1466th and 1467th meetings

## DOCUMENT E/L.1158

## Canada, India, Kuwait, Libya, Pakistan, Philippines, Sweden and Turkey: draft resolution

[Original text: English]  
[23 May 1967]

*The Economic and Social Council,*

Recalling General Assembly resolutions 200 (III) and 246 (III) of 4 December 1948, 356 (IV) of 10 December 1949, 518 (VI) of 12 January 1952, 723 (VIII) of 23 October 1953, 1256 (XIII) of 14 November 1958 and 1530 (XV) of 15 December 1960,

Recalling also its own resolutions 132 (VI) of 24 February 1948, 253 (IX) of 28 July 1949, 399 (XIII) of 1 September 1951, 492 B (XVI) of 20 August 1953, 791 (XXX) of 3 August 1960, 907 (XXXIV) of 2 August 1962 and 987 (XXXVI) of 2 August 1963,

Having examined the report of the meeting of experts on the United Nations programme in public administration (E/4296),

Conscious of the need for trained public administrators in many developing countries,

Convinced that the United Nations system of organizations can make a valuable contribution to the promotion of more effective public administration,

Noting with satisfaction that significant progress has been achieved in co-ordination and co-operation among the United Nations and specialized agencies and non-governmental organizations concerned in the field of public administration,

1. Notes with appreciation the report of the meeting of experts as a valuable contribution to the further elaboration of a comprehensive programme of assistance in the field of public administration;

2. Decides that public administration should be

accorded a priority place in planning for the period following the United Nations Development Decade and, to this end, requests the Secretary-General to elaborate more specific objectives and programmes in this field, in close collaboration with the specialized agencies and non-governmental organizations concerned;

3. Takes note of the plans of the Secretary-General to raise the status of the Public Administration Branch to that of a division, and his related programme for 1968 for providing increased support for the work of that division;

4. Requests the Secretary-General to consider, as appropriate and feasible, the out-posting of qualified staff to the regional economic commissions, and to give urgent consideration to the most appropriate means of effectively implementing the provision in General Assembly resolution 723 (VIII) for the collection, analysis and exchange of technical information in the field of public administration, reporting thereon to an early session of the Economic and Social Council;

5. Invites the Governing Council of the United Nations Development Programme to give sympathetic consideration to requests for assistance from developing countries, especially in those aspects of public administration to which attention has been drawn in the report of the meeting of experts;

6. Further requests the Secretary-General in formulating his annual proposals for the regular programme of technical assistance under part V of the United Nations budget to maintain the reserves for interregional and

regional programmes in public administration at least at the level attained when there was a separate section for public administration in the budget and, if possible, to increase those reserves;

7. *Decides* that the United Nations programme for

public administration should from time to time be reviewed by a meeting of experts, taking into account the public administration aspects of all programmes of the United Nations system, and that their report should be submitted for consideration to the Economic and Social Council.

## DOCUMENT E/L.1158/Add.1

### Financial implications of the draft resolution contained in document E/L.1158

#### Note by the Secretary-General

[Original text: English]  
[23 May 1967]

1. In accordance with rule 34 of the rules of procedure of the Economic and Social Council, the Secretary-General wishes to inform the Council as follows in regard to the financial implications arising from the operative paragraphs of the draft resolution contained in document E/L.1158.

#### I. OUTPOSTING OF STAFF

2. While the draft resolution in operative paragraph 3 "*Takes note* of the plans of the Secretary-General to raise the status of the Public Administration Branch to that of a division, and his related programme for 1968 for providing increased support for the work of that division", it requests the Secretary-General in paragraph 4 to consider, as appropriate and feasible, the out-posting of qualified staff to the regional economic commissions and the Economic and Social Office in Beirut, and to give urgent consideration to the most appropriate means of effectively implementing the provision in General Assembly resolution 723 (VIII) for the collection, analysis and exchange of technical information in the field of public administration, reporting thereon to an early session of the Economic and Social Council.

3. The proposals already made by the Secretary-General in his budget estimates for 1968, to which reference is made in operative paragraph 3, provide as an initial step, for the addition of three Professional (one P-5, one P-4 and one P-3) and three General Service posts for the Public Administration Division at Headquarters, and one Professional (P-5) and one local level post each for the Economic Commission for Asia and the Far East, the Economic Commission for Latin America and the Economic Commission for Africa.

4. The outposting of qualified staff from Headquarters to the regional economic commissions and to the United Nations Economic and Social Office in Beirut could be accomplished in a limited way if all the posts proposed for 1968 are approved by the General Assembly. Such

outpostings would necessarily have to be for short periods (of a few months at a time) and on the basis of priority needs in each case. Based on one trip by a staff member to each of the commissions and the Office in Beirut for an average stay of three months in each case, it is estimated that an expenditure of approximately \$11,000 will arise in 1968 by way of travel (\$4,000) and subsistence (\$7,000) costs. Should the Council adopt the draft resolution, it would be the intention of the Secretary-General to submit the necessary revised estimates for 1968 for the purpose of outposting Headquarters staff to the regional offices, to the General Assembly at its twenty-second session.

#### II. MEETING OF EXPERTS

5. Operative paragraph 7 of the draft resolution decides "that the United Nations programme for public administration should from time to time be reviewed by a meeting of experts, taking into account the public administration aspects of all programmes of the United Nations system, and that their report should be submitted for consideration to the Economic and Social Council".

6. It is assumed that the expert group would comprise seventeen experts, and that it would meet at Headquarters for a period of two weeks. It is also assumed that the meeting will be convened at such a time of the year as would fit in with the regular programme of meetings. On the basis of these assumptions the estimated costs of holding the meeting of experts would be as follows:

	\$ US
Travel of seventeen experts (at average cost of \$1,100)	18,700
Subsistence costs for twelve days (at \$30 per day)	6,120
	<u>24,820</u>

7. Should the Council adopt the draft resolution, necessary provision for the meeting of experts would be made in the regular budget estimates relating to the year in which the meeting will be convened.

**CHECK LIST OF DOCUMENTS**

NOTE. This check list includes the documents mentioned during the consideration of agenda item 6 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4296	United Nations Programme in Public Administration : report of the Meeting of Experts	United Nations, New York, 1967
E/RES/1199 (XLII)	Resolution adopted by the Economic and Social Council at its 1467th plenary meeting, on 24 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolution 1199 (XLII)

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

RESEARCH REPORT

NO. 100

BY

JOHN H. SCHWINGER  
AND  
S. S. SCHWARTZ





## ECONOMIC AND SOCIAL COUNCIL

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 7: Report of the Statistical Commission\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session, 1473rd meeting*; see also the records of the 416th meeting of the Economic Committee (E/AC.6/SR.416).

## DOCUMENT E/4283/Add.1

## Note by the Secretary-General

[Original text: English]  
[24 March 1967]

In its resolution 1154 (XLI) of 4 August 1966, on documentation, the Council, *inter alia*, requested the Secretary-General to "indicate those reports which are of a technical nature requiring detailed study by experts of Governments of Member States rather than by the Council, while drawing the attention of the Council to any sections of such reports requiring specific action on its part".

The report of the Statistical Commission on its fourteenth session (E/4283) would appear to fall within the category of reports of that kind. The Secretary-General has not therefore prepared a summary of the report for the Council. He would, however, wish to call the Council's attention to the fact that the report contains, in chapter IX, two draft resolutions — one on statistical co-ordination and one on principles and recommendations for the 1970 population and housing censuses — which require action by the Council.

## DOCUMENT E/4382

## Report of the Economic Committee

[Original text: English]  
[31 May 1967]

1. At its 1460th plenary meeting, on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 7, "Report of the Statistical Commission".

2. Under the chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, the Committee considered the item at its 416th meeting held on 31 May 1967.

3. In considering the item, the Committee had before it the report of the Statistical Commission at its fourteenth session (E/4283), which contained two draft resolutions approved by the Commission.

4. The Committee took note of the report with appreciation and unanimously approved the two draft resolutions contained in chapter IX of the report.

**Recommendations of the Committee**

5. The Committee therefore recommends to the Council as follows :

- (a) To take note with appreciation, of the report of the Statistical Commission at its fourteenth session ;
- (b) The adoption of the following two draft resolutions.

**I****STATISTICAL CO-ORDINATION**

*[Text adopted by the Council without change. For the*

*final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1214 (XLII).]*

**II****PRINCIPLES AND RECOMMENDATIONS FOR THE 1970  
POPULATION AND HOUSING CENSUSES**

*[Text adopted by the Council without change. For the final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1215 (XLII).]*

**CHECK LIST OF DOCUMENTS**

NOTE. This check list includes the documents mentioned during the consideration of agenda item 7 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4283	Report of the Statistical Commission on its fourteenth session (10-20 October 1966)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 3</i>
E/RES/1214 (XLII), 1215 (XLII) and 1242 (XLII)	Resolutions adopted by the Economic and Social Council at its 1473rd plenary meeting, on 1 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolutions 1214 (XLII), 1215 (XLII) and 1242 (XLII)</i>



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NEW YORK, 1967

## Agenda item 8 : Land reform\*

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\* For the discussion on this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1473rd meeting ; see also the records of the 408th, 410th-412th and 415th meetings of the Economic Committee (E/AC.6/SR. 408, 410-412 and 415).

## DOCUMENT E/4310

## Report on the proceedings of the 1966 World Land Reform Conference

## Note by the Secretary-General

[Original text : English]  
[18 March 1967]

1. The World Land Reform Conference, convened in accordance with the recommendation of the Social Commission<sup>1</sup> at its sixteenth session<sup>2</sup> and Economic and Social Council resolution 1078 (XXXIX) of 28 July 1965, and organized under the technical co-operation programme by the United Nations and the Food and Agriculture Organization of the United Nations (FAO), in association with the International Labour Organisation, was held in Rome, Italy, from 20 June to 2 July 1966. The Conference was attended by some 300 participants from seventy-six countries, more than half of whom came from developing countries, and by representatives of the Economic Commission for Asia and the Far East, the Economic Commission for Latin America, the World Food Programme, the Inter-American Development Bank, and the Inter-American Institute of Agricultural Sciences, as well as of several non-governmental organizations.

2. The programme of the Conference included a review and assessment of existing land tenure systems in their relation to agricultural development programmes, experiences in various forms of land reform, supporting and complementary measures in land reform, and the impact of land reform on agricultural, economic and social

development. Most of the discussions took place in three working parties, which examined the topics of problems of land tenure and structural reforms, social and economic aspects of land reform, administrative, financial and training aspects of land reform, respectively. The documentation of the Conference included some fifty country reports prepared by participating countries and a number of background papers submitted by the sponsoring organizations and by individual experts.

3. The full report on the Conference has been issued as document E/4298 and will be available as a United Nations publication later in the year. The report consists of an account of the organization and work of the Conference (part one), a summary of the results of the Conference (part two) and an analysis of the main issues of the Conference (part three).

## I. MAJOR CONCLUSIONS OF THE DISCUSSIONS

4. Throughout the discussions at the Conference, land reform was recognized as a tool both for achievement of social and economic equity and for the establishment of a dynamic agriculture which, by expanding production, could provide adequate food for the growing population of the world. The Conference felt that those objectives did not contradict each other and that integrated land reform programmes, by the creation of incentives for additional efforts by the cultivators, would increase the

<sup>1</sup> In its resolution 1139 (XLI) of 29 July 1966, the Council decided that the Social Commission shall be redesignated the Commission for Social Development.

<sup>2</sup> See *Official Records of the Economic and Social Council, Thirty-ninth Session, Supplement No. 12*, para. 18, resolution 1 (XVI).

productivity of the farmers and strengthen the forces which fight hunger and starvation.

5. One of the main conclusions reached at the Conference was that planning in land reform determined its final result, and that this planning, including the process of its implementation, had to be done in close association with development planning as a whole. This conclusion was drawn in recognition of the fact that there was a close interdependence between land reform and other measures leading to economic and social progress. Economic growth and social development, indeed, depended on improvements in the agrarian structure through land reform. The Conference was, however, aware that some land reform programmes were revolutionary and had never been planned; they had to be adjusted during implementation to the needs of economic and social realities. Other land reform action was the result of thorough planning. It was recognized that the continuation of servile forms of tenure and feudal systems impeded agricultural and economic and social progress, and systems which were marked by tenures of this type should be abolished. The Conference also stressed the need for the fullest participation of the rural population in the planning process.

6. The Conference fully recognized the effects of agricultural and industrial development on each other. Particular attention was drawn to the need for complementary measures for promoting non-agricultural employment in areas of heavy pressure of population on land, where even massive land redistribution programmes could not ensure that the entire rural population could obtain an adequate income from farming. The promotion of rural industries, especially agricultural processing industries, and industrial decentralization, where appropriate, would help relieve population pressure. The development of forestry could provide additional employment and revenue and lead to a diversification of the economy of land reform areas and forest industries can act as catalysts for industrialization, thus providing an important link between land reform programmes and the general process of economic development. In general, there was acceptance that industrialization was a major factor of economic progress and that a sufficiently rapid rate of industrial development could help to reduce the size of the agricultural population and thus ease some of the problems of agriculture.

7. Any land reform which was not supplemented by complementary measures in the closely associated fields of agricultural credit, co-operatives, extension and marketing was not likely to succeed. Only the integrated approach to land reform could make it possible to achieve positive results. Land reforms, therefore, had to be accompanied by the building of appropriate institutions and by infra-structural and social overhead investment. While one of the objectives of land reform was the redistribution of national income (and of saving capacity), it was generally agreed that land reform by itself would not necessarily improve the pattern of income distribution, at least not in a substantial and continuing way. Other developmental and institutional improvements were required to improve the balance in favour of the peasants

and, in the more advanced countries, between rural and urban incomes.

8. The Conference, which discussed the problems of agrarian structure on a world-wide scale also included in its considerations the structural problems of developed countries; it recognized that land reform, or agrarian reconstruction, was a continuing process making it possible for agriculture to adjust to changes in technological and demographic development. In the course of such a continuing process of adjustment, there were a number of important measures which had to be applied in accordance with the needs of economic and social situations in individual countries. Such measures include: land redistribution, distribution and organization of new viable farms; changes in landlord/tenant relations; changes in the structural organization of large estates, originally commercial plantations; adjustments of traditional tenure systems; land consolidation operations; establishment of ceilings on and floor to size of holdings; introduction of joint and co-operative farming and of partnership arrangements; and land settlement.

9. Supporting and complementary measures to land reform proper, such as those relating to agricultural credit, supply of production requisites, marketing, community development, agricultural extension, fiscal policy including taxation, would create favourable conditions leading to the success of land reform, reduce the difficulties of implementation and smooth the hardships of transition. The development of Government-supported services in these and other complementary fields was essential in the economic and social conditions of the developing countries.

10. These and other measures called for the strengthening of existing institutions and the creation of new ones so as to ensure the widest possible participation of the people in agricultural development. Particular emphasis was given to the important role of various types of co-operative organizations and attention was also drawn to the significant part that associations of farmers, peasant organizations and similar groups could play, both in the formulative and the implementation stages of reforms. It was also realized that the effective implementation of land reforms called for the strengthening of local government institutions.

11. Land settlement was recognized as an important means of correcting the maldistribution of population and of expanding the agricultural area in the interest of increased food production, but at the same time it was emphasized that land settlement was no substitute for basic structural reforms; land settlement might assist in the implementation of agrarian reform programmes, but could not replace land reform. The Conference stressed that there was a need for analytical and comparative studies of successes and failures of land settlement schemes.

12. Since land redistribution by itself might not necessarily bring about an increase in production, land reform had to be focused on a definite increase in productivity and an improvement in the social well-being and dignity of the cultivators. In addition to redistribution to make

better use of resources, great attention should be paid to implementing far-reaching technical change. One of the more important side effects of land reform was to prepare the cultivator, by creating adequate incentives, to accept technical innovations. It was recognized that it might not always be possible to provide the cultivators, in the course of redistribution schemes, with reasonably economic holdings, but it should be within the capacity of the responsible agency to strengthen the income potential of the holdings by the introduction of better cultivation methods; it would be meaningless to reproduce on redistributed land conditions which were potentially not better than those pertaining before.

13. It was observed by some participants that the problem of tenancy could be solved finally only by the transfer of ownership rights to the cultivator (or to the State), and that the regulation of tenancy conditions should be considered only as a transitional stage in the transfer of individual property rights. It was pointed out that the tenant in most developing countries had only a very weak bargaining power and that the administrative capacity of these countries to carry out tenancy regulation was extremely limited. Where, however, social institutions were better developed, tenancy regulations might be technically feasible and often even preferable to other reforms. The important thing was for the cultivator to have security of tenure, so essential for agricultural development and capital formation in agriculture. Where it was not possible to provide this security through tenancy reform, land redistribution would be preferable.

14. The Conference drew attention to the structural aspects of forestry, which in the past had not received adequate attention in land reform discussions. It was recognized that structural reform of forest lands was an important means of forestry development, and it was stressed that the forest sector played a major role in agrarian policy. In developing countries with their relatively weak administrative structures, the institutional measures in the field of forestry had to be more than improvements of administration; new institutional features, such as contracts for forest utilization and forest usage rights and the legalization of squatter settlements, had to be introduced, taking into consideration the particular situations in individual countries. Adequate tenancy contracts were amongst the most appropriate institutional instruments for promoting forestry development with a minimum of capital and management input on the part of the Government. Such contracts, however, should be reconciled with the objective of over-all economic development. The encouragement of efficient forest industries could make an important contribution to rural industrialization and help to solve labour and other social problems. Furthermore, co-operation should play a larger part in the management of forest lands, since forest associations could take advantage of scale and more efficient management, regulate planning and cropping and arrange for bulk marketing. Another important aspect was the communalization of state forests, which might be recommendable under favourable institutional and technical conditions; the State would relinquish tenancy rights over certain forest areas to rural communities.

15. The adjustment of customary tenures was of special importance in Africa. In the great majority of African countries, the existing tenure systems were in a transitional stage and the Conference agreed that gradually some individualized tenure types, not necessarily full ownership, might emerge. In some of the regions concerned, particularly those close to urban areas, evasion practices made use of traditional deals to reach objectives contrary to the concept of the traditional tenure systems. Appropriate measures had to be taken to reduce the risks during the transitional period and to prevent the gradual weakening of the traditional values and the process of accelerated disintegration before a new order of values emerged to reconcile the best of tradition — particularly communal mutual-aid and responsibility concepts — with elements of economic and social progress. Only in this way might it be possible to prevent the tribal authorities from becoming themselves agents in the process of alienation of communal property. It was generally agreed that the individual cultivator who lost the protection of the traditional tenure system would be at a disadvantage if he was not supported by group action.

16. The success of land reform depended in a large measure on the quality of administration in charge of the implementation of reforms, and in this context, farmers' organizations and other local bodies could make a very considerable contribution. The close interrelationship between land reform and community development was recognized, since each could contribute to the success of the other. Community development could help to prepare a suitable climate for land reform and assist in its implementation by strengthening the infra-structure and local institutions. Land reform, in turn, was frequently a precondition for successful community development. Training aimed at strengthening the administrative machinery for land reform and land policy programmes was of great importance. The Conference expressed the view that the sponsoring organizations should make additional efforts to assist Member States to improve their administrative structures. Training of beneficiaries of land reform was also essential to enable them to improve their economic and social conditions and to make proper use of their rights under the new legislation.

17. The Conference did not reach a definite conclusion with regard to the way in which land reform should be carried out: universally, or by a selective approach proceeding either from region to region or through a gradual lowering of ceilings. The chief merits of the selective approach were considered to be the possibility of thorough implementation by concentration of staff resources to one region and to limited objectives and the opportunity to correct mistakes in subsequent work. On the other hand, the dangers of evasion and uncertainty in connexion with a selective approach were obvious, with its unfavourable effects on agricultural development; furthermore, it might take a longer period for the full reform to be implemented. The final decision would depend on conditions in individual countries.

18. The Conference recognized that there were many serious problems facing Governments with regard to the financial aspects of land reform and that international

financial support was necessary for programmes closely associated with land reform, such as land reclamation, land development and the building up of adequate institutions, particularly in the field of extension and agricultural credit.

19. Evaluation should be an essential feature in the planning and implementation of all agrarian reform programmes and the latter must provide for an adequate evaluation machinery. Since Governments have to see the situation in the light of their own policy objectives, before, during and after the conclusion of action programmes, evaluation was particularly necessary in those cases in which a change in the agrarian structure took the form of an actual policy programme, and was in this way the subject of controversy. The evaluation of the implementation of land reform, especially the administrative aspects, was particularly important, since the failure of implementation meant the defeat of land reform and this could be avoided if Governments were informed in time about the shortcomings of administrative action. The Conference strongly favoured an independent evaluation agency, which was not in the same line of command as the administration responsible for implementation.

## II. IMPLICATIONS FOR FUTURE WORK PROGRAMMES

20. The Conference suggested intensive research in all areas of relevance to the planning and implementation of land reform, and more specifically, analytical studies on:

(a) Effective implementation of land reform and land policy programmes, giving specific attention to administrative training and evaluation aspects;

(b) Financial aspects of land reform, with specific attention to problems of agricultural credit, agricultural taxation and trade, including foreign exchange balances, in view of their importance to national development;

(c) Successes and failures of land settlement schemes;

(d) Co-operatives of all types, with specific attention to the merits of different forms of co-operative farming and their applicability to developing countries, and on various types of community structures;

(e) Different types of farmers' associations, including peasant organizations, with a view to strengthening their role in the process of economic and social development, and particularly in the implementation of land reform;

(f) The role of plantations and other large commercial estates, with a view to determining their contribution to economic and social progress in developing countries, and recommending possible structural changes.

21. The Conference, in its resolution, also recommended that the United Nations and the specialized agencies should organize regional seminars and workshops dealing with various aspects of land reform and continue to provide the necessary assistance to countries, on their request, for the planning, implementation and evaluation of land reform measures.

22. While it was too early to report specifically to the Council on the extent to which the agencies concerned had been able to give effect to the recommendations made by the Conference, a number of general indications could be given. As far as research and study was concerned, the extensive documentation submitted by participants to the

Conference and that prepared by the sponsoring organizations would be taken into account in the preparation of the fifth report on progress in land reform, to be submitted in 1969, and the specific themes to be highlighted would be selected in the light of the deliberations of the Conference. Certain of the subjects to which the Conference attached particular importance — such as the administrative aspects of land reform, financial aspects, the relationship between industrialization and land reform, problems and techniques of evaluating land reform programmes, the adjustment of customary tenures, land settlement performance, employment aspects of land reform, the role of farmer and peasant organizations in land reform, types of co-operative organizations which can make a maximum contribution to land reform, community development and land reform — were already included in the work programmes of the United Nations and the specialized agencies, and other studies would be initiated as funds became available. The formulation of international standards with respect to the improvement of conditions of tenants, share-croppers and similar categories of agricultural workers was in process.

23. At the operational level, it was to be expected that, as a result of the Conference, the number of requests for technical assistance in matters related to land reform, especially with regard to the evaluation of measures now being implemented, would increase and more importance would be attached to land reform activities under which the United Nations bodies were already advising Member States. The current work programmes of the United Nations and the specialized agencies concerned, particularly FAO, included a number of workshops, seminars, development centres and training courses in fields related to land reform. The fifth report on progress in land reform would, as in the past, contain a more detailed review of United Nations bodies activities, which would enable the Council to examine this matter more thoroughly.

24. In the light of the above, the Secretary-General considers that during the years ahead, particular consideration in operational work should be given to the following activities, some of which had been suggested in his note to the Commission for Social Development:<sup>3</sup>

(a) The organization of regional seminars and workshops in co-operation with the regional economic commissions and regional institutes and agencies concerned with land reform,<sup>4</sup> as well as support of national centres and seminars;

(b) The carrying out of field assessments of land reform programmes, at the request of Governments;

(c) Assistance to Governments, at their request, in the planning and implementation of land settlement schemes as an integrated part of agricultural and economic development;

(d) The provision of adequate training facilities for personnel engaged in land reform programmes and for the beneficiaries of such programmes;

<sup>3</sup> Document E/CN.5/411.

<sup>4</sup> The results of the Conference have been drawn to the attention of the regional economic commissions suggesting that the recommendations be taken fully into account in their work programmes for the coming years.



(e) The development of methods and machinery for evaluation as a continuing process in land reform programmes in order to assess the economic and social results of action taken and to provide current guidance and future orientation of land reform policy;

(f) Action research and pilot projects in various aspects

of land reform, particularly in new forms of institutions and new types of farm organization;

(g) The strengthening of administrative arrangements for land redistribution, land settlement and tenancy improvement and for the provision of co-ordinated supporting services to beneficiaries of land reform.

## DOCUMENT E/4379

### Report of the Economic Committee

[Original text: English]

[26 May 1967]

1. At its 1460th meeting, on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 8 entitled: "Land reform".

2. Under the Chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, and Mr. Daniel Cosío Villegas (Mexico), Acting Chairman, the Committee considered the item at its 408th, 410th-412th and its 415th meetings, held between 18 and 25 May 1967.

3. In considering the item, the Committee had before it the Secretary-General's report of the 1966 World Land Reform Conference (E/4298), a note by the Secretary-General (E/4310), and the pertinent parts of the report of the Commission for Social Development (E/4324, chap. IV, and E/4324/Add.1, paras. 19-23). Later the Committee had before it a draft resolution submitted by the delegations of Iran and Panama (E/AC.6/L.360).

4. At the 415th meeting, the representative of Panama,

on behalf of the sponsors, introduced a revised draft resolution (E/AC.6/L.360/Rev.1), submitted by the delegations of Iran, Pakistan, Panama and Philippines. The delegation of Libya joined as co-sponsor of the revised text. Following further consultations, the representative of Iran, on behalf of the sponsors, made orally several revisions to the draft resolution and the Committee then approved it unanimously.

#### *Recommendation of the Committee*

5. The Committee therefore recommends to the Council the adoption of the following draft resolution:

#### LAND REFORM

[Text adopted by the Council without change. For the final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1213 (XLII).]

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 8 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/4298	Report of the 1966 World Land Reform Conference: note by the Secretary-General	Will be issued as a United Nations publication
E/4324 and Corr.1 and 2	Report of the Commission for Social Development on its eighteenth session (6-23 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 5, and corrigenda (E/4324 and Corr.1 and 2)</i>
E/AC.6/L.360	Iran and Panama: draft resolution	Replaced by E/AC.6/L.360/Rev.1
E/AC.6/L.360/Rev.1	Iran, Pakistan, Panama and Philippines: revised draft resolution	Mimeographed
E/RES/1213 (XLII)	Resolution adopted by the Economic and Social Council at its 1473rd plenary meeting, on 1 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1213 (XLII)</i>





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 9 : Report of the Committee on Housing, Building and Planning\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1478th meeting; see also the records of the 576th and 577th meetings of the Social Committee (E/AC.7/SR.576 and 577).

## DOCUMENT E/4330

## Comments of the Commission for Social Development and the regional economic commissions on the report of the Committee on Housing, Building and Planning

## Note by the Secretary-General

[Original text : English]  
[9 May 1967]

1. In accordance with resolution 903 C (XXXIV) of 2 August 1962, of the Economic and Social Council, the Committee on Housing, Building and Planning has to report to the Council through the Commission for Social Development and also forward its report to the Industrial Development Board<sup>1</sup> and to the regional economic commissions in order that the Council may consider the Committee's report together with the comments thereon of these bodies.

2. In response to this resolution the report of the Committee on Housing, Building and Planning on its fourth session (E/4287) was sent for consideration to the Commission for Social Development at its eighteenth session (March 1967), to the Industrial Development Board at its first session (April 1967), and to the regional economic commissions at their regular annual sessions.

3. In considering this report the following views and suggestions have been expressed by those bodies :

## I. COMMISSION FOR SOCIAL DEVELOPMENT

4. During the discussion of this item in the Commission for Social Development (see E/4324 and Corr.1 and 2, paras. 13-20; E/4324/Add.1, paras. 17-18) serious concern

<sup>1</sup> The resolution mentions the former Centre for Industrial Development.

was expressed that the world housing situation had worsened, instead of improving, during the United Nations Development Decade, and the United Nations resources remained seriously insufficient to meet even the most urgent needs of the Member States. It was emphasized, however, that at both the national and international levels the problem called for solutions in a wider context, and not merely through technical building programmes. The economic and social aspects of the housing problem were the two sides of the same coin and, as such, had to be considered together. It was suggested by some members that, in a sense, housing could be considered primarily a social problem for the industrialized countries, and an economic problem for the developing areas. Moreover, with regard to the social aspects of housing, it was pointed out that the solutions arrived at in the developed countries could contain elements that would be useful in other economic and social contexts, but that they could not be transferred to developing areas without modification.

5. Housing problems arising out of rapid urban population growth received considerable attention in the Commission's discussions. It was noted that in many developing countries insufficient funds have been allocated to cope with the influx of people from rural into urban areas and the consequent creation of slums and squatter

settlements. In this regard, the urgency of preventive measures was stressed; disinherited social groups must be integrated into the economic and social life of the cities, an effective administrative infra/structure had to be created, and the efficiency of the building industry had to be improved.

6. The question of low-cost housing for lower-income families was considered particularly important both for urban and rural areas. Although the nature of the housing problem differed in each country, the provision of housing for low-income families was considered to be a central problem for the developing countries, and it was felt that the United Nations had not yet developed adequate programmes to meet the needs of these groups. In some views the standards of new housing for low-income families were often unrealistically high, considering the available resources and existing housing conditions, and it was therefore proposed that a United Nations programme should be planned for aiding residents of shanty towns and squatter areas, particularly through practical demonstration projects, with the resources of the United Nations Development Programme, the World Food Programme and other sources.

7. Draft resolution I.A (see E/4324, chap. IX) proposed for adoption by the Council, focuses on this question of housing and related community facilities for low-income families. Under this draft resolution the Council would request the Committee on Housing, Building and Planning to give attention to self-help, co-operatives, rental housing and government subsidies, as well as to the development of appropriate housing standards. It would also recommend to Governments of Member States to undertake pilot programmes "adapted to the needs of developing countries and directed at the improvement of living conditions in squatter settlements or slums of urban and rural areas through a simultaneous attack on the social, economic and physical conditions of such areas, gaining the participation of the citizens concerned and creating, where feasible, institutions and organizations that will promote or support self-improvement". The Secretary-General would be requested to determine, in consultation with Member Governments and other United Nations bodies, the possibilities "of obtaining financial, technical and material support for such pilot programmes, and to provide the general direction for any pilot programme which may be initiated".

8. With regard to the recommended target of ten new housing units per thousand inhabitants per year of the United Nations Development Decade, it was felt that the remedy for the disappointing trends in housing construction did not lie in lowering the modest target originally established for the Development Decade, but rather in finding ways and means by which this target could be realized.

9. A crucial problem in many countries was the mobilization of funds for housing construction; it was felt that in the developing countries the competing claims of all

sectors for urgent action meant that inadequate resources were often devoted to the housing sector; this underlined and made more urgent the need of these countries for international assistance, but also required increased efforts to organize existing resources through such means as pilot projects and self-help housing. In rural areas, where peasant housing was often inadequate, programmes of community development might contribute to solutions, along with the setting of realistic national housing standards. It was also noted that, in some countries, State action played an important and successful role in the field of housing, building and planning. It was also suggested that where private funds are not available, the State should consider the financing of housing projects for low-income groups. In some countries, systems of subsidies to private or semi-public developers had also proved effective, as had systems of credit grants to co-operatives formed by the inhabitants of dwellings. Some countries were preparing experimental pilot schemes in housing and urban development which could provide useful information for the developing countries.

10. Regarding the training of personnel in the fields of housing, building and planning, it was generally agreed that the technical, social and financial aspects were the main elements to which attention should be directed. Training should be concentrated on the needs of the developing countries, and should take account of the special and particular requirements of each country. It was also emphasized that the training of skilled cadres, particularly in developing countries, should be oriented towards the designing and provision of low-cost housing, and that sociologists and social workers should be associated in the preparation of large housing schemes.

11. The proposals made by the Committee on Housing, Building and Planning for co-operation with the regional economic commissions and international agencies in strengthening international collaboration in the housing field were generally supported by the Commission. In this connexion, the Commission took note of the offer of the Government of Bulgaria to serve as host for a United Nations study tour for experts and policy-makers in housing, urban and rural development, including officials dealing with the social aspects of housing, and agreed that this offer be referred to the Committee on Housing, Building and Planning at its fifth session.

12. In order to mobilize public interest and to draw Governments' attention to the housing problem, the Commission expressed interest in the proposal to organize an International Housing Year. On this subject, draft resolution I.B was proposed for adoption by the Council (see E/4324, chap. IX). It concerns means by which public attention might be focused on "the acute social and economic problems associated with the lack of adequate housing, community facilities and the difficulties of national development of rural and urban communities, particularly in the developing countries", as well as means for mobilizing action by means of specific programmes for the improvement of these conditions. The Secretary-

General would be asked to prepare a report on this subject, with possible proposals for action; in its consideration of this report, the Committee on Housing, Building and Planning would be asked to consider also the advisability of proclaiming an International Housing Year.

13. Some members observed that the Secretariat was not implementing General Assembly resolution 2036 (XX) of 7 December 1965 effectively enough and also opposed the suggestion that the Committee on Housing, Building and Planning should report directly to the Economic and Social Council.

## II. INDUSTRIAL DEVELOPMENT BOARD

14. The Industrial Development Board had before it, at its first session, the report of the fourth session of the Committee on Housing, Building and Planning under the item on "Activities of the United Nations system of organizations in the field of industrial development".

15. Since the first session of the Industrial Development Board was primarily dedicated to discussing its rules of procedure, as well as organizational and financial matters and the future work programme of the United Nations Industrial Development Organization, the Board decided not to consider at that session the Committee's report and consequently no comments or recommendations have been made.

## III. REGIONAL ECONOMIC COMMISSIONS

16. So far, the Economic Commission for Africa (ECA) and the Economic Commission for Asia and the Far East (ECAFE) are the only ones that have sent the views, as they were expressed during their last sessions, on the report of the Committee on Housing, Building and Planning.

17. At its eighth session held at Lagos in February 1967, ECA expressed its satisfaction with the decision of the Economic and Social Council (see resolution 1147 (XLI)) that the membership of the Committee on Housing, Building and Planning would be extended and that the enlarged Committee would include about one-fourth of its members from Africa.

18. In considering the chapter on the world housing situation, attention was called to the present housing situation in African countries. It was anticipated that the need for urban housing, amounting to 2.4 new dwellings per 1,000 inhabitants in 1965 in Africa south of the Sahara, would rise to 3.0 in 1970, 3.7 in 1975, 4.6 in 1980 and 5.7 in 1985. It was considered that housing needs and targets in Africa might be based on the number of men aged twenty-five since that seemed to be the age when men would require separate dwellings for themselves and their families.

19. The Economic Commission for Africa noted with interest that a number of delegations on the Committee on Housing, Building and Planning had expressed their view that the staff of the regional economic commissions should be strengthened by teams of specialists capable of dealing with problems of housing, building and planning in accordance with the Commission's programme of work. The Economic Commission for Africa expected that several industrialized countries would be prepared to collaborate with the African nations in the same way as the Netherlands complex team of experts (economist, sociologist-physical planner, civil engineer and production engineer for serial dwelling production) had done in Ghana and Kenya in March 1967 and would operate in Zambia, Cameroon, Chad, Sudan and Tunisia during the second half of 1967. The co-operation of the United Nations Centre for Housing, Building and Planning with these missions has been requested.

20. With regard to the financing of housing, ECA would like to see the international financial institutions using some of their resources for housing construction. That would be a positive way of attracting bilateral external finance for the same purpose and for use in the same construction project. The Commission adopted resolution 157 (VIII) in this regard.

21. A proposal was also made on financing for housing and community facilities according to which many dwelling units would be constructed by aided self-help methods, where the Government or public agency could provide technical supervision as necessary and provide building materials in bulk for use of individual house builders. The repayment for materials could be reflected in a mortgage completed between the individual house builder and the Government or public agency.

22. In considering the problems of industrialization of building, it was concluded that, according to the experience of some African countries, the prefabricated buildings produced in other countries were not easily adaptable to local conditions. If prefabricated buildings were to be used, a thorough study should be made of the conditions in which they were to be erected and, where feasible, they should be fabricated locally.

23. In the light of the report of the Committee on Housing, Building and Planning on its fourth session, the Economic Commission for Asia and the Far East adopted during its twenty-third session, held at Tokyo in April 1967, resolution 83 (XXIII) on housing and urbanization in which it recommended the States members of ECAFE to harmonize their social, economic and physical plans, to define urbanization policies and to give higher priority to housing, urban and regional planning programmes, as well as to expand the existing training and research facilities for urban planning.

## DOCUMENT E/4386

## Report of the Social Committee

[Original text: English]  
[5 June 1967]

1. At its 576th and 577th meetings, held on 1 June 1967, the Social Committee, under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered item 9 of the agenda entitled: "Report of the Committee on Housing, Building and Planning".

2. In connexion with its consideration of this item, the Committee had before it the report of the Committee on Housing, Building and Planning on its fourth session (E/4287), in chapter X of which draft resolutions I and II required action by the Council. The Committee also had before it the report of the Commission for Social Development on its eighteenth session (E/4324 and Corr.1 and 2), in chapter IX of which two draft resolutions I.A and I.B on the work programme and on the report of the Committee on Housing, Building and Planning, respectively, required action by the Council.

3. The Committee also had before it documents E/4287/Add.1 and E/4330.

4. In the course of discussion, various oral amendments were submitted as indicated below.

5. The Committee's action on the different proposals and amendments submitted is described in the following paragraphs.

**DRAFT RESOLUTION I (E/4287, chap. X): CO-OPERATION WITH REGIONAL ECONOMIC COMMISSIONS AND INTERNATIONAL AGENCIES INCLUDING NON-GOVERNMENTAL ORGANIZATIONS**

6. No amendments were submitted to this draft resolution and it was unanimously adopted. (See para. 14 below, draft resolution A.)

**DRAFT RESOLUTION II (E/4287, chap. X): REHABILITATION AND RECONSTRUCTION FOLLOWING NATURAL DISASTERS**

7. No amendments were submitted to this draft resolution and it was unanimously adopted. (See para. 14 below, draft resolution B.)

**DRAFT RESOLUTION B (E/4324, chap. IX): REPORT OF THE COMMITTEE ON HOUSING, BUILDING AND PLANNING**

8. No amendments were submitted to this draft resolution and it was unanimously adopted. (See para. 14 below, draft resolution C.)

**DRAFT RESOLUTION I.A (E/4324, chap. IX): WORK PROGRAMME OF THE COMMITTEE ON HOUSING, BUILDING AND PLANNING**

9. Two oral amendments were submitted by Czechoslovakia to this draft resolution:

(a) To add to the fourth preambular paragraph the reference to General Assembly resolution 2036 (XX);

(b) To insert in operative paragraph 5, after the words "government subsidies", the following phrase: "financing and other forms of activity of Governments for the provision of low-cost housing".

10. Two oral amendments were also submitted by France:

(a) In operative paragraph 3, to replace the words "to consider the allocation of an increased proportion of their available resources" by the words "to give a higher priority";

(b) To add at the end of operative paragraph 4, the words "especially pilot programmes of a regional character".

11. At its 577th meeting the representative of the United Kingdom withdrew his delegation's motion that the draft resolution be referred to the Committee on Housing, Building and Planning.

12. An oral amendment proposed by Czechoslovakia to the fourth preambular paragraph was adopted unanimously. An oral amendment proposed by France to operative paragraph 3 was adopted unanimously. An oral amendment proposed by France to operative paragraph 4 was adopted unanimously. An oral amendment proposed by Czechoslovakia to operative paragraph 5 was also adopted unanimously.

13. The draft resolution as a whole, as amended, was adopted by 20 votes to none, with 4 abstentions. (See para. 14 below, draft resolution D.)

14. The Social Committee, therefore recommends to the Economic and Social Council the adoption of the following draft resolutions:

## A

**CO-OPERATION WITH REGIONAL ECONOMIC COMMISSIONS AND INTERNATIONAL AGENCIES INCLUDING NON-GOVERNMENTAL ORGANIZATIONS**

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1221 (XLII).]<sup>2</sup>

## B

**REHABILITATION AND RECONSTRUCTION FOLLOWING NATURAL DISASTERS**

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1222 (XLII).]<sup>2</sup>

<sup>2</sup> See Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.



## C

## REPORT OF THE COMMITTEE ON HOUSING, BUILDING AND PLANNING

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1223 (XLII).]<sup>2</sup>

## D

## WORK PROGRAMME OF THE COMMITTEE ON HOUSING, BUILDING AND PLANNING

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1224 (XLII).]<sup>2</sup>

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 9 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/4287	Report of the Committee on Housing, Building and Planning on its fourth session (5-16 September 1966)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 4</i>
E/4287/Add.1	Summary of the report of the Committee on Housing, Building and Planning on its fourth session	Mimeographed
E/4324 and Corr.1 and 2	Report of the Commission for Social Development on its eighteenth session (6-23 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 5, and corrigenda (E/4324 and Corr.1 and 2)</i>
E/4324/Add.1	Summary of the report of the Commission for Social Development on its eighteenth session	Mimeographed
E/RES/1221 (XLII)-1224 (XLII)	Resolutions adopted by the Economic and Social Council at its 1478th plenary meeting, on 6 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1221 (XLII), 1222 (XLII), 1223 (XLII) and 1224 (XLII)





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 10 : Report of the Commission for Social Development\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1478th meeting; see also the records of the 579th-581st meetings of the Social Committee (E/AC.7/SR.579-581).

## DOCUMENT E/4388

## Report of the Social Committee

[Original text : English]  
[5 June 1967]

1. The Social Committee, under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered at its 579th to 581st meetings on 2 June 1967, item 10 of the Council's agenda, "Report of the Commission for Social Development".

2. In connexion with this item, the Committee had before it the report of the Commission for Social Development on its eighteenth session (E/4324 and Corr.1 and 2), in chapter IX of which draft resolutions II and III required action by the Council.

3. Action was also required on the Commission's recommendations regarding preparation of the draft declaration on social development (E/4324 para. 56), and on the work programme (*ibid.*, annex I).

4. The Committee's action on these matters is summarized below.

## DRAFT RESOLUTION II. SOCIAL QUESTIONS RELATING TO THE EXTENSION OF HEALTH SERVICES

5. An oral amendment suggested by the representative of the World Health Organization was formally moved by the representative of Mexico and agreed to by the Committee. In the operative paragraph of the draft resolution, therefore, the words "if possible" were inserted before the words "for the nineteenth session of the Commission for Social Development".

6. At its 580th meeting, the draft resolution was unanimously adopted, as amended. (See para. 17 below, draft resolution A.)

## DRAFT RESOLUTION III. REVIEW OF TECHNICAL CO-OPERATION ACTIVITIES IN SOCIAL DEVELOPMENT

7. The Committee's attention was drawn to the financial implications (E/4324, annex II) in connexion with this draft resolution.

8. The representative of the United Kingdom moved that the Committee recommend deferring this draft resolution, with the relevant documentation, to the forty-third session of the Council, in order to permit full consideration by the specialized agencies prior to the Council's action on it, as recommended by the Administrative Committee on Co-ordination (ACC).

9. The representatives of the ILO, WHO, FAO and UNESCO pointed out that the ACC's recommendation for deferral to the forty-third session of items requiring inter-agency consultations had arisen from the fact that discussions in the Commission for Social Development had taken place at the same time that the Preparatory Committee of the International Conference on Human Rights and ACC had been considering social questions, and it had therefore been agreed that further discussions would take place at a special meeting before the forty-third session of the Council. Specifically with regard to the Commission's proposals for a review of the technical co-operation activities of the United Nations family, the representatives of the specialized agencies pointed out that deferral of action by the Council would permit the Directors-General to study the proposals and to discuss them with the Secretary-General through the ACC machinery; this was considered desirable in view of the fact that the agencies would be expected, and indeed wished, to co-

operate fully with the special rapporteurs to be appointed by the Secretary-General and that clarification of the mandate of the rapporteurs and of the tasks expected of the agencies was therefore considered necessary prior to action by the Council. The relationship between these proposals and the various reviews of United Nations activities being carried out through other channels was also mentioned.

10. A motion to close the debate to vote by roll-call on the draft resolution was made by the representative of the Philippines, and it was unanimously agreed, by roll-call vote, to close the debate.

11. The representative of the United Kingdom requested that the Committee vote on whether his motion for deferral of the draft resolution was a priority motion.

12. The motion for priority was rejected by 17 votes to 5, by a roll-call vote, requested by the representative of Pakistan. The results were as follows:

*In favour:* Belgium, Canada, France, Peru, United Kingdom of Great Britain and Northern Ireland.

*Against:* Czechoslovakia, Dahomey, Gabon, Guatemala, India, Iran, Libya, Mexico, Pakistan, Philippines, Romania, Sierra Leone, Sweden, Turkey, Union of Soviet Socialist Republics, United States of America, Venezuela.

13. The draft resolution was adopted at the 580th meeting, by a roll-call vote proposed by the representative of the Philippines, of 21 votes to none, with 1 abstention. The results were as follows:

*In favour:* Belgium, Canada, Czechoslovakia, Dahomey, France, Gabon, Guatemala, India, Iran, Libya, Mexico, Pakistan, Peru, Philippines, Romania, Sierra Leone, Sweden, Turkey, Union of Soviet Socialist Republics, United States of America, Venezuela.

*Against:* None.

*Abstaining:* United Kingdom of Great Britain and Northern Ireland.

(See para. 17 below, draft resolution B.)

14. Some representatives said in explanation of vote that they had voted in favour of the resolution at the present time with the understanding, as explained by the representative of the Secretary-General, that the details of the terms of reference of the special rapporteurs would be discussed with the specialized agencies before they were nominated. Some representatives also stated that in their view the matter could again be discussed at the forty-third session of the Council.

#### RECOMMENDATIONS REGARDING THE DRAFT DECLARATION ON SOCIAL DEVELOPMENT (E/4324, PARA. 56)

15. The representative of Pakistan proposed the adop-

tion of the recommendations contained in paragraph 56 (a) and (d) of the report of the Commission for Social Development (E/4324), since no action was required immediately on recommendations (b) and (c). Recommendations (a) and (d) were unanimously adopted by the Committee at its 580th meeting. (See para. 17 below, draft resolution C.)

16. At its 581st meeting, the Committee unanimously agreed to recommend that the Council take note of the report of the Commission for Social Development on its eighteenth session (E/4324 and Corr.1 and 2) and of the work programme contained in it (*ibid.*, annex I). (See para. 17 below, draft resolution D.)

#### *Recommendations of the Social Committee*

17. The Social Committee accordingly recommends to the Economic and Social Council the adoption of the following draft resolutions:

#### A

##### SOCIAL QUESTIONS RELATING TO THE EXTENSION OF HEALTH SERVICES

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1226 (XLII).]<sup>1</sup>

#### B

##### REVIEW OF TECHNICAL CO-OPERATION ACTIVITIES IN SOCIAL DEVELOPMENT

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1227 (XLII).]<sup>1</sup>

#### C

##### DRAFT DECLARATION ON SOCIAL DEVELOPMENT

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1228 (XLII).]<sup>1</sup>

#### D

##### REPORT OF THE COMMISSION FOR SOCIAL DEVELOPMENT

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1229 (XLII).]<sup>1</sup>

<sup>1</sup> See *Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.*

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 10 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4324 and Corr.1 and 2	Report of the Commission for Social Development on its eighteenth session (6-23 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 5, and corrigenda (E/4324 and Corr. 1 and 2)</i>
E/4324/Add.1	Summary of the report of the Commission for Social Development on its eighteenth session	Mimeographed
E/RES/1226 (XLII)-1229 (XLII)	Resolutions adopted by the Economic and Social Council at its 1478th plenary meeting, on 6 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1226 (XLII), 1227 (XLII), 1228 (XLII) and 1229 (XLII)







## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 11: Report of the Commission on Human Rights\*

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E/4387	Report of the Social Committee . . . . .	1
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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1479th meeting; see also the records of the 562nd to 578th meetings of the Social Committee (E/AC.7/SR.562-578).

## DOCUMENT E/4387\*

## Report of the Social Committee

[Original text: English]  
[3 June 1967]

1. The Social Committee under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered at its 562nd to 578th meetings, held from 16 May to 1 June 1967, item 11 of the Council's agenda: "Report of the Commission on Human Rights."

2. In connexion with its consideration of this item, the Committee had before it the following documents:

E/4322 and Corr.1 and Add.1

Report of the Commission on Human Rights on its twenty-third session and summary;

E/4340 and Corr.1 and Add.1

Communications dated 13 April and 17 April 1967 from the Permanent Representative of the Republic of South Africa to the United Nations;

E/4340/Add.2

Communication dated 1 May 1967 from the Chairman of the Commission on Human Rights to the Secretary-General;

E/CN.4/923

Measures taken in implementation of the United Nations Declaration on the Elimination of all Forms of Racial Discrimination;

A/6412

Note by the Secretary-General transmitting the report of the Seminar on Apartheid, held at Brazilia, Brazil, from 2 August to 4 September 1966.

3. In chapter XVII of the report of the Commission on Human Rights, draft resolutions III, IV, V and VI required action by the Council.<sup>1</sup>

4. During the discussion of this item, the following documents were submitted for the Committee's consideration: E/AC.7/L.514 and Rev.1, E/AC.7/L.515, E/AC.7/L.516 and Rev.1 and Rev.1/Add.1, E/AC.7/L.517-L.519, E/AC.7/L.520 and Rev.1, E/AC.7/L.521-L.523, E/AC.7/L.524 and Corr.1, E/AC.7/L.525, E/AC.7/L.526 and Corr.1, E/AC.7/L.527 and L.528.<sup>2</sup>

5. In the course of the discussion, various oral amendments were submitted as indicated below.

6. The Social Committee's action on the various proposals and amendments submitted is described in the following paragraphs:

## DRAFT RESOLUTION V. PERIODIC REPORTS ON HUMAN RIGHTS

7. No amendments were submitted to this draft resolution. At its 562nd meeting, the Committee unanimously adopted the draft resolution. (See para. 55 below, draft resolution A.)

## DRAFT RESOLUTION VI. REVIEW OF THE COMMISSION'S PROCEDURES AND METHODS OF WORK WITH A VIEW TO EXPEDITING THE CONSIDERATION OF THE ITEMS OF ITS AGENDA

8. No amendments were submitted to this draft resolution. At its 562nd meeting, the Committee unanimously adopted the draft resolution. (See para. 55 below, draft resolution B.)

\* Incorporating document E/4387/Corr.1.

<sup>1</sup> Draft resolutions I and II were considered in connexion with agenda item 15.

<sup>2</sup> For the titles of these documents, see "Check list of documents" below.

**DRAFT RESOLUTION III. QUESTION OF SLAVERY AND THE SLAVE TRADE IN ALL THEIR PRACTICES AND MANIFESTATIONS, INCLUDING THE SLAVERY-LIKE PRACTICES OF APARTHEID AND COLONIALISM**

9. At its 562nd meeting, oral amendments to operative paragraph 3 were proposed by the representatives of Venezuela, Panama, the United Republic of Tanzania, Pakistan and India to make the paragraph reflect the General Assembly's decision [resolution 2145 (XXI)] regarding the status of the Territory of South West Africa.

10. These oral amendments were subsequently withdrawn in favour of a joint oral amendment proposed by Pakistan and India, the effect of which was to amend paragraph 3 to read:

*"Calls upon the Government of the Republic of South Africa to put an end immediately to the slavery-like practice of apartheid in the Republic of South Africa and in the Territory of South West Africa under the direct responsibility of the United Nations and now illegally occupied by that Government."*

11. The Committee adopted that amendment, and the draft resolution, as a whole, as orally amended, was adopted by 24 votes to none, with 1 abstention. (See para. 55 below, draft resolution C.)

**DRAFT INTERNATIONAL CONVENTION ON THE ELIMINATION OF ALL FORMS OF RELIGIOUS INTOLERANCE**

*Draft resolution submitted by Dahomey and Pakistan (E/AC.7/L.515)*

12. Several oral amendments were proposed to the draft resolution by Sweden, Libya, the USSR and Pakistan. Those amendments were subsequently withdrawn by the above-mentioned representatives.

13. At its 564th meeting, the draft resolution was adopted, by a roll-call vote, at the request of the representative of Pakistan, by 19 votes to none, with 5 abstentions. The voting was as follows:

*In favour:* Belgium, Cameroon, Canada, Dahomey, France, Guatemala, Kuwait, Libya, Mexico, Morocco, Pakistan, Panama, Peru, Philippines, Sweden, Turkey, United Kingdom of Great Britain and Northern Ireland, United States of America and Venezuela.

*Against:* None.

*Abstentions:* Czechoslovakia, India, Iran, Romania and Union of Soviet Socialist Republics.  
(See para. 55 below, draft resolution D.)

14. At its 565th meeting, the representative of Iran announced that his delegation's vote on draft resolution E/AC.7/L.515 should have been an affirmative vote and not an abstention. At its 564th meeting, by 12 votes to 10, with 1 abstention, the Social Committee adopted a formal motion moved by the representative of Sweden that it should take no action on the amendments to the articles of the draft international convention on the elimination of all forms of religious intolerance.

15. Following the above-mentioned decisions, the Committee did not discuss the amendment to the draft

convention presented by Libya (E/AC.7/L.517) and decided to transmit to the General Assembly the following text of that amendment:

*"In article VI of annex A of draft resolution 3 (XXIII) of the Commission on Human Rights on the draft international convention on the elimination of all forms of religious intolerance (E/4322, chap. II), add immediately after the word 'anti-Semitism', the following words: 'Nazism, Fascism and Zionism'."*

**QUESTION OF THE VIOLATION OF HUMAN RIGHTS AND FUNDAMENTAL FREEDOMS, INCLUDING POLICIES OF RACIAL DISCRIMINATION AND SEGREGATION AND OF APARTHEID, IN ALL COUNTRIES, WITH PARTICULAR REFERENCE TO COLONIAL AND OTHER DEPENDENT COUNTRIES AND TERRITORIES**

*Draft resolution submitted by Dahomey (E/AC.7/L.518)*

16. No amendments were submitted to this draft resolution. However, at the request of France, a separate vote was taken at the 568th meeting, on each operative paragraph of that resolution which was as follows:

Operative paragraph 1 was adopted by 14 votes to none, with 6 abstentions;

Operative paragraph 2 was adopted by 19 votes to none, with 1 abstention;

Operative paragraph 3 was adopted by 19 votes to none, with 2 abstentions.

17. The draft resolution, as a whole, was adopted by 16 votes to none, with 5 abstentions. (See para. 55 below, draft resolution E.)

**QUESTION OF THE VIOLATION OF HUMAN RIGHTS AND FUNDAMENTAL FREEDOMS, INCLUDING POLICIES OF RACIAL DISCRIMINATION AND SEGREGATION AND OF APARTHEID, IN ALL COUNTRIES, WITH PARTICULAR REFERENCE TO COLONIAL AND OTHER DEPENDENT COUNTRIES AND TERRITORIES (E/4322, CHAP. V)**

18. Two draft resolutions were submitted on the subject: one by India (E/AC.7/L.519), the other by Dahomey, the Philippines and Sweden (E/AC.7/L.520/Rev.1).

*Draft resolution E/AC.7/L. 520*

19. At its 570th meeting, several amendments to this draft resolution were submitted by Pakistan (E/AC.7/L.522) and by the United Republic of Tanzania (E/AC.7/L.523).

20. The following amendments submitted by Pakistan were accepted by the sponsors of draft resolution E/AC.7/L.520:

(a) Operative paragraph 1: delete *"Approves"* and insert *"Welcomes"* and between *"international"* and *"conventions"*, insert the words *"conventions and"*;

(b) Insert a new operative paragraph between operative paragraphs 3 and 4:

*"Decides to review the provisions of paragraphs 2 and 3 of the present resolution after the entry into force of the International Covenants on Human Rights."*

21. At the 571st meeting, the representative of Pakistan withdrew his amendment to operative paragraph 3 in

favour of the amendment to the same paragraph proposed by the United Republic of Tanzania.

22. The sponsors of draft resolution E/AC.7/L.520 also accepted the amendments to paragraphs 2 and 3 submitted by the representative of the United Republic of Tanzania with the following modifications:

(a) In operative paragraph 2: after the words "fundamental freedoms," it was modified to read:

"as exemplified by the policy of apartheid as practised in the Republic of South Africa and in the Territory of South West Africa under the direct responsibility of the United Nations, and to racial discrimination as practised notably in Southern Rhodesia, contained in the communications listed by the Secretary-General pursuant to Economic and Social Council resolution 728 F (XXVIII) of 30 July 1959";

(b) In operative paragraph 3: after the words "human rights," the addition was modified to read:

"as exemplified by the policy of apartheid as practised in the Republic of South Africa and in the Territory of South West Africa under the direct responsibility of the United Nations, and racial discrimination as practised notably in Southern Rhodesia."

23. The Committee decided, at the request of Sweden, by 11 votes to 8, with 4 abstentions, to give priority in voting to the three-Power draft resolution (E/AC.7/L.520/Rev.1) and the amendments proposed by the United Republic of Tanzania (E/AC.7/L.523).

24. Voting by roll-call, at the request of the USSR, the amendment to operative paragraph 2 proposed by the United Republic of Tanzania was rejected by 11 votes to 11, with 2 abstentions. The voting was as follows:

*In favour:* Cameroon, Czechoslovakia, France, India, Iran, Kuwait, Libya, Romania, Turkey, Union of Soviet Socialist Republics and the United Republic of Tanzania.

*Against:* Belgium, Canada, Dahomey, Guatemala, Mexico, Panama, Philippines, Sweden, United Kingdom of Great Britain and Northern Ireland, United States of America and Venezuela.

*Abstentions:* Gabon, Pakistan.

25. Since the sponsors of the three-Power draft resolution accepted the orally modified amendments to operative paragraphs 2 and 3, the representative of the United Republic of Tanzania withdrew his third amendment concerning operative paragraph 5.

26. At the request of the USSR, a separate vote was taken on each operative paragraph of draft resolution E/AC.7/L.520/Rev.1. The results of the vote were as follows:

Operative paragraph 1 was adopted by 21 votes to none, with 3 abstentions;

The last part of the sentence in operative paragraph 2 after the words "contained in" were adopted by 10 votes to 7, with 7 abstentions;

Operative paragraph 2, as a whole, was adopted by 14 votes to 3, with 7 abstentions;

Operative paragraph 3 was adopted by 14 votes to none, with 10 abstentions;

Operative paragraph 4 was adopted by 20 votes to none, with 4 abstentions;

Operative paragraph 5 was adopted by 18 votes to none, with 6 abstentions;

Operative paragraph 6 was adopted by 18 votes to none, with 5 abstentions.

The draft resolution (E/AC.7/L.520/Rev.1) as a whole, was adopted by 15 votes to 3, with 6 abstentions. (See para. 55 below, draft resolution F.)

#### *Draft resolution E/AC.7/L.519*

27. At the 570th meeting, an oral amendment was introduced by the sponsor of the resolution who requested the insertion of a new preambular paragraph, the text of which was as follows:

"*Noting with satisfaction* the intention of the Commission on Human Rights to seek enhanced powers for itself, primarily for the purpose of combating consistent violations of human rights as inherent in the policies and practices of apartheid, racism and colonialism in all their manifestations."

28. The Committee decided, at its 571st meeting, by 13 votes to 6, with 4 abstentions, not to take a vote on draft resolution E/AC.7/L.519.

29. The Committee considered that, pending the finalization of the study by the *ad hoc* study group established under the relevant provisions of resolution No. 6 (XXIII) of the Commission on Human Rights and in accordance with operative paragraph 2 of resolution 9 (XXIII) of the Commission on Human Rights, it would be premature to take action on operative paragraph 1 of that same resolution during the present session.

COMMUNICATION DATED 3 FEBRUARY 1967 FROM THE ACTING CHAIRMAN OF THE GENERAL ASSEMBLY'S SPECIAL COMMITTEE ON THE POLICIES OF APARTHEID OF THE GOVERNMENT OF THE REPUBLIC OF SOUTH AFRICA (E/4322, CHAP. IV)

#### *Draft resolution submitted by the United Republic of Tanzania (E/AC.7/L.521)*

30. At its 571st meeting, an oral amendment to operative paragraph 1 was submitted by Pakistan to substitute the word "*Approves*" by "*Welcomes*".

31. This proposal was adopted by 11 votes to 4, with 8 abstentions.

32. Upon the proposal of the USSR, a separate vote, by roll-call, was taken on the operative paragraph 2 of the draft resolution.

33. Operative paragraph 2 was adopted by 21 votes to none, with 2 abstentions. The voting was as follows:

*In favour:* Belgium, Cameroon, Canada, Czechoslovakia, Dahomey, Guatemala, India, Iran, Kuwait, Lebanon, Libya, Mexico, Panama, Philippines, Romania, Sweden, Turkey, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United States of America and Venezuela.

*Against:* None.

*Abstentions:* France, Gabon.

34. The draft resolution (E/AC.7/L.521) as a whole, as amended, was adopted by 20 votes to none, with 3 abstentions. (See para. 55 below, draft resolution G.)

35. At the 579th meeting, the representative of Gabon requested that his delegation's vote on draft resolution E/AC.7/L.521 should be considered as an affirmative vote rather than an abstention.

**DRAFT RESOLUTION IV. QUESTION CONCERNING THE IMPLEMENTATION OF HUMAN RIGHTS THROUGH A UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS OR SOME OTHER APPROPRIATE INTERNATIONAL MACHINERY (E/4322, CHAP. XVII)**

*Draft resolution submitted by India and the United Republic of Tanzania (E/AC.7/L.516/Rev.1)*

36. Amendments to draft resolution IV contained in the report of the Commission on Human Rights (E/4322, chap. XVII) were submitted by the United Republic of Tanzania (E/AC.7/L.526 and Corr.1).

37. At its 575th meeting, the representative of India orally proposed a revised draft resolution under which five operative paragraphs of E/AC.7/L.516/Rev.1 would be replaced by a single operative paragraph to the effect that the Economic and Social Council would take no decision on the subject at the current session.

38. At the request of the representative of India, the Committee, by a roll-call vote, by 15 votes to 9, with 3 abstentions, rejected the oral revision proposed by India. The voting was as follows:

*In favour:* Czechoslovakia, Kuwait, India, Libya, Morocco, Romania, Sierra Leone, Turkey, Union of Soviet Socialist Republics.

*Against:* Belgium, Canada, Dahomey, France, Guatemala, Iran, Mexico, Pakistan, Panama, Peru, Philippines, Sweden, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela.

*Abstentions:* Cameroon, Gabon, United Republic of Tanzania.

39. The Committee agreed that the amendments proposed by the United Republic of Tanzania to draft resolution IV would not be voted on and would be referred directly to the General Assembly for its consideration. The text of these amendments is as follows:

(a) In operative paragraph 2: (i) after the words "United Nations", insert "especially the Universal Declaration on Human Rights"; (ii) after sub-paragraph (a) add a new sub-paragraph to read as follows:

"He shall initiate action where necessary to promote, encourage and strengthen universal and effective respect for human rights and fundamental freedoms.";

(iii) In operative paragraph 2 (d), delete the last sentence beginning with "Before submitting his reports";

(b) In operative paragraph 3, delete the word "appointed", and substitute the word "elected";

(c) In operative paragraph 4, delete the words "appointed by the Secretary-General in consultation with the High Commissioner" and substitute "elected by the General Assembly on the basis of equitable geographical representation";

(d) Replace paragraph 6 by the following text:

"Decides to elaborate, during its twenty-second session, an appropriate convention which shall govern the powers of competence and procedures under which the High Commissioner and his office shall operate.";

(e) Replace paragraph 7 by the following text:

"Decides to invite the Director-General of the International Labour Office to submit to the General Assembly for its guidance and assistance at its forthcoming session, a report on the experience of the International Labour Organisation in the field of implementation of human rights in its sphere of competence."

40. At the request of the representative of the United Republic of Tanzania, the vote on draft resolution IV was taken by roll-call. This draft resolution, as recommended by the Commission on Human Rights, was adopted by 15 votes to 4, with 8 abstentions. The voting was as follows:

*In favour:* Belgium, Canada, Dahomey, France, Guatemala, Iran, Mexico, Pakistan, Panama, Peru, Philippines, Sweden, United Kingdom of Great Britain and Northern Ireland, United States of America, Venezuela.

*Against:* Czechoslovakia, India, Romania, Union of Soviet Socialist Republics.

*Abstentions:* Cameroon, Gabon, Kuwait, Libya, Morocco, Sierra Leone, Turkey, United Republic of Tanzania.

(See para. 55 below, draft resolution H.)

41. At the 579th meeting, the representative of Gabon requested that his delegation's vote on draft resolution IV should be considered as an affirmative vote rather than an abstention.

42. The representative of India formally proposed that the two-Power draft resolution in its original form (E/AC.7/L.516/Rev.1) also be transmitted directly to the General Assembly for its consideration.

43. By 10 votes to 9, with 4 abstentions, the Committee rejected the proposal of India.

*Draft resolution submitted by Pakistan (E/AC.7/L.528)*

44. At its 577th meeting, oral amendments were proposed to this draft resolution by the following representatives:

*India.* To delete the part of the first preambular paragraph which follows the words "human rights".

*Sweden.* To replace, in the preamble, the words "draft resolution IV of the Commission on Human Rights", by a reference to the Council resolution on the subject.

*USSR.* Operative paragraph 1: add the words "as well as the report of the Social Committee and summary records on the subject during the forty-second session of the Economic and Social Council".

*France.* To add to the first operative paragraph, the words "and the pertinent documentation" after the words "to bring the resolution".

*United Republic of Tanzania.* (a) To add to the first operative paragraph the words "and the amendments thereto submitted by the United Republic of Tanzania (E/AC.7/L.526)" after the word "resolution". (b) To

substitute the text of operative paragraph 2 by the following text: "Further requests the Secretary-General to invite the Director-General of the International Labour Office and the Director-General of the United Nations Educational, Scientific and Cultural Organization to submit to the General Assembly, for its guidance and assistance at its twenty-second session, a report on their experience in the field of implementation of human rights in their spheres of competence."

*United Kingdom.* Operative paragraph 1: after the words "international machinery", change the wording to read: "and to submit a report embodying the replies of Governments in time for consideration by the General Assembly during its twenty-second session."

45. The sponsor of the draft resolution accepted the oral amendments presented by the above-mentioned representatives with some modifications.

46. The draft resolution (E/AC.7/L.528) as amended, was unanimously adopted by the Committee. (See para. 55 below, draft resolution I.)

#### CAPITAL PUNISHMENT

*Draft resolution submitted by Sweden and Venezuela (E/AC.7/L.514/Rev. 1)*

*Draft resolution submitted by the USSR (E/AC.7/L.524 and Corr.1)*

47. After the representative of the USSR was refused priority in voting on draft resolution E/AC.7/L.524, he formally moved a motion to the effect that the Economic and Social Council at its current session, take no action on the two-Power draft resolution contained in document E/AC.7/L.514/Rev.1. The Committee adopted the USSR motion, by a roll-call vote, at the request of the representative of the USSR, by 10 votes to 8, with 3 abstentions. The voting was as follows:

*In favour:* Czechoslovakia, France, India, Iran, Libya, Philippines, Romania, Turkey, USSR, United Republic of Tanzania.

*Against:* Belgium, Canada, Dahomey, Guatemala, Mexico, Sweden, United States, Venezuela.

*Abstentions:* Cameroon, Sierra Leone, United Kingdom of Great Britain and Northern Ireland.

#### DURATION OF THE SESSION OF THE SUB-COMMISSION ON PREVENTION OF DISCRIMINATION AND PROTECTION OF MINORITIES

*Draft resolution submitted by Pakistan and Turkey (E/AC.7/L.525)*

48. At its 578th meeting, four oral amendments were submitted by the representative of the United Kingdom:

(a) To substitute the words "primary purpose" in the first line of the second preambular paragraph for "an important task";

(b) In the first line of the third preambular paragraph, to substitute the words "has decided in" for "under" and after the words "resolution 5 (XIX)", to insert "intends to";

(c) At the end of the third preambular paragraph, to add the following words: "and that the Commission

on Human Rights in paragraph 2 and 6 of its resolution 8 (XXIII), has given the Sub-Commission tasks in relation to this question".

(d) In the fifth preambular paragraph insert the word "the" between the words "and" and "other" and insert, before the word "relating" the words "on its agenda".

49. At the request of the representative of the USSR, these amendments were voted by the Committee as follows:

The amendment to the second preambular paragraph was adopted by 12 votes to 4, with 2 abstentions;

The first amendment to the third preambular paragraph, as amended, was adopted by 13 votes to 2, with 3 abstentions;

The second amendment to the third preambular paragraph was adopted by 10 votes to 3, with 5 abstentions; The amendment to the fifth preambular paragraph was adopted by 14 votes to 1, with 3 abstentions.

50. The representative of the USSR proposed to delete the reference to the dates from the last operative paragraph. This proposal was agreed to by the Committee.

51. The draft resolution (E/AC.7/L.525) as amended, was adopted unanimously. (See para. 55 below, draft resolution J.)

#### REPORTS OF THE SUB-COMMISSION ON PREVENTION OF DISCRIMINATION AND PROTECTION OF MINORITIES

*Draft resolution submitted by India and the USSR (E/AC.7/L.527)*

52. At its 578th meeting, an oral amendment was submitted by the representative of the United Kingdom to operative paragraph 2, the beginning to read as follows:

"2. Approves the request of the Sub-Commission to the Secretary-General, contained in its resolution 3 (XIX), to invite . . ."

53. This oral amendment was agreed upon by the Committee. The resolution, as amended, was unanimously adopted by the Committee. (See para. 55 below, draft resolution K.)

#### REPORT OF THE COMMISSION ON HUMAN RIGHTS

54. At its 578th meeting, the Committee unanimously adopted a draft resolution which takes note of the report of the Commission on Human Rights at its twenty-third session (E/4322 and Corr.1). (See para. 55 below, draft resolution L.)

#### Recommendations of the Social Committee

55. The Social Committee accordingly recommends to the Economic and Social Council the adoption of the following draft resolutions:

#### A

##### PERIODIC REPORTS ON HUMAN RIGHTS

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1230 (XLII).]<sup>3</sup>

<sup>3</sup> See *Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.*

## B

REVIEW OF THE COMMISSION'S PROCEDURES AND METHODS  
OF WORK WITH A VIEW TO EXPEDITING THE CONSIDERATION  
OF THE ITEMS OF ITS AGENDA

[Text adopted by the Economic and Social Council without change under the title "Amendment of rules 15, 17 and 18 of the rules of procedure of the functional commissions of the Economic and Social Council". For the final text, see Council resolution 1231 (XLII).]<sup>3</sup>

## C

QUESTION OF SLAVERY AND THE SLAVE TRADE IN ALL  
THEIR PRACTICES AND MANIFESTATIONS, INCLUDING THE  
SLAVERY-LIKE PRACTICES OF APARTHEID AND COLONIALISM

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1232 (XLII).]<sup>3</sup>

## D

DRAFT INTERNATIONAL CONVENTION ON THE ELIMINATION  
OF ALL FORMS OF RELIGIOUS INTOLERANCE

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1233 (XLII).]<sup>3</sup>

## E

QUESTION OF THE VIOLATION OF HUMAN RIGHTS AND  
FUNDAMENTAL FREEDOMS INCLUDING POLICIES OF RACIAL  
DISCRIMINATION AND SEGREGATION AND OF APARTHEID,  
IN ALL COUNTRIES, WITH PARTICULAR REFERENCE TO  
COLONIAL LAND OTHER DEPENDENT COUNTRIES AND TER-  
RITORIES

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1234 (XLII).]<sup>3</sup>

## F

QUESTION OF THE VIOLATION OF HUMAN RIGHTS AND  
FUNDAMENTAL FREEDOMS INCLUDING POLICIES OF RACIAL  
DISCRIMINATION AND SEGREGATION AND OF APARTHEID,  
IN ALL COUNTRIES, WITH PARTICULAR REFERENCE TO  
COLONIAL AND OTHER DEPENDENT COUNTRIES AND TER-  
RITORIES

*The Economic and Social Council,*

Noting resolutions 8 (XXIII) and 9 (XXIII) of the Commission on Human Rights,

1. Welcomes the decision of the Commission on Human Rights to give annual consideration to the item entitled "Question of the violation of human rights and fundamental freedoms, including policies of racial discrimination and segregation and of apartheid, in all countries, with particular reference to colonial and other dependent countries and territories," without prejudice to the functions and powers of organs already

in existence or which may be established within the framework of measures of implementation included in international covenants and conventions on the protection of human rights and fundamental freedoms; and concurs with the requests for assistance addressed to the Sub-Commission on Prevention of Discrimination and Protection of Minorities and to the Secretary-General;

2. Authorizes the Commission on Human Rights and the Sub-Commission on the Prevention of Discrimination and the Protection of Minorities, in conformity with the provisions of operative paragraph 1 of the Commission's resolution 8 (XXIII), to examine information relevant to gross violations of human rights and fundamental freedoms, as exemplified by the policy of apartheid as practised in the Republic of South Africa and in the Territory of South West Africa under the direct responsibility of the United Nations, and to racial discrimination as practised notably in Southern Rhodesia, contained in the communications listed by the Secretary-General pursuant to Economic and Social Council resolution 728 F (XXVIII) of 30 July 1959;

3. Decides that the Commission on Human Rights may, in appropriate cases, and after careful consideration of the information thus made available to it, in conformity with the provisions of paragraph 1 above, make a thorough study of situations which reveal a consistent pattern of violations of human rights, as exemplified by the policy of apartheid as practised in the Republic of South Africa and in the Territory of South West Africa under the direct responsibility of the United Nations, and racial discrimination as practised notably in Southern Rhodesia, and report, with recommendations thereon, to the Economic and Social Council;

4. Decides to review the provisions of operative paragraphs 2 and 3 of the present resolution after the entry into force of the International Covenants on Human Rights;

5. Takes note of the fact that the Commission on Human Rights has instructed an *ad hoc* study group to study in all its aspects the question of the ways and means by which the Commission might be enabled or assisted to discharge functions in relation to violations of human rights and fundamental freedoms, whilst maintaining and fulfilling its other functions;

6. Requests the Commission on Human Rights to report to it on the result of this study after having given consideration to the conclusions of the study group referred to above.

[For the final text, as amended by the Economic and Social Council, see Council resolution 1235 (XLII).]<sup>3</sup>

## G

QUESTION OF THE VIOLATION OF HUMAN RIGHTS AND  
FUNDAMENTAL FREEDOMS, INCLUDING POLICIES OF RACIAL  
DISCRIMINATION AND SEGREGATION AND OF APARTHEID,  
IN ALL COUNTRIES, WITH PARTICULAR REFERENCE TO  
COLONIAL AND OTHER DEPENDENT COUNTRIES AND  
TERRITORIES

[Text adopted by the Economic and Social Council

<sup>3</sup> See footnote, page 5.

without change. For the final text, see Council resolution 1236 (XLII).]<sup>3</sup>

## H

QUESTION CONCERNING THE IMPLEMENTATION OF HUMAN RIGHTS THROUGH A UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS OR SOME OTHER APPROPRIATE INTERNATIONAL MACHINERY

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1237 (XLII).]<sup>3</sup>

## I

QUESTION CONCERNING THE IMPLEMENTATION OF HUMAN RIGHTS THROUGH A UNITED NATIONS HIGH COMMISSIONER FOR HUMAN RIGHTS OR SOME OTHER APPROPRIATE INTERNATIONAL MACHINERY

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1238 (XLII).]<sup>3</sup>

## J

DURATION OF THE SESSION OF THE SUB-COMMISSION ON PREVENTION OF DISCRIMINATION AND PROTECTION OF MINORITIES

[Text adopted by the Economic and Social Council

without change. For the final text, see Council resolution 1239 (XLII).]<sup>3</sup>

## K

REPORTS OF THE SUB-COMMISSION ON PREVENTION OF DISCRIMINATION AND PROTECTION OF MINORITIES

[Text adopted by the Economic and Social Council without change, except for operative paragraph 3 which read as follows:

"Further requests the International Conference on Human Rights to use the special study of racial discrimination in the political, economic, social and cultural spheres and the report of the seminar on racial discrimination to be held in 1968, as one of its background papers on the question of racial discrimination."

For the final text, see Council resolution 1240 (XLII).]<sup>3</sup>

## L

REPORT OF THE COMMISSION ON HUMAN RIGHTS

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1241 (XLII).]<sup>3</sup>

<sup>3</sup> See footnote, page 5.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 11 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/4322 and Corr.1	Report of the Commission on Human Rights on its twenty-third session (20 February - 23 March 1967)	Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 6
E/4322/Add.1	Summary of the report of the Commission on Human Rights on its twenty-third session	Mimeographed
E/4340 and Corr.1 and Add.1 and 2	Communications, dated 13 and 17 April 1967, from the representative of South Africa, and communication, dated 1 May 1967 from the Permanent Mission of the Ukrainian Soviet Socialist Republic to the United Nations	Ditto
E/AC.7/L.514/Rev.1	Sweden and Venezuela: revised draft resolution	Ditto
E/AC.7/L.515	Dahomey: draft resolution	Ditto
E/AC.7/L.516/Rev.1	India and United Republic of Tanzania: revised draft resolution	Ditto
E/AC.7/L.516/Rev.1/ Add.1	Statement of financial implications of the draft resolution contained in document E/AC.7/L.516/Rev.1	Ditto
E/AC.7/L.517	Libya: amendment to article VI of the draft international convention on the elimination of all forms of religious intolerance (E/4322, chap. II)	Ditto
E/AC.7/L.518	Dahomey: draft resolution	Ditto
E/AC.7/L.519	India: draft resolution	Ditto



<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/AC.7/L.520/Rev.1	Dahomey, Philippines and Sweden : revised draft resolution	Ditto
E/AC.7/L.521	United Republic of Tanzania : draft resolution	Ditto
E/AC.7/L.522	Pakistan : amendments to document E/AC.7/L.520	Ditto
E/AC.7/L.523	United Republic of Tanzania : amendments to document E/AC.7/L.520	Ditto
E/AC.7/L.524 and Corr.1	Union of Soviet Socialist Republics : draft resolution	Ditto
E/AC.7/L.525	Pakistan and Turkey : draft resolution	Ditto
E/AC.7/L.526 and Corr.1	United Republic of Tanzania : amendments to draft resolution IV contained in document E/4322	Ditto
E/AC.7/L.527	India and Union of Soviet Socialist Republics : draft resolution	Ditto
E/AC.7/L.528	Pakistan : draft resolution	Ditto
E/AC.7/L.529	Note by the Secretariat, transmitting the text of a letter from the Permanent Mission of the Union of Soviet Socialist Republics to the United Nations	Ditto
E/L.1164	Sweden, United Republic of Tanzania and Venezuela : draft resolution	Ditto
E/RES/1230 (XLII)- 1241 (XLII) and 1243 (XLII)	Resolutions adopted by the Council at its 1479th plenary meeting, on 6 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1230 (XLII), 1231 (XLII), 1232 (XLII), 1233 (XLII), 1234 (XLII), 1235 (XLII), 1236 (XLII), 1237 (XLII), 1238 (XLII), 1239 (XLII), 1240 (XLII), 1241 (XLII) and 1243 (XLII)



## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 12: Report of the Commission on the Status of Women\*

## CONTENTS

Document No.	Title	Page
E/4365	Report of the Social Committee . . . . .	1
	Check list of documents . . . . .	3

\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session, 1470th meeting*; see also the records of 558th to 560th meetings of the Social Committee (E/AC.7/SR.558-560).

## DOCUMENT E/4365

## Report of the Social Committee

[Original text: English]  
[15 May 1967]

1. The Social Committee under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered at its 558th to 560th meetings, held from 9 to 11 May 1967, item 12 of the Council's agenda: "Report of the Commission on the Status of Women".

2. In connexion with its consideration of this item, the Committee had before it the report of the Commission on the Status of Women (E/4316) in chapter XIX of which draft resolutions I to V required action by the Council.

3. During the discussion of this item, documents E/AC.7/L.512 and L.513 were submitted for the Committee's consideration.

4. At its 558th meeting, the Committee decided to take no action on any amendments to the draft declaration on the elimination of discrimination against women, but to submit them to the General Assembly for consideration.

5. Following the above-mentioned decision, the Committee did not discuss amendments to the draft declaration presented by India in document E/AC.7/L.512. The text of the amendments reads as follows:

## (a) Article 6

In operative paragraph 1 (i) insert the words "as far as possible" after the words "to ensure"; (ii) in operative paragraph 2, add the words "as far as possible" after the words "shall be taken to ensure"; (iii) in operative paragraph 2(a), omit the words "to free choice of a husband and"; (iv) in operative paragraph 2(c), add the words "as far as possible" after the words "parents shall"; (v) in operative paragraph 3, omit the words

"and the betrothal of young girls before puberty" and add the words "as far as possible" before "to make the registration . . . compulsory".

## (b) Article 10

(i) Paragraph 1 and sub-paragraph 1 (a) be redrafted as follows:

"1. All appropriate measures shall be taken to ensure to women, married or unmarried, equal rights with men in the field of economic and social life, and in particular:

"(a) The right, without discrimination on grounds of marital status or any other grounds, to receive vocational training; to work; to free choice of profession and employment subject to considerations of suitability to a particular type of employment and to professional and vocational advancement."

(ii) In paragraph 2, omit the words "and to provide the necessary social services, including child-care facilities".

6. To facilitate the work of the Committee, an informal working group was established at the Committee's 559th meeting to consider different amendments to draft resolutions II, III and IV contained in the Commission's report.

7. The working group met on 11 May, with the representative of the Philippines in the Chair. Recommendations of the working group are contained in document E/AC.7/L.513.

8. The Committee's action on the different proposals and amendments taken at its 560th meeting is described in the following paragraphs:

# DRAFT RESOLUTION I. DRAFT DECLARATION ON THE ELIMINATION OF DISCRIMINATION AGAINST WOMEN

9. No amendments were submitted to this draft resolution and it was unanimously adopted. (See para. 17 below, draft resolution A.)

## DRAFT RESOLUTION II. PARENTAL RIGHTS AND DUTIES INCLUDING GUARDIANSHIP

10. The Committee agreed with the recommendation of the working group to delete the fourth, fifth and sixth preambular paragraphs.

11. By a separate vote, at the request of the representative of France, the Committee decided by 14 votes to 2, with 8 abstentions, to retain operative paragraph 2 (a).

12. The Committee adopted draft resolution II, as amended, by 23 votes to none, with 1 abstention. (See para. 17 below, draft resolution B.)

## DRAFT RESOLUTION III. ACCESS OF WOMEN TO HIGH EDUCATION

13. The first and second amendments to draft resolution III, recommended by the working group, were approved by the Committee. The draft resolution, as amended, was then unanimously adopted by the Committee. (See para. 17 below, draft resolution C.)

## DRAFT RESOLUTION IV. UNITED NATIONS ASSISTANCE FOR THE ADVANCEMENT OF WOMEN

14. At the Committee's 560th meeting, the representative of the Union of Soviet Socialist Republics withdrew his objection to operative paragraph 2 (a) of draft resolution IV and consequently, the second amendment contained in document E/AC.7/L.513, concerning this draft, was no longer before the Committee.

15. After the Committee approved the other amendments recommended by the working group, draft resolution IV, as amended, was unanimously adopted. (See para. 17 below, draft resolution D.)

## DRAFT RESOLUTION V. REPORT OF THE COMMISSION ON THE STATUS OF WOMEN

16. No amendments were submitted to draft resolution V, which was unanimously adopted. (See para. 17 below, draft resolution E.)

## Recommendations of the Committee

17. The Social Committee accordingly recommends to the Economic and Social Council, the adoption of the following draft resolutions:

### A

#### DRAFT DECLARATION ON THE ELIMINATION OF DISCRIMINATION AGAINST WOMEN

*[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1206 (XLII).]*<sup>1</sup>

### B

#### PARENTAL RIGHTS AND DUTIES, INCLUDING GUARDIANSHIP

*[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1207 (XLII).]*<sup>1</sup>

### C

#### ACCESS OF WOMEN TO HIGHER EDUCATION, JOBS AND PROFESSIONS

*[Text adopted by the Economic and Social Council without change, except for sub-paragraph (d) which reads as follows:*

*“(d) To promote the access of women who have completed higher education to all jobs and professions to which their education entitles them to aspire and for which they are qualified”.*

*[For the final text, see Council resolution 1208 (XLII).]*<sup>1</sup>

### D

#### UNITED NATIONS ASSISTANCE FOR THE ADVANCEMENT OF WOMEN

*[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1209 (XLII).]*<sup>1</sup>

### E

#### REPORT OF THE COMMISSION ON THE STATUS OF WOMEN

*[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1210 (XLII).]*<sup>1</sup>

<sup>1</sup> See *Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.*

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 12 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4316	Report of the Commission on the Status of Women on its twentieth session (13 February - 6 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 7</i>
E/4316/Add.1	Summary of the report of the Commission on the Status of Women on its twentieth session	Mimeographed
E/AC.7/L.512	India : amendments to the draft declaration on the elimination of discrimination against women (E/4316, chap. XIX)	Ditto
E/AC.7/L.513	Recommendations of the Working Group on draft resolutions II, III and IV submitted to the Economic and Social Council (E/4316, chap. XIX)	Ditto
E/RES/1206 (XLII)- 1210 (XLII)	Resolutions adopted by the Council at its 1470th plenary meeting, on 29 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1206 (XLII), 1207 (XLII), 1208 (XLII), 1209 (XLII) and 1210 (XLII)





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 13: Advisory services in the field of human rights\*

## CONTENTS

Document No.	Title	Page
E/4328	Report of the Secretary-General . . . . .	1
E/4389	Report of the Social Committee . . . . .	2
Check list of documents . . . . .		3

\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1479th meeting; see also the record of the 581st meeting of the Social Committee (E/AC.7/SR.581).

## DOCUMENT E/4328

## Report of the Secretary-General

[Original text: English]  
[7 April 1967]

1. In accordance with the terms of General Assembly resolution 926 (X) of 14 December 1955, establishing the programme of advisory services in the field of human rights, the Secretary-General reports regularly to the Economic and Social Council, to the Commission on Human Rights and, as appropriate, to the Commission on the Status of Women on the measures taken to carry out the advisory services programme.

2. The report which the Secretary-General submitted to the Commission on Human Rights at its twenty-third session and to the Commission on the Status of Women at its twentieth session (E/CN.4/925-E/CN.6/476 and Add.1) outlined the relevant decisions of the Economic and Social Council at its forty-first session and the arrangements for the 1967 advisory services programme as approved by the Council, and set forth the proposed programme for 1968 within the budgetary limits recommended by the Council in resolution 1120 (XLI).

3. The report of the Secretary-General was considered by the Commission on Human Rights, which adopted resolution 17 (XXIII) on advisory services (see E/4322 and Corr.1, para. 545), and by the Commission on the Status of Women, which adopted resolutions 10 (XX) and 11 (XX) dealing with advisory services (see E/4316, paras. 322 and 326).

4. The attention of the Council is drawn, accordingly, to the report of the Secretary-General and to the recom-

mendations of the Commission on Human Rights and the Commission on the Status of Women which relate to the 1968 advisory services programme and to the future development of the programme as a whole.

## SEMINARS PLANNED FOR 1968

5. In its resolution 17 (XXIII) on advisory services, the Commission on Human Rights *inter alia* approved the 1968 programme for advisory services in the field of human rights proposed by the Secretary-General and recommended that seminars on subjects relating to the status of women should continue to be organized in collaboration with those Member States which are able to act as host countries and, in particular, that every effort should be made to hold such a seminar in 1968, the International Year for Human Rights. A similar hope was expressed by the Commission on the Status of Women in its resolution 10 (XX). In this connexion, the Secretary-General wishes to inform the Council that so far he has not received an offer by a Government to act as host to such a seminar. The Secretary-General also wishes to note that the attention of Governments of Member States has been drawn to Council resolution 1125 (XLI) and to the possibility of acting as host to a 1968 seminar on a subject relating to the status of women in a *note verbale* circulated on 16 February 1967, subsequent to the issuance of his report to the two Commissions (E/CN.4/925-E/CN.6/476, para. 12).

# FUTURE DEVELOPMENT OF THE ADVISORY SERVICES PROGRAMME

6. In operative paragraph 5 (b) of its resolution 17 (XXIII), the Commission on Human Rights requested the Secretary-General:

“To consider the organization, from 1969 onwards, of an annual programme of advisory services in the field of human rights, consisting of at least two seminars on subjects of human rights of which at least one should be on an international level, one or two seminars on the status of women and one or more regional training courses on human rights; and that the programme should include the award of an adequate number of human rights fellowships, taking into account the increasing interest expressed in the fellowships by Member States.”

The Secretary-General was further requested to draw the attention of the Governing Council of the United Nations Development Programme (UNDP) to this resolution, and the Commission invited the Governing Council to bear this resolution in mind in considering the recommendations to the Economic and Social Council relating to the level of appropriations for part V of the United Nations budget in 1968 and 1969.

7. Under the terms of reference approved for it in General Assembly resolution 2029 (XX), the Governing Council of UNDP has among its responsibilities that of providing general policy guidance and direction for all programmes of technical assistance administered by the United Nations. The proposals of the Commission on Human Rights in resolution 17 (XXIII) referred to above are being brought to the attention of the June 1967

session of the Governing Council of UNDP for review and comment, as called for in Economic and Social Council resolution 1008 (XXXVII). The observations of the Governing Council will be before the Economic and Social Council at its forty-third session as part of the Governing Council's report on its fourth session, which will be considered by the Economic and Social Council in connexion with item 11 of its provisional agenda.

8. In addition to resolution 17 (XXIII) dealing specifically with advisory services, two other resolutions adopted by the Commission on Human Rights referred to the organization of future seminars under the advisory services programme. Resolution 15 (XXIII), concerning the study of special problems relating to human rights in developing countries, included a request to the Secretary-General to proceed to organize additional seminars on this subject; and in resolution 13 (XXIII), the Economic and Social Council was asked to adopt a resolution requesting the Secretary-General to organize seminars on measures and techniques which have proved effective on the eradication of slavery and the slave trade in all their practices and manifestations, including the slavery-like practices and aspects of *apartheid* and colonialism.

9. The Secretary-General wishes to note that the holding of seminars on the topics requested by the Commission on Human Rights would be dependent upon offers by Governments of Member States to act as host to such seminars. As in the case of the 1968 seminar on a subject relating to the status of women requested by the Council in resolution 1125 (XLI) (see para. 5 above), the Secretary-General would draw the attention of Governments of Member States to these requests by circulating a *note verbale*.

## DOCUMENT E/4389

### Report of the Social Committee

[Original text: English]  
[5 June 1967]

1. At its 581st meeting on 2 June 1967,<sup>1</sup> the Social Committee, under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered item 13 of the agenda entitled: “Advisory services in the field of human rights”. The item had been referred to the Committee by the Council at its 1460th meeting held on 8 May 1967.

2. The Committee had before it the reports of the Secretary-General on advisory services in the field of human rights (E/4328, E/CN.4/925-E/CN.6/476 and Add.1) and the pertinent parts of the report of the Commission on Human Rights (E/4322 and Corr.1, chap. XI) and the report of the Commission on the Status of Women (E/4316, chap. VIII).

3. The Committee agreed with the action taken by the Commission on Human Rights in approving the programme for advisory services in the field of human rights for 1968. It concurred with the Commission's request to the Secretary-General regarding the annual programme of advisory services in the field of human rights as from 1969 and agreed that the Governing Council of the United Nations Development Programme (UNDP) should bear resolution 17 (XXIII) of the Commission on Human Rights in mind in considering the recommendations to the Economic and Social Council relating to the level of appropriations for part V of the United Nations budget in 1968 and 1969.<sup>1</sup>

<sup>1</sup> In document DP/RP/3/Add.4 (sect. III), the Secretary-General has drawn the attention of the Governing Council of UNDP to resolution 17 (XXIII) of the Commission on Human Rights.



**CHECK LIST OF DOCUMENTS**

NOTE. This check list includes the documents mentioned during the consideration of agenda item 13 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4316	Report of the Commission on the Status of Women on its twentieth session (13 February-6 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 7</i>
E/4322 and Corr.1	Report of the Commission on Human Rights on its twenty-third session (20 February-23 March 1967)	<i>Ibid., Supplement No. 6</i>
E/CN.4/925-E/CN.6/476 and E/CN.4/925/Add.1- E/CN.6/476/Add.1	Report of the Secretary-General	Mimeographed





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 14 : Allegations regarding infringements of trade union rights \*

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E/L.1156	Union of Soviet Socialist Republics : draft resolution . . . . .	5
E/L.1156/Rev.1	Cameroon, Pakistan, Union of Soviet Socialist Republics and United Republic of Tanzania : revised draft resolution . . . . .	5
E/L.1156/Rev.1/Add.1	Financial implications of Council resolution 1216 (XLII) : note by the Secretary-General . . . . .	6
E/L.1157	United Republic of Tanzania : amendments to document E/L.1156 . . . . .	8

\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1463rd, 1465th, 1473rd and 1479th meetings.

## DOCUMENT E/4305

## Note by the Secretary-General

[Original text: English]  
[7 March 1967]

1. The Secretary-General has the honour to inform the Economic and Social Council that he has received the following communication, dated 1 June 1966, from the Director-General of the International Labour Office.

"I have the honour to inform you that the Governing Body of the International Labour Office decided on 27 May 1966, in the course of its 165th session, on the recommendation of its Committee on Freedom of Association, to refer to the Economic and Social Council for consideration, in accordance with resolution 277 (X) adopted by the Economic and Social Council on 17 February 1950, certain allegations of infringements of trade union rights in the Republic of South Africa which had been addressed to the International Labour Organisation by the World Federation of Trade Unions.

"The complaint of the World Federation of Trade Unions, dated 3 March 1966, was received by the International Labour Office on 14 March 1966. On 11 March 1966, three days prior to the receipt of the complaint, the period of notice given by the Republic of South Africa of its intention to withdraw from the International Labour Organisation expired. The Republic of South Africa remained a Member of the United Nations. The Committee on Freedom of Association, therefore, made the above recommendation to the Governing Body, as indicated in paragraph 12 of its ninety-first report, in accordance with the provisions of the procedure for the examination of complaints of alleged

infringements of trade union rights agreed upon between the United Nations and the International Labour Organisation, as set forth in my letter to you dated 19 January 1950, stating the proposed terms of reference of the Fact-Finding and Conciliation Commission on Freedom of Association, which were subsequently approved by the Economic and Social Council when it adopted resolution 277 (X) concerning trade union rights (freedom of association). According to that procedure, before the Governing Body of the ILO refers to the Commission an allegation which it has received against a Member of the United Nations which is not a Member of the International Labour Organisation, such allegation should be referred to the Economic and Social Council for its consideration, and, in its resolution 277 (X), the Economic and Social Council invited the International Labour Organisation to refer, in the first instance, to the Economic and Social Council any such allegations. At its 111th session (March 1950), the Governing Body decided that it will, before referring any such allegations to the Commission, refer them to the Economic and Social Council for consideration.

"The procedure further provides that the Secretary-General of the United Nations will seek the consent of the Government concerned before any consideration of the allegation by the Economic and Social Council; if such consent is not forthcoming, the Economic and Social Council will give consideration to such refusal

with a view to taking any appropriate alternative action designed to safeguard the rights relating to freedom of association involved in the case.

"I have the honour to draw your attention to the fact that the Governing Body, as indicated in paragraph 13 (c) of the ninety-first report of the Committee on Freedom of Association, noted, when deciding to refer the matter to the Economic and Social Council, that, in accordance with the afore-mentioned resolution 277 (X), it is for the Economic and Social Council to decide what further action it proposes to take in the matter by seeking the consent of the Government of the Republic of South Africa to the case being referred to the Fact-Finding and Conciliation Commission on Freedom of Association or in any other manner.

"I enclose the English, French and Spanish texts of the ninety-first report of the Committee on Freedom of Association<sup>1</sup> and of the complaint of the World Federation of Trade Unions.<sup>2</sup> The report was adopted without discussion by the Governing Body."

2. As the allegations regarding infringement of trade union rights addressed to the International Labour Office by the World Federation of Trade Unions, referred to in the communication from the Director-General of the International Labour Office, are against a State Member of the United Nations which is not a member of the International Labour Organisation (ILO), the Secretary-General, in notes dated 27 June and 27 December 1966, respectively, requested the consent of the Government of South Africa to having these allegations referred to the Fact-Finding and Conciliation Commission on Freedom of Association of the ILO as provided in Economic and Social Council resolution 277 (X).

3. The Secretary-General has the honour to inform the Council that he has received the following reply, dated 30 January 1967, from the Acting Permanent Representative of the Republic of South Africa to the United Nations:

"The Acting Permanent Representative of the Republic of South Africa to the United Nations presents his compliments to the Secretary-General of the United Nations and, in reply to the latter's note dated 27 June 1966, has the honour to state that the South African Government declines to consent to the complaint of the World Federation of Trade Unions concerning alleged infringements of trade union rights in South Africa being referred to the Fact-Finding and Conciliation Commission on Freedom of Association of the International Labour Organisation.

"The allegations made by the World Federation of Trade Unions have been examined and it has been established that the persons mentioned in case No. 1 were sentenced on being found guilty of criminal offences, and that those cited in case No. 2 were also held provisionally in connexion with criminal proceedings. The matter is therefore totally unrelated to trade union and labour affairs. Consequently, the events cited constitute a matter essentially within the jurisdiction of the Republic of South Africa."

<sup>1</sup> See annex I.

<sup>2</sup> See annex II.

## ANNEX I

### Ninety-first report of the Committee on Freedom of Association

(From the Official Bulletin of the International Labour Office, vol. XLIX, no. 3, Supplement II)

#### INTRODUCTION

1. The Committee on Freedom of Association set up by the Governing Body at its 117th session (November 1951) met at the International Labour Office, Geneva, on 23 May 1966, under the chairmanship of Mr. Roberto Ago, former Chairman of the Governing Body.

2. In accordance with the procedure laid down in paragraph 12 of its twenty-ninth report, as amended by paragraph 5 of its forty-third report, the Committee recommends the Governing Body to examine the present report at its 165th session.

3. The Committee considered the case relating to the Republic of South Africa (case No. 472), with respect to which it submits in the present report, for the approval of the Governing Body, the conclusions which it has now reached.

#### CONCLUSIONS IN THE CASE RELATING TO THE REPUBLIC OF SOUTH AFRICA (CASE NO. 472)

*Case No. 472. Complaint presented by the World Federation of Trade Unions against the Government of the Republic of South Africa*

4. On 3 March 1966, the World Federation of Trade Unions submitted a complaint of alleged infringements of trade union rights in the Republic of South Africa, which was received by the International Labour Office on 14 March 1966.<sup>a</sup>

5. The complainants allege that, in 1961, 193 African workers employed by the Bay Transport Company went on strike in support of their occupational demands, after negotiations had broken down. As strikes by African workers are prohibited under the Native Labour (Settlement of Disputes) Act, 1953, as amended — a fact which the complainants condemn as a measure of racial discrimination — they were arrested and then fined £7 10s. each. Subsequently, negotiations were resumed, and a settlement was eventually reached. In 1965, it is alleged that ten of those workers, namely, Mr. Eric Zuma, Mr. Llewellyn Yava, Mr. Daniel Magongo, Mr. Milton Baleni, Mr. Alfred Qungani, Mr. Matthew Mpolongwana, Mr. Amos Zembetha, Mr. Richard Klaas, Mr. Arnold Nhantana, and Mr. W. Duru, were arrested on charges of having furthered the aims of the banned African National Congress — a political organization declared unlawful under the Suppression of Communism Act — and sentenced to four-and-a-half years imprisonment, all except the last-named having previously been illegally detained for more than one year.

6. It is also alleged that three officers of trade unions belonging to the South African Congress of Trade Unions, Mr. Zolly Malindi, Mr. Bernard Huna and Mr. Elyah Loza, have been held in solitary confinement since December 1965 without having been charged or brought to trial.

7. The particular incident of the imposition of fines on 193 African workers has previously been considered by the Committee when it had before it a complaint submitted by the South African Congress of Trade Unions.<sup>b</sup> At its meeting in November 1965, the Committee recalled that it had always applied the principle that allegations respecting the right to strike are not outside its competence

<sup>a</sup> With respect to allegations relating to the Republic of South Africa previously examined in substance, see the eighty-fifth report of the Committee on Freedom of Association, case Nos. 300, 311 and 321, and earlier South African cases referred to therein.

<sup>b</sup> See eighty-fifth report, case Nos. 300, 311 and 321 (Republic of South Africa).

in so far as they affect the exercise of trade union rights<sup>c</sup> and pointed out, as it already had done on numerous occasions,<sup>d</sup> that the right of workers and their organizations to strike as a legitimate means of defending their occupational interests is generally recognized. The case of the 193 workers was one more example of the application of the legal provisions prohibiting strikes by African workers which had already been considered by the Committee in case No. 102 relating to the Union of South Africa. The Committee had then observed that, while temporary restrictions were placed on the right to strike of employees covered by the Industrial Conciliation Act and a complete prohibition was placed on strikes by such employees engaged in certain essential services, section 18 (1) of the Native Labour (Settlement of Disputes) Act placed a total prohibition on strikes by African workers, irrespective of the nature of their occupation. It had expressed the view that, where the right to strike is accorded to workers and their organizations, there should be no racial discrimination with respect to those to whom it is accorded, and had recommended the Governing Body to note that in South Africa the existence of racial discrimination in respect of trade union rights is further confirmed by the fact that the nature and extent of the limitations placed on the right to strike differ widely as between employees covered by the Industrial Conciliation Act and African workers.<sup>e</sup> After examining the allegations relating to the case of the 193 workers who were fined for striking, the Committee reaffirmed this recommendation in paragraph 166 (f) (iii) of its eighty-fifth report. This recommendation was affirmed by the Governing Body at its 163rd session (November 1965) and was communicated to the Government of the Republic of South Africa by a letter dated 26 November 1965.

8. It appears from the complaint that ten of the strikers referred to above were, in 1965, sentenced for an offence against the Suppression of Communism Act. It is not clear from the complaint whether the fact of their having been on strike in 1961 was the basis for their conviction in 1965 of furthering the aims of a political organization declared unlawful pursuant to the Act. On the more general question of the consequences of the Suppression of Communism Act on the exercise of trade union rights considered by the Committee in case No. 63 relating to the then Union of South Africa, the Committee concluded:

"In so far as the South African Act of 1950 was enacted, as the Government contends, purely for a political reason, namely that of barring Communists in general, as citizens, from all public life, the Committee considers that the matter is one of internal national policy with which it is not competent to deal and on which it should therefore refrain from expressing any view. However, in view of the fact measures of a political nature may have an indirect effect on the exercise of trade union rights, the Committee wishes to draw the attention of the South African Government to the views which it has expressed in the above cases (in case No. 5 (India), fourth report, and case No. 10 (Chile), fourth report) with regard, first, to the principle that workers, without distinction whatsoever, should have the right to join organizations of their own choosing and, secondly, to the importance of due process in cases in which measures of a political nature may indirectly affect the exercise of trade union rights. Consequently, the Committee recommends the Governing Body to communicate the above conclusions to the Government of the Union of South Africa."<sup>f</sup>

<sup>c</sup> See twenty-eighth report, case No. 143 (Spain), cases Nos. 141, 153 and 154 (Chile), and case No. 169 (Turkey); forty-seventh report, case No. 143 (Spain); fifty-eighth report, case No. 221 (United Kingdom-Aden); sixty-fifth report, case No. 266 (Portugal); sixty-sixth report, case No. 294 (Spain); seventy-first report, case No. 173 (Argentina); seventy-second report, case No. 211 (Canada); seventy-eighth report, case No. 364 (Ecuador); eighty-third report, case No. 399 (Argentina).

<sup>d</sup> See fourth report, case No. 5 (India); twelfth report, case No. 60 (Japan); twenty-eighth report, case Nos. 141, 153 and 154 (Chile); thirtieth report, case No. 167 (Honduras), case No. 181 (Ecuador); case No. 143 (Spain) and case No. 172 (Argentina); fifty-eighth report, case No. 192 (Argentina); sixty-fifth report, case No. 266 (Portugal); sixty-eighth report, case No. 294 (Spain); seventy-eighth report, case No. 364 (Ecuador); eighty-third report, case No. 399 (Argentina).

<sup>e</sup> See fifteenth report, paras. 153, 154 and 185 (4).

<sup>f</sup> See twelfth report of the Committee. These conclusions were reaffirmed in case No. 102 (fifteenth report) and subsequent cases relating to South Africa.

This recommendation was approved by the Governing Body at its 124th session (March 1954) and the above conclusions were communicated to the Government of the then Union of South Africa by a letter dated 20 March 1954.

9. In the present case it is also alleged that, before their conviction, nine of the ten workers named had been held in preventive detention for over one year and that three officers of the South African Congress of Trade Unions have been detained since December 1965 without having been charged or brought to trial. The question of preventive detention is one which the Committee has been called upon to examine in a considerable number of cases, including some relating to the Republic of South Africa. In all these cases, the Committee has consistently pointed out that when trade unionists are preventively detained, these measures may involve a serious interference with the exercise of trade union rights and has emphasized the right of all detained persons to receive a fair trial at the earliest possible moment.<sup>g</sup> In cases Nos. 300, 311 and 321 relating to the Republic of South Africa, the Committee recommended the Governing Body, in paragraph 166 (b) (iii) of its eighty-fifth report, to bring these principles to the notice of the Government of the Republic of South Africa. This recommendation was approved by the Governing Body at its 163rd session (November 1965) and was communicated to the Government by a letter dated 26 November 1965.

10. The questions of principle raised by the complaint now before the Committee have thus been the subject of recommendations by the Governing Body in earlier cases, but in the present case a new question concerning the jurisdiction and competence of organs of the ILO to deal with the matter arises.

11. The present complaint was received by the International Labour Office on 14 March 1966. On 11 March 1966, the period of notice given by the Republic of South Africa of its intention to withdraw from the International Labour Organisation expired. The Republic of South Africa remained a Member of the United Nations.

12. According to the procedure for the examination of complaints of alleged infringements of trade union rights agreed upon between the United Nations and the ILO, as set forth in the letter of 19 January 1950 from the Director-General of the International Labour Office to the Secretary-General of the United Nations stating the proposed terms of reference of the Fact-Finding and Conciliation Commission on Freedom of Association, which were subsequently approved by the Economic and Social Council when it adopted resolution 277 (X) concerning trade union rights (freedom of association) on 17 February 1950, before the Governing Body of the International Labour Office refers to the Fact-Finding and Conciliation Commission an allegation which it has received against a Member of the United Nations which is not a member of the ILO, such allegation should be referred to the Economic and Social Council for its consideration.<sup>h</sup> In resolution 277 (X) approving the arrangements, the ILO was invited to refer, in the first instance, to the Economic and Social Council any allegations regarding infringements of trade union rights against a Member of the United Nations which is not a member of the ILO. If the Governing Body has before it such allegations regarding infringements of trade union rights, it will, before referring them to the Commission, refer them to the Economic and Social Council for consideration. The procedure provides that the Secretary-General of the United Nations will seek

<sup>g</sup> See fourth report, case No. 5 (India), case No. 10 (Chile), and case No. 30 (United Kingdom-Malaya); sixth report, case No. 47 (India), and case No. 49 (Pakistan); twelfth report, case No. 87 (India), case No. 63 (Union of South Africa), and case No. 16 (France-Morocco); thirteenth report, case No. 62 (Netherlands); sixteenth report, case No. 112 (Greece); seventeenth report, case No. 104 (Iran); twenty-fourth report, case No. 142 (Honduras); twenty-fifth report, case No. 136 (United Kingdom-Cyprus); twenty-seventh report, case No. 143 (Spain), and case No. 152 (United Kingdom-Northern Rhodesia); sixty-second report, case No. 251 (United Kingdom-Southern Rhodesia); sixty-sixth report, case No. 25 (United Kingdom-Southern Rhodesia); eighty-third report, case No. 303 (Ghana), and case No. 418 (Cameroon); eighty-fifth report, case No. 300, 311 and 321 (Republic of South Africa).

<sup>h</sup> See *Fourth Report of the International Labour Organisation to the United Nations*, (Geneva, ILO., 1950), pp. 324-326.

the consent of the Government concerned before any consideration of the allegation by the Economic and Social Council; if such consent is not forthcoming, the Council will give consideration to such refusal with a view to taking any appropriate alternative action designed to safeguard the rights relating to freedom of association involved in the case.<sup>1</sup>

13. In these circumstances the Committee recommends the Governing Body:

(a) To refer to the Economic and Social Council for consideration, in accordance with resolution 277 (X) of 17 February 1950, the allegations which have been received from the World Federation of Trade Unions against Government of the Republic of South Africa, which is no longer a member of the ILO, to the effect that 193 African workers were fined for striking in contravention of the provisions of the Native Labour (Settlement of Disputes) Act, 1953, as amended, which prohibits all strikes by African workers; that over four years later ten of those workers were sentenced to four-and-a-half years imprisonment for an offence punishable under the Suppression of Communism Act, 1950, as amended; that prior to such conviction nine of the ten persons concerned had been held in preventive detention for more than one year; and that three officers of the South African Congress of Trade Unions have been detained since December 1965 without having been charged or brought to trial;

(b) To inform the Economic and Social Council that in examining allegations of this kind in earlier cases relating to the Republic of South Africa, which arose while South Africa was a member of the ILO, the Governing Body has communicated to the Government of South Africa the following findings and recommendations:

- (i) Where the right to strike is accorded to workers and their organizations, there should be no racial discrimination with respect to those to whom it is accorded; the nature and extent of the limitations placed on the right to strike differ widely as between employees covered by the Industrial Conciliation Act, 1956, and African workers;
- (ii) Workers without distinction whatsoever should have the right to join organizations of their own choosing and full due process should be observed in cases in which measures of a political nature may indirectly affect the exercise of trade union rights;
- (iii) The preventive detention of trade union leaders may involve a serious interference with the exercise of trade union rights; all detained persons should receive a fair trial at the earliest possible moment;

(c) To note that, in accordance with Economic and Social Council resolution 277 (X), it is for the Economic and Social Council to decide what further action it proposes to take in the matter by seeking the consent of the Government of the Republic of South Africa to the case being referred to the Fact-Finding and Conciliation Commission on Freedom of Association or in any other manner.

<sup>1</sup> See first report of the Committee, para. 20.

## ANNEX II

### Communication dated 3 March 1966 from the World Federation of Trade Unions to the Director-General of the International Labour Office<sup>a</sup>

The World Federation of Trade Unions has the honour to draw your attention to new and serious violations of trade union rights directed in South Africa against workers and active members and leaders of trade unions and asks you to be good enough to bring this complaint before the Committee on Freedom of Association. Although they are nothing new, these measures taken against South African workers confirm the intention of the South African Government to make a dead letter of the generally accepted principles of freedom of association.

<sup>a</sup> ILO document G.B./L.S./XLIII.

## CASE No. 1

In 1960, 193 African workers started negotiations with their employers (the Bay Transport Company) with a view to:

(a) The extension to them of the benefits already granted to European and coloured workers (an annual bonus of 3 per cent of the wage);

(b) A minimum wage of £1 sterling per day.

After the breaking off of negotiations, the African workers went on strike. Strikes by "native" workers, however, are absolutely forbidden under section 18, as amended in 1955, of the Native Labour (Settlement of Disputes) Act 1953. This alone is a revolting discrimination against African workers in respect of the right to strike. The 193 workers were arrested and each of them was sentenced to a fine of £7 10s. sterling for having gone on strike.

Some weeks later the negotiations were concluded to the satisfaction of the workers, who obtained:

(a) An increase in the weekly wage, which rose from £7 13s. 2d. to £9 18s. 6d.;

(b) The bonus of 3 per cent that they were claiming.

Four-and-a-half years later, ten of the workers who had taken part in the 1961 strike, the aims of which were of a trade union character since they sought an improvement in the economic conditions of the African workers, were arrested and accused of having supported the aims of the African National Congress, a political organization forbidden under the Suppression of Communism Act.

As stated above, although these workers had already been sentenced to pay a fine, this did not prevent the South African Government from continuing the repression of African workers with the purpose of eliminating their trade union rights.

The workers arrested and sentenced to four-and-a-half years in prison are: Eric Zuma, 42 years old; Llewellyn Yava, 34 years old; Daniel Magongo, 53 years old; Milton Baleni, 37 years old; Alfred Qungani, 50 years old; Matthew Mpolongwana, 36 years old; Amos Zembetha, 27 years old; Richard Klaas, 39 years old; Arnold Nhantana, 47 years old; W. Duru, 31 years old.

With the exception of W. Duru, all the sentenced had been kept illegally in prison for over a year before conviction.

The names of the convicted workers were published by the Port Elizabeth newspaper *Evening Post*.

## CASE No. 2

We also wish to denounce violations of trade union rights in respect of three trade union leaders who have been kept in solitary confinement since December 1965 without charge or trial. They are:

Zolly Malindi: Chairman of the Garage Workers' Union and Vice-Chairman of the SACTU Local Committee of Cape Town;

Bernard Huna: member of the Executive Committee of the Garage Workers' Union and member of the SACTU Local Committee;

Elyah Loza: Chairman of the SACTU Local Committee of Cape Town. After having been kept in prison for twenty-one months and declared in 1965 innocent of the accusations brought against him, this trade union leader is at present kept under house arrest, which prevents him from carrying on his trade union activities and duties.

The allegations made by the World Federation of Trade Unions confirm the endless series of violations of trade union rights in South Africa, both in respect of workers (case No. 1) and in respect of trade union leaders (case No. 2). This policy of suppressing the democratic freedom — of which trade union freedom is an essential part — of African workers carried out by the racist Government of South Africa is intended to reduce African labour to slavery, as was confirmed by the Committee of Experts on the Application of Conventions and Recommendations of the International Labour Office in 1962, when it examined the problem of forced labour for economic and social purposes. These attacks on democratic and social freedom are becoming even more serious as a result of the revolting racial discrimination of which South African workers are the victims (*apartheid*). Accordingly, the World Federation of Trade

Unions condemn them energetically and requests the International Labour Organisation and the International Labour Office to intervene urgently with the South African Government, so that:

(a) The workers sentenced to four-and-a-half years in prison (case No. 1) shall be immediately released;

(b) An end shall be put to the preventive detention and house arrest of the African workers mentioned under case No. 2;

(c) The right to strike of African workers and their trade union organizations shall be guaranteed as a legitimate means of defending their occupational interest without any racial discrimination in respect of those who are to enjoy this right;

(d) The right to carry on trade union activities and duties shall be guaranteed without interference by the public authorities, involving either preventive detentions or restrictions on the freedom of movement of trade union leaders and active members;

(e) The democratic and trade union freedoms and rights of African workers shall be guaranteed in future against the violations and brutal repression exercised by the South African Government.

The World Federation of Trade Unions reserves the right to submit further information on these cases to the International Labour Office whenever it receives any.

(Signed) Stana DRAGOI  
Secretary of the World Federation  
of Trade Unions

### ANNEX III

#### Economic and Social Council resolution 277 (X) of 17 February 1950: trade union rights (freedom of association)

[For the text of this resolution, see Official Records of the Economic and Social Council, Tenth Session, Supplement No. 1.]

## DOCUMENT E/L.1156

### Union of Soviet Socialist Republics: draft resolution

[Original text: Russian]  
[14 May 1967]

*The Economic and Social Council,*

*Having considered* in accordance with its resolution 277 (X) of 17 February 1950 the question of the infringement of trade union rights in the Republic of South Africa, which has been brought to its attention by the International Labour Organisation on the basis of a communication received from the World Federation of Trade Unions,

1. *Fully supports* the specific accusations contained in the complaint by the World Federation of Trade Unions;

2. *Condemns* the infringement of trade union rights and the unlawful prosecution of trade union workers in the Republic of South Africa as a violation of the right to freedom of association, and as a manifestation of the criminal policy of apartheid;

3. *Decides* to transmit the facts contained in the complaint by the World Federation of Trade Unions to the Special Committee on the Policies of Apartheid of the government of the Republic of South Africa for consideration and appropriate action.

## DOCUMENT E/L.1156/REV.1

### Cameroon, Pakistan, Union of Soviet Socialist Republics and United Republic of Tanzania: revised draft resolution

[Original text: English and Russian]  
[24 May 1967]

[Text adopted by the Economic and Social Council without change, except for the second preambular paragraph and operative paragraphs 1, 2 and 3 which read as follows:]

“*Endorsing* the relevant principles affirmed by the Governing Body of the International Labour Organisation as set forth in the ninety-first report of its Committee on Freedom of Association,

“1. *Congratulates* the International Labour Organisation and the World Federation of Trade Unions for the diligence with which they communicated to the Council the allegations concerning the flagrant violations of trade union rights in the Republic of South Africa;



"2. *Supports fully* the findings and recommendations of the Governing Body of the International Labour Organisation annexed to the note of the Secretary-General (E/4305), concerning the allegations contained in the complaint submitted to it by the World Federation of Trade Unions;

"3. *Condemns* the infringement of trade union rights and the unlawful prosecution of trade union workers reflected in the legislation and practices of the Republic of South Africa as a violation of the right to freedom of association, and as a manifestation of the criminal policy of apartheid."

*For the final text of the resolution, see* Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, *resolution 1216 (XLII)*.

## DOCUMENT E/L.1156/REV.1/ADD.1

### Financial implications of Council resolution 1216 (XLII)

#### Note by the Secretary-General

[Original text: English]  
[22 June 1967]

1. At its 1473rd meeting on 1 June 1967, the Economic and Social Council adopted the above resolution which, *inter alia*, authorized the *Ad Hoc* Working Group of Experts, established by resolution 2 (XXIII) of the Commission on Human Rights, to receive communications and hear witnesses, as necessary, and to consider the comments received from the Government of the Republic of South Africa on the communication received from the Director-General of the International Labour Office in its examination of the allegations regarding infringements of trade union rights in South Africa; the resolution requested the *Ad Hoc* Working Group to report to the Economic and Social Council on its findings at the earliest possible date and to submit its recommendations for action to be taken in specific cases. Prior to its action, the Council was informed orally that the assignment of this additional task to the *Ad Hoc* Working Group would have financial implications for the Organization, the extent of which would be communicated formally to the Council subsequently, after the *Ad Hoc* Working Group had been consulted.

2. Accordingly, there are set out below the estimated additional costs of the implementation of the above-mentioned resolution, which have been prepared after consulting the *Ad Hoc* Working Group, who believe that its present task should be completed before the additional assignment is taken up.

3. The convening of the *Ad Hoc* Working Group of Experts to receive communications and hear witnesses

and to prepare its recommendations to the Council is estimated to require an additional period of four weeks. With regard to the witnesses' testimony, the Group will hear whatever witnesses are available in London and Dar es Salaam during its present field trip assignment. The only additional testimony to be heard will presumably be taken from witnesses in New York and/or Geneva. In order to provide for hearing such witnesses from Europe and Africa as may not be available at present, provision is made for the travel of two witnesses from Europe and two witnesses from Africa to appear before the *Ad Hoc* Working Group of Experts in New York.

4. In compiling the estimates, the following assumptions have been made:

(a) The Group, which consists of five members, would meet in New York for a maximum of two weeks in September-October 1967 and two weeks in the first quarter of 1968;

(b) Interpretation would be required in English, French and Spanish;

(c) Documentation in English, French and Spanish would comprise approximately 200 pages in-session and 40 pages daily of summary records, witnesses' testimony estimated at 400 pages in total tape recorded and thereafter transcribed in one language and translated into two others;

(d) The final report would comprise 100 pages (mimeographed).

5. The details of the costs involved are as follows:

(United States dollars)

## SEPTEMBER-OCTOBER 1967

A. *Travel and subsistence*Travel of members of the *Ad Hoc* Working Group of

Experts to New York (and return) . . . . .	3,500
Subsistence for two weeks session . . . . .	1,500
Fees (5 members $\times$ \$50 $\times$ 12 days) . . . . .	3,000

8,000

B. *Conference servicing costs*

Interpretation in English, French and Spanish

(6 interpreters $\times$ \$43 $\times$ 14 days) . . . . .	3,600
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Translation:

In-session documentation in English, French and Spanish (200 pages $\times$ 2 $\times$ \$10) . . . . .	4,000
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Summary records in English, French and Spanish (40 pages daily = 400 $\times$ 2 $\times$ \$10). . . . .	8,000
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Typing: 200 pages documentation and 600 pages of summary records

(200 pages in-session documentation $\times$ 3 = 600 and 400 pages summary records $\times$ 3 = 1,200 = 1,800 pages at \$2.50) . . . . .	4,500
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Verbatim testimony (400 pages in English, French and Spanish)

Translation (400 $\times$ 2 $\times$ \$10) . . . . .	8,000
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Typing (400 $\times$ 3 $\times$ \$2.50) . . . . .	3,000
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Reproduction

In-session documents, \$5,400 } . . . . .	12,400
Summary records, 7,000 }	

43,500

C. *Travel and subsistence of witnesses*

Travel:

Two from London (\$399 $\times$ 2) and Two from Dar es Salaam (\$1,045 $\times$ 2) . . . . .	2,900
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Subsistence:

(4 $\times$ \$25 $\times$ 2 days) . . . . .	200
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3,100

TOTAL

54,600

## JANUARY 1968

A. *Travel and subsistence*Travel of members of the *Ad Hoc* Working Group of

Experts to New York (and return) . . . . .	3,500
Subsistence for two weeks session . . . . .	1,500
Fees (5 members $\times$ \$50 $\times$ 12 days) . . . . .	3,000

8,000

B. *Conference servicing costs*

Interpretation in English, French and Spanish

(6 interpreters $\times$ \$43 $\times$ 14 days) . . . . .	3,600
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Translation

In-session documentation in English, French and Spanish (200 pages $\times$ 2 $\times$ \$10) . . . . .	4,000
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Summary records in English, French and Spanish (40 pages daily = 400 $\times$ 2 $\times$ \$10). . . . .	8,000
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Typing: 200 pages in-session documentation and 400 pages of summary records (200 pages  $\times$  3 = 600 and 400 pages  $\times$  3 = 1,200 = 1,800 pages at \$2.50) . . . . .

4,500

Reproduction: (including final report of 100 pages)

In-session documents, \$5,400 } . . . . .	15,500
Summary records, \$7,000 }	
Final report, \$3,100 }	

35,600

TOTAL

43,600

GRAND TOTAL (for 1967 and 1968)

98,200

6. With regard to the 1967 costs, the Secretary-General will seek the authorization, under the provisions of General Assembly resolution 2243 (XXI), of the Advisory Committee on Administrative and Budgetary Questions to incur these expenses. The requirements for 1968 will be included in the revised estimates resulting from decisions taken by the Council at its forty-second and forty-third sessions to be presented to the General Assembly at its twenty-second session.

## DOCUMENT E/L.1157

### United Republic of Tanzania : amendments to document E/L.1156

[Original text : English]  
[17 May 1967]

1. Insert a new preambular paragraph after the last preambular paragraph as follows:

“*Endorsing* the relevant principles affirmed by the Governing Body of the International Labour Organisation as set forth in the ninety-first report of its Committee on Freedom of Association.”

2. Delete paragraph 3, and insert the following in its place:

“3. *Requests* the Secretary-General to transmit a copy of the communication received from the Director-General of the International Labour Organisation regarding infringements of trade union rights in the Republic of South Africa to the Government of that Republic with a request for an urgent reply and comments thereon;

“4. *Decides* to transmit the communication received from the Director-General of the International Labour Organisation and the comments received from the Government of the Republic of South Africa thereon to the *Ad Hoc* Working Group of Experts which was established by resolution 2 (XXIII) of the Commission on Human Rights, to investigate charges of torture

and ill treatment of prisoners, detainees or persons in police custody in the Republic of South Africa ;

“5. *Authorizes* the *Ad Hoc* Working Group to receive communications and hear witnesses, as necessary, and to consider the comments received from the Government of the Republic of South Africa on the communication received from the Director-General of the International Labour Organisation in its examination of the allegations regarding infringements of trade union rights in the Republic of South Africa ;

“6. *Requests* the *Ad Hoc* Working Group to report to the Economic and Social Council at the earliest possible date on its findings and to submit its recommendations for action to be taken in specific cases ;

“7. *Requests* the Secretary-General to transmit the present resolution to the Governing Body of the International Labour Organisation ;

“8. *Suggests* to the Governing Body of the International Labour Organisation that it keep this question on its agenda for periodic review and that it inform the Council of its deliberations.”



## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

# Agenda item 15: Measures taken in implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination \*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1466th, 1470th and 1479th meetings; see also the records of the 560th and 561st meetings of the Social Committee (E/AC.7/SR.560 and 561).

## DOCUMENT E/4373

## Report of the Social Committee

[Original text: English]  
[22 May 1967]

1. The Social Committee, under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered at its 560th and 561st meetings held on 11 and 12 May 1967, item 15 of the Council's agenda: "Measures taken in implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination".

2. In connexion with its consideration of this item, the Committee had before it the following documents: report of the Secretary-General (E/4306 and Add.1-3); and chapter XVII of the report of the Commission on Human Rights at its twenty-third session (E/4322 and Corr.1), including draft resolutions I and II.

3. In the course of the discussion, some oral amendments were submitted, as indicated below.

4. The Committee's action on the draft resolutions and on some oral modifications, is described in the following paragraphs.

## DRAFT RESOLUTION I (E/4322, CHAP. XVII). MEASURES TO BE TAKEN AGAINST NAZISM AND RACIAL INTOLERANCE

5. No amendments were submitted to this draft resolution and it was unanimously adopted (see para. 9 below, draft resolution A.)

## DRAFT RESOLUTION II (E/4322, CHAP. XVII). MEASURES FOR THE SPEEDY IMPLEMENTATION OF INTERNATIONAL INSTRUMENTS AGAINST RACIAL DISCRIMINATION

6. The following three oral amendments were proposed

by the representative of the United Republic of Tanzania :

(a) To add the following text at the end of the third preambular paragraph:

"particularly in the Republic of South Africa, in the rebellious colony of Southern Rhodesia and in the United Nations Trust Territory of South West Africa."

This oral amendment, subsequently revised so as to replace the words "United Nations Trust Territory of South West Africa" by the words "the Territory of South West Africa under the direct responsibility of the United Nations", was adopted by the Committee by 21 votes to none, with 5 abstentions.

(b) To add the following words at the end of operative paragraph 4:

"especially in the Republic of South Africa, in the rebellious colony of Southern Rhodesia and in the United Nations Trust Territory of South West Africa."

This oral amendment, subsequently revised in conformity with the terminology already used (see (a) above) in respect of the Territory of South West Africa, was adopted by the Committee by 20 votes to none, with 6 abstentions.

(c) To insert the following new operative paragraph between existing operative paragraphs 5 and 6:

"Calls upon the Governments of South Africa and the rebellious colony of Southern Rhodesia to desist from their open and nefarious practices of racial discrimination and intolerance against the African

peoples of the Republic of South Africa, the United Nations Trust Territory of South West Africa and the rebellious colony of Southern Rhodesia.”

This oral amendment, subsequently revised so as to replace the expression “rebellious colony” by the words “illegal régime” and the reference to South West Africa by the wording already used, was adopted by the Committee by 22 votes to none, with 4 abstentions.

7. An oral amendment was proposed by the representative of Pakistan to replace the original operative paragraph 5 by a new one, the text of which reads:

“5. *Recommends* that the Commission on Human Rights continue to give consideration, as a matter of priority, to the measures for the speedy implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination in all countries and that it report to the General Assembly at its twenty-third session.”

This amendment, subsequently revised so as to delete the words “in all countries”, was unanimously adopted by the Committee.

8. Draft resolution II as a whole, as amended, was adopted by the Committee by a roll-call vote (requested by the representative of Pakistan), by 24 votes to none, with 2 abstentions. (See para. 9, draft resolution B.)

#### Recommendation of the Social Committee

9. The Social Committee accordingly recommends to the Economic and Social Council the adoption of the following draft resolutions:

##### A

#### MEASURES TO BE TAKEN AGAINST NAZISM AND RACIAL INTOLERANCE

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1211 (XLII).]<sup>1</sup>

##### B

#### MEASURES FOR THE SPEEDY IMPLEMENTATION OF INTERNATIONAL INSTRUMENTS AGAINST RACIAL DISCRIMINATION

*The Economic and Social Council,*

*Recommends* to the General Assembly the adoption of the following draft resolution:

“*The General Assembly,*

“*Recalling* its resolutions 1905 (XVIII) of 20 November 1963, 2017 (XX) of 1 November 1965 and 2142 (XXI) of 26 October 1966,

“*Expressing its profound concern* that many Governments continue to violate fundamental human rights and the principles of the Charter of the United Nations through policies of apartheid, segregation and other forms of racial discrimination,

“*Concerned also* that the principles of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination and the International Convention on the Elimination of All Forms of Racial Discrimination are being grossly violated in some parts of the world, particularly in the Republic of South Africa, in the rebellious colony of Southern Rhodesia and in the Territory of South West Africa under the direct responsibility of the United Nations,

“*Noting* that many States have not yet signed and ratified the International Convention on the Elimination of All Forms of Racial Discrimination,

“1. *Urges* all eligible Governments which have not yet done so to sign, ratify and implement without delay the International Convention on the Elimination of All Forms of Racial Discrimination, as well as the other conventions directed against discrimination in employment and occupation and against discrimination in education;

“2. *Requests* the Secretary-General to make available to the Commission on Human Rights at its regular sessions the information submitted by Governments of Member States on measures taken for speedy implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination;

“3. *Requests* the Secretary-General, the specialized agencies and all organizations concerned to continue measures to propagate through their appropriate channels the principles and norms set forth in the United Nations Declaration on the Elimination of All Forms of Racial Discrimination and in the International Convention on the Elimination of All Forms of Racial Discrimination;

“4. *Requests* the International Conference on Human Rights to consider the question of giving effect to the provisions of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination and the International Convention on the Elimination of All Forms of Racial Discrimination and the question concerning the implementation of the conventions directed against discrimination in employment and occupation and against discrimination in education in so far as they relate to racial discrimination, especially in the Republic of South Africa, in the rebellious colony of Southern Rhodesia and in the Territory of South West Africa under the direct responsibility of the United Nations;

“5. *Recommends* that the Commission on Human Rights continue to give consideration, as a matter of priority, to the measures for the speedy implementation of the United Nations Declaration on the Elimination of All Forms of Racial Discrimination and that it report to the General Assembly at its twenty-third session;

“6. *Calls* upon the Governments of the Republic of South Africa and the illegal régime in Southern Rhodesia to desist from their open and nefarious practices of racial discrimination and intolerance against the African and other non-white peoples in the Republic of South Africa, in the Territory of South

<sup>1</sup> Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.

West Africa under the direct responsibility of the United Nations, and in the rebellious colony of Southern Rhodesia;

"7. *Decides* to consider at its twenty-third session the question of the elimination of all forms of racial

discrimination."

[*Text adopted, as amended, by the Economic and Social Council. For the final text, see Council resolution 1244 (XLII).*]<sup>2</sup>

<sup>2</sup> *Ibid.*

## DOCUMENT E/L.1165

**United Republic of Tanzania: amendments to draft resolution B in document E/4373**

[*Original text: English*]

[5 June 1967]

1. Substitute operative paragraph 6 by the following two paragraphs:

"6. *Condemns* the Government of the Republic of South Africa and the illegal régime in Southern Rhodesia for their open and nefarious practices of racial discrimination and intolerance against the African and other non-white peoples in the Republic of South Africa, the Territory of South West Africa under the direct responsibility of the United Nations, and in the rebellious colony of Southern Rhodesia;

"7. *Calls upon* the Government of the Republic of South Africa to desist from all such nefarious practices."

2. Renumber paragraph 7.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 15 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4306 and Add.1-3	Action taken by Member States, the United Nations, the specialized agencies and regional intergovernmental organizations directed toward the implementation of the Declaration on the Elimination of All Forms of Racial Discrimination: further report of the Secretary-General	Mimeographed
E/4322 and Corr.1	Report of the Commission on Human Rights on its twenty-third session (20 February - 23 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 6 and corrigendum (E/4322 and Corr.1)</i>
E/RES/1211 (XLII)	Resolution adopted by the Council at its 1470th plenary meeting, on 29 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1211 (XLII)</i>
E/RES/1244	Resolution adopted by the Council at its 1479th plenary meeting, on 6 June 1967	<i>Idem</i> , resolution 1244 (XLII)







## ECONOMIC AND SOCIAL COUNCIL

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 16 : Question of the punishment of war criminals and of persons who have committed crimes against humanity\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session, 1478th meeting.*

## DOCUMENT E/L.1163

## Czechoslovakia : draft resolution

[Original text : English]  
[5 June 1967]

*The Economic and Social Council,*

Having considered resolution 4 (XXIII) of the Commission on Human Rights concerning the question of the punishment of war criminals and of persons who have committed crimes against humanity (E/4322 and Corr.1, para. 181),

Expressing its regret that for lack of time it was not possible for the Commission to prepare a draft convention on the non-applicability of statutory limitations to war crimes and crimes against humanity,

Recalling its resolution 1158 (XLI) of 5 August 1966, in which it decided to submit the draft convention for adoption by the General Assembly at its twenty-second session,

1. *Reiterates* its view that early adoption by the General Assembly of a convention on the non-applicability of statutory limitations to war crimes and crimes against humanity constitutes an important and urgent question;

2. *Transmits* to the General Assembly the preliminary draft convention on the non-applicability of statutory limitation to war crimes and crimes against humanity

prepared by the Secretary-General<sup>1</sup> and the report of the Working Group established by the Commission on Human Rights,<sup>2</sup> together with all the proposals submitted to the Commission<sup>3</sup> and the records of the discussions in the Commission on this item;<sup>4</sup>

3. *Recommends* that the General Assembly take the documents mentioned in paragraph 2 above into consideration in the preparation and adoption of a convention on the non-applicability of statutory limitation to war crimes and crimes against humanity;

4. *Requests* the Secretary-General to include in the provisional agenda of the twenty-second session of the General Assembly the question of the punishment of war criminals and of persons who have committed crimes against humanity, as a new and separate item.

<sup>1</sup> E/CN.4/928.

<sup>2</sup> E/CN.4/L.943.

<sup>3</sup> E/CN.4/L.917, E/CN.4/L.946-948, E/CN.4/L.957-959, E/CN.4/L.962-963

<sup>4</sup> E/CN.4/SR.919, E/CN.4/SR.921, E/CN.4/SR.931 and E/CN.4/SR.933-935.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 16 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4322 and Corr.1	Report of the Commission on Human Rights on its twenty-third session (20 February-23 March 1967)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 6</i>
E/RES/1220 (XLII)	Resolution adopted by the Council at its 1478th plenary meeting, on 6 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolution 1220 (XLII)



## ECONOMIC AND SOCIAL COUNCIL

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 17: International control of narcotic drugs\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1464th meeting; see also the records of the 556th to 558th meetings of the Social Committee (E/AC.7/SR.556-558).

## DOCUMENT E/4320

## Approval of the appointment of the Secretary of the Permanent Central Narcotics Board

## Memorandum by the Secretary-General

[Original text: English, French and Spanish]  
[22 March 1967]

1. In article 20 of the International Opium Convention of 19 February 1925, as amended by the Protocol of 11 December 1946,<sup>1</sup> it is provided that the Secretary-General shall appoint the secretary and staff of the Permanent Central Narcotics Board on the nomination of the Board and subject to the approval of the Economic and Social Council.

2. As the present Secretary of the Board, Mr. Adolf Lande, is retiring in the near future, the President of the Board addressed a letter to the Secretary-General, informing him that the Board had unanimously nominated Mr. Joseph Dittert for appointment as its new Secretary.

3. The Secretary-General now has the honour, in accordance with article 20 of the 1925 Convention, as amended, to submit the appointment of Mr. Dittert as

Secretary of the Permanent Central Narcotics Board to the Council for its approval. For the information of the Council, a brief biography on Mr. Dittert is published as an annex to the present document.

4. The Secretary-General has the honour to propose, in accordance with rule 13 of the rules of procedure of the Council, that the question of the approval of the appointment of the Secretary of the Board should be included in the provisional agenda of the forty-second session. He would suggest that it might be taken up by the Council under agenda item 17 "International control of narcotic drugs".

## ANNEX

[This document, in mimeographed form, also contained the curriculum vitae of Mr. Dittert.]

<sup>1</sup> United Nations publication, Sales No.: 47.XI.4.

## DOCUMENT E/4364

## Report of the Social Committee

[Original text : English]  
[15 May 1967]

1. The Social Committee, under the chairmanship of Mr. Maxime-Léopold Zollner (Dahomey), Vice-President of the Council, considered, at its 556th to 558th meetings, held on 8 and 9 May 1967, item 17 of the agenda: "International control of narcotic drugs". This item had been referred to the Committee by the Council at its 1460th plenary meeting, held on 8 May 1967.

2. During the discussion of this item the Committee had before it the report of the Commission on Narcotic Drugs on its twenty-first session (E/4294) and a summary of the report (E/4294/Add.1), the report of the Permanent Central Narcotics Board on the work of the Board in 1966 (E/OB/22), a summary of the report (E/4325) and a memorandum by the Secretary-General on the approval of the appointment of the Secretary of the Permanent Central Narcotics Board (E/4320).

3. The Committee's consideration of draft resolutions A, B and C submitted by the Commission on Narcotic Drugs (E/4294, chap. X), as well as the appointment of the Secretary of the Permanent Central Narcotics Board as suggested by the Secretary-General in document E/4320, are summarized below:

(a) Draft resolution A in the report of the Commission on Narcotic Drugs was amended to include also the reference to the report of the Permanent Central Narcotics Board on its work in 1966. This revised resolution was adopted unanimously by the Committee. (See para. 4 below, draft resolution I.)

(b) Draft resolution B concerned the administrative arrangements to ensure the full technical independence of the International Narcotics Control Board. Two oral amendments were offered to this resolution and to its annex, and it was adopted unanimously by the Committee. (See para. 4 below, draft resolution II.)

(c) Draft resolution C concerning LSD and simira-substances was also adopted unanimously by the Committee. (See para. 4 below, draft resolution III.)

(d) The Committee approved without objection the appointment of Mr. Joseph Dittert as Secretary of the Permanent Central Narcotics Board, as was suggested by the Secretary-General in document E/4320. (See para. 4 below, draft resolution IV.)

#### Recommendations of the Committee

4. The Social Committee therefore recommends the adoption by the Economic and Social Council of the following draft resolutions:

#### I

#### REPORT OF THE COMMISSION ON NARCOTIC DRUGS AND REPORT OF THE PERMANENT CENTRAL NARCOTICS BOARD

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1195 (XLII).]<sup>2</sup>

#### II

#### ADMINISTRATIVE ARRANGEMENTS TO ENSURE THE FULL TECHNICAL INDEPENDENCE OF THE INTERNATIONAL NARCOTICS CONTROL BOARD

[Text adopted by the Economic and Social Council without change, except for the first sentence of paragraph 20 in the annex to the draft resolution which read as follows:

"The arrangements outlined in paragraphs 1 to 19 above shall be in force from 2 March 1968 to 1 March 1974, subject to the right of the Secretary-General to propose, in agreement with the Board, at any time to the Commission on Narcotic Drugs and the Economic and Social Council, such revisions of the arrangements as might be found to be useful, to become effective even before the expiration of that period . . ."

For the final text, see Council resolution 1196 (XLII).]<sup>2</sup>

#### III

#### LSD AND SIMILAR SUBSTANCES

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1197 (XLII).]<sup>2</sup>

#### IV

#### APPROVAL OF THE APPOINTMENT OF THE SECRETARY OF THE PERMANENT CENTRAL NARCOTICS BOARD

[Text adopted by the Economic and Social Council without change. For the final text, see Council resolution 1198 (XLII).]<sup>2</sup>

<sup>2</sup> Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1.

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 17 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/4294	Report of the Commission on Narcotic Drugs on its twenty-first session (5-21 December 1966)	<i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 2</i>
E/4294/Add.1	Summary of the report of the Commission on Narcotic Drugs on its twenty-first session	Mimeographed
E/4325	Summary of the report to the Economic and Social Council on the work of the Permanent Central Narcotics Board in 1966 (E/OB/22)	Ditto
E/OB/22	<i>Permanent Central Narcotics Board: report to the Economic and Social Council on the work of the Permanent Central Narcotics Board in 1966</i>	United Nations publication, Sales No. : 66.XI.9
E/RES/1195 (XLII)-1198 (XLII)	Resolutions adopted by the Economic and Social Council at its 1464th plenary meeting, on 16 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolutions 1195 (XLII), 1196 (XLII), 1197 (XLII) and 1198 (XLII)





## ECONOMIC AND SOCIAL COUNCIL

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FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 18: Town twinning as a means of international co-operation \*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1462nd, 1464th, 1465th and 1474th meetings.

## DOCUMENT E/4309

## Note by the Secretary-General

[Original text: English and French]  
[16 March 1967]

1. The General Assembly, on 16 December 1965, adopted resolution 2058 (XX), the operative part of which reads:

*"The General Assembly,*

*"1. Considers town twinning to be one of the means of co-operation which the United Nations should encourage, both in connexion with the International Co-operation Year and on a permanent basis;*

*"2. Requests the Economic and Social Council, in collaboration with the appropriate non-governmental organizations in consultative status and taking into consideration the decisions of the United Nations Educational, Scientific and Cultural Organization on town twinning, to prepare a programme of measures through which the United Nations and the United Nations Educational, Scientific and Cultural Organization might take concrete steps to encourage further the achievement of the largest possible number of twinned towns;*

*"3. Requests the Economic and Social Council to submit to the General Assembly at its twenty-second session a report on the programmes of action that have been taken to comply with the present resolution;*

*"4. Requests the Secretary-General to take, through his offices, all suitable measures to encourage this form of co-operation."*

2. Accordingly, the Secretary-General has consulted with the Director-General of UNESCO and also with the United Towns Organization (UTO) and the International

Union of Local Authorities (IULA), the non-governmental organizations most directly concerned. Papers on this subject by UNESCO and the two organizations are appended to this note (see annexes I-III).

3. The discussions so far in United Nations bodies have indicated that Governments have not proposed that the United Nations Secretariat should engage in town twinning or that additional financial provision should be made for such an activity on its part. In the General Assembly, the question was raised whether this would be a proper function for an intergovernmental body, or whether it should not rather remain non-governmental and largely bilateral, as in the past. There is general agreement, however, that town twinning is desirable and that the Secretariat should encourage it; that within existing programmes, and at the request of Governments, it should continue and even expand its role in inter-municipal assistance.

4. The Secretary-General hopes that requests for this type of assistance will be submitted and that more offers of assistance from municipalities of developed countries will be received. He will be happy to arrange, through the usual channels, for the matching of such offers, which would make it possible for felt needs to be met and for the voluntary and spontaneous nature of this type of assistance to be maintained. In some cases, of course, consultation with the specialized agencies would be required.

5. The Secretary-General presents three statements from parts of the United Nations family which have had



experience and will continue to have responsibilities in rendering assistance to municipalities and in arranging intermunicipal assistance.

#### A. THE UNITED NATIONS PROGRAMME IN LOCAL GOVERNMENT AND RELATIONSHIPS WITH INTERNATIONAL NON-GOVERNMENTAL ORGANIZATIONS

6. The United Nations programme in local government is designed to assist Member Governments in their efforts to improve the ability of their local units of government to promote social and economic development. This programme is carried out by the Local Government Section of the Public Administration Branch, Department of Economic and Social Affairs, and comprehends international co-operation in research, exchange of information, training, technical advice, and other activities.

7. Research is carried out on a world-wide basis to synthesize experience in dealing with common problems of local government. The United Nations has completed studies entitled *Administrative Aspects of Community Development Programmes*, *Decentralization for National and Local Development*, *Public Administration Problems of New and Rapidly Growing Towns in Asia*<sup>1</sup> and, with the collaboration of IULA, a study on central services to local authorities, which has not yet been published. The United Nations recently completed a study, *Local Government Personnel Systems*,<sup>2</sup> and it has another in process on local government training. Non-governmental organizations have been involved in all of these studies.

8. Two studies are now being undertaken with the help of non-governmental organizations: one on credit institutions for local authorities with the collaboration of the International Information Centre for Local Credit, and the other on administrative aspects of urbanization with the collaboration of the Institute of Public Administration of New York. The Public Administration Branch is also co-operating with the Toronto Bureau of Municipal Research on its centennial study and training programme on metropolitan problems, and on its world-wide conference to be held in August 1967. Other studies are being planned, including those on local government structure, administration for regional development, and local government financial administration.

9. The United Nations facilitates the exchange of information among officials responsible for improvement of local government administration. It does this not only through research and publications but also through conferences, study tours, fellowships and other means which often involve the collaboration of non-governmental organizations. The United Nations has convened several interregional and, in collaboration with the regional economic commissions, regional meetings of senior officials of ministries responsible for local government. In almost all such meetings, non-governmental organizations have been invited to participate. The Seminar on Central Services to Local Authorities,<sup>3</sup>

held at New Delhi in 1963, was co-sponsored by the United Nations (Headquarters Public Administration Branch and the Economic Commission for Asia and the Far East) and the Eastern Regional Organization for Public Administration (a non-governmental organization), with the co-operation of the Indian Institute for Public Administration.

10. There are also ways in which non-governmental organizations can collaborate in the United Nations programme of technical co-operation related to local government. In recent years, over twenty United Nations technical assistance experts in local government each year have assisted Governments of developing countries by advising on local government matters and assisting in training local government staff. For example, an expert, with the help of three associate experts, is currently assisting the Government of Niger to put into effect a new system of regional and local administration which the expert helped to design. Three experts are helping operate a correspondence course for local government personnel in Uganda; one of these recently went to northern Nigeria at the request of the Government to advise on the feasibility of setting up a national correspondence course on local government. A non-governmental organization is exploring the possibility of providing substantive support for such national correspondence courses for local government staff.

11. Some non-governmental organizations in the field of local government have undertaken to inform their members, whether they be local authorities, unions of local authorities, credit institutions for local authorities, or professional associations of local government officers, of the technical assistance available to them, through their national Governments, from the United Nations. Technical assistance, especially that available through the financing of the United Nations Development Programme (UNDP), can be especially helpful in establishing and strengthening central agencies and institutions for the provision of technical and other services to local authorities.

12. With a view to facilitating technical assistance to individual local authorities, the United Nations established, upon the initiative of IULA, the United Nations Intermunicipal Technical Assistance Programme (UNITAP). IULA also made available to the United Nations part of its Ford Foundation grant (\$25,000) to finance pilot projects in intermunicipal co-operation. This Programme is designed to facilitate technical co-operation between cities in developed and developing countries with a minimum of support from the United Nations. Under this Programme, any international or regional non-governmental organization can serve as the intermediary between cities in developing countries which seek technical assistance and those in developed countries which are willing to make their offices available without charge for periods up to six months. For projects it considers sound and for which funds are available, the United Nations pays the travel and subsistence costs of the experts upon request of the national Government concerned. Three projects have been carried out under this Programme since it was instituted.

<sup>1</sup> United Nations publications, Sales Nos. : 59.II.H.2, 62.II.H.2 and 62.II.H.1, respectively.

<sup>2</sup> United Nations publication, Sales No. : 67.II.H.1.

<sup>3</sup> Document ST/TAO/M/23.

13. United Nations fellowships are granted to enable central government officials with responsibilities relating to local government and also senior local government officials to obtain training outside their country. Among these in recent years have been fellowships for training courses especially designed for such officials by IULA and the Institute of Local Government at the University of Birmingham, England. The IULA course includes both a period of instruction at the Institute of Social Studies at The Hague and a study tour to other European countries. The United Nations also arranged a local government study tour for African officials to India and Yugoslavia, the visit to the latter country with the collaboration of the Standing Conference of Towns of Yugoslavia. The report of the study tour is available.<sup>4</sup>

14. In summary, there are various ways in which international non-governmental organizations can collaborate with the United Nations in the field of local government, including arrangements for intermunicipal technical co-operation under UNITAP, provision of technical courses or study tours on local government administration and finance for which United Nations fellowships might be granted, collaboration on research projects of mutual interest on ways of improving local government in developing countries, and assistance in the provision of technical support for national programmes of local government training which receive United Nations assistance. The United Nations is keenly aware of the important contribution which non-governmental organizations have made in the past and can make in the future to the improvement of local government as well as in fostering the larger purposes of the United Nations, and therefore encourages collaborative activities of mutual interest.

#### B. ARRANGEMENTS FOR COLLABORATION BETWEEN THE UNITED NATIONS AND NON-GOVERNMENTAL ORGANIZATIONS IN THE FIELDS OF HOUSING, BUILDING AND PLANNING

15. Although there are no specific arrangements with particular international non-governmental organizations, there is a wide area of need for international co-operation and mutual assistance in the fields of housing, building and planning. In the past, collaboration has been in connexion with specific research projects rather than in technical assistance, the execution of which has invariably been through the existing programmes of technical co-operation. Even when funds were provided by non-governmental organizations or other private organizations, such funds were channelled through the technical assistance programmes, as can be seen below.

16. Over the past sixteen years, one of the main activities of the United Nations Centre for Housing, Building and Planning has been to assist Member States in dealing with some of the very acute problems of urban development which many of their cities face today. This assistance has often been related to the formulation of comprehensive plans for urban development or, in other cases, for the solution or amelioration of specific problems such as preparation of plans for the improvement of run-down areas (urban renewal), preparation of plans

for traffic and transportation, provision of housing community facilities, etc. These activities have been invariably carried out through the United Nations technical assistance programmes. In the few instances where the non-governmental organizations have participated, the implementation of such has been carried out by the United Nations through its existing arrangements. This was the case when the World Veterans Federation assisted financially the study tour on housing in Asia and when it provided funds for an expert on rural housing requested by Brazil in 1958. Another example is the joint undertaking by the Governments of Ethiopia and Sweden, the Ethiopian Swedish Institute of Building Technology. The United Nations contribution, which was agreed on in the amount of \$40,000, was made up of voluntary donation by the American Society of Friends of the Friends World Committee for Consultation, for technical assistance in housing in Africa. This was to be matched by an equal contribution from the Swedish Government and an equal counterpart fund to be put up by the Ethiopian Government, for the purpose of undertaking a pilot project on village planning and construction. As a result, a model village with 156 dwelling units is expected to evolve. Its purpose is to demonstrate good planning, low-cost housing and community facilities which can be duplicated throughout Africa.

17. The experience gained by the Centre for Housing, Building and Planning in the urban planning field points out that the experiences of sites in developing countries, helpful as they are, are of very limited application. Not only would it be difficult to establish a basis for matching cities, but it would be impossible to ensure that the experience of one city could be transferred to its twin. Although many towns might exhibit similar characteristics, features and problems, these similarities are only superficial and very little is directly transferable. Approaches and solutions which have worked effectively in one given urban environment might not be applicable or, indeed, might even be detrimental if applied indiscriminately elsewhere. Thus, the United Nations throughout the years has relied more on individual experts with a broad experience gained from working in more than one urban area.

18. Furthermore, it should be pointed out that urban planning problems for instance, cannot be considered in isolation. A city, unlike an island, is geographically, economically and socially related to and dependent on the activities of the region, if not the nation, of which it is a part. Municipal Governments, having only limited jurisdiction, can only plan within the somewhat arbitrary city boundaries which may have little to do with the realities of the existing geographic, social and economic situation. A programme on a city-to-city basis could therefore be seriously jeopardized by administrative jurisdictional limitations, which would not arise if planning were undertaken, at least initially, at a higher level, for example at the regional or national levels. Many well-intentioned municipalities have seen the objectives of their urban plans shattered by their inability to cope with forces outside their jurisdiction. Squatting, to mention one example, the gravest problem in many cities of developing countries,

<sup>4</sup> United Nations publication, Sales No.: 64.II.H.4.

originates not only from the "push" forces of the rural areas, but also from the attraction, or "pull" forces, of the city. Municipal Governments can therefore only deal with the resultant problem; they can hardly control the causes outside of their jurisdictional boundaries. This is a problem which requires policy and planning action either at the central or regional level as it involves the creation of alternative centres for the performance of economic activities, improvement of conditions in rural areas, etc.

19. This does not mean that other forms of international co-operation might not be needed. The magnitude of the problem and the shortage of resources are such that any possible means of increasing co-operation and assistance from developed countries to the developing world should be supported. The town-twinning programme could therefore provide additional pledges of assistance from city to city, but its role should be limited to promotion, leaving the execution of programmes either to bilateral arrangements or to be implemented within the existing mechanism of the United Nations family, to avoid the limitations which might be inherent in such a programme. It is the Centre's belief that any pledge of mutual co-operation and assistance in the field of town planning could be carried out within the existing arrangements of the United Nations, which has the administrative machinery to administer and the substantive departments to supervise and provide the professional guidance that would be required to avoid some of the obvious pitfalls indicated above.

#### C. THE UNITED NATIONS DEVELOPMENT PROGRAMME AND TOWN TWINNING

20. The United Nations Development Programme welcomes useful new approaches and innovations which would widen participation in and intensify the impact of the efforts of low-income countries to accelerate their economic and social advance. In this spirit, the Governing Council of the UNDP took note of resolution 2058 (XX) on town twinning adopted by the General Assembly. The Administrator of the UNDP, for his part, sees town twinning as a useful area of international co-operation, non-governmental as well as governmental.

21. The UNDP, in partnership with Governments and United Nations agencies, is prepared to consider ways and means for more actively incorporating and promoting town twinning in its programmes, especially in its work with authorities of developing countries in such fields as town planning, urban development and rehabilitation of slum areas. To a limited extent, through subcontractual arrangements in its approved projects, UNDP is fostering twinning of institutions between the developed and developing countries.

22. The Administrator of the UNDP particularly hopes that towns and cities in the advanced countries, perhaps through appropriate non-governmental organizations, may participate more rigorously in the important task of helping build institutions for mobilizing domestic savings and other local resources in the urban areas of the low-income countries as an effective tool of economic development. Towards this end, he has already consulted with

such non-governmental organizations as the International Cooperative Housing Development Association, the International Union of Building Societies and Savings Associations, and the International Savings Banks Institute.

#### ANNEX I

##### Statement by the United Towns Organization

1. No one can doubt that the United Towns Organization (UTO) is the sole organization of twinned towns whose principal goal is to make of twinning a means of international co-operation.

2. It alone has codified and organized this new kind of international relationship through giving it an ideological basis — the principles of its charter, its own methods and organization the twinning committee open to all, a goal — the setting up of a current of exchanges and friendship between all twinned towns in order to involve the masses, and youth in particular, in a united action for international education and the creation of a climate of peace and co-operation.

3. Also, it alone is so structured as to maintain contacts between twinned towns on the one hand, and between twinned towns and the organization on the other.

4. The word "monopoly" has sometimes been used in connexion with UTO. This is absurd. Is it said that the United Nations monopolizes States? UTO has a universal calling and a valid concern for unity. It is open to all towns throughout the world, regardless of the origin of the twinning, on the one condition that these towns accept and apply the principles of its charter. UTO belongs to no one person, or group of persons, but to the twinned towns themselves, each of which has a vote in the general assembly of members. Naturally, UTO has no national division or association, since on the cultural and co-operation levels, it transcends nationalisms. It represents, as President Bourguiba put it, an attempt at horizontal solidarity to complete the vertical solidarities of State to State.

5. The UTO is, as it were, for the towns what the United Nations is for States, constituting a relay between the world organizations and the people.

##### A. ACTION OF THE UNITED TOWNS ORGANIZATION

6. A text defining the action of UTO was unanimously adopted by the 14th session of the General Conference of UNESCO. This text originated in the draft resolution presented by Mali, Senegal and Tunisia and was incorporated into the UNESCO 1967-1968 work programme (see annex III). There is no reason therefore to go into further detail concerning an action, the effects of which numerous Governments had been able to measure first-hand. During his opening speech at the first African Conference of World-Wide Inter-Community Co-operation, held at Dakar in 1964 under the auspices of UTO, President Senghor, certainly an authority on co-operation, said:

"If a considerable part of the sums spent on technical aid programmes had left concrete traces in the form of town-to-town ties, we would perhaps be able to record a more positive balance."

7. Let us say briefly that:

(a) Concerning twinning, UTO brings, in addition to the contacts which it establishes for those who request them, a permanent aid to local government officials in order to make of these relations an action of high quality serving the entire population — this being the sole monopoly which the UTO claims; it ensures especially that the working classes participate in this programme; it encourages these activities by teaching to each one the experiences of everyone; it supplies all useful documents, edits special bulletins and a review which groups all of the experiments and problems of twinned towns;

(b) UTO organizes between all twinned towns, comprehensive exchanges of technical information, where the experiments suc-

cessful or not — of each are brought to the attention of all. These exchanges, which deal with all topics of interests to towns (urbanization, town-planning with its basic problems of open spaces, garbage disposal, public health and pollution, food inspection, local government and municipal services, education etc.) materialize in symposia, limited to a small number of municipal experts, preparatory to the big public conferences, called "World-Wide, Town-to-Town Conferences". In July 1965, a conference of this kind, held in Leningrad, took as its theme "Organization of Public Health". In April 1966, the conference at Monastir (Tunisia), held under the sign of town-planning in the service of man, dealt with "The Respective Roles of Local Governments and Town-Planning Experts". In 1967 and 1968 will be held successively: a symposium on local structures and autonomy, in Ljubljana (Yugoslavia); a symposium on sanitary education and hygiene, in Algiers; a symposium on town-planning linked with the preservation, renovation and utilization of historic buildings and districts, in Prague; a symposium on the training of junior staff for developing nations, in Dushambe (USSR); a conference on the audio-visual methods of modern language teaching, in Royan (France); and, the sixth World Congress of United Towns, to be held from 12 to 15 September 1967 at UNESCO Headquarters in Paris (marking the Tenth Anniversary of the Movement). The originality of these meetings lies in the fact that they group, at the same time and in the same place, specialists in different fields, local government officials and townspeople. Such was the case, for example, at the conference of Monastir, where town-planners, technicians, doctors, sociologists worked side by side with mayors and peoples' representatives. From this conference resulted a standing committee on town-planning documentation and consultation which is to be a link between people who usually know nothing of each other. One of UTO's ambitions is to create an institute of world-wide, town-to-town co-operation which would be the base and centre of all these activities concerning the exchanges of technical information.

(c) UTO has approached the topic of youth in its usual practical spirit. Twinning, especially co-operation-twinning which unites a town from an industrialized country with a town from an under-developed country, constitutes for the young people of the town — whether they are organized or not — a permanent centre of interest. Organized in the "Volunteers for Co-operation", the young people of twinned towns participate actively in the promotion of exchanges, in welcoming committees from sister-towns, drawing from these concrete tasks a new ideal. Each year, UTO unites these young people in Youth Assemblies, which offer the opportunity to exchange ideas and experiences and to mix with the young people of other lands. The most active participants will be the animators of twinings, forming the leaders of the Volunteers for Co-operation Service.

(d) Co-operation-twinning, mentioned above, deserves special attention. It has the following characteristics:

(i) A decentralization of technical aid and, consequently, a multiplication of the actions undertaken by Governments and the major world organizations. For example, in the case of the training of African junior staff, it means on-the-spot training in the town halls, hospitals, local industrial and commercial undertakings of African youth, too accustomed to wasting its time in the big-city streets outside of rare school hours;

(ii) A campaign against officialdom and for the humanization of co-operation, in the sense that the town as a whole with its officials and inhabitants is working for the development of an under-equipped town;

(iii) An action towards mutual development, for local government officials perform a service to mass education by bringing the townspeople to take an interest in the problems of under-development and by mobilizing the youth, organized or not, for a new and concrete "hunger campaign".

8. Of course, activity programmes for co-operation-twinning will not involve harnessing a river or undertaking other large-scale projects. Yet, they can supply the answer to a thousand and one problems whose solution conditions the cultural, technical and even the economic development of small and medium-sized towns, when the effectiveness of the specialists and of the development programmes drawn up by nations and large regional units has ceased.

9. What no one can accomplish, because it requires increasing by thousands the number of experts, the mayor and technicians of a European town did accomplish quite recently: they established direct and personal contact with the local government officials of an African community, they collaborated with them in drawing up an inventory of the latter's needs and a co-operation plan in terms of the possibilities of the European community.

10. The sum of these programmes constitutes the World-Wide, Town-to-Town Co-operation Plan whose principle and financing have been the subject of several documents addressed to the Economic and Social Council and to UNESCO by the President of the United Towns Organization, Mr. Doudou Thiam, Minister of Foreign Affairs of Senegal.

11. It is remarkable, to observe that most of these co-operation-twinning emerge on the social and economic levels such as:  
Le Locle (Switzerland) Kaolack (Senegal) twinning witnesses the creation of a technical school in the latter town;  
Saint-Maur-des Fossés (France) — Ziguinchor (Senegal) twinning is organizing a fruit and vegetable market in the African town;  
Avignon, Champagnole, Chaumont, Loudun and Saint-Germain-Laye (France), twinned respectively with Diourbel (Senegal), Ségou (Mali), Garoua (Cameroon), Ouagadougou (Upper Volta) and Saint-Louis (Senegal) are joining efforts for the training of African junior staff, farmers and administrators;  
Prague is helping solve Algiers' public health and hygiene problems;  
Legnano (Italy) supplied Ebolowa with equipment and a demonstrator-technician for building prefabricated houses with local materials.

12. Annex I shows some of these co-operation-twinning programmes.<sup>a</sup> These are only examples, and sometimes more intended than real, since the lack of financial means prevents the extension of these programmes. In order to finance them, the towns appeal to the generosity of the townspeople; yet this does not prevent a considerable deficit.

13. In regard to financing, it must be stated that, for several years, a basic misunderstanding, born of divergent notions, hindered our collaborating with UNESCO, though such collaboration would be well within the nature of things. In fact, certain UNESCO officials do not consider twinning as a new phenomenon, a new instrument of co-operation, but as a peripheral activity which, under penalty of being ignored, must adopt itself to the established framework of the "Programme" and respect fixed standards of State-to-State co-operation.

14. Though we do not share this opinion, we see no incompatibility between the necessities of official action and the new process based on direct participation of townspeople in international life.

## B. FINANCING

15. It is unthinkable that municipal budgets can alone bear the weight of financing twinings, especially co-operation-twinning. States can, of course, assist their respective towns, but the Governments themselves are embarrassed when facing this new formula of co-operation; in taking charge of these twinings, in regulating them, they risk compromising their flexible and spontaneous nature, characteristics which account for their present success. There is

<sup>a</sup> The annexes to this statement, are available to delegations at the office of the Council Secretariat, at United Nations Headquarters.

another solution : aid from world organizations. President Leopold Sédar Senghor, honorary president of UTO, has written in this regard :

"I do not believe it impossible to find these financial means if each country is willing to contribute to this international co-operation, a minute percentage of the sums which it spends on war materials. Why don't we consider setting up a world-wide, town-to-town co-operation fund which would serve to finance all forms and activities of co-operation, such as twinning."

#### C. WHAT DO WE REQUEST FROM THE UNITED NATIONS?

16. To help us increase by the hundreds and thousands the number of twinings described above, twinings which, experience has proved, correspond to the needs of the people and to the deepest hopes of the masses; to consider UTO as the auxiliary of the United Nations in the field of co-operation on the municipal and popular masses level; to accord it the means of extending its technical services in order to be able to assume its world responsibilities.

17. We therefore request the Economic and Social Council to make the following recommendations to the twenty-second session of the General Assembly of the United Nations :

(a) To create a world-wide, town-to-town co-operation fund to finance a permanent programme which, for 1967-1968, would call for 100 co-operation-twinings (or 3 million dollars, based on the average cost of such existing twinings), by appealing to Member States to make voluntary contributions and by drawing, to begin with, on the existing funds for technical aid and co-operation ;

(b) To entrust UTO with the carrying out of this programme, constituting the World-Wide, Town-to-Town Co-operation Plan and to assure, for this purpose, with the possible collaboration of UNESCO, an annual operational subsidy of \$300,000 ;

(c) To create, within the United Nations, a world-wide, town-to-town co-operation committee, charged on the one hand with the control of the funds managed by UTO and, on the other hand, with the exploration of the possibilities of this new type of international relationship, and especially with the study of the timeliness and the terms and conditions of carrying into effect and operating an institute of world-wide, town-to-town co-operation, as described above.

18. At this stage, we request the Economic and Social Council to :

(a) Take all useful measures permitting the financing of a first portion of co-operation-twinings by the Special Fund sector of the UNDP, it being understood that UTO will forward to the Secretary-General a certain number of programmes based on the annexes attached to this statement,<sup>b</sup> the spirit, the concept and the presentation of which we shall ask the Economic and Social Council to approve explicitly ;

(b) Recommend to the Secretary-General of the United Nations the drawing up of a contract with UTO for the implementation of this first portion, which would call for substantial financial aid to UTO itself for the accomplishment of its mission ;

(c) Approve the spirit and goals of both the United Towns Charter and of the United Towns policy statement (see appendix).

19. From all parts, the most authoritative voices have spoken up to tell of the merits of UTO's action. In conclusion, I shall quote two of them : that of President Edgar Faure, who was a member of the Executive Council of UTO before participating in the French Government :

"The 'apolitisme' of the United Towns Organization transcends partisan prejudice and antagonism to reach a higher plane of political thought and action ; it is truly the policy of the historic phase that we have now attained."

And, at the eleventh session of the Executive Council UTO, in his 1967 New Year's wishes to us Professor Giorgio La Pira stated :

"To build a 'new era of towns' : build from town to town, on all continents and between all peoples, solid bridges which unite and permit solid and fraternal exchanges — from one to the other — of all the values which define and enhance the human life.

"United Nations, united towns : peace, progress and civilization depend on the creative balance of these two great unities in which peoples' organisms harmoniously develop.

"The time has thus arrived to turn towards each other, to work together towards this concrete ideal which seems to me to be in reality a new frontier of the present and future history of the world.

"Today, this theme has become more important than ever before : unite towns to unite nations.

"May the Lord bless this fraternal action which strives to make all the towns of the world one town and one family."

20. Military expenditures throughout the world exceed 120,000,000,000 dollars a year. One per cent of this sum would make it possible to carry out 20,000 programmes like the one of the Locle-Kaolack twinning.

#### Appendix

##### THE FIVE PRINCIPLES OF THE UNITED TOWNS CHARTER

1. The "cultural twinning" is that link which binds together, in a spirit of equality and reciprocal friendship, the entire population of two or more towns in different countries, with the common aim of fostering individual contacts and exchanging ideas, local products and technical experience. Designed as an instrument of popular culture and of international co-operation at civic level, it is essentially social and educational in its intention and cannot and must not be deviated or exploited for personal party or political gain or advantage.

2. Entered into under the auspices of the municipal authorities, with the full consent and support of their townspeople, the cultural twinning must be free from all interferences which may infringe communal rights. Similarly, it may not be used as a pretext for intervening in the private affairs of any town participating in it.

3. Under the terms of this definition, cultural twinning admits of no discrimination whatsoever, either within the town itself or in its dealings with other towns :

(a) In inter-town affairs, the twinning should seek to encourage and facilitate understanding between peoples, no matter what their system of government may be. Geographical distance, divergence of background, tradition or ideology, these, far from being regarded as obstacles, should, on the contrary, only serve to make twinning more necessary and more desirable ;

(b) Within the town itself, the twinning should serve as a means of bringing together well-disposed citizens, whatever their status, backgrounds or beliefs may be. The twinning should embrace all aspects of civic life : the family, professional or economic bodies, travel, sport, artistic and intellectual pursuits.

4. In consideration of the fact that the greatest obstacle standing in the way of direct individual contact at the "man-in-the-street level" between peoples is the language barrier, the essential task of towns entering into cultural twinning is to work towards the creation of a two-language system based on the following principle : the right of every man to keep and use his native language demands of him that he should seek to acquire a second language which will enable him to communicate with his fellow-men the world over. (French or English.)

5. Solemn approval of the principles of the Charter implies that the town will, through membership of the United Towns Organization, accept part of the material and moral responsibilities of the world twinning movement.

<sup>b</sup> *Ibid.*



## ANNEX II

## Statement by the International Union of Local Authorities

1. The origins of the International Union of Local Authorities (IULA) go back to a Conference convened in Ghent in 1913. It is a federation of nearly seventy national unions of municipal authorities in nearly forty countries, in many of which there are separate unions of urban and rural communes. Its eighteenth congress, held in Bangkok, in early 1967, brought together for the first time in Asia local officials from forty-four countries, sixteen of them in Asia, four in Africa, as well as delegations from Europe and the Americas. Its seventeenth congress was held in Belgrade in 1965. IULA also admits cities to membership, especially in countries where no national union is a member. IULA's constitution does not permit it to control the actions of its members nor to engage in any "political, philosophical or religious preoccupation whatsoever" (the term "political" being understood in the sense of "party political").

2. The International Union of Social Authorities was granted consultative status B by the Economic and Social Council in August 1947, and status A in July 1966. It has consultative status with UNESCO and has maintained an educational and cultural committee. It has official relations with the World Health Organization and maintains a public health committee.

3. IULA has found many forms of useful co-operation with the United Nations, UNESCO and WHO. IULA has selected as the themes of its congresses questions on which member States seek advice from the United Nations and its specialized agencies. The working papers and reports of these congresses thus provide objective, independent professional views that supplement official reports of Governments.

4. IULA has carried on comparative studies of the structure and functions of local government around the world, commissioned by the United Nations and UNESCO, using its constituent unions as unique sources of information, as well as sending qualified observers on field missions to Asia and Africa. Some of IULA's findings have been used in United Nations documents.

5. IULA is conducting a series of nine-week training courses on decentralization for development (in English, in French, and soon in Spanish) for officials concerned with local government in Africa and Asia. The United Nations has provided fellowships for selected officials to attend each of these seminars.

6. The United Nations and IULA have co-operated in an Intermunicipal Technical Assistance Programme to facilitate direct city-to-city technical assistance. IULA has recently proposed to the Economic Commission for Africa co-operation in the institution of correspondence courses for local officials.

7. IULA has maintained permanent representation at United Nations Headquarters for seventeen years. It has sent observers to, and submitted reports at, regional conferences of the United Nations and seminars in Budapest, Moscow, and Addis Ababa as well as at Headquarters.

8. It is in the perspective of this ever-widening active co-operation between IULA and the United Nations agencies that town twinning must be considered. IULA maintains a committee on twinning, to advise and stimulate action by its constituent national unions. The committee seeks to establish national secretariats to facilitate twinning contacts and inform IULA members on twinning techniques and programmes. IULA and its national unions have sponsored over a thousand such forms of voluntary co-operation. Several of IULA's member associations co-operate in twinning not only with IULA members but with municipalities affiliated to other non-governmental organizations, such as the United Towns Organization, the Council of European Municipalities, the Union Internationale des Maires and the Foreningen Norden. It should, however, be mentioned that many, if not most, twinings are arranged directly between the cities concerned without the aid of any national or international bodies.

9. It is the considered view of IULA that twinning is best conducted as a voluntary, bilateral action. This view is based on experience and observation extending over more than twenty years. In our judgement, the objectives to be achieved by these bilateral contacts will not be furthered by action of intergovernmental organizations unless, of course, these were to decide to put considerable funds at the disposal of cities engaged in twinning activities, in order to meet the costs of travel of groups of the population (youth associations, sports organizations, orchestras, workers, etc.) between the twinned cities. This is of special importance if the distances between the cities are great as they may be in the case of a link between a city in a developed and in a developing country.

## ANNEX III

## Statement by United Nations Educational, Scientific and Cultural Organization

1. The present activities of UNESCO with respect to the twinning of towns as a means of international co-operation are governed by resolution 4.12 adopted at the fourteenth session of its General Conference, together with the corresponding work plan.

2. Resolution 4.12 authorizes the Director-General to advise Member States, at their request, on the development of national services concerned with international exchanges, including cultural co-operation, educational exchanges and intermunicipal links. The corresponding work plan provides that

"Assistance in the form of short term advisory missions and short term training courses will be provided to Member States, upon request, in developing their national services concerned with international relations and exchanges in the fields of education, science, culture and communication, including intermunicipal links. Fellowships may be offered to officials of cultural relations services, technical co-operation agencies, etc."

The budget allocated to this item for the 1967-1968 period was \$20,000 under the Participation Programme.

3. The work plan also states that "measures will be taken to develop ways in which the promotion of intermunicipal links and the twinning of towns may serve to further UNESCO's aims and programmes". To this end, the secretariat will offer advice and collaboration to the United Towns Organization in studies on the latter's plans for intermunicipal co-operation and a proposed world fund for this purpose. UTO will be eligible for assistance under the Participation Programme, in accordance with the procedures of the programme and requests made by Member States. The report of the Programme Commission also took note of draft resolution 14 C/DR.138, after amendment, which would be taken into consideration in the implementation of the work plan. The text of this draft resolution, as amended, is reproduced in full at the end of this statement (see appendix).

4. The present situation should be viewed within the broader framework of UNESCO's long-standing interest in town twinning as a means of international co-operation in its fields of competence. A chapter on the linking of towns was included in 1960, in the report by the Director General entitled: "International Relations and Exchanges in the Fields of Education, Science and Culture",<sup>a</sup> submitted to the Economic and Social Council in response to resolution 695 (XXVI). This chapter gave attention to the origin of linking, linking procedures, multi-national links, and development of linking outside Europe.

5. UNESCO has collected a considerable amount of information on the subject, and has had long-standing relationships with international non-governmental organizations with town twinning activities. Chief among these organizations are the International Union of Local Authorities and the United Towns Organization. There has also been direct co-operation with the Fédération inter-

<sup>a</sup> Document E/3352, paras. 853-860.

nationale de journalistes et écrivains de tourisme, in the preparation of a report on the subject in 1964.

6. At its thirteenth session in 1964, the General Conference adopted resolution 4.322 in which it invited Member States "to study means of organizing and financing the twinning of towns as a further means of promoting co-operation and understanding, and in this connexion, to take into account the needs of small towns and those of less developed countries". The work plan for the Secretariat stated that:

"Attention will be given to encouraging the twinning of towns through Member States and the various twinning organizations, as a means of further co-operation and understanding between nations and UNESCO's fields of interest. Particular account will be taken of the needs of small towns and those in developing countries. The principles and methods whereby twinning should be organized and financed and the role that UNESCO might play therein will be studied."

7. In 1965-1966 the General Conference and Executive Board gave attention to the question of the category of consultative status with UNESCO to which the International Union of Local Authorities and the United Towns Organization should be admitted. The position now is that the former is at present in Category B and the latter in Category A.

8. In their totality, UNESCO's activities indicate recognition of the important role of town twinning as a potentially effective means of promoting international exchanges. At the same time, it should be noted that the greater part of the activities taking place under town twinning programmes fall outside UNESCO's fields of interest (see activities proposed in document 14C/DR.138 Rev.). Thus, while UNESCO gives general encouragement to the town twinning movement, its particular concern relates to the ways in which educational, scientific and cultural programmes can be assisted by a network of intermunicipal links. As regards support for specific activities, provision has been made for assistance to projects which fall within UNESCO's fields of interest, requested through established procedures. Other matters, such as public administration, regional urban plans, public health etc., would however fall within the purview of other organizations.

### Appendix

PAIRING OF TOWNS AND INTERNATIONAL CO-OPERATION: DRAFT RESOLUTION SUBMITTED BY MALI, SENEGAL AND TUNISIA AT THE FOURTEENTH SESSION OF THE GENERAL CONFERENCE OF THE UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

*Development of inter-community co-operation throughout the world and work done in this regard by the United Towns Organization*

DRAFT RESOLUTION 14 C/DR.138 REV. NOTED IN THE REPORT OF THE PROGRAMME COMMISSION AT THE FOURTEENTH SESSION OF THE GENERAL CONFERENCE

#### *The General Conference,*

Recalling resolution 1028 (XXXVII), adopted by the Economic and Social Council of the United Nations on 13 August 1964, resolution 4.323 adopted by the General Conference of UNESCO at its thirteenth session, on 20 November 1964, resolution 2058 (XX) unanimously adopted on 16 December 1965 by the United Nations General Assembly, and advocating the pairing of towns as a means of international co-operation,

Considering that the first African Conference of World-Wide Inter-Community Co-operation, held at Dakar from 1 to 3 April 1964 emphasized the exceptional value of co-operation by pairing as a

means of handling the problem of under-equipment at local level, in so far as such pairing furthers the principles of tolerance, political neutrality, non-discrimination and non-intervention contained in the United Towns Charter which, in this respect, reflects the United Nations Charter,

Noting that meanwhile, the plan for world intermunicipal co-operation put forward by the United Towns Organization has already had practical results,

Noting that the United Towns Organization, a non-governmental organization admitted to category A status both by the United Nations and UNESCO, has a programme:

(a) To carry out the necessary preparatory work to arrange a hundred pairings for purposes of co-operation:

- (i) By interesting local authorities and informing public opinion;
- (ii) By setting up reception structures;
- (iii) By arranging exchange programmes, mainly for the benefit of towns which are worst off, especially in regard to the training of medium cadres;

(b) To ensure a regular exchange of information on the administration and the cultural, economic and social development of all the towns concerned through:

- (i) Specialized brochures;
- (ii) Symposia, particularly for municipal officials;
- (iii) Conferences of more general interest for elected members of local authorities and those in charge of various municipal departments so that each town can benefit from the experience of all the others regarding:

*Regional urban planning:* works, highways, refuse disposal, parks, land problems.

*Public Health:* dispensaries, training of public health staff, water supplies, food hygiene.

*Local administration and municipal services*

*International education of young people and popular culture:* bilingualism and new methods of learning foreign languages for the purpose of enhancing international understanding;

(c) To speed up the training of monitors for pairing — co-operation, appealing mainly to young people for voluntary services, and to create among young people of all races a new outlook based on tolerance and non-discrimination,

Authorizes the Director-General to take all necessary measures to provide world intermunicipal co-operation with an infra-structure adequate to cope with the increased development of exchanges between the towns of the world, and in particular:

(a) To undertake the necessary studies to give effect to the plan for world intermunicipal co-operation put forward by the United Towns Organization, as a basis for systematic action by UNESCO in this regard;

(b) To study ways and means in liaison with the United Nations, for setting up a world intermunicipal co-operation fund which might be financed with moneys drawn from existing funds for co-operation and technical assistance or other forms of international solidarity (voluntary public subscriptions, levies — however small by States on their military budgets), in order to develop contacts and exchanges between towns throughout the world, and particularly between towns in up-to-date countries and towns in developing countries;

Authorizes the Director-General to give assistance to the United Towns Organizations in accordance with the procedures of the Programme of Participation in activities of Member States, and at the request of Member States.



## DOCUMENT E/L.1155

## Cameroon, Dahomey and United Republic of Tanzania : draft resolution

[Original text : French]  
[15 May 1967]

*The Economic and Social Council,*

Recalling that in its resolution 2058 (XX) of 16 December 1965, the General Assembly stressed that experience in recent years had shown the great value of town twinning, practised without any discrimination, that town twinning promoted the achievement of the great ideals enshrined in the Charter of the United Nations and in the Constitution of the United Nations Educational, Scientific and Cultural Organization and that the first African Conference of World-Wide Inter-Community Co-operation, held at Dakar from 1 to 3 April 1964, had laid special emphasis on twinning co-operation, that it considered town twinning to be one of the means of co-operation which the United Nations should encourage on a permanent basis; that it requested the Economic and Social Council, in collaboration with the appropriate non-governmental organizations in consultative status, to prepare a programme of measures through which the United Nations and the United Nations Educational, Scientific and Cultural Organization might take concrete steps to encourage further the achievement of the largest possible number of twinned towns; that it requested the Council to submit to the Assembly at its twenty-second session a report on the programmes of action that had been taken to comply with that resolution; and that it requested the Secretary-General to take, through his offices, all suitable measures to encourage this form of co-operation (E/4309),

Considering that the World Federation of Twinned Towns, a non-governmental organization in consultative status operating under its charter in accordance with paragraph 2 of the above-mentioned General Assembly resolution and with the decisions of the first African

Conference of World-Wide Inter-Community Co-operation, to which reference is made in the resolution, is an ideal instrument for promoting twinning co-operation as defined above,

1. *Decides* to seek the participation of the United Nations Development Programme in twinning co-operation by inviting it to provide, in response to requests received from the Governments of countries in which the towns concerned are located, the funds required for financing twinning co-operation activities which are also in accordance with its own objectives;

2. *To this end invites* the World Federation of Twinned Towns:

(a) To request towns which have prepared plans for twinning co-operation under its auspices to forward their plans to their Governments for submission to the United Nations Development Programme with a view to obtaining the necessary financial assistance;

(b) To supervise the implementation of the plans once they have been approved;

3. *Recommends* the United Nations Development Programme to allocate to the World Federation of Twinned Towns in an appropriate form the resources required for carrying out the tasks hereby assigned to it;

4. *Proposes* that the General Assembly should consider the possibility of establishing an international inter-community co-operation fund to finance the first series of 100 twinings to be considered by the World Federation of Twinned Towns, and should appeal for voluntary contributions to this fund from States, local communities and philanthropic institutions.

## DOCUMENT E/L.1155/REV.1

Cameroon, Dahomey, Morocco and United Republic of Tanzania:  
revised draft resolution

[Original text : French]  
[22 May 1967]

[Text adopted by the Economic and Social Council without change, except for operative paragraph 1 which read as follows:

"1. *Decides* to seek the participation of such non-governmental organizations in assisting in the formulation and implementation of United Nations Development Programme projects in which town twinning or other forms of intermunicipal co-operation may play an important role."

For the final text of the resolution, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1217 (XLII).]





## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

**Agenda item 20 : Applications and reapplications of non-governmental organizations  
for consultative status \***

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1476th to 1478th meetings; see also the summary records of the Council Committee on Non-Governmental Organizations (E/C.2/SR.215-219).

## DOCUMENT E/4321

## Report of the Council Committee on Non-Governmental Organizations

[Original text : English]  
[1 May 1967]

1. The Committee on Non-Governmental Organizations met at Headquarters on 30 and 31 March and on 21 and 25 April 1967. The list of representatives attending is contained in annex I.

2. The Committee elected Per-Olof Forshell (Sweden) Chairman. At its 218th and 219th meetings Mr. J. B. Béléoken (Cameroon) acted as Chairman.

3. Twelve applications and reapplications for consultative status were considered by the Committee. In accordance with rule 82 of the rules of procedure of the Council, as amended, the Committee invited representatives of applying organizations to address the Committee and to reply to questions. The list of these organizations and their representatives is contained in annex II.

4. The Committee decided that its report should contain a list of organizations granted status by the Council, the country of the headquarters of each and the date on which it was granted status (see annex III below).

5. The Committee had before it documents E/C.2/R.33 and Corr.1 and E/C.2/R.33/Add.1 and 2 as well as the draft report containing its recommendations to the Council (E/C.2/L.27).

## APPLICATIONS AND REAPPLICATIONS FOR CONSULTATIVE STATUS

*Reapplications for category B consultative status**Women's International Democratic Federation*

6. Those in favour of the reapplication, and the representative of the organization, noted that the organization, founded in 1945, had a membership of 200 million women on all continents representing a wide variety of races and economic and political views. It had status C with UNESCO and already co-operated fully with the work of the Commission on the Status of Women, UNICEF and many specialized agencies. It circulated information about United Nations activities and held important conferences; its purposes were thoroughly consistent with those of the Charter of the United Nations. Because of the increased membership of the United Nations and its approach to universality, the views of such a large and world-wide organization would be of value to the Council. It met the standards for status established by the Council and it could express points of view now unfortunately lacking.

7. Those opposing the reapplication considered the organization to be political and not non-governmental,

since in their view it represented a narrow political spectrum and the opinions of one group of Governments. It was not, therefore, truly international.

8. The Committee decided in a roll-call vote, by 6 votes to 4, with 3 abstentions, to recommend the reapplication of the Women's International Democratic Federation to the Council for category B consultative status. The vote was as follows:

*In favour:* Czechoslovakia, India, Philippines, Sweden, Union of Soviet Socialist Republics, United Republic of Tanzania;

*Against:* Cameroon, France, United Kingdom of Great Britain and Northern Ireland, United States of America;

*Abstaining:* Morocco, Panama, Venezuela.

*International Association of Democratic Lawyers*

9. Those favouring the rejection of this reapplication stated that the organization was politically inspired and limited in membership to those of a narrow political spectrum. It had criticized the United Nations and one representative stated it had intervened in the affairs of his country. Doubts were expressed concerning its claim to having members in some countries.

10. Those favouring the reapplication of the organization, and the representative of the organization, stated that it was the largest organization of its kind in the world. It was based on the principle of universality, with affiliated associations in forty-four countries and individual members in most others. It was objective and widely representative, for its members were drawn from all parts of the world and from countries with different political and economic systems. It would thus be in a better position to aid the Council than some non-governmental organizations already enjoying consultative status which were geographically limited in scope and politically biased in favour of the western countries. It was of the utmost importance that the Council should be able to consult organizations in which all points of view were represented, particularly in legal matters. The organization endorsed the principles of the Charter of the United Nations and any criticisms it had made of United Nations decisions were made in a constructive spirit. This attitude would continue.

11. The Committee decided by 6 votes to 5, with 2 abstentions, to recommend the rejection of the reapplication of the International Association of Democratic Lawyers.

*Application for reclassification to category A consultative status*

*International Council for Building Research, Studies and Documentation*

12. Those favouring this reclassification, and the representative of the organization, noted that it had been formed to assist the Committee on Housing, Building and Planning of the Economic Commission for Europe. Since housing is both a tremendous industry affecting all phases of social and economic development, and an acute problem in much of the world, the organization should, like others in category A status, have direct access to the Council and its committees.

13. Those opposing the reclassification stated that the organization had made a valuable contribution in category B consultative status and could continue to do so. However, its concerns were too narrow to meet the requirements for category A status established by the Council.

14. The Committee decided by 5 votes to 4, with 4 abstentions, to recommend to the Council the reclassification of the International Council for Building Research, Studies and Documentation to category A consultative status.

*New applications for category B consultative status*  
*Inter-American Federation of Public Relations Associations*

15. Those favouring this application, and the representatives of the organization, stated that the organization was independent, non-political and concerned with the betterment of communications. Its budget was small, the national affiliates paying their own expenses and the host affiliates paying for the cost of conferences.

16. Questions were raised concerning the relationship of the organization to the Alliance for Progress and the Organization of American States. One delegation expressed surprise that Cuba was represented in the organization by a federation of refugees who were traitors to their country.

17. The Committee decided by 10 votes to 2, with one abstention, to recommend this application.

*International Christian Union of Business Executives*

18. The Committee decided without vote and without discussion to recommend deferment of consideration of this application for one year.

*International Organization of Supreme Audit Institutions*

19. The Committee decided without discussion and by 10 votes to none, with one abstention, to recommend this application.

*World Muslim Congress*

20. The representative of the organization stated that this was the first and only application for consultative status made by it and that it had no connexion with a Cairo organization with a similar name. It was against genocide, apartheid and racial and religious discrimination. This was the view of all true Muslims, which the organization wanted to unite. In reply to a question, the Secretary of the Committee said that no other organization with the word "Muslim" in its title had been granted consultative status.

21. Those opposing this application questioned the non-political and non-governmental character of it. Note was taken of its failure to be representative of many groups of Muslims in various regions of the world.

22. The Committee decided by 4 votes to 1, with 8 abstentions, to recommend this application.

*World Peace Through Law Centre*

23. Those supporting this application, and the representative of the organization, stated that the Centre

followed United Nations' activities with close interest and distributed much information to its members, which included many prominent in the legal profession. It had a wide membership; except for an original foundation grant it was self-supporting and hoped that, if granted consultative status, it would make a substantial contribution to the Council's work. At its last assembly there were members from 126 nations.

24. Those opposing the application noted that the organization had members in South Africa and Southern Rhodesia and that it supported the jurisdiction of the International Court of Justice which had recently made an intolerable decision in the question of South West Africa. Its object was the promotion of the acceptance of western law throughout the world.

25. The Committee decided by 5 votes to 2, with 6 abstentions, to recommend this application.

*Mutual Assistance of the Latin American Government Oil Companies*

26. Those supporting this application assured the Committee that the organization was non-governmental in that no intergovernmental agreement had been entered into. Some of the member companies had originally had governmental support but were all now independent. The objectives of the organization, the economic integration of Latin America and the protection of the exports of the developing countries, were desirable and among the objectives of the Council.

27. The Committee decided by 10 votes to none, with 2 abstentions, to recommend this application.

*Applications for the Register  
International Police Association*

28. Those supporting this application, and the representative of the organization, stated that it consisted of over 50,000 rank-and-file policemen and was growing in numbers and geographically each year. It was concerned with professional improvement and the exchange of methods. Its publications and the visits it arranged led to the professional development of its membership.

29. Those opposing the application noted that the organization had an affiliate in Southern Rhodesia where the police force was responsible for the implementation of racist policies and that its chief concern was the leisure-time activities of its members.

30. The Committee decided by 8 votes to 2, with 2 abstentions, to recommend this application.

*International Confederation of Associations of Experts and Consultants*

31. Those favouring this application, and the representative of the organization, stated that it consisted of associations of professional experts, consultants and arbitrators and that, therefore, it was entirely professional and non-political. Public recognition of its status was of considerable importance in economic and commercial development. It was drawing up a code of professional ethics for judicial experts.

32. Those opposing the application felt that the organization was young, was limited geographically and that its work was remote from that of the Council.

33. Although the organization had applied for category B consultative status, the Committee decided by 9 votes to 3, with 1 abstention, to recommend that this organization be placed on the Register.

*Application for reclassification from Register to category B status*

*Soroptimist International Association*

34. Those favouring this application, and the representative of the organization, stated that the organization consisted of women professionals and executives and it had a good record of co-operation with the Council, the Commission on the Status of Women, UNICEF, UNESCO and the ILO. It co-operated with the Office of the United Nations High Commissioner for Refugees and it established scholarships to assist young women from many countries. It planned to increase its programme of international assistance on the non-political level.

35. Those opposing the application noted that the organization had an affiliate in South Africa and Southern Rhodesia, countries which manifestly practised apartheid and racial discrimination. They asserted that those affiliates were segregationist in nature and that this element of their character was known to the organization itself. One delegation observed that although one of the basic aims of the organization was said to be to assist refugees, it appeared to be assisting only former collaborators of Hitler rather than the victims of apartheid. The organization had a limited geographical distribution and might well remain on the Register. Those delegations felt that the organization was intended mainly to promote the interests of women of the western world and that it was not sufficiently universal in its activities or personality.

36. The Committee decided by 6 votes to 5, with 2 abstentions, to recommend this application for reclassification.

*General observations*

37. It was pointed out by some delegations that a number of non-governmental organizations receive financial support from the Central Intelligence Agency of the United States of America, which is incompatible with their consultative status with the Council.

38. A number of other delegations pointed out that discussion of non-governmental organizations already enjoying consultative status with the Council was not relevant to the agenda of the Committee and was therefore out of order.

39. There had been a strong feeling among some delegations in the Committee that the criteria laid down by the Council in its resolution 288 B (X) for the granting or rejection of status to applicant organizations, are somewhat outmoded and do not meet contemporary conditions in the international community. Equally it had been felt that a clear enough distinction between the criteria for admission to categories A and B was not made in the resolution. These delegations recommended, therefore,

that the Council reconsider this matter on an urgent basis at its forthcoming session in order to arrange that clear directives be given to the Committee.

40. The following draft resolution, embodying the above recommendations of the Committee is submitted to the Council for its consideration :

*"The Economic and Social Council,*

*"Having considered the report of its Committee on Non-Governmental Organizations (E/4321),*

*"1. Decides to defer for one year consideration of the request of the International Christian Union of Business Executives for category B consultative status ;*

*"2. Decides to grant the request of the International Council for Building Research, Studies and Documentation for reclassification from category B to category A consultative status ;*

*"3. Decides to grant the request of the Soroptimist International Association for reclassification to category B consultative status ;*

*"4. Decides to grant the request for category B consultative status of the following organizations:*  
Inter-American Federation of Public Relations Associations;  
International Organization of Supreme Audit Institutions;  
Mutual Assistance of the Latin American Government Oil Companies;  
World Muslim Congress;  
World Peace Through Law Centre;

*"5. Decides to place the following organizations on the Register of the Secretary-General:*  
International Confederation of Associations of Experts and Consultants;  
International Police Association;

*"6. Decides to grant the reapplication of the Women's International Democratic Federation for category B consultative status;*

*"7. Decides not to grant the reapplication of the International Association of Democratic Lawyers for category B consultative status."*<sup>1</sup>

41. Some delegations stated that they reserved their right to raise at the next session of the Economic and Social Council the question of the reconsideration of the recommendation of the Committee in respect of the reapplication of the International Association of Democratic Lawyers for category B consultative status.

<sup>1</sup> For the final text of the resolution, as amended by the Council at its 1476th meeting, see resolution 1219 (XLII).

## Annexes

### ANNEX I

#### List of representatives on the Committee

#### CAMEROON

Mr. J. B. Béléoken  
Mr. E. B. Chamfor

#### CZECHOSLOVAKIA

Mr. Luděk Handl

#### FRANCE

Mr. Jean-Dominique Paolini  
Mr. J. N. Bouillane de Lacoste

#### INDIA

Mr. A. S. Gonsalves  
Mr. L. N. Piparsania  
Mr. N. N. Jha

#### MOROCCO

Mr. Mohamed Tabiti

#### PANAMA

Mr. Manuel Varela, Jr.

#### PHILIPPINES

Mr. Antonio J. Uy

#### SWEDEN

Mr. Per-Olof Forshell (Chairman)  
Mr. Mats Bergquist

#### UNION OF SOVIET SOCIALIST REPUBLICS

Mr. E. N. Nasinovsky  
Mr. L. I. Verenikin

#### UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Mr. P. J. S. Moon

#### UNITED REPUBLIC OF TANZANIA

Mr. Waldo E. Waldron-Ramsey

#### UNITED STATES OF AMERICA

Mrs. Kirsten Campbell Paulos

#### VENEZUELA

Mr. Germán Nava Carrillo  
Miss María Clemencia López

### ANNEX II

#### Representatives of non-governmental organizations

#### INTER-AMERICAN FEDERATION OF PUBLIC RELATIONS ASSOCIATIONS

Mr. Arthur Reef  
Mr. Arthur Jesurum

#### INTERNATIONAL ASSOCIATION OF DEMOCRATIC LAWYERS

Mr. Max Dean

#### INTERNATIONAL CONFEDERATION OF ASSOCIATIONS OF EXPERTS AND CONSULTANTS

Mrs. Juliette Gérin

#### INTERNATIONAL COUNCIL FOR BUILDING RESEARCH, STUDIES AND DOCUMENTATION

Mr. R. F. Leggett

#### INTERNATIONAL POLICE ASSOCIATION

Mr. P. J. Matthews

#### SOROPTIMIST INTERNATIONAL ASSOCIATION

Mrs. Dora S. Lewis

#### WOMEN'S INTERNATIONAL DEMOCRATIC FEDERATION

Mrs. Helen Weir

#### WORLD MUSLIM CONGRESS

Mr. Omar Azouni

#### WORLD PEACE THROUGH LAW CENTRE

Miss Miriam Rooney

## ANNEX III

## List of organizations granted consultative status by the Council, the date granted and country of headquarters

Category A . . . . .	12
Category B . . . . .	135
Register . . . . .	43
TOTAL	190

## CATEGORY A

1946 International Chamber of Commerce (France)  
 1950 International Confederation of Free Trade Unions (Belgium)  
 1946 International Co-operative Alliance (United Kingdom)  
 1947 International Federation of Agricultural Producers (France)  
 1947 International Federation of Christian Trade Unions (Belgium)  
 1947 International Organization of Employers (Switzerland)  
 1947 International Union of Local Authorities (Netherlands)  
 1947 Inter-Parliamentary Union (Switzerland)  
 1963 United Towns Organization (France)  
 1946 World Federation of Trade Unions (Czechoslovakia)  
 1947 World Federation of United Nations Associations (Switzerland)  
 1955 World Veterans Federation (France)

## CATEGORY B

1962 Afro-Asian Organization for Economic Co-operation (United Arab Republic)  
 1948 Agudas Israel World Organization (Israel, United Kingdom, United States of America)  
 1964 All African Women's Conference (Mali)  
 1947 All India Women's Conference (India)  
 1951 All Pakistan Women's Association (Pakistan)  
 1964 American-Hispanic-Portuguese International Law Institute (Spain)  
 1964 Amnesty International (United Kingdom)  
 1950 Anti-Slavery Society (United Kingdom)  
 1950 Associated Country Women of the World (United Kingdom)  
 1960 Association for the Study of the World Refugee Problem (Liechtenstein)  
 1963 Battelle Memorial Institute (United States)  
 1954 CARE (Cooperative for American Relief to Everywhere, Inc.) (United States of America)  
 1947 Carnegie Endowment for International Peace (United States of America)  
 1947 Catholic International Union for Social Service (Belgium)  
 1962 Centre for Latin American Monetary Studies (Mexico)  
 1954 Chamber of Commerce of the United States (United States of America)  
 1950 Christian Democratic World Union (Italy)  
 1947 Commission of the Churches on International Affairs (Switzerland)  
 1966 Community Development Foundation, Inc. (United States of America)  
 1947 Consultative Council of Jewish Organizations (United States of America)  
 1947 Coordinating Board of Jewish Organizations (United States of America)  
 1961 Credit Union National Association, Inc. (CUNA) (United States of America)  
 1966 Eastern Regional Organization for Public Administration (Philippines)  
 1960 European Alliance of Press Agencies (Belgium)  
 1966 European Insurance Committee (France)  
 1966 Federation of Commonwealth Chambers of Commerce (United Kingdom)  
 1948 Friends World Committee for Consultation (Switzerland)  
 1947 Howard League for Penal Reform (United Kingdom)  
 1949 Indian Council of World Affairs (India)  
 1963 Industrial Co-ordination Bureau (Sweden)

1947 Inter-American Council of Commerce and Production (Uruguay)  
 1951 Inter-American Federation of Automobile Clubs (Argentina)  
 1959 Inter-American Planning Society (Puerto Rico)  
 1953 Inter-American Press Association (United States of America)  
 1952 Inter-American Statistical Institute (United States of America)  
 1947 International Abolitionist Federation (Switzerland)  
 1947 International Air Transport Association (Canada)  
 1947 International Alliance of Women — Equal Rights, Equal Responsibilities (United States of America)  
 1959 International Association for Social Progress (Belgium)  
 1960 International Association for the Protection of Industrial Property (Switzerland)  
 1948 International Association of Penal Law (France)  
 1966 International Association of Ports and Harbours (Japan)  
 1947 International Association of Schools of Social Work (United States of America)  
 1952 International Association of Youth Magistrates (Belgium)  
 1964 International Astronautical Federation (France)  
 1947 International Automobile Federation (France)  
 1947 International Bar Association (United States of America)  
 1954 International Bureau for the Suppression of Traffic in Persons (United Kingdom)  
 1952 International Catholic Child Bureau (Italy)  
 1952 International Catholic Migration Commission (Switzerland)  
 1951 International Catholic Press Union (France)  
 1952 International Commission Against Concentration Camp Practices (Belgium)  
 1957 International Commission of Jurists (Switzerland)  
 1954 International Commission on Irrigation and Drainage (India)  
 1947 International Committee of the Red Cross (Switzerland)  
 1951 International Conference of Catholic Charities (Italy)  
 1947 International Conference of Social Work (United States of America)  
 1954 International Council for Building Research, Studies and Documentation (Netherlands)  
 1949 International Council for Scientific Management (Switzerland)  
 1964 International Council of Jewish Women (United States of America)  
 1947 International Council of Women (France)  
 1956 International Council on Jewish Social and Welfare Services (Switzerland)  
 1946 International Criminal Police Organization — INTERPOL (France)  
 1947 International Federation for Housing and Planning (Netherlands)  
 1952 International Federation for the Rights of Man (France)  
 1947 International Federation of Business and Professional Women (Canada)  
 1964 International Federation of Disabled Workmen and Civilian Handicapped (Italy)  
 1953 International Federation of Journalists (Belgium)  
 1950 International Federation of Newspaper Publishers (France)  
 1952 International Federation of Settlements and Neighbourhood Centres (United Kingdom)  
 1959 International Federation of Social Workers (United States of America)  
 1947 International Federation of University Women (United Kingdom)  
 1961 International Federation of Women in Legal Careers (France)  
 1952 International Federation of Women Lawyers (Australia)  
 1964 International Information Centre for Local Credit (Netherlands)  
 1947 International Institute of Administrative Sciences (Belgium)  
 1949 International Institute of Public Finance (Federal Republic of Germany)  
 1947 International Law Association (United Kingdom)  
 1947 International League for the Rights of Man (United States of America)



- 1953 International Movement for Fraternal Union Among Races and Peoples (France)
- 1947 International Organization for Standardization (Switzerland)
- 1964 International Prisoners' Aid Association (United States of America)
- 1963 International Recreation Association (United States of America)
- 1951 International Road Federation (United States of America)
- 1949 International Road Transport Union (Switzerland)
- 1947 International Social Service (Switzerland)
- 1949 International Society for Criminology (France)
- 1950 International Society for Rehabilitation of the Disabled (United States of America)
- 1953 International Society of Social Defense (France)
- 1947 International Statistical Institute (Netherlands)
- 1947 International Touring Alliance (Switzerland)
- 1947 International Union for Child Welfare (Switzerland)
- 1951 International Union for Conservation of Nature and Natural Resources (Switzerland)
- 1952 International Union for Inland Navigation (France)
- 1950 International Union for the Scientific Study of Population (Belgium)
- 1949 International Union of Architects (France)
- 1966 International Union of Building Societies and Savings Associations (United States of America)
- 1948 International Union of Family Organizations (France)
- 1951 International Union of Marine Insurance (Switzerland)
- 1948 International Union of Official Travel Organizations (Switzerland)
- 1947 International Union of Producers and Distributors of Electrical Energy (France)
- 1956 International Union of Public Transport (Belgium)
- 1952 International Union of Railways (France)
- 1951 International Union of Socialist Youth (Austria)
- 1951 International Young Christian Workers (Belgium)
- 1954 Junior Chamber International (United States of America)
- 1964 Latin American Iron and Steel Institute (Chile)
- 1954 League of Red Cross Societies (Switzerland)
- 1947 Lions International — The International Association of Lions Clubs (United States of America)
- 1947 National Association of Manufacturers (United States of America)
- 1953 Pan-Pacific and South-East Asia Women's Association (Australia)
- 1949 Pax Romana (Switzerland)
- International Catholic Movement for Intellectual and Cultural Affairs
- International Movement of Catholic Students
- 1952 Research Group for Social and Visual Relationships (CIAM) (Netherlands)
- 1947 Rotary International (United States of America)
- 1947 Salvation Army (United Kingdom)
- 1950 Society of Comparative Legislation (France)
- 1955 Studies and Expansion Society — International Scientific Association (Belgium)
- 1961 Union of International Fairs (France)
- 1948 Women's International League for Peace and Freedom (Switzerland)
- 1959 Women's International Zionist Organization (Israel)
- 1947 World Alliance of Young Men's Christian Associations (Switzerland)
- 1950 World Assembly of Youth (Belgium)
- 1948 World Confederation of Organizations of the Teaching Profession (United States of America)
- 1952 World Council for the Welfare of the Blind (France)
- 1963 World Federation for Mental Health (Switzerland)
- 1953 World Federation of Catholic Young Women and Girls (Belgium)
- 1956 World Federation of the Deaf (Italy)
- 1947 World Jewish Congress (Switzerland)
- 1949 World Movement of Mothers (France)
- 1947 World Power Conference (United Kingdom)
- 1949 World Union for Progressive Judaism (United States of America)
- 1947 World Union of Catholic Women's Organizations (France)
- 1962 World Union of Organizations for the Safeguard of Youth (France)
- 1947 World Young Women's Christian Association (Switzerland)
- 1947 World Woman's Christian Temperance Union (United Kingdom)

## REGISTER

- 1957 American Foreign Insurance Association (United States of America)
- 1947 Boy Scouts World Bureau (Canada)
- 1957 Comité d'études économiques de l'industrie du gaz (Belgium)
- 1963 Commission on Migration of the International Council of Voluntary Agencies (Switzerland)
- 1963 Commission on Refugees of the International Council of Voluntary Agencies (Switzerland)
- 1951 Committee for Economic Development (United States of America)
- 1952 Confédération internationale du crédit populaire (France)
- 1947 Econometric Society (United States of America)
- 1950 Engineers Joint Council (United States of America)
- 1963 European Confederation of Woodworking Industries (France)
- 1955 European Union of Coachbuilders (France)
- 1954 Fédération internationale libre des déportés et internés de la Résistance (France)
- 1953 Federation of International Furniture Removers (Belgium)
- 1951 Hansard Society for Parliamentary Government (United Kingdom)
- 1951 Inter-American Association of Broadcasters (Venezuela)
- 1966 International Association for the Promotion and Protection of Private Foreign Investments (Switzerland)
- 1953 International Centre for Wholesale Trade (Belgium)
- 1953 International Confederation of Professional and Intellectual Workers (France)
- 1955 International Container Bureau (France)
- 1950 International Council of Commerce Employers (Switzerland)
- 1956 International Council of Social Democratic Women (United Kingdom)
- 1964 International Council on Alcohol and Alcoholism (Switzerland)
- 1952 International Federation for Documentation (Netherlands)
- 1957 International Federation of Cotton and Allied Textile Industries (Switzerland)
- 1951 International Federation of Free Journalists (United States of America)
- 1954 International Federation of Olive Growers (Spain)
- 1952 International Federation of Senior Police Officers (France)
- 1963 International Fiscal Association (Netherlands)
- 1950 International Music Council (France)
- 1963 International Organization of Consumers Unions (Netherlands)
- 1956 International Permanent Bureau of Automobile Manufacturers (France)
- 1964 International Planned Parenthood Federation (United Kingdom)
- 1964 International Public Relations Association (Greece)
- 1955 International Savings Banks Institute (Switzerland)
- 1954 International Shipping Federation Ltd., (United Kingdom)
- 1953 International World Calendar Association (Canada)
- 1951 Open Door International (for the Economic Emancipation of the Woman Worker) (Belgium)
- 1954 Permanent International Association of Navigation Congresses (Belgium)

1963 Prévention routière internationale (France)  
 1947 World Association of Girl Guides and Girl Scouts (United Kingdom)

1947 World Federation of Democratic Youth (Hungary)  
 1947 World University Service (Switzerland)  
 1963 Zonta International (United States of America)

## DOCUMENT E/L.1159

### United Republic of Tanzania : draft resolution

[Original text: English]  
 [29 May 1967]

#### *The Economic and Social Council,*

Considering that the criteria laid down in its resolution 288 B (X) of 27 February 1950 for the admission of non-governmental organizations to consultative status with the Economic and Social Council do not tend to conform to the realities of contemporary experience in the international community,

Considering further that the criteria in resolution 288 B (X) do not make sufficient distinction between the requirements for admission to the various categories, especially categories A and B,

Noting that recent disclosures have indicated that certain non-governmental organizations currently in status with the Council, have received funds from the intelligence agencies of certain States,

1. *Decides* to establish a special committee of fifteen Member States to be appointed by the President of the Council composed on the basis of equitable geographical representation, to examine the whole question of the criteria to be used for consultative status of non-governmental organizations, in particular:

(a) The precise requirements for each category with a view to distinguishing the importance between categories A and all other categories;

(b) A review of the nature and activities of each non-governmental organization in each category granted

consultative status by the Council with a view to recommending reclassification where advisable;

(c) To request non-governmental organizations in consultative status to submit memoranda on their current activities and their sources of financing those activities;

(d) Examination of the possibilities of non-governmental organizations making some financial contribution to United Nations activities having regard to the facilities and privileges which they currently enjoy without any reciprocal financial contribution on their part;

(e) To review, in particular, all those non-governmental organizations which have been mentioned in recent disclosures as having received financial assistance directly or indirectly from the intelligence agencies of certain States; and to recommend what action should be taken by the Council to preserve the non-governmental character of all non-governmental bodies associated with it;

(f) Consideration of the possibilities of suspending the operations of some or all non-governmental organizations for a specified time until the Council can properly determine a rational and equitable basis upon which non-governmental organizations may be admitted to consultative status.

2. *Requests* the Committee on Non-Governmental Organizations to report to the Council not later than at its forty-fourth session.

## DOCUMENT E/L.1159/REV.1

### United Republic of Tanzania: revised draft resolution

[Original text: English]  
 [2 June 1967]

[For the preamble and operative paragraph 1 (a), (b), (c), (d), and (e) of the draft resolution, see E/L.1159 above.]

(f) Consideration of the possibilities of suspending the consultative status with the Council of some or all non-governmental organizations for a specified time until the Council can properly determine a rational and equitable basis upon which non-governmental organizations may be admitted to consultative status;

2. *Requests* the Secretary-General to report to the General Assembly and to the Economic and Social Council on:

(a) The history of association of national and international non-governmental organizations associated with the Office of Public Information;

(b) The possibilities of increasing the number of national non-governmental organizations from all States Members of the United Nations associated with the Office of Public Information, in order to increase their informational activities concerning economic and social affairs;

3. *Invites* the General Assembly to keep under review the activities and nature of all non-governmental organizations associated with the United Nations, and to transmit to the Council for its information and assistance the results of any such review;

4. *Requests* the Committee on Non-Governmental Organizations to report to the Council not later than at its forty-fourth session.

### DOCUMENT E/L.1159/REV.2

**India, Kuwait, Libya, Sweden, United Republic of Tanzania and United States of America: revised draft resolution**

[Original text: English]  
[5 June 1967]

[Text adopted as amended by the Council to include a new third preambular paragraph reading as follows:

“Recognizing the necessity of assuring the widest possible representation of non-governmental organizations of different views and ideas on matters of interest to the Council and in conformity with the spirit, purposes and principles of the Charter,”.

*For the final text of the resolution, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1225 (XLII).]*

### CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 20 which are not reproduced in the present fascicle.

<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/C.2/L.27	Draft report of the Council Committee on Non-Governmental Organizations	Mimeographed
E/C.2/R.33 and Corr.1 and Add.1 and 2	Memorandum by the Secretary-General	Ditto
E/RES/1219 (XLII)	Resolution adopted by the Council at its 1476th plenary meeting, on 5 June 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1219 (XLII)</i>
E/RES/1225 (XLII)	Resolution adopted by the Council at its 1478th plenary meeting, on 6 June 1967	<i>Idem</i> , resolution 1225 (XLII)



## ECONOMIC AND SOCIAL COUNCIL

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## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 21 : Review and reappraisal of the Council's role and functions\*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1471st meeting. See also "Other decisions taken by the Council during the Forty-second Session", *ibid.* Supplement No. 1.

## DOCUMENT E/4313

Amendments to the rules of procedure of the Council<sup>1</sup>

## Note by the Secretary-General

[Original text : English]  
[20 March 1967]

1. The Economic and Social Council, in its resolution 1156 (XLI), part III, decided "to consider at a forthcoming session, taking into account suggestions to be submitted by the Secretary-General, what amendment to its rules of procedure may be necessary as a result of, in particular, the enlargement of its membership and changes in its pattern of meetings".

2. Previously, at its thirty-seventh session, the Council had decided (1351st meeting) to make a number of changes in its pattern of meetings and had asked the Secretary-General to bring to its attention at the resumed thirty-seventh session any amendments which appeared to be required in the rules of procedures as a result of the changes made.

3. As requested, the Secretary-General suggested<sup>2</sup> a number of consequential amendments relating to rules 2, 9 and 82. The Council, however, at its resumed thirty-seventh session (1352nd meeting) postponed further consideration of the matter, in view of the review and reappraisal of its role and functions which it had been decided to undertake. Since then, the Council has made a number of additional changes in its pattern of meetings and has also amended several of its rules of procedure,

including rule 82. The suggestions previously made by the Secretary-General are therefore no longer appropriate and are superseded by those made hereunder.

4. In the opinion of the Secretary-General, amendments — most of which are consequential upon decisions of the Council — could appropriately be made to rules 2, 4, 19, 23, 26 and 27. The attached table sets out in parallel columns the existing text and the proposed text of those rules. The amendments have been suggested for the reasons given below.

## Rule 2

The amendments are taken from part I of resolution 1156 (XLI) of the Economic and Social Council. In placing the words "if necessary" in square brackets, the Secretary-General wishes to draw the attention of the Council to a discrepancy between the proposed rule 2 and the existing rule 9. The latter rule provides for the formulation, each year at the Council's resumed session, of the basic programme of activities for the following year. Since this rule still governs the plan of work, the Council may wish to consider the elimination of the apparent inconsistency between the proposed rule 2 and rule 9 by dropping the words "if necessary" from the proposed rule 2.

## Rule 4

The change from "two" to "three" Vice-Presidents is consequential upon Council resolution 1193 (XLI).

## Rule 19

With respect to the suggestion to replace "twenty-four

<sup>1</sup> The rules of procedure of the Council, reproduced in document E/3063 (United Nations publication, Sales No. : 58.I.3) were adopted by Council resolution 217 (VIII) of 18 March 1949, as amended subsequently by resolutions 289 (X) of 6 March 1950, 456 A (XIV) of 29 July 1952 (consequent upon resolution 414 (XIII) of 18, 19, 20 September 1951) and 481 (XV) of 1 April 1953. Since the publication of that document, the Council has further amended its rules of procedure by resolutions 1099 (XL) of 4 March 1966 and 1193 (XLI) of 20 December 1966.

<sup>2</sup> Document E/3997.

hours" by "one week" in the first sentence, it is believed that the Council might find it convenient if the credentials of representatives and the names of alternate representatives and advisers were submitted to the Secretary-General in time to enable him to issue the list of representatives and observers before the opening of the session. This suggestion also corresponds to the provision in rule 27 of the rules of procedure of the General Assembly.

The insertion of a second sentence relating to the issuance of credentials is in accord with the rules of procedure of the General Assembly (rule 27), of the Security Council (provisional rule 13) and of the Trusteeship Council (rule 14).

In the fourth sentence, the change from "representatives" to "representative" is merely a correction of a misprint since according to rule 18 each member of the Council is to be represented by only one accredited representative.

#### Rule 23

Under rule 23, as amended by Council resolution 1193 (XLI), if the office of the President or a Vice-President

should unexpectedly become vacant between sessions of the Council for any one of the reasons stated in that rule, the office could not be filled until the next session of the Council is held. As the President may have to discharge certain functions when the Council is not in session, and as it might not be practicable to call a meeting of the Council for the sole purpose of filling the vacancy, the Secretary-General, having regard to the application of the principle of equitable geographical distribution to the offices of the President and Vice-Presidents of the Council as indicated in the annex to resolution 1193 (XLI), has suggested the additional provision in regard to rule 23 for consideration by the Council.

#### Rules 26 and 27

The suggested insertions in the first paragraph of rule 26 and of rule 27 are designed merely to provide clarification of the text. The amendment suggested for the second paragraph of rule 26 is consequential upon rule 20, as amended by Council resolution 1193 (XLI), which provides *inter alia* that "each of the Vice-Presidents shall be Chairman of one of the sessional Committees".

#### Present rule

##### Rule 2

Each regular session shall be held, subject to the provisions of rule 3, at a date fixed by the Council at a previous session. The date of the opening of the first regular session of the year shall be fixed as nearly as administratively practicable to the first Tuesday in April. The date of the second regular session of the year shall be fixed as late as administratively practicable before the opening of the regular session of the General Assembly, and shall be adjourned at least six weeks before it. This session shall be resumed during or shortly after the regular session of the General Assembly for a brief series of meetings.

##### Rule 4

Special sessions shall be held by decision of the Council, or at the request of:

- (1) A majority of the members of the Council;
- (2) The General Assembly;
- (3) The Security Council.

The Council shall also hold a special session at the request of the Trusteeship Council, any Member of the United Nations or a specialized agency,<sup>2</sup> if the President of the Council and the two Vice-Presidents agree to the request. If the officers have not notified their agreement to the Secretary-General within four days of the receipt of the request, the President shall forthwith inform the other members of the Council, through the Secretary-General, of the request and shall inquire whether or not they support the request for a session. If within eight days of the inquiry, a majority of the members of the Council explicitly concurs in the request, the President will convene the Council accordingly.

Special sessions will be convened within six weeks of receipt by the President of a request for such a session, at a date fixed by the President.

<sup>2</sup> When the term "specialized agency" is used in these rules, it refers to specialized agencies brought into relationship with the United Nations.

#### Proposed rule

Each regular session shall be held, subject to the provisions of rule 3, at a date fixed by the Council at a previous session. *The first regular session of the year shall be held in the second quarter of the year. The second regular session of the year shall be held in the third quarter of the year and shall be adjourned at least six weeks before the regular session of the General Assembly. This session shall be resumed (if necessary) during the regular session of the General Assembly, or shortly thereafter, for a brief series of meetings.*

Special sessions shall be held by decision of the Council, or at the request of:

- (1) A majority of the members of the Council;
- (2) The General Assembly;
- (3) The Security Council.

The Council shall also hold a special session at the request of the Trusteeship Council, any Member of the United Nations or a specialized agency,<sup>2</sup> if the President of the Council and the three Vice-Presidents agree to the request. If the officers have not notified their agreement to the Secretary-General within four days of the receipt of the request, the President shall forthwith inform the other members of the Council, through the Secretary-General, of the request and shall inquire whether or not they support the request for a session. If, within eight days of the inquiry, a majority of the members of the Council explicitly concurs in the request, the President will convene the Council accordingly.

Special sessions will be convened within six weeks of receipt by the President of a request for such a session, at a date fixed by the President.

<sup>2</sup> When the term "specialized agencies" is used in these rules, it refers to specialized agencies brought into relationship with the United Nations; it also includes the International Atomic Energy Agency.

*Present rule**Proposed rule**Rule 19*

The credentials of representatives and the names of alternate representatives and advisers shall be submitted to the Secretary-General not less than twenty-four hours before the first meeting which the representatives are to attend. The President and the Vice-Presidents shall examine the credentials and submit their report to the Council. This rule shall not, however, prevent a member from changing its representatives, alternate representatives, or advisers subsequently, subject to proper submission and examination of credentials, where needed.

The credentials of representatives and the names of alternate representatives and advisers shall be submitted to the Secretary-General not less than *one week* before the first meeting which the representatives are to attend. *The credentials shall be issued either by the Head of the State or Government or by the Minister for Foreign Affairs.* The President and the Vice-Presidents shall examine the credentials and submit their report to the Council. This rule shall not, however, prevent a member from changing its *representative*, alternate representatives, or advisers subsequently, subject to proper submission and examination of credentials, where needed.

*Rule 23*

If the President or any of the Vice-Presidents ceases to be a representative of a member of the Council or is incapacitated, or if the Member of the United Nations of which he is a representative ceases to be a member of the Council, a new President or Vice-President, as the case may be, shall be elected for the unexpired term.

If the President or any of the Vice-Presidents ceases to be a representative of a member of the Council or is incapacitated, or if the Member of the United Nations of which he is a representative ceases to be a member of the Council, a new President or Vice-President, as the case may be, shall be elected for the unexpired term. *If an unforeseen vacancy occurs when the Council is not in session, the member of the Council of which the President or the Vice-President, as the case may be, was a representative shall designate another representative to fill the vacancy until a successor is elected by the Council.*

*Rule 26*

At each session, the Council may set up such committees as it deems necessary in addition to the committees specifically provided for in these rules, and refer to them any questions on the agenda for study and report. Such committees may be authorized to sit while the Council is not in session.

At each session, the Council may set up such committees as it deems necessary in addition to the committees specifically provided for in these rules, and refer to them any questions on the agenda for study and report. Such committees, *which may be committees of the whole or committees of limited membership*, may be authorized to sit while the Council is not in session.

Each committee shall elect its own officers, except where decided otherwise by the Council.

Each committee shall elect its own officers, except *as provided in rule 20* or where decided otherwise by the Council.

The provisions of rules 41 and 42 and 47 to 70 inclusive shall be applied in the proceedings of the committees and any subsidiary bodies set up by them.

The provisions of rules 41 and 42 and 47 to 70 inclusive shall be applied in the proceedings of the committees and any subsidiary bodies set up by them.

*Rule 27*

Committees of the Council shall be nominated by the President, subject to approval of the Council, unless the Council decides otherwise.

Committees of *limited membership* shall be nominated by the President, subject to approval of the Council, unless the Council decides otherwise.

Sub-committees of committees shall be nominated by the chairman of the committee, subject to approval of the committee, unless the committee decides otherwise.

Sub-committees of committees shall be nominated by the chairman of the committee, subject to approval of the committee, unless the committee decides otherwise.







## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 22 : Documentation of the Council \*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session, 1474th meeting.*

## DOCUMENTS E/4317 AND ADD.1

## Note by the Secretary-General

## Document E/4317

[Original text: English]  
[20 March 1967]

1. At the request of the Economic and Social Council, in its resolution 1090 E (XXXIX) of 31 July 1965, the Secretary-General submitted to the Council, at its fortieth session, a note containing a number of proposals (E/4157)<sup>1</sup> designed to reduce to more manageable proportions the volume of documentation requiring the Council's attention at any particular session, or to make such documentation better suited to the Council's needs.

2. The Council considered the question of documentation at both its fortieth and its forty-first sessions and, in its resolution 1154 (XLI) of 4 August 1966, endorsed the Secretary-General's proposals contained in paragraphs 9 to 15 of the note mentioned above. In paragraph 4 (c) of the resolution, the Council also requested the Secretary-General, *inter alia*:

"To submit to the Council in 1967 further proposals designed to reduce the volume or to improve the conciseness of documentation requiring the Council's consideration."

3. Subsequently, the General Assembly, on 20 December 1966, adopted resolution 2247 (XXI) entitled "Publications and documentation of the United Nations" in which *inter alia* it requested the Secretary-General, in accordance with the recommendations of the *Ad Hoc* Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies and of the Advisory Committee on Administrative and Budgetary Questions, to instruct the Publications Board:

"(a) To review the present practice of preparation and publication of Official Records and Supplements and Annexes of all organs of the United Nations, with the aim of determining whether any economy can be achieved;

"(b) To review the publications programme in order to ascertain whether publications, studies and reports are prepared in accordance with pertinent resolutions of the General Assembly and other policy-making bodies, as well as to determine whether any publication may have lost its usefulness or become redundant;

"(c) To study the documentation of the Organization with a view to suggesting possible ways and means of achieving possible economy both in extent and cost;

"(d) To harmonize the publication programme of the United Nations with those of the specialized agencies and the International Atomic Energy Agency, with a view to eliminating possible duplication."

4. The General Assembly further requested the Secretary-General: (a) to submit to the Advisory Committee on Administrative and Budgetary Questions at its summer session, on the basis of the above-mentioned studies by the Publications Board, a preliminary report containing such suggestions and recommendations as may be appropriate for the elimination, consolidation or reduction in frequency of various publications; and (b) to report to the General Assembly at its twenty-second session.

5. As far as the documentation of the Economic and Social Council is concerned, the Secretary-General remains fully aware of the need for constant efforts wherever possible to reduce its volume, improve its quality and conciseness and make it available in good time in accordance with the Council's rules of procedure. He has, however, no further specific suggestions to make at this time in response to the request contained in Council

<sup>1</sup> See *Official Records of the Economic and Social Council, Fortieth Session, Annexes, agenda item 17.*

resolution 1154 (XLI), paragraph 4 (c). He would propose to report to the Council in due course on the results of the current efforts to carry out the proposals made in document E/4157 and to inform it of the outcome of the study at present being undertaken by the Publications Board in accordance with General Assembly resolution 2247 (XXI).

### *Document E/4317/Add.1*

[Original text: English]  
[25 May 1967]

1. As a result of his continuing study, pursuant to Council resolution 1154 (XLI), of possibilities of reducing the volume of documentation requiring the Council's consideration, the Secretary-General wishes to bring the following suggestions to the Council's attention.

2. The volume of documentation issued in connexion with the agenda item on elections could be substantially reduced if the practice of publishing biographical data received from Governments concerning representatives they propose to nominate were discontinued. For example, the number of pages of documentation issued for the forty-second session in respect of the item on elections has so far amounted to seventy-two, of which forty-eight were devoted to biographical data. The discontinuance of the practice of publishing biographical data would not, in the Secretary-General's view, constitute non-compliance with the provisions of Council resolution 557 C V (XVIII) of 5 August 1954. Governments would, as heretofore, be asked to furnish biographical data concerning their candidates, but instead of publishing the information, the Secretary-General would keep it on file in the Secretariat, where it would be available for consultation by delegations on request.

3. As regards biographical data concerning the representatives nominated by Governments to serve on the functional commissions, the Secretary-General would see some merit in continuing the practice of publishing those data, inasmuch as he uses them as the basis for the consultations which he carries out with the nominating Governments in accordance with the terms of reference of the commissions. He would, however, suggest that the volume of documentation could be reduced by limiting the material published to facts pertinent to the fields of competence covered by the particular body to which a representative has been nominated. The number of pages of documentation issued for the forty-second session in respect of the item on confirmation of nominations was thirty-eight, of which twenty-eight were devoted to biographical data.

4. In considering ways in which the report of the Council to the General Assembly might be further shortened, the question arises whether the section on implementation of recommendations on economic and

social matters<sup>2</sup> serves any useful purpose in its present form and therefore whether it should be retained.

5. The General Assembly, in operative paragraph 3 of its resolution 119 (II) of 31 October 1947:

*"Recommends, furthermore, that in fulfilment of Article 64 of the Charter of the United Nations the Secretary-General report annually to the Economic and Social Council and that the latter report to the General Assembly on steps taken by the Member Governments to give effect to the recommendations of the Economic and Social Council as well as to the recommendations made by the General Assembly on matters falling within the Council's competence."*

The procedure adopted by the Council to give effect to the recommendations made by the Assembly has already been modified on several occasions. The original system of annual reports from Governments established by Council resolution 210 (VIII) of 18 March 1949, gave way in 1950 in resolution 283 (X) to a system of biennial reports. The general biennial reporting procedure was in turn discontinued on 29 July 1952 when the Council decided, in its resolution 450 (XIV), to include in its resolutions, wherever practicable, indications as to the timing of the reports expected from Governments in implementation of the resolutions concerned, and to include, in its annual report to the General Assembly, information regarding replies received from Governments on the implementation of recommendations of the General Assembly and the Council regarding economic and social matters.

6. Although the material at present included in the section on implementation in the Council's report is prepared in accordance with resolution 450 (XIV), it is no more than a record of the replies received from Governments, the substance of the replies being dealt with in other sections of the report. It is doubtful whether the section, as such, is of much value to Governments. It may also be noted that the preparation of the material takes up the time of a good many officials in the Department of Economic and Social Affairs.

7. In the circumstances, and in view of the repeated requests of the Council and of the General Assembly for control and limitation of documentation, it is suggested that the Council might consider discontinuing the practice of including in its report a specific section on implementation.

8. The Office of Legal Affairs considers that the requirement of Council resolution 450 (XIV) concerning the provision of information regarding replies from Governments is complied with when the substance of those replies is set forth in other pertinent sections of the annual report of the Council to the General Assembly. It therefore sees no objection to the above suggestion.

<sup>2</sup> See, for instance, *Official Records of the General Assembly, Twenty-first Session, Supplement No. 3*, chap. XVI, sect. XIII.



## ECONOMIC AND SOCIAL COUNCIL

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## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

# Agenda item 23: Implementation of the recommendations of the *Ad Hoc* Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies \*

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1474th and 1475th meetings.

## DOCUMENT E/4318

## Note by the Secretary-General

[Original text: English]  
[21 March 1967]

1. The question of the implementation of the recommendations of the *Ad Hoc* Committee of Experts to Examine the Finances of the United Nations and the Specialized Agencies is included as an item in both the provisional agenda for the forty-second session of the Council and the draft agenda for the forty-third session, in accordance with the decision taken by the Council at its resumed forty-first session (1458th meeting). The recommendations of the *Ad Hoc* Committee are contained in its second report,<sup>1</sup> which was approved by the General Assembly in its resolution 2150 (XXI) of 4 November 1966. In that resolution the General Assembly also:

"2. *Urges* that the recommendations and comments contained in the report be given the most attentive consideration by Member States and by the United Nations organs and related bodies with a view to the earliest implementation of the recommendations;

"3. *Requests* the Secretary-General, as chief administrative officer of the United Nations, to take the appropriate measures to give effect to those recommendations requiring his action, including the submission of proposals to the competent United Nations organs and related bodies;

"4. *Recommends* to the specialized agencies and the International Atomic Energy Agency that they give the most attentive consideration to the recommendations contained in the report and that they take appropriate measures, within their respective areas of competence, with a view to the earliest possible implementation of those recommendations;

"5. *Requests* the Secretary-General, as Chairman of the Administrative Committee on Co-ordination, to encourage the adoption of the appropriate measures by the specialized agencies and the International Atomic Energy Agency, particularly those requiring concerted action;

"6. *Further requests* the Secretary-General to transmit the present resolution and the report of the *Ad Hoc* Committee to the specialized agencies and the International Atomic Energy Agency;

"7. *Invites* the Secretary-General to submit to the General Assembly at its twenty-second session a report on the implementation of the recommendations of the *Ad Hoc* Committee by the United Nations family of organizations."

2. The recommendations of the *Ad Hoc* Committee that would seem to be of most direct concern to the Economic and Social Council appear in chapters VII, VIII and IX of its report. In this connexion, it will be recalled that the Council, during its resumed forty-first session in November 1966, considered (1448-1450th meetings) a recommendation of the *Ad Hoc* Committee concerning the reconstitution of the Committee for Programme and Co-ordination, which appears in paragraphs 90 (g) and (h) of the report. Whereas the *Ad Hoc* Committee had recommended that the Committee for Programme and Co-ordination should consist of twelve members, the Council, in its resolution 1187 (XLI) of 17 November 1966, decided that it should be composed of sixteen States Members of the United Nations to be elected for a period of three years according to a geographical pattern specified in the resolution. In its reso-

<sup>1</sup> See *Official Records of the General Assembly, Twenty-first Session, Annexes*, agenda item 80, document A/6343.

lution 1189 (XLI) of 17 December, the Council, in response to General Assembly resolution 2188 (XXI) further decided, *inter alia*, that the Committee should be enlarged by five additional Member States to be designated by the President of the General Assembly, for the purpose of undertaking certain tasks specified in operative paragraph 2 of resolution 2188 (XXI); moreover, it requested the Committee to invite the experts appointed by the five additional Member States to participate in the remainder of the Committee's work, without the right to vote.

3. Interagency consultations on implementation of the recommendations of the *Ad Hoc* Committee were held in New York from 6 to 10 March 1967, and a draft statement was prepared for consideration by the

Administrative Committee on Co-ordination on 5 and 6 April, which constitutes the progress report to be submitted by the Secretary-General to the Advisory Committee on Administrative and Budgetary Questions at its May - June session. This report, together with the comments of the Advisory Committee thereon, will be made available to the Council at its forty-third session. At that time the Secretary-General also proposes to report to the Council on the measures he has taken as chief administrative officer of the United Nations, as requested under paragraph 3 of General Assembly resolution 2150 (XXI).<sup>2</sup>

<sup>2</sup> At its 1475th plenary meeting, on 2 June 1967, the Council decided to postpone the Consideration of this question to its forty-third session.



## ECONOMIC AND SOCIAL COUNCIL

## OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

**Agenda item 28: Arrangements for the convening of an international conference to replace the Convention on Road Traffic and the Protocol on Road Signs and Signals, done at Geneva, 19 September 1949\***

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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session*, 1469th meeting; see also the record of the 407th meeting of the Economic Committee (E/AC.6/SR.407).

## DOCUMENT E/4308\*

## Note by the Secretary-General

[Original text: English]  
[16 March 1967]

1. At its forty-first session, the Economic and Social Council adopted resolution 1129 (XLI) regarding the arrangements for the convening of an international conference to replace the Convention on Road Traffic and the Protocol on Road Signs and Signals done at Geneva, 19 September 1949. Operative paragraph 3 of this resolution provides for a conference to be convened in Vienna in March 1968 at a date to be determined by the Secretary-General in consultation with the Government of Austria.

2. Shortly after the adjournment of the forty-first session of the Council, and in accordance with the above-mentioned resolution, agreement was tentatively reached between the Austrian Government and the Secretary-General for the conference to be held from 4 March to 6 April 1968. No definite arrangements were made, however, pending the outcome of the twenty-first session of the General Assembly.

3. The General Assembly, in its resolution 2206 (XXI) of 17 December 1966, decided that the second session of the United Nations Conference on Trade and Development should be convened at New Delhi from 1 February to 25 March 1968.

4. In view of the administrative problems which would arise if both conferences were to be held at the same time, the Secretary-General has entered into further negotiations with the Austrian Government and also consulted the Sub-Committee on Road Transport of the Inland Transport Committee of the Economic Commission

for Europe. As a result of these further consultations and subject to a positive outcome of negotiations currently being held to make available the Vienna Conference Centre from 30 September to 1 November 1968, the Secretary-General proposes that the conference provided for in Council resolution 1129 (XLI) should be convened in Vienna from 30 September to 1 November 1968 rather than in March of that year. He further proposes that the Council, in accordance with rule 13 of its rules of procedure, should include a supplementary item in the provisional agenda for the forty-second session to consider this matter.

5. Should the Council agree to the proposed postponement of the conference, the revised draft conventions referred to in operative paragraph 4 of Council resolution 1129 (XLI), which the Secretary-General expects to forward to Governments in July or August 1967, will reach Governments a considerably longer time before the opening of the conference than was contemplated. In order to give Governments, specialized agencies and other organizations concerned more time to study the preparatory documents of the conference, the Secretary-General would therefore suggest that the Council may wish to amend operative paragraph 5 (a) (i) and (b) of its resolution 1129 (XLI), to provide that proposed amendments or suggestions to the revised draft conventions should be communicated to the Secretary-General six months instead of four months before the opening date of the conference and that amendments and suggestions received should be circulated by the Secretary-General three months instead of two months before that date.

\* Incorporating document E/4308/Corr.1.

## DOCUMENT E/4369

## Report of the Economic Committee

[Original text: English]  
[18 May 1967]

1. At its 1460th meeting, on 8 May 1967, the Economic and Social Council referred to the Economic Committee agenda item 28, entitled "Arrangements for the convening of an international conference to replace the Convention on Road Traffic and the Protocol on Road Signs and Signals, done at Geneva, 19 September 1949".

2. The Economic Committee, under the Chairmanship of Mr. Manuel Varela (Panama), Vice-President of the Council, considered the item at its 407th meeting, held on 17 May 1967.

3. The Committee had before it a note by the Secretary-General (E/4308 and Corr.1). The representative of the United Kingdom, on behalf of the sponsors, Czechoslovakia, Panama, United Kingdom of Great Britain and Northern Ireland, and the United Republic of Tanzania, introduced a draft resolution (E/AC.6/L.356), which the Committee adopted unanimously.

*Recommendation of the Committee*

4. The Committee therefore recommends to the Council the adoption of the following draft resolution :

ARRANGEMENTS FOR THE CONVENING OF AN INTERNATIONAL CONFERENCE TO REPLACE  
THE CONVENTION ON ROAD TRAFFIC AND THE PROTOCOL ON ROAD SIGNS AND SIGNALS,  
DONE AT GENEVA, 19 SEPTEMBER 1949

[Text adopted by the Council without change. For the final text, see Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1203 (XLII).]

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 28 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/AC.6/L.356	Czechoslovakia, Panama, United Kingdom of Great Britain and Northern Ireland and United Republic of Tanzania : draft resolution	Mimeographed
E/RES/1203 (XLII)	Resolution adopted by the Council at its 1469th plenary meeting, on 26 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1, resolution 1203 (XLII)</i>



## ECONOMIC AND SOCIAL COUNCIL

OFFICIAL RECORDS

## ANNEXES

FORTY-SECOND SESSION

NEW YORK, 1967

## Agenda item 29 : Action to be taken following the flooding of the river Euphrates\*

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E/4381	Letter dated 26 May 1967 from the representative of Iran to the President of the Economic and Social Council . . . . .	1
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\* For the discussion of this item, see *Official Records of the Economic and Social Council, Forty-second Session, 1471st meeting.*

## DOCUMENT E/4381

## Letter dated 26 May 1967 from the representative of Iran to the President of the Economic and Social Council

[Original text: French]  
[29 May 1967]

On instructions from my Government, I have the honour to request, in accordance with rule 17 of the rules of procedure of the Economic and Social Council, the inclusion in the agenda of the forty-second session of the Council of the following supplementary item: "Action to be taken following the flooding of the river Euphrates".

During the last three weeks, according to reports from official sources, the waters of the Euphrates have reached levels without precedent for centuries past. Flooding has occurred in several areas, causing the destruction of dozens of villages and thousands of families both in Iraq and in Syria. Incalculable losses have been suffered by the population of the devastated areas.

In view of the urgent importance of considering the question, my Government hopes that the Council will give its immediate attention to this request.

[Signed] Mehdi VAKIL,  
Permanent Representative  
of Iran to the United Nations

## CHECK LIST OF DOCUMENTS

NOTE. This check list includes the documents mentioned during the consideration of agenda item 29 which are not reproduced in the present fascicle.

Document No.	Title or description	Observations and references
E/L.1161	Belgium, Cameroon, Canada, Czechoslovakia, Dahomey, France, Gabon, Guatemala, India, Iran, Kuwait, Libya, Mexico, Morocco, Pakistan, Panama, Peru, Philippines, Romania, Sierra Leone, Sweden, Turkey, Union of Soviet Socialist Republics, United Kingdom of Great Britain and Northern Ireland, United Republic of Tanzania, United States of America and Venezuela : draft resolution	Mimeographed



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<i>Document No.</i>	<i>Title or description</i>	<i>Observations and references</i>
E/RES/1212 (XLII)	Resolution adopted by the Council at its 1471st plenary meeting, on 29 May 1967	For the text, see <i>Official Records of the Economic and Social Council, Forty-second Session, Supplement No. 1</i> , resolution 1212 (XLII)



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