



UNITED NATIONS  
ECONOMIC  
AND  
SOCIAL COUNCIL



Distr.  
GENERAL  
E/2836  
13 March 1956

ORIGINAL: ENGLISH

Twenty-First session  
Agenda item 5

ECONOMIC DEVELOPMENT OF UNDER-DEVELOPED COUNTRIES

CONSERVATION AND UTILIZATION OF NON-AGRICULTURAL RESOURCES

Action taken under Council resolution 345 (XII)

Report by the Secretary-General

1. This report is the ninth to be submitted in accordance with the Economic and Social Council's request that the Secretary-General furnish to each session a statement of specific plans and action taken in compliance with resolution 345 (XII).

ACTION TAKEN AT HEADQUARTERS  
AND RELATED ACTIVITIES

Mineral resources

2. The Secretariat has continued its activities in the domain of mineral resources and, having proceeded from work on iron ore<sup>1/</sup> to that on non-ferrous metals, has just published a study entitled Non-Ferrous Metals in Under-Developed Countries, presented to this session of the Council as document E/2798.

3. This report assesses the position of the under-developed countries as producers and consumers of the major non-ferrous metals; it reviews secular trends in the use of these metals as well as short-term fluctuations in demand and prices; it seeks to provide an up-to-date picture of the distribution of smelting and refining capacity, and finally it discusses at some length the problems involved in maximizing the development potential of the various activities directly based on the exploitation of non-ferrous ore resources.

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<sup>1/</sup> See document E/2691.

4. Attention is presently being given to the possibility of setting up - under the terms of Economic and Social Council resolution 345 (XII) - an ad hoc committee of experts on copper, lead and zinc to survey the resources in these metals and their long-term problems.

Energy resources

5. With reference to economic development aspects of energy production and utilization, the Secretariat prepared for the International Conference on the Peaceful Uses of Atomic Energy held in Geneva in August 1955, three papers, one on "World Requirements of Energy, 1975-2000",<sup>2/</sup> one on "Contribution of Nuclear Energy to Future World Power Needs",<sup>3/</sup> and one on "Some Economic Implications of Nuclear Power for Under-Developed Countries".<sup>4/</sup>

6. The paper on world requirements of energy presents a comprehensive picture of the world energy situation in recent years, indicates the rate at which energy consumption has increased in the past and reviews in the light of past experience some of the factors likely to affect energy requirements in the future.

7. The paper on contribution of nuclear energy is based on information supplied by various countries and by previous studies made in the Secretariat and discusses the question of integrating atomic energy, during the next fifty years, into the world power system. The paper draws up a quantitative and qualitative balance sheet of estimated needs and known resources available to meet them; it also studies the respective costs and the competitive positions of the available means of energy production.

8. The paper on economic implications of nuclear power examines the characteristics of nuclear power which are of special significance to under-developed countries. It discusses the question of cost comparisons of nuclear-power-based electricity and electricity from conventional sources of energy. Finally, it examines the type of reactors which may be especially suited to conditions in under-developed countries and the benefits which such regions stand to gain from the introduction of nuclear plants.

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<sup>2/</sup> A/Conf.8/P/902.

<sup>3/</sup> A/Conf.8/P/1116.

<sup>4/</sup> A/Conf.8/P/893.

9. In its continuous review of the economics of energy development and utilization, the Secretariat follows closely the progress being made in several parts of the world in the utilization of unconventional sources of power such as wind, solar radiation, geothermic, tidal and Claude Process energy. Evidence of growing interest in one or other of these energy sources is to be noted on the part of a number of international organizations and on the part of individual governments who have made requests for technical assistance in some of the fields in question.

10. In these circumstances consideration is being given to the possibility of undertaking a brief study on present activities in the field of energy resources - conventional and unconventional - along the lines of the report presented to the fourteenth session of the Council on co-operation in water control and utilization.<sup>5/</sup> The study would describe the work undertaken in this field by the United Nations and other international organizations and point out existing deficiencies in data as well as any areas where further international co-ordination of activities might seem desirable.

#### Water resources

11. A second meeting of officers of the United Nations organizations concerned with the development and utilization of water resources was held in Geneva at the beginning of August 1955 to consider various aspects of international co-operation and co-ordination of activities in this field, pursuant to resolutions 417 (XIV) and 533 (XVIII) of the Council. An account of the work done in the domain of water at the United Nations Headquarters, by the regional economic commissions, and by the specialized agencies concerned, as it emerged from this meeting, is given in the Secretary-General's report on International Co-operation with respect to Water Resource Development, presented to this session of the Council as document E/2827.

#### Conferences

12. With respect to part B of resolution 345 (XII), authorizing the Secretary-General to undertake, upon the request of Member States, explorations with respect

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<sup>5/</sup> E/2205 and E/2205/Add.1.



to the holding of international conferences related to resource development, no action has been taken inasmuch as no such requests have been forthcoming.

#### REGIONAL ACTIVITIES

##### Economic Commission for Asia and the Far East

13. The secretariat of the Commission has continued its work in the fields of electric power, iron and steel, and mineral resources development in the region. The latest Electric Power Bulletin for Asia and the Far East reviewed the progress made in the development of electric power stations and transmission lines, and analysed the power situation in the region. A preliminary report was prepared summarizing the principles and methods for assessing the hydroelectric potential of each country of the region and its technical and economic limits. A study tour of electric power experts to manufacturers' plants and power stations in Europe is scheduled for 1956.

14. A preliminary report on legislation governing mineral development in the ECAFE region was completed,<sup>6/</sup> and preparatory work on a regional geological map for Asia and the Far East is progressing. A continuing survey of the iron and steel industry and trade in ECAFE countries includes the study of plans and problems as well as dissemination of related technical and economic information. The latest developments and practices of iron and steel processing techniques of interest to ECAFE countries, and other current information, will be included in an Iron and Steel Bulletin which is to be issued annually. Work in the field of mineral resources development included the publication of a report on Mining Development in Asia and the Far East, 1954-1955<sup>7/</sup> and completion of a study on "Integration of fuel economy of the region". A study group of geologists and mining engineers visited western Europe and the USSR in August-November 1955. The final report of the study group will be examined by the Sub-Committee on Mineral Resources Development at its second session.

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<sup>6/</sup> ECAFE/I and T/SUB.368.

<sup>7/</sup> E/CN.11/421.



Economic Commission for Europe

15. The activities of the Economic Commission for Europe on energy problems continue to be centred on the field of conservation and utilization of non-agricultural resources. The main developments during the period under review have been: the progress made in arranging non-governmental agreement on export of electric power from Yugoslavia to Austria, western Germany and Italy ("Yougelexport" project); the completion of a study undertaken at the request of the Government of Turkey on the hydroelectric potential in that country; the commencement of a similar study requested by the Government of Greece; the publication of extensive documentation on rural electrification, particularly with a view to assisting under-developed countries, and the examination on an inter-governmental level of the possible extension of the work done on the electric power transfers across frontiers to the Danube and southeastern European regions.

16. Steady progress is also being made in coal classification and in recommendations on coal utilization as well as in studies of the relation of coal to other forms of energy, particularly black oils. A special study has been made of the gas industry in Europe.

17. Periodic reviews of the European coal and steel markets as well as of annual developments in the field of electric power in Europe have also been prepared by the secretariat.

18. The expert group on the economic development of southern Europe in its report to the eleventh session of the Commission has also considered the development of non-agricultural resources in Greece, Italy, Turkey and Yugoslavia and made recommendations.

19. The eleventh Commission meeting in April 1956 will review all of the above work and will also consider the question of future work in the energy field as a whole.

Economic Commission for Latin America

20. The Economic Commission for Latin America has maintained a continuing interest in the utilization of natural resources for the iron and steel industry of the region and its activities in this field have progressed steadily. A meeting of experts under the sponsorship of the Commission, the Technical Assistance Administration and the Associação Brasileira de Metais is to be held in

October 1956 in Sao Paulo, to discuss, inter alia, problems of basic iron and steel production. This meeting will carry forward to a further stage the work initiated at a meeting held in Bogotá, which, among other questions, dealt with problems of iron ore and fuels for the iron and steel industry in Latin America.<sup>8/</sup>

21. In the field of energy the secretariat submitted to the sixth session of the Commission a preliminary study under the title "Development of Energy Production and Utilization in Latin America - Possibilities and Problems"<sup>9/</sup> as well as a summary of this study and of the statistical material on which it is based. Following recommendations by the Commission, future work in this field will include an appraisal of hydroelectric resources in selected areas, field surveys on the efficiency of production and utilization of energy, and circulation of information on developments in nuclear energy.

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8/ A Study of the Iron and Steel Industry in Latin America, volume I, Report of the meeting of the Expert Working Group held in Bogotá, sales number: 1954.II.G.3, vol. 1.

9/ E/CN.12/384.