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DEVELOPMENT AND UTILIZATION OF HUMAN RESOURCES
OUTFLOW OF TRAINED PERSONNEL FROM DEVELOPING COUNTRIES
Second report of the Secretary-General

Addendum

Based on observations of Member States

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INTRODUCTION

1. The Economic and Social Council at its forty-third session considered the Secretary-General's first report on the development and utilization of human resources in developing countries (E/4353 and Add.1)^{1/} and adopted resolution 1274 (XLIII) on the subject.

2. In operative paragraph 3 of this resolution, the Secretary-General was requested:

"(a) To communicate this report to the competent specialized agencies, the International Atomic Energy Agency and the other interested bodies of the United Nations system, including the United Nations Conference on Trade and Development, the United Nations Development Programme, the United Nations Industrial Development Organization, the Advisory Committee on the Application of Science and Technology to Development, the Committee for Development Planning, the United Nations Children's Fund and the United Nations Institute for Training and Research;

"(b) To make a detailed examination, in consultation with these bodies through the Administrative Committee on Co-ordination, of the proposals set out in the report, with a view to submitting specific recommendations to the Council on the implementation of these proposals, the priorities to be established among them and the arrangements that should be made for the strengthening of co-ordination among the participating organizations in the execution of a concerted programme in the field of human resources;

"(c) To report to the Council at its forty-fifth session on the observations of Member States and on the results of these consultations with the interested United Nations bodies;

"(d) To report to the same session of the Council on the progress made in studies carried out by interested organizations in the United Nations system on the brain drain problem."

3. The Secretary-General's second report on the development and utilization of human resources based on sub-paragraphs (a), (b), (d) and part of (c) of Council resolution 1274 (XLIII), has been issued (E/4483). The present report is based on the observations of Member States referred to in sub-paragraph (c) above.

^{1/} This is referred to henceforth as the first report.

4. Twenty-one Governments submitted their observations.^{2/} These Governments represented developed and developing, centrally planned and free market economy countries, as well as the major regions of the world. The replies received varied in length from one or two pages of comments in some cases to upwards of ten pages in a few others.
5. The recommendations and proposals in the Secretary-General's first report were generally endorsed by the Governments, as was the main emphasis placed in the study on education and training for human resource development. Strong support was also given to the need expressed for intensified concerted international action in the field of human resource development and utilization, and several Governments commented on the problem of the brain drain. Against this background of general agreement and usually of strong support for the proposals, there were also a few reservations expressed and questions raised with regard to certain points made in the study. These are also considered in the present report.
6. The Secretary-General's second report discussed the subject under four main sections:
- I. Planning for the development and utilization of human resources;
 - II. Development of human resources;
 - III. Utilization of human resources;
 - IV. Drain of highly trained personnel from developing countries.
7. The present report has also been organized on the basis of this framework. However, the subsections used in the first part of the second report, namely, current work programme and long-term programme, have not been used here because the material submitted did not generally fall within these two categories.
8. The Secretary-General's first report was commended as being well constructed and well written and it was noted that throughout the study, a real effort at

^{2/} These Governments were: Austria, Belgium, Burma, Cambodia, Ceylon, Chile, Czechoslovakia, France, Jamaica, Japan, Lebanon, Netherlands, New Zealand, Norway, Romania, Sierra Leone, Singapore, Sweden, Turkey, United Kingdom of Great Britain and Northern Ireland and the United States of America. Governments were requested to submit their observations not later than 29 February 1968. Several of the replies, however, were received after that date and the last two to have arrived were dated 24 and 25 April 1968.

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comprehension and reflection had been made. Nevertheless, one Government^{3/} pointed out that the report would perhaps have gained in clarity if in its structure and presentation, it had made a clearer distinction between the concept of human resources, the means of utilizing them and the policy that might be recommended to the developing countries in this connexion. If that had been done, the recommendations in the report, which are sometimes difficult to discern in the analysis, would probably have been brought out more forcefully.

9. The definition of human resources given in the first report (E/4353, para. 12) was considered by some Governments as tending to stress the economic aspects. Although this approach is very useful, nevertheless it was felt that, as the study points out, the importance of the social aspects should not be minimized. A new dimension could be added to this approach by taking cultural and psychological factors into consideration. The definition should also take into account categories of persons who are economically inactive because of lack of opportunities or because of their involvement with certain responsibilities such as those in the home. There are other important aspects of education apart from its productive goals. If conditions are created through education that are favourable to innovation and inventiveness, a more productive life could be ensured. Moreover, the promotion of economic development is not dependent on a particular system of values. The fact should be underlined that social and economic development is a highly complicated process depending on different social and economic systems and reciprocal relationships between several factors. Consequently, it would seem important that planning, investment and administration with respect to the development of human resources be based on a broad general concept of the problem. The definition would gain from the inclusion of some other basic ideas which are to be found in the first report, such as the breakdown of the labour force, the educational system and regional considerations. Broadening the concept would have the advantage of drawing immediate attention to the institutional and interdisciplinary aspects of human resources policy which

^{3/} This Government also pointed out that the fact that the competent organs of the United Nations have given the report their general approval does not imply that it accepts all the proposals and recommendations, some of which may lead to additional expenditure. Such proposals and recommendations should, where appropriate, be given separate and detailed consideration.

too often is relegated to the background in development programmes. The final goal of developmental efforts should be the harmonious development of the total person and the creation of conditions for his optimum well-being. The human factor is, therefore, fundamental to economic growth and social progress.

10. One Government noted that it is perhaps in its method of approach that the report is most open to reservations. The problems facing the developing countries are studied with reference to the model of the highly developed countries, as if economic expansion, which is a prerequisite for the development of human resources, was unattainable except by following one particular process and by setting two objectives: industrialization and its complement, urbanization and public services. The report is virtually silent on two very important subjects, civic responsibility and human rights. These closely interrelated ideas are fundamental to the development of new States and to their independence and sovereignty. In view of the events that have taken place in some of them, it would seem essential that any educational programme should accord an important place to civic education and to respect for human rights. The future leaders of the nation would thus be able to acquire or develop that sense of duty and responsibility on which, in the final analysis, the preservation of any social or political order depends. Furthermore, in view of the dramatic events which have recently convulsed some of the less developed countries and are still keeping them in turmoil, the report's silence on the possible value of studies and research on inter-ethnic relations seems surprising. Such studies and research would be extremely useful to the Governments of the States in question. In a number of instances, it would also be desirable to take them into account when formulating national or regional development programmes and preparing various technical assistance projects. Carried out on a broader scale and gradually entrusted to national experts, studies and research of this type could ultimately provide valuable material for a systematic programme of training in citizenship in the countries concerned. Lastly, the report is silent on the education and training of future officers of the armed forces. However, it is a well-known fact that in many countries, recent political developments have resulted in officers being put in charge of technical and "civilian" ministries as well as services of all types. It might perhaps be useful to make provisions in their training for possible extension of their activities.

11. The process of modernization, the conditioning of public opinion, change in customs and attitudes and the removal of obstructions to social progress are related to the cultural context to which members of the community belong and in which they perform social roles. It was observed that the first report (E/4353, para. 37) would seem to imply that the traditional cultural heritage of a country should be eliminated as an obstructive element to progress. A distinction should be drawn, on the one hand, between elements in the traditional cultural or social heritage that are functional and should be retained, and on the other hand, between those elements that are dysfunctional with respect to reforms and should be eliminated. The traditional life of a society is bound up with the cultural, psychological, social and political thought and activities of the local population. The negative features of traditional life should in time be replaced by more positive aspects, using education as the chief instrument in the transitional process.

12. Development activities are structurally coherent because they are all connected with the participation of people in social progress. These activities centre around the needs and aptitudes of people and can be placed in functional categories such as health, nutrition, education, employment, housing and social welfare. This concept of structural coherence should be taken as the basis for the formulation of a policy with respect to development and the utilization of human resources and for the implementation of this policy both within the national economy and within the framework of international co-operation and assistance.

I. PLANNING FOR THE DEVELOPMENT AND UTILIZATION OF HUMAN RESOURCES

13. The development of human resources through education and training, it was stressed by the Governments, implies a direct interdependence between economic planning and social planning. It also presupposes that national development plans include a realistic evaluation of the problem of training and the development of personnel. However, despite the progress made in the adaptation of development planning over the last decade, many countries have still to achieve the integration of the economic and social aspects of their plan. It is essential that human resource planning should be given its rightful place in development plans. Economic and social development requires a concerted approach.

Consequently, adequate arrangements between various administrative bodies concerned are necessary so that realistic and co-ordinated priorities might be established. This raises the question whether the concept of human resources should be the basis for establishing new forms of organization, for instance, in the administrative field. Because this question has not yet been adequately and satisfactorily answered, international organizations should be very cautious in making recommendations regarding such organizational matters.

14. Broad generalizations about education and its significance for human resource development can hardly be usefully applied if not related to differences in regional and national conditions. In considering the vast problem of the human factor in development, it must be remembered that as a group the developing countries among themselves represent a much wider spectrum of stages of development than do the developed countries within their group. It follows that in drawing up development plans, every developing country or region should take account of its educational needs in terms of local conditions. This approach, it was suggested, might require the working out of a typology of models for developing countries in general with the assistance of the United Nations system. The models would take account of the experiences of both developed and developing countries in manpower planning and in calculating the cost-benefit of educational programmes.

15. The introduction of regional plans within the framework of national plans would assist developing countries to solve difficult problems of localizing new projects particularly for production purposes. This would favourably influence

the creation of work opportunities, improvement of the basic components of social infra-structure and the mobilization of material and human resources. The establishment of planning bodies at the lower levels would also contribute to popularization and stimulation of interest in development plans.

16. The use of multinational regional institutes and the regional bodies of the specialized agencies in human resources programmes as suggested in the first report (E/4353 and E/4353/Add.1, paras. 11, 121) is fully endorsed. However, the notion of decentralization and co-operation at the regional level with the assistance of the regional economic commissions raises the question whether in their present form, they are sufficiently well-equipped to deal with non-economic developmental activities. Very useful meetings of experts have been held in recent years on different aspects of human resource development. These meetings should be followed up by regional meetings of operational personnel at senior and middle levels to bring together the practical experiences and approaches of the different countries in the field.

17. The organization of education should be worked out in accordance with employment estimates and general development. However, even at the risk of creating a surplus of educated personnel during a short transitional period, education and training programmes must not be too strictly designed in terms of anticipated economic needs. Indeed, such rigidity in the conception and execution of a training plan, while perhaps giving the illusion of balance, might, as correctly noted by the ILO Advisory Committee of Employees and Intellectual Workers, diminish the number of trained personnel, and this scarcity of "non-manual workers ... might have disturbing effects on the economy, block economic growth, and endanger the welfare of the working force".^{4/}

18. In many developing countries, educational planning in relation to the development of the labour force is yet to be undertaken. Plans for the development of the labour force are usually projected for ten to fifteen years, whereas national plans are often drawn up for a five-year period. This difference in time period, however, can allow for the necessary adjustments to meet possible changes in the structure of the national economy. An important aim yet to be realized would be the closer co-ordination of economic and social goals particularly in the fields of education and employment.

19. The most urgently discussed aspect of education and training programmes in developing countries at the present time, is the question of the relation

^{4/} See International Labour Organisation, Proceedings of the Sixth Session, December 1967, p. 49.

between educational investment and manpower requirements. The stress is usually on education for production. But the aim should be to develop other aspects of the person as well, such as his habits, attitudes and motivations, to enable him to play an effective role as a member of a social group. Education with these goals could create conditions that would be favourable to innovations and inventiveness and ultimately to productivity and social development. The State should take steps to ensure that its policy in the field of wages and salaries is in harmony with the principles set forth to govern the development of the education system. As an example, this policy should ensure appropriate status and remuneration for teachers commensurate with their training and responsibilities.

20. To reduce educational costs, more developing countries should seriously consider the feasibility of establishing regional training centres and universities to serve the needs of two or more neighbouring countries. As the first report pointed out, the United Nations Development Programme has for some time assisted projects of this kind, but participating countries should work out suitable and mutually satisfactory arrangements for financial support and an adequate supply of students (E/4353/Add.1, paras. 114, 190-192). One approach to the financial question might be that the participating countries contribute proportionally of their national budget. Appropriate organs of the United Nations might in some cases be requested to operate these institutions for the first few years of their establishment. Consideration might also be given to adapting more widely the practice of establishing educational and training centres dispersed in linguistically homogeneous regions and affiliated to a university so as to spread more widely the advantages of university teaching. Because of the high financial cost of establishing colleges, especially faculties of technology, science and medicine, the setting up of such institutions should be limited to cases in which the quality and quantity of the students trained would guarantee optimum results to the countries concerned.

21. The concern expressed in the first report regarding the rapid growth in population in several of the developing countries, particularly the rate of this growth in relation to the development and utilization of human resources (E/4353, paras. 20-28) is fully shared by a number of Governments. Rapid population growth adds more people to the already large numbers of illiterate,

underfed, untrained and unemployed than can be absorbed in the development process to bring about social and economic progress. There is, therefore, a need to arrest too rapid a growth especially in less developed over-populated countries. This calls for a population policy in which family planning should be considered. It is recognized, however, that in some developing countries, the problem is not one of over-population but one of coping with a dispersed population.

Planning the location of industry is suggested in the report as an alternative to migration from rural areas to the cities (E/4353/Add.1, paras. 256-258). The studies made on this problem by some countries would be of interest here.

22. The first report recommends that international organizations should incorporate in their programmes of technical co-operation a wider range of projects and activities concerned with the development and utilization of human resources. In this connexion, it was observed that the subject of international co-operation should be placed in a new perspective in an attempt to achieve complete harmony of aims and means between donor and recipient of technical assistance. The subject should be considered in a multilateral context. It is further stated in the first report that international agencies should avoid inconsistent and complicated advice on the selection of priorities in human resources programmes (E/4353/Add.1, para. 117). While this is regarded as good advice, at the same time, it is pointed out that the effort to gain consistency should not be carried to the point of stifling imaginative ventures in a field in which there is only a partial consensus among experts as to the most suitable and effective approaches to human resources development and utilization.

23. In deciding the type and scope of technical assistance, the organization concerned should carefully assess the special conditions of the recipient country with regard to demand and supply of the labour force, as well as the degree and type of training required. In this regard, it would be necessary to take into account, the individual characteristics of different geographical zones. To take Africa south of the Sahara as an example, development activities requiring a high density of population would have to be avoided in most areas, since a number of these countries are under-populated, and under-population is often a curb on development. The socio-economic context of these societies is also different from that of many others.

24. The co-ordination of outside assistance with the over-all development programme of the recipient country is of particular importance. Programmes of assistance executed by organizations of the United Nations system should contain appropriate evaluation procedures with a view to assessing the effectiveness of the programmes both during the period of the project and at its completion. In formulating and executing technical assistance programmes, every effort should be made to intensify co-ordination among the organizations concerned so that the maximum economy and efficiency would be secured. The countries giving aid should attempt to prepare more operational and productive programmes. The principle should also be followed whereby assistance is provided only upon request by Governments. While United Nations organizations may advise Governments, it should be left to the Governments themselves to be the final arbiters in determining which projects they may wish to initiate.

25. The assistance given by the developed countries to the developing countries should suit the development needs of those countries both in the quality of the experts selected and in the duration of their service. The missions undertaken by experts should be long enough to enable them to make an effective contribution and to obtain tangible results. What is often needed is not more but fewer experts who would remain for a much longer period of time so as to do a more efficient and effective job of work. Experts chosen as planners and economists for the preparation of national plans are often oriented towards problems of macro-economics whereas the majority of projects are based on micro-economics. This fact should be taken into consideration when choosing experts to serve as individual advisors or as members of an advisory team. As far as external assistance towards the planning and building of systems of formal education is concerned, success often depends on the degree to which expertise and governmental authorities can emancipate themselves from foreign models and attempt new approaches. Because the expert in educational planning too often considers the educational system of his own country superior to that of all others, assistance in educational planning should be given by multinational teams.

26. The first report underlined the importance of the requirements of manpower as a basic element in the development of the educational system (E/4353/Add.1, para. 103). However, the statement that manpower and educational planning must be

seen as an integral part of over-all development plans, while appropriate, should not be interpreted in static terms. The concept must give expression to the creative elements of a dynamic employment policy as indicated in Economic and Social Council resolution 1274 (XLIII). A full expression of this concept should include the conviction that manpower policy and educational planning programmes can make a distinct contribution to economic growth as well as to the achievement of social goals. It would, therefore, be useful to devote a significant number of studies as well as pilot programmes, to be undertaken by organizations of the United Nations system, to the significant aspects of the relation between manpower and economic policy as applied in developing countries.

27. Very little is still known about the relationship between general education and economic achievements, and practically nothing so far about efforts to quantify such a relationship which would stand up to objective criticism. In practice, this means that a greater part of the educational sector cannot be planned on a basis of economic requirements. In the economically developed countries, those forms of education which, at least to some degree, can be associated with certain professions and occupations - vocational education, technical education and higher education - are usually allowed about 15 to 25 per cent of the resources of the educational sector. But even in this field, there is uncertainty regarding the extent to which effective use can be made of manpower projections for quantifying the capacity of education. If these projections of manpower requirements are to be useful, they should cover a longer period than they tend to do at present. It is doubtful, for instance, that many of the engineers who are being trained today, especially for work in the developed countries, would be suited to the requirements of 1980. The relevance of various forms of education to the problems that are being confronted today is an important issue in the developed countries, and is an issue of even greater importance in the developing countries where uncertainty still exists regarding the kind of education that is relevant to their development needs. Consequently, ten to twenty year forecasts of the requirements of specific categories of labour in the developing countries might for the reasons given have only limited value. This is not to say that the analysis of the requirements of labour is of no value at all in relation to the educational systems of both the developed and developing

countries. What should be emphasized is that the qualitative aspects of the requirements of education in many cases are of much greater importance than the quantitative ones on which present projections are based. This would apply particularly to developing countries. On the basis of this observation, it might be advisable to reconsider this aspect of the report and its relation to the programmes of the United Nations organs in this field. There is an inherent danger that without the possession of basic knowledge of the situation here discussed, aid may be offered which in fact fails to benefit the development of the educational sectors of the countries concerned.

28. The first report recommends that international organizations prepare medium- and long-term regional or subregional indicative plans of manpower requirements and employment targets based upon national data to serve as guidelines for international action in developing regional or subregional training and employment programmes (E/4353/Add.1, para. 121). These proposals have merit, but should be applied selectively. Such plans may be appropriate to regions or subregions which have a reasonable degree of homogeneity in the economic, social and human resources structure, but probably are not useful otherwise. Furthermore, such plans and programmes are not likely to be implemented unless there is a willingness on the part of the countries involved to co-operate. In addition, there may be countries which are so large and complex or where there is a regional political disaffection in which even national indicative planning is impractical. Some countries would probably argue for a considerable degree of decentralization of this type of planning and programming. Similarly, with regard to the recommendation for an institutional framework for human resources development planning (E/4353/Add.1, paras. 122-125), while the general patterns suggested are sound, the experience of some developed countries would suggest caution in applying even general patterns in all developing countries. One Government even suggests that large countries with a complex institutional framework would probably find it more appropriate to delegate most of the human resources development planning and co-ordination to states, provinces and other subdivisions or in some cases to non-governmental institutions. This would mean that planning would involve local government bodies, rural institutions, co-operatives, trade unions, employer's association and other local organizations.

29. While the preparation of medium- and long-term regional and subregional indicative plans of manpower requirements (E/4353, para. 66 (b)) would be of value, it was stressed that priority should probably be given to using the resources in talent and finances of the organizations concerned at the grass-roots level. At this level, one area that would require urgent attention would be the compiling of essential educational statistics on school attendance, drop-cuts and other forms of wastage to be made in co-operation with the educational authorities. Another area would be the compiling of employment statistics by means of surveys of manpower and the labour force, including the employment possibilities of university graduates to be made in co-operation with labour or manpower authorities. Any survey of the economic, educational and training resources should show not only a country's economic possibilities but also the existing educational and training facilities capable of improvement and extension. It should also show whether the potential exists for providing human resources to meet future needs. It would be particularly useful if studies were made by the Committee for Development Planning of the problems involved in making maximum use of medium- or long-term national economic development planning in terms of the need for the more efficient utilization of the available labour force. These studies should sum up the experience gained to date in the United Nations family. One Government suggested that a set of specific recommendations on the subject relating to the situation in Latin America be elaborated, with a view toward the formulation of a socio-economic development policy that would ensure the full utilization of human resources. These recommendations should be the subject of a full discussion in which the representatives of the United Nations, Governments, the productive sectors, universities and other development agencies could participate, in other words, all agencies that in one form or another are involved in decisions which could lead to solution of the problem would participate.
30. The link between professional skills and education is one of the problems that should be studied in detail. The tentative summary evaluations made at Organisation for Economic Co-operation and Development (OECD) meetings reveal the difficulty of finding an appropriate methodology by which an adequate table showing the relationship between professional skills and education could be drawn up. Consideration should be given to the question of how to direct manpower and

education in systems based both on private enterprise and a free economy as well as on a centrally planned economy.

31. It is well known that the developing countries are handicapped by the lack of adequate and comprehensive data for human resource planning (E/4353/Add.1, paras. 110-112). In many cases, some Governments observed, developing countries have to draw up their medium-range economic plans without even an up-to-date census. Without the availability of recent census data to give an over-all picture of education and employment conditions to measure the effectiveness of programmes, it is not surprising that educational and manpower plans and forecasts have in so many cases failed to achieve their goal. As long as the collection and analysis of manpower and other data are primarily a national responsibility, considerable time will elapse before developing countries can have a strong and sound information base for purposes of planning. In the interim, data deficiencies will have to be made up by adopting suitable assumptions based on international experience. International organizations should give more importance to the study of country experience on a regional basis so as to evolve operational norms, meaningful patterns and occupational guidelines to supplement the data sources of developing countries. This requires not only a much greater effort in research but also a substantially increased emphasis on international communication and the transfer of information.

32. In the field of methodology for the assessment of human resources requirements (E/4353/Add.1, para. 115), certain Governments and institutions have made some useful studies, both as applied to the needs of the developed countries concerned and as related to the conditions of the developing countries. Comparative studies of the methodology of manpower forecasting in different countries on the basis of inter-country experience should form one of the high priority projects in this field. The immediate problem of the deficiency of manpower data and heterogeneity of concepts can largely be met on the part of the United Nations and the specialized agencies by undertaking a concerted, comprehensive programme of country studies and regional manpower strategies. One developed country, in its comments, indicated a desire to participate in any fruitful joint endeavour in these fields under the sponsorship of the United Nations system. For the same reason, it was stressed that international

organizations should move away from the global approach to the more practical case studies of human resources development strategy in developing countries in an effort to evolve policy guidelines for action on a regional basis. The preparation of regional manpower planning should thus become an operational exercise, in which the active participation of the Member States should be invited at appropriate stages and the close association of personnel working in this field in different countries should be ensured.

33. Paragraph 8 of the first report identifies the crucial areas in which there is need for concerted action by Members of the United Nations family (E/4353). These conclusions, it was observed, should be made the basis of an action programme for the totality of efforts on the part of the international organizations in the field of human resources development. This concerted international action, to which the Secretary-General's first report attaches so much importance should not, however, be taken as a panacea. Moreover, while the effect of this approach can be to minimize duplication and waste, it may sometimes inhibit action or add to costs. At the same time, concerted international action which implies common objectives, a common framework for action and common working tools, can in many ways help to solve problems which are complex in themselves and consequently exceed the competence of a single agency. It is also essential that priorities of action be established, particularly for the developing countries in relation to their over-all national development plans. Moreover, the intensification of the efforts of United Nations agencies is needed to maximize the effectiveness of United Nations programmes.

II. DEVELOPMENT OF HUMAN RESOURCES

34. The first report, it was observed, correctly gives major emphasis to education and training in relation to the development of human resources. However, the importance of other areas, as the report observes, should also be recognized. The right to education as a means for the development of human personality, which implies that the development of related areas such as culture, health and housing are also essential aspects of this process and was proclaimed in article 26 of the Universal Declaration of Human Rights. Education and training policy in developing countries has often been insufficiently related to real needs, and more often oriented to goals that are not within the possibilities of realization. Therefore, full support is given to the emphasis placed in the first report on the need to adapt education systems to the needs of developing countries. An important requirement is a direct relationship between education, on the one hand, and employment possibilities and other social prerequisites to raise levels of living on the other.

35. The first report notes that a thorough reorientation of the curricula in most developing countries would be desirable if they are to be effectively adopted to local conditions (E/4353/Add.1, chap. II). However, it was stressed that merely adopting the teaching and training methods and curricula being used in advanced countries would not be likely to bring about immediate solutions which developing countries so urgently need (E/4353/Add.1, para. 145). New relevant methods related to local conditions must be devised to meet specific needs. Another aim should be to promote programmes with a multiplying effect such as teacher training and the training of instructors and extension workers.

36. While pre-school education is desirable (E/4353/Add.1, paras. 146-148), the question was raised whether most developing countries have the means to provide it and whether there are not more urgent priorities. The school should relate its main educational goals with those set forth in the country's economic and social policy. Primary school education therefore should not be separated from the life and activities of village or urban community but should be integrated with them through both the programme of instruction and the activities of the school. The teacher should be instructor as well as rural development worker, while parents should be closely associated with school activities, and students should be

involved in agriculture or other local activities. At the secondary level, education should not be removed from the urban and rural activities of the region. In teaching language and science, for instance, examples should be taken from the environment and health teaching should be included at both the primary and secondary levels of education. The training of the school teacher should be appropriate to his new functions and the selection procedure of pupils for training should be revised and brought in line with needs and aptitudes rather than based exclusively on scholastic considerations. In countries where elementary and secondary education and training are carried out in schools under both State and private sponsorship, co-ordinating arrangements should be made to orient the curriculum and programme of these schools to the needs of the country. This co-ordination could probably be made under the supervision and leadership of the school system of the State.

37. Science teaching runs into numerous difficulties in the developing countries, particularly because of environmental reasons. Most children are brought up in a non-technical world which poses for them difficulties in understanding what they learn about science. The essential need here would be to strengthen the students' very inadequate knowledge of basic mathematics and endeavour to get them to understand the role of science in their environment. Technology could undoubtedly be used for this purpose to enable the children to acquire logical methods of analysis.

38. The important point is that the education programme should enable the student after leaving school to be absorbed into the economic and social life of his society. As the report states in paragraphs 132-134, there should therefore be a balance between the education and the training programmes (E/4353/Add.1). A short-term period of instruction, for instance, extending over four years and leading to rural community development and pre-vocational training would probably assure good developmental results whereas a longer period of instruction which leads nowhere would probably constitute an economic and social loss to the country. The secondary school programme should provide vocational guidance as well as training in a vocation for probably as much as about 50 per cent of its enrolment. Vocational guidance geared to both the students' inclinations and the country's requirements should help to prevent unemployment for some categories of qualified

cadres which is being experienced by some countries. Similarly, universities and colleges should devote a greater part of their programme to preparing students for technical occupations that are more economically productive to the country. This would help considerably to reduce and hopefully stem the tide of emigration of highly trained personnel.

39. Development is essentially an activity which concerns youth as well as adults (E/4354/Add.1, paras. 286-298). Training for young men and women in developing countries should be carefully tailored to actual or potential employment opportunities. Nowhere is this planning more necessary than in rural areas, where educational and training programmes need to be reoriented towards the needs of rural development and the agricultural economy. The provision of suitable training for young people will be necessary not only to give them the relevant skills, but also to train them in semi-skills that would involve a minimum of training but at the same time would contribute to nation building. Stress is sometimes given to the problem of choice between the requirements for long-term and short-term training, but the urgent need is often for retraining. What is involved is not a question of distinguishing between two types of training, but that of recognizing the need for long-term training in the early years and of accelerated training during the vocational period.

40. In relation to education and training programmes for adults, it was observed that a distinction should be made between the provisions necessary for adults in rural areas as against those required for urban dwellers. In urban areas, one Government pointed out that literacy is often necessary for integrating the worker into the industrial enterprise. In rural areas, however, this Government argued that it did not seem useful to orient the education of adults toward literacy training. What is needed here is community development and agricultural extension programmes. Another Government however took the point of view that an important first step in agricultural production would be to educate the farmer, and in most developing countries, a useful approach would be to initiate a programme of functional literacy. This would be linked to the farmer's practical activities and later extended beyond the scope of his agricultural interests to other areas of his socio-economic life. The next step would be the use of village advisers, as in India, as well as extension workers, and model farms for demonstration purposes.

41. The eradication of illiteracy poses problems of such scope that this goal should probably be considered a long-term objective. Governments should draw on the experience of other developing countries with literacy programmes, as well as on those of UNESCO, which has already achieved some successful results in its functional literacy programmes. Interesting work has also been done in adult literacy in the vernacular languages. Literacy programmes that are carried out in the vernacular have the advantage of benefitting the majority of the rural population. This operation might, of course, require linguistic research. It might also call for the recruitment and use on a large scale of young intellectuals. Their use in literacy programmes is having encouraging results in some countries and should be tried out in others. Employers, especially in industry, should be required to arrange, where necessary, functional literacy classes for their employees. Finally, it is essential that basic literacy classes be followed through by a continuing educational programme to ensure that the students do not lapse into illiteracy.

42. To overcome social rigidities that retard development, the first report has suggested basic education as a vital instrument of change (E/4353/Add.1, paras. 198-202). However, this instrument, especially if related primarily to the school system, might be only one of several means for such transformation. Moreover, in many countries this may not be the principal means. It would also appear that more information is probably available about the most effective means of communication in the rural areas of developing countries than is indicated in the report. Research carried out recently in several developing countries suggests that there may be an effective combination of mass media, "change agents" and community forums which together provide a more effective means of communication than any one of these alone.

43. In discussing teaching media, which the first report described (E/4353/Add.1, chap. IV), consideration must also be given to their possible role in a revised educational system. It was pointed out that audio-visual media are not an end themselves. The challenge is to adapt them to methods and techniques of instruction in relation to the environment. Audio-visual media should, therefore, be conceived as a new instructional technique, but not as a technique that would necessarily be superimposed on traditional methods. For example, the introduction of audio-visual

media would have no value for training in the language of instruction, which should be based on conversations between the teacher and his pupils, if there had been no change beforehand in the traditional book method. Films, language charts and television cannot be efficiently used unless they are integrated in a new method of instruction. Moreover, to be effective, a multidisciplinary team of teachers, psychologists and audio-visual experts, working on the spot should contribute to the over-all transformation of the methods of instruction.

44. It is known that the level and quality of teaching methods vary considerably between countries. Efforts should be made at levelling out these standards and where necessary to upgrade these methods. In particular, up-to-date teaching methods should be applied to the teaching of languages, mathematics and science subjects. This would require a programme of research, development, testing and application of teaching aids and methods as well as appropriate organizational arrangements to carry out these functions. Inter-agency co-operation is required for developing teaching methods and procedures, curricula content, and teaching media and aids to overcome the barriers of traditional standards. Although most of these traditional standards related to teaching methods and curricula have been rendered obsolescent, most developing countries have continued to follow them with little, if any, change. The objective of international co-operation in this area should be to minimize the burden on developing countries with regard to experimentation both in terms of time, as well as investment in money, materials and manpower. This would strengthen their efforts to improve the quality of manpower training programmes.

45. Several attempts have been made in recent years to develop and expand facilities for agricultural education and training in most developing countries. However, considerable confusion regarding the aims and objectives of agricultural education appears to permeate recent thinking in this field. As a result, there has been a great deal of wastage on investment and frustration among agricultural workers, technicians and scientists - all of which has been detrimental to agricultural production programmes. Clearly a great deal of international exchange of experience and ideas is called for in this area and the United Nations agencies concerned have a vital role to play in developing positive directives for the growth and stimulation of agricultural education and training. There have been shortcomings in rural manpower assessment in relation to training for agriculture

and related activities as far as developing countries are concerned. One of the limitations of most of the studies in this field is that they fail to take into account other occupations that rural people are likely to enter. The tendency has been to concentrate on the training of agricultural technicians primarily for employment in government extension and research. It might be better to begin the assessment by studying the people and their potentialities, next try to discover the skills which farmers and farm workers urgently need and then determine the best ways of imparting these skills. A close relationship exists between education and training on the one hand and production techniques on the other. Properly applied, suitable production technology will also encourage further education and training.

46. The disparity in living standards between city and country and the disparity between the tertiary and the primary sectors have far-reaching effects on life in rural areas, consequently, greater emphasis should be placed on this problem in the report. The education system should aim at improving rural standards rather than at perpetuating this imbalance. One of the remedies for these conditions is perhaps rurally oriented instruction of the kind given in rural community development programmes in some French-speaking African countries. In these programmes, an attempt is made to arouse interest by modernizing rural skills and the rural environment, by instilling a liking for technical activity and manual labour, and by developing a sense of civic responsibility. A primary aim of this rural oriented programme is to encourage young people to remain in their rural habitat. Perhaps adopting this approach, especially through the medium of the schools, will stimulate the desire for change in the rural population.

47. Several developed countries in their technical assistance programmes have been placing major emphasis on education and training. The proposals to improve the effectiveness of international fellowship programmes (E/4353/Add.1, paras. 182-189) are timely. It has been pointed out in the first report that the utilization of the skills of fellows on returning to their own country leaves much to be desired, and that because students from developing countries sometimes have difficulty in adjusting to a new environment, the maximum benefits might not be obtained from their training abroad. One Government suggested that perhaps there is need to revise the fellowships programmes operated by organs of the United Nations to ensure that the subjects offered to fellows meet the urgent needs of

their country. In view of the growing financial difficulties for some countries, including problems of foreign exchange, it would be of great help if more fellowships and scholarships were offered by both developed countries and the United Nations family. Governments should also make appropriate arrangements for their fellows, ensuring that adequate allowances are provided to meet their needs and sufficient time allowed to benefit from their studies. For instance, students who are granted a six or nine months fellowship to take part of a two-year course, as experienced by some fellows, are not likely to gain maximum benefit from their studies.

48. There is general agreement regarding the stress in the first report on the need for balance in the educational and training systems (E/4353/Add.1, paras. 132-145). In technical and vocational education, the report has made significant recommendations for improvements in the organization, establishment and operation of appropriate and efficient vocational and technical education as well as training facilities both in school and out of school. The aim would be to strengthen the nation's capacity to accelerate economic and social development. It is true, some Governments observed, that general education in the strict sense should not be the essential factor in technical education, which should primarily consist of training for a trade. But, as a general rule in most countries, a graduate in technical education is not used with profit by an employer immediately after his training. Usually, his technical education is but a first phase followed by a period of training for a specific type of work. The important thing is that the graduate with a technical education should be able to learn his trade rapidly or by retraining, learn another job if he does not find employment in his original trade. Thus, his ability to adapt to the technical world is what should be developed by technical education.

49. The introduction of technology in general education would seem to be an effective way of giving students an awareness of the importance of skills in the world today. One Government could not agree with the statement in the first report that the problem of relating technical education and vocational training to the needs of the economy is more acute in industry than in agriculture (E/4353/Add.1, para. 157). It was suggested that the teaching of technology in developing countries should not necessarily be oriented towards industry as is

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usually the case in developed countries. Technology oriented solely towards industry in developing countries could have the effect of alienating the students from their environment. Therefore, a traditional or artisan type of technology could be taught in rural areas oriented, where appropriate, toward such activities as traditional building and construction, weaving and fishing equipment. In the towns, technology would be taught in skills such as those related to the automobile and electrical industries.

50. It is an accepted fact that co-ordination between technical education and vocational training is essential and that continual study of the question is required. What is urgently needed is action by Governments concerned to achieve co-ordination between the different ministries responsible for training and maintaining close communication with industry and business. The situation requires modification of the system for the selection of students and providing proper orientation of courses to offer training in practical skills suitable especially for industrial and commercial life. In the section in the first report on high-level personnel education and training (E/4353/Add.1, para. 167), the emphasis on public administration is appropriate, but it is also important to include the training of high business and industrial management and the training of leadership for such organizations as trade unions and co-operatives. Experience has strengthened the belief that each country must play the major role in the task of training its national personnel by using its own resources and efforts. Each country must, therefore, establish its own priorities in the light of its needs and within the context of its economic and social plan.

51. The first report enjoins the ILO, UNESCO and UNIDO to promote in-plant training and closer co-operation between industry and technical schools and training centres (E/4353/Add.1, para. 259). The experience of developed countries in this field should be useful to the developing countries especially where low-cost methods of training have been tried out. The trend among United Nations agencies, especially the ILO and UNESCO, towards co-ordination between vocational and technical education deserves strong support and the research initiated by these two agencies on the planning and organization of vocational and technical training should help in this respect. Experience and research knowledge have also been acquired in this area by developed countries, and the United Nations organs concerned may find it useful to consider some of these experiences in their planning of such programmes. The suggestion in the report to hold a conference on the subject is considered useful and should be given further consideration.

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III. UTILIZATION OF HUMAN RESOURCES

52. The utilization of human resources is probably an area to which insufficient attention has been given in the past by the organs of the United Nations system as well as by developing countries. The emphasis given to this question in the report is therefore timely. One reason for its importance is because in this area the highest cost-benefit ratios of expenditure on public programmes in relation to both individual and social benefits can be achieved. It could be that full attention to relatively short-term efforts to improve utilization will help significantly toward solving long-term problems. This is the case partly because of the probability of gross miscalculation in long-range educational programmes related to the forecasts of manpower requirements, and partly because of the resulting waste of money and human talent. The United Nations agencies concerned with this question are, therefore, strongly urged to place very high priority on studies and appropriate measures for the improvement of manpower distribution and utilization in developing countries.

53. The first report has correctly stated that the most crucial aspect of the whole problem of agricultural and rural development is that of mobilizing and making effective use of the vast potential of human resources (E/4353/Add.1, paras. 197-198). Most developing countries at their present stage of economic development are basically rural and agricultural, and agriculture will for a long time to come continue to be the backbone of their economic structure. Agricultural and rural problems should, therefore, be given high priority in the development programmes of these countries. However, as the report observed, it is to be deplored that low priority is given to rural development by several developing countries.

54. Since the promotion of agriculture is probably one of the essential conditions for achieving progress in developing countries, it was suggested that perhaps more attention should have been given to the rural sector in the proposals submitted in the Secretary-General's first report. Industrialization, on the other hand, one Government observed, would seem to be overstressed (E/4353/Add.1, paras. 232-235). No doubt should be left in the reader's mind, it was stressed, that the report is not advocating industrialization of the developing countries, modelled on the developed countries, or that the rural

sector should be primarily a reservoir of manpower for new industries. Differences in environmental and socio-economic conditions as well as in stages of agricultural development in developing countries will call for different approaches to achieve the most effective use of manpower in these areas. In countries where primitive agricultural methods are widely used, the first task should be to change the tradition-bound attitudes and practices of farmers to more progressive ones. If traditional forms of collective farming or a nomadic type of life is practised, the positive aspects of these activities should be identified and utilized where possible. In areas where the agrarian structure is conducive to the introduction of progressive methods and techniques, the use of social and economic incentives are likely to contribute to the increase and improvement of the general level of qualified manpower and the use of production techniques. The modernization of agriculture through mechanization, where appropriate in partial stage, should also be encouraged. In societies, where the need exists to increase the level of production so as to create a market for trade, it will be necessary not only to persuade and instruct farmers to adopt more progressive production methods but also to stimulate their desire for consumer goods, to acquire more cash for spending.

55. The problem of rural unemployment and underemployment especially among youths calls for urgent action. The successful development of the rural sector will depend as much on action to improve the standard and quality of rural life as on the provision of productive employment. The problem is also related to the need to increase the world's food production and to utilize the land as productively as possible. This makes it doubly important to give increased attention to the agricultural sector and to the rural environment. For some time to come, rural development schemes will be of paramount importance in developing countries. It would, therefore, be useful to supplement the report with proposals for practical measures, in both the national and international contexts, designed to reform agriculture, improve its structure, promote the utilization of other potential resources, produce direct improvements in the living conditions of the increasing rural population and make rural areas more socially liveable.

56. There is strong support for the statement that the problems of agricultural and rural development are often those of the barriers of understanding and motivation rather than of technology. There are also the problems of outmoded

institutions. An important strategy for the better utilization of human resources, therefore, would be to bring about radical institutional changes, particularly agricultural reforms. The gradual introduction of modern technology in agriculture and industry coupled with research should follow these reforms. This kind of programme would require international co-operation under the sponsorship of the United Nations and could be a most effective form of technological assistance to developing countries. Discussions in various United Nations bodies have already shown the extent to which the economic growth of the developing countries hinges on seeking solutions to these problems by adopting measures to bring about structural changes and innovations, such as planning, industrialization, modernization and development of agriculture, and changes in the system of international trade and financial relations to give greater benefits to the developing countries.

57. In most developing countries, the low social status given to farmers does not provide the incentive for progress. Moreover, farm labourers working on estates or the small tenant farmer often are deprived of opportunities to improve their yields through instruction and the application of progressive methods. The low income received, the burden of rent and the insecurity of tenancy also have frustrating and discouraging effects on their efforts. Where these conditions exist, to put new hope in the farmers, there will be the need to introduce land reform as well as to establish co-operatives to facilitate the introduction and use of modern agricultural equipment.

58. The first report estimates that nearly two thirds of the employment in the processing industry of the developing countries is agriculturally based (E/4353/Add.1, para. 278). This means that there is the need to establish supplementary centres of growth in the agricultural regions to balance the concentration of industries in the cities. The report further argues that the utilization of rural manpower as well as of local raw material in rural areas for these industries would contribute to a more balanced distribution of labour opportunities. While the need does exist for maintaining a balance between the growth rate of industry and that of agriculture, one Government argued that the solutions proposed such as industrial decentralization and the setting up of small and intermediate scale industries in rural areas cannot always be realistically

applied. If such programmes are to be effective, a fairly high level of development must already have existed.

59. The slower growth of employment in industry as compared with the total growth of industrial production is indicated by United Nations statistics which show that 7 to 8 per cent of the post-war growth of industrial production corresponds to only 2 to 3 per cent of employment growth. The first report also states that the introduction of capital intensive technology has greatly influenced this situation (E/4353/Add.1, para. 234). It should, however, be remembered that the growth of industry also increases employment opportunities in other sectors as well, such as the building industry, the services industry and agriculture. For many years, there has been much controversy on the use of labour intensive technology as a means of increasing employment levels. Some of the issues involved have been summarized in the first report. The rapid growth of industrial production is associated with progress in technology. There are those who advocate maintaining or returning to a system of labour intensive technology in order to multiply employment opportunities. However, this approach is not likely to lead to improvement in the employment situation. It might be appropriate, however, in certain stages of development in some industrial fields, to adopt a system of partial labour intensive technology. There is still a lack of definite studies and experience on the feasibility of a system of labour intensive technology in developing countries. The pooling of the experiences of the United Nations organs concerned as recommended in the report could be a useful first step. The available information is inconclusive since much of the opinion on the subject is based on superficial observation or personal predilection of economists and other experts in the field. This subject, along with other elements in the field of employment creation, should be made an area of high priority for research and consultation by the United Nations system.

60. The first report dramatizes the problem of migration to urban areas, indicating that this is to a large extent a transfer of poverty, underemployment and poor living conditions from the rural areas to the cities (E/4353/Add.1, paras. 232-235). It further emphasizes that the flow of migrants has far outpaced the capacity of industrialization to provide employment. The tendency of industrial employment to be capital intensive with increasing labour productivity accentuates these problems. Despite several significant recommendations which the study makes

in this area, it is felt nevertheless by one Government that the first report probably has failed to provide the basis for a coherent policy on the part of developing countries to cope with the situation. The section on training for industrial and urban development with the emphasis on improving skills in keeping with rapid technological change would have the effect of sharply increasing labour productivity, and in the short run, reducing manpower requirements. It was noted that other sections of the first report, such as that on location of industry and choice of technology, give considerable weight to employment considerations and utilization of surplus manpower from rural areas. Although both approaches are required in most countries, consideration must also be given to questions of priority and the allocation of scarce capital and other resources.

61. Rapid population increase coupled with longer life expectancy have exacerbated the unemployment situation. The continuing non-utilization of much of the labour force will result in serious economic loss as well as the lowering of living standards. The United Nations proposals to improve the employment situation are concerned primarily with programmes at the local level such as community development and self-help schemes (E/4353/Add.1, pp. 97, 98). However, the use of these labour intensive methods to increase employment of non-utilized manpower are measures which in most cases would postpone rather than solve these problems. As a long-term measure to cope with the population increase, it has been suggested that attention should be given to family planning. However, it has also been pointed out that in some developing countries the problem is not over-population but population that is too widely dispersed for effective utilization. The report gives the general impression that community development ought to be regarded as one of the many instruments that national Governments and various international organizations may use for development purposes (E/4353/Add.1, p. 101). But community development ought to be regarded as an important development technique. It is a means whereby the actual life of the country may be directly influenced, the objectives of development may be understood more easily and the participation of the population may be encouraged. Often the goals of development seem unreal within the framework of a national plan. However, community development can also help to guide the process of development more effectively, through various intermediate stages to its ultimate objectives.

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62. The first report provides an excellent summary analysis of under-employment and under-utilization of rural manpower and of schemes for the solution of these problems (E/4353/Add.1, pp. 85-91). However, few developing countries have been able to mount programmes of sufficient diversity and magnitude to make a major impact on these conditions. Probably what is needed is a number of pilot programmes and specific comparative studies to indicate what are the most feasible and effective types of programmes.

63. Attention is given in the first report to the need for broadening the range of women's participation in development and for the assessment of future employment prospects for girls on reaching maturity. It also recommends the strengthening of measures for women's education (E/4353/Add.1, pp. 85-91). One country observes that although the laws of most countries recognize equality between men and women, in practice equality between the sexes does not exist in many parts of the world. The equality of women with men should not only be guaranteed legally and constitutionally but should also be supported by opportunities for economic development. Some Governments have demonstrated the importance they attach to the education of women and girls, and the record of some developed countries in broadening the occupational base for women's employment opportunities is impressive and could offer guidance to other countries. Financial support is also being provided by some developed countries for several educational programmes for women in developing regions such as Africa. Several of these programmes are being operated under the auspices of the ILO, FAO and UNESCO.

64. In some developing countries, it was pointed out, women constitute an even more active part of the labour force than do men. A growing number of countries realize that their development effort will stand a poor chance of success unless they mobilize all their intellectual and productive potential resources. About one half of the resources consist of women. Every country should, therefore, take the necessary measures to enable women to obtain through education and training, the opportunity to develop and use their abilities to the full.

65. The emphasis in the first report, however, would seem to be on the education of women for regular employment. In the opinion of one Government, in countries in which women do agricultural work in the fields, it would be important and

essential to teach them better agricultural techniques. Another observation was that in countries where substantial unemployment exists, to make the training of women for employment the primary aim of education for women might be a questionable goal. In a number of countries, especially those with limited educational facilities, a substantial part of the training and education of children is carried out in the family by women. This would mean that the housewife could play an important role either as an agent for change or as an obstacle to change. In these circumstances, the main argument for strengthening the education of young women and encouraging courses in home economics would be to prepare them for their role as educators. In many developing countries, this function might be much more important for the social and economic development process than the increased contribution of women through regular employment.

66. Some developing countries are making efforts to mobilize and study the problem of their surplus rural manpower. Valuable experiences in this field have also been obtained by developed countries. The efforts of these countries, developed and developing, could be greatly strengthened if supported by a concerted and systematic interagency programme. This would enable the pooling of knowledge and resources to facilitate an integrated approach to the problem. Interagency programmes in this area should receive high priority in the United Nations Development Programme in the coming years. It would also be useful to consider the proposal to organize in a broader context an exchange of views and experience on the utilization of the labour force possibly in the form of an international conference under United Nations auspices. The organizations of the United Nations system concerned, especially the ILO, are strongly urged to place very high priority on various studies and measures for the improvement of manpower distribution and utilization in developing countries. The Secretary-General's report should be only the beginning of a thorough examination by the United Nations system of the problem of human resources. Periodic examinations should be carried out in the light of new factors that arise with a view to formulating and implementing proposals for more energetic concerted action by the United Nations system.

IV. DRAIN OF HIGHLY TRAINED PERSONNEL FROM DEVELOPING COUNTRIES

67. The brain drain, some Governments observed, is not a recent phenomenon and effects not only the developing countries, but the developed States as well. Only in recent years, however, has the problem become extensive and its ^{well} ~~well~~ ^{many} ~~many ^{of many} ~~of many~~ been internationally recognized. This means, not only that the efforts of many countries to train urgently needed national cadres are wasted, but also that these Governments are deprived of a major element of their creative potential and a basic factor in their struggle to overcome underdevelopment. The seriousness of the problem, especially the concern of the developing countries, has been well demonstrated by the figures given in the first report (E/4353/Add.1, pp. 112-114) and the conclusions drawn from them. Therefore, the counter-measures suggested are well worth considering.~~

68. At the same time, it was pointed out by one Government that some of the figures cited to illustrate the dimensions of the problem should be accepted with reservation because, as the first report noted, the available data are inadequate in terms of quality and quantity and are also fragmentary and scattered. Moreover, the loss of manpower, sustained by some countries as a result of the brain drain is neither absolute nor irreparable since, as the first report observed, to a certain extent, the loss is compensated for by the inflow of technical skills from abroad provided through bilateral and multilateral technical assistance. For this reason, the figures advanced by several writers in attempting to evaluate the benefits to the receiving countries should be viewed with caution. This places on the United Nations system the urgent task of giving the necessary assistance to collecting the required data as a prerequisite for an objective analysis of the problem.^{5/}

69. Education and training in developed countries for certain categories of students from developing countries has for a number of reasons been found to be both expedient and necessary. There are advantages and disadvantages to the practice and more studies on the subject from different angles are needed. Despite the problems resulting from this training arrangement, for some time to come, the need will exist for the training abroad of several categories of high level personnel from developing countries.

70. The reasons which impel highly trained personnel from developing countries to settle in developed ones are practical to improve their material situation;

^{5/} This was requested recently by the ILO Advisory Committee on Employees and Intellectual Workers in its resolution No. 59, Geneva, December 1967. /...

vocational to improve their skills; and human to put an end to intellectual isolation. To these may be added in some cases, political reasons. While probably a few developing countries, like Turkey, have taken steps to control this exodus, it appears that most countries affected have not yet taken action on the problem. The problem calls for short-term as well as long-term measures and for national as well as international action. At the national level, developing countries affected could request help inside or outside the framework of technical assistance to set up programmes and educational institutions to train nationals locally and to plan programmes for administrative co-ordination. Other suggestions include the twinning of institutes for teaching or research in the industrialized countries with those in the developing countries and the renewal of contacts between trained persons from the developing countries with high-level personnel from the developed countries. Educational institutions in industrial countries serving foreign students from developing countries should devote more attention than is the general practice to specializing in the problems of the developing countries. In so doing, the teaching programme for foreign students as well as for their own experts for work overseas would be improved. At the same time, educational institutions in developing countries should instill in their students patriotism and the moral obligation to serve their own country. The adoption of measures that would reduce considerably the number of students from developing countries studying abroad could have the serious effect of isolating these students and in turn the developing countries concerned from the mainstream of several of the advancements that are in progress in their field of study. As recommended by the ILO Advisory Committee on Employees and Intellectual Workers, developing countries should adopt appropriate measures with regard to compensation and careers favourable to persons with scientific and technical training. Highly trained persons who could not immediately find employment should receive a salary from their Government to retain them until such time that their services could be used. It was also stressed that it was the responsibility of developing countries to promote better manpower planning and utilization of human resources.

71. There is particular interest in the idea of joint reappraisal of interagency fellowship programmes (E/4353/Add.1, paras.182-189), and it would be useful if

this assessment would include an analysis of the relationship between the fellowships provided by the United Nations bodies and those provided through bilateral programmes. Some developed countries have expressed the desire to work with the United Nations agencies in improving such programmes. Through such co-operation, it is hoped that the Governments of developed countries would be able to work out with international agencies and developing countries more satisfactory mutual approaches for minimizing the alienation of trainees from their home country and to offer assurance that on completing their training, students would be repatriated to return to a relatively attractive position.

72. Most countries, it would appear, are in general agreement that some form of international agreement should be drawn up on the problem of the brain drain. There have been divergent views, however, regarding the kind and degree of restrictions that should be placed on the persons intending to emigrate. The more extreme measures which are advocated by some Governments would support international agreement to prevent or limit the permanent employment of highly trained skilled manpower from developing countries by developed nations. Students from developing countries after completing their training abroad would not be given work permits by the developed countries in order to ensure their return to their country of origin. Where work permits were given to such students, a time limit would be set on them. The industrialized countries are sometimes reproached for not adopting stern measures to restrain or halt the brain drain and the suggestion has even been made that compensation should be paid by the receiving to the deprived countries for the loss of their trained personnel. There might, however, be serious objections based on social and economic considerations and even on moral and legal grounds for adopting extreme measures in attempting to solve the problem.

73. The argument against a rigid system of restrictions points out the inherent dangers morally and legally as well as economically and socially to the individuals concerned and to the maintenance of satisfactory relations between States. Furthermore, without minimizing the seriousness of the loss experienced by the developing countries, it is a fact that the mobility of workers has many advantages. Consequently, measures to avoid the undesirable results of such emigration should be limited to those which are constructive in nature and which are directed towards the elimination of the causes of emigration. Any

consideration of restrictions on the freedom of movement or recruitment should be contemplated with caution and should be based on more basic research and study.

74. It was suggested by one Government that clauses favouring various categories of graduates contained in the immigration laws of certain developing countries go beyond the liberal standards followed in this respect by most developed countries. Consequently, while the developed countries should not in any way hinder the entry of trained personnel, it is also felt that neither should they adopt measures to encourage their coming. Legal enactments, reinforced by culture and traditions, rather than by self-interest, would deter several developed countries from resorting to authoritarian and discriminatory measures forbidding the prolonged residence in their country of trained persons from developing countries. They would more likely be opposed to the introduction of special regulations against certain categories of foreigners, solely on the grounds that they were more highly educated than others. It would probably be equally difficult, in most of the countries concerned, to make abrupt and far-reaching changes in their current immigration laws and regulations in order to prohibit the immigration of graduates. Furthermore, it would be a serious repudiation of the spirit and letter of the Universal Declaration of Human Rights in which the right to emigrate is so solemnly proclaimed to oppose the free circulation of a particular category of persons. As another Government observed, the problem is made more difficult to solve for the simple reason that individual human beings are involved who are not always willing to renounce their claims to be allowed to exercise some influence over their own fate. As alarming as the trend in the brain drain might be, there would seem to be little justification for hasty action in this field until more information is available.

75. It is hoped that the studies being undertaken on different aspects of the problem by the United Nations organs concerned would cover all types of countries affected by the brain drain, developed and developing, centrally planned economies and market economies. These studies should take account of the special position of those countries which experience a considerable gain as well as those experiencing a considerable loss in the migration of highly trained persons to and from their country. The studies should be concerned not only with the quantitative but also with the qualitative and motivational aspects of the problem.

The inquiry should also be concerned with the co-operative actions of the developing countries in promoting better manpower planning to ensure maximum utilization of trained manpower. It would also be useful to study the possibility of organizing an international conference under the auspices of the United Nations for the exchange of views and experience on the subject of the brain drain.
