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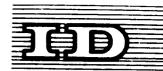
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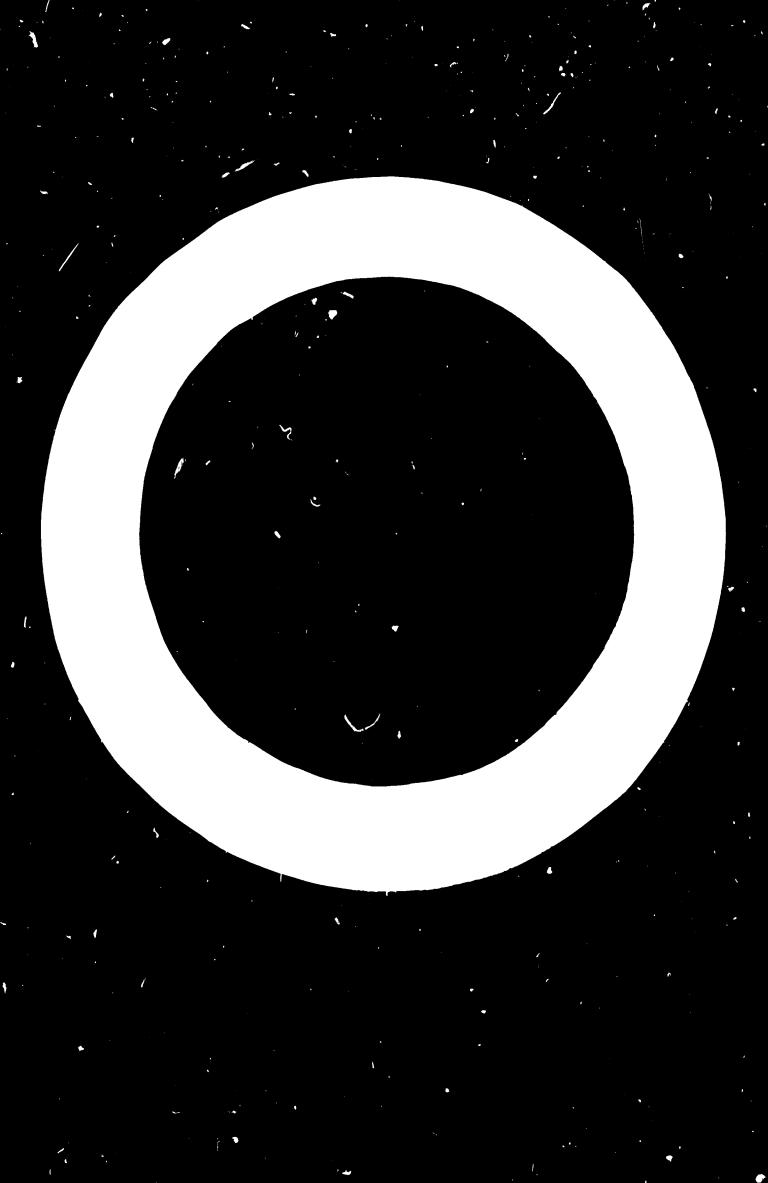
United Nations Industrial Development Organization

INTERNATIONAL SYMPOSIUM ON INDUSTRIAL DEVELOPMENT
Athens, 29 November-20 December 1967
Provisional agenda, item 1

Background paper

MAJOR ACTIVITIES OF THE ECAFE SECRETARIAT IN THE FIELD OF INDUSTRIAL DEVELOPMENT SINCE THE CONCLUSION OF THE FIRST ASIAN CONFERENCE ON INDUSTRIALIZATION

Presented by the ECAFE secretariat





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Introduction

1. The Symposium has been presented with the proceedings of the Asian Conference on Industrialization which concluded, in Manila, on 20 December 1965. These are presented in five printed volumes:

Report of the Asian Conference on Industrialization

Industrial Developments in Asia and the Far East - Volume 1 (Covering General Considerations)

Industrial Developments in Asia and the Far East - Volume 2 (Covering Country Studies, Afghanistan to Republic of Korea)

Industrial Developments in Asia and the Far East - Volume 3 (Covering Country Studies, Laos to Republic of Viet-Nam)

Industrial Developments in Asia and the Far East - Volume 4 (Covering Sectoral Studies)

The Asian Conference on Industrialization had made many meaningful recommendations for action, by the ECAFE secretariat and by the countries, in regard to the establishment of an appropriate machinery for implementation of measures necessary to achieve an accelerated growth of industries in the region; in regard to development of key industries; and in regard to development of the infra-structure necessary for accelerated industrialization. The action taken to implement these recommendations and the developments that have taken place after the conclusion of the Conference are reported for information of the Symposium.

I. MACHINERY FOR IMPLEMENTATION

5. The Conference had recommended the creation of a machinery consisting of two bodies, namely the Asian Conference on Industrialization, which was to become a permanent organ of the Commission, and an Asian Industrial Development Council. The Economic Commission for Asia and the Far East considered these recommendations at its twenty-second session and accepted them, adopting resolution No. 68 (XXII). The Commission felt that greater attention could now be given at different levels to the various aspects of industrial and natural resources development. The Conference might devote itself largely to policies and programmes at the ministerial level while the Committee on Industry and Natural Resources could give

attention to the same problems in greater depth. The Committee could also devote increasing attention to natural resources and energy resources development and to problems of housing, building and small industries development. Policies and programmes to ensure co-ordination between the development of agriculture and of industry were also important and could be given greater attention. It welcomed a proposal that, during the years when the Asian Conference on Industrialization was convened, there should be no meeting of the Committee on Industry and Natural Resources, thus avoiding possible duplication of work and an increase in the number of meetings. The Council might be thought of as the executive counterpart of the Conference and the Committee, and its functions could be action-oriented and project-based with a view to securing the promotion of joint ventures and harmonization of industrial development plans.

4. At its twenty-third session the Commission recommended that in view of the desirability of maintaining close liaison between the Council and the Committee on Industry and Natural Resources, liaison might best be achieved by keeping the Committee informed of the major undertakings of the Council. The Committee might have an item on its agenda under which a report on the matter could be presented by the secretariat.

II. ASIAN CONFERENCE ON INDUSTRIALIZATION

5. According to the terms of the Commission's resolution, the Asian Conference on Industrialization is to meet at three-year intervals, with joint preparation by ECAFE and UNIDO. The next session of the Conference will therefore be in 1968.

III. ASIAN INDUSTRIAL DEVELOPMENT COUNCIL

6. The Asian Industrial Development Council has been established and has already had two sessions in Bangkok in September 1966 and February/March 1967. 1/
The resolution No. 68 (XXII) of the Commission spells out the purposes and functions

^{1/} The reports of these two sessions are documents E/CN.11/747 and E/CN.11/769.

of the Asian Industrial Development Council, its composition, operation and procedures, its secretariat and relationship with ECAFE and other international bodies concerned with industrialization.

IV. FIRST SESSION OF THE ASIAN INDUSTRIAL DEVELOPMENT COUNCIL

- 7. The first session of the Asian Industrial Development $\operatorname{Council}^{2/}$ devoted its attention mainly to general considerations affecting the pace of industrialization in the ECAFE region. The Council also considered organizational matters affecting its work.
- 8. The Council considered that regional and sub-regional co-operation was essential to achieve accelerated industrialization. It was recognized that to achieve such co-operation there must be a willingness on the part of Governments to make adjustments in their policies and plans in order to be able to co-operate effectively with other countries in suitable joint undertakings. A full and continuous exchange of information between the countries of the region regarding industrial development plans was therefore essential and the secretariat was requested to arrange this.
- 9. The Council felt that the selection of specific projects was perhaps the most important step it would take in furthering its basic objectives which was to serve as a "catalyst" to bring about the establishment of the largest number of industrial co-operation schemes in the countries of the region and to assist in mobilizing technical and financial assistance from all sources for the planning and implementation of agreed projects. The Council accordingly selected eleven projects in which members presented envisaged interest and desired that the secretariat should take necessary steps to initiate action on these projects. The Council also devoted attention to development of infra-structure, industrial research, standardization, etc.
- 10. The Council decided to appoint an advisory group which should consist of nine members who would be chosen for their "expertise" primarily in economic development in the industrial field, including, preferably, expertise on a national basis as well as expertise in promoting multilateral economic co-operation. The work of

^{2/} See document E/CN.11/747.

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the Advisory Group will be primarily that of preliminary economic analysis. It would advise on all matters within its competence referred to it by the Council, including the carrying out of feasibility studies concerned with projects on which there was broad initial agreement among the Governments and also feasibility studies in respect of national schemes for which there were requests from individual Governments. The Advisory Group will normally meet twice a year and report to the Council. The Chairman of the Council might, at the request of the Government of member countries concerned and in consultation with the Executive Secretary, appoint ad hoc "action groups" of experts to assist in the implementation of specific industrial projects. Such experts should be appointed only with the concurrence of the participating countries and might be drawn from all regions of the world.

11. In order to ensure effective mobilization and utilization of all available resources, the Council felt that its activities should complement and strengthen the work and efforts of all other organizations concerned with industrialization in the ECAFE region. With this objective in view, the Council and its secretariat would maintain close working relationships with the United Nations Industrial Development Organization, the United Nations Development Programme, the United Nations Conference on Trade and Development, the Asian Development Bank and the United Nations specialized agencies concerned. For its next meeting, the Council decided to invite representatives of all the United Nations organizations and specialized agencies concerned as well as the Asian Development Bank to participate as observers at its open sessions.

V. SECOND SESSION OF THE ASIAN INDUSTRIAL DEVELOPMENT COUNCIL

12. At its second session, the Council devoted further attention to the subject of industrial integration and the prerequisites for success and the problems encountered in this matter. For this purpose, it reviewed the world experience and noted that the difficulties in the ECAFE region were perhaps of a greater magnitude due to the large variation in stages of development between different countries and lack of homogeniety of social and conomic conditions and existence of other barriers impeding closer collaboration. The Council therefore felt that at least in the early years of industrial integration any attempt to harmonize

national development plans in the industrial field should take the form of integration of individual industrial projects, and an effort should therefore be made to select sound regional projects giving special attention to intermediate and capital goods where the importance of economies of scale and market sharing provided powerful incentives for co-operation. This approach was likely to be most rewarding on a short-term basis and the experience of working together in partnership would provide the stimulus for long range economic co-operation. And while over-all planning on regional basis may be premature at this stage, countries may carefully consider each other's national development plans and programmes to identify areas of profitable co-operation. The Council felt that this was an area to which the secretariat may also pay attention and particularly help the smaller countries by undertaking, at their request, studies of a micro-economic nature to determine long-term priorities and the framework within which industrial integration with other countries may be promoted. It suggested that assistance of the Advisory Group set up by the Council at its second session may be sought in devising and conducting such studies which may, among other things, examine the implications of industrial integration for the economies of those countries which are prepared to be associated in such regional or sub-regional groupings. The Council felt that such studies may be particularly useful in the case of groupings such as the Association of Southeast Asia (ASA) which were understood to be in the initial stages of joint industrial planning, and recommended that the secretariat may, on receipt of appropriate requests, assist the countries to carry out such studies.

- 13. The Council reiterated the importance which it attached to the full and continuous exchange of information among the countries of the region on industrial development plans and news of other development. It considered that information from these plans and other news of interest could be incorporated in the secretariat. "Industrial Development News". It felt that there was a need for the secretariat to build up a small library to accommodate all national industrial development plans as well as other industrial information received. This could serve as a nucleus for a central industrial library as well as documentation centre to which member countries would have free access.
- 14. In addition to the eleven industries which had been identified by the Council at its first session, and in which member countries had evinced interest for co-operative

development of projects, during the second session many member countries suggested additional projects to be considered. The Council felt that choice of projects was a matter of great importance and had to be undertaken with great care. On the one hand, it was necessary to ensure that those projects with the maximum chances of success and the greatest impact on the economy of the region be chosen for earlier attention. On the other hand, no aspirations of the member countries, particularly the smaller ones, should be ignored and an attempt would have to be made to give some attention to every suggestion. In any case, in view of the "action-oriented" nature of the Council's objectives, it was desirable that a beginning be made as soon as possible.

15. The Council accordingly agreed that action may be taken for organizing the Iron and Steel Industry Mission and the Chemical and Dissolving Pulp Industry Mission, provided that the Pulp Industry Mission shall pay special regard to the possible need for relating its studies to other aspects of the Forest Industry. While this is being done, the Council felt that action should go forward in respect of all the other projects mentioned in the report of the First Session and also of the projects added during the Second Session. The Council felt that the secretariat may, in respect of every one of these projects, immediately begin consultations with the countries concerned and those likely to be interested therein. Action has accordingly been taken to form Action Groups as detailed below:

Action Group on an Integrated Iron and Steel Industry

16. This Group will be convened on 15 July 1967 and will consider the development of an integrated iron and steel industry in the Republic of China (Taiwan), Malaysia, the Philippines, Singapore and Thailand. It shall consist of a chief of mission who would be a personality of the highest global standing in the iron and steel industry; one member each from the above-mentioned countries to represent their Governments; an expert in iron and steel making; a rolling expert; a marketing expert; and a technical member secretary provided by the secretariat. The Group will meet in the first instant in Bangkok for approximately two weeks for considering information and statistical data which would have been collected by that time by the secretariat and would chereafter visit each of the above-mentioned countries to collect local information and consult local authorities.

17. While the Group will not visit neighbouring countries, the Group will take into consideration the plans and markets in neighbouring territories and countries such as Burma, Brunei, Cambodia, the Republic of Viet-Nam.

Action Group for Dissolving and Chemical Pulp Industries

- 18. This Group, which will also be convened on 15 July 1967, will consider establishment of a regional plant for the manufacture of chemical and dissolving pulp for maling paper and rayon in Malaysia, Singapore and Thailand. This Group will consist of a chief of mission, an experienced pulp and paper maker of the highest standing; one representative each from the three Governments mentioned; an expert in marketing; a specialist in raw materials; a specialist in production of chemical pulp, and a specialist in production of dissolving pulp. This Group will also be provided with a member secretary from the secretariat.
- 19. The Group will meet first in Bangkok to consider statistical data and information that will have been collected for them. Then they will consult the authorities in Thailand, visit Malaysia and Singapore, and finally reassembling in Bangkok to make their recommendations.
- 20. This Group also will, while not necessarily visiting any other countries, take into consideration the plants and markets in the neighbouring countries of Burma, Laos, Cambodia and Indonesia.

VI. ADVISORY GROUP TO THE ASIAN INDUSTRIAL DEVELOPMENT COUNCIL

- 21. The following nine members form the Advisory Group, elected (for one year) by the Asian Industrial Development Council at its second session, 28 February to 6 March 1967:
 - 1. Dr. Antonio V. Arizabal (the Philippines)
 - 2. Dr. H.C. Bos (the Netherlands)
 - 3. Professor L.V. Castle (New Zealand)
 - 4. Mr. Enayatollah Esmailian (Iran)
 - 5. Dr. H.D. Fong (Republic of China)
 - 6. Mr. Lim Ho Hup (Singapore)
 - 7. Mr. K.B. Rao (India)
 - 8. Dr. Porn Srichamara (Thailand)
 - 9. Mr. Shinta o Tabata (Japan)

22. The first meeting of the Advisory Group is proposed to be convened in September/October 1967.

VII. ACTION GROUPS OF THE ASIAN INDUSTRIAL DEVELOPMENT COUNCIL

- 23. As decided by the Asian Industrial Development Council at its second session, two action groups in respect to two specific industries (with possible joint establishment by specified countries) are to be established; one action group for studying all aspects of development of forest-based industries in respect to the region as a whole; and a large number of other action groups in respect to several industries in which various countries have evinced interest are also to be established.
- 24. Accordingly, an Action Group for an Integrated Iron and Steel Industry for Thailand, Malaysia, Singapore, Indonesia and the Philippines is to be convened on 15 July 1967 to study the feasibility of this industry and to report by 15 September 1967; an Action Group for Chemical and Dissolving Pulp Industry for Thailand, Malaysia, Singapore, Indonesia and the Philippines is proposed to be convened on 15 July 1967 and to report on the feasibility of this industry by 15 September 1967. The dates of convening further action groups have not been finalized pending replies to inquiries regarding participation of regional member countries.

VIII. ADVANCEMENT OF TECHNOLOGICAL LEVEL

Industrial Research

- 25. A Consultative Group for Promoting Co-ordinated Industrial Research in Asia and the Far East was held at Bangkok from 1 to 8 December 1966, in co-operation with the United Nations Bureau of Technical Assistance Operations (BTAO).
- 26. The Consultative Group reviewed the present status and development of industrial research institutes in the countries of the region; discussed the training of scientific personnel for industrial research and considered the most rewarding lines of action to promote regional co-operation and co-ordination in industrial research programmes.

- 27. The Group recognized that, for rapid industrialization, transfer of technical know-how from advanced countries is essential but emphasized the important role of local research and development effort in making effective use of imported technology. It felt that for better utilization of research results, realistic choice of research projects and the closest association of research groups all the way through from laboratory work and pilot plant studies to the actual factory production are needed. Techno-economic feasibility studies for application of the results of research were an important factor in their successful application.

 28. The Group emphasized that it is essential for each member country to draw up its own training programme in line with its own economic development programme and define the fields of training of personnel for industrial research. It stressed the need for a period of in-service training for scientific personnel recruited for industrial research. This training may be done in the institutes or in suitable cases, in industry itself.
- 29. The Group discussed "brain-drain" and felt that this was due mainly to relatively low salaries and lack of effective and sufficient research equipment and facilities at home. Wrong selection of fields of specialization before sending out scientists for training abroad was also one of the causes of "brain-drain". The Group expressed the view that no one should be sent abroad without first ascertaining the availability of facilities in a specific field in which training was required.
- 30. The Group considered that as in other disciplines, in the case of industrial research also, co-ordination of programmes among countries and institutes in the ECAFE region and mutual co-operation in execution of research programmes would be a useful means for optimizing utilization of scarce resources for accelerated industrial development. It noted that community of interests was the strongest motivation for co-operative effort and an essential prerequisite for any ventures for collaborative industrial research. It considered that a beginning could be made in co-operative research effort by way of exchange of information, experience, personnel and expertise, especially between the commodity oriented research institutes, such as those for industrial research on rubber, tea, fuels, coconut, oil seeds, etc. Some other areas for investigation of possibility of co-operative action were joint training programmes, exchange of scientists, award of fellowships for intra-regional training, and sharing of equipment. The Group recommended that

after a beginning is made in these directions, the next step may be the establishment of joint industrial research projects for research with common objectives of interest to more than one country, such as delayed-action fertilizer for rice, manufacture of steel from relatively poor quality raw materials, and research on local fuels including natural gas. It also recommended that a specific project for the establishment of a documentation, abstracting, translation and review service may be taken up for early implementation.

- 31. The Group strongly recommended that a regional advisory council to be called the "ECAFE Advisory Council for Industrial Research", should be set up as soon as possible. It defined the terms of reference, composition, and manner of election of its own officers. The ECAFE secretariat, in the Division of Industry and Matural Resources, suitably strengthened by the addition of an "Industrial Research Section" should be the secretariat of the Council.
- 32. The Group also recommended that a fair portion of the "development" fund to be earmarked by the Asian Development Bank for infra-structure development should be allotted to industrial research and set apart as an Industrial Research Fund. The Advisory Council, when formed, should be made use of by the Bank for advice on the selection of suitable projects to be financed from the Fund.

Standardization

- 33. A Working Group on the Development of Standards Institutions in the ECAFE region was convened at Bangkok, from 12 to 19 December 1966. The Working Group had detailed discussions and made recommendations on the following items:
- Review of the status and problems of standardization in the countries of the region: The Group noted that fifteen countries of the ECAFE region had national standards bodies in operation while eight other countries did not appear to have any national standards organization. Some of them were government departments and others were autonomous organizations in which Governments, industries and other interested bodies co-operated. It was noted that there has been a general trend to organize national standards bodies as independent or autonomous organizations.

- 35. On finance, it was essential that co-operation and financial support from the Governments should continue to be available to standards bodies. The Working Group suggested that the countries might adopt the committee method in formulating their national standards.
- 36. Experience shows that the implementation of national standards in developing countries was rather slow. The Working Group felt that the national standards bodies should establish implementation divisions entrusted with the duty of getting the issued standards widely accepted and adopted by all sections of the public. It would be desirable also, they felt, for Governments to issue directives to all of their departments to use national standards as basis in all government work.
- 37. The Working Group considered the question of certification marking and noted that the certification mark scheme not only safeguards the interest of the purchaser against sub-standard products, but is also beneficial to the manufacturer in rectifying defects.
- 38. The Working Group noted that the common problem in most standards organizations was the lack of trained personnel. In view of the fact that standardization does not form a part of normal academy, it is necessary to organize a special training course for standards engineers. In this respect the Working Group emphasized the mutual co-operation among countries and took note of the offers made by India, Iran and Japan to provide training facilities in their countries to participants from ECAFE countries.
- 39. Regarding testing facilities, the Working Group felt that it would be impractical for standards bodies to establish and maintain a full range of testing facilities for preparation of standardization and certification marking. Therefore, countries should take full advantage of the reliable existing testing facilities.
- 40. The Working Group noted that in cases where countries entered into collaboration agreements with several manufacturers of developed countries, there might result a multiplicity of standards. In order to avoid such development, countries should consult national standards bodies before concluding agreements.
- 41. The Group suggested that the ECAFE secretariat should collect and disseminate to countries of the region on a regular basis information on standardization activities of the countries of the ECAFE region.

- 42. (b) Establishment of national standards bodies: The Working Group agreed with the recommendations given by the ACI that countries should establish national standards bodies wherever they do not exist, and that countries with established standards bodies should assist others in the training of personnel and the use of expert services on request.
- 43. It was pointed out that the awareness of the usefulness and role of standardization should be created in all sectors of society, and that the administration of standards bodies should be left to a board of nominees representing Government, industry, trade and other interests. The Working Group was of the view that a national standards body in the form of an autonomous organization with financial support from the Government appears to have advantages over a purely governmental department.
- 44. The Working Group prepared a detailed note describing objectives, organizational set-up, working procedure and initial steps that may be taken by the countries in preparing their national standards bodies.
- 45. The Working Group stressed that national standards should be prepared as far as possible in line with international standards; and countries should join and participate in the work of the International Organization for Standardization (ISO) and the International Electechnical Commission (IEC).
- 46. The Working Group took note of the difficulty in recognition of certification marks among countries and recommended that further investigation should be made with a view to evolving a modus vivendi to achieve mutual recognition of certification marks.
- 47. (c) Regional co-operation in standardization: The Group felt that developing countries could greatly benefit from achieving uniformity in their basic standards and suggested that countries of a region could align their basic standards on: weights and measures, glossaries of technical terms, symbols, packaging and transport, and methods of sampling, testing and analysis. Attempts could be made to evolve uniform standards in electrical voltages, safety of domestic electrical appliances, iron and steel as well as aluminium based on their chemical composition and agreed designation, and in contract forms and other documents concerning conditions of export and import. It was felt that free exchange of publications among countries would help in the alignment of their standardization work.

- 48. (d) Training of standards engineers: The Working Group outlined the requirements for trained personnel in the countries which have newly established standards bodies as well as the countries which have not yet established standards. It noted that the facilities for the training of national standards engineers were currently available only in India, Iran and Japan.
- 49. The Working Group was of the opinion that it might not be justifiable for all countries to set up their own training centres, but, on the other hand, there might be difficulties in the establishment of a regional centre designed to serve all the countries. It was suggested that countries should examine the possibility of strengthening their national training centres (where they exist) with United Nations assistance, and make their facilities available to other countries. The Working Group also recommended that the question of establishing regional or sub-regional training centres should be taken up by the proposed Asian Standards Committee.
- 50. (e) Asian Standards Committee: The recommendation of ACI on the establishment of an inter-governmental committee was welcomed by the Working Group. It was suggested that the Committee could be named the Asian Standards Committee. The Working Group had the opinion that if the proposed Committee prepared and issued regional standards there might result a duplication of the activities of the ISO and IEC. On the other hand, the Committee could serve the essential need for effective co-ordination and co-operation among the standards bodies of the region.

 51. The Working Group defined the terms of reference of the proposed Asian Standards Committee and recommended that all regional countries should be entitled to membership of the Committee. It was also suggested that the rules of procedure of the Committee should be formulated in line with the practice of ECAFE, and that the first meeting of the Committee should be organized as soon as practicable and thereafter the Committee should meet at yearly intervals.
- 52. The Group also recommended that the secretariat should be strengthened with a minimum specialist staff and the Executive Secretary should take steps to obtain finances for activities of the proposed Committee.

IX. COMMITTEE ON INDUSTRY AND NATURAL RESOURCES

53. Since the Asian Conference on Industrialization concluded, sessions eighteenth and nineteenth of the Committee on Industry and Natural Resources were held at Bangkok in February 1966 and March 1967, respectively. At its eighteenth session the Committee considered the measures for increased regional co-operation in the field of industry and natural resources; reviewed the work of its subsidiary bodies in the fields of mineral resources, energy resources, and housing, building and planning; and considered questions relating to the application of science and technology to development, the assistance provided by the United Nations to countries of the region and the institutional arrangements for promoting industrial development. The Committee, at its nineteenth session, considered the prospects of, and measures for, promoting industrial exports from developing countries; it reviewed the work of its subsidiary bodies, considered questions relating to the development of metals and engineering industries, chemical industries, small-scale industries, and housing, building and planning and discussed the application of science and technology to development.

Regional co-operation in the field of industry and natural resources

54. The Committee (eighteentr session) noted the recommendations and resolutions of the Asian Conference on Industrialization and emphasized the need for promptly implementing those recommendations with a view to accelerating industrialization in the region. The developing countries were asked to strengthen their central planning or co-ordinating agencies to achieve sound industrial programming, and a balance between the infra-structure and production sectors. The secretariat was requested to study the experience of countries in industrial development planning for development, disseminate the lessons derived therefrom to the developing ECAFE countries, and undertake feasibility investigations of joint industrial schemes in six specific industries, namely, iron and steel, fertilizers, aluminium, pulp and paper, machinery and transport equipment, and petro-chemicals, as mentioned in the proceedings of the Conference.

Application of science and technology to development

The Committee (eighteenth session) felt that the work of the Advisory 55. Committee on the Application of Science and Technology to Development, particularly of its Asian Regional Group, was useful. Some of the problems chosen by the Advisory Committee for a concerted attack were particularly relevant to the region's needs and deserved high priority, but emphasis should be given to evolving specific measures for the training of engineers and scientists. Since the techniques used in developed countries were often labour-saving, and entailed heavy investment in machinery and plant, they had to be suitably adapted to the needs of the developing countries which had an abundant labour force. The Committee felt that, while patents legislation was important, since patent rights were owned privately, the legislation should be so devised as not to undermine the free flow of patented know-how. Appropriate guarantees on expatriation of profits were also required. The Committee recommended the establishment of a Regional Institute of Science and Technology and requested the secretariat to follow up the proposal.

Manpower training, management development and productivity

56. The Committee (eighteenth session) noted that many countries of the region now had programmes for development of manpower, hence a regional training course for high-level manpower specialists to staff the manpower planning bodies would be useful. While Governments recognized the importance of technical and vocational training in their education systems, universities, technical and professional institutions and workers' and employers' organizations should co-operate in promoting such training. Training programmes should be developed after comprehensive surveys of existing training institutions and industrial undertakings providing training. Management training was one of the greatest needs of the region; the secretariat was requested to explore the possibility of developing a regional programme for training industrial administrators and managers, taking into account the available facilities, including fellowships, in countries of the region.

Arrangements are on hand to introduce s ch a training course in the Asian Institute beginning 1967. The secretariat was requested to complete at periodic

intervals indices of output and input in the economy to reflect trends in productivity. Joint productivity councils of employers and employees were suggested.

Technical assistance

57. The Committee (eighteenth session) noted that assistance in a variety of fields was being given under the United Nations Development Programme and that the receiving countries were benefiting therefrom. There was a need for a substantial increase in technical assistance. The representatives of many developed countries had expressed their continued support for the United Nations Development Programme and their readiness to help in the activities recommended by the Asian Conference on Industrialization.

Five-year survey programme of non-agricultural natural resources

58. The Committee (nineteenth session) welcomed the Secretary-General's proposal for a five-year survey programme of non-agricultural natural resources and the secretariat's proposal regarding a survey of mineral raw materials for fertilizers. It noted that the secretariat and the United Nations Development Programme had assisted Burma and the Republic of Korea in conducting offshore surveys, that ECAFE experts had assisted Ceylon in undertaking a similar survey, and that Indonesia and the Republic of Viet-Nam had expressed an interest in obtaining similar assistance. The Committee requested that a regional adviser on geothermal energy be provided by UNDP to ECAFE.

Industrial exports

59. The Committee (nineteenth session) noted with concern that the payments gap in the developing countries was widening, mainly because of continuous set backs in those countries' exports of primary commodities. It urged the developed countries to ease tariff barriers, remove import restrictions and other impediments hindering their imports of semi-manufactured and manufactured products from developing countries, and promote joint ventures between developed and developing countries. The Committee stressed that the developing countries should produce quality products at internationally competitive prices, and should establish special institutions such as trade and market information agencies. Special attention should be devoted to agricultural production so as to expand the food supply and to provide raw materials for industrial development.

Metal-working and engineering industries

- 60. The Committee (nineteenth session) felt that the United Nations Inter-Regional Symposium on the Development of Metal-Working Industries in Developing Countries held at Moscow from 7 September to 6 October 1966 had been of great value to the developing countries of the region. It supported the recommendations of the Symposium for appropriate action by the developing countries of the ECAFE region such as the establishment of national agencies for improving the collection of local statistical data; the carrying out of machinery censuses at intervals; and regional co-operation in the fields of research and training facilities. The Committee also drew attention to the advantages to be derived from the pooling of demands and the sharing of financing. The Committee generally endorsed also the recommendations of the Symposium for action by the United Nations and related agencies.
- 61. The proposed agenda of the eleventh session of the Sub-Committee on Metals and Engineering to be held in Australia in September 1967 was considered by the Committee and found to be generally satisfactory.

Mining industry

Sub-Committee on Mineral Resources Development

- 62. At its sixth session held at Bangkok in August 1966 the Sub-Committee discussed measures for implementing Commission resolutions 59 (XXI) and 72 (XXII) on the development of Asia's mineral wealth, including mineral raw materials for the fertilizer industry. It considered the role of the United Nations Development Programme in assisting the countries of the region to develop geological services and mineral resources in the light of Economic and Social Council resolution 1127 (XLI), which requested the Secretary-General to prepare a world-wide five-year survey of non-agricultural resources, including mineral resources.
- 63. The Sub-Committee considered the techno-economic aspects of mining development; drilling rigs and techniques of drilling for mineral deposits; the development of petroleum and natural gas resources; reports on selected mineral commodities; and the world market for iron ore. It recommended that the secretariat: (a) compile and disseminate to member countries information on modern drilling methods for

mineral exploration and evaluation; (b) convene the Fourth Petroleum Symposium in Australia in early 1969; and (c) arrange a seminar on resources of mineral raw materials for fertilizers. The secretariat has initiated preparations for holding the last-mentioned seminar at Bangkok in December 1967.

Prospecting for mineral resources in Asian offshore areas

64. An Expert Working Group on Joint Geophysical Survey for Mineral Resources in Asian Offshore Areas which met from 5 to 17 July 1965 at Bangkok examined the scope and economic advantages of joint and co-ordinated measures among the countries of the region in undertaking surveys for mineral resources in offshore The Group felt that there was scope for such co-operative work among the countries for which purpose they should establish a co-ordinating committee with functions such as: to evolve co-ordinated programmes; to explore sources of financial and technical assistance for joint projects; to prepare requests for technical, financial and other assistance to the United Nations agencies and other organizations; to promote plans for basic and applied research relating to offshore prospecting and to establish training programmes on various aspects of offshore prospecting. In a resolution adopted by the Second Ministerial Conference on Regional Economic Co-operation held at Manila in December 1965, Governments concerned in the region had been requested to take necessary action to implement the recommendation of the Working Group for the establishment of a Co-ordination Committee on Prospecting for Mineral Resources in Asian Offshore Areas. Governments of the Republic of Korea, Japan, Republic of China and the Philippines joined this Co-ordination Committee which was formed with these countries to start with and began its work. At its first session held at Quezon City, the Philippines, in May/June 1966, the Co-ordination Committee reviewed the offshore exploration projects undertaken by its member countries. It considered that the proposed offshore explorations and broad reconnaissance surveys would achieve concrete results. It took note of the total number of line-kilometres to be covered by each type of survey method proposed by member countries for the initial co-ordinated programmes. The Committee examined in detail the current status of all aspects of offshore exploration connected with the co-ordinated programme, and recommended:

(a) that a technical advisory group be established to review and advise on the Committee's programmes and other technical matters coming before the Committee; (b) that a regional training centre for offshore geophysical prospecting be established in Japan to supplement the existing Institute of Applied Geology in the Philippines, in order that each could devote more attention to specialized subjects; (c) that a study tour be arranged under the United Nations technical co-operation programme to enable experts from member countries to study offshore prospecting projects in operation in the ECAFE region; and (d) that UNESCO be invited to participate in the meetings of the technical advisory group. 65. At its second session held at Tokyo in October/November 1966, the Co-ordination Committee reviewed the progress made in offshore prospecting in the four member countries and drew up plans for future operations. The Committee felt that its activities should not be diffused beyond the member countries situated on the Pacific Ocean. However, its technical secretariat might assist other interested member countries as a supplement to the services provided by the two regional advisers. The Committee reviewed the suggestions of the Technical Advisory Group concerning the proposed offshore prospecting programme, which included a seismic refraction survey for some member countries in the latter half of 1967, with equipment and technicians provided by the Federal Republic of Germany. aeromagnetic survey programme prepared jointly by China and the Philippines was considered suitable for UNDP assistance and the Committee therefore decided to draft a joint application with the assistance of the regional advisers and the technical secretariat. The Committee noted that the special advisers provided by developed countries would explore the possibilities of providing geophysical survey equipment. It decided to establish a pool of smaller and less complex types of equipment for use by the countries represented on the Committee. The Government of Japan offered the services of a geophysicist for the technical secretariat. The Committee adopted a work programme for the technical secretariat, and expressed the hope that the special advisers in the Technical Advisory Group would continue to be made available by their Governments. It decided to explore further the possibility of establishing in Japan a regional training centre for offshore prospecting. Some developed countries expressed their willingness to

consider training technical personnel from Asia in submarine geology and offshore prospecting methods, and providing the services of their experts at the proposed regional centre. The third session of the Committee is scheduled to be held at Seoul, Korea, in July 1967.

Electric power for industrial development

- 67. During 1966 the Sub-Committee on Electric Power of ECAFE met in Manila from 9 to 16 September. Noting with satisfaction that electric power supplies have been doubling every six years in the region, the Sub-Committee emphasized the need for giving increased attention towards improving the economy and efficiency of the construction and operation of power systems. This was important to ensure production of electric power at reasonably low cost, as low cost power was an important factor in industrial development.
- 68. Dealing with energy industries in general, the Sub-Committee stressed the need for balanced development of different forms of energy coal, oil, natural gas, water power, etc., and in this connexion, recommended that comprehensive and systematic energy surveys should be undertaken to form an adequate basis for co-ordinated planning of the various natural energy resources.
- 69. Recent technological developments in the application of nuclear energy for generation of electric power have proved its technical as well as economic feasibility. Within the region, Japan has a nuclear power plant in operation; India has one which is in advanced stage of construction; and more nuclear power plants are either under construction or under consideration. By and large the ECAFE region is poorly endowed in natural energy resources and in this context, it is expected that nuclear energy will, in the years to come, play a significant role in providing energy supply for industries.
- 70. The increasing requirements of water for industries as well as other domestic purposes is likely to prove a serious problem in the future. Intense research and development is now taking place in many of the developed countries to utilize nuclear energy for desalination of sea water. It is felt that dual purpose plants in which the nuclear energy is used both for power generation and desalination of water would prove economically advantageous.

71. Recognizing the importance of rural electrification as a means to promote dispersal of industries as well as the development of small-scale industries, the Sub-Committee urged the countries of the region to examine this problem in detail, formulate definite policies and programmes of development on the basis of which efforts could be made to secure financial assistance from international organizations.

Building materials industry

- 72. The housing situation in the ECAFE region is perhaps more serious than anywhere in the world. Apart from scarcity of financial resources, there is a host of other problems confronting many countries in the region. Among these problems are low level of productivity and high building costs. Shortages of building materials are chronic problems impeding building activities and in many cases have delayed execution of development plans.
- 73. In view of the serious problems of building materials, a seminar will be held in Bangkok from 28 September to 4 October 1967 to study and examine the present status and future prospects of the manufacture of building materials in the ECAFE region.
- This seminar will be convened by ECAFE in collaboration with the Centre for Housing, Building and Planning and the Bureau of Technical Assistance Operations at United Nations Headquarters. Twenty-two experts, building technologists and executives engaged in the planning and production of building materials in the countries of the region will be selected to participate in the seminar at United Nations expense from those to be nominated by member countries in the region.

 75. The present status of the production of building materials will be examined by the seminar in terms of scale of production, level of technology, relative merits of the processes and economies of production. For this purpose, building materials have been classified into two broad categories, namely, materials produced through industrial process, and materials produced through the craft process. Materials under the first category include structural clay products, building boards, ceramics, glass, plywood, cement and cement products,

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earth, bamboo, stabilized soil, burnt clay, aggregates, and other materials. 76. The seminar will examine the prospects of manufacture of new building materials, materials with special properties of thermal and sound insulation, waterproofing and fire resistance, as well as the utilization of agricultural and industrial wastes, for developing new and substitute materials. The seminar will also examine the need, status and function of building materials research in each country; the level of research and its organization; problems of evaluation, co-ordination and implementation of the result of research; and proposals for the setting up of national and sub-national research institutes.

Construction industry

- 77. A number of countries in the region are experiencing difficulties in their efforts to increase their capacity to undertake the construction of housing projects on a scale adequate to cope with the mounting demand for more housing as a result of rapid and large-scale urbanization and increasing urban population. Shortages and bottle-necks are chronic problems in many countries of the region and building costs are high.
- 78. In view of these problems a seminar on prefabrication of building will be held in the Scandinavian countries from 25 August to 14 September 1968, under the joint sponsorship of the United Nations and the Danish Government. It will be the second of a series of meetings on the prefabrication of building for the benefit of the developing countries in the various regions.

Chemical industries

- 79. One of the recommendations of the ACI concerning textile industry was that:
 "for the rationalization and expansion of the textile industry in the ECAFE region, ways and means should be devised to increase output of raw materials such as cotton, wool, jute and kenaf and silk, and to attain easier access to substitute raw materials, namely, man-made fibres".
- 80. The question of attaining easier access to man-made fibres was answered by the Seminar on the Development of the Man-Made Fibre Industry in Asia and the Far East held at Tokyo/Osaka from 28 October to 7 November 1966. The Seminar paid particular attention to the techno-economic feasibility of producing man-made fibres

in the developing ECAFE countries. It focused attention on the economic size of plants to produce various kinds of fibres. In this connexion, the Seminar came out with the consensus that, for developing countries with protected markets, the economic size of the plant is considered to be five to ten tons per day for viscose filament and twenty tons per day for viscose staple. The economic size for nylon filament was considered to be two to five tons per day capacity, using imported caprolactam. For polyester fibres, small plants such as two and a half tons per day capacity was considered to be economic.

81. The Seminar also discussed the supply and demand position of the man-made fibres in the countries of the region, appraised the adequacy of raw material resources for the development of man-made fibre industry, scrutinized investment and production cost for different types of manufacturing processes and sizes of plants, and suggested national, sub-regional and regional action to be taken for achieving a rapid development of the man-made fibre industry in the region.

Small-scale industry

- 82. The eighth session of the Working Party on Small-Scale Industries held at Manila in June 1966 reviewed the progress and problems of small-scale industries in the region. It discussed the desirability of Governments devising a development policy for small industries within the framework of over-all industrial development, and evolving specific measures to remove hindrances to the growth of small industries. The Working Party felt that there was scope for regional co-operation in training, for example in training small industry owner-managers. It recommended that the secretariat investigate, in consultation with other international organizations and with industrialized countries, the possibility of establishing an Asian institute for management and consultancy training in small industries; it requested the secretariat to make an inventory of all the training facilities available in the countries of the region.
- 83. The Working Party recommended the decentralisation of small industries, particularly such agro-industries as cotton ginning, vegetable oil extraction and the manufacture of small agricultural tools, and it stressed the need to build up basic services, training facilities and governmental aid in that regard. It requested the secretariat to convene a symposium in which industrial planners and

both techno- and socio-economists could exchange views and experience on methods of framing realistic targets for small industries within over-all national development programmes.

84. The Working Party requested the secretariat to collect and disseminate information on opportunities and techniques for developing engineering industries and to study the possibilities of regional co-operation in such industries. It considered the export potential of the region's handicraft and small industries and commended the Government of Australia for eliminating tariff duties on imports of small industries products from the developing countries.

Prospects for industrial exports from developing countries and measures for expansion of production and trade to ECAFE countries

- 35. Regarding the above subject, at its nineteenth session, the Committee on Industry and Natural Resources noted that a significant post-war development had been the widening of the payments gap of all developing countries, arising from growing import requirements and a declining capacity to pay for them. Import requirements had grown, mainly owing to capital requirements for the purpose of industrialization and industrial raw materials, and also on account of the rising demand for consumption goods, particularly food, to feed the rapidly expanding population in the developing countries. On the other hand, the capacity to import had failed to keep pace, since the main component, primary exports, had suffered continuously for a variety of reasons replacement by synthetics and other substitutes, economy in the use of raw materials, low income elasticity of demand for food in developed countries, adverse terms of trade for primary exports, and the need of the developing countries themselves to retain much of these primary products to meet domestic demand.
- 86. The Committee felt that to promote the production and marketing of industrial exports from the developing countries, appropriate measures would have to be taken by the developed countries, by the developing countries, and among the developing countries themselves. In so far as measures to be taken by developed countries were concerned, certain measures, such as those relating to tariff barriers and import restrictions, fell within the purview of other specialized bodies such as UNCTAD which were already paying attention to them. The Committee noted that action

to ease barriers and remove import restrictions and other impediments was being taken by many countries and recorded its appreciation of the measures taken by the Government of Australia, which, among other things, had taken a lead in introducing a system of tariff preferences for industrial exports from developing countries.

7. The Committee expressed the view that, apart from easing of tariff barriers and removal of import restrictions and other impediments, there were also other aspects of production and marketing of manufactures and semi-manufactures in which developed countries could help developing countries to increase exports. The Committee appreciated that facilitating the imports of manufactured and semi-manufactured products from developing countries sometimes produced problems of structural adjustment in the industrial sectors of the developed countries. The opinion was expressed, however, that where the total volume of such imports was relatively small in comparison with total supply, it might not be difficult for most of the developed countries to make the necessary adjustments.

- 88. The Committee noted that many developing countries had begun to take active measures, such as the appointment of trade commissioners, opening of trade information centres, participation in international trade fairs, etc., for marketing their products in developed countries. The Committee felt that the developed countries could render valuable help in facilitating these arrangements by providing focal or contact points within their appropriate government agencies, to be counterparts that the information and promotion centres set up by developing countries; by provision of financial and technical assistance to export organizations of developing countries to market their industrial products; and by granting favourable treatment to the industries and exporters of developing countries to display and market their products. In this regard the Committee expressed its appreciation of the arrangements made by the Government of the Metnerlands, under which free exhibition space had been provided at the Utrecht International Fair for display of products of developing countries.
- 89. The Committee considered that, while developed countries could greatly facilitate the export of manufactured goods from developing countries, the success or failure of efforts to increase export earnings would, in the final analysis, depend largely on the developing countries themselves. It was therefore important that they should pay careful attention to all aspects of industrialisation so that quality products could be produced at internationally competitive prices. The

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Committee felt that (a) choice of industries and their integration into the over-all national development strategy; (b) increasing of productive efficiency, standardization and quality control as well as industrial research; (c) granting of appropriate export incentives; (d) developing trade and market information agencies; and finally (e) international and regional co-operation for increasing production of export goods, were also very important and should receive adequate attention from the developing countries.

Industrial advisory services

90. The Regional Industries Promotion and Planning Centre, set up on 1 January 1965 and which terminated on 31 December 1966, rendered direct advisory services in the industrial development fields upon requests received from the Governments of Malaysia, Iran, Republic of China, the Philippines and Singapore. A team to survey industrial possibilities in Laos was organized by the secretariat. The secretariat gave technical advice to the Republic of Korea on matters connected with the electricity distribution system, to the Republic of Viet-Nam on the procedures for transfer of ownership of electricity undertakings, and to the Philippines on the development of rural electrification. Advisory services were provided to Ceylon, China (Taiwan), Iran and Western Samoa in the fields of urban and regional planning, housing financing, food industry and timber industries. A regional adviser on oils and fats industry rendered advice to the Governments of Ceylon and Iran regarding the development of rice bran oil industry. The secretariat continued to play a pivotal part in the offshore geophysical prospecting carried out with the co-operation of BTAO in Burma and the Republic of Korea.



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MAJOR ACTIVITIES OF THE ECAFE SECRETARIAT IN THE FIELD OF INDUSTRIAL DEVELOPMENT SINCE THE CONCLUSION OF THE FIRST ASIAN CONFERENCE ON INDUSTRIALIZATION

SUMMARY

Presented by the ECAFE secretariat

This paper is a summary of a paper presented in document ID/COMF.1/B.5.

SUMMARY

- 1. The proceedings of the first asian Conference on Industrialisation in five printed volumes are presented to the Symposium. This Conference had made many meaningful recommendations for action, by the ECAFE secretariat and by the countries, regarding the establishment of an appropriate machinery for implementation of measures necessary to achieve an accelerated growth of industries in the region; in regard to development of key industries; and in regard to development of the infrastructure necessary for accelerated industrialisation. The report highlights the action taken to implement these recommendations, the work of the Committee on Industry and Matural Resources and the developments that have taken place since the conclusion of the Conference.
- 2. The Economic Commission for Asia and the Far East in its Resolution 68 (XXII) decided to make the Asian Conference on Industrialisation a permanent organ of the Commission and to establish an Asian Industrial Development Council. The spheres of activity of the Conference, the Committee on Industry and natural Resources and the Council were demarcated by the Commission. The first session of the Asian Industrial Development Council devoted its attention mainly to general considerations affecting the pace of industrialisation in the ECAFE region. The Council considered that regional and sub-regional co-operation was essential to achieve accelerated industrialisation and selected eleven projects in which members present evinced interest and on which the secretariat was to take

necessary steps to initiate action. The Council decided to appoint an advisory group which should consist of nine members who would be chosen for their "expertise" primarily in economic development in the industrial field, including preferably "expertise" on a national basis as well as expertise in promoting multi-lateral economic co-operation. The work of the Advisory Group will be primarily that of preliminary economic analysis. The Chairman of the Council might, at the request of the Government of member countries concerned and in consultation with the Executive Secretary, appoint Ad Hoc "action groups" of experts to assist in the implementation of specific industrial projects.

At its second session, the Council devoted further attention to the 3. subject of industrial integration and the prerequisites for success and the problems encountered in this matter. In addition to the eleven industries which had been identified by the Council at its first session, and in which member countries had evinced interest for co-operative development of projects, during the second session many member countries suggested additional projects to be considered. The Council felt that choice of projects was a matter of great importance and had to be undertaken with great care. The Council agreed that action may be taken for organising the Iron and Steel Industry Mission and the Chemical and Dissolving Palp Industry Mission. While this is being done, the Council felt that action should go forward in respect of all the other projects mentioned in the report of the Piret Session and also of the projects added during the Second Session. Accordingly, the secretariat has taken action for organising the Action Groups for the Iron and Steel Industry and for the

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Dissolving and Chemical Pulp Industries which are to commence work on 15 July 1967. The dates of convening further Action Groups have not been finalised pending replies to inquiries regarding participation addressed to the regional member countries. The Council elected for one year the nine members of the Advisory Group whose first meeting would take place in September/October 1967.

- 4. The Council at its second eession also considered the reports of the Consultative Group for Promoting Co-ordinated Industrial Research in Asia and the Far East and of the Working Group on the Development of Standards Institutions in the ECAFE region, both of which were convened in December 1966, in co-operation with United Nations BTAO. The salient points of the two reports are mentioned in the Report to the International Symposium.
- 5. Since the Asian Conference on Industrialisation concluded, the eighteenth and nineteenth sessions of the Committee on Industry and Natural Resources were held at Bangkok in February 1966 and harch 1967 respectively. At its eighteenth session the Committee considered the measures for increased regional co-operation in the field of industry and natural resources; reviewed the work of its subsidiary bodies in the fields of mineral resources, energy resources, and housing, building and planning; and considered questions relating to the application of science and technology to development, the assistance provided by the United Nations to countries of the region and the institutional arrangements for promoting industrial development. The Committee, at its nineteenth session, considered the prospects of, and measures for, promoting industrial exporte from developing countries; it reviewed the work of its

subsidiary bodies, considered questions relating to the development of metals and engineering industries, chemical industries, small-scale industries, and housing, building and planning and discussed the application of science and technology to development. In the Report to the International Symposium are mentioned in a summary form the findings of the Committee on the subjects considered at its eighteenth and nineteenth sessions.

- 6. The Committee at its nineteenth session felt that the United Nations Inter-Regional Symposium on the Development of Netal-Porking Industries in Developing Countries held in September/October 1966 had been of great value to the developing countries of the region and supported the recommendations of the Symposium for appropriate action by the developing countries.
- 7. The Sub-Committee on Fineral Resources Development at its sixth session considered the techno-economic aspects of mining development; drilling rigs and techniques of drilling for mineral deposits; the development of petroleum and natural gas resources; reports on selected mineral commodities; and the world market for iron ore. It made certain recommendations for action by the secretariat, one of which is the holding of the feminar on Resources of Mineral Raw Materials for fertilizers, for which preparations have been initiated.
- 8. A Co-ordinating Committee on Prospecting for Mineral Resources in Asian Offshore Areas was formed with the Governments of the Republic of China, Republic of Korea, Japan and the Philippines as members. Its functions are to evolve co-ordinated programmes: to explore sources of financial and technical assistance for joint projects: to prepare requests for technical, financial and other assistance to the United Nations agencies and other

to offshore prospecting and to establish training programmes on various aspects of offshore prospecting. The Co-ordinating Committee held its first session at Queson City, the Philippines in May/June 1966 and its second session at Tokyo in October/November 1966, while the third session is scheduled to be held at Seoul in July 1967.

9. Regarding the development of energy resources, especially electric power for industrial development, the Report to the Symposium contains a summary of the findings and recommendations of the tenth session of the Sub-Committee on Flectric Power held at Manila in September 1966.

10. In the field of building materials, a reference has been made in the Report to the Seminar on Building Materials which will be convened at Bangkok in September/October 1967 by TCAF in collaboration with the Centre for Housing, Building and Planning and FTAO. Concerning the construction industry, mention has been made of a Seminar on the Prefabrica-

tion of Building scheduled to be held in the Scandinavian countries in

August/September 1968 under the joint sponsorship of the United Nations

and the Danish Government.

11. Mention has also been made in the Peport to the Seminar on the

Development of Man-Made Fibre Industry in 'sia and the Far East held in

October/November 1966, which paid particular attention to the techno
economic fessibility of producing man-made fibres in the developing countries.

As regards the development of small-scale industries, the Report contains

the recommendations and suggestions made by the eighth session of the

Working Party on Small-Scale Industries held in June 1966, relating to such

aspects as industrial policy for small industry development, development

and training of personnel for small industries, decentralisation of small industries, development of engineering industries on a small-scale basis and export promotion of handicrafts and small industry products.

- 12. The mineteenth session of the Committee on Industry and Natural Resources dealt, as an item of its agenda, with the prospects for industrial exports from developing countries and measures for the expansion of production and trade with special reference to MCAFE developing countries. The findings and recommendations of the Committee on this subject are included in the Report.
- 13. The industrial advisory services rendered by the secretariat through the Regional Industries Promotion and Planning Centre and regional advisers on urban and regional planning, on electricity management, on timber industry and oils and fats industries are also mentioned in the Report to the Symposium.

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