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ECONOMIC COMMISSION FOR AFRICA

BASIC METAL INDUSTRIES DEVELOPMENT PROGRAMME

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I. Authority, origin and nature of proposal

At its first meeting held in September 1974, the Follow-up Committee on Industrialization in Africa, stressed that African countries could no longer follow the policy of trying to meet their economic requirements by way of the export of raw materials.1/ At its second meeting in August 1975, it proposed the promotion of a variety of basic industries as priority areas for action in the African region.2/ The Conference of African Ministers of Industry meeting in Cairo in December 1973 3/ and in Nairobi in December 1975, 4/ also underlined the importance of developing basic industries.

The branch of basic metals is part of the basic industries recommended in the Lima Plan of Action, 5/ and endorsed as a programme by the Follow-up Committee at its third meeting in November 1976. From a number of isolated projects in the ECA work programme for 1976-1981, a programme on the development of basic metals industries is being developed within the Joint ECA/UNIDO Industry Division (JID).

II. Justification and need for establishing a metal industry programme

1. The production and consumption of metals is the foundation of modern industrial technology and industrialization;

2. There is a need to survey new natural resources and to locate them in the least developed countries so that they may participate effectively in and benefit from the establishment of a new international economic order;

3. Besides being an important complement of the engineering industry, the metal branch of basic industries is vital for developing linkages among all branches of the economy;

4. Consumption of metals in Africa is rising faster than their fabrication or semi-fabrication in the region, indicating the need to internalize the structure of African-produced metallic ores for the benefit of the region;

5. Africa is well endowed with exploitable metallic ores and the complementary raw materials required for production of semi-finished basic metal industrial products;

1/ Report of the first Meeting of the Follow-up Committee on Industrialization in Africa, (E/CN.14/INR/211), part III, para, C (xi).

2/ Report of the second Meeting of the Follow-up Committee, (E/CN.14/INR/213), para, 31 (a) (i).

3/ Declaration on Industrialization in Africa: Principles and Guidelines for Co-operation and Development, 1974, Part Two, para A (vii).

4/ Report of the Third Conference of African Ministers of Industry, 1975, (E/CN.14/649), Part Two, para 20.

5/ Lima Declaration and Plan of Action, para 58 (f).

6. There is a need to create the indigenous skills, appropriate technology, policies and programmes as well as capital required to improve the economic impact of metal development in Africa;

7. There is a need to improve the efficiency of existing plants and their rationalization in Africa.

III. Objectives

The aim of the metal industry programme is to assist African countries directly and through their own basic metal industrial projects and enterprises in:

1. developing an integrated basic metal industry, through policies, programmes, targets and actual projects;

2. selecting and securing the necessary metallurgical know-how, equipment, expertise, raw material, complementary inputs, finance and markets;

3. developing an increased supply of metals and tools for small-scale and rural industries;

4. rationalizing and up-grading existing plants, workshops and forging facilities and establishing new ones;

5. improving production techniques in existing metal based industries, solving technical problems, further up-grading their products;

6. establishing and operating metallurgical plants especially for the production of iron, steel, aluminium, copper and tin.

7. On the basis of sound surveys, prefeasibility and feasibility studies for the establishment of metal industries, exploring factors of efficiency and capacity utilization;

8. utilizing scrap metal whose exploitation has been hitherto neglected.

IV. Modalities of operation

1. Taking an inventory of existing metal industrial plants in order to determine the critical areas for improvement, and the necessary assistance for the development of appropriate priorities and policies aimed at facilitating metal product diversification, product expansion, maintenance and repair of industrial equipment, including appropriate parts production, and organizing subregional seminars on these matters.

2. Development of national and regional policies and programmes, including the establishment of projects and targets, by providing metallurgical know-how, expertise and technology, either through publications, seminars, working groups and specialized centres or plant workshops, in order to increase local capability to find solutions to problems related to metallurgical processes and to the production and application of metals and alloys.

3. Preparation of studies and holding of seminars or symposia on specific domestic and external problems facing African metal industries with a view to proposing solutions to these problems, taking into account also the experiences in other developing regions as one of the guides in formulating realistic metal development policies and programmes in Africa.

4. Identification of potentials for rationalization, long-term purchase and subcontracting arrangements among metal plants in the same or different countries, also using such arrangements for promoting meaningful intra-African co-operation in the formulation and implementation of co-ordinated programmes for the manufacture of metal products and semi-products.

5. Assistance to African Governments on request in the development of national institutions for the planning and development of metal industries, integrated with the rest of the industrial sector and other economic sectors.

6. Assistance to African countries in their efforts to secure the most appropriate technology, expertise, equipment, raw materials, finance and markets, and organization of working parties and seminars in this connexion.

7. Organization of working parties on the assistance required for developing appropriate national and regional policies for the development of local skilled manpower in the metal and metal-working industries.

8. Organization of working parties and seminars on assistance to African countries in the establishment of mini-metal industries.

9. Assistance to African countries in securing long-term purchase agreements for supply of processed or semi-processed inputs in the metal industry among African countries themselves, and establishment of a working party for the purpose.

10. Assistance to African countries, on request, in negotiating contracts with potential investors in metal industries and the manufacture of intermediate and capital goods.

11. Convening, on regular basis, of African regional ad hoc expert working groups on metal industries in regard to policies, strategies, intersectoral linkages and the relationship of this sector to other sectors of industry, and also undertaking joint working parties between experts from other developing and developed regions and African experts, particularly those from the ministries of industry, mines, planning, rural development and those engaged in actual production of metals.

V. Interrelationship between metal development and other planned programmes

1. The metal industry is an important complement of the engineering industry.

2. The metal industry provides inputs for the manufacture of machinery for chemical industries such as fertilizer plants and for the production of construction and building materials.

3. Metals have an important role to play in the operating structure of technological processes and thus the programme will contribute substantially to the transfer, design, adaptation and development of industrial technology.

4. The basic metal industry is directly related to the proposed Centre for Industrial Design and Manufacture, especially in regard to workshops, foundries and forging facilities.

5. The metal industry development programme will facilitate integ rated rural development, especially in regard to the supply of metals and metal products for small-scale and agro-based industries, rural electrification, water supply, transport and communications.

VI. Phasing

It is expected that the programme will initially concentrate on a survey of existing situations combined with some operational activities, in order to be able to move into the second phase with a greater content for technical assistance. The second phase will focus more on technical assistance activities in policy and strategy formulation at the national, subregional and regional levels and also in determining the priorities and conditions for interregional and global consultations in the field of metal industry. Governmental experts will be expected to participate actively in all these activities to ensure that there is a large training component in the implementation of the programme.

VII. Expected impact

1. Integration of basic metal development in Africa into the local economy, ranging from ore-dressing and processing to the manufacture of intermediate and capital goods.

2. Increase in employment in metals industry proper and subsidiary activities.

3. Economic diversification and greater supply of metals, especially to the rural small-scale industries and workshops.

4. Development of highly skilled and specialized indigenous manpower required for various aspects of the metal industry.

5. Greater capability for the transfer, adaptation and development of metallurgical technology.

6. Greater multinational economic interdependence and self-reliance in the African region, associated with intra-African trade in minerals, metal products and semi-finished products based on mutually advantageous development policies.

7. Recycling of scrap metal into useful products.

8. Increased savings of foreign exchange.

VIII. Sources of financing

The sources of financing for the programme and its operations will consist of:

1. The ECA budget, where ECA regular personnel are involved,

2. UNIDO, for experts seconded to JID,

3. UNDP, for experts obtained through the UNDP regional programme,

4. Contributions from ECA member Governments for the national counterpart experts seconded to ECA on request.

IX. Peronnel

African experts must be closely associated with the programme as counterparts. Such experts should be drawn from organizations at the national level already working in fields related to metals. The personnel recruited through UNDP financing should preferably come from other developing countries so as to ensure that appropriate practical experience in other developing regions is transmitted to the African region. This will contribute effectively to the implementation of the principle of technical co-operation among developing countries.

X. Location and organizational structure

The programme will be part of JID and operate from Addis Ababa. In order to facilit te effective technical assistance to individual countries, it is envisaged that the project costs per expert should include a large travel component in the rate of 10,000 United States dollars per year.

XI. Schedule of implementation

1. Discussion within ECA in connexion with the regional projects - October/November 1976.

2. Discussions with UNIDO - November/December 1976.

3. Recruitment of staff - February /March/April 1977.

4. The programme should begin operations in 1977 and last for three years in the first instance, after which it will be evaluated and the next move determined.

TERMS OF REFERENCE

I. Background

1. The development of basic metal industries has been accorded high priority in the Lima Plan of Action and has been singled out for intensive action at all recent meetings of African ministers.

2. The objectives of the programme include the provision of assistance to African countries in the formulation of policies concerning the development of basic metal industries, especially projects and in the negotiations conducive to multinational co-operation.

II. Tasks to be performed by the mission

3. A careful evaluation of production and consumption patterns of basic metal products in Africa and of the concomitant trade flows in these products. This will imply a description of the current situation and of the expected situation in 1985 as well as an outline of trends up to the year 2000. This part of the report will lay special emphasis on existing and expected intra-African trade flows in raw materials and metal products, so as to establish a possible pattern of regional co-operation.

4. Formulation, in the light of the above and of national and regional objectives, of a coherent strategy leading to greatly increased African self-sufficiency in basic metal products with the possibility of exports to the developed regions so as to reduce the trade gap from two sides.

5. Detailed description of the role, organizational structure and funding of the programme.

6. Presentation of recommendations in the form of a document covering the following areas.

(a) General report
(b) Programme on the integrated development of the basic metal industrial branches at the national level, outlining targets, programmes and strategies as well as instruments for the implementation of such programme;

(c) Specific programme of work of ECA in this field to assist African Governments individually and collectively in the implementation of integrated national development programmes with regard to the specific position of the basic metal industries;

(d) Recommendation on the most appropriate means of facilitating collaboration between ECA and Governments in the implementation of the programme;

(e) Recommendation on the potentials for co-operation among African countries in the implementation of national objectives contained in the national development plan and programmes for the industrial branch, especially multinational projects;

(f) **Recommendations** in particular on the integration of the basic metal industrial branches in the industrial sector and in other economic sectors.

III. Modalities for the operation of the mission

7. The mission will discuss with people and institutions involved in policy making for the basic metals subsector, as well as with those responsible for executing those policies. These will specifically include:

(a) Ministries of planning, industry, mining and trade;

(b) Public sector institutions engaged in productive activities, especially state-owned corporations active in the subsector or whose activities depend to a large extent on the basic metal sector;

(c) Indigenous basic metals centres and research units;

(d) Development banks, operating in the subsector;

(e) Existing major plants;

(f) International agencies in the field;

(g) Such other institutions and individuals as may provide valuable information.

IV. Composition of the mission

8. The mission will consist of:

1 team leader (casting, forging expert)

1 metallic mineral processing expert

1 industrial economist

9. The team will, in conjunction with the mission for the engineering programme, cover the main potential producer and/or consumer countries.

10. The team leader, who should come from outside the United Nations system as an independent consultant, will be appointed by ECA.

V. Country coverage

11. Although the mission will select countries to be visited primarily on the basis of their potential role as producers and/or consumers, as diverse a cross-section of African countries as possible will be achieved; i.e. the team will certainly include one or two countries which are land-loked, least developed or otherwise a priori disfavoured with respect to the speedy development of a basic metals industry.

VI. Duration and schedule of the mission

12. The mission will start its work on 1 April 1977 with a one-week briefing at ECA headquarters in Addis Ababa. The mission will take two or three months in the field and at least two more months for the finalization of the report.

VII. Report of the mission

13. The report of the mission should be completed in Addis Ababa immediately after the field mission and should be prepared in such a way as to outline the priority areas for the development of the basic metal industries during the period 1977-1981.

JOB DESCRIPTION

Title: Team Leader for the ECA/UNIDO Field Mission on Metal and Engineering Industry Development Programme

Grade/Post No: Equivalent to P-5 or D-1

Date required: As soon as possible, possibly mid-March or early April 1977

Duration: Five months

Duty station: ECA headquarters, Addis Ababa, with extensive travel to African countries on the field mission

Duties: Under the overall direction of the Executive Secretary and, on his behalf, the day-to-day direction of the Chief of the Joint ECA/UNIDO Industry Division, the Team Leader will supervise, a metallurgical expert, with experience in mineral processing, a mechanical engineer, expert on small steel mill foundry and forging, and an industrial economist. The Team Leader is expected to carry out the duties and functions contained in the project document and terms of reference for the Metal and Engineering Industry Development Programme with a view to producing a report covering the following aspects:

(i) General report;

(ii) Programme on the integrated development of metal and engineering industrial branches at the national level outlining the targets, programmes and strategies as well as instruments for the implementation of such programmes;

(iii) Specific programme of work of ECA in this field to assist African Governments individually and collectively in the implementation of integrated national development programmes together with recommendations on the best modalities for assisting Governments;

(iv) Recommendations on the most appropriate means of facilitating collaboration between ECA and Governments in the implementation of the programme;

(v) Recommendations on the potentials for co-operation between two or more African countries in the implementation of the national objectives contained in the national programme for the development of the industrial branch;

(vi) Recommendations in particular on the integration of the industrial branches with other aspects of other branches of industry and other socio-economic sectors.

Qualifications: Industrial engineer with comprehensive and broad practical experience in engineering industry, including technical and economic aspects of intersectoral and intrasectoral relations, knowledge of the charcteristics of the engineering industrial branch and its dynamics; knowledge of organizational relationships including research and development, knowledge of the broad technological problems related to the industrial branch; practical knowledge in the programming and planning of this branch at the national or subregional level; some knowledge of economic and social development of the developing countries would be very useful.

Languages: Fluency either in English or French and working knowledge of the other.