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Regional Expert Group Meeting
on Production Complementarities in
the Aluminium Industry in Latin America*

Kingston, Jamaica
23-26 July 1990

REPORT**

* This meeting was organized by UNIDO in co-operation with the Jamaica Bauxite Institute.

** This document has not been edited.

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INTRODUCTION

1. The Regional Expert Group Meeting on Production Complementarities in the Aluminium Industry in Latin America was convened at Kingston, Jamaica, from 23 to 26 July 1990. The meeting was organized by the System of Consultations of UNIDO in co-operation with the Jamaica Bauxite Institute. Twenty participants from eight countries in the Latin America and the Caribbean region and two observers one from the Commission of the European Community and one from the Caribbean Development Bank attended the meeting (See Annex 1).

2. As a follow-up to the recommendations of the First Consultation on the Non-Ferrous Metals Industry held in Budapest, Hungary, in 1987, a regional expert group meeting was organized in March 1989 in Córdoba, Argentina. One of the main objectives of the meeting was to analyse the situation and the prospects of the non-ferrous metals industry in the Latin America region and the possibilities of production complementarities among the producer countries. In view of the wide areas covered by the non-ferrous metals industry the meeting specifically recommended, inter alia, to focus future activities on individual metals.

3. Based on the recommendations of the meeting in Córdoba the Secretariat of UNIDO decided to organize a regional expert group meeting in the aluminium industry with the participation of the main producer countries in Latin America and the Caribbean region.

Objectives

4. The objectives of the meeting were mainly:

(a) To analyse the main trends in the industry and the possibilities for a programme of complementarities in the region;

(b) To identify appropriate forms of co-operation among the main producers in the field of bauxite, alumina, primary aluminium, and finished and semi-finished products;

(c) To establish a plan of action with the view to promoting the development of the aluminium industry, and increase and strengthen co-operation among the producer countries at the regional level.

Documentation

5. The documents issued for the meeting are listed in Annex II.

I. AGREED CONCLUSIONS AND RECOMMENDATIONS

6. The following conclusions were reached:

(a) There is great scope for a regional programme of complementarity in the aluminium industry of Latin America and the Caribbean. Such a programme could provide direct benefits to the countries of the region;

(b) In furthering the above, there is a need for bilateral or multilateral discussion between countries with the objective of identifying and defining areas of common interest;

(c) There is a need for detailed studies of local markets in the region in order to identify a range of products that could be manufactured within the framework of an integrated regional market in which the capital goods sector could occupy an important role;

(d) It is important to maintain products at the level of international standards in order to remain competitive world-wide;

(e) It is important to encourage the exchange and dissemination of information among regional producers on - among other things - markets, production, technology and standards;

(f) Appropriate environmental standards in the various production processes should be maintained;

(g) The transfer of appropriate technology such as in primary aluminium production, where for example, countries such as Venezuela have achieved technological expertise should be encouraged among enterprises in the region.

Recommendations

7. The meeting adopted the following recommendations:

(a) Governments and relevant private sector organizations should formulate and implement, where feasible, appropriate policies to promote a programme of complementarity from bauxite mining to aluminium fabrication, as well as appropriate linkage industries.

(b) UNIDO should sponsor:

(i) Specific studies on environmental issues (i.e. trends, patterns) as they could affect the industry in the near future;

(ii) An ongoing review of technical standards and norms in the industry in order to keep abreast of world requirements in this area;

(iii) A feasibility study for the establishment of additional caustic soda capacity in the region;

(iv) A study on the identification of semi-fabricated and fabricated products to be produced in the region.

(c) A panel of experts selected from the eight participating countries in the EGM should be established. The panel should meet at least once per year and at the suggestion of the participants, Brazil offered to host the first meeting during the first semester of 1991. It was proposed that UNIDO should sponsor the first meeting as part of the activities of the Section for Economical and Technical Co-operation among Developing Countries (ECDC) activities.

(d) The terms of reference for the Panel of Experts should be as follows:

- (i) Analyse the main trends of the aluminium industry in the context of the restructuring process taking place in the world economy;
- (ii) Study the prospects for the Latin American and Caribbean aluminium industry;
- (iii) Propose ways and means to strengthen regional and intra-regional co-operation in the fields of:
 - commercial agreements
 - production complementarities
 - research and development
 - technical assistance
 - exchange of economic, financial and technological information
- (iv) Encourage bilateral and multilateral negotiations leading to new forms of regional co-operation;
- (v) Promote appropriate forms of financial mechanisms to encourage investment projects among Latin American and Caribbean countries in the aluminium and related industries.

(e) UNIDO's System of Consultations Division should be the focal point for the collection and dissemination of information submitted by member countries on their respective industries.

(f) Research and development should focus primarily on enhancing regional co-operation for the development of the aluminium and related industries;

(g) UNIDO should provide technical assistance to the region where required, for the negotiation, acquisition and transfer of technology;

(h) The preparation of a plan of action geared to the promotion of commercial and production complementarities among the main producers of aluminium in the region.

Informal contacts among participants in the Meeting had permitted either initial negotiation or offers of co-operation on concrete proposals as listed in Annex III.

II. ORGANIZATION OF THE MEETING

Opening of the meeting

8. The Regional Expert Group Meeting was opened by the Minister of Mining and Energy of Jamaica. In his address he welcomed the participants and extended his thanks to UNIDO for having organized the meeting and selected Jamaica as its venue. He mentioned briefly the primary importance of bauxite in the national economy; the bauxite/alumina industry accounts for approximately 10 per cent of the gross domestic product of the country. He also mentioned the constraints faced by the industry particularly in the Caribbean and the efforts being made by the Government to encourage its further development. There is growing recognition, he added, of the need for regional co-operation by Government and the private sector.

9. The Resident Representative and Co-ordinator of the United Nations System in Jamaica expressed his appreciation to the Government of Jamaica and the Jamaica Bauxite Institute (JBI) for hosting the meeting. He pointed out that the aluminium industry was one of the main areas which needed to be promoted, bearing in mind its relevant role in the growth and industrial development of several countries in the region. For instance, in Jamaica, bauxite and alumina accounted for 60 per cent of export earnings, in addition to being an important base of support for other local economic sectors. The world-wide restructuring process, he mentioned, had created technological changes and new approaches in the use of metal which had had an impact on the end-user markets; the restructuring process has also had a repercussion on energy costs and environmental conditions. He also noted that the new perception in the orientation of the development of the aluminium sector in the region was geared towards strengthening production complementarities and reinforcing linkages with other industrial sectors, i.e. capital goods, transport, and construction, mainly as a result of the restructuring process.

10. The Executive Chairman of the Jamaica Bauxite Institute (JBI) in his opening speech pointed out among other things that the idea of exploring the full potential of the region's industry was mainly due to the decline in the importance of the region as a producer of semi-finished and finished products. The Latin America and the Caribbean region, he noted, was the second largest producer of bauxite, and the third largest producer of alumina; the region was the fourth largest producer of aluminium with a supply of 4 per cent of the world's production. Forty years after the industry began its activities in Jamaica, the country still remained primarily a producer of bauxite and alumina; one of the reasons being the lack of energy at affordable cost. He mentioned, however, that there were clear prospects for raising utilization rates of existing capacity in the finished and semi-finished production sector and also for expanding the capacity through increased regional co-operation.

11. The Director of the System of Consultations Division of UNIDO expressed his appreciation to the participants and in particular to the Jamaica Bauxite Institute for the excellent co-ordination in the convening of the meeting. Referring to the deliberations of the First Consultation on the Non-Ferrous Metal Industry held in December 1987 in Budapest, Hungary, he mentioned that recent structural changes in the world economy had had different effects on the non-ferrous metals sector in many countries. Development strategies for the aluminium industry should primarily be dictated by considerations based on the role of the industry in the national economy of a country and on the prospects for the future within the world context. He also stressed that there were opportunities for a joint programme of action in the development of the aluminium industry in Latin America and the Caribbean taking into account the vast local resources in the region, the existing capacities of production and the experience available. Due to the debt burden, many countries in the region would have to increase their export capacities to gain hard currency and introduce structural changes in their metallurgical sector in order to create a coherent productive system less dependent on foreign imports.

Election of officers

12. The following officers were elected:

Chairman: Mr. Carlton E. Davis (Jamaica), Executive Chairman,
Jamaica Bauxite Institute

Vice-chairman: Mr. Mario Abad (Brazil), Head, Metallurgical Division,
Industry and Trade Department, Ministry of Economy

Rapporteur: Mr. Carlos Sánchez Cepeda (Mexico), Vice-president,
Instituto Mexicano del Aluminio

Adoption of the agenda

13. The following agenda was adopted:

1. Opening of the meeting
2. Election of the Chairman and officers
3. Presentation of the agenda
4. Presentation of the discussion paper
5. Presentation of the main findings of the two studies developed one for the South American region and one for the Mexican and Caribbean region in production complementarities
6. Presentation by the participants on the situation of the aluminium industry in their country
7. Identification of areas of complementarity, and discussion on modalities for implementation
8. Regional co-operation in the identified sectors, trade opportunities, and institutional mechanisms
9. Adoption of the conclusions and recommendations

Adoption of the conclusions and recommendations

14. The conclusions and recommendations of the meeting were adopted by consensus at the closing session on 25 July 1990.

III. SUMMARY OF DISCUSSIONS

Presentation of the discussion paper and the studies

15. One of the UNIDO representatives presented a summary of the discussion paper and the main points for discussion. He briefly mentioned the situation of the aluminium industry in the region including its main subsectors, namely bauxite, alumina, caustic soda, petroleum coke and semi-finished and finished products. The development of the industry in the region was faced by basic constraints such as the low level of aluminium consumption, lack of capital, high energy costs in many countries, transport and communication, and under-utilization of installed capacities. He stressed that one of the key points for discussion was the need for regional co-operation between all the producer countries to develop strategies and promote supportive measures with the view to developing a programme of complementarity based on a coherent productive system, taking into account the vast natural resources of the region and the existing local capabilities.

16. A representative of the (JBI) presented in detail the background documents prepared for the meeting. One study covers the identification and the viability of production complementarities in the aluminium industry in Latin America, namely in Argentina, Brazil and Venezuela, and the second investigates the prospects for development of a specific complementation programme in the aluminium industry in Mexico and the Caribbean region. He noted, among other things, that the Latin American and the Caribbean region has experienced major economic difficulties since the 1980's. Economic growth was still being hampered by external debts and outflow of capital to meet principal and interest payments as a consequence of which regional investments had substantially declined. In addition other areas of concern were high inflation rates and sudden shifts in exchange parities. He also stressed that there was general recognition of the need to expand investment in productive process for both domestic and export markets if the region was to resume steady growth. In the presentation of the two studies specific areas for production complementarities and the various countries in which those areas could represent major interests for bilateral or multilateral co-operation were mentioned in detail.

General discussion

17. One participant stressed that Governments of countries mainly in the Caribbean area, do not have full control over the industry. That of transnational companies is, for instance, greater at mining and primary production levels. In the case of caustic soda and alumina in Jamaica, production is mainly controlled by transnational interests whereas for instance in Argentina, Mexico and Brazil this situation is much less of a concern due to strong state and private interests. A programme of action for promoting the industry should aim at feasible targets and be within the limits of a country's capability. He also noted that the need for regional integration and co-operation between producer countries is of basic importance if a programme of production complementarity is expected to benefit all the participating countries in the region.

18. Another participant noted that in view of the high energy component in the production costs structure, many bauxite-producing countries in the region cannot consider producing aluminium. Venezuela has a unique advantage due to both its capability of providing low energy cost based on hydropower and its large bauxite reserves. The lack of energy at affordable costs makes it difficult for countries, particularly in the Caribbean, to venture into the manufacturing and processing fields. In countries where government-subsidized energy might be discontinued, the situation of the aluminium industry could become critical. One participant added however that if energy costs are taken as a parameter, the industry in the Latin American and Caribbean region as a whole is very competitive.

19. One participant mentioned the shortfall in downstream activities in the aluminium industry of the Caribbean countries. He noted that about 25 per cent of aluminium-based products are imported primarily for local consumption. In his opinion greater co-operation within the region would be needed to increase production of semi-finished and finished products. Co-operation could be strengthened between government-sponsored enterprises and private concerns in the search for viable projects. He added, however, that there are limits in the capacity of consumption or utilization of finished and semi-finished products in many countries in the region in which case export opportunities should be encouraged.

20. Another participant expressed the view that in this framework of a programme of complementarity in the region, in particular at the downstream level, governments should analyse the possibility for providing appropriate commercial representation in each producer country in order to study the local market needs and potential. Such representation would, inter alia, have the scope to identify areas of mutual interest for co-operation and investment opportunities.

21. According to one participant, government-backed research and development programmes should be encouraged if the region is to achieve technological independence in the industry. Technological co-operation should focus particularly on acquiring better knowledge of computer-controlled technology of production processes. In addition, specific areas of research and development should be identified on a bilateral basis between the larger economies in the region as well as between those and the smaller economies.

22. Many participants expressed the view that due to time-consumption and the large investments required for research and development programmes it would be advisable for experts to look into this subject for more specific identification of priorities pertaining to the aluminium industry. He also mentioned that due to the existence of large unused installed production capacity, a comprehensive research and development programme should focus primarily on appropriate technologies with the view to making necessary improvements in the production process. The programme could also put emphasis on diversification, particularly in the field of finished and semi-finished products, thus creating stronger linkages with the capital goods industry at the regional level.

23. Many participants remarked that co-ordinated action should be undertaken by the countries in the region to concentrate efforts on norms and standards. If the industry is to compete on world markets and if export policies are to be successful, their production line must keep up with international regulations. One participant noted that in view of the opening of trade markets in Europe in 1992 and the expected competition thereafter, exports from the aluminium industry in the region may face increasing difficulties. Measures should be taken to keep abreast with those norms and standards with the view to increase the competitiveness of the industry.

24. Many participants noted that in view of the significance of the aluminium industry in the Latin American and the Caribbean economies it was necessary to establish a regional committee that could be in charge, among other things, of monitoring trends in the industry and ensure co-ordinated action at the regional level. They also expressed the view that existing specialized national institutions related to the industry could assist, in coordination with UNIDO, in establishing such a committee. The committee should be composed of experts in the region and have a permanent headquarters.

25. Various participants emphasized that the development of the aluminium industry should also be seen within an environmental context. The main area of concern related to the environment, is basically associated with e.g. mining of bauxite, production of alumina, smelters operations; another concern is related to other areas such as red mud and waste disposal. Another participant pointed out that transfer of environmentally-sound technology, institutional arrangements and ways to integrate sustainable development and environmental issues should be considered as important areas at policy level.

26. As agreed by all the participants, bauxite mining is one of the most destructive aspects of the industry considering the degradation of the soil and the profound modifications it brings about in the landscape and the ecological system. They also agreed that the impact of the industry on the environment should be assessed at the regional level in order to formulate an appropriate programme of action that could prevent irreversible conditions to human life and nature.

Annex I

LIST OF PARTICIPANTS

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Annex II

LIST OF DOCUMENTS

- | | |
|---|--|
| Identification and Viability of Production
Complementarities of the Main Producers
of Aluminium in the South American Region
(Argentina, Brazil and Venezuela) | ID.WG.501/1(SPEC.) |
| Investigation of the Prospects for
Development of a Specific Complementation
Programme in the Aluminium Industry of
Mexico and Caribbean Area | ID/WG.501/2(SPEC.)
and Corr.1(SPEC) |
| Consideration for Production
Complementarities and Regional Co-operation
in the Aluminium Industry in Latin America
and the Caribbean | ID/WG.501/3(SPEC.) |

Annex III

Offers of Co-operation on Concrete Proposals

The participants discussed possibilities for co-operation in the following identified areas of interest:

(a) INGOTS:

Venezuela is currently involved in an expansion programme of its smelters for which investment will be needed. On the other hand, Mexico, which due to high energy and production costs lacks of primary aluminium, would be interested in co-operating with Venezuela.

(b) ALUMINA:

Mexico would be interested in importing alumina from Jamaica. Argentina would like to receive and evaluate offers and conditions for the supply of Jamaican alumina that may be available; in the event of availability, an initial agreement of five years could be considered.

(c) CAUSTIC SODA:

Both Jamaica and Venezuela have indicated an interest in identifying regional producers that could provide the necessary supply for their production of alumina.

(d) REFRACTORY BRICK:

Brazil and Argentina both of which have export capacity that could be approached by Venezuela.

(e) COKE:

Mexico has shown interest in exploring the possibilities of purchasing petroleum coke from Argentina.

(f) SMELTER:

Trinidad and Tobago and Jamaica are interested in the construction of a smelter and are considering discussions to define terms of investment.

(g) EXTRUSION, SHEET AND FOIL:

(i) The Dominican Republic and Trinidad and Tobago have both shown interest in receiving supplies from Mexico, Venezuela and Argentina.

(ii) Having excess production capacity, Mexico would in turn be interested in co-operating with both Venezuela and Argentina.

(h) SEMI-FINISHED AND FINISHED PRODUCTS:

Jamaica and Venezuela would be interested in exploring possibilities of co-operation. Identification of products for local and export markets should be carried out. Raw materials would be supplied by Venezuela.