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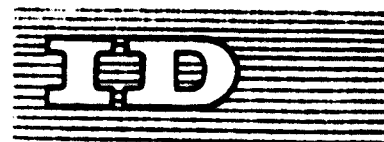
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~~The~~ Workshop on Organizational and Technical Measures
for the Development of Building Materials

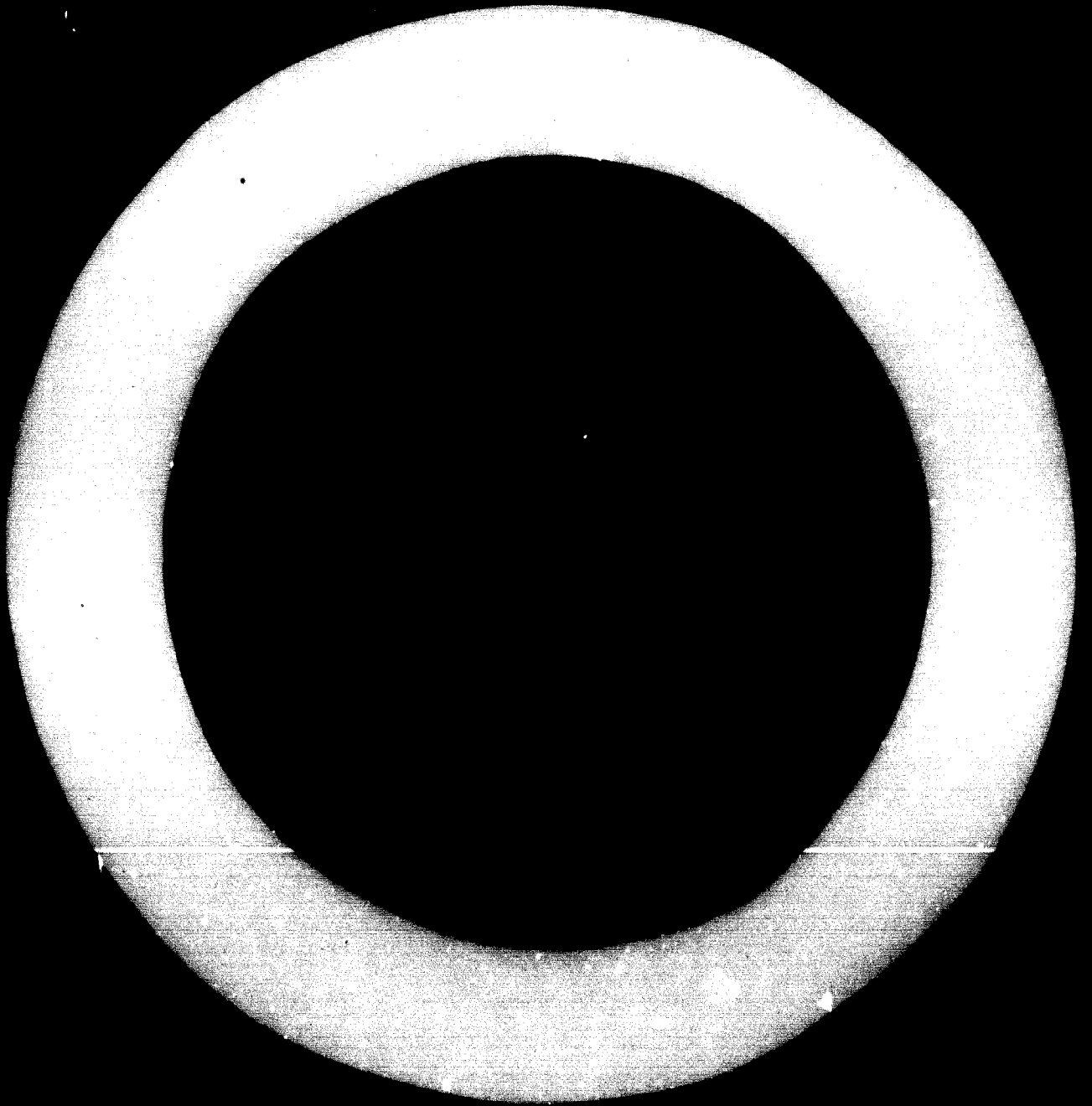
Moscow, 25 September - 19 October 1968

BUILDING MATERIALS AND WOOD PRODUCTS INDUSTRIES

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INTERNATIONAL SYMPOSIUM ON INDUSTRIAL DEVELOPMENT
Athens, 29 November - 20 December 1967

REPORT OF COMMITTEE 11 ON AGENDA ITEM 2

SUB-ITEM: BUILDING MATERIALS AND WOOD PRODUCTS INDUSTRIES

ATH.67-505

Committee II

12 December 1967

Building Materials, including Wood Products

1. In introducing the discussion, the Chairman drew attention to the wide range of building materials industries. It was suggested that the discussion concentrate on non-metallic minerals and wood products and other inputs not previously discussed under other items.
2. It was generally felt that the problems and policies relating to the development of the building materials and components industries had been well stated in the issue paper under discussion (ID/CONF.1/A.11). Several delegations expressed their support for the recommendations made in this paper and stressed the urgent need for action to increase the efficiency and output of the building materials and components sector. The rational production of building materials and components, using locally available raw materials and waste products to the maximum extent, was recognized as a pre-requisite for meeting the enormous demands for construction works of all kinds prevailing in developing countries. The representatives of the ECA and the UNDP remarked that governments had not hitherto given a higher priority to the field of building materials and components in their requests for technical assistance. Assistance in this field would be particularly valuable. It offered important possibilities for economic and social development as well as of achieving savings of scarce foreign exchange.
3. Although several examples were given of the successful use of locally available raw materials, it was strongly felt that the opportunities in this respect had been far from exhausted. It was pointed out by several delegations that recently developed techniques of processing and preserving local raw materials offered new possibilities of producing building materials and components of improved quality and durability. The dissemination of accurate information on these new technologies should be made more effective and further research should be encouraged. Delegations expressed their concern about the lack of surveys of natural resources suitable to serve as a basis for expanded production of building materials. It was stressed that such surveys provided a necessary background for the preparation of long-term plans for the development of the building materials and components industries. On the other hand, it was

realized that long-term plans and forecasts of needs were not alone sufficient for determining investments in new factories. Feasibility studies must be carried out for each specific project, otherwise misinvestments, high production costs and idle capacity of installed machinery could result. Several developed countries expressed their willingness in co-operating with developing countries in the carrying out of pre-investment surveys and market studies. In this connexion, it was suggested that each country study carefully its own sources of raw materials rather than rely uncritically on building materials of foreign origin. It was also noted that direct cost comparisons between various materials could be misleading without taking into account durability and other requirements.

4. It was stressed by several delegations that one of the major reasons for the retarded development of the building materials and components sector was the lack or weakness of the institutions required to support their industries in the developing countries. One delegation noted that, in his country, it has proved necessary to establish a specialized Ministry for the development of the building materials and construction industries. Several representatives pointed out the need for setting up centres or institutes, partly or entirely financed by governments, to deal with testing and quality control, research, dissemination of information and standardization. The importance of using uniform measurements and quality standards was emphasized. In this connexion, attention was drawn to the recommendations issued by the International Council for Building Research, Studies and Documentation (International Modular Group), and by the International Organization for Standardization. One delegation suggested a world-wide consultation on the problems of standardization of building materials and components.

5. It was suggested that special attention should be paid by governments and by the industries concerned to the organization of suitable education and training of skilled personnel. The need for operatives skilled in the maintenance of machinery and equipment and in the management of factories was particularly singled out. Education and training centres should be set up, where appropriate, based on regional co-operation. UNIDO should play an important role in helping to establish such centres. One delegation particularly emphasized that local languages be used in these centres.

6. The issue of prefabrication of building components in developing countries was raised by some delegates. In the opinion of one delegate, prefabrication had been introduced in industrial countries as a means of reducing labour requirements and would thus not be justified or advisable in countries facing serious unemployment or under-employment. Other delegations pointed out that prefabrication methods could thus substantially help to diminish the requirements of skilled labourers. Prefabrication methods would help to speed up the building production process in general. One delegation proposed that UNIDO should provide assistance and disseminate information on prefabrication methods suitable for the conditions prevailing in developing countries.
7. In connexion with a discussion of suitable policies aimed at increasing the capacity and efficiency in building materials and components production, one delegate drew attention to the importance of the modernization of existing factories, the organization of maintenance and of taking measures to ensure the full use of already installed capacity.
8. Several delegations also stressed the necessity of developing transport facilities as a major means of reducing on site costs of building materials and components and facilitating regional co-operation and international trade. As regards regional co-operation, however, it was stressed by one delegate that such co-operation could only be achieved if a positive attitude were taken by the governments concerned. The regional economic commissions could play an important role in promoting a better understanding of the importance and economic advantages of regional co-operation, specialization and sharing of potential markets for building materials and components.
9. As regards the development prospects for specific building materials, there was a consensus that the demand for cement would continue to increase very considerably in the future. It was stated that the establishment of further plants for the production of cement should therefore be encouraged, in particular in countries or regions where the price of imported cement is at present high, mainly due to transport cost. As regards the economic advantages of large-scale in the production of cement, it was stressed by several speakers that, although these advantages were considerable, modern machinery is now available for comparatively

modest capacities which enables the economic production of cement for domestic markets of comparatively small size. One cement expert expressed his views concerning the feasibility of even smaller scale cement plants. One speaker drew attention to the special difficulties arising in connexion with production and use of concrete in hot climates. He recommended that UNIDO collect experience and information relating to this problem for dissemination to countries concerned, even by the establishment of appropriate research facilities of regional character.

10. There was a comprehensive discussion on the possibilities of using timber, and wood based products for the purpose of building and construction. It was generally agreed that these products should be considered as basic inputs for the construction industry and that there was a wide range of so far unutilized possibilities. These products offered favourable opportunities for satisfying domestic needs and held out prospects for exports, although a severe competition would be faced. It was pointed out that a number of species, which had not so far been used for commercial purposes, could serve as raw materials for the production of sheet materials for construction. Recent research and development in this field has opened up new possibilities, information on which should be widely disseminated. One delegation drew attention to the possibilities of the establishment of multi-purpose board plants under limited market conditions. It was also indicated that developing countries intent on expansion of their forest products industries should start from an uncomplicated base by manufacturing and selling relatively simple products. Some delegates suggested that more significance be given to wood products as building materials than indicated in para. 55 of document ID/CONF.1/23. One delegation suggested studies on the effects of increasing land prices on construction activities.

11. One delegate suggested that a small special working group be set up to develop a programme of action for the establishment of pilot and demonstration plants based on the use of local raw materials.

Recommendations

1. Developing countries should, where appropriate, give higher priority to the development of the building materials industries in order to achieve greater efficiency in their construction activities, better utilization of local raw material resources and savings in foreign currency.

2. UNIDO, on request, should assist in drawing up national and regional long-term programmes for the production of building materials having regard to plans for their construction industries and surveys of their relevant natural resources.
3. UNIDO, on request and in co-operation with other organizations, should promote studies and collect and distribute information on the economics and production techniques of competitive building materials, having regard to the function and durability of the constructions.
4. UNIDO, on request and in co-operation with other organizations, should assist in the development of production techniques based on the use of local raw materials including agricultural and industrial waste products, by promoting the establishment of pilot and demonstration plants in different regions and by other measures.
5. UNIDO should assist in the establishment of testing and training centres for a more efficient use of traditional and modern building materials and the setting up of research facilities to promote the application of modern production techniques to specific climatic conditions (as, for example, in concrete products handled in large quantities).
6. UNIDO should examine the feasibility of smaller scale local cement plants having regard to high transport costs for imported cement.
7. UNIDO was asked to promote the implementation of projects based upon pre-investment studies already available either on regional or national bases.
8. UNIDO, in co-operation with other bodies, should assist in the development of co-ordinated systems of standards relating to the dimensions and properties of building materials and components as well as to methods of testing and quality control.



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