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*for a sustainable future*

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TO PREPARE FOR CONSULTATIONS ON THE  
PETROCHEMICAL INDUSTRY,

Doha, Qatar, 21-24 October 1978

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### INTRODUCTION

1. The Industrial Development Board in May 1978 decided that a consultation meeting should be convened on the petrochemical industry; UNIDO was therefore planning to convene the First Consultation Meeting on the Petrochemical Industry in Mexico City, Mexico from 12 to 16 February 1979. As part of the preparations for that Meeting, UNIDO, in co-operation with the Government of Qatar, held the Regional Preparatory Meeting for the Arab States at Doha from 21 to 24 October 1978.
2. The head of the delegation of Qatar, T. Hadidi, was elected Chairman of the Meeting. The participants were as listed in the annex.
3. The Meeting agreed that the UNIDO team would present the main conclusions of the UNIDO World-wide Study of the Petrochemical Industry: 1975 to 2000. That presentation would serve as a basis for discussions with the object of ascertaining the issues relevant to the first global consultation meeting on the petrochemical industry.

#### CONCLUSIONS

4. The Arab countries as a group possess the greater part of the world's hydrocarbon resources and it is their right to maximize the revenues of this valuable non-renewable material. Since the market value of a petrochemical product is, on average, about 10 times the cost of the hydrocarbon feedstock, the production of petrochemicals is the natural and obvious choice.
5. Arab countries do not consider the establishment of a petrochemical industry solely as a profit-making undertaking. Socio-economic benefits have also to be taken into consideration.
6. The Arab countries intend to develop an integrated petrochemical industry in stages each according to its own structure and policy, starting with basic and intermediate products and extending to the end products. The planned production of petrochemicals in Arab countries represents a very small percentage of the total world demand. This should be compared with the fact that they are the producers of more than 30 per cent of the world's supply of hydrocarbons, the main feedstocks of the industry.
7. Joint ventures between Arab countries for the development of petrochemical and down-stream industries should be encouraged. Co-operation between Arab countries in the marketing and, whenever possible, in production is desirable.
8. The establishment of regional information, research and development services is essential to support further development of the industry and to gradually reduce the dependence of the Arab petrochemical industry on imported technology.
9. Arab countries would be able to finance development of down-stream industries in other developing countries to satisfy their demand and at the same time create outlets for Arab products. Joint-ventures should be considered to achieve that goal.
10. Co-operation of Arab countries with developed countries was most desirable in the areas of technology and market development. That co-operation might take the form of joint-ventures.

## I. THE UNIDO WORLD-WIDE STUDY

11. A summary was presented of the conclusions of the World-wide Study of the Petrochemical Industry (1975 to 2000) undertaken by UNIDO on the current situation and prospects for the years 1985 and 2000. In particular it was emphasized that a great change in the production cost of petrochemicals, especially in ethylene, had taken place since the adjustment of oil prices late in 1973. For example, there had been a considerable decline in the fixed costs portion of the total manufactured cost of ethylene from 39.5 per cent in 1972 to 19.3 per cent in 1977. On the other hand the variable costs share, which was composed mainly of raw materials and utilities, rose from 44.4 per cent in 1972 to 72.9 per cent in 1977. That would make petrochemical plants in Arab countries with abundant and relatively cheap feedstocks competitive with plants constructed in the developed countries, even though plant costs in the former were higher than in the latter.

12. It was also suggested in the Study that if the objective set by the Second General Conference of UNIDO at Lima, Peru, in March 1975 were to be attained, the developing world should have as a target a share of 35 per cent of the world's petrochemical production in the year 2000. Of this 35 per cent, the Arab countries, with their abundant hydrocarbon resources, should contribute a sizeable proportion.

13. A summary was also presented of the results to date of that part of the UNIDO study that would deal with the strategies of the corporations and states involved in the petrochemical industry as regards feedstocks, technological and manufacturing patterns, research and development orientations, and trade and market legislations.

14. The discussions that followed emphasized the selectivity of geographical manufacturing spread and sectoral redeployment with their implications for the developing countries, as well as the increasing reshaping of relationships between the state and the corporations of developed countries. That led to the conclusion that those trends would conflict with the attainment of the Lima target.

## II. THE CASE FOR ARAB PETROCHEMICALS

15. The participants pointed out that the world-wide consultations launched by UNIDO were envisaged as a framework within which developing countries would discuss with developed countries how both groups would contribute to world industrial output to achieve the Lima target. The following arguments were presented to support the case for a significant Arab contribution to the future world petrochemical output.
16. It was first stated that the Arab countries were over-extracting oil, their main, non-renewable source of wealth, to satisfy the needs of the consuming countries; by doing so, those countries were obliged to flare most of the associated gas. Therefore, the only alternative left to a lower rate of extraction was to up-grade an increasing part of their hydrocarbons through the development of petrochemical industries.
17. It was noted that the current and projected petrochemical production by Arab countries until the end of the century, represented a marginal part of total world production. Thus, the marketing of future Arab production of petrochemicals called for a different response than, for example, the attitude adopted so far by the EEC partners in the Arab-European Dialogue. In this connection, Arab countries found it difficult to accept the EEC argument that the markets were saturated when the developed countries were actively investing in new plants mostly located in selected developed countries.
18. The time factor was important; the earlier the Arab countries started, the better it would be for them. Delays in starting petrochemical production would mean paying higher investment costs; on the other hand, immediate project implementation would enable new producers to approach export markets upon their full recovery, which was expected in the early 1980s. Furthermore, to put new plants on-stream at their full capacity usually took a few years. The Arab and other developing countries, therefore, needed to speed up the establishing of petrochemical industries. In addition, as oil and gas prices were expected to increase during the forthcoming years, the Arab countries would find themselves in an increasingly competitive position.
19. It was stressed that for the Arab region, which was basically oil and gas producing, the petrochemical industry was a main sector through which the Arab countries could contribute efforts to the attainment of the Lima target. It was in that sector and others, such as the fertilizer industry, that the Arab countries could, and must contribute to the achievement of the Lima objectives.

20. The Meeting pointed out that in practice the Arab countries could and would promote their new projects following different time schedules. Although the Arab countries were determined to achieve the full integrated development of the industry (that is encompassing basic, intermediate and end-products), it was stated that some of them would start by setting up facilities to produce basic and intermediate petrochemical products.



### III. PRODUCTION OF PETROCHEMICALS

21. Various aspects related to the production of petrochemicals in Arab countries were discussed. It was pointed out that although operational problems were expected they would not be much different from those already encountered and solved during the development of the Arab petroleum refining and fertilizer industries.

22. The question of comparative location was also considered and it was pointed out that although freight, special design and the higher cost of construction contributed to higher investment costs in the developing countries, those factors were more than compensated for by the secure and direct control of the feedstock at relatively low cost.

23. The production of the existing Arab plants and projected plants would, at the outset, be mainly basic and intermediate products. However, downstream extension and diversification of production were to be expected.

#### IV. CO-OPERATION BETWEEN ARAB COUNTRIES

24. It was suggested that the Arab oil and gas producing countries should encourage, through joint ventures, complementary down-stream operations in other more populated Arab countries.

25. It was pointed out that Arab regional co-operation in marketing and, wherever possible, in production was most desirable.

26. The Meeting stressed the necessity of establishing regional centres for information and technological research and development to provide technical support for the Arab petrochemical industry.

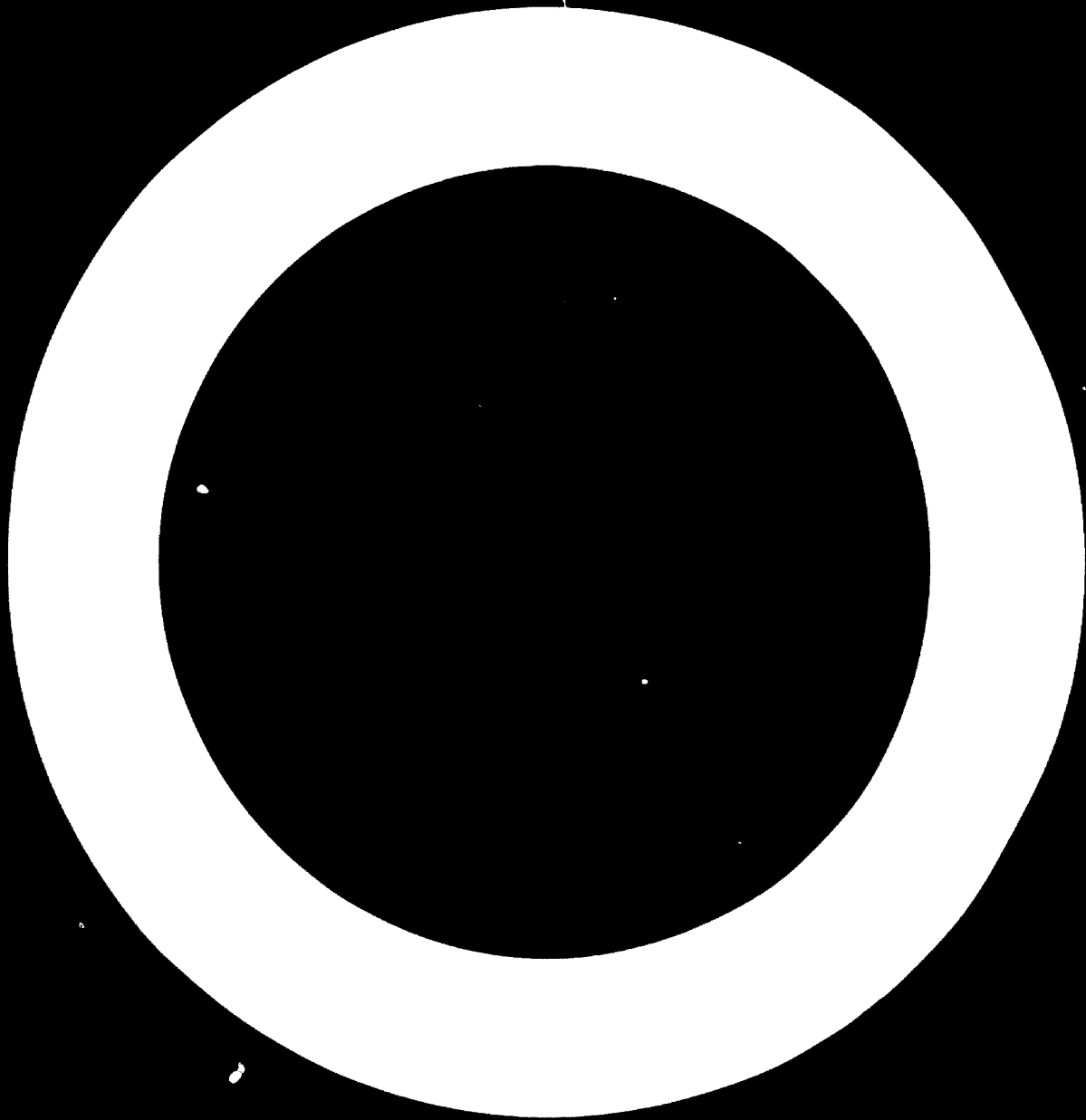
27. A suggestion was made to encourage a mutually beneficial exchange between Arab countries of their experiences in the area of contracting with foreign partners.

28. It was further suggested that existing regional Arab organizations involved in petrochemical activities should assume a dominant role in the implementation of the above proposal and should maximize the utilization of existing data. The participants expressed the wish that UNIDO should contribute to that effort.

V. CO-OPERATION BETWEEN DEVELOPING COUNTRIES

29. It had been stressed that co-operation between Arab oil-producing countries and other third world countries was fundamental to the promotion of petrochemical manufacture in the developing countries as a means of achieving the Lima target. The way to promote petrochemical-based trade between those two groups of countries might be to enter into such a relationship through industrial promotion, including joint ventures, on the basis of regional comparative advantages and regional rationalized specialization.

30. The Meeting felt that co-operation between petrochemical producers in the Arab area would help them to overcome market obstacles.
31. It was stressed that credit facilities were being needed increasingly to finance petrochemical exports. Therefore, the existing Arab financial institutions should be involved.
32. The Meeting emphasized that the markets of developing countries, including Arab ones, should be developed for Arab petrochemicals through the establishment of down-stream industries.
33. It was felt that although certain joint venture agreements provided for marketing, the national partners had to be involved in marketing in order to be able, at a later stage, to themselves market their production.
34. It was observed that while competition might be acceptable in the final analysis, restrictive market practices were not because they were meant to obstruct the export of industrial products of developing countries.



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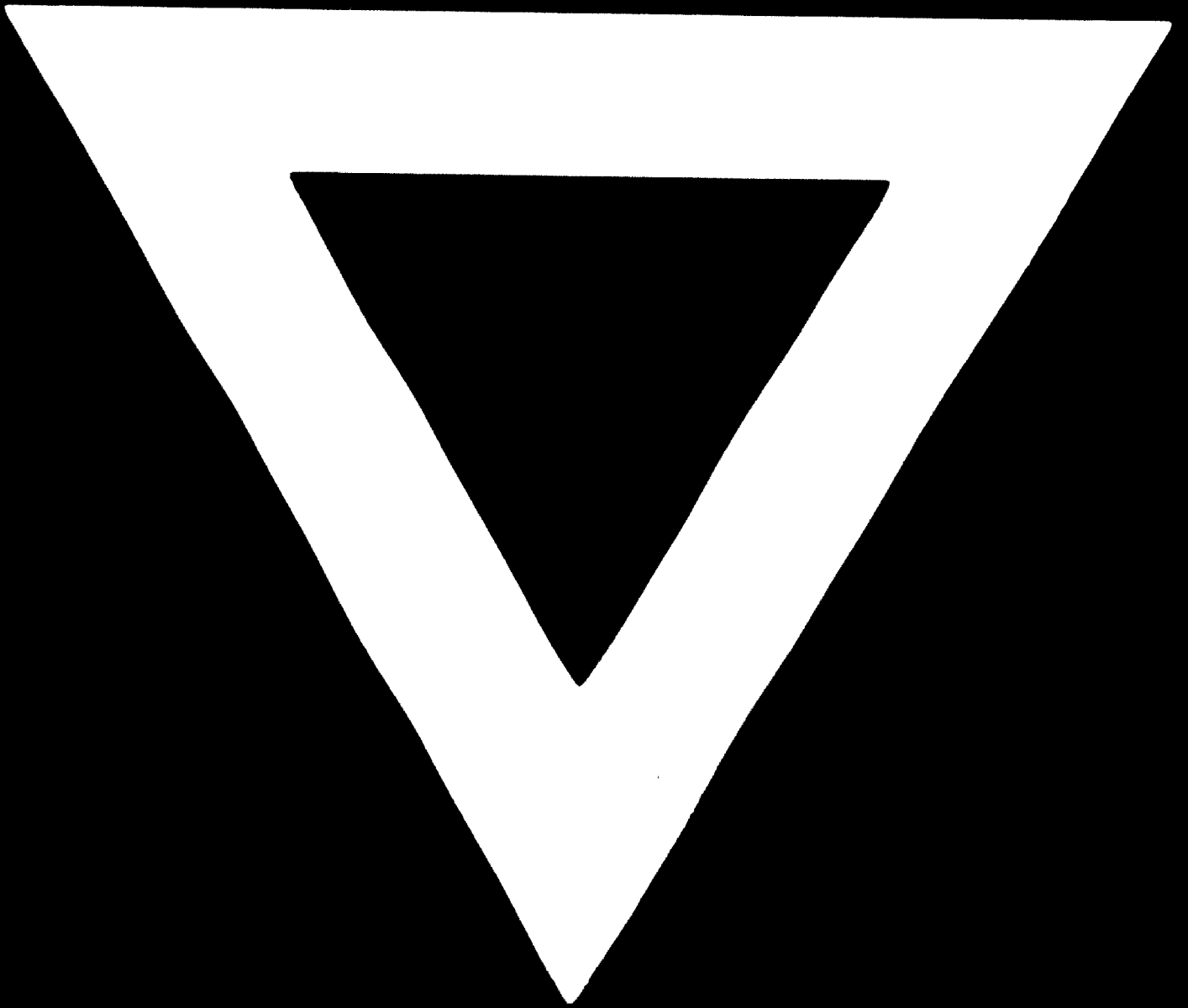
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