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Developing Countries

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Note for the Participants on

Background Information concerning

Existing and/or Planned Petrochemical Industries

in

Their Countries 1/

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

In order to facilitate UNCTAD's efforts in planning, co-ordinating and determining priorities for technical assistance connected with petrochemical developments in member countries you are kindly invited to provide the information concerning petrochemical activities in your country along the lines of the following questionnaire composed of -

Part I. - General Questions

Part II. - Specific Questions

Please answer the questions under all four aspects indicated, i.e., resources, basic raw materials, petrochemical intermediates and finished products.

A preliminary list attached covers the products to which this review refers.

Kindly return your answers to Dr. Fredrik Lager, Senior Interregional Adviser, attending the Meeting.

We take this opportunity to express our thanks for your co-operation.

QUESTIONNAIRE

1. General Questions

- 1. What is the installed capacity to produce any of the listed petrochemicals in your country?
- 2. What is the utilization of these capacities?
- 3. What are the sources of raw materials (home production, imports)?
- 4. What are your Government's and/or the industry's plans regarding the expansion of the production?

What is your Government's policy regarding the petrochemical industry? Any specific measures (taxation, tariff, etc.) influencing the establishment, diversification and growth of this industry?

- 5. What are, in your opinion, the market potentials in your country for the products listed in the attached covering the Second Development Decade? (If possible, give at least three figures, use the years 1970, 1975 and 1980.) Please give any other techno-economic factors which may influence the growth of this industry during the 1970's in your country.
- 6. To what extent, from your point of view, will the demand be met by home production during the Second Development Decade?
- 7. If possible, give estimated capital costs invested and expenditures on research and development to achieve the production targets.
- 8. Please indicate if any such projects have previously been made in your country.
- 9. When describing production of any of the products listed, please indicate, generally, the method of production, the source of equipment and know-how, the size of the plant and the raw materials.
- 10. Are there any research institutions dealing with petrochemicals in your country? Are there any plans regarding this?
- 11. What are, from your point of view, the progressive and possibilities for regional or sub-regional co-operation in your country in the field of petrochemical industry?
- 12. What do you think may be the role of the United Nations, and UNCTAD particularly, in assisting the efforts to develop the Second Development Decade for the petrochemical industry in your country?

II. Specific Questions

1. Resources

- What is the present situation with regard to natural gas or crude oil deposits in your country (size, location)?
- Is there any production of organic chemicals based on coal and/or natural resources?

2. Basic Materials

- Have you a nitrogenous fertilizer industry? What are the present projects in your country regarding this?

3. Final Products

- What are the markets for petrochemical end-products in your country? If possible, characterize the utilization of these products by other industrial branches (input-output data).

III. Preliminary list of products to which this review refers

1. Resources

- natural gas
- crude oil

2. Basic Materials

- ethylene
- propylene
- benzene
- toluene *

3. Petrochemical Intermediates

- | | | |
|-----------------------|----------------------------------|-------------------|
| - ethylene oxide | - cyclohexane | - phenol |
| - ethylene glycol | - glutaric anhydride | - glycerol |
| - methyl methacrylate | - ammonia for non-fertilizer use | - dodecyl benzene |
| - vinyl acetate | - urea for non-fertilizer use | - butadiene |
| - styrene | - methanol | - butylene |
| - acrylonitrile | - dimethyl ether | - acrylonitrile |
| - acrylamide | - dimethylamine | - propylamine |
| - acrylonitrile | - dimethylamine | - DMF. |

4. Finished Products

a) Thermoplastics

- polyethylene
- polypropylene
- P.V.C. (vinyl chloride)
- polyvinyl acetate
- polystyrene and related moulding compounds
- polyacrylates
- polyamide
- cellulose

b) Thermosetting Resins

- phenolic resin
- urea formaldehyde
- melamine resin
- polyurethanes
- alkyd resin
- epoxy resin
- amino acid polymer resin
- urea

c) Synthetic Fibres

- polyamide fibres
- polyester fibres
- acrylic fibres
- polypropylene fibres
- rayon

d) Elastomers

- natural rubber
- latex
- synthetic rubber
- rubber compounds

e) Solvents and Plasticizers additional to #

- ethyl alcohol
- butanol
- acetone
- methyl ethyl ketone
- methyl isobutyl ketone
- diacetone alcohol
- chlorinated hydrocarbons
- ester solvents
- hexane
- benzyl alcohol
- plasticizers

