



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

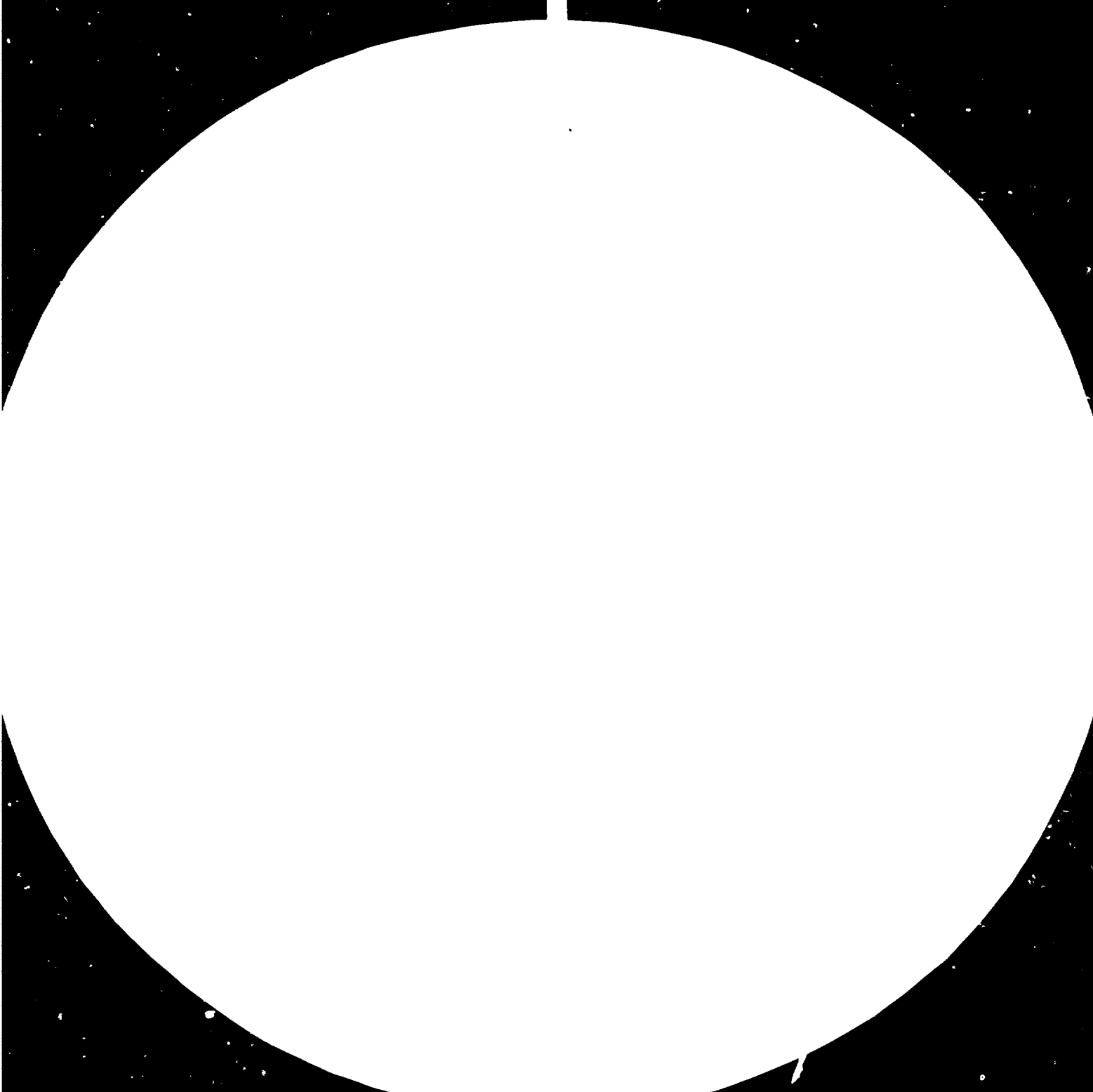
## FAIR USE POLICY

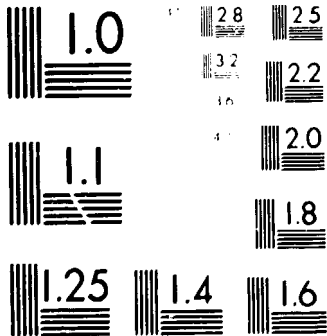
Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)





MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF STANDARDS-1963-A



10646 - E

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

---

**SECOND  
CONSULTATION  
ON THE  
PETROCHEMICAL  
INDUSTRY**

Istanbul, Turkey, 22-26 June 1981

---

**REPORT**

99000

ID/273  
ID/WG.336/7/Rev.1

Distr.  
LIMITED  
ID/273  
(ID/WG.336/7/Rev.1)  
ENGLISH

**Explanatory notes**

CEFIC	European Council of Chemical Manufacturers' Federations
GAIT	General Agreement on Tariffs and Trade
GOIC	Gulf Organization for Industrial Consulting
ITC	International Trade Centre
OAPEC	Organization of Arab Petroleum Exporting Countries
OPEC	Organization of Petroleum Exporting Countries
UNCTAD	United Nations Conference on Trade and Development

with



Distr.  
LIMITED

ID/273/Corr.1  
(ID/WG.336/7/Rev.1/Corr.1)  
19 August 1981

ENGLISH ONLY

---

Second Consultation on the  
Petrochemical Industry

Istanbul, Turkey, 22-26 June 1981

REPORT

Corrigendum

Contents, page 1

For existing page numbers substitute

- 1 -

CONTENTS

<u>Chapter</u>	<u>Page</u>	<u>Paragraphs</u>
PREFACE .....	2	
INTRODUCTION .....	4	1
CONCLUSIONS AND RECOMMENDATIONS .....	4	2-7
I. ORGANIZATION OF THE MEETING .....	6	8-15
II. DISCUSSION ON THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE FIRST CONSULTATION .....	8	16-31
III. LONG-TERM ARRANGEMENTS FOR THE DEVELOPMENT OF THE PETROCHEMICAL INDUSTRY IN DEVELOPING COUNTRIES .....	13	32-48
IV. UNIDO MODEL FORM OF LICENSING AGREEMENT FOR THE PETROCHEMICAL INDUSTRY .....	19	49-72
V. OTHER ISSUES PROPOSED FOR FUTURE CONSIDERATION .....	24	72-73

Annexes

I. List of participants .....	25
II. List of documents .....	34

CONTENTS

<u>Chapter</u>	<u>Page</u>	<u>Paragraphs</u>
PREFACE .....	4	
INTRODUCTION .....	6	1
CONCLUSIONS AND RECOMMENDATIONS .....	6	2-7
I. ORGANIZATION OF THE MEETING .....	8	8-15
II. DISCUSSION ON THE IMPLEMENTATION OF THE RECOMMENDATIONS OF THE FIRST CONSULTATION .....	10	16-21
III. LONG-TERM ARRANGEMENTS FOR THE DEVELOPMENT OF THE PETROCHEMICAL INDUSTRY IN DEVELOPING COUNTRIES .....	15	32-48
IV. UNIDO MODEL FORM OF LICENSING AGREEMENT FOR THE PETROCHEMICAL INDUSTRY .....	21	49-72
V. OTHER ISSUES PROPOSED FOR FUTURE CONSIDERATION	26	72-73

Annexes

I. List of participants .....	27
II. List of documents .....	36

PREFACE

The Second General Conference of the United Nations Industrial Development Organization (UNIDO), held at Lima, Peru, in March 1975, recommended that UNIDO should include among its activities a system of continuing consultations between developed and developing countries with the object of raising the developing countries' share in world industrial output through increased international co-operation.<sup>1/</sup>

The General Assembly, at its seventh special session in September 1975, in its resolution 3362 (S-VII), decided that the System of Consultations called for by the Lima Declaration and Plan of Action should be established at global, regional, interregional and sectoral levels,<sup>2/</sup> and that UNIDO, at the request of the countries concerned, should provide a forum for the negotiation of agreements in the field of industry between developed and developing countries and among developing countries themselves.

The System of Consultations has been established under the guidance of the Industrial Development Board. The First Consultation on the Petrochemical Industry was convened in Mexico City from 12 to 16 March 1979.<sup>3/</sup> The Board, at its thirteenth session in 1979, decided that the Second Consultation on the Petrochemical Industry should be convened during 1981.<sup>4/</sup>

---

1/ Report of the Second General Conference of the United Nations Industrial Development Organization (ID/CONF.3/31), chapter IV, "The Lima Declaration and Plan of Action on Industrial Development and Co-operation", para. 66.

2/ Official Records of the General Assembly, Seventh Special Session, Supplement No. 1, para. 3.

3/ See Report of the Meeting (ID/227).

4/ Official Records of the General Assembly, Thirty-fourth Session, Supplement No. 16.



The Board at its fourteenth session in 1980 decided to establish the System of Consultations on a permanent basis with the following main characteristics, including those described in its past decisions:

(a) The System of Consultations should be an instrument through which the United Nations Industrial Development Organization (UNIDO) would serve as a forum for developed and developing countries in their contacts and consultations directed towards the industrialization of developing countries;<sup>5/</sup>

(b) Consultations would also permit negotiations among interested parties at their request, at the same time as or after Consultations;<sup>6/</sup>

(c) Participants of each member country should include officials of Governments as well as representatives of industry, labour, consumer groups and others, as deemed appropriate by each Government;<sup>7/</sup>

(d) Final reports of the Consultations should include such conclusions and recommendations as agreed upon by consensus by the participants as well as other significant views expressed during the discussion;<sup>8/</sup>

Draft rules of procedure for the System of Consultations have been drafted for the Board but have not yet been adopted.

---

<sup>5/</sup> Ibid., Thirty-fifth Session, Supplement No. 16, para. 151(a).

<sup>6/</sup> Ibid., para. 151(b).

<sup>7/</sup> Ibid., para. 152.

<sup>8/</sup> Ibid., Thirty-second Session, Supplement No. 16, para. 163.

## INTRODUCTION

1. The Second Consultation on the Petrochemical Industry was held at Istanbul, Turkey, from 22 to 26 June 1981. The meeting was attended by 133 participants (see annex I) representing Governments, industry and labour from 43 countries, 7 United Nations organizations and 7 other international organizations.

## CONCLUSIONS AND RECOMMENDATIONS

### Long-term arrangements for the development of the petrochemical industry in developing countries

2. The production of petrochemical products at locations where readily recoverable petrochemical feedstocks and sources of energy are available would have economic attractions.

3. The UNIDO secretariat should:

(a) Examine the various forms of long-term arrangements for the development of the petrochemical industry in the developing countries along the parameters discussed,<sup>1/</sup> and update the existing general guidelines for joint ventures;<sup>2/</sup>

(b) In co-operation with the parties concerned, develop a programme of co-operation among developing countries, with or without petrochemical feedstocks, to promote the development of the petrochemical industry in those countries.

4. In view of the importance of the issues discussed under this agenda item for both developed and developing countries, the Industrial Development Board is urged to authorize the convening of the Third Consultation on the Petrochemical Industry, and the UNIDO secretariat is requested to report at that Consultation on the implementation of these recommendations.

### UNIDO Model Form of Licensing Agreement for the Petrochemical Industry

5. The UNIDO secretariat should:

(a) Revise the first draft of the Model Form of Licensing Agreement, taking full account of the comments made at the Consultation, and include a much more extensive integral commentary on the text including, where necessary, alternative texts;

---

<sup>1/</sup> See paragraphs 40-45 below.

<sup>2/</sup> UNIDO Manual on the Establishment of Joint Venture Agreements in Developing Countries, ID/68, Vienna 1971.

(b) Thereafter, convene a meeting of experts, selected with due regard to equitable geographical distribution, to review the new draft with a view to preparing a version expressing both views, with a balanced presentation of the views, for distribution to all member countries and participants at this Consultation, and for review at the next Consultation, if so requested by the Industrial Development Board:

(c) Further examine the potential losses faced by the purchaser of petrochemical plants in the event of process defects and consider how those risks might be better dealt with by insurance and taken into account in the Licensing Agreement and Plant Construction contracts, and inform all member countries and participants at this Consultation as well as report to the next Consultation on the action taken.

Other issues proposed for future consideration

6. The following additional issues were recommended for future consideration:

(a) Ways and means of mobilizing financial resources for the development of petrochemical industries in developing countries:

(b) Opportunities for co-operation between industrialized and oil-and gas-producing developing countries for the development of downstream petrochemical industries in other developing countries.

7. The UNIDO secretariat should conduct an empirical study on the various technical training schemes and programmes in the petrochemical industry that have been made available so far to developing countries with a view to recommending the most effective form of training for ensuring the maximum transfer of technology in the shortest possible time.

## I. ORGANIZATION OF THE MEETING

### Opening of the Consultation

8. The Second Consultation on the Petrochemical Industry was opened by the Deputy Prime Minister of Turkey, Mr. Turgut Özal, on 22 June 1981. The Consultation was also addressed by the Minister of Energy and Natural Resources, Mr. S. Bingöl.

9. A message from the Executive Director of UNIDO, Dr. Abd-El Rahman Khane, was read to the Consultation.

10. Messages were also read from General Kenan Evren, Head of State; Mr. Bülent Ulusu, Prime Minister; General Tahsin Şahinkaya, Commander of the Air Force and Member of the Security Council; Admiral Nejat Tümer, Commander of the Navy and Member of the Security Council; Professor Sabahattin Özbek, Minister of Agriculture and Forestry; Mr. Vecdi Özgül, Minister of Youth and Sport; and Mr. Sadık Şide, Minister of Social Security.

### Election of the officers

11. Kemal Mişnar (Turkey), Director General, Petkim Petrokimya A.S., was elected Chairman.

The following were elected as Vice-Chairmen:

A.C. Uzoigwe (Nigeria), Chief Projects Engineer (Petrochemicals), Nigerian National Petroleum Corporation

Husain Al-Jasem (Kuwait), Deputy Managing Director, Petrochemical Industries Company

E. Carrara Junior (Brazil), Assistant to the Minister of Industry and Commerce

V.A. Khodakovskaya (USSR), Chief of Department, Ministry of Oil Refining and Petrochemical Industries

### Adoption of the agenda

12. The Consultation adopted the following agenda:

1. Opening of the Consultation
2. Election of the Chairman and Vice-Chairmen
3. Adoption of the agenda

4. Long-term arrangements for the development of the petrochemical industry in developing countries including arrangements for marketing petrochemicals produced in developing countries
5. UNIDO model form of agreement for licensing patents and know-how in the petrochemical industry
6. Other issues proposed for future consideration
7. Adoption of the report of the meeting

Establishment of working groups

13. The Consultation established two working groups to discuss the following issues and to propose conclusions and recommendations for the consideration of the plenary session:

Long-term arrangements for the development of the petrochemical industry in developing countries

(Chairman: S.S. Sachdeva, Adviser to the Government of India, Ministry of Petroleum and Chemicals, India),

UNIDO model form of agreement for licensing patents and know-how in the petrochemical industry

(Chairman: G.H. Davies, Counsellor, Trade Policy, CEFIC).

Adoption of the report at the closing session

14. The report of the Consultation was unanimously adopted in plenary on 26 June 1981.

Documentation

15. Documents issued for the Second Consultation are listed in annex II.

II. DISCUSSION ON THE IMPLEMENTATION OF THE  
RECOMMENDATIONS OF THE FIRST CONSULTATION

16. The UNIDO secretariat informed the Consultation that it had implemented, wholly or partly, five major recommendations of the First Consultation that UNIDO should:

Prepare an updated version of the World-wide Study on the Petrochemical Industry

Establish a permanent working group on world supply of and demand for petrochemicals

Make a detailed study of the industrial uses of associated gas

Continue to study the marketing of petrochemicals produced in developing countries as a means to assist the orderly flow of petrochemicals to existing and future markets

Prepare a model form of agreement covering the licensing of patents and know-how in the petrochemical industry and a set of guidelines for its use.

The introduction of the UNIDO secretariat on each item and the subsequent discussion that took place in the plenary sessions on 22 and 26 June is summarized below.

Second World-wide Study (ID/WG.336/3 and Add.1)

17. The UNIDO secretariat mentioned the contents of the Second World-wide Study, which examined world supply of and demand for petrochemicals up to 1990 and considered trends in the availability and cost of feedstocks and in international trade in petrochemicals and petrochemical technology as well as prospects of global co-operation in the industry. The participants were requested not to discuss the Study in detail, but to send written comments to the UNIDO secretariat.

18. At the closing plenary session one participant pointed out that although the Study had been presented to the Consultation there had been no opportunity to examine or discuss it. That lack of comment by the meeting on the Study in no way implied approval or acceptance of it. In his view, the Study attempted to justify preconceived conclusions instead of being a scholarly presentation and discussion of data; the inclusion in the Study of conclusions, recommendations and prescriptions for the

future development of the industry was entirely inappropriate. He and other participants would be sending preliminary comments addressing various aspects of the Study to the UNIDO secretariat. Given the importance of that in-depth study, he suggested that the UNIDO secretariat should take into account the comments received when the Study was revised and updated.

Permanent Working Group on World Supply of and Demand for Petrochemicals

19. The UNIDO secretariat reported that the Working Group recommended by the First Consultation had met only once - in March 1980. UNIDO had completed estimates of supply of and demand for petrochemicals at the global and regional levels from information submitted by the countries and organizations participating in the Working Group and information obtained from other sources.<sup>1/</sup> It was recalled that the UNIDO/FAC/World Bank Working Group on Fertilizers had been in existence for about 10 years, and its estimates of world supply and demand were highly regarded. It was hoped that the similar Working Group on petrochemicals could be continued despite the budgetary difficulties faced by UNIDO.

20. One participant noted that it was more difficult to estimate world supply of and demand for petrochemicals than for fertilizers. UNIDO should be encouraged to continue that activity and to specify to all countries the type of information it required. UNIDO should build up a data bank so that increasingly more accurate estimates of world supply and demand could be made in future years.

21. The representative of OPEC said that the Working Group on World Supply of and Demand for Petrochemicals should continue its work: it was important to identify regions with a deficit or surplus in the production of or demand for basic and other petrochemicals because such estimates could guide future development of the industry.

22. The UNIDO secretariat pointed out that since the First Consultation had recommended the establishment of a permanent working group, what was required was not a further recommendation but rather the funds to implement an existing mandate.

---

<sup>1/</sup> The estimates are presented in Chapter I of the Second World-wide Study of the Petrochemical Industry (ID/WG.336/3) and as Annex I in the Annexes to the Study (ID/WG.336/3/Add.1).

Joint Study of the Industrial Uses of Associated Gas (UNIDO/PC.11)

23. It was stated that the study on industrial uses of associated gas had been prepared by the UNIDO secretariat jointly with GOIC and in co-operation with 15 developing countries and initially with the assistance of the secretariat of OAPEC. That important background document considered the economics of producing selected important petrochemical products from methane and ethane as well as other plans to utilize the associated gas that would otherwise be flared. Written comments were invited and no comments on the study were made in the plenary.

Long-term arrangements for the marketing of petrochemicals produced in developing countries (agenda item 4)

24. The UNIDO secretariat enumerated six factors favouring the utilization of long-term arrangements for the marketing of petrochemicals that would lead to greater co-operation in the petrochemical industry, as follows:

- (a) Growth of world demand for petrochemicals in the 1980s;
- (b) Opportunities to obtain a secure source of supply;
- (c) Opportunities to produce petrochemicals offered by the increasing capacities for petroleum refining in developing countries;
- (d) The increasing importance of feedstock cost and the particular advantages of petrochemical production based on flared gas;
- (e) Opportunities to build plants in developing countries to replace obsolete capacities in industrialized countries;
- (f) Opportunities to invest surplus financial resources in developing countries.

Those six factors would accelerate and deepen the restructuring process that was currently taking place in the petrochemical industry.

25. Although the UNIDO secretariat had examined long-term arrangements for the marketing of petrochemicals produced in developing countries, a lack of resources prevented the secretariat from monitoring the implementation of the many other recommendations of the First Consultation for action by Governments and the petrochemical industry on that topic.



26. One participant urged the UNIDO secretariat to examine in more detail trade barriers to petrochemical products entering industrialized countries. That issue needed to be tackled urgently since questions of tariffs, import quotas and dumping arose most frequently in conditions of a soft market. One view was that GATT was the body to discuss tariff matters since it was under GATT auspices that the Multilateral Trade Negotiations had taken place. The UNIDO secretariat stated that the chapter on international trade in the Second World-wide Study on the Petrochemical Industry had been prepared in co-operation with UNCTAD. The representative of UNCTAD pointed out that UNCTAD was studying those issues in relation to the petrochemical industry, and that GATT was not the only appropriate forum to consider them since not all developing countries were parties to GATT.

27. Another participant saw a need for making a periodic report on all organized market research conducted by United Nations agencies such as UNIDO, UNCTAD and ITC to help developing countries to find the potential markets for petrochemicals in developed and developing countries. That would help developing countries to establish the correct capacity for their new petrochemical projects and to utilize their existing capacities. The special report recommended should be compiled at an early date and updated for presentation to the next Consultation. That suggestion was noted by the UNIDO secretariat.

Model Form of Licensing Agreement for the Petrochemical Industry  
(agenda item 5)

28. The UNIDO secretariat reported that a model form of licensing agreement had been prepared following the guidelines suggested by the First Consultation and with advice from a few experts from developed and developing countries. The structure of the Model Form had been kept as simple as possible. One of the many different variations of licensing agreements was presented; it provided for lump-sum payments and for the licensor to check the engineering design of the plant and also to provide a comprehensive training programme. As part of the Model Form of Licensing Agreement, the more important technical annexures had been drafted; in particular the scope of information provided in the process engineering design package had been defined in detail. The aim of UNIDO was to facilitate an effective transfer of technology to the licensee; the

contents of the Model Form should be balanced, and should take into account the mutual benefit of the licensee and the licensor. The Consultation, when considering the first draft of the Model Form, should bear in mind that UNIDO had drafted and discussed at previous Consultations two model forms of contract for the construction of fertilizer plants.

29. One participant noted that the UNIDO Model Form assumed direct arrangements between licensor and licensee whereas in many cases licensing for fertilizer and petrochemical plants was handled indirectly through contractors. The UNIDO secretariat noted that the UNIDO model forms of contract for the construction of a fertilizer plant considered by Consultations on that industry assumed that the license would be granted through the contractor. Those model contracts, in the view of the UNIDO secretariat, could be used as a starting point for negotiating plant construction contracts in the petrochemical industry when a similar indirect arrangement was used.

30. One participant took the view that the First Consultation had set the UNIDO secretariat an impossible task in drafting a model form of licensing agreement; in commercial practice, the agreement was usually only written after a period of extended negotiation of the main points. The Consultation should, therefore, consider whether the objective was a realizable one; if a model agreement was still required, then it should be accompanied by a clause-by-clause commentary indicating the possible reaction of the licensors to the suggested wording and offering alternative wording that might be acceptable to both parties.

31. It was recalled that as long ago as 1964 the developing countries had identified a need for assistance in negotiating licensing agreements in the petrochemical industry. Since the approaches of licensors to licensing agreements varied, UNIDO should prepare comprehensive guidelines that would help the licensee in his negotiations.

III. LONG-TERM ARRANGEMENTS FOR THE DEVELOPMENT  
OF THE PETROCHEMICAL INDUSTRY IN DEVELOPING COUNTRIES

32. The Chairman of the Working Group on Long-term Arrangements for the Development of the Petrochemical Industry in Developing Countries stressed that discussion should take into consideration the points outlined by the UNIDO secretariat in the opening session of the plenary as well as in the UNIDO document on this subject (ID/WG.330/2).

33. Several participants expressed satisfaction with the work of the secretariat contained in that document. However, it was felt that in the document too much emphasis was put on two specific forms of long-term arrangement, namely, joint ventures and long-term direct sales agreements.

34. The view was expressed that before any useful discussion on long-term arrangements took place, the Working Group should look at the restructuring trends taking place in the industry and examine the need for such arrangements.

35. It was agreed that restructuring in the industry had already begun under the long-term influence of rising feedstock and energy prices in traditional production centres, increasing investment costs and the need to secure feedstock supplies.

36. Many participants stated that that made petrochemical production in oil- and gas-producing developing countries economically more attractive, and some participants felt that petrochemical products, particularly basics and intermediates, might be competitively produced at those locations. Others felt that might be viable in some countries for some products.

37. Several participants took note of chapter II in the "Second Worldwide Study on the Petrochemical Industry: Process of Restructuring" (ID/WG.336/3) concerned with comparative production and distribution costs, as well as the "Study on Industrial Uses of Associated Gas". However, as requested by the UNIDO secretariat, those studies were not made the subject of detailed discussions. It was agreed that the participants would submit their comments in written form to the secretariat.

36. Some participants felt that, inter alia, long-term arrangements need to be introduced in order to ensure orderly restructuring of the industry. That would benefit both developed and developing countries while avoiding the detrimental impact on all concerned. Others felt that market forces would bring about the developments that eventually prove necessary. Taking into account the different views expressed, the Chairman stated that the production of some petrochemical products at locations where petrochemical feedstocks and the sources of energy are available is economically attractive.

39. Many participants stated that such long-term arrangements should not be confined to joint venture and sales agreements, but should include other forms and aspects of co-operation. That co-operation, furthermore, should be both between developed and developing countries and among the developing countries themselves.

40. To facilitate the discussion, an informal group of participants was formed to draw up precise proposals. Since several participants had noted that long-term arrangements might take a variety of forms, the informal group considered that such arrangements might cover specifically the following:

Marketing

Financing

Access to technology and to its improvement

International co-operation between countries and companies concerning their policies on the replacement or expansion of capacities for selected petrochemical products

Training

Secure long-term supply of raw materials and feedstocks

Barter arrangements including compensation agreements for the supply of equipment and production.

The implementation of those long-term arrangements could be carried out in various ways, such as through joint ventures.

41. The informal group also felt that, in view of the information already available on joint ventures and of the discussion that took place at the Consultation, the UNIDO secretariat should, in co-operation with experts from the various geographical groups, modify the existing general guidelines for joint ventures and adapt them to the requirements of the petrochemical industry, taking into account, inter alia, the following check list:

Agreement of intent, feasibility studies, organization and financing of projects

Provision of feedstocks and fuel

Construction of the plant, including processes, technologies and off-site facilities

Organization, management and operation of the plant

Provision of infrastructure

Production and pricing policies

Marketing arrangements

Training

Technical support

Legal considerations

42. Those proposals were accepted by the Working Group as the basis for further discussions instead of document ID/WG.336/2 submitted by the UNIDO secretariat.

43. During the further discussion, participants of the Working Group made the following comments and additions to the above proposals:

Marketing. The need was stressed for price information, identification of market trends, the distinction between marketing and selling, careful analysis of markets in developing countries; the addition of "trade" was suggested and the title was changed to "Trade and marketing";

Financing. Attention was drawn to the following points: the need to reach full understanding on the scope of any project before concluding financial arrangements and the necessity for arrangements for security of loans satisfactory to both lenders and borrowers where debt financing was involved;

Access to technology and to its improvement. It was noted that that subject was under discussion in the other working group;

International co-operation between countries and companies concerning their policies on the replacement or expansion of capacities for selected petrochemical products. Some participants mentioned that the role of Governments in some countries was limited and a proposal was made to refer to "parties" instead of "countries and companies". Other participants underlined the important role of Governments in international and regional co-operation especially between developed and developing countries and among developing countries.

In that context, the importance of co-operation between oil-producing developing countries and non-oil-producing developing countries was emphasized. A statement was made that OPEC was fully prepared to initiate discussions with other developing countries for the development of the petrochemical industry. To that effect, OPEC and UNIDO had already initiated preliminary talks.

Because old petrochemical capacities in developed countries had been built under conditions that did not anticipate the evolution of the price of raw materials and energy and did not take into account the environmental requirements, it was expected that new capacities would be built in locations where those advantages existed.

Some participants stressed that that item should be considered as a key factor needing special attention and required a study by itself;

Training. It was stressed that training should be comprehensive and include operators as well as management to ensure an effective transfer of technology;

Secure long-term supply of raw materials and feedstocks. The critical importance of that item was emphasized. Particular reference was made to the need for agreement on prices on a long-term basis giving due regard to the share of each partner in total investment. There was also a need to agree on a price escalation formula for natural gas based

on its thermal value. Such agreements should be concluded on the basis of a fair and equitable relationship between the partners. Moreover, legal security of such agreements was vital. It might be necessary to index raw material prices according to market trends. However, disagreement was expressed with a necessity for such price indexation based on market trends;

Barter arrangements including compensation agreements for the supply of equipment and production. Two main views were expressed.

The advantage of such arrangements, particularly to countries short of foreign exchange, was pointed out; another view was that barter arrangements should have a limited sphere of application.

44. The items for joint-venture agreements recommended by the informal group were discussed and agreed upon with the following amendments:

Agreement of intent, feasibility studies, organization and financing of projects: to include "ownership structure";

Marketing arrangements: to include "product transportation and storage facilities";

Training: modified to "Training and personnel development".

45. Referring to statements concerning co-operation between oil-producing and non-oil-producing developing countries, as well as a proposal circulated by one delegation on the same subject, the Chairman of the Working Group suggested that the UNIDO secretariat prepare a programme for co-operation among developing countries to promote their petrochemical industries. Such a programme for co-operation should consider, inter alia, the role of developing countries with important local markets and experienced contractors.

#### Conclusions and recommendations

46. The Working Group concluded that the production of petrochemical products at locations where readily recoverable petrochemical feedstocks and the sources of energy were available would have economic attractions.

47. As a result of its deliberations, the Working Group recommended that the UNIDO secretariat should:

(a) Examine the various forms of long-term arrangements along the parameters discussed for the development of the petrochemical industry in the developing countries, and update the existing general guidelines for joint ventures;

(b) In co-operation with the parties concerned develop a programme of co-operation among developing countries, with or without petrochemical feedstocks, to promote the development of the petrochemical industry in those countries.

48. In view of the importance of the issues discussed in the Working Group for both developed and developing countries, the participants urged the Industrial Development Board of UNIDO to authorize the convening of the Third Consultation on the Petrochemical Industry and requested the UNIDO secretariat to report at that Consultation on the implementation of those recommendations.



IV. UNIDO MODEL FORM OF  
LICENSING AGREEMENT FOR THE PETROCHEMICAL INDUSTRY

49. The Working Group agreed to discuss first the introduction that UNIDO had prepared to the UNIDO Model Form of Licensing Agreement, and then discuss in detail the wording of the Model Form itself (ID/WG. 336/1 and Add.1). The Working Group agreed that in conformity with commercial practice the UNIDO draft should be referred to as a model form of licensing agreement rather than a model contract.

Introduction of the Model Form

50. Some participants suggested changes in the wording of the introduction that would indicate that not all the contents of the UNIDO draft were in line with current licensing practices. It was also pointed out by the same participants that the normal practice in negotiating a licensing agreement was first to discuss and agree the main points of the agreement, and then to start drafting the licensing agreement itself. Since it was also the usual practice for the licensor to prepare the first draft, the UNIDO Model Form would help the licensee to comment on that draft and to prepare counter proposals or additions. It was their view that unless it was recognized that the Model Form would be used in this way, the users might be seriously misled as to what they might achieve in their negotiations. It was pointed out by some other participants that that was the point of view of licensors.

51. At the same time views were expressed that there was inherent inequity in the forms of current practice in specific areas. It was therefore recommended that UNIDO examine current practice with a view to establishing equity in such areas as market constraints, penalty limitations and royalty application. It was pointed out by some other participants that that was the point of view of licensees.

Presentation of the Model Form

52. The Working Group agreed that the commentary provided by UNIDO should be expanded so that there was a commentary on all articles where there was a controversy. That commentary might take the form of comments

on points to be considered, footnotes explaining particular points in the text or alternative wording of the clause or subarticle that could be considered by the licensor and licensee.

53. The participants agreed that where consensus could not be reached on suitable wording, the text proposed by UNIDO would remain, but it would be accompanied by an alternative text, possibly in the commentary.

54. As regards the presentation, it was suggested that the next version of the document present the commentary so that it was an integral part of the document.

#### The different positions of licensor and licensee

55. Discussion clearly revealed differences in the position of the two partners to a licensing agreement on the text of the Model Form as proposed by the UNIDO secretariat. Some participants felt that licensors would base their objections to the Model Form on the following:

(a) While individual provisions could be accepted, the full text of the Licensing Agreement was not balanced;

(b) Some of the provisions did not provide sufficient flexibility arising out of specific products and different situations;

(c) Some of the Articles adopted a wording that did not conform to current licensing practice;

(d) Many of the Articles would require extensive commentaries in order to provide an explanation of the relationship between the licensee and the licensor;

(e) Some provisions would be found completely unacceptable to them and needed to be amended or accompanied by an alternative text or texts.

Some other participants however confirmed from their experience that in real situations that was not the case.

56. Views were also expressed by some participants that licensees would feel that current practice was in favour of licensors, but recent agreements showed that licensing practice was changing to more equitable forms. The Model Form of Licensing Agreement should therefore reflect those trends. It was also felt by the same participants that parameters should be given in the commentary, wherever possible, to guide licensees in their future negotiations.

Discussion of the text of the Model Form

57. The UNIDO secretariat made a complete record of the changes in and additions to the wording suggested by the Working Group for use in preparing the next draft of the Model Form of Licensing Agreement and commentary. Up to Article 3.5, many suggestions for new wording were made that met with general approval; for the remaining Articles comments were noted, but no attempt was made to agree to a new wording. That record (Conference Room Paper No. 1) was circulated to participants, but was not included in the report of the Working Group.<sup>1/</sup>

58. A statement was introduced on behalf of the Licensing Executives Society International commenting on the concept of the Model Form of Licensing Agreement and on particular clauses.

59. While participants from developing countries felt that the text of the first UNIDO draft should be retained in nearly all cases, there were six areas, discussed below, in which divergent views were expressed and hence were left open for further consideration.

Financial liability of the licensor

60. One view was that the unlimited financial liability for making good defects and indemnifying patent infringements was completely out of line with current practice because the maximum licensor's liability was normally limited by an amount equal to a proportion of his fee.

61. The other view was that, in cases of well-proven technology, losses due to process defects were not expected to reach a significant proportion of the total value of the plant and therefore the licensor should assume full liability in respect of defects in process know-how and process design package as well as make good such defects.

---

<sup>1/</sup> The Conference Room Paper states "agreed" when there were no comments on the text of the Licensing Agreement drafted by UNIDO; in answer to a question, the UNIDO secretariat confirmed to participants that that presentation would not prevent further consideration of those parts of the text at the Expert Group Meeting recommended by the Working Group.

Patent infringements

62. One view was that there should be a ceiling on the liabilities for patent infringements because the licensor could not be expected to bear undivided responsibility for possible infringements by his process of third party rights in the country of the licensee.

63. The other view was that because the licensor was best equipped to know the patent position of his process at the international level, licensors should fully indemnify and hold harmless the licensee against all patent infringements, and be prepared to defend, at the licensor's expense, any patent infringement suit brought against a licensee.

Performance guarantees

64. One view was that the coverage of performance guarantees in the draft was excessive in relation to current international practice because in particular many of the guarantees would normally only be obtainable from the contractor rather than the licensor.

65. The other view was that current international practice was in favour of the licensors and does not provide sufficient guarantee for the licensees to attain agreed performance levels from the plant.

Penalties

66. One view was that penalties were linked to a too-wide range of parameters to be tested that were not applicable in all possible situations, and therefore the present wording should be extensively revised.

67. The other view was that since the draft only proposed a model agreement, penalties should be linked to the widest possible range of parameters in order to enable the negotiators to select penalties on those parameters that best suited the situation.

Secrecy provisions

68. One view in respect to secrecy provisions was that the interest of the licensors required extensive duration and broad scope of such provisions.

69. The other view favoured minimizing such obligations because of the

dynamic nature of the petrochemical industry with consequent rapid change in technology; as a result secrecy agreement duration should not exceed 10 years from the effective date of the agreement.

Range of services provided by the licensor

70. One view was that the licensor should not be required to provide services additional to those that were essential for the transfer of know-how.

71. The other view was that inexperienced licensees expected a broad range of services plus the right to request additional services. Such additional services requested by licensees were needed because of their inability to obtain them from other sources and they should be provided by licensors at cost if they had the ability to perform them. It was to the mutual benefit of both licensor and licensee to build and operate the plant successfully.

Recommendations

72. The Working Group recommended that:

(a) The UNIDO secretariat should revise the first draft of the Model Form of Licensing Agreement taking full account of the comments made at the Working Group and include a much more extensive integral commentary on the text including, where necessary, alternative texts;

(b) Thereafter, UNIDO should convene a meeting of experts selected with due regard to equitable geographical distribution, to review the new draft with a view to preparing a version expressing both views, with a balanced presentation of the views, for distribution to all member countries and participants at the Consultation, and for review at the next Consultation if so requested by the Industrial Development Board;

(c) UNIDO should further examine the potential losses faced by the purchaser of petrochemical plants in the event of process defects and consider how those risks might be better dealt with by insurance and take into account in the licensing agreement and plant construction contracts and inform member countries and participants at the Consultation as well as report to the next Consultation on the action taken.

#### V. OTHER ISSUES PROPOSED FOR FUTURE CONSIDERATION

73. The Chairman, on the basis of consultations with his colleagues in the Bureau, proposed the following two issues for future consideration:

(a) Ways and means of mobilizing financial resources for the development of petrochemical industries in developing countries;

(b) Opportunities for co-operation between industrialized and oil- and gas-producing developing countries for the development of downstream petrochemical industries in other developing countries.

The Consultation agreed that those two issues should be recommended for examination by the UNIDO secretariat and for consideration by the next Consultation.

74. One participant proposed that in the area of transfer of technology UNIDO should conduct an empirical study on the various technical training schemes and programmes in the petrochemical industry that have been made available so far to developing countries. Such a study should:

(a) Examine all the features of such schemes;

(b) Identify common features in all those schemes;

(c) Examine the circumstances under which each of those schemes had been introduced in the particular developing country concerned, such as the availability of basic skills, general standard of education prevailing in that country when the scheme was originally formulated and introduced;

(d) Evaluate the effectiveness of those schemes;

(e) Identify the best features of each scheme in the context of the maximum transfer of technology in the shortest possible time;

(f) Draw conclusions;

(g) Recommend the most effective training scheme that could be formulated perhaps by extracting and combining the best features of each training programme.

The Consultation agreed and supported that recommendation.

Annex I

LIST OF PARTICIPANTS

Algeria

Ali Ouartsy, Chef de délégation, Conseiller technique au Ministère et de l'Industrie Pétrochimique, 30 av. Ahmed Chermoni, Alger

Abd. Er. Rahim Bessam, Sous-directeur, Pétrochimie au Ministère de l'Industrie Pétrochimique, 30 av. Ahmed Gherzoul, Alger

Angóla

Francisco Jose Goncalves, Director, Ministry of Petroleum, Luanda

Jorge Adolfo Vandeste, Director of Production, National Oil Company, SONANGOL, Luanda

Australia

Robert Goodrick, First Secretary, Alternate Permanent Representative to UNIDO, Embassy of Australia, Mattiellistrasse 2-4/111, 1040 Vienna

Bahrain

Tawfeeq A. Almoayed, Chairman of the Board, Gulf Petrochemical Industries Company, P.O. Box 5095, State of Bahrain

Samih Mahmood Al-Alawi, Engineer, Gulf Petrochemical Industries Company, P.O. Box 5095, State of Bahrain

Bangladesh

A.K.M. Mosharraf Hossain, Chairman, Bangladesh Chemical Industries Corporation, Shilpa Phaban, Motijheel C.A., Dacca

Belgium

Raymond du Moulin, Chef de la délégation, Consul General à Istanbul, Sira Selviler Cad. 73, Taksim

Mme. G. Parent-Colson, Conseiller, Conseil Centrale de l'Economie, Ave. de la Joyeuse Entrée 21-27, 1040 Bruxelles

Cyriel de Schrijver, Président, Centrale Chrétienne de l'Energie, de la Chimie et du Cuir, Ave. d'Auderghem 26, 1040 Bruxelles

Donald de Muelenaere, Chef du Service économique de la Centrale Générale des Syndicats Libéraux (C.G.S.L.B.), Koning Albertlaan, 87, 9000 Ghent

Brazil

Ernesto Carrara Junior, Assistant to the Minister of Industry and Commerce, Industrial Development Council, SAS Qd.5, Blh 1/20, Brasília D.F.

China

Hongning Huang, Head of Delegation, Chief Engineer, Planning Institute of Chemical Industry, Ministry of Chemical Industry, He Ping Li Beijing, P.O. Box 1421

China (cont'd)

Canqi Ou, Chemical Engineer, Planning Institute of Chemical Industry,  
He Ping Li, Beijing, P.O. Box 1421

Colombia

Emir Jose Gonzalez, Assistant to the President, Empresa Colombiana  
de Petroleos (ECOPETROL), Cra. 13, Cll. 36, Bogota

Czechoslovakia

Jaroslav Pelc, Head of Delegation, Director of State Planning  
Committee, Statni Planovaci Komise, Prague 7, 1000

Ladislav Holada, Technical Manager, Chemopetrol, Chemical Works CSSP,  
Litvinov

Denmark

Holger Larsen, Manager, Danish Semi-skilled Workers' Federation,  
Nyropsgade 30, Copenhagen 1602

Annette Martensen-Larsen, Chargé d'Affaires, Danish Embassy, Ankara

Egypt

Fawzy Ibrahim Hussein, Chairman, Egyptian Petrochemicals Company,  
568 El-Horia Street, Alexandria

France

François Chappuis, Chef de la Délégation, Directeur adjoint de la  
Direction des Industries chimiques, Ministère de l'Industrie, Paris

Hervé Bolot, Représentant Permanent adjoint de la France auprès de  
l'ONUDI, Ambassade de France, Technikerstrasse 2, 1040 Vienne, Autriche

Annie Cordet, Directeur, SEMA stratégie industrielle, 16-18 rue Barbès,  
92126 Montrouge Cedex, Paris

Jacques Péan, Directeur à CDF Chimie, Tour Aurore, Paris Défense

Yvan Roussy, Division des Affaires Internationales à ATO Chimie, Paris

Gabon

Paul Biyoghe Mba, Secrétaire général adjoint à la présidence de la  
république, Chargé des relations commerciales et des participations

Germany, Federal Republic of

Helmut Schuster, Assistant Managing Director, Association of Chemical  
Industry, Karlstrasse 21, D-6000 Frankfurt/Main

Enno Carstensen, Counsellor, Alternate Permanent Representative to  
UNIDO, Metternichgasse 3, 1030 Vienna, Austria

Rudolf Seifert, Senior Manager, Legal Department, Lurgi Administration  
Company Limited, Gervinusstrasse 17/19, D-6000 Frankfurt/Main 2

Robert Wandel, Ministerial Counsellor, Federal Ministry of Economics,  
Villemomblerstrasse 76, D-5300 Bonn 1

Herbert Wiessner, Assistant Director, Patents Department, Hoechst A.G.,  
D-6230 Frankfurt/Main 80



Ghana

Robert Ben Forson, Production Manager, GHAIIP Oil Refinery,  
P.O. Box 599, Tema

Greece

Alexandre Philon, Consul General, Consulate General of Greece,  
P.K. 114, Beyoglu, Istanbul

Haralambos Kouyevetopoulos, Consul, Consulate General of Greece,  
P.K. 114, Beyoglu, Istanbul

Athanasios Vlactaras, Marketing Co-ordinator, Greek Petrochemicals  
S.A., 3 Korai Street, Athens

Hungary

Eva Koltai, Director of Ministry of Foreign Trade, V., Honvéd u.13-15,  
1880 Budapest

Janos Sandor, Director, CHEMOLIMPEX Co., V., Deák Ferenc u.7-9,  
P.O.B. 121, 1805 Budapest

India

Surjit Singh Sachdeva, Adviser to the Government of India, Ministry  
of Petroleum, Chemicals and Fertilizers, Shastri Bhawan, New Delhi  
110001

Rajamadam S. Venkataraman, Process Manager, Engineers India Limited,  
P.T.I. Building, 4th Floor, Sansad Marg, New Delhi 110001

Indonesia

Pudjadi Soekarno, Head of Non-Fuel Products Development, State Oil  
and Gas Company (PERTAMINA), Jl. Merdeka Timur 1A, 16th Floor, Jakarta

Arifin Abubakar, Head, Process and Evaluation Non-Fuel Products  
Department, State Oil and Gas Company (PERTAMINA), Jl Merdeka Timur 1A,  
16th Floor, Jakarta

Syafar B. Sinambela, Government Official, Directorate General for  
Basic Chemicals, Jln. Kebon Sirih 31, Jakarta Pusat

Iran

Kamal Khoddam, General Manager of Domestic Sales, National  
Petrochemical Company, P.O. Box 2895, Teheran

Shahvareh Melikian, Head of Production, Iran-Nippon Petrochemical  
Company Limited, Bandar Imam-Khomeini

Iraq

Osama A.R. Hamadi, General Director, Ministry of Industry and Minerals

Italy

Giovanni Bianco, Ente Nazionale Idrocarburi (ENI), Piazzale Enrico  
Mattei, 1, 00144 Rome

Rosario Trefiletti, Fédération Unitaire des Travailleurs de l'Industrie  
chimique (F.U.L.C.), Via Bolzano, 16, Rome

Japan

Toru Watanabe, Consul, Consulate-General of Japan, Inönü Caddesi No. 24, Taksim, Istanbul

Masamichi Yoshifuji, First Secretary, Embassy of Japan, Argentinierstrasse 21, 1040 Vienna, Austria

Yoshio Tanzawa, Deputy Director, Ministry of International Trade and Industry, Basic Chemicals Division, Basic Industry Bureau (MITI), 1-3-1 Kasumigaseki, Chiyodaku, Tokyo

Hirohisa Hiramatsu, Director, Petrochemicals, Japan Trade Centre (JETRO), 19-25 Baker Street, London W1M 1AE

Moriya Kurimura, Assistant General Manager, Management Office, Nippon Petrochemicals Company Limited, Saiwai Building, 3-1 Uchisaiwaicho 1-chome, Chiyoda-ku, Tokyo 100

Nobuharu Shigemura, Manager of Economic Research Department, Maruzen Petrochemical Company Limited, 25-10, 2-chome, Hatchobori, Chuo-ku, Tokyo

Jordan

A. Malek Said, Director, International Petrochemical Industries Limited, P.O. Box 2502, Amman

Kenya

Samuel Ochiel Obura, Under-Secretary, Ministry of Industry, P.O. Box 30413, Nairobi

Alexander Ranja Gacuhi, Research Officer, Kenya Industrial Research and Development Institute, P.O. Box 30650, Nairobi

Festus Kamau Githaiga, Projects Officer, Ministry of Industry, P.O. Box 30418, Nairobi

Kuwait

Husain Al-Jasem, Deputy Managing Director, Petrochemical Industries Company, P.O. Box 1084, Kuwait

Libyan Arab Jamahiriya

Abdulhad Rifaat Nuri, Economist, Secretariat of Industry, Tripoli

Taher Saad Forqani Elyaser, Manager, Project Co-ordination, Azzwiya Oil Refining Company, P.O. Box 6431, Tripoli

Malaysia

Abu Hanifah Long, Head of Delegation, Director, Petroleum Development Division, Prime Minister's Department, Bahagian Kemajuan Petroliaam, Jabatan Perdana Menteri, Kuala Lumpur

Periyakaruppan Kalaiyanpan, Deputy Director, Malaysian Industrial Development Authority, Kuala Lumpur

Moner Mohammadiyah, Alternate Permanent Representative to UNIDO, Embassy of Malaysia, Mariahilferstrasse 84/5, 1070 Vienna, Austria

Mohd Shukor Omar, Manager, Project Planning and Monitoring, Processing and Manufacturing Division, PETRONAS, Bangunan MIDF, P.O. Box 2444, No. 195A, Jalan Pekeliling, Kuala Lumpur

Malaysia (cont'd)

Abdul Samad bin Yahaya, General Manager, Processing and Manufacturing Division, PETRONAS, Bangunan MIDF, P.O. Box 2444, No. 195A, Jalan Pekoiling, Kuala Lumpur

Mexico

J. Antonio Alvarado Juarez, Director, Comisión Petroquímica Mexicana, Secretaria de Patrimonio y Fomento Industrial, Insurgentes sur 550-1, Mexico D.F. 7

Netherlands

Peter Hansen, Head of Delegation, First Secretary, Alternate Permanent Representative, Permanent Mission of the Netherlands to UNIDO, Untere Donaustrasse 13-15/8, 1020 Vienna, Austria

Hans Beijer, Head, Chemical Industry Division, Ministry of Economic Affairs, Bezuidenhoutseweg 20, The Hague

Nigeria

Andrew C. Uzoigwe, Chief Projects Engineer, (Petrochemicals), Nigerian National Petroleum Corporation (NNPC), Falomo Office Complex, 12701 (P.M.B.), Ikoyi, Lagos

Denis Aghaizu, Industrial Chemist, Nigerian National Petroleum Corporation (NNPC), Falomo Office Complex, 12701 (P.M.B.), Ikoyi, Lagos

Pakistan

Ali Maqsood Mian, Deputy Managing Director, National Refinery Limited, P.O. Box 3964, Karachi - 4

Portugal

Maria da Gloria Guimaraes, Head of Delegation, Sous-Directeur, Ministère de l'Industrie, Companhia Nacional de Petroquímica E.P. (CNP), Av. Conselheiro Fernando de Sousa, Lisboa 1000

Alberto Fortunato Baptista, Managing Director, Petroquímica e Gas de Portugal E.P., R. Visconde Seabra 22 - 7<sup>o</sup> D, 1700 Lisboa

Joao Carvalho Marques, Planning Manager, Companhia Nacional de Petroquímica E.P. (CNP), Av. Duarte Pacheco 17, 1092 Lisboa Codex

Qatar

Salah M. El-Shazly, Head of Petrochemical Section, Qatar General Petroleum Corporation, P.O. Box 3212, Doha

Republic of Korea

Han Jeong Kim, Deputy Director, Petrochemical Industry Division, Ministry of Commerce and Industry, Seoul

Kyu Lee, Managing Director, Korea Petrochemical Industry Association, 68, Kyunji-dong chongro-Ku, Seoul

Romania

Mihai Moldovan, Head of Delegation, Counsellor, Ministry of Chemical Industry of Romania, Bucharest

Romania (cont'd)

Constantin D. Cirloganu, Technical Director, IITPIC, Design Organization for Chemical Industries, Bucuresti Str. Cadea Bastiliei 26, Bucharest

Saudi Arabia

Abdulrahman Ali Algarawi, Project Manager, Saudi Basic Industries Corporation (SABIC), P.O. Box 5101, Riyadh

Khalid Ahmed Al-Qatari, Chemical Engineer, Ministry of Petroleum, P.O. Box 590, Dhahran

Sweden

Göran Gustavsson, Head of Section, Ministry of Industry, Fack, 10333 Stockholm

Hans E.I. Wernborg, Expert, Association of Swedish Chemical Industries, Sforg 19, 11435 Stockholm

Switzerland

Johannes Manz, Counsellor, Embassy of Switzerland, Wagramerstrasse 14, 1220 Vienna, Austria

Trinidad and Tobago

Basharat Ali, Head of Delegation, Head, Refining and Petrochemicals Division, National Energy Corporation, 24 Sackville Street, Port-of-Spain

C. Anthony Beaubrun, Co-ordinator, Manufacturing and Commercial Development, Trinidad and Tobago Oil Company Limited, 5th Floor, Salvatori Building, Frederick Street, Port-of-Spain

Errol Kelvin McLeod, Member of Parliament, Trade Unionist, Oilfields Workers Trade Union, San Fernando

Clifford Anselm Stephen Radhay, Special Projects Manager, Trinidad Tesoro Petroleum Company, Santa Flora

Turkey

Kemal Mijgar, Head of Delegation, Director General, Petkim Petrokimya A.Ş., İzmir Caddesi 26, Yenisehir, Ankara

Oktay Apaydin, Assistant Head, Planning Department, Ministry of Energy and Natural Resources, 23. Sok. 17/3, Bahçelievler, Ankara

Ayşe Ceyhan, Expert, State Planning Organization of Turkey, Ankara

Hikmet Gürsey, Deputy General Director, Petkim Petrokimya A.Ş., İzmir Caddesi 26, Yenisehir, Ankara

Türkân Kırmızı, Marketing Manager, Petkim Petrokimya A.Ş., İzmir Caddesi 26, Yenisehir, Ankara

Argun Özer, Director, International Economic Organizations Department, Ministry of Foreign Affairs, Ankara

Reyan Saral, Director, Ministry of Energy and Resources, Planning and Co-ordination Department, Ankara

Ömer Tunç Savaşçı, Research Manager, Petkim Petrokimya A.Ş., P.K. 46, İzmir

Turkey (cont'd)

Ali Tigrel, Director, Petkim Petrokinya A.S., P.K. 104, Yenisehir,  
Ankara

Union of Soviet Socialist Republics

Vera Adamovna Khodakovskaya, Chief of Department, Ministry of Oil  
Refining and Petrochemical Industries, 31, Giliarovsky Street, Moscow

Alexander I. Glazkov, Representative of V/O Neftekhimpromexport,  
Ovchinnikovskaja No. 18/1, Moscow

United Arab Emirates

Abdullah Darwish, Economist, Ministry of Finance and Industry,  
P.O. Box 433, Abu Dhabi

Subhi Abdul Hamid Hamdan, Senior Economic Researcher, Ministry of  
Finance and Industry, P.O. Box 433, Abu Dhabi

United Kingdom of Great Britain and Northern Ireland

John Leggett, Department of Industry, Chemicals and Textiles Division,  
Ashdown House, 123 Victoria Street, London SW1

Anthony Michael Thrush, Industrial Adviser, Shell International  
Petroleum Company Limited, Shell Centre, London

United Republic of Tanzania

Victor Paulinus Irengo, Director of Research, Development Planning,  
Tanzania Petroleum Development Corporation, P.O. Box 2774, Lar-Es-Salaam

United States of America

Carol Colloton, Alternate Permanent Representative of the United  
States of America to UNIDO, Kundmangasse 21, 1030 Vienna, Austria

Richard G. Dodge, International Marketing Representative, Shell Oil  
Company, One Shell Plaza, Houston Texas

Robert R. Lent, Consultant to the President, Litton Industries, Litton  
Energy Systems, P.O. Box 2469, Houston, Texas 77001

John Hanson Oxley, Director of Middle East and South Asian Sales,  
Scientific Design Company, 2 Park Avenue, New York N.Y. 10044

Venezuela

Federico Borjas, Chargé d'Affaires a.i. of Venezuela in Ankara, Turkey

Yugoslavia

Velimir Rajković, President, PETROKEM, Savska 41/X, Zagreb 41000

Branković Stojan, Vice President, Chemical Industry PANČEVO, PANČEVO,  
Spoljnostarčevačka 82,

United Nations Organizations

United Nations Industrial Development Organization/ANDEAN Group

Patricio Castro, Technical Assistance Expert, Junta del Acuerdo de Cartagena, P.O. Box 3237, Lima, Peru

International Trade Centre (UNCTAD/GATT)

M.A.K. Chaudhry, Market Development Officer, Technical Division, Palais des Nations, 1211 Geneva 10, Switzerland

United Nations Centre on Transnational Corporations (UNCTC)

Hans Frederick Samuelsson, Officer-in-Charge of IAD Industry Studies, Burroughs Building, 10th Floor, 40th Street East and 3rd Avenue, New York, N.Y.

United Nations Conference on Trade and Development (UNCTAD)

Peter John Ginman, Senior Economic Affairs Officer, Manufacturers Division, Palais des Nations, 1211 Geneva 10, Switzerland

United Nations Economic Commission for Western Asia (ECWA)

Tariq Al-Khudayri, Senior Industrial Development Officer, Joint ECWA/UNIDO Industry Division, P.O. Box 4656, Beirut, Lebanon

United Nations Development Programme

Safraz K. Malik, Resident Representative, Resident Co-ordinator, UN System's Operational Activities for Development, Turkey, P.O. Box 407, Ankara, Turkey

Ganti Narasimhan, Senior Industrial Development Field Adviser, UNIDO, Turkey, P.O. Box 407, Ankara, Turkey

World Bank

Richard Berney, Senior Economist, 1818 H. Street N.W., Washington DC  
Bernard Chadenet, Consultant, 1818 H. Street N.W., Washington DC 20433  
Zia Kalin, 1818 H. Street N.W., Washington DC 20433  
Turgay O. Ozkan, Economist, 1818 H. Street N.W., Washington DC 20433  
C.H. Thompson, 1818 H. Street N.W., Washington DC 20433  
Yermal T. Shetty, Financial and Economic Analyst, 1818 H. Street N.W., Washington DC 20433

Other international organizations

Arab Industrial Development Organization (AIDO)

Ghanim Jasim, First Secretary (Senior Officer), Industrial Technology and Design Division, P.O. Box 3156, Sadoon Street, Baghdad, Iraq

Conseil europeen des federations de l'industrie chimique (CEFIC)

Gareth H. Davies, Counsellor, Trade Policy, Avenue Louise 250, Bte 71, B-1050 Brussels, Belgium

European Economic Community (EEC)

Richard John Wyatt, Administrator, Directorate-General for External Relations, 200 rue de la Loi, B-1040 Brussels, Belgium

Gulf Organization for Industrial Consulting (GOIC)

Ali A. Alkhalaf, Secretary General, P.O. Box 5114, Doha

Ahmed Bashir Al-Haib, Assistant Secretary General, P.O. Box 5114, Doha

M.Y. Shana'a, Director, Sectoral Development Department, P.O. Box 5114, Doha

Organization of Arab Petroleum Exporting Countries (OAPEC)

Samih Masoud, Senior Economist, P.O. Box 20501, Kuwait

Allam Kilani, Petrochemical Project Engineer, P.O. Box 20501, Kuwait

Organization of Petroleum Exporting Countries (OPEC)

Marcelo Maldonado, Economist, Energy Studies Department, Obere Donaustrasse 93, 1020 Vienna, Austria

World Federation of Trade Unions (WFTU)

Dmitri Dziouba, Secrétaire, Union Internationale des Syndicats des Industries Chimiques, du Pétrole et Similaires (ICSIS), 1415 Budapest, Hungary

Annex II

LIST OF DOCUMENTS

Issue papers

First draft of the UNIDO model form of agreement for licensing patents and know-how in the petrochemical industry ID/WG.336/1 and Add.1

Long-term arrangements for the development of the petrochemical industry in developing countries including arrangements for marketing petrochemicals produced in developing countries ID/WG.336.2

Background documents

Industrial uses of associated gas: a joint study by UNIDO in co-operation with the Gulf Organization for Industrial Consulting UNIDO/OC.11

Second world-wide study on the petrochemical industry: process of restructuring ID/WG.336/3 and Add.1

Reports of meetings

Report of the First Consultation on the Petrochemical Industry ID/227







