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REPORT OF THE FIRST CONSULTATION MEETING
ON THE FERTILIZER INDUSTRY

Vienna, 17-21 January 1977

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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 and among developing countries themselves with the object of raising the developing countries' share in world industrial output through increased international co-operation. The General Assembly, at its seventh special session in September 1975, 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, 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.

In April 1976, the Industrial Development Board decided that consultations on industrial sectors should be organized on an experimental basis, with account taken of the priority sectors indicated in the Lima Declaration, the varying capacity of developing countries to benefit from such consultations, and the views expressed by the States members of the Board.

In September 1976, the Industrial Development Board decided that these consultations should be convened among member countries, the participants of interested countries to include representatives of any or all of the following: Government, industry, labour, consumer groups etc.

The first consultation meeting held was on the fertilizer industry. A Preparatory Meeting was held to prepare for the first consultation meeting from 8-12 November 1976; it was attended by participants from 28 developing and developed countries.

Introduction

The First Consultation Meeting on the Fertilizer Industry was held at the Neue Hofburg, Vienna, Austria, from 17 to 21 January 1977. The Meeting was attended by over 150 delegates and participants representing Governments, industry and labour, from sixty countries, and international organizations.

CHAPTER I. ORGANIZATION OF THE MEETING

Opening of the Meeting

1. The First Consultation Meeting on the Fertilizer Industry organized by UNIDO was opened by the Executive Director of UNIDO, Dr. Abd-El Rahman Khane, on 17 January 1977. His opening address is attached as annex I to this report.

Election of the Chairman

2. Mr. P.J. Fernandes (India), Secretary to the Government, Ministry of Chemicals and Fertilizers, was elected Chairman of the Consultation Meeting.
3. On assuming office, the Chairman suggested that the Meeting should adopt an approach with three dimensions. First, the approach should be courageous and bold. Second, it should be pragmatic, down-to-earth and result in specific action: the aim should be to build fertilizer plants on the ground rather than "castles in the air". Third, the Meeting must contribute to the reduction of the gap between rich and poor countries: all efforts must be made to reduce the large proportion of the world's population affected by malnutrition.

Election of four Vice-Chairmen

4. The following Vice-Chairmen were elected:

Mr. E. Gutierrez Salgado (Mexico), Technical Secretary of the Association for the Development of the Fertilizer Industry in Latin America

Mr. G. Honti (Hungary), Deputy General Manager, Hungarian Chemical Industries Engineering Centre, Budapest

Mr. J.G. Okyne (Ghana), Counsellor, Embassy of Ghana,
Switzerland

Mr. G. Sander (Germany, Federal Republic of), Managing
Director, Fachverband Stickstoffindustrie, Dusseldorf

Bureau

5. It was agreed that the Chairman and four Vice-Chairmen would constitute the Bureau of the Meeting.

Adoption of the Agenda

6. The Meeting adopted the following agenda:

1. Election of Officers
2. Adoption of the Agenda
3. The allocation of fertilizer production between developing and developed countries and amongst developing countries themselves (Issue 1)
4. Infrastructure needed for the production and distribution of fertilizers in developing countries (Issue 2)
5. The construction of fertilizer plants (Issue 3)
6. The operation of fertilizer plants (Issue 3)
7. The financing of fertilizer plants and associated infrastructure (Issue 4)
8. Follow-up to the first Consultation Meeting

The Issues referred to were set out in document ID/WG.242/2.

7. One delegation, which considered the question of infrastructure to be a matter of priority, entered a reservation on the order in which the items of the agenda of the Consultation Meeting should be considered, and expressed its preference for the order proposed by the experts at the Preparatory Meeting (Issue 2 before Issue 1).

Rules of Procedure

8. The Chairman informed the Meeting that since UNIDO had recommended no specific rules of procedure, the Meeting could adopt its own rules of procedure. He suggested that the Meeting be as informal as possible, that all delegates should participate actively, and that no formal rules of procedure should be established.

Organization and time-table of the Meeting

9. It was agreed that, all discussions would take place in plenary sessions.
10. The Chairman suggested that the time allotted to each issue should depend on the degree of interest shown in it by the meeting. His aim would be to have a report of the Meeting available in all working languages for adoption towards the close of the Meeting.

Report of the Meeting

11. The Secretariat expressed its regret that summary records could not be provided for the Meeting. That decision was in conformity with the guidelines for the provision of meeting records of United Nations bodies for the biennium 1976-1977, adopted by the General Assembly in its resolution 3415 (XXX) of 8 December 1975. The Chairman therefore suggested that, based on the recommendation of the Secretariat, the main emphasis of the report should be on an agreed set of conclusions and recommendations.

CHAPTER II. CONCLUSIONS AND RECOMMENDATIONS OF THE MEETING

Growth of the developing countries' share of world fertilizer output 1975-2000 and other objectives

12. The Consultation Meeting, having in mind the basic objectives adopted by the Second General Conference of UNIDO held at Lima, was of the view that the development of the world fertilizer industry could make a very significant contribution to increasing the developing countries' share of world industry.
13. The Consultation Meeting arrived at an agreed set of conclusions for the information of, and consideration by, all interested parties, in particular the Executive Director, the Industrial Development Board, and the countries participating in the activities of UNIDO.
14. The Consultation Meeting recognized the urgent and imperative need for increasing fertilizer consumption in the world in order to augment agricultural output and food production. It recognized that the level of fertilizer consumption in the developed countries was already high and that the prospects for further substantial growth in consumption in those countries was relatively

limited. The Meeting noted with regret, however, the very low levels of fertilizer consumption in the developing countries, and it urged that immediate steps be taken to stimulate consumption in those countries.

15. The Consultation Meeting recognized that the stimulation of fertilizer consumption in the developing countries would necessitate the adoption by the developing countries of a series of measures, that would include: the establishment of a marketing and distribution infrastructure, the adoption of suitable pricing policies, the granting of credit to farmers, and the adoption of modern agronomic practices and agricultural extension services.

16. The Consultation Meeting recognized that the increased consumption of fertilizers in developing countries depended on the availability of adequate supplies of fertilizers, the stability of prices, adequate infrastructure, and, for the majority of them, on the availability of foreign exchange resources for the purchase of fertilizers from abroad.

17. Consequently, the Consultation Meeting recognized the need for more fertilizer production within the developing countries in order to meet increased consumption and assist industrial development. It suggested the following objectives:

- (a) The achievement by the developing countries of self-sufficiency in fertilizer production as soon as possible and in any case by 2000;
- (b) The production by the developing countries of a surplus for export;
- (c) The maintenance of reasonable balance between supply and demand in the world market.

The Consultation Meeting emphasized that the term "self-sufficiency" should be interpreted with reference not to the present low levels of fertilizer consumption but to a stimulated optimum level of consumption.

18. The Consultation Meeting took note of the Draft World-Wide Study prepared by the UNIDO Secretariat and due to be revised shortly, particularly the assessment made in the Study that if the objectives mentioned and levels

of consumption forecast were indeed achieved, the developing countries' share in total world production of nitrogen and phosphate fertilizers would increase substantially when self-sufficiency was achieved^{1/} and more when surpluses for export were produced.

19. The Consultation Meeting recognized that while the objectives stated were for all developing countries taken together, a reasonable balance of fertilizer production would have to be achieved between the countries of the developing world.

20. The Consultation Meeting stressed the need, however, to produce fertilizers economically. In locating fertilizer plants in developing countries, the following factors should be taken into consideration:

- (a) Proximity to feedstocks, other raw materials, and intermediates, which would ensure full utilization of the resource or avoidance of wastage;
- (b) Proximity to consumer markets, which would reduce freight costs;
- (c) Availability and development of an adequate infrastructure to support fertilizer production;
- (d) Availability and development of skills and trained manpower.

21. The Consultation Meeting, having recognized the need to establish the fertilizer plants at economic locations, strongly urged that the benefits of more economical production and distribution should be passed on to the consumers in developing countries.

22. The Consultation Meeting recognized that there was also a need to ensure that production in fertilizer plants was optimized and that they operated at high levels of capacity utilization and with reasonable input-output coefficients.

23. The Consultation Meeting urged that during the period while the developing countries still needed to import progressively smaller amounts of fertilizers, steps should be taken to ensure the availability of adequate supplies at reasonable and stable prices. The Consultation Meeting took note of the

^{1/} ICIS/22/Rev.1. The Draft Study had estimated that to be self-sufficient by 2000, the developing countries would need to produce about 40 per cent of total world production of nitrogen and phosphate fertilizers. The UNIDO Secretariat recognizes that this estimate may change later when forecasts of consumption levels in 2000 are revised; the revised forecasts may suggest a share for developing countries either higher or lower than the 40 per cent suggested by the Draft Study.

estimate of global demand and supply of fertilizers made by a UNIDO/FAO/IBRD Working Group and the efforts being made by FAO and its Commission on Fertilizers to promote measures for price stabilization; it urged that those efforts should be intensified.

24. The Meeting recognized that, to achieve the objectives stated above, existing international co-operative efforts should be continued and intensified. Those efforts would include:

- (a) Action by individual developing countries;
- (b) Co-operative action between developing countries;
- (c) Support and assistance from the developed countries;
- (d) Support and assistance from international organizations.

25. If the objectives were adopted, there would be a need for such action as:

- (a) The building up of infrastructure for the production and distribution of fertilizers; ^{2/}
- (b) The construction of fertilizer plants;
- (c) The economic operation of fertilizer plants.

Infrastructure

26. The Consultation Meeting recognized that the major programme of construction of fertilizer plants in developing countries that has already started would necessitate the building up of an adequate infrastructure. The Consultation Meeting considered various aspects of infrastructure planning. They included:

- (a) Transportation infrastructure (roads, railways, port facilities, railway rolling stock and ships);
- (b) Utilities infrastructure (power supply, water supply and a drainage and sewage system);
- (c) Raw materials infrastructure (critical raw material inputs, particularly feedstocks);

^{2/} For the reasons given in connexion with its reservation (paragraph 7), one delegation expressed a reservation concerning the inclusion of the building up of infrastructure among the measures listed in paragraph 25.

- (d) Marketing infrastructure (storage facilities and a distribution network that would make it possible for the product to reach the farms);
- (e) Infrastructure of agricultural extension services and modern agronomic practices;
- (f) Human infrastructure (entrepreneurial skills, managerial skills, and maintenance and operation skills);
- (g) Policy infrastructure (the broad framework of government planning, laws, and pricing and economic policies).

27. The Consultation Meeting felt that the construction of fertilizer plants would be greatly facilitated if there was a composite infrastructure including the types described above. In locating fertilizer plants in developing countries, it would therefore be desirable to place them in areas where infrastructural facilities already existed. When the specific location of plants within individual developing countries was being considered, local infrastructure should be taken into account.

28. Although the Consultation Meeting emphasized the need for a composite infrastructure, it appreciated that the creation of an infrastructure could not be related solely to fertilizer plants. The infrastructure would be part of over-all internal planning and development and would be required to support a variety of industries within the regional and national plans.

29. The Meeting recognized that the absence of an infrastructure should not be allowed to inhibit decisions to set up plants. On the other hand, the Meeting felt that the setting up of plants would assist in the over-all economic development of less developed areas and would stimulate the creation of an infrastructure.^{3/}

30. Considering the costs involved in establishing an infrastructure and the need to produce fertilizers cheaply so that they would be within the reach of the farmer, the Consultation Meeting was of the view that it would not be correct to expect fertilizer projects to bear the total costs of infrastructure.

^{3/} One delegation expressed a reservation regarding the second sentence of paragraph 29 for the same reasons as led it to enter reservations on paragraphs 7 and 25.

There was a need to define and demarcate clearly those items of infrastructure that should fall within the responsibility of the State and public authority and that should consequently be financed from the public exchequer, and items of infrastructure which were directly associated with fertilizer projects.

31. The Meeting recognized that the conditions and practices in different developing countries would not be identical and that the demarcation of the State's and project's areas of responsibility would therefore have to be adjusted to local conditions. It was generally felt, however, that the public authority should assume responsibility for the basic physical, transportation and utilities infrastructures up to the site boundary. The projects should assume responsibility for the marketing infrastructure and the environmental infrastructure, including the disposal of effluents. There would be joint responsibility for the building up of the human infrastructure: the State would provide the basic facilities for training and development, and the projects would assume responsibility for the specialized skills required for fertilizer plants.

32. The Consultation Meeting felt that the demarcation must be so arranged as to reduce, as far as possible, capital costs in fertilizer projects and, consequently, total production costs.

33. The Consultation Meeting emphasized the need for a clearly defined policy infrastructure (as defined in paragraph 26(g)) and suggested that developing countries should work out a scheme of laws, regulations, and economic and planning policies that would facilitate the growth of the fertilizer industry.

34. The Consultation Meeting recognized that the development of human skills was most important. It suggested that managers and workers should participate at all stages of project conception, planning and implementation. The Consultation Meeting also suggested that measures should also be included for the health and safety of workers and the protection of the environment, and that the relevant ILO conventions should be duly observed.

The construction of fertilizer plants

35. The Consultation Meeting recognized that the setting up of fertilizer plants would involve a package of inputs that would include:

- (a) An adequate infrastructure;
- (b) Finance for investment;
- (c) Technology;
- (d) Capital equipment;
- (e) Human skills;
- (f) Feedstocks and other raw materials;
- (g) Markets.

36. On the question of financing of fertilizer projects, the Consultation Meeting recognized the current high costs involved today in establishing fertilizer plants. The Meeting felt that if the objectives envisaged were to be successfully achieved, measures to bring down investment costs should be considered urgently. The Meeting suggested that UNIDO, UNCTAD and other appropriate international organizations should consider looking into the justification for some recent increases in the prices of equipment and services. There was general agreement that the greatest possible use should be made of international competitive bidding for fertilizer projects, because that would give developing countries the opportunity to obtain the best choice of equipment and services at the most competitive prices. The Meeting noted that bilateral aid was often given in the form of tied credit that required the purchase of equipment and services mainly from the donor countries. The Consultation Meeting stressed that aid should as far as possible be untied.^{4/}

37. On the question of transfer of technology and purchase of equipment and services, the Consultation Meeting recognized that there were occasions when fertilizer plants and specific items of equipment had not functioned adequately, and buyers had suffered high consequential losses. It was further noted that the protection given by penalty clauses in international contracts was inadequate protection against consequential losses.

^{4/} One delegation indicated that it could not support the last sentence of paragraph 36 and entered a reservation to that effect.

38. The Consultation Meeting examined the proposal made by UNIDO to investigate the possibility of setting up a multilateral insurance scheme covering consequential losses. The Meeting supported the intentions underlying the scheme but realized that practical difficulties might arise in its implementation. It was felt that one of the best forms of insurance would be to select carefully reputed and experienced contractors, adopt proven technologies and equipment, and ensure that contracts contained appropriate guarantee clauses. The Meeting suggested, however, that UNIDO should examine the practical aspects of such a scheme, which could be considered further.

39. There was general agreement that the work done by UNIDO on model contracts would be of interest to many countries, particularly those in the early stages of development. However, because of the variety of local circumstances, legal systems, and economic and managerial capabilities, no single model would be universally applicable. Nevertheless, the Meeting suggested that UNIDO should continue its investigations into alternative forms of contracts and should suggest guidelines for the developing countries' use. A variety of contracts, including turn-key and semi-turn-key contracts, and contracts for engineering services only, process know-how and some capital equipment could be considered at the same time.

40. The Consultation Meeting considered the desirability of standardization in the design of plant and equipment. Although such standardization would help to reduce costs, improve operating conditions and simplify maintenance, the Meeting recognized that the different conditions prevailing might make it difficult to have uniform standard designs for all countries. In particular, standardization would be relatively more difficult for phosphate fertilizer plants.

41. The Consultation Meeting emphasized the need to develop in the developing countries professional managerial and technical skills in the planning, design and construction of fertilizer plants. Local personnel should be involved in those processes. Only if that were done could there be an effective transfer of technology. Consideration would also have to be given to such questions as the health and safety of workers and workers' participation in project management.

42. The Consultation Meeting noted that some of the developing countries were producing a range of plant and equipment and were also developing skills in engineering services. The Meeting recognized that developing countries should make as full a use as possible of their own internal resources among themselves and that international co-operation should help them to do so.

43. The Consultation Meeting also recommended that UNIDO, within the limits of its financial resources, should provide more consultancy services to developing countries requesting them in: preparation of feasibility studies, the preparation of specifications for tenders, the evaluation of bids, the negotiation of contracts, the commissioning of plants, trouble-shooting, the development of maintenance programmes, marketing, and operational management. The Meeting for that purpose recommended that a panel of experts should be established and that financing for the assistance granted should be sought from new sources as well as existing ones.

The operation of fertilizer plants

44. Keeping in mind the high capital investment costs of fertilizer plants and the concurrent need to produce fertilizers at reasonably low costs, the Consultation Meeting emphasized the need to ensure that existing fertilizer plants in developing countries, and those projected for the future, ran at high levels of efficiency, used raw materials economically and made optimum use of capacity. The Meeting noted that the current situation in several developing countries was not satisfactory; the efficiency levels and the capacity utilization were below desired levels. The Meeting recognized that the effect of making fuller use of capacity in existing plants would be equivalent to that of setting up several new fertilizer plants.

45. The Consultation Meeting analysed the following major reasons for the low operational efficiencies and capacity utilization in the plants set up in developing countries:

(a) Problems arising from faults in plant design

The Meeting recognized that one of the major precautions to be taken when setting up fertilizer plants would be to design them on the basis of a careful analysis of basic data. A wrongly conceived or faultily designed plant would experience problems of operation. The need to prepare feasibility studies and project reports so as to ensure that viable and efficient fertilizer plants

were installed was emphasized. Studies and reports should be followed by the selection of reputed contractors, the adoption of proved technologies, and the careful drawing up of bid documents and proper contracts;

(b) Problems arising from inadequate infrastructure

The Meeting drew particular attention to low operational efficiency due to such infrastructural factors as: an inadequate and erratic power supply, lack of a proper water supply, and an inadequate supply of feedstocks and other raw materials.

(c) Problems caused by faulty maintenance

The Meeting noted that one of the keys to fuller utilization of capacity and higher operational efficiency was a regular system of preventive maintenance backed by trained manpower and a regular flow of spare parts. The Meeting was of the view that contractors and consulting engineers should assist buyers to draw up schedules of maintenance and should provide lists of critical spare parts that should be carried in stock. Because of difficulties in obtaining spare parts, developing countries should, with the assistance of contractors, ensure that their workshops were so equipped that spare parts could be manufactured locally wherever possible. The developing countries should also shorten the procedures for importing urgently required spare parts.

(d) Problems arising from market constraints

The Meeting noted that capacity could be under-utilized if no adequate arrangements were made for the local, regional or international marketing of the product. That problem was of special significance in developing countries that were installing capacity mainly for export.

46. The Consultation Meeting recognized that the development of skilled manpower was essential, if fertilizer plants were to operate efficiently. That manpower would include plant management staff, plant operators and maintenance staff. It would be necessary to train personnel well in advance of the commissioning of plants. There was also a need for a continuous process of training.

47. Keeping in mind the identification of the problems, the Consultation Meeting recommended that:

- (a) UNIDO, other international agencies, and donor countries should do their utmost to respond to requests for consultancy services from developing countries, particularly in the field of plant operation and maintenance;

- (b) Studies should be done on the rehabilitation and modernization of obsolescent plants;
- (c) Training facilities should be created and developed by developing countries with the assistance of UNIDO, ILO, international fertilizer companies, and developed countries;
- (d) Special emphasis should be laid on correcting faults in plant design and international financing organizations and donors of bilateral assistance should recognize the need to give priority to the financing of schemes to overcome such constraints.

48. The Meeting noted with satisfaction that the World Bank Group had extended financial assistance to several countries for that purpose.

The financing of fertilizer plants

49. The Consultation Meeting recognized that a major programme of investment in fertilizer plants would involve substantial funds. Certain preliminary indications of the funds required had been given: according to the Draft World-wide Study on the Fertilizer Industry, the total for the developing and developed countries, including investment on infrastructure, would be of the order of \$US 10 thousand million a year, although the estimate was subject to verification.

50. The Consultation Meeting took note of recent indications that the pace of investment in fertilizer plants is faster in the developing countries than in the developed countries. It felt that steps would have to be taken to mobilize the funds needed for that investment and to provide finance on concessionary terms to developing countries where appropriate.

51. The Meeting recognized that certain investment funds, particularly those for financing local costs, would have to be raised in the developing countries themselves. It considered various possibilities for investment finance, including:

- (a) The investment of foreign capital on an equity basis in joint ventures;
- (b) The establishment of public sector plants owned by the governments of developing countries, where funds from public exchequers would be backed up by foreign loans covering the costs of importing equipment and services;
- (c) The establishment of private-sector plants in developing countries, which would need local long-term development loans for indigenous costs and foreign loans to cover imports of equipment and services;
- (d) The mobilization of local investment finance from farmers' co-operatives.

The Meeting recognized that the adoption of the various forms of investment would depend on the internal policies of the developing countries concerned.

52. The Consultation Meeting suggested that foreign assistance should not be restricted to the actual costs of the fertilizer plants themselves but might also be extended to the associated infrastructure directly connected with the operation of the plant and the expanded use of fertilizers. The foreign assistance should be provided on soft terms as far as possible.

53. The Meeting took note of the practice of financing mainly the foreign exchange component of investments. It suggested that the extension of financial aid for local costs might also be considered wherever a lack of local finance was a constraint.

54. The Meeting took note of the various forms of bilateral assistance that were available and recognized that the terms and conditions of such aid varied considerably, some being more favourable than others. It recommended that bilateral assistance should be untied to the greatest extent possible so that the developing countries could purchase equipment and services at the most competitive international prices.

55. The Consultation Meeting noted with appreciation the financial assistance rendered by international financing bodies and the financial assistance given by some countries on a bilateral basis. It suggested that other sources of finance should also be tapped, including the recently formed OPEC Special Fund, the International Fund for Agricultural Development and the investment institutions of countries that were members of the Council for Mutual Economic Assistance.

56. The Meeting stressed that fertilizer plants set up in developing countries must be so planned that they would be viable.

57. The Meeting noted that there was a desire to bring down the prices of fertilizers charged to farmers. It felt, however, that the burden of any subsidization required should not fall on the plant.

58. The Consultation Meeting stressed the need for developing countries to prepare well-conceived feasibility studies and project reports. It recommended that international financing agencies should lend their support to well-conceived projects.

Regional co-operation

59. The Consultation Meeting recognized that the installation of fertilizer plants and the establishment of a marketing and distribution network would be easier in developing countries that had large fertilizer markets. In countries with smaller markets, it would be desirable to plan for regional co-operation and a combination of resources and skills. The opportunities for broader co-operation between all developing countries should also be pursued.

60. The Consultation Meeting reviewed the efforts that had already been made, including the regional co-operation arrangements of the Andean Group, the Latin American Association for the Development of Fertilizer Industry (ADIFAL), the Latin American Economic System (SELA), the Senegal River Development Organization (OMVS), the Mano River Union, the Arab Federation of Chemical Fertilizer Producers, the Industrial Development Centre for Arab States (IDCAS), the ASEAN group of countries, and the region served by the Economic and Social Commission for Asia and the Pacific (ESCAP).

61. The Consultation Meeting expressed its support for those efforts. It recommended that they should be intensified and that:

- (a) High priority should be given in the programmes of those regional groups to the preparation of feasibility studies, the setting up of fertilizer plants, and the building up of a marketing and distribution network within each region;
- (b) UNIDO should extend technical and professional assistance to those regional co-operative efforts and should provide consultancy services in response to requests, and should follow up the suggestions made at the Consultation Meeting;
- (c) UNIDO should consider giving assistance to establish regional development centres for the fertilizer industry;
- (d) International technical and financing assistance from bilateral and other sources should also be made available for such regional group efforts.

Follow-up to the first consultation meeting

62. The Consultation Meeting recognized that the subject of the development of the fertilizer industry has complex ramifications. During the Consultation Meeting it was not possible to examine all aspects of the subject, although indicators for future lines of consultation were provided. The Meeting noted the intention that the process of consultation should be a continuing one.

63. The Consultation Meeting took specific note of the suggestion made by the Executive Director in his opening address that participants might wish to consider both how soon the next Consultation Meeting on the Fertilizer Industry should be convened and how UNIDO should organize Working Groups on specific issues in the interim period prior to the next Consultation Meeting.

64. The Consultation Meeting suggested to the Executive Director that the next Consultation Meeting should be held in 1978. It proposed the following subjects for more intensive examination and investigation:

1. Contract procedures intended to ensure the successful construction and operation of fertilizer plants and the suggested multilateral insurance scheme intended to ensure the protection of the interests of all parties concerned by providing, in particular, adequate compensation for consequential losses.
2. Ways and means to reduce the high cost of fertilizer plants and of mobilizing the large volume of funds required for investment.
3. Continuous monitoring of the growth of fertilizer production capacity at the national, regional and global level in order to facilitate a balanced growth of the world fertilizer industry.
4. The opportunities for co-operation between developing countries at the sub-regional, regional and inter-regional levels, and the international support needed for that co-operation.

65. The Consultation Meeting urged the Executive Director to initiate an in-depth examination of the subjects proposed and, if necessary, to establish suitable working groups for the purpose. The results of the in-depth examination should be placed before the next Consultation Meeting. When in-depth examination was initiated or working groups established, consideration should be given to work already being done on those subjects by other agencies and bodies concerned, so as to avoid duplication. The Meeting noted that the Executive Director would be submitting those matters to the Industrial Development Board for consideration at its next session.

66. The Consultation Meeting noted that delegates and participants had made a number of recommendations during its discussion that would require follow-up action in areas not directly related to the four topics mentioned above.

67. The Consultation Meeting commended UNIDO for the preparation of the Draft World-wide Study on the Fertilizer Industry. It noted that the revised version of the Study would be completed later in 1977 and would take account of the views of the panel of experts that examined the Draft Study late in 1976 and the comments that participants in the Meeting would communicate to the Secretariat by the end of May 1977.

68. The Consultation Meeting expressed its appreciation of the regional and global estimates of the supply and demand of fertilizers which were collected and published by a UNIDO/FAO/IBRD Working Group. It urged that group to continue its useful work and to improve further the information presented.

69. The Consultation Meeting, bearing in mind the importance which it attached to the establishment of an adequate infrastructure in developing countries, requested the UNIDO Secretariat to prepare a detailed document on the infrastructure required for fertilizer plants.

70. The Consultation Meeting considered that it would be useful to establish information and data bank services on new and existing processes, plant and equipment and project and equipment costs in the fertilizer industry. It would also be particularly useful to study the past experience of developing and developed countries in establishing fertilizer plants and examine the successes or failures, with a view to providing guidelines for the future. The Meeting suggested that the Executive Director might consider giving priority to the fertilizer industry when recommending to the Industrial Development Board the areas to be covered by the industrial technological information bank provided for by General Assembly resolution 3362 (S-VII).

71. The Consultation Meeting suggested that, to help intensify existing activities, UNIDO might establish, in accordance with its rules and regulations, a panel of experts on the fertilizer industry who could be called upon to provide a broad range of the consultancy services required for improving the operation and capacity utilization of existing fertilizer plants and for establishing new plants.

72. The Consultation Meeting recommended that UNIDO should examine the possibility of establishing (a) regional testing facilities needed for the adequate maintenance of fertilizer plants and (b) an interregional centre that could examine and promote opportunities for the standardization of design of fertilizer plants and equipment in developing countries.

Annex I

TEXT OF OPENING STATEMENT BY DR. ABD-EL RAHMAN KHANE,
EXECUTIVE DIRECTOR OF UNIDO AT THE FIRST CONSULTATION
MEETING ON THE FERTILIZER INDUSTRY

It is a great pleasure for me to welcome you to this First Consultation Meeting organized by UNIDO. We appreciate very much that over one hundred and fifty participants from about sixty countries and about twenty international bodies and organizations have taken the time to be present here today. I am convinced that all of you will share with me the feeling of hope and enthusiasm that should be present when a new initiative in the field of international co-operation is to take shape.

As you well know, the Second General Conference of UNIDO, which was held in Lima, Peru, in March 1975, adopted the Lima Declaration and Plan of Action on Industrial Development and Co-operation. This Declaration stressed the important role of industrialization for developing countries and proposed a Plan of Action involving measures of national scope, co-operation among developing countries and co-operation between developing and developed countries.

The Lima Conference decided that UNIDO should play a central role in the implementation of the Declaration and Plan of Action and that to this end the scope and functions of UNIDO should be extended inter alia by including, among its activities, a system of continuing consultations at global, regional and sectoral levels. UNIDO was also asked to be prepared to serve as a forum for negotiation of agreements in the field of industry between developed and developing countries and among developing countries themselves at the request of the countries concerned.

When the General Assembly convened at its Seventh Special Session in September 1975, it endorsed the Lima Declaration and Plan of Action and specifically requested the Executive Director of UNIDO to make preparations for the establishment of a system of consultations in the field of industry. Detailed proposals for the establishment of a system of continuing consultations at the global, regional, interregional and sectoral levels were prepared and considered by the Industrial Development Board, the governing body of UNIDO,

which met in April and September 1976. The Board decided that as a first step, UNIDO should convene Consultation Meetings on a few specific sectors of industry on an experimental basis and that I should report on the results of these meetings to the Board at its next session.

I therefore decided that Consultation Meetings should be organized early in 1977 on the Fertilizer Industry and Iron and Steel Industry. These sectors were chosen both because they were in accordance with the priorities established by the Lima Declaration and Plan of Action and because UNIDO had a sufficient reservoir of experience in these industries to be able to make adequate preparations in the short time available.

The spectre of famine which hangs on hundreds of millions of human beings provides ample justification for this international consultation meeting. Of course the need for the developing countries to use enough fertilizers to support the expansion of food production necessary to feed their growing population is well understood. However, while there have been consultations on world food production at a general level, this meeting will be the first occasion on which international co-operation on the production of fertilizers will be discussed. I may, in this connexion, point to the fact that some of the developing countries have already devoted some attention to these problems. It is worth noting, for example, that at their First Conference in Algiers in March 1975, the Sovereigns and Heads of State of OPEC Member Countries, recognizing the vital importance of the fertilizers for the developing countries, decided to promote the production of this commodity with the aim of supplying it under favourable terms to the poorest countries of the world.

The consultations meetings which UNIDO will organize are expected to identify the problems faced by the world at large and particularly by the developing countries in building up and expanding the industry concerned and to reach agreement on specific solutions which provide opportunities to develop new areas of international co-operation. Looking forward to the Lima target of having 25 per cent of the world's industrial output produced in the developing countries by the year 2000, it is expected that these consultations will reach broad agreement on the growth of the developing countries' share of total world production in the fertilizer sector; in this connexion, there

will be a need for these consultations to discuss carefully the transfer of know-how, the development of human skills and the mobilization of financial resources in order to ensure that new industrial facilities are successfully constructed and operated in developing countries.

If these aims are to be achieved, and considering the proximity of the year 2000, there will be little time at this meeting for general discussion; instead, I would expect your efforts to concentrate on finding some specific solutions of the problems presented and in agreeing how new forms of international co-operation can rapidly be developed for the mutual benefit of the parties concerned.

The success of this meeting and further meetings which will be held as the system of consultations is developed, depends ultimately upon the willingness and conscious efforts of all interested parties to reach agreement. I hope it will be possible for this meeting to reach a consensus on what needs to be done to ensure a better management of the world resources in the field of fertilizers. Consequently, I also hope you will aim for an agreement with a view to ascertaining that all concerned will play their part in implementing the recommendations and conclusions which your meeting may arrive at.

As you all know, in order to ready itself for this Consultation Meeting, UNIDO prepared a World-wide Study of the Fertilizer Industry and convened a Preparatory Meeting last November. This meeting was attended by participants from twenty-eight countries, all of them with an in-depth knowledge of the fertilizer industry. They considered eight issues proposed by the UNIDO Secretariat and recommended that four issues be considered at this Consultation Meeting. We have accepted this recommendation and these four issues are the issues that are included on the Provisional Agenda that is placed before you. When the Co-Chairmen of the Preparatory Meeting, Mr. Fernandes from India and Mr. Boudewijn from the Netherlands visited me at the end of their meeting, I was most pleased to hear from them that their discussions had taken place in a most co-operative spirit and that they had been able very quickly to reach an agreed set of recommendations and conclusions which you have before you as a supporting document for the present meeting. Bearing in mind the optimistic report which they gave me, I am sure that the World Fertilizer Industry is also well represented in this larger meeting and that as a result there will

be a sufficient understanding of the issues, a co-operative spirit and some concrete results of this meeting for me to report to the Industrial Development Board at its next session.

On the basis of the discussion at the Preparatory Meeting and the recommendations and conclusions which were agreed, the UNIDO Secretariat has prepared a paper which includes a suggested text of a possible agreement for your consideration. I hope that this suggested draft text will be of some help to you in reaching the positive outcome which I expect from this meeting.

I place a great deal of importance on the work of this First Consultation Meeting on the Fertilizer Industry. Indeed, it falls on you, the distinguished participants, to have the opportunity of taking a major first step towards creating a new and dynamic form of international co-operation in the field of industrial development. To our knowledge, there are no precedents for this type of meeting. Therefore, your approach is compelled to be both imaginative and innovative, particularly when taking into account the complexity of the issues that have been placed on your agenda.

The Lima Declaration and Plan of Action called for continuing consultations. We interpreted this as meaning that further consultation meetings on the fertilizer industry should be held at a later date and that in the interim period working groups may need to be convened by UNIDO to give a more in-depth consideration to the examination of some specific proposals. Consequently, you might wish to consider both how soon the next Consultation Meeting on the Fertilizer Industry should be convened and how UNIDO should organize working groups on specific issues in the interim period prior to this next Consultation Meeting.

I will follow your deliberations with great personal interest indeed for a successful conclusion of this meeting will bear a great deal on the furthering of consultations on other industrial sectors and for the development of the system as a whole.

In conclusion, may I wish to your meeting every success and record UNIDO's appreciation for the generous contribution that the Government of the Netherlands has made to the costs of preparing for and organizing this Consultation Meeting.

Annex II

LIST OF PARTICIPANTS

ALGERIA

- N. Abdelouahab KERAMANE, Conseiller du Ministre, Ministère de l'Industrie et de l'Energie
- M. Tahar GATI, Directeur des industries chimiques et pétrochimiques, Ministère de l'Industrie et de l'Energie
- M. Sassi AZIZA, Directeur de l'Expansion industrielle, Ministère de l'Industrie et de l'Energie
- M. Abdelkader BENSID, Chef de département ammoniacque et engrais, SONATRACH
- M. Messaoud TOUATI, Assistant, Division Commerciale, SONATRACH

ARGENTINA

- Sr. L.R. BALLESTER, Subsecretario de Estado de Desarrollo Industrial
- Sr. Hugo CASADELLA, Gerente general de Proyectos, ALPARGATAS S.A.

AUSTRALIA

- Mr. D.A. TOWNSEND, Counsellor, Alternate Representative of Australia to UNIDO
- Mr. D.R. O'NEILL, Third Secretary, Adviser to the Permanent Representative to UNIDO

AUSTRIA

- Mr. Heinrich STICH, Director of Agrochemicals Division, Chemie Linz AG
- Mr. Heinrich BIRNLEITNER, Counsellor, Alternate Representative of Austria to UNIDO
- Mr. Gerhard ERDPRESSER, Federal Ministry for Commerce, Trade and Industry
- Mr. Helmut WACHTEL, Donau Chemie AG
- Mr. Stefen KLINGHOFER

BANGLADESH

- Mr. Rafiquddin AHMAD, Chairman, Bangladesh Chemical Industries Corporation

BELGIUM

- M. H. FONDER, Conseiller, Représent adjoint de la Belgique auprès de l'ONUDI
- M. Jean HOED, Directeur de l'Association belge de l'Industrie des produits azotés
- M. Christian MONNOYER, Troisième Secrétaire, Conseiller du Représentant permanent

BOLIVIA

Sr. Hans DRESCHER, Consul general de Bolivia en Viena

BRAZIL

Mr. Antenor Firmino SILVA, Director, Consulting Firm Engenharia para a Industria Mineral

BULGARIA

Mr. Anguel PETROV, First Secretary, Adviser to the Permanent Representative of Bulgaria to UNIDO

Mr. Ivan KEREZOV, Attaché, Embassy of Bulgaria in Vienna

CANADA

Mr. William D. DAWSON, Chief, Petroleum and Industrial Chemicals, Department of Industry, Trade and Commerce

Mr. R.W. McCASKILL, Adviser to the Permanent Representative of Canada to UNIDO

COLOMBIA

Sr. John NARANJO, Sub Jefe, Departamento Nacional de Planeación

CZECHOSLOVAKIA

Mr. Jozef BELACIK, Counsellor, Alternate Representative of Czechoslovakia to UNIDO

Mr. Jozef ERAVEC, Adviser to the Permanent Mission of Czechoslovakia to UNIDO

DENMARK

Mr. Mogens PEDERSEN, Danish Federation of Industries and Danish Employers' Confederation

Mr. Jes NISSEN, Chairman of the Semi-Skilled Worker Union

Mr. Kjeld AAKJAER, Danish Federation of Trade Unions

Mr. Gert OVERVAD, First Secretary, Alternate Representative to Denmark to UNIDO

ECUADOR

Sr. Filoteo SAMANIEGO, Encargado de Negocios, Representante Permanente del Ecuador ante la ONUDI

Sr. Alfonso JARRIN, Asesor Ministerial, Ministerio de Industrias y Comercio

Sra. Maria AFUNTE DE ENDLER, Attaché

EGYPT

- Mr. Abdel Fattah Sabry HUSSEIN, Chairman of Financial and Industrial Corporation
- Mr. Saad Eldin Ibrahim IMAN, General Director of Chemical Project Department, General Organization for Industrialization
- Mr. Mohamed El Mahdi FATHALLA, Second Secretary, Embassy of Egypt in Austria

FINLAND

- Mr. Pekka CJANEN, Second Secretary, Alternate Representative of Finland to UNIDO
- Mr. Markku KOHONEN, Commercial Secretary, Alternate Representative of Finland to UNIDO
- Mr. Pekka SUPPANEN, Director, Kemira Oy, Helsinki
- Mr. Eino UUSITALO, Kemira Oy, Helsinki
- Mr. Pentti KNUUTTILA, Kemira Oy, Helsinki

FRANCE

- M. Alain DEMENTHON, Représentant permanent de la France auprès de l'ONUDI
- M. Yves BLANCHET, Directeur de la Société Nittrade
- M. Jean-Paul GARDINIER, Société d'Engrais et Produits chimiques Gardinier S.A.
- M. Daniel HADOT, Représentant permanent adjoint de la France auprès de l'ONUDI
- M. Félix RISTA, Délégué pour les Affaires internationales de la Fédération nationale de l'Industrie des Engrais (FNIE)
- M. Gérard TAGLIANA, Administrateur civil du Ministère de l'industrie

GERMAN DEMOCRATIC REPUBLIC

- Mr. Hans KOLLMANN, Director for International Co-operation, Ministry for Chemical Industry
- Mr. Georg HARZFELD, Deputy Director for Production, VVB Agro-Chemie and Semi-Products
- Mr. Günther BARTH, Second Secretary, Alternate Representative to UNIDO

GERMANY, FEDERAL REPUBLIC OF

- Mr. Greif SANDER, Managing Director, Fachverband Stickstoffindustrie
- Mr. Manfred JAENISCH, Head of the Industry Division, Kreditanstalt für Wiederaufbau
- Mr. Enno CARSTENSEN, Counsellor, Alternate Representative of the Federal Republic of Germany to UNIDO

GHANA

- Mr. James G. OKYNE, Counsellor, Permanent Mission of Ghana in Geneva

GREECE

Mr. Georges VAFIDIS, Chief of Soil and Fertilizer Division, Ministry of Agriculture

Mr. Haralambos KOUYEVETOPOLOUS, Second Secretary, Alternate Representative to UNIDO

GUATEMALA

Sra. A.F. Espana de MERIDA, Ministro Consejero, Encargado de Negocias de Guatemala en Austria

HOLY SEE

M. Peter GRUBER, Expert

M. Theodor FISCHLEIN, Conseiller principal, Chambre d'Agriculture

HUNGARY

Mr. Zoltán TOROK, Director of Chemistry, National Planning Board

Mr. György HONTI, Deputy General Manager, Designing Company for Chemical Works

Ms. Ingeborg SALASCHOVITS, Department Leader, Ministry of Foreign Trade

Mr. Robert WALDMANN, Head of Department, Secretariat for International Economic Relations

Mr. István BUZAS, Deputy Director of Centre for Agrochemicals, Ministry of Food and Agriculture

Mr. Laszlo MODRANSZKY, First Secretary, Alternate Representative of Hungary to UNIDO

INDIA

Mr. P.J. FERANDES, Secretary to the Government of India, Ministry of Chemicals and Fertilizers

Mr. Paul POTHEN, Managing Director of the Fertilizer Association of India

Mr. S. SUNDAR, Deputy Secretary, Ministry of Chemicals and Fertilizers

INDONESIA

Mr. SOERJOSOENARKO, Directorate General for Chemical Industries, Ministry of Industry

Mr. Adian SILALAH, Second Secretary (Economic), Permanent Mission of Indonesia to UNIDO

IRAQ

Mr. Adnan H.A.K. AL-KINDI, President, State Organization of Chemical Industry
Mr. Mohammed AL-SHUKRI, Director, Fertilizer Industries, State Organization
of Industrial Design and Construction, Ministry of Industry and Minerals
Mr. Hisham Rashid H. AL-MUDARRIS, State Company of Fertilizers

IRAN

Mr. Ebadollah BAHARI, Executive Director, National Petrochemical Company
Mr. Ebrahim MANOUCHEHRI, Project Manager in Planning, Development and
Engineering, National Petrochemical Company

IRELAND

Mr. Thomas M. CULLEN, Assistant General Manager, Nitrigin Eireann Teoranta
(Irish Nitrogen Company)
Ms. Philomena MURNAGHAN, Third Secretary, Adviser to the Permanent
Representative of Ireland to UNIDO

ISRAEL

Mr. E. AVIVI, Minister Plenipotentiary, Permanent Representative of Israel
to UNIDO
Mr. J. LASTIGZON, Senior Economist, Israel Chemicals Ltd.

ITALY

M. Umberto ZAMBONI, Conseiller, Représentant adjoint de l'Italie auprès de
l'ONU
M. Mario CONSTANTINO, Ministère du Commerce extérieur
M. Horst-Maria FLENKENTHALER, Directeur commercial de SNAM-Progetti
M. Piermaria ARLOTTI, Département de la Planification, ANIC
M. Pasquale SALMIERI, Département de la Planification, MONTEDISON

JAPAN

Mr. Yoshitomo TANAKA, Counsellor, Alternate Representative of Japan to UNIDO
Mr. Toru ITANO, Deputy Director, Fertilizer Division, Ministry of International
Trade and Industry
Mr. Yoshio YAMAGISHI, Second Secretary, Adviser to the Permanent Representative
of Japan to UNIDO
Mr. Osamu ITO, Counsellor, Staff to President, Surveying Department,
Mitsubishi Chemical Industries Ltd.
Mr. Kozo NAGUMO, Deputy General Manager, Japan Urea and Ammonium Sulphate
Export Co.

(cont'd)

JAPAN (cont'd)

Mr. Masayasu SAKANASHI, Chief Techno-Economist, UNICO International Corporation

Mr. Minoru HORIKOSHI, Member of the Central Executive Committee, Japanese Federation of Synthetic Chemistry

KENYA

Mr. C.N. KEBUCHI, Deputy Permanent Secretary to the Treasury

Mr. Gabriel K. GICOGO, Deputy Secretary, Ministry of Agriculture

Mr. J.K. GITAU, Assistant Director of Agriculture

Mr. H. OGOLA, Marketing Manager, Ken-Ren Chemicals and Fertilizers

KUWAIT

Mr. T. AL-NAKIB, Marketing Manager, Petrochemical Industries Company, K.S.C., Fertilizer Division

Mr. S.J. MISLEH, Research Department, Petrochemical Industries Company, K.S.C., Fertilizer Division

LIBERIA

Mr. Hilary B. WILSON, General Manager, Liberian Development Corporation

Mr. John Pius ONUMAH, Assistant Minister of Agriculture

Mr. Vittorio A.J. WEEKS, Financial Analyst, Liberian Development Corporation

LIBYAN ARAB REPUBLIC

Mr. Gheith SRARI, Second Secretary, Alternate Representative of the Libyan Arab Republic to UNIDO

MADAGASCAR

M. Raymond RAOELINA, Premier Conseiller, Ambassade de Madagascar à Bonn

MALAYSIA

Mr. Ho HENG TEONG, Deputy Director, Evaluation Unit, Federal Industrial Development Authority

Mr. Ahmad ZAINUDIN, Engineer, PETRONAS

Mr. Mohamad Diah JURINI, Marketing Executive, PETRONAS

MEXICO

Sr. Eduardo GUTIERREZ SALGADO, Secretario Tecnico Asociación Desarrollo Industrial Fertilizantes en America Latina
Sr. Jaime CORDERO, Ingeniero, Petroleos Mexicanos y Guanoa y Fertilizantes de Mexico
Srta. Zadalinda GONZALES, Primer Secretario, Representante Alterno de Mexico ante la ONUDI

MOROCCO

M. Hassan OUAJJOU, Ingénieur, Fonctionnaire à l'Office Chérifien des Phosphates

NETHERLANDS

Mr. H. GAJENTAAN, Ministry of Foreign Affairs
Mr. P.J. HANSEN, Ministry of Foreign Affairs
Mr. B.J. TERPELLE, Ministry of Economic Affairs
Mr. J.M. BOUDEWYN, Director-General, Nederlandse Stikstofmaatschappij

NIGERIA

Mr. Abdullah Jibril OYEKAN, Deputy Secretary (Petrochemical), Federal Ministry of Industries
Mr. Olu ADENIJI, Ambassador of Nigeria to Austria, Permanent Representative to UNIDO
Mr. Fate ABUBAKAR, Third Secretary, Nigerian Embassy in Vienna

NORWAY

Mr. Ivar LUNDE, Ambassador of Norway to Austria, Permanent Representative to UNIDO
Mr. Odd AUSTVEG, Deputy Director, Ministry of Industry and Handicrafts
Mr. Jan JOLLE, First Secretary, Alternate Representative of Norway to UNIDO
Mr. Erick LANGE, Sales Manager, Norsk Hydro
Mr. Holger FANGEL, Director

PAKISTAN

Mr. S. Habeeb HUSAIN, Additional Secretary, Ministry of Production
Mr. Fakir Syed ALJAZUDDIN, General Manager (Finance), National Fertilizer Corporation of Pakistan Ltd.

POLAND

Mr. Jan KACZOR, Director, Development and Planning Department, Ministry for Chemical Industry
Mr. Bogdan MADOWIJCZUK, First Secretary, Alternate Representative of Poland to UNIDO
Mrs. Janina NOWACKA, Senior Counsellor at the Ministry of Foreign Trade and Maritime Economy
Mr. Jozef MEMPEL, Chief Expert, Union of Petrochemical Industry "PETROCHEMIA"
Mrs. Halina SIBILSKA, Expert

QATAR

Mr. Mohamed Reda FARAHAT, Second Secretary, Embassy of Qatar in Vienna
Mr. Fahd KHATER, Ambassador of Qatar to Austria

REPUBLIC OF KOREA

Mr. Sun-Yup PAIK, President, Korean General Chemical Corporation
Mr. Dong-Kyu PARK, Counsellor, Adviser to the Permanent Representative of the Republic of Korea to UNIDO
Mr. Seung-Kyung KIM, Director for Finance, Yong-Nam Chemical Company
Mr. Moon-Hyung LEE, Planning Director, Ham-Hae Chemical Corporation

ROMANIA

Mr. Neculai POPOVICI, Ministry of Chemical Industry
Mr. Leonard BADEA, Ministry of Chemical Industry
Mr. Ioan DEVAN, Ministry of Chemical Industry
Mr. Anton DRAGOMIRESCU, Adviser to the Permanent Representative to UNIDO

SENEGAL

M. Yoro DE, Ingénieur chargé de l'Industrialisation, Direction de l'Industrie
M. André M. BERNOS, Président, Société Industrielle d'Engrais

SIERRA LEONE

Mr. S.T. MATTURI, Ambassador of Sierra Leone in Italy, Permanent Representative to UNIDO
Mr. C.J. THOMAS, First Secretary, Embassy of Sierra Leone in Rome

SUDAN

Mr. M. DAWELBEIT, Director of Fertilizer Corporation
Mr. Ali OSMAN AMIR, Government Official, Ministry of Industry

SWEDEN

Mr. A.L. WENTZEL, Expert

Mr. G. EKHOLM, Counsellor, Alternate Representative of Sweden to UNIDO

Mr. M. GRILL, Second Secretary, Adviser to the Permanent Representative to UNIDO

SWITZERLAND

M. Michael von SCHENCK, Conseiller, Représentant adjoint de la Suisse auprès de l'ONU

Mlle. Françoise de MORSIER, Division du Commerce, Département fédéral de l'Economie publique

SYRIAN ARAB REPUBLIC

Mr. Zeid EL-HARIRI, Engineer, General Establishment of Chemical Industry, Ministry of Industry

THAILAND

Mr. M.C. Piriadis DISKUL, Director of Industrial Economics and Planning Division, Ministry of Industry

Mr. Asda JAYANAMA, First Secretary, Alternate Representative of Thailand to UNIDO

Mr. Trakarn CHAIRAT, Engineer, Industrial Economic and Planning Division, Ministry of Industry

Mrs. Kanokphan CHANCHARASWAT, Economist

TRINIDAD AND TOBAGO

Mr. George Hamel LEGALL, Permanent Secretary, Ministry of Petroleum and Mines

Mr. Carlos HEE HOUNG, Project Co-ordinator, Co-ordinating Task Force

Mr. Frank SEALY, Ministry of Foreign Affairs

TUNISIA

M. Negib CHAABANE, Sous-directeur, Centre nationale d'Etudes industrielles (CNEI)

TURKEY

Mr. Ertügrül APAKAN, Alternate Representative of Turkey to UNIDO

Mrs. Suna ASLANOGLU, Adviser, State Planning Organization

Mr. Murat KUBATOGLU, General Assistant Manager, Turkish Nitrogen Industry

Mrs. Sevim RENDA, Director of Research, Planning and Co-ordination at the General Directorate of the Nitrogen Industry

(cont'd)

TURKEY (cont'd)

Mr. Mahmut ERDIR, Director of Planning Department, Turkish Agricultural Supply Organization

Mr. Ismail TOPKAR, Director, Petrol-is Sendikasi

Mr. Faik YUMRU, Administrative Chief, Petrol-is Sendikasi

UNION OF SOVIET SOCIALIST REPUBLICS

Mr. Vladimir BELOV, State Research and Designing Institute of Heavy Chemical Industry

Mr. Evgeni M. SOURNITCHEV, Chief Specialist, State Research and Design Institute of Nitric Industry

Mr. B. LINKOV, Counsellor, Permanent Mission of the USSR to the International Organizations in Vienna

UNITED KINGDOM OF GREAT BRITAIN AND NORTHERN IRELAND

Mr. R.J. WALSGROVE, Ministry of Overseas Development

Mr. J. STEPHENSON, Department of Industry

Mr. Selwyn FEW, Director General, Fertilizer Manufacturers' Association

Mr. Peter JENKINS, Second Secretary, Alternate Representative of the UK to UNIDO

Mr. Ian McINTYRE, Economist, Imperial Chemical Industry

UNITED REPUBLIC OF TANZANIA

Mr. Z.C. MAKONI, Deputy Director of Operations (Heavy Industries), National Development Corporation

Mr. J.N. RUSIBAMAYILA

UNITED STATES OF AMERICA

Mr. John SHIELDS, Director, International Fertilizer Development Programmes, Tennessee Valley Authority

Mr. William J. STIBRAVY, Minister Plenipotentiary, Permanent Representative of the United States to UNIDO

Mr. Elvis LEE, Valley Nitrogen Producers

Mr. Frank A. CORSINI, Manager for Market Development, N-REN International

URUGUAY

Sr. Hector DIBIASE, Representante Alterno del Uruguay ante la ONUDI

VENEZUELA

- Sr. Cesar SALAZAR CUERVO, Asesor del Presidente del Instituto de Comercio Exterior
- Sr. Sergio SAEZ, Gerente de Planificación, Instituto venezolano de Petroquímica
- Sr. Francisco José VELEZ VALERY, Segundo Secretario, Representante Alterno ante la ONUDI

YUGOSLAVIA

- M. Zlatibor SUDAR, Secrétaire du Conseil de la Chimie industrielle auprès de la Chambre de l'Industrie
- M. Stjepan LEVATA, Chef du Secteur de la Chimie industrielle auprès du Ministère de l'Industrie et de l'Energie
- M. Branislav VUJADINOVIC, Directeur de la Société industrielles d'Engrais "Agrohemijska"
- M. Vukasin SRECKOVIC, Deuxième Secrétaire, Représentant adjoint de la Yougoslavie auprès de l'ONU
- M. Viktor ACIMOVIC, Conseiller technique
- M. Borislov FRUSIC, Conseiller technique

ZAIRE

- M. Mena VUIU, Chef de Division au Département de l'Economie nationale et de l'Industrie

Regional Commissions

ECONOMIC COMMISSION FOR AFRICA (ECA)

Mr. Youssef HELBAWI, Regional Industrial Adviser

ECONOMIC COMMISSION FOR EUROPE (ECE)

Mr. Werner K. VEITH, Economic Affairs Officer

ECONOMIC COMMISSION FOR LATIN AMERICA (ECLA)

Mr. Roberto MATTHEWS, Director, Joint ECLA/UNIDO Ind. Dev. Division

ECONOMIC AND SOCIAL COMMISSION FOR ASIA AND THE PACIFIC (ESCAP)

Mr. H.G.R. REDDY, Regional Adviser for Agro-Industries and Light Industries

ECONOMIC COMMISSION FOR WESTERN ASIA (ECWA)

Mr. Tariq AL-KHUDAYRI, Regional Ind. Adviser

Specialized Agencies and IAEA

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS (FAO)

Mr. R. DUDAL, Acting Director, Land and Water Development Division, and
Co-ordinator, FAO Task Force on Fertilizers

Mr. J.W. COUSTON, Secretary FAO Commission on Fertilizers, Agricultural
Services Division

UNITED NATIONS CONFERENCE ON TRADE AND DEVELOPMENT (UNCTAD)

Mr. R. HELLBERG, Chief, Current Trade Analysis, Supply and Demand Section,
Manufactures Division

UNITED NATIONS (UNAPEC-TTI)

Mr. Gonzalo MARTNER, Senior Advisor for the Project on Economic Co-operation
among developing countries in the field of Trade, Transport and Industry

INTERNATIONAL ATOMIC ENERGY AGENCY (IAEA)

Mr. Y. BARRADA, Head, Soil Fertility, Irrigation and Crop Production
Section

Intergovernmental Organizations

AFRICAN DEVELOPMENT BANK (ADB)

Mr. Mohamed DOUCOURE, Ingenieur agronome

Mr. Charles MANGUA

ANDEAN PACT

Sr. Rodrigo DONOSO

EUROPEAN ECONOMIC COMMUNITIES (Commission) (EEC)

Mr. A. TACHIS, Administrateur Principal, Direction Générale des Affaires Industrielles et Technologiques

Mr. Anton REITHINGER, Conseiller Principal

Mr. P. HOCQUET, Administrateur Principal, Direction Générale du Développement

Mr. Walter A. SHAFER, Chef de Service

INDUSTRIAL DEVELOPMENT CENTRE FOR ARAB STATES (IDCAS-IAS)

Mr. Mourad STINO, Fertilizer and Petrochemical Industries Specialist

ORGANIZATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD)

Mr. Baudoin ROELANTS DU VIVIER, Special Adviser on Industrialization OECD Development Centre

ORGANISATION POUR LA MISE EN VALEUR DU FLEUVE SENEGAL (OMVS)

M. Mamadou KONATE, Chef de la Division de L'Energie et des Mines

LATIN AMERICAN ECONOMIC SYSTEM (SELA)

Sr. Pedro CARMONA, Director, Cooperacion Industrial

Non-Governmental Organizations

ARAB FEDERATION OF CHEMICAL FERTILIZER PRODUCERS

Mr. Farouk AL MA'AYOUF, Secretary General

Mr. Wahib KELADA, Head of Production and Marketing Department

EUROPEAN UNION OF PUBLIC RELATIONS

Mr. Alessandro PETTENUZZO, President

Mr. Giorgio CAPELLARI, Director

Mr. Paolo CAPELLARI, Assistant Director, FOMET s.a.s.

Mr. Giorgio CAGNONI, Assistant Director, FOMET s.a.s.

INTERNATIONAL ASSOCIATION FOR CEREAL CHEMISTRY (ICC)

Mr. F. SCHWEITZER, Secretary General

Ms. H. REIGNER, Executive Secretary

INTERNATIONAL CENTRE OF FERTILIZERS (CIEC)

Mr. Walter RUCKENBAUER, General Secretary

Mr. Werner REIMOSER, Member of Central Co.

INTERNATIONAL CONFEDERATION OF FREE TRADE UNIONS (ICFTU)

Mr. Karl HUMMEL, Permanent Representative to UNIDO

Mr. Umberto LAMAGNI, Permanent Representative to FAO

INTERNATIONAL FEDERATION OF AUTOMATIC CONTROL (IFAC)

Mr. F. MARGULIES, Chairman of IFAC Technical Committee on Social Effects of Automation

INTERNATIONAL FERTILIZER DEVELOPMENT CENTER (IFDC)

Mr. Donald L. McCUNE, Managing Director

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

Mr. P. KONANDREAS, Research Associate

INTERNATIONAL PHOSPHATE INDUSTRY ASSOCIATION (ISMA)

Mr. K.L. WINDRIDGE, Secretary General

Mr. W.H. COATES, Chairman of ISMA Technical Committee

Mr. J-P. VAN SUCHTELEN, Vice-Chairman, ISMA Raw Materials Committee

Mr. A. DE CASTEJON, ISMA Economics Committee

INTERNATIONAL SAVINGS BANK INSTITUTE (ISBI)

Mr. Wolfgang MÜLLER

SOCIETY FOR CHEMICAL INDUSTRY

Mr. Hans HOHN, Honorary President

Mr. Karl CZEIJA, Member of the Board

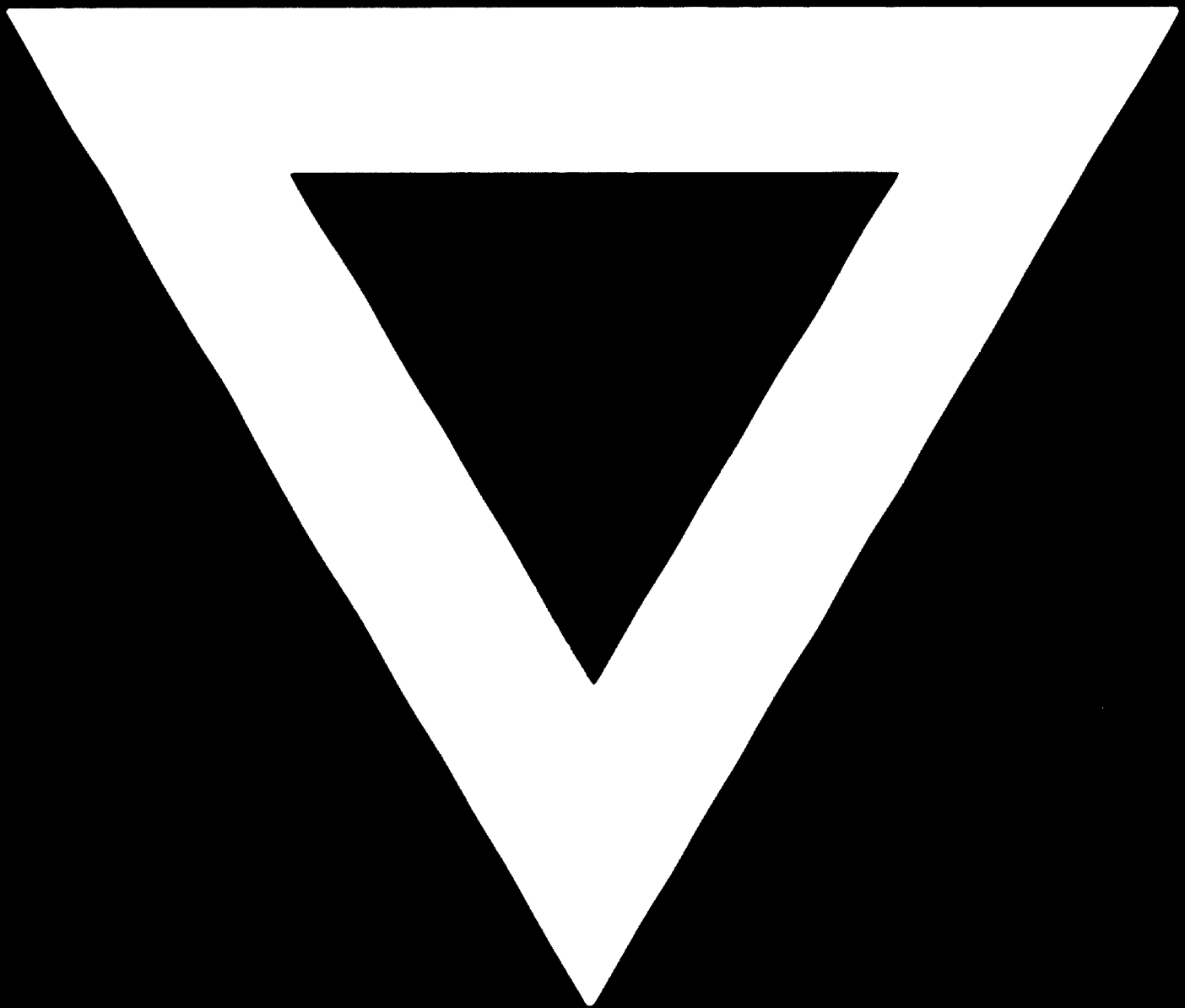
UNION OF INDUSTRIES OF THE EUROPEAN COMMUNITY (UNICE)

M. Eugène MEERT, Secrétaire General, Association des Producteurs Européens d'Azote

WORLD FEDERATION OF TRADE UNIONS (WFTU)

Mr. Pal FORGACS, Secretary General, Chemical Workers Trade Union International

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