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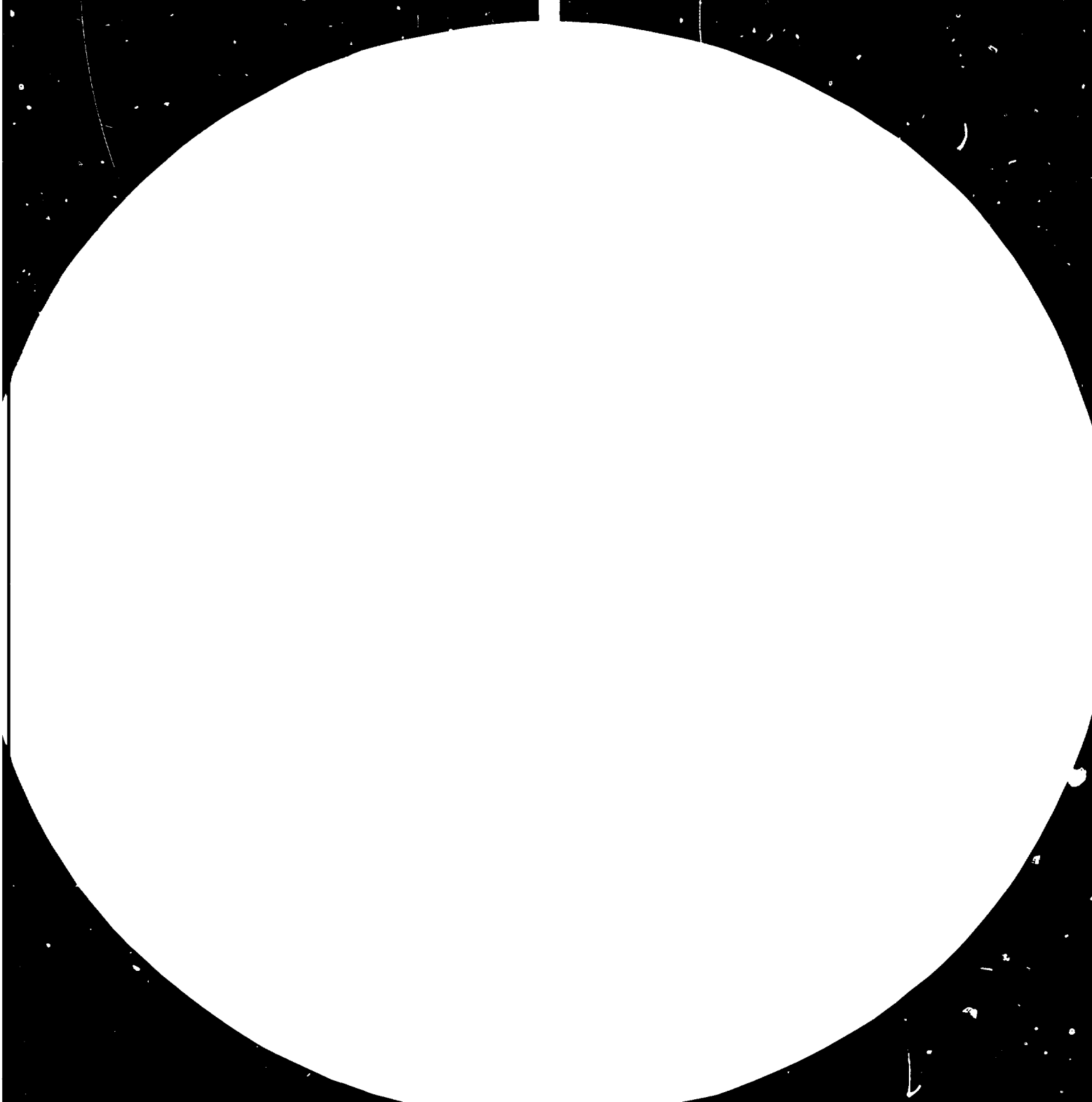
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UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

**THIRD
CONSULTATION
ON THE
FERTILIZER
INDUSTRY**

São Paulo, Brazil
29 September–2 October 1980

REPORT

001092

Distr.
LIMITED
ID/260
(ID/WG.318/14/Rev.1)
ENGLISH

Explanatory notes

The tons referred to in this report are metric tons.

The following abbreviations of organizations are used in this document:

ASEAN	Association of South-East Asian Nations
ISMA	International Phosphate Industry Association
OAU	Organization of African Unity
UNCITRAL	United Nations Commission for International Trade Law
UNCTAD	United Nations Conference on Trade and Development
WIPO	World Intellectual Property Organization

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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 with the object of raising the developing countries' share in world industrial output through increased international co-operation.^{1/}

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^{2/} 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 Fertilizer Industry was convened in Vienna from 17 to 21 January 1977.^{3/} The Second Consultation was convened at Innsbruck from 6 to 10 November 1978.^{4/} The Board, at its thirteenth session in 1979, decided that the Third Consultation on the Fertilizer Industry should be held during 1980.^{5/}

^{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/WG.258/9.

^{4/} See Report of the Meeting, ID/221.

^{5/} 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;^{6/}

(b) Consultations would also permit negotiations among interested parties at their request, at the same time as or after Consultations;^{7/}

(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;^{8/}

(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.^{9/}

Draft rules of procedure for the System of Consultations are to be submitted for consideration and adoption by the Board at its fifteenth session in 1981.

INTRODUCTION

The Third Consultation on the Fertilizer Industry was held at the Sao Paulo Hilton Hotel, Sao Paulo, Brazil, from 29 September to 2 October 1980. The meeting was attended by 163 participants representing Governments, industry, labour and other groups from 52 countries and 9 international organizations. The participants are listed in annex I.

^{6/} Ibid., Thirty-fifth Session, Supplement No. 16, para. 151(a).

^{7/} Ibid., para. 151(b).

^{8/} Ibid., para. 152.

^{9/} Ibid., Thirty-second Session, Supplement No. 16, para. 163.

CONCLUSIONS AND RECOMMENDATIONS

1. The Third Consultation, taking into account the need to continue the valuable work performed through the System of Consultations initiated by the Industrial Development Board, recommends to the Executive Director of UNIDO and to the Industrial Development Board that:

(a) The UNIDO secretariat should undertake the preparatory work relating to the recommendations contained in this report (summarized in paras. 2-7 below);^{10/}

(b) The UNIDO secretariat should convene the Fourth Consultation on the Fertilizer Industry in 1982 at New Delhi, India, to examine and to take appropriate action on the work performed.

UNIDO Model Forms of Contracts for the Construction of a Fertilizer Plant

2. The Consultation examined the Model Forms of Contracts presented by the UNIDO secretariat and recommended that:

(a) An international group of experts should be convened by UNIDO, preferably within the next three months, to complete examination of the UNIDO Model Forms of Turnkey Lump-Sum and Cost Reimbursable Contracts, to serve as guidelines. The experts should be selected by UNIDO from developed and developing countries, with due regard to an equitable geographical distribution, and include the members of the drafting committee of the Working Group on this subject convened at the Third Consultation;

(b) The group of experts should finalize the Model Contracts; in cases of disagreement on the specific clauses, the various alternatives should be presented and given equal weight;

(c) UNIDO, when publishing the Model Contracts, should acknowledge that they were finalized by the group of experts.

Multilateral Insurance Scheme Providing Adequate Coverage for Consequential Losses Incurred by Fertilizer and Other Industrial Plants

3. The Consultation noted the work of the UNIDO secretariat and the draft insurance policy proposed to implement the scheme and recommended that:

(a) UNIDO should further develop the proposed insurance policy to cover consequential losses for which insurance cover is not yet available; taking into account the views expressed at the Consultation (Chapter VII below), every effort should be made to obtain as much coverage as possible, considering the acceptability of the proposed policy to major insurance and reinsurance companies;

(b) UNIDO should convene, at a later date, a working group including experts on insurance, reinsurance and project implementation and other interested parties from developing and developed countries to further discuss the proposal.

^{10/} Presented here in accordance with "Instructions for the Preparation of Reports of Seminars and Other Meetings" issued by UNIDO.

The optimum level of fertilizer consumption in developing countries in 1990 and 2000

4. The Consultation noted the differences between the various estimates of likely requirements for fertilizers in the developing countries in the year 2000. Although it appeared that the FAO Study "Agriculture: Towards 2000" had collected much of the information required to assess the optimum level of fertilizer consumption in developing countries in 1990 and 2000, the Consultation recommended that the UNIDO/FAO/World Bank Working Group on Fertilizers should develop a uniform methodology for making these estimates.

Programme to strengthen co-operation among developing countries in the fertilizer industry

5. UNIDO, in co-operation with the Governments of the developing countries and appropriate international organizations, should initiate and implement an inter- and intra-regional programme to strengthen co-operation among the developing countries in the fertilizer industry. This programme should heighten the developing countries' awareness of each other's potential in fields of mutual interest and establish a firm basis for increasing their self-reliance. The programme should devote particular attention to the following three areas:

- (a) An exchange and transfer of experience;
- (b) Co-operation in the design, manufacture of equipment, machinery and spare parts and construction of fertilizer plants;
- (c) Joint ventures for exploitation of reserves of fertilizer raw materials and for the establishment of fertilizer manufacturing facilities.

UNIDO should pursue vigorously the establishment of the programme (described in Chapter IV below) and its financing so that implementation could start as soon as possible and form a basis for a continuing activity. This first phase of the programme should be completed within a period of two years.

Issues for consideration by the Fourth Consultation

6. The following issues should be studied in depth by UNIDO and presented for consideration by the Fourth Consultation on the Fertilizer Industry:

- (a) Capital costs for fertilizer plants;
- (b) Mini fertilizer plants.

The topics to be examined under each issue were identified by the Consultation (Chapter V below).

Part one. Report of the Plenary

I. ORGANIZATION OF THE MEETING

Opening of the Consultation

7. The Third Consultation on the Fertilizer Industry was opened on 29 September 1980 by Professor Israel Vargas (Brazil), Secretary of Industrial Technology of the Ministry of Industry and Commerce.

8. A statement by the Executive Director of UNIDO was read by his representative, the Chairman of the UNIDO Task Force to Prepare for Consultations on the Fertilizer Industry.

Election of officers

9. Cleantho de Paiva Leite (Brazil), Member of the Board of Directors, Fertilisul S.A., was elected Chairman.

The following were elected as Vice-Chairmen:

J. K. Gitau (Kenya), Director for Research, Ministry of Agriculture
Gyorgy Honti (Hungary), Deputy General Director, Vegtyterv,
Hungarian Chemical Industries Engineering Centre

Aminah Pit Abd.Rahman (Malaysia), Deputy Director, Industries
Division, Ministry of Trade and Industry

Greif Sander (Federal Republic of Germany), Managing Director,
Fachverband Stickstoffindustrie e.V.

Adoption of the agenda

10. The Consultation adopted the following agenda:

1. Progress Report on actions recommended by the Second Consultation
2. UNIDO Model Forms of Contracts for the Construction of a Fertilizer Plant:
 - (a) Third Draft of the Cost Reimbursable Contract
 - (b) Second Draft of the Turnkey Contract
3. Multilateral insurance scheme providing adequate coverage for consequential losses incurred by fertilizer and other industrial plants
4. New issues proposed for consideration by the next Consultation
5. Adoption of the report of the Consultation

Establishment of Working Groups

11. The Consultation established the following Working Groups:

Working Group on UNIDO Model Forms of Contract for the
Construction of a Fertilizer Plant
(Chairman: Paul Pothen, India)

Working Group on the Multilateral Insurance Scheme Providing
Adequate Coverage for Consequential Losses Incurred by
Fertilizer and Other Industrial Plants
(Chairman: Harry B. Glazer, United States of America)

12. The Consultation also established an enlarged Bureau composed of
the Chairman, four Vice-Chairmen and any other participants who wished
to join to discuss the action that may be taken by the Consultation on
agenda items 1 and 4.

Adoption of the report

13. The report of the Consultation, including the reports of the enlarged
Bureau and Working Groups, was unanimously adopted in plenary on 2 October.

Documentation

14. Documents issued for the Consultation are listed in annex II.

II. PROGRESS REPORT ON ACTIONS RECOMMENDED
BY THE SECOND CONSULTATION

15. The UNIDO secretariat described the progress made in implementing actions recommended by the Second Consultation (ID/WG.318/7). The main effort had been concentrated on preparing new drafts of the UNIDO Model Forms of Contracts for the Construction of a Fertilizer Plant and in preparing a new proposal for a multilateral insurance scheme providing adequate coverage for consequential losses incurred by fertilizer and other industrial plants. It was pointed out that the other topics had been examined less intensively owing to lack of resources.

UNIDO Model Forms of Contracts for the Construction of a Fertilizer Plant

16. The UNIDO secretariat stated that the interests of both parties to a contract had to be well balanced and reported that, as recommended by the Second Consultation, comments had been invited on both the Turnkey and Cost Reimbursable Model Contracts; revised drafts of the Model Contracts had then been prepared and were reviewed by an Expert Group Meeting in November 1979. Following that Meeting, revised drafts were prepared for consideration by the Third Consultation, namely, the Third Draft of the Cost Reimbursable Contract (ID/WG.318/3) and the Second Draft of the Turnkey Contract (ID/WG.318/1). An international group of contractors were invited to prepare comments on those drafts (ID/WG.318/4 and ID/WG.318/5) for submission to the Third Consultation. Since the Second Consultation had anticipated that the final drafts of those Contracts would be approved at the Third Consultation, arrangements had been made for the final review of the wording of at least one Contract in a working group.

17. Some participants from developing countries indicated that it was time to take a final view on the matter so that other items of importance could be considered at future Consultations; UNIDO should therefore publish the Model Contracts as soon as possible so that developing countries could benefit from using them. On the other hand, other participants expressed the view that the drafts should be made more clear and flexible so as to better serve the various needs of purchasers.

18. It was recognized that the negotiation of a specific contract should take into account the circumstances of the country. There would need to be flexibility in such negotiations and the Contractor would have to understand the developing country's need for a gradual but continuing transfer of technology.

19. It was stated that the Model Contracts helped to put the interests of the Purchaser in proper perspective considering that the liabilities of the Contractor were small in relation to the Purchaser's investment in a new fertilizer plant and to the socio-economic impact of the project on the recipient country. It was unrealistic to expect the Purchaser to invest money and to refrain from monitoring the project until it was completed, since by then it would be too late to correct the programme of construction. One participant stated that it could not be the liability of Contractors to solve problems beyond their professional competence.

20. The view was expressed that the final version of the Model Contracts presented by UNIDO should not be so complicated as to cover every eventuality, since in all contracts there was a need for mutual respect and co-operation.

21. In answer to a question, the UNIDO secretariat stated that the work in drafting the Model Contracts did not duplicate the work of other United Nations organizations, such as UNCTAD, WIPO, UNCITRAL, and the United Nations Centre on Transnational Corporations.

22. The Consultation agreed to set up a working group to examine the Model Contracts.

Multilateral Insurance Scheme to cover consequential losses

23. The UNIDO secretariat introduced its new proposal (ID/WG.318/6). As requested by the Second Consultation, UNIDO approached contractors and found that they were not willing to accept liability for consequential losses. As recommended, UNIDO turned next to the export credit agencies; they confirmed that under existing government instructions and legislations, their agencies were not able even to consider the insurance of consequential losses because they had been established by Governments to protect the interest of their exporters. With those answers in hand, UNIDO was obliged to again approach the commercial insurance market. That approach resulted in the UNIDO proposal submitted for the consideration of the Third Consultation.

24. One participant stated that although there were legal and other obstacles to the Governments of the developed countries implementing such an insurance scheme, he nevertheless felt that commercial insurance was not the appropriate answer. A challenge should be posed to the Governments of the industrialized countries to develop improved guarantees for the performance of industrial plants.

25. There was little further discussion of the proposal in plenary; a working group was established to examine the UNIDO proposal in detail.

The high cost of fertilizer plants

26. The UNIDO secretariat reported that little further work had been undertaken on the high cost of fertilizer plants but all available information indicated that such costs had continued to increase rapidly since the Second Consultation and were likely to continue doing so. It was therefore proposed that the topic should be kept under continuing review and be considered by the next Consultation.

27. Participants from several developing countries expressed concern at the rising cost of fertilizer plants and the impact of those increases on the ex-factory price of fertilizers and the resulting need for larger subsidies in some countries. Since the cost of fertilizer plants had risen faster than inflation, there was a need for the subject to be examined further.

Co-operation among developing countries in the fertilizer industry

28. The UNIDO secretariat reported that due to lack of resources it had not been possible to implement in full the programme of action recommended by the Second Consultation. However the Ad Hoc Committee on Co-operation among Developing Countries in the Fertilizer Industry had been convened and its report was available for examination by the Consultation.

29. Many participants from developing countries confirmed the importance that they attached to the subject and suggested that it be given priority in discussions at the Third and future Consultations.

30. The arrangements made by ASEAN for the joint-venture projects to produce urea in Indonesia and Malaysia were mentioned. One participant suggested that the basis of industrial co-operation in those projects could be recognized and utilized elsewhere.

31. The co-operation between OAU and UNIDO discussed at the First Meeting of the Ad Hoc Committee on Co-operation among Developing Countries in the Fertilizer Industry was noted. One participant proposed that efforts should be made to establish a fertilizer development centre for African countries.

32. The Chairman of the Fertilizer Industry Advisory Committee (FIAC) indicated that all fertilizer producers whether in developed or developing countries had common problems and interests and could learn from one another. An indication was given of the willingness of the various fertilizer industry associations represented in FIAC to co-operate with UNIDO within their capability. Particular mention was made of the ISMA Technical Conference to be held in Vienna, 10-14 November 1980, to which delegates from developing countries would be welcomed.

33. The FIAC representative expressed the industry's concern at the substantial proportion of current world fertilizer capacity that was uncompetitive at current prices and the fact that those prices were below the level required to justify investment in new capacity. A major factor affecting fertilizer prices was the impact of the rising costs of energy.

34. The subject was referred for further consideration to the enlarged Bureau, which suggested a programme to strengthen co-operation between developing countries in the fertilizer industry (Chapter IV below).

Other recommendations of the Second Consultation

35. The other main recommendations of the Second Consultation were related to ways to increase the consumption of fertilizers and the role that could be played by organic fertilizers. The report on those subjects by the UNIDO secretariat was contained in the Supplement to the Second World-Wide Study on the Fertilizer Industry (ICIS.81/Add.1).

36. The report of FAO on the subject was contained in ID/WG.318/11. In introducing that document, the FAO representative stressed that while developing countries as a whole were self-sufficient in food in the 1950s, their imports of cereals reached 70 million tons in 1978 and might reach 90 million tons by 1984. A recent study by FAO "Agriculture - towards 2000" stressed, in its most favourable scenario, that the developing countries should more than double food production by 2000, and that over 70 per cent of the increase would have to come from increased yields on land already cultivated. That fact stressed the crucial importance of fertilizers, which were expected to contribute over 50 per cent of the increase in food production requirements in the developing countries over the next 20 years; a considerable increase in the use of organic materials would also be needed.

37. Although at the same levels of nutrients the effects of organic materials and chemical fertilizers on crop yields were similar, when used together they had a complementary effect and gave higher yields than when used alone. Organic materials and biological nitrogen fixation were important additional sources of nutrients that should be utilized to the fullest possible extent. It was not possible to accurately estimate the contribution of organic materials, but biological nitrogen fixation could provide approximately 10-15 per cent of the nitrogen required by developing countries.

38. The FAO representative also stressed the importance of training, the ready availability of the correct kinds of fertilizer at the right time and place to farmers, and the importance of the relationship between the prices of crops and fertilizers in increasing the use of fertilizers by farmers in developing countries. In that regard, he reviewed the activities of FAO in promoting the proper and economic use of mineral fertilizers and organic materials in developing countries and stressed the importance of overcoming the various physical and economic constraints on fertilizer use; the necessary action should be taken by Governments in adopting appropriate national policies and measures. In view of increasing costs, it was imperative that fertilizers be produced and used as efficiently as possible.

III. NEW ISSUES PROPOSED FOR CONSIDERATION BY THE FOURTH CONSULTATION

39. The UNIDO secretariat introduced the paper "Issues affecting development of the fertilizer industry in the 1980s" (ID/WG.318/12), which identified the following issues:

- (a) The progress made by developing countries towards self-sufficiency in fertilizer production and prospects to 1990;
- (b) Supplies of ammonia, phosphate, sulphur and potash in the period 1980-1990;
- (c) The price of fertilizers and the cost of fertilizer imports;
- (d) The high cost of fertilizer plants;
- (e) Mini fertilizer plants;
- (f) Assistance for the fertilizer industry from the Governments of the developed countries;
- (g) The optimum level of fertilizer consumption in the developing countries in 1990 and 2000.

40. Participants from developing countries indicated that the first two issues mentioned in the UNIDO paper should be considered in the context of arrangements for co-operation among developing countries.

41. Participants indicated that the high cost of fertilizer plants was not a new issue; it was therefore an issue that required discussion at the current and at future Consultations on a continuing basis.

42. There was only a limited discussion of the proposed new issues in the plenary. It was decided to review them further in the enlarged Bureau.

Part two. Report of the enlarged Bureau

IV. PROGRAMME TO STRENGTHEN CO-OPERATION AMONG DEVELOPING COUNTRIES IN THE FERTILIZER INDUSTRY

43. The enlarged Bureau reviewed and discussed the relevant documents as well as the proposals to enhance co-operation among developing countries made by the delegations of China, Egypt and India. As a result of those discussions, it was decided that UNIDO should initiate and implement a programme of co-operation among developing countries in the fertilizer industry that paid particular attention to the following three areas:

(a) An exchange and transfer of experience through:

- (i) The organization of a number of in-plant training programmes in selected developing countries on plant operation and maintenance;
- (ii) The convening of technical meetings at the managerial level on project and plant management, operational problems and technological development;
- (iii) The provision of expert services and training facilities on plant and equipment design and on ways to improve capacity utilization;

(b) Co-operation in the design, manufacture of equipment, machinery and spare parts and construction of fertilizer plants through:

- (i) The collection and dissemination of information on the availability in developing countries of capacities to manufacture machinery, equipment and spare parts, to provide engineering services and to construct fertilizer plants;
- (ii) An investigation of the feasibility of manufacturing standard and specialized equipment for the fertilizer industry;
- (iii) The organization of expert group meetings to advise on opportunities for specialization in the manufacture of standard equipment and machinery for fertilizer plants;

(c) Joint ventures for exploitation of reserves of fertilizer raw materials and for the establishment of fertilizer manufacturing facilities through:

- (i) A survey of available reserves of fertilizer raw materials for joint exploitation;
- (ii) A survey of the developing countries interested in establishing joint fertilizer manufacturing facilities;

- (iii) An expert group meeting to exchange experience in technical, financial and legal aspects of joint investment in the fertilizer industry;
- (iv) Assistance in preproject investigations and assessment of the techno-economic viability of identified joint projects.

UNIDO should pursue vigorously the establishment of the above programme and its financing so that implementation could start as soon as possible and form a basis for a continuing activity. That first phase of the programme should be completed within a period of two years.

V. NEW ISSUES SELECTED FOR CONSIDERATION BY THE FOURTH CONSULTATION

44. The following issues were selected for in-depth study by UNIDO and for consideration by the Fourth Consultation on the Fertilizer Industry.

Capital costs for fertilizer plants

45. The escalating capital costs for fertilizer plants were noted with great concern by the first three Consultations on the Fertilizer Industry. Part of those increases were due to inflation, but not all. Construction and equipment costs had risen faster than inflation. Such high costs reduced the capabilities of developing countries to build new fertilizer plants.

46. The examination of the capital costs for fertilizer plants should cover, among others, the following topics:

(a) Equipment costs. (The main cost elements, trends, terms of financing and ways and means of reducing equipment costs.);

(b) Construction and start-up costs. (The main cost elements, trends and ways and means of reducing costs, particularly the foreign exchange components.);

(c) Associated infrastructure costs. (The main cost elements, trends and ways and means of reducing the burden of infrastructure costs.);

(d) Ways of improving the formulation, preparation and implementation of fertilizer projects in order to speed up construction and the achievement of the plants' designed capacity;

(e) Recommendations for closer co-operation between developed and developing countries as well as among developing countries aimed at reducing the capital costs for fertilizer plants;

(f) Recommendations for action by decision-makers in developing countries to reduce capital costs for fertilizer plants;

(g) The potential role of UNIDO in assisting developing countries to reduce the capital costs of fertilizer plants.

Mini fertilizer plants

47. In many developing countries, and in particular, the least developed and other small developing countries, the demand for fertilizers was not sufficient to warrant large-scale nitrogen or phosphate fertilizer plants. In land-locked developing countries or land-locked regions of a country with an inadequate transportation network, high transportation costs also favoured small plants located near the market, the raw material, or both.

In such circumstances, mini fertilizer plants with production capacities of up to 150 tons per day of ammonia, and phosphate fertilizer plants with capacities of up to 50 tons per day of P_2O_5 , might prove to be more suitable.

48. For that issue, the following topics, among others, should be examined:

- (a) The identification of developing countries where the construction of mini fertilizer plants might be desirable;
- (b) The identification of available technologies and plant engineering designs that could be used for building mini fertilizer plants in developing countries;
- (c) The development of new energy-efficient technologies and engineering designs for model mini fertilizer plants;
- (d) Recommendations for co-operation between developed and developing countries as well as among developing countries in promoting mini fertilizer plants;
- (e) The potential role of UNIDO in promoting mini fertilizer plants in developing countries.

Part three. Reports of the Working Groups

VI. MODEL FORMS OF CONTRACTS FOR THE CONSTRUCTION
OF A FERTILIZER PLANT

49. The UNIDO secretariat explained the concept of Model Forms of Contracts (ID/WG.318/1, ID/WG.318/2 and ID/WG.318/3) as guidelines that clearly spelled out the obligations of the parties in an adequately balanced way. The Model Contracts were designed to help both parties, especially the purchasers from developing countries, in their specific dealings but, as such, they were not legally binding documents for the parties. The Model Contracts presented were working documents that the Consultation might wish to modify and improve. The UNIDO secretariat would be pleased to present the results of the deliberations and compromises worked out by participants.

50. Several participants from developing countries stated that the Model Contracts had been in preparation for three years and hence they should be finalized at the Consultation. The comprehensiveness of the Model Contracts, as presented, was emphasized. It was recognized that a general contract form was no substitute for specific contracts; however, the Model Contracts were already useful documents for the developing countries to benefit from. One participant stressed the need for a flexible application of the Model Contracts because the more demands placed on the Contractor the more expensive a contract became; he also pointed out that some clauses of the Model Contracts might have to be adapted or deleted according to the governing laws of the countries concerned.

51. Some participants from developed countries stated that the Model Contracts as presented were still too voluminous and complicated, that the drafting of such general purpose contract forms might take a very long time, and that, unless changes were made on the models according to the written comments from Contractors (ID/WG.318/4 and ID/WG.318/5), no agreement might be reached at the Consultation.

52. Nevertheless, some participants recognized that the Model Contracts were realistic documents that should be commented upon Article by Article and approved. However, in view of the short time available for discussion, the participants agreed to concentrate on the Second Draft of the Turnkey Contract because of its immediate importance to developing countries.

53. An attempt to discuss the Turnkey Contract Article by Article was made, but after a trial discussion of two Articles, it was deemed impossible to complete the task on time since the Model Contracts contained 40 Articles with approximately 400 clauses and the Contractors' comments covered approximately 200 of those clauses.

54. An alternative approach was proposed, namely, to select key items of disagreement for discussion. One participant presented a short list of 38 such clauses where, in his opinion major substantive disagreement existed. Participants accepted the approach and proceeded to discuss those clauses in detail. The results of the discussion showed a major area of agreement or compromise between the points of view of Purchaser and Contractor.

55. Consequently, a drafting committee was proposed to redraft the main problem clauses of the Model Contracts taking into account the legitimate interests of Purchasers and Contractors. A drafting committee composed of participants from six developed and five developing countries was set up, but was left open to any country that wished to attend its deliberations.

56. In considering the Turnkey Contract in detail, many points were agreed and much reconciliation accomplished, but, owing to the complexities involved and the many viewpoints that were expressed and were accommodated, the Working Group could only review and discuss approximately half the Articles. In finalizing the Model Forms of Contracts the ensuing procedure should be followed:

(a) An international group of experts should be convened by UNIDO, preferably within the next three months, to complete examination of the UNIDO Model Forms of Turnkey Lump-Sum and Cost Reimbursable Contracts, to serve as guidelines. The experts should be selected by UNIDO from developed and developing countries, with due regard to an equitable geographical distribution, and include the members of the drafting committee of the Working Group on that subject convened at the Third Consultation;

(b) The group of experts should finalize the Model Contracts; in cases of disagreement on the specific clauses, the various alternatives should be presented and given equal weight;

(c) UNIDO, when publishing the Model Contracts, should acknowledge that they were finalized by the group of experts.

VII. MULTILATERAL INSURANCE SCHEME PROVIDING ADEQUATE COVERAGE FOR
CONSEQUENTIAL LOSSES INCURRED BY FERTILIZER
AND OTHER INDUSTRIAL PLANTS

57. The UNIDO secretariat suggested that the Working Group consider the following points:

(a) Whether the Multilateral Insurance Scheme proposed by UNIDO was useful and covered the risks that buyers of plants wanted to cover;

(b) Whether implementation of the Scheme by the commercial insurance industry along the lines proposed should be pursued by UNIDO;

(c) Whether Governments could and should become involved in the implementation of the Scheme and, if so, in what capacity.

58. The concept of the Multilateral Insurance Scheme (ID/WG.318/6) proposed by UNIDO was explained by a UNIDO consultant. He reported that for the purpose of testing the proposal, UNIDO had prepared a draft insurance policy and that in recent months the draft policy had been discussed confidentially with a small number of leading insurance and reinsurance companies. Some of those companies found the wording clear and considered that the wording seemed acceptable on a first reading. Furthermore, four of those companies expressed an interest in co-operating with UNIDO in developing the Scheme by playing a leading role in developing a world-wide insurance facility that could provide cover for the large consequential losses that might be incurred by industrial plants.

59. UNIDO circulated copies of the draft policy (CRP2) which, although it was ready in June 1980, had not been issued earlier so that the insurance companies could give their initial reactions in confidence. In view of the limited time available, it was suggested that the Working Group should take note of the document since most of the participants were not in a position to review the text in detail or to enter into negotiations regarding its terms.

60. Participants from developing countries, while understanding the approach adopted by UNIDO, felt that their insurance companies and reinsurance companies should have been consulted by UNIDO prior to the Consultation. The UNIDO secretariat assured them that it was the intention of UNIDO to consult and involve them in the further development of the Scheme (ID/WG.318/6, para.47). Participants from developed countries, for their part, regretted that they were not informed of the results of the discussions with insurance companies in their countries.

61. Participants recognized that the Scheme should cover the failure of the completed plant to perform fully in accordance with contract specifications and technical data due to the risks as proposed by UNIDO (ID/WG.318/6, para. 48). It was explained that the Scheme would fill certain gaps in the insurance coverage currently available and, in particular, include coverage for consequential losses arising from, for example, design defects and deficiencies in technology, equipment, machinery, and materials of construction.

62. In the draft policy, UNIDO had proposed that delays in completion of the plant should also be covered. One participant questioned whether that were advisable. The draft policy also covered the risk of some incidents of force majeure. Participants doubted that that were advisable; moreover the UNIDO secretariat reported that several of the insurance companies contacted had indicated their preference for excluding that risk.

63. It was explained that the draft policy would have certain exclusions and only cover the consequential losses of the Purchaser that were not recoverable in other ways, for example, by other insurance policies or through compliance of the Contractor with his contractual obligations, including the performance bonds and penalties.

64. One participant asked whether the draft policy was to be applied only to turnkey contracts or also to other types of contract. It was recognized that all contracts were different and that the offer of insurance would be preceded by a risk analysis that would include examination of the contract between the Purchaser and the Contractor. Therefore careful consideration should be given to the risk coverage of the plant-supply contract and the draft policy. The same participant pointed out that in some developing countries the detailed engineering and the procurement of equipment and machinery were carried out within the country. He felt that that should affect the conditions of draft policy.

65. It was suggested by the UNIDO secretariat that although the proposed Scheme might be implemented initially for plants built in the developing countries, there might be some purchasers of industrial plants located in developed countries who would welcome and take out that type of insurance protection.

66. The Working Group considered the next steps that might be taken to establish a world-wide facility for the new type of risk. The UNIDO consultant pointed out that since that was a new risk for insurers to consider, they could not use their existing reinsurance treaties. Therefore,

in order to develop the large capacity required to cover the very large potential losses that might be incurred, he said it would be necessary to create a pool or facility to which several insurers or reinsurers would each subscribe small amounts of insurance. All insurers and reinsurers would be given the opportunity to participate in the suggested facility. In order to establish such a facility, two or three leading insurers from different countries might act as the leading underwriters who would also take responsibility for assessing the risk analysis, undertake the risk management and assess the claims. It was recognized that the establishment of such a facility would take considerable time since it would need to be preceded by a detailed analysis of the potential losses that would have been incurred had there been such an insurance facility in existence.

67. Some participants, referring to the information that UNIDO had presented on the causes of consequential losses in fertilizer plants (ID/WG.318/6), noted that the levels of production achieved in developing countries were considerably lower than those achieved in similar North American plants. It was pointed out that the reported experience of plants in developing countries related to the first three years of operation, whereas for many of the North American plants the experience was for later years when plants were less subject to mechanical breakdown. It was further stated that the causes of production loss had been presented to show the incidence of design defects, mechanical breakdowns and other causes. The view was expressed that if fertilizer plants in developing countries had not achieved a better performance in more recent years, the consequential losses to be covered by insurance would be very large in that type of plant. It was suggested that the UNIDO secretariat should try to obtain information on the experience of fertilizer and petrochemical plants built in both developing and developed countries in more recent years in order to give insurers an up-to-date appreciation of the potential risk.

68. One participant asked whether the title "Multilateral Insurance Scheme" was appropriate. It was pointed out that the title had been used at the First Consultation and could be changed when the precise nature of the insurance programme emerged. It was noted that in certain international organizations, multilateral implied an organization of governments. Furthermore it was felt that the wording "and other industrial" in the title was not appropriate because the Consultation and the proposed insurance scheme were dealing with fertilizer plants only.

69. There was a difference of opinion on the role that Governments could play in the establishment of the insurance programme. One participant referred to the draft resolution of the Second General Conference of UNIDO, held at Lima in March 1975, that requested Governments of the developed countries to establish an insurance system to protect the developing countries from the risks to which the latter were exposed in their industrial co-operation with the developed countries. Although that resolution was not adopted by the Conference, the Industrial Development Board had taken note that such a scheme for the fertilizer sector was being discussed at Consultations on that industry. The participant therefore suggested that the draft policy proposed by UNIDO should be elaborated so that it could be taken out on behalf of the Purchaser by one of the following:

- The Purchaser himself
- The engineering Contractor
- The Government of the country giving aid for the establishment of the project
- The Government of the recipient country.

70. Several participants recalled that previous work had shown that Governments, notably those of supplier countries, could not undertake responsibility for the Scheme under discussion, which should remain on a purely commercial basis. Since the proposed insurance would be for the benefit of the buyer, the export-credit agencies of the supplier countries could not cover that type of risk.

71. The proposed insurance programme, concerning on the one hand the buyer and on the other hand the insurance companies, should take into account the interests of the buyer but also ensure that the draft policy was agreeable to the insurance companies. As for the premium involved, that should be paid by the buyer.

72. Concerning the suggestion that the Governments of supplier countries might pay the premium, a number of participants remarked that that would interfere with free competition as it could be construed as an instrument of export aid.

73. The Working Group, bearing in mind the recommendation of the Second Consultation that UNIDO should collect additional information on the amount and causes of consequential losses in fertilizer plants and, on the basis of that information, continue to examine with contractors, insurers, Governments and other interested parties how appropriate solutions to the problem might be reached, took note of the report of the UNIDO secretariat on its work (ID/WG.318/6) and the Conference Room Paper No. 2 entitled "Multilateral Insurance Scheme; Suggested Draft Policy".

The Working Group proposed that:

(a) UNIDO should further develop the proposed insurance policy to cover consequential losses for which insurance cover is not yet available; taking into account the views expressed in the Working Group, every effort should be made to obtain as much coverage as possible, considering the acceptability of the proposed draft policy to major insurance and reinsurance companies;

(b) UNIDO should convene, at a later date, a working group including experts on insurance, reinsurance and project implementation and other interested parties from developing and developed countries to further discuss the proposal.

See para. 3(a) and (b).

Annex I

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Annex II
LIST OF DOCUMENTS

Information documents

Provisional agenda	ID/WG.318/8
Provisional list of documents	ID/WG.318/9
Advance information for participants	ID/WG.318/10
Addendum	ID/WG.318/10/Add.1
Provisional list of participants	ID/WG.318/13

Main working documents

Second draft of the UNIDO model form of turnkey lump-sum contract for the construction of a fertilizer plant	ID/WG.318/1
Technical annexures	ID/WG.318/1/Add.1
First draft of the UNIDO model form of the semi-turnkey contract for the construction of a fertilizer plant	ID/WG.318/2
Third draft of the UNIDO model form of cost reimbursable contract for the construction of a fertilizer plant	ID/WG.318/3
Technical annexures	ID/WG.318/3/Add.1
Second draft of the UNIDO model form of turnkey contract for the construction of a fertilizer plant - comments prepared by an International Group of Contractors	ID/WG.318/4
Third draft of the UNIDO model form of cost reimbursable contract for the construction of a fertilizer plant - alternative draft (counter-proposal) prepared by an International Group of Contractors	ID/WG.318/5
Establishing a multilateral insurance scheme providing adequate coverage for consequential losses incurred by fertilizer and other industrial plants; proposal by the UNIDO secretariat	ID/WG.318/6
Progress report on actions recommended by the second consultation	ID/WG.318/7
New issues for consideration at the next Consultation; proposal by the UNIDO secretariat	ID/WG.318/8

Background documents

- Supplement to the second world-wide study on the fertilizer industry: 1975-2000 ICIS.81/Add. 1
- FAO activities in promoting and overcoming constraints to the efficient and complementary use of mineral fertilizers, organic materials and biological nitrogen fixation by small-scale farmers in developing countries: prepared by the Food and Agricultural Organization of the United Nations ID/WG.318/11
- Issues affecting development of the fertilizer industry in the 1980s ID/WG.318/12
- Current world fertilizer situation and outlook 1977/78 to 1983/84. Report of the UNIDO/FAO/World Bank Working Group on Fertilizers (June 1979) FAO
- Current world fertilizer situation and outlook 1978/79 to 1984/85. Report of the UNIDO/FAO/World Bank Working Group on Fertilizers (May 1980) FAO
- Co-operation among developing countries in the fertilizer industry - Suggestions of participants received by the UNIDO secretariat ID/WG.322/1
- Report of the first meeting of the ad hoc Committee on Co-operation among Developing Countries in the Fertilizer Industry ID/WG.322/2



