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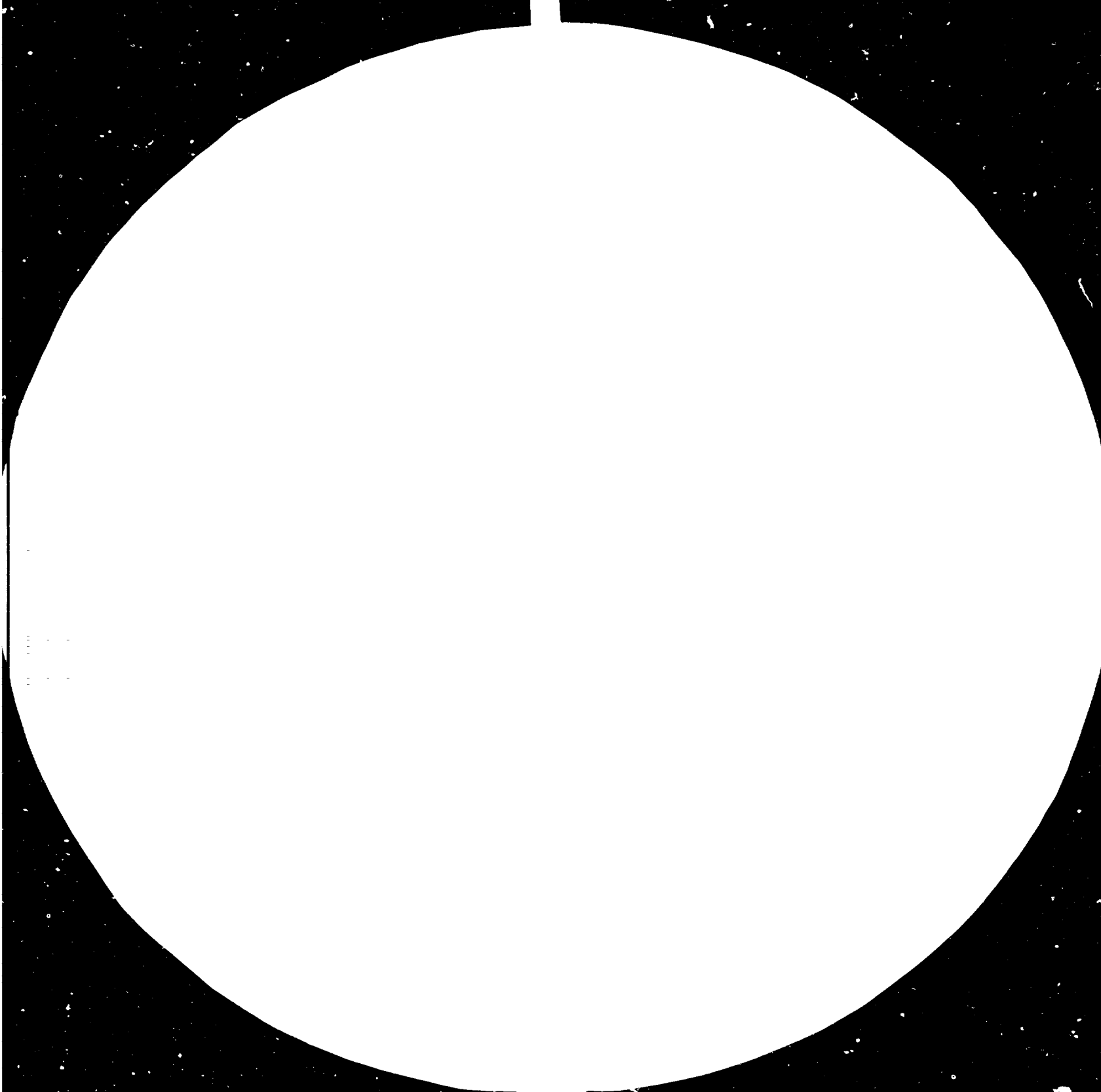
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**UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION**

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**HIGH-LEVEL  
EXPERT GROUP MEETINGS  
PREPARATORY TO THE  
FOURTH  
GENERAL CONFERENCE  
OF UNIDO**

*Report.*

*Industrial Co-operation Among Developing Countries*

*Bangkok, Thailand, 18 - 22 July 1983*

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**REPORT**

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CONTENTS

	<u>Paragraphs</u>	<u>Pages</u>
Chapter I Introduction	1 - 12	1 - 4
Chapter II General Considerations on Industrial Co-operation among Developing Countries	13 - 35	5 - 13
Chapter III Policies, Instruments and Mechanisms for Industrial Co-operation among Developing Countries	36 - 49	14 - 20
Chapter IV Areas for Effective Industrial Co-operation among Developing Countries	50 - 70	21 - 26
Chapter V Closure of the Meeting	71 - 75	27

ANNEXES

Annex 1	Agenda of the Meeting	28
Annex 2	List of Participants	29 - 41
Annex 3	List of Documents	42 - 44
Annex 4	Terms of Reference and Composition of Working Groups	45 - 48

## CHAPTER I - INTRODUCTION

1. The High-Level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO on Industrial Co-operation among Developing Countries was held in Bangkok, Thailand, from 18 to 22 July 1983. It was organized by UNIDO in co-operation with the Government of Thailand. The Meeting was attended by 44 experts from 25 countries including the host country. A number of observers from Thailand and from international organizations also participated. The list of participants is contained in Annex 2. A list of documents presented to the Meeting is provided in Annex 3.
2. The objectives of the Meeting, which was one of a series of preparatory meetings for the Fourth General Conference of UNIDO (UNIDO IV), were to review main issues and relevant experiences on the subject of industrial co-operation among developing countries and to formulate recommendations for a concrete programme of action at national, regional and interregional levels and for UNIDO in that field.

### Opening of the Meeting

3. During the opening session of the Meeting, the Executive Director of UNIDO, Dr. Abd-El Rahman Khane, drew attention to the fact that since 1975 the progress made towards the Lima target of increasing the share of developing countries to at least 25 per cent of world industrial production had been painfully slow. It was, therefore, obvious by now that the Lima target would not be attained by the year 2000. The lack of significant progress for the vast majority of the developing countries towards achieving that target was a reflection of the present international situation: low export earnings due to the recession in the developed countries and high prices of imports from these same countries and the consequent heavy debt burden had compounded the problems of industrialization in the developing countries. In the light of the recent events, in particular the conclusions of the Williamsburg Meeting, he stated, co-operation among developing countries was bound to become, more than ever before, a focal point of a new

international strategy for development. Such co-operation would not only strengthen those countries internally, but also enable them to deal with the industrialized countries on a more equitable and balanced footing, reduce their economic vulnerability and thus improve their collective capability to contribute to the prosperity of the global economy. South-South co-operation should, however, not minimize the importance of North-South co-operation for economic and industrial development.

4. In spite of some progress, South-South co-operation had not reached its full potential, he stated, and industrial co-operation among developing countries (ICDC) in particular should expand in a number of areas. Furthermore, the prerequisites to promote and facilitate such co-operation should be identified, while ensuring a large degree of immediate or longer term mutuality of benefits so as to avoid inequitable sharing of opportunities and wealth among developing nations. He noted that UNIDO had developed a number of programmes in the past, but there was considerable scope for expansion and improvement of UNIDO's activities in this field, should adequate resources become available. While stressing the need for exploiting all the potential of co-operation among developing countries, Dr. Khane called on the developed countries to join in a new era of co-operation, reflecting a more positive perception of the new interdependence of the world and thus contributing to preserving peace for future generations.

5. Addressing the Meeting on behalf of the Executive Secretary of the Economic and Social Commission for Asia and the Pacific (ESCAP), Mr. K. Nakagawa, Deputy Executive Secretary, underlined the importance accorded by ESCAP to the forthcoming Fourth General Conference of UNIDO. ESCAP would be convening in early 1984 a meeting of Ministers of Industry preparatory to UNIDO IV to define the regional position for the Conference, which would be preceded by an expert group meeting to consider the documentation.



6. Concerning the subject of the current Meeting, ESCAP had for many years placed emphasis on co-operation among developing countries with high priority on regional and inter-regional co-operation as the only sound basis for international co-operation. The ESCAP region provided a number of examples of how such co-operation could be developed. One of them was the "Club for Industrial Co-operation" by the ESCAP secretariat to promote flows of resources and supporting activities for industrial projects from more advanced developing countries to less developed countries within the region. He hoped that the international community would develop a concrete programme of action at the international level for promoting such efforts.

7. In his address at the Meeting, the Deputy Minister of Industry of Thailand, H.E. Dr. Chirayu Israngkun Na Ayuthaya, referred to the Association of South East Asian Nations (ASEAN) as one form of economic co-operation among developing countries of which industrial co-operation formed an important part; another form was the extension of such co-operation to other regional groupings within a world forum. He underlined the importance to take into account constraints and realistic conditions when examining co-operation arrangements among developing countries, and pointed to the need to formulate less-than-ideal work plans, thus aiming towards high ideals in a pragmatic manner. He expressed the hope that the deliberations at the Meeting would lead to action-oriented results.

#### Election of Officers

8. The Meeting elected the following officers: Mr. Djakkrit Puanasamriddhi as Chairman; Mr. I. Barac, Mr. R. Lucas and Mr. K.G. Purcell as Vice-Chairmen; and Mr. A.S. Ojerinola as Rapporteur.

#### Adoption of the Agenda

9. The Meeting adopted its agenda which is attached as Annex 1.

10. Mr. G.S. Gouri, Chairman of the Task Force on the Fourth General Conference of UNIDO, provided information on the preparations for the Conference. These included five preparatory meetings in 1983 relating to the critical areas of technology, industrial strategies and policies, human resources, industrial co-operation among developing countries and energy. Three of those meetings had already taken place and their recommendations would be taken into consideration by the current Meeting.

11. The Meeting, he said, was to undertake a thorough examination of ways and means to exploit the full potential of industrial co-operation among developing countries. Attention had, therefore, been drawn in the documentation to such areas as harmonization of industrialization policies, joint investment programming, joint development of production units, physical and institutional infrastructure development, development of human resources, and of technological, energy and financial capacities, and the strengthening of negotiation capacity vis-à-vis the developed countries in the acquisition of technology and other resources for industrial production.

12. Most developing countries, Mr. Gouri stated, had already reached a stage of development where they could engage in a meaningful and mutually beneficial co-operation aimed at promoting the flow of technology, capital and skills for industrial production. To establish effective South-South co-operation changes would, however, be required in infrastructure links such as trade, shipping, finance, telecommunication, etc., and in laws, regulations and administrative systems which, for historical reasons, were geared to the North and thus not apt to South-South co-operation. The agenda adopted by the Meeting and the documentation prepared by the UNIDO Secretariat also focussed attention on these important issues. While looking forward to practical recommendations by the Meeting, Mr. Gouri pointed to the need for commitment of the Governments at the national level as the prerequisite to ensure the success of industrial co-operation among developing countries.

CHAPTER II - GENERAL CONSIDERATIONS ON INDUSTRIAL CO-OPERATION  
AMONG DEVELOPING COUNTRIES

A. Potentialities and constraints related to ICDC

13. The Meeting noted the background documentation prepared by the UNIDO Secretariat as well as the documents prepared by participants on country experience in industrial co-operation among developing countries (ICDC). It was felt that the documentation provided a good basis for an in-depth discussion of the substantive items on the agenda.

14. The Meeting recognized that the present international economic situation characterized by stagnant growth, recessionary conditions and protectionist tendencies in developed countries and the consequent worsening of terms of trade, balance of payments and debt burden of developing countries, had seriously affected the growth prospects of the third world. Despite hesitant signs of recovery, reliance could not be placed on "trickle-down" effects arising therefrom. Thus, present world conditions necessitated acceleration of activities for industrial co-operation among developing countries themselves.

15. While developing countries are at different stages of economic and industrial development, taken together they are endowed with considerable resources both human and material; they represent vast markets for industrial products; and many of them have developed considerable technological capabilities. While complementarity of resource and technology endowments could lead to mutually beneficial ICDC, it was felt that co-operation could be equitable and effective between countries at similar levels of development. This did not imply that levels of technological development had to be the same or similar, but rather that the economic, social and cultural environment had to be similar. It was emphasized that concentrated and intensive attention needed to be paid to assistance to least developed countries by the other developing countries.

16. The Meeting agreed that South-South co-operation was not a substitute for North-South co-operation. It was in fact underlined that a greater

co-operation among developing countries in the field of industrial development would not be against the interests of the developed countries. Rather the opposite, such co-operation could be expected to lead to identifying common objectives which favour partnership and co-operation between rich and poor countries. The development of a policy and institutional framework for industrial co-operation among developing countries should make possible optimum use of technological and material resources of developing countries for mutually beneficial development of markets and trade in appropriate products. ICDC would thus be a measure of first resort and not one of last resort. Through a self-sustaining action programme of ICDC the technological capabilities of developing countries could be enhanced and they could be enabled to make better use of North-South co-operation.

17. There was considerable discussion on the kind of industrial development which should be promoted by developing countries. Certain experts felt that "imitation" of the "Western model" had led to inequitable development, excess capacities inappropriate products, impoverishment of rural areas and emergence of elitist classes. There was a need for alternative industrialization strategies which could be studied by UNIDO. It was felt that ICDC could be more meaningful if the structure and pattern of industrialization took into account the human and material resource endowments of the developing countries, the basic needs of the population and the need to ensure equitable distribution of income. Within such a policy framework development countries could help each other by transfer of relevant technology and trade in appropriate products.

18. Triangular arrangements could be envisaged with an international agency such as UNIDO acting as "moderator" to ensure equitable terms of technology transfer. Multi-lateral arrangements involving not only establishment of industries but also trade among a group of countries should also be envisaged. Such arrangements could enable matching of resources of one country to technology, management and finance from

different countries. Trade among developing countries in products appropriate to their needs and markets - products which might not necessarily meet the specifications of developed countries - would provide an important means for accelerating industrialization in many developing countries.

19. The Meeting recognized that ICDC could assist in providing a credible alternative to North-South industrial links in terms of access to, and/or conditions of availability of factors of production, i.e. skills, technology, finance, etc. and would be based on equality and mutuality of interest, in the true spirit of interdependence. Moreover there were constraints to ICDC arising from the historical past of developing countries as well as from lack of a full set of adequate mechanisms for effectively handling such co-operation. Examples of the former were: uncritical acceptance of the concept of the nation-state as an economic unit irrespective of its natural endowments or size; differences in language, political, administrative and legal systems; set consumption and production preferences favouring products and technologies originating in developed countries; the existence of institutional and physical infrastructure and facilities that favour and/or tend to perpetuate developed-developing country co-operation and the leverage built up by developed countries to influence the industrialization process in the developing countries, by various means, including at times through their control of certain international development institutions. Examples of the latter were: lack of information systems on needs and capabilities to undertake ICDC; inadequate harmonization of industrialization strategies and policies oriented towards ICDC; and lack of proper organizations capability at national, regional and inter-regional levels to facilitate ICDC.

20. It was agreed that ICDC to be effective required the will and commitment of sovereign States and governmental action was necessary to provide a suitable framework of co-operation in industry. Furthermore, ICDC to be meaningful should be based on development of technological

and entrepreneurial capacities and capabilities at the national level. Education, training, technology and R+D institutions should be developed in every country. ICDC should help in developing these institutions. There should also be pooling of scientific resources for undertaking education, training, research and development activities, and co-operation among these institutions. ICDC programmes could aim at the development of comprehensive industrial systems, including industrial establishments, training of technical and management cadres, the development of engineering capabilities, R+D capacity, equipment making facilities and other elements that play a role in an industrial sector. Twinning arrangements between institutions and enterprises of developing countries could accelerate this process. UNIDO has promoted such arrangements in the past and should attempt to refine such arrangements in the future.

21. The Meeting emphasized the need for UNIDO to organize collection and dissemination of information on ICDC "demand-and supply". On the one hand UNIDO should perform the function of a clearing-house providing information on technology, human resources, raw materials, industrial consultancy capabilities, etc. so that developing countries could take advantage of possibilities of mutual co-operation. On the other hand, UNIDO could play the role of a "match-maker" by identifying promising areas or projects where co-operation would be particularly effective and mutually beneficial.

22. It was noted that some developing countries had built up capabilities for design, technical adaptation and creation of products and processes through the gradual learning resulting from import substitution, technology adaptation and development, leading finally to technology exports. In many cases, more appropriate products and processes had thus been developed at more advantageous costs than for similar technologies or products in developed countries. Advantage of ICDC to the recipient country or enterprise would reside in the adequacy of technology and products to the local conditions, smaller scales, simpler and more

labour-intensive technologies, higher flexibility of equipment, lower skill requirements, use of local inputs and raw materials, ability to work in tougher environmental conditions, etc.

23. The Meeting stressed the importance of the acquisition of intellectual and scientific capability and capacity by the developing countries. Apart from technological and scientific skills, entrepreneurial abilities as well as negotiating abilities were important. Only through such development was it possible to take proper advantage of transfer of technology from more developed countries.

24. It was emphasized that ICDC should not be based on arrangements similar to those for transfer of technology from developed to developing countries, which are regarded as inequitable. Such co-operation should rather be based on conditions of equality and mutual benefit. Optimization of ICDC possibilities would be facilitated through development of appropriate guidelines for such co-operation among developing countries.

25. The Meeting took note that the developing countries had already significantly accelerated their consultations and joint planning towards economic co-operation among themselves, as witnessed, inter alia, by the Caracas High-level Conference on Economic Co-operation among Developing Countries and its follow-up meetings as well as the meetings of the Movement of Non-Aligned Countries. The Second and Third General Conferences of UNIDO in their Lima and New Delhi Declarations and Plans of Action had also stressed the question of economic co-operation among developing countries as a fundamental importance. However, it was felt that in the field of industrialization pronouncements at international forums would need to be expanded to include the building of a new set of principles, policies and measures that would provide a framework for assisting each other on an equal footing.

26. Consequently the Meeting recognized there would need to be certain pre-requisites for promoting an expanded and more effective flow of technology, capital and industrial skills for industrialization in the

developing countries. These were identified as: (a) the formulation of policies and incentives conducive to industrial co-operation among developing countries which are integrated within overall national development plans and policies, and are underpinned by considerations of equity and mutuality in the sharing of benefits, (b) the establishment of appropriate mechanisms at the national, regional and international levels for execution of such policies, and (c) the identification of promising areas or projects where co-operation would be particularly effective and would contain an element of mutuality of benefits as well as be within the capabilities of developing countries to implement.

B. Policy Considerations

27. It was recognized by the Meeting that there was, as a matter of priority, a need for developing countries to establish policies and incentive schemes to promote ICDC. In this regard, the Meeting was of the view that it was not possible to prescribe particular policies of general applicability to all developing countries, since a developing country's industrial strategy and policies, of which policies conducive to ICDC need to be an integral part, could be expected to vary according to its chosen style of development, level of industrialization already achieved, geographical size and location, etc., and according to its policy responses to dynamic changes in the international economic situation.

28. Nevertheless the Meeting did identify the following particular orientations that policies and incentive systems conducive to ICDC should take at global as well as at regional and bilateral levels to achieve concrete objectives. At a global level, such policies and incentive systems should give expression and coherence to objectives and activities of international institutions and mechanisms that developing countries might consider establishing to take action on a collective



basis to accelerate their industrialization, and should therefore be oriented towards:

- (a) strengthening the negotiating capacities of developing countries to obtain fair and equitable conditions from the developed countries in the transfer of technology and managerial know-how, finance, energy and capital and intermediate products for industrialization;
- (b) sharing of information and facilitating the flow of human, technological, energy and financial resources between the developing countries;
- (c) increasing direct foreign investment between the developing countries, particularly for the benefit of the least developed countries;
- (d) increasing South-South trade in manufactured goods and requisite raw materials, while at the same time avoiding that the least developed countries become the new periphery for the industrial centres in the developing world.

29. At a bilateral, regional and interregional level, policies and incentive systems conducive to ICDC should be oriented towards:

- (a) co-ordinating and harmonizing of national industrialization plans and promotion of regional industrial sectoral planning and programming;
- (b) establishing of multinational industrial enterprises in key priority areas and based on the utilization of local raw materials;
- (c) promoting joint ventures between industrial enterprises, both public and private, of developing countries;
- (d) encouraging of joint tenders and project development by engineering design and consultancy organizations in developing countries;
- (e) strengthening regional and interregional industrial and professional associations of the developing countries;

- (f) ensuring for special treatment of countries in the initial stages of industrialization in the sharing of costs and benefits related to particular ICDC projects;
- (g) developing financial co-operation for project development and industrial investment.

30. The Meeting noted that some machinery existed at the Government level for pursuing policies and measures favourable to industrial co-operation among developing countries. These included framework agreements on a bilateral basis, participation in regional and sub-regional organizations, and discussions through meetings of the Group of 77 and the Movement of Non-aligned Countries. In addition, in most Latin American countries and in the ASEAN, arrangements also existed for enterprise-to-enterprise co-operation. Noting that practical or actual co-operation takes place through enterprise-to-enterprise activities (whether they be private or public enterprises), the meeting recognized the need to strengthen co-operation between entrepreneurs and discussions among them for the purpose of accelerating ICDC.

31. The Meeting took into account the experiences of Latin America and the ASEAN in regard to co-operation on the basis of sectoral networks or industry branches. Such co-operation could lead to specialization in R+D by specific countries in specific fields for mutual benefit of a group of countries. It was noted that besides "hard" areas, e.g. steel, aluminium, cement, etc., there was scope for organizing sectoral networks in "soft" areas such as training, computer applications, genetic engineering, etc.

32. Agreements among developing countries on a global, regional or sub-regional basis for allocation of different sub-sectors or branches of industry to different countries for specialization, development of technology, education and training facilities, product development, etc., could be encouraged. Such specialization would enable concentrated work not only to keep in touch with global technological developments, but also in some cases to "leap-frog" and become a leader in the field. All developing countries or members of a regional grouping should be

able to benefit from such specialization.

33. The promotion and development of small-scale industry, it was noted, offered considerable opportunities for ICDC. The development in India of consultancy services for small-scale industry by co-operation among development banking institutions provided an example in this connection. It might be possible to organize such networking arrangements among development banking or extension service organizations of developing countries on a regional or sub-regional basis. The Meeting was informed that the World Assembly of Small and Medium Enterprises (WASME) provided assistance in such matters.

34. The Meeting noted that some countries had set up special banks for channelling programmes or projects of co-operation with developing countries. Some other countries, including some developed countries, had set up institutions for economic co-operation with developing countries. It was proposed that UNIDO should analyse the role of such banks and institutions and their effectiveness in promoting programmes of ICDC.

35. In order to deal more adequately with agenda items 6, 7 and 8, two working groups were established: one dealing with mechanisms for promoting ICDC and the other dealing with areas for effective ICDC. The reports of the working groups were adopted by the Plenary and constitute the basis for Chapters III and IV of the present report.

CHAPTER III - POLICIES, INSTRUMENTS AND MECHANISMS FOR  
INDUSTRIAL CO-OPERATION AMONG DEVELOPING COUNTRIES

36. The terms of reference and composition of Working Group No. 1 are contained in Annex 4.

37. Pursuant to its terms of reference and on the basis of the documentation submitted, the Working Group held three sessions, as a result of which the following conclusions and recommendations emerged.

A. Policies

38. It was acknowledged that effective co-operation could only result from the will and commitment of the sovereign States. Given such will, the developing countries should undertake, individually and collectively, all necessary policies and measures for promoting and strengthening industrial co-operation activities among themselves. Such policies should aim at:

- multiplying initiatives for ICDC; this needs information on opportunities for ICDC operations, a study of potential supply and demand, and mechanisms for bringing together the likely participants in such operations;
- making available financial support and incentives for ICDC operations to the interested parties;
- setting up ICDC operations with positive features that will produce benefits to the countries concerned;
- working out concrete proposals, which may include co-operation between public and private enterprises, co-operation between institutions that support industrialization, and co-operation aimed at developing comprehensive industrial systems;
- establishing technical co-operation networks among two or more developing countries;

- formulating integrated programmes of industrial development in such fields as agro-industries and energy equipment;
  - setting up networks of national manufacturing associations and chambers of commerce and industry to help project identification and to promote contacts among entrepreneurs concerned.
39. Developed countries should provide support for ICDC programmes, through various means, such as:
- providing funds within their development assistance programmes for the promotion of joint industrial ventures and multi-national enterprises of the developing countries; for technological research activities; for pre-investment studies, and for actual investments;
  - facilitating separate procurement of equipment and technological inputs in investment projects they fund, in order to encourage importation of capital goods, engineering services and technology from other developing countries;
  - supporting the development of new schemes for export credit finance and guarantees by the World Bank and regional development banks;
  - supporting the establishment of the South-South Bank in the light of on-going studies by the Group of 77;
  - increasing their voluntary contributions to the United Nations Development Programme and the United Nations Industrial Development Fund with a view to meeting the growing requirements of developing countries in relation to ICDC operations and programmes.

B. Instruments and Mechanisms

40. In order to carry out policies in favour of ICDC, a variety of instruments and mechanisms are needed at different levels. The Meeting identified the following.

(a) National level

(i) Co-operation among enterprises

41. National authorities should vigorously promote enterprise co-operation covering the wide range from technology transactions to direct foreign investment through a joint venture or a multinational enterprise set up by several developing countries. Both public and private enterprises have an important role to play in ICDC, and incentives and assistance mechanisms should be employed to promote their participation.

42. To properly guide ICDC operations between enterprises so that wide positive impact occur throughout the productive structure of the partner countries, a set of guidelines should be developed under the initiative of UNIDO, and enterprises should be offered financial support and other incentives at the national and international levels for complying with such guidelines. In this way "commercial" ICDC operations may be endowed with characteristics that make them effectively co-operative.

43. Opportunities should be explored for the setting up of multinational enterprises between several developing countries, possibly through agreements within sub-regional integration schemes. Practical problems should be carefully examined, among them the role of private and public enterprise in such endeavours, the way production is to be organized among the participating countries, and how benefits are to be distributed.

(ii) Measures by Government

44. ICDC programmes should be explicitly considered for inclusion in national development plans. Countries should establish focal points for ICDC which may receive support and orientation from external institutions and international organizations. National focal points should collect information about their countries' ICDC supply capabilities as well as their demands relative to ICDC, making this information available to other developing countries through UNIDO's Industrial and Technological Information Bank. They should also pursue ICDC initiatives on a systematic basis.

45. Governments may on the other hand enter into agreements for co-operation, which may be of a general framework type or relate specifically to certain programmes. A particularly interesting case is that of a "twinning" arrangement, which may bring together into a long-term co-operation set up industrial enterprises (mainly those in the public sector) or institutions that support industrialization (research institutes, engineering schools, standards institutions, etc.), or may be directed to the development of a comprehensive industrial system for a given industry.

(b) Multinational, sub-regional, regional and interregional levels

46. A large number of possibilities appear at these levels, among them:

- mechanisms favourable to ICDC within integration schemes. These may include trade liberalization; industrial programming leading to industrial complementation among the participating countries: the setting up of multi-national enterprises; joint projects on physical infrastructure (hydro-electricity, international roads and bridges, railways, etc.); joint programmes for technology development; complementation and co-operation in consulting and engineering services; co-operation in university education, etc.;
- technical co-operation networks linking similar institutions in different countries, in "soft" technology areas such as vocational training, engineering education, technological research, standards, etc., and in "hard" technology areas as well, such as agro-industry, petrochemicals, etc.;
- joint technology enterprises that may provide technological know-how services and "packages" to the participating countries in areas such as iron and steel, electric energy production, non-ferrous metals, plastics, etc. This type of mechanism may complement technical co-operation networks in a certain branch;

- "clubs for industrial co-operation" such as found in ASEAN (Association of South East Asean Nations) would be a useful mechanism for promoting co-operation between private and public sector organizations in specific industrial branches;
- tax credit agreements may serve as a basis for the promotion of multi-national enterprises within the framework of broad interregional economic co-operation;
- the exchange of experiences among economic groupings in different regions should be promoted; an important point is that of legal arrangements for the establishment of mechanisms and instruments for ICDC, such as multi-national enterprises.

(c) Global level

47. Instruments at the global level would aim at supporting ICDC and facilitating the negotiating position of developing countries. The following may be mentioned:

- a Project Development Facility to assist in preparing industrial projects, including feasibility studies and bankable project proposals, such as was suggested at the Third General Conference of UNIDO in its New Delhi Declaration and Plan of Action;
- an Industrial Project Information System to collect and disseminate information about industrial projects, so that ICDC possibilities may be identified at an early stage;
- arrangements for providing adequate financial resources for ICDC activities and programmes, such as the proposal made under the Caracas Programme of Action adopted by the Group of 77 High-Level Conference on Economic Co-operation among Developing Countries to set up an international bank for development in the South, and UNIDO's proposal for an International Bank for Industrial Development;
- mechanisms for advising developing countries in their negotiations with each other and with the industrialized countries (e.g. the Third World Secretariat).



C. Role of UNIDO and other International Bodies

48. In view of the potential benefits to developing countries, explicit support and collaboration should be forthcoming from international organizations in regard to ICDC activities and programmes. Those in the United Nations system, including the regional commissions, and in particular the United Nations Development Programme, should devote an important share of their technical assistance resources to such programmes. International and regional financial institutions should adjust their operational and financial policies so as to support ICDC projects.

49. UNIDO should play an active and leading role in the promotion and implementation of ICDC activities, and to this end it should adopt the following measures:

- (a) Organizations support. UNIDO should strengthen and expand its section concerned with promoting industrial co-operation among developing countries.
- (b) Assistance. The developing countries should be assisted in identifying possibilities in different industrial branches. Industrial investment promotion activities by UNIDO should be strengthened and should include ICDC joint venture arrangements. There should also be support for the drawing up of model agreements and standard contracts which are formulated under UNIDO System of Consultations. UNIDO should strengthen and expand the Technological Information Exchange System (TIES) so as to increase the capabilities of developing country enterprises for negotiating the acquisition of technology and its adaptation. Another important task for UNIDO would be to identify institutions that may become "Centres of Excellence" for training industrial personnel, and later to support such activity. A study should be conducted on the experience of ASEAN industrial clubs, within the framework of ASEAN industrial co-operation, with a view to wider application of this mechanism.

- (c) Meetings and Studies. Expert meetings should be organized by UNIDO to explore ICDC in various industrial branches. UNIDO should promote or carry out studies that may help to foster and orient ICDC, such as a review of existing industrial co-operation agreements; the drafting of a handbook on this subject; action-oriented studies that will lead to concrete ICDC proposals; an analysis of the impact on ICDC activities by transnational corporations. There should be a further expansion of the UNIDO solidarity meetings for the least developed countries, as well as a support to the round-table conferences organized within the framework of the Substantial New Programme of Action for the 1980s for the Least Developed Countries.
- (d) Information. UNIDO should assist the establishment of information channels between developing countries, include a special chapter on ICDC activities and programmes in each issue of its Industrial Development Survey, and publish a periodical bulletin offering relevant information about new industrial capacity and the type of assistance and co-operation required, and other useful details related to the modernization and strengthening of existing industrial units.

CHAPTER IV. AREAS FOR EFFECTIVE INDUSTRIAL CO-OPERATION  
AMONG DEVELOPING COUNTRIES

50. The terms of reference and composition of Working Group No. 2 are contained in Annex 4. Pursuant to its terms of reference and on the basis of documentation submitted, the Working Group held three sessions, as a result of which the following conclusions and recommendations emerged.

51. It was stressed that to give concrete shape and form to ICDC, specific functional and sectoral areas and projects needed to be identified which hold promise and potential for ICDC endeavours. The Meeting only reviewed the critical requisites for the industrial production units, namely, human resources, technology, energy, finance, marketing and industrial consultancy. The Meeting also noted the importance of service sectors such as insurance, communication, transport and shipping, but did not go into details, as these were specifically dealt with elsewhere in the United Nations system.

A. Human Resource Development

52. The Meeting recognized the crucial importance of human resource development for industry and stressed the need for co-operation among institutions of developing countries in this area including scientific institutions. Such co-operation was considered not only desirable but necessary to shorten the training time and minimize costs through sharing of training facilities already available and exchange of training experience. Apart from the main sectors of production in industry, special attention was drawn to the training needs of, and extension services for, agro-based industries. It was pointed out that vocational training courses in these areas, which have large employment potential, could assist the industrial development process.

53. Attention was drawn to the desirability of matching the education and training programmes to the needs. It was noted that while the sectoral needs would vary from country to country according to their

industrial sector priorities, there were functional areas which were common and which needed attention. Such functional areas included scientific and technological capabilities, decision-making abilities, consulting and design engineering services, plant operation and management, project management, etc., for industrial development.

54. It was stressed that it was essential to develop indigenous technological capabilities which are necessary to choose, adapt and assimilate technology; otherwise, the transfer of technology would have little meaning.

55. The role of manpower planning in industrial development received considerable attention and the Meeting felt that human resource development policy and planning were essential for a dynamic industrial development strategy. An important issue concerned the special needs of the least developed countries for extension services, techniques and institutions and the manner in which such needs could be fulfilled through ICDC.

56. Reference was also made to development-oriented education and training which meet the specific requirements of a country and the manner in which this objective would be achieved through co-operative networks.

57. The Meeting made the following recommendations:

- (a) Developing countries should, with the help of UNIDO and other international agencies, identify the sectoral and functional needs in terms of training for human resource development. In this connection, areas of importance and urgency should be identified;
- (b) Regional networks of training institutions and centres of excellence in developing countries should be considered with a view to providing a wide range of appropriate training and development programmes to suit the profiles of industrial, technological, and decision-making needs in these countries;

- (c) UNIDO was urged to continue its work in identifying existing centres of excellence for training, assess their capabilities and potential and develop technical co-operation projects to strengthen these centres to serve the national needs as well as those of other developing countries;
- (d) Environmental, cultural and operating factors being different in developing countries from those in the developed countries, it is necessary for developing countries, with the assistance of UNIDO, to develop case studies for management and entrepreneurial development which are appropriate to their situation, and exchange such information to evolve "appropriate training material" and "training systems";
- (e) Guidelines should be developed for assisting least developed countries in regard to extension services, techniques, information dissemination, and industrial manpower training including for rural industries. Such guidelines should be based on sharing of experience and pooling of ideas of developing countries in this field.

#### B. Technology

58. The Meeting considered the importance of new emerging technologies and the impact they may have on developing countries. In this connection, the Group noted the report of the International Forum on Technological Advances and Development (ID/WG.389/6) as well as the document "World Industrial Development: Dynamics of Growth through Co-operation"(ID/WG.391/9).

59. It was mentioned that the new emerging technologies were rapidly affecting the course of industrialization and the mode of transfer of technology and that the impact would soon be felt on the quality of life in developing countries. The Group felt that developing countries should give close and urgent attention to the co-operative aspects implicit in building levels of competence to meet the challenges emanating from new technological advances.

60. The emergence of such new technologies would provide yet another dimension leading to a new form of co-operation among developing countries.

The problems of information gathering, forecasting, awareness and appreciation, selection, acquisition, adaptation and absorption of new technologies would call for close co-operation and exchange of information on policies and experiences in this field. Developing countries might indeed have to consider a collective strategy for their response to the technological changes.

61. It was noted that the new technological break-through in certain areas had opened up fresh opportunities for South-South co-operation and the example of "biomass" and its utilization was cited.

62. The UNIDO Technological Information Exchange System (TIES) was recognized as an important and useful area of co-operation for increasing the technological capabilities of domestic industrial enterprises in negotiating for the acquisition of technology and strengthening the collective bargaining position of the developing countries in the technology market. Noting the recommendations of the High Level Conference on Economic Co-operation among Developing Countries held at Caracas and the Meeting of the Heads of Science and Technology Agencies of Developing Countries (CRP.2), the Meeting urged the strengthening and enlargement of the TIES system to include other developing countries. The Meeting also discussed the aspects of technology generation and utilization and noted that co-operation among R&D institutions in the developing countries should be accelerated.

63. The Meeting recommended that:

- (a) The impact of new technologies on developing countries should be assessed in depth and areas of co-operation be identified. In view of UNIDO's pioneering work in this area, which was noted with satisfaction, the Meeting urged that this work should be continued and accelerated. ICDC programmes for policy harmonization as well as development of projects should be evolved among developing countries in these areas;

- (b) The UNIDO Technological Information Exchange System (TIES) should be expanded with focus on the sectoral needs. The manner in which TIES could help the least developed countries should be developed and improved mechanisms evolved based on the past experiences of the TIES system;
- (c) Networks of R+D institutions on a regional and inter-regional basis should be formed and specific R+D programmes and activities should be evolved for undertaking joint R+D projects for which specific needs exist in one or more developing countries. Emphasis should be on development of relevant technologies.

C. Energy

64. The Meeting considered paragraphs 67 to 71 of document ID/WG.399/1, the recommendations contained in Conference Room Paper No. 3 and the information given in Conference Room Paper No. 9. The importance of energy for industrialization was recognized. The need was stressed for developing co-operative programmes in energy conservation and energy saving, particularly in the small and medium scale industries. In this connection the Meeting noted with satisfaction the work initiated by UNIDO in some sectors of industry and suggested that this programme be continued.

65. Desirability of ICDC for equipment, engineering consultancy, design and project management for total energy systems for industry was identified as a key area for industrial co-operation.

66. The Meeting recognized the emerging opportunities for ICDC in mini-hydro plants, in equipment manufacture, design and consultancy services, operational management and training programmes.

67. The Meeting felt that co-operative programmes needed to be developed in the area of new and renewable sources of energy to supplement the traditional sources of energy.

D. Finance

68. The Meeting recognized the importance of finance for industrial development and the opportunities for co-operation which exist in this field. Reference was made to the Regional Development Financial Institutions which serve to attract and mobilize funds from the international finance market and channel them into the regional priorities of respective programmes. Co-operative interaction between such industrial finance institutions was considered desirable. It was also felt that, should the South-South Bank come into existence, it could provide help to the regional networks of development banks to enhance ICDC activities. Mention was also made of the importance of twinning arrangements between development financing institutions and co-operative arrangements for training of development finance managers.

E. Marketing

69. It was considered that important factors tending to inhibit an increase in trade in manufactures between developing countries were uneven and biased information, inadequate communication and lack of marketing networks available to the industrial enterprises in developing countries. General trading organizations for developing countries, which have succeeded in linking domestic industrial firms to overseas buyers and sellers, would go a long way to overcoming such inhibiting factors. This would require a system involving the establishment of general trading organizations (private or state-owned) in each developing country and a regional and inter-regional network with a collective system of information gathering.

70. Developing countries should give priority and preference to raw materials and manufactured products from other developing countries, consistent with provisions of the General Agreement on Tariffs and Trade.



CHAPTER V. CLOSURE OF THE MEETING

71. The draft report of the Meeting was presented by the Rapporteur, Mr. A.S. Ojerinola, to the last plenary session on 22 July. After introduction of a few amendments, the report as a whole was formally adopted by the Meeting with the understanding that the Rapporteur would be entrusted with the task of finalizing the report.

72. The Executive Director of UNIDO, Dr. Abdel-Rahman Khane, expressed his gratitude to the Government and people of Thailand for their co-operation and hospitality, and to the Economic and Social Commission for Asia and the Pacific for their assistance in organizing the Meeting. The support and interest shown by the Government of Thailand, which already had extensive experience in co-operating with other developing countries, he stated, were indicative of the importance of the subject in the field of industrialization. He expressed the conviction that the conclusions and recommendations reached would give further guidance and stimulation to the developing countries in building up their collective self-reliance.

73. Mr. G.S. Gouri, Chairman of the Task Force for UNIDO IV, thanked the Government of Thailand, the members of the Bureau and all participants for their contribution to the Meeting which, he said, would provide an important input to the Fourth General Conference of UNIDO.

74. In his closing statement, the Chairman, Mr. Djakkrit Puranasamriddi, expressed the gratitude of the Government of Thailand for having had the privilege of hosting such an important event. The deliberations at the Meeting, he stated, had renewed the belief that ICDC could and should be the vehicle to bring about a new strategy of industrial development for the developing countries, based on the principles of equality, justice and a deep commitment to collective self-reliance that would contribute greatly to the fostering of a new international economic order.

75. The Meeting expressed its appreciation to the Government and people of Thailand for the warm hospitality accorded to the participants and excellent services provided to the Meeting.

Annex 1

AGENDA

1. Opening of the Meeting
2. Election of the Chairman, Vice-Chairmen and Rapporteur of the Meeting
3. Adoption of the Agenda
4. Role and Potential of Industrial Co-operation among Developing Countries within the context of Overall International Co-operation
5. Policy Options and Incentive Systems Conducive to Industrial Co-operation among Developing Countries
6. Mechanisms for Promoting Industrial Co-operation among Developing Countries
7. Areas for Effective Industrial Co-operation among Developing Countries
8. Formulation of Recommendations on a Concrete Programme of Action and the Role of UNIDO
9. Adoption of the Report of the Meeting
10. Closure of the Meeting

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Annex 3

LIST OF DOCUMENTS

Basic documentation

<u>Document No</u>	<u>Language</u>	<u>Title</u>
	E,F,S	Aide-Mémoire
ID/WG.399/1	E,F,S	Industrial Co-operation among Developing Countries: Some issues for consideration
ID/WG.399/2	E	Provisional Agenda
ID/WG.399/3	E	UNIDO's Activities for Promoting and Implementing ECDC/TCDC

Background documentation

ID/WG.389/6	E	Report of the High-level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO: International Forum on Technological Advances and Development
ID/WG.391/12	E	Report of the High-level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO: Industrial Development Strategies and Policies for Developing Countries
ID/WG.394/8	E	Report of the High-level Expert Group Meeting Preparatory to the Fourth General Conference of UNIDO: Accelerated Development of Human Resources for Industrial Development
ID/WG.391/9	E,F,S	World Industrial Development: Dynamics of Growth through Co-operation



- CRP.1 E Joint Ventures Among Developing Countries and Industrial Development, prepared by Mr. Eduardo White
- CRP.2 E Group of 77: Report of the Meeting of Heads of Science and Technology Agencies of Developing Countries
- CRP.3 E Group of 77: Report of the Expert Group Meeting on Technical Co-operation in Energy
- CRP.4 E Group of 77: Report of the High-Level Meeting of Officials Responsible for Industrial Manpower Training in Developing Countries
- CRP.5 E Group of 77: Report of the Meeting of Experts on ECDC in Industrialization
- CRP.6 E The Financial Context of Development, prepared by Mr. David Ibarra
- CRP.7 E Technological Information Exchange System (TIES), prepared by the UNIDO Secretariat
- CRP.8 E Some Experience relevant to South-South Industrial Co-operation, prepared by Mr. R. Pradhan
- CRP.9 E Technical Co-operation in Energy, prepared by the UNIDO Secretariat
- CRP.10 E Group of 77: Report of the Meeting on Capital Goods Among Developing Countries
- CRP.11 E Industrial Co-operation in Latin America: Experiences and Possibilities, prepared by Mr. Alberto Araoz, consultant to UNIDO
- CRP.12 E Thailand's Experience in ICDC, prepared by the Office of the National Committee for UNIDO.
- CRP.13 E Industrial Co-operation among Developing Countries, prepared by Mr. Rawle Lucas
- CRP.14 E Turkey's Industrialization and Industrial Relations, prepared by Mrs. Fezal Akin
- CRP.15 E Industrial Co-operation among Developing Countries - An Alternative View Point, prepared by Mr. S.C. Manicavasagar
- CRP.16 E Industrial Co-operation among Developing Countries, prepared by Mr. V.K. Chanana
- CRP.17 E Recent Portuguese Experience, prepared by Mrs. M. L. Lameira and Mr. A.R. Sousa

- CRP.18            E            Some Remarks on Industrial Co-operation among Developing Countries, prepared by Mr. Kong Xiangyi
- CRP.19            E            Some Issues Related to Industrial Co-operation among Developing Countries, prepared by Mr. B. Scepanovic
- CRP.20            E            Role and Potential of Industrial Co-operation among Developing Countries - Pakistan's Experience in Development of International Co-operation, prepared by Mr. Zainul Abedeen
- CRP.21            E            Some Proposals for a Programme of Action on Industrial Co-operation among Developing Countries, prepared by Mr. Ion Barac
- CRP.22            E            Latin American Economic Co-operation: Description, Results and Options; a Preliminary View, prepared by Mr. Ivan Rivera
- CRP.23            E            Industrial Co-operation Agreements - Present and Future Role, prepared by Mr. Peter Moore
- CRP.24            E            Industrial Co-operation among Developing Countries: the Nigerian Experience, prepared Mr. A.S. Ojerinola
- CRP.25            F            Coopération Industrielle entre Pays en Développement, prepared by Mr. Cyprien Lokossou
- CRP.26            E            Industrial Co-operation among Developing Countries: Further Progress, Finance and Contribution of Czechoslovakia, prepared by Prof. V. Balhar

TERMS OF REFERENCE  
AND COMPOSITION OF WORKING GROUPS

WORKING GROUP NO. 1 - MECHANISMS FOR PROMOTING ICDC

1. Terms of Reference.

Working Group No. 1 will, taking into account the discussions in the Plenary Sessions, cover the main issues under agenda items 6 and 8. The Working Group will, in particular, be required to put forward practical recommendations on a concrete programme of action and the role of UNIDO within each of the following subject areas:

- (a) Measures to strengthen existing mechanisms at national, regional and global level to render them more effective and adequate for the scope and magnitude envisaged for ICDC. (ID/WG.399/1, ID/WG.391/12, ID/WG.389/6, CRP.2, CRP.4, CRP.5, ID/WG.394/8).
- (b) Measures and mechanisms required to promote and implement industrial joint ventures and multi-national production enterprises. (ID/WG.399/1, CRP.1).
- (c) Potential of public enterprises as effective instruments of ICDC. (ID/WG.399/1).
- (d) Creation of a project development facility to help developing countries in accelerating the pace of ICDC. (ID/WG.399/1).
- (e) Mechanisms to accelerate financial flows of industrialization to the developing countries. (ID/WG.399/1, ID/WG.391/2).
- (f) Possibility to establish mechanisms at global level to foster economic co-operation among developing countries in general and ICDC in particular. (ID/WG.399/1).
- (g) Other mechanisms.

The background documentation for Working Group No. 1 will consist of: ID/WG.399/1, ID/WG.399/3, ID/WG.391/9, ID/WG.391/12, ID/WG.389/6, ID/WG.394/8, CRP.2, CRP.4, CRP.5, CRP.11, CRP.13.

2. Composition

Chairman: Mr. Ion Barac

Rapporteur: Mr. Alberto Araoz

Mr. Zainal Abedeer

Mr. Charles Robert Augustin

Mr. Hossein Bozorgkhan

Mr. Elefterios Danellis

Mr. Pairote Gesmankit

Ms. Pataravadee Komalarachun

Mr. Kong Xiangyi

Ms. Maria Lourdes Lameira

Mr. Manu Leopairote

Mr. Cyprien Lokossou

Mr. Salvator Matata

Mr. Peter Francis Moore

Mr. Muchaneta N. Nyambuya

Mr. Brissi Lambert One

Ms. Cholchineepan Padumanonda

Mr. Soodsakorn Putho

Dr. Ivan Rivera Flores

Mr. Bogic Scepanovic

Mr. Achmad Slamet

Ms. Orapin Werawut

WORKING GROUP NO. 2 - AREAS FOR EFFECTIVE ICDC

1. Terms of Reference

Working Group No. 2 will, taking into account the discussions in the Plenary Sessions, cover the main issues under agenda items 7 and 8.

The Working Group will, in particular, be required to put forward practical recommendations on a concrete programme of action and on the role of UNIDO within each of the following subject areas:

(a) Human Resources

- (i) Pooling of resources and interlinkages of facilities in developing countries for training and human resources development.
- (ii) Identification and strengthening of centres of excellence in R+D technology, training, etc. in developing countries, for utilization in the context of ICDC.
- (iii) Exchange of information between developing countries on experiences acquired in management and entrepreneurial development. (ID/WG.399/1, ID/WG.391/12, ID/WG.394/8, CRP.4).

(b) Development of Technological Capacities

- (i) Programmes to deal with the problems and challenges of technological advances.
- (ii) Technological information exchange services
- (iii) Technology generation and utilization. (ID/WG.399/1, ID/WG.391/9, ID/WG.389/6, ID/WG.391/12, CRP.2, CRP.7).

(c) Energy

Industry-related energy co-operative programmes (ID/WG.399/1, CRP.3, CRP.9).

(d) Finance

Linkages and network programmes to increase the South-South flow of finance for industrial development. (ID/WG.399/1, CRP.6).

(e) Marketing

Networks of marketing enterprises for industrial products in the developing countries. (ID/WG.399/1, ID/WG.391/12).

(f) Industrial Consultancy

Regional networks. (ID/WG.399/1).

(g) Other Areas

The background documentation for Working Group No. 2 will consist of: ID/WG.399/1, ID/WG.394/1, ID/WG.389/6, ID/WG.382/7, ID/WG.391/12, CRP.2, CRP.3, CRP.4, CRP.6, CRP.7, CRP.9, CRP.13.

2. Composition

Chairman: Mr. Rawle Lucas

Rapporteur: Mr. Kan D. Mariwalla

Mr. Shazali M. Abdel Magied

Dr. Behzad Ahmadi

Ms. Fezal Akin

Prof. Vitazoslav Balhar

Mr. Virendra K. Chanana

Ms. Chutaporn Lambasara

Mr. Siva C. Manicavasagar

Mr. Pratheep Nakornchai

Prof. Yelavarthy Nayudamma

Ms. Ben-Jaratana Nophakoon

Mr. Wilfred L. Nyachia

Mr. Keith G. Purcell

Ms. Wilawan Ritruetchai

Assoc. Prof. Dr. Santhad Rojanasoonthon

Mr. Antonio Sousa

Mr. Dhawatchai Tangsanga

Mr. Abelardo M. Tolentino Jr.

Mr. Thamnu Vasinonta

