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Expert Group Meeting on Exchange of Information among Developing Countries on Available Technologies in the Field of Small and Medium Industries

Ljubljana, Yugoslavia, 12-14 April 1988

REPORT *

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C O N T E N T S

Annexes

I. Introduction

1. The Expert Group Meeting on Exchange of Information among Developing Countries on Available Technologies in the Field of Small and Medium Industries was held in Ljubljana, Yugoslavia, from 12-14 April 1988. The Meeting was organized by the Research Centre for Cooperation with Developing Countries (RCCDC) and UNIDO. It was attended by sixteen participants from nine countries (Annex I).

2. The purpose of the Meeting was:

- to identify and agree on an appropriate national system in the developing countries which may serve for the exchange of information and to elaborate ways and means to ensure a permanent flow of information among developing countries in the field of technology in small and medium industries;
- to promote and facilitate international exchange of commercially available technologies originating from developing countries and thus to strengthen their collective self-reliance.

II. Background

3. The problems encountered by the developing countries striving for industrialization are numerous and complex. One of them relates to the inadequate technological capabilities and to the fact that most developing countries are still heavily dependent on imported technologies from the highly industrialized countries.

4. Apart from the heavy expenditure for imported technology and know-how from the industrialized countries, there is another problem which makes it necessary to pay more attention to technological co-operation among developing countries and in particular to the promotion of technology exports from the developing countries. The problem relates to the fact that, in various fields, the technology available in the developed countries is not suitable for adoption in the developing countries. On the other hand, many developing countries have developed what is called appropriate technology which can be readily transferred and absorbed in the local context of developing countries, especially in the small and medium scale industry sector.

5. Many international conferences have stressed the necessity for the developing countries to establish and foster national capabilities for identification and encouragement of endogenous industrial technologies and to give high priority to programmes of co-operation among themselves. The General Conference of UNIDO have specifically requested UNIDO to identify and make greater use of the technological expertise and capabilities of developing countries and to identify and assist the diffusion of technologies originating from developing countries through action-oriented consultation, studies and the like. Through its action-oriented programmes, UNIDO has been assisting developing countries in identifying and making greater use of the technologies, capabilities and know-how originated from them.

6. Lack of information is one of the most serious obstacles to selection, acquisition and use of appropriate technology options. Understanding the local environment, character and orientation of the transferees is as important as information on the technology to be supplied. Being aware of this and possessing an increasing number of technologies to be transferred, the more advanced developing countries have by now succeeded in creating national inventories of available technologies. Although these inventories are based on various methodologies, they are intended to serve the same purpose: to inform potential partners on the specific possibilities of technological co-operation.

III. Opening of the Meeting

7. The Meeting was opened by Dr. Marjan Svetlicic, RCCDC Director, who welcomed the participating experts on behalf of RCCDC. The representative of the Chamber of Economy of Socialist Republic of Slovenia greeted the participants and stressed the importance of such meetings for the promotion of South-South co-operation and thus also for the national development. He wished the participants successful and constructive work.

8. The representative of UNIDO referred in his opening remarks to UNIDO's activities related to the promotion of economic and technical co-operation among developing countries which is a high priority in UNIDO's programme. Through its action-oriented programmes, UNIDO has been assisting developing countries in identifying and making greater use of the technologies, capabilities and know-how originated from them. He expressed the confidence that the conclusions and recommendations to be reached during the Meeting will be pursued with vigour and implemented in the spirit of overall economic and technical co-operation among developing countries.

9. RCCDC's Director underlined the importance of overcoming the information gap on technologies available in developing countries which is one if not the major barrier to South-South co-operation. The time is ripe to narrow the gap between declarations and their implementation and begin truly to promote ECDC/TCDC. South-South co-operation should be based in the future on the interest of direct actors, i.e. firms themselves.

10. Upon the proposal of the Indian participant, seconded by the Romanian participant, Dr. Mojmir Mrak of RCCDC was elected Chairman of the Meeting. The Meeting adopted the agenda (Annex II).

IV. Presentation of papers

11. During the Meeting eleven papers were presented by participating experts and UNIDO representatives and subsequently discussed by the Expert Group Meeting (Annex III). As a part of the programme, participants visited ISKRA Automatica. Also, experiences of ENERGOINVEST in the establishment of information systems on export markets were presented.

12. The RCCDC proposal on the establishment of an Information System on Technologies and Projects (ISTP) was extensively discussed. The participants felt that this proposal represented suitable means to further and enhance exchange of information among developing countries.

The basic principle of ISTP: i.e. its orientation towards identification, selection and processing of information suitable to the environment found in developing countries, in particular for small and medium-sized enterprises, was supported by the experts.

V. Conclusions and Recommendations

13. As a result of thorough discussion of all contributions, the following Conclusions and Recommendations were agreed upon.

A. Conclusions

14. Successful socio-economic development of developing countries considerably depends on reaching a sufficient degree of national technological capability. The participants of the Expert Group Meeting recognized that in many developing countries the range of endogenously developed or adjusted imported technologies is quite impressive, regardless of different levels of technical and technological development at the country level and even within a country, at the sectoral and regional levels. Potential for exchange of information on available technologies for transfer among developing countries is therefore recognized as substantial.

15. The participants felt that in view of the above there is a need to further strengthen, develop and diversify the co-operation among developing countries in the field of exchange of information on technologies and projects available for transfer. Such activity could contribute substantially to South-South co-operation as well as provide means for narrowing the gap in technological development between North and South. This is more important in view of the rapid advancements in the field of technology.

16. The existing gap between the developing and developed countries could be also decreased by a systematic creation and application of new knowledge through innovation processes and technological progress whereby the developing countries will be able to make better use of their own raw materials, energy resources and human potential.

17. The Meeting pointed out a number of difficulties encountered in collecting and processing of information at the national level and/or in dissemination of collected information both nationally and internationally. The need for a permanent flow of information, based on systematic standardized collection, processing and dissemination of information on technologies and projects was thus stressed.

18. The Meeting concluded that the small and medium scale enterprises played an important role in increasing the level of technological capability of a country due to their innovative capacities and flexible structures. Transfer of technology to small and medium enterprises has often been carried out with more success, initiated application oriented research, provided opportunities for technical training and in the long run laid the foundation for the creation of suitable new technologies which could in turn be transferred to other developing countries.

19. The Meeting recognized the important role played by UNIDO in promoting economic and technological co-operation among developing countries, in particular through its Industrial and Technological Information Bank (INTIB), in supplying the developing countries with required technological information. The Meeting also noted the existence of other information systems and networks, both within and outside of the UN System engaged in supplying the developing countries with technological and industry-related information.

20. However, it was felt strongly that there is a need for a more business-oriented, user-friendly international information system on suitable technologies/projects, available for transfer among developing countries. Particular attention should be given to such information appropriate for small-and medium-sized enterprises in developing countries.

B. Recommendations

21. A considerable amount of basic work has been done in collecting information, either at sectoral or at the level of different institutions. However, it was felt that a unified national system for collecting, processing and disseminating of information on technologies/projects should be established or strengthened.

22. National centres, engaged in this work, should be primarily institutions with close links with business enterprises and should have strong commercial interest in participating in the system.

23. The participants felt that the organization and financing of identification, assessment and processing of information on available technologies/projects at the national level should be organized by the national centres independently, in recognition of different institutional infrastructures in each country.

24. Also, arrangements between the supplier/buyer of technology/project and the national centre should be left to the national centre and organized according to the national institutional infrastructure. These arrangements are to be co-ordinated at the national level.

25. The participating experts emphasized the need of strong government support for the establishment or strengthening of national centres as well as for their participation in the international network.

26. For the full integration of the transferred technology into the industrial and economic structure of the country, technology has to be evaluated, selected and acquired according to the needs and adapted to the existing human and material resources so that eventually this technology can lead to the creation of new technologies.

27. The international ISTP should be a network of national centres. National centres act as coordinators of the system within a given country and are responsible for a smooth flow of information from/to enterprises and particularly to small and medium-sized industry.

28. It was agreed by the experts that in the initial stage, RCCDC could act as a coordinating centre of ISTP, as assisting national centres in training of personnel, in advising the national centres in implementing the methodology of gathering, assessing and processing data and information on available technologies and projects and holding seminars for users of ISTP. It would also assist national centres in information services development as well as in establishing other relevant data bases on economic, legal and other relevant business aspects under which a transfer of technology or joint investment can be undertaken in respective countries. RCCDC should be responsible for the continuous upgrading of the system. Suggestions for its further development are expected from participating national centres.

29. The participants strongly recommended a common format to be used for preparation of information on a technology/project. In designing a common format computer application should be foreseen as well as the use of a unified international product code. An existing RCCDC format (Annex IV) should serve as a model.

30. The experts recognized the important catalytical role UNIDO has played so far and have requested further support in the establishment of the ISTP. Aware of UNIDO's activities aimed at the promotion of the exchange of information on technologies available for transfer from developing countries, the Meeting recommended that:

- the network to be established, as recommended by the Meeting, should draw on the experience gained by UNIDO, in particular in the field of processing of technological information in accordance with the designed standard format;
- RCCDC in its capacity of co-ordinator of the network's activities should join UNIDO's Technology Supply Database Club;
- RCCDC periodically should inform INTIB of UNIDO, about the results of the network's activities.

31. The financial resources required to cover RCCDC's expenses for the coordinating activity, including the monitoring of ISTP performance should be provided from various multilateral agencies, particularly the UN system. The participants were of the opinion that RCCDC should, with the support of other developing countries, submit a proposal to the G-77 Perez Guerrero Fund for assisting in financing the implementation of ISTP. At a later stage it is expected that ISTP should be self-financed on the basis of a specific proposal to be elaborated and agreed upon.

32. The participants expressed the need to review the implementation of the above recommendations and to discuss further operational aspects of establishment of ISTP. Convening of a Meeting at an appropriate time was consequently recommended.

Annex I

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Annex II

Agenda

- Official opening of the Expert Group Meeting
- Welcome address
- Introductory remarks
- Adoption of agenda and organization of work
- Presentation of UNIDO's papers
- Presentation of RCCDC's paper on ICTP
- Presentation of Yugoslav case study (RCCDC, Iskra, Smelt)
- Presentation of country papers:

  India, China, Egypt, Algeria, Argentina, Pakistan, Romania, Turkey.

- Discussion on modalities to further promote co-operation among developing countries in the field of available technologies
- Adoption of the Report
- Closure of the Meeting

Annex III

List of documents

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- EGYPTIAN NATIONAL SYSTEM OF TECHNOLOGICAL INFORMATION, Mohamed M. Kamal E. Tawfik, April 12-14, 1988, Ljubljana, p. 4
- TECHNOLOGY TRANSFER - ITS LIMITATIONS & PROSPECTS, Dr. Asaf Ali Qureshi, April 12-14, 1988, Ljubljana, p. 10
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- INTERNATIONAL TRANSFER AND TECHNOLOGY TRANSFER FROM ABROAD: JAPANESE EXPERIENCE, Masaru Saito, Distr. LIMITED, ID/WG.410/3, 4 January 1984, p. 31
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- NATIONAL APPROACHES TO THE ACQUISITION OF TECHNOLOGY, Development and Transfer of Technology Series, No. 1, UNITED NATIONS, New York, 1987, p. 111

- TECHNOLOGIES FROM DEVELOPING COUNTRIES (II), Development and Transfer of Technology Series, No. 7. UNITED NATIONS, New York, 1980, p 65

- GUIDELINES FOR EVALUATION OF TRANSFER OF TECHNOLOGY AGREEMENTS, Development and Transfer of Technology Series, No. 12, UNITED NATIONS, New York, 1979, p. 71

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Annex IV

Year	Edition	Origin	Contractor	Code

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Project

Description

Project Cost Estimate	**US $**				
Technology & Production Equipment Cost Estimate	**US $**				
Capacity in (m, m², m³, t, pcs) per Year at ..... Shifts					
Floor Space (m²)	**Production**				
	Storage				
	Other				
N° of Employees		**Unskilled**	**Skilled**	**Tech. Staff**	**Other**
Contracting Mode	**Engineering** ☐	**Turn-key** ☐	**Others** ☐		

Financial Aspects

Ecological Aspects

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