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Expert Group Meeting on the Analysis of the
Experience Gained from the Pilot Activities
of the Industrial and Technological
Information Bank (INTIB)

Vienna, Austria, 5-9 February 1979

REPORT

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CONTENTS

<u>Chapter</u>	<u>Page</u>
INTRODUCTION	3
I. ORGANIZATION OF THE MEETING	4
II. ASSESSMENT OF THE PILOT OPERATION OF INTIB	4
III. THE SCOPE OF WORK OF INTIB	6
IV. THE CONTINUING OPERATION OF INTIB	8
V. OBSERVATION	10

Annexes

I. ATTENDANCE LIST	11
II. LIST OF DOCUMENTS	15
III. LIST OF SECTORS SELECTED FOR INTIB ACTIVITY	17

INTRODUCTION

1. The Expert Group Meeting on the Analysis of the Experience Gained from the Pilot Activities of the Industrial and Technological Information Bank (INTIB), convened by the United Nations Industrial Development Organization (UNIDO), took place at Vienna from 5 to 9 February 1979. Its main purpose was to review the experience gained from the pilot operation of INTIB and to advise on its further development. The experts who attended the meeting are listed in annex I.

I. ORGANIZATION OF THE MEETING

2. The Meeting was opened by the Acting Deputy Executive Director of UNIDO. He described the task of the Expert Group as being first, to assess the experience of INTIB during the pilot phase of its operation; secondly, to suggest ways and means of making INTIB provide effective information services to assist decision making and contribute to achieving technological self-reliance; thirdly, to indicate the order of magnitude of resources required; and lastly, to make recommendations that would enable the Industrial Development Board to take further action in this field. He pointed out that INTIB was a unique experiment in the history of the United Nations activities and represented the desire on the part of the developing countries to receive selective and perhaps partly assessed information permitting access to technologies.

3. He noted that one of the objectives during the pilot phase had been to identify areas in which developing countries urgently needed information and associated extension services; the secretariat document offered for consideration by the experts suggested that these areas concerned choice of technologies, equipment procurement and prices, design and drawings and negotiation for acquiring technology.

4. The Expert Group elected U.A. El-Kholy, D.E. Osifo and P. Castro as Chairman, Vice-Chairman and Rapporteur, respectively.

II. ASSESSMENT OF THE PILOT OPERATION OF INTIB

5. The Meeting had before it copies of the documents and publications issued in connection with the pilot operation of INTIB and of those undertaken on a continuous basis under the Industrial Information Service programme of UNIDO. It also had a working document prepared by the secretariat describing the progress made during the pilot phase of INTIB and identification of information requirements as emanating from not only the experience gained by INTIB but from other activities of UNIDO. The documentation is listed in annex II.

6. A UNIDO staff member described the development of the industrial information services of UNIDO, which the Meeting then reviewed. The participants noted with satisfaction the growing demand for these services and were particularly impressed by the fact that these services were offered by a small number of staff in the UNIDO secretariat. The Group expressed the view that UNIDO industrial information services

and activities should be effectively integrated in the industrial information system and that member States should support UNIDO in this effort, both within the secretariat and at the national and regional levels.

7. The Meeting was next briefed on the genesis of INTIB and on the relevant paragraphs in the Lima Declaration and Plan of Action for Industrial Development and Co-operation (PI/38), resolutions of the General Assembly, and decisions of the Industrial Development Board, particularly decision V(XI), which authorized the implementation of a pilot project of INTIB in four industrial sectors and specified certain actions for this phase, as detailed in paragraph 34 of the Report of the Executive Director on the Establishment of an Industrial and Technological Information Bank (ID/B/183). The pilot project operation was reviewed and discussed in detail. UNIDO staff provided the information and clarifications called for by the participants.

8. The technological profiles published during this period were examined as well as the studies carried out - through questionnaires, expert group meetings, consultations and the International Forum on Appropriate Industrial Technology (held in India in November 1978) - to ascertain the particular needs in each of the four industrial sectors selected for the pilot phase of the operation.

9. After reviewing the work done in each sector, the Group expressed its satisfaction with the volume and quality of the work completed during the pilot phase of INTIB. The Group felt that the technological profiles, some of which were singled out for special praise, were relevant to the purpose of INTIB and effectively filled certain gaps. The Group expressed the hope, now that INTIB was an ongoing activity, that the profiles would provide more information on such specific issues as ownership, the flow of technology, the degree of technology absorption, successes in adaptation in particular cases, and other information that would be of help in assessing and choosing technologies. It was felt that the technological profiles should be translated into other languages.

10. The Group was impressed by the speed with which the Technological Information Exchange System (TIES) had been launched, the extent of participation of States, and the amount of information received and processed. It realized, however, that further extension of this valuable service would depend on the establishment of technology registries and regulating bodies in other developing countries and their effective participation in TIES.

11. The Group was unanimous in the view that the duration of the pilot project had been rather short and the resources available too small in relation to the scope of work called for by Industrial Development Board decision V(XI). It noted, with satisfaction, that action had been undertaken on each of the seven assignments specified by the Executive Director (ID/B/183, paragraph 34). The Group was of the opinion that INTIB had been launched on the right track and that two other solid results had been achieved, namely, the publication of the technological profiles and the identification of the needs in each of the four industrial sectors in which INTIB had been engaged.

12. In concluding the review of the pilot project operation, the Group emphasized the following points:

(a) Needs and priorities in each sector should be analysed continuously in a dynamic situation;

(b) Further efforts should be made to mobilize and co-ordinate the wealth of UNIDO in-house information, and joint action with other United Nations organizations was needed;

(c) Efforts to develop user linkages and networking arrangements with national technological, research and development and information centres were important;

(d) INTIB was as much concerned with successful technological developments in developing countries as in developed countries.

13. The Group concluded that the pilot project had demonstrated that INTIB not only had a value in itself but also served as an instrument of vertical integration of UNIDO activities. It then proceeded to consider action to develop it, in both the short and the long terms.

III. THE SCOPE OF WORK OF INTIB

14. The Group discussed at length the specific function of INTIB that distinguished it from other sources of data. It found that the distinguishing character of INTIB was that it addressed itself to the question of access to technologies: the technology selection process at the stage preceding its acquisition and operation. Furthermore, it was to have an information-generating function that would permit it to play the advisory and linking role expected from it. The Group thus concluded that INTIB should provide limited, analysed and annotated information on technological alternatives.

15. Having specified what the main function and particular output of INTIB were, the Group examined the manner in which INTIB could best perform its role. The situation was characterized as one in which there was continuous communication, interaction and negotiations between the owners of technology and those who intended to use it. The points at which INTIB could assist in the development of this sequence, by providing "information permitting the proper selection of technologies" (PI/38, paragraph 61 (k)), were identified as follows:

(a) Broadening the base of knowledge on available technologies and identifying alternative technologies, both quantitatively and qualitatively. This activity should provide comparative information on technologies and permit a wider choice to be made. INTIB should address itself in particular to generating and disseminating information of the type specified in the previous paragraph on technologies in the smaller industrialized countries as well as in some developing countries, bearing in mind the recommendations of the International Forum on Appropriate Industrial Technology (ID/WG.282/123 and 124);

(b) Providing the parameters of alternative technologies in the various industrial sectors and the criteria for selecting from among them, a crucial factor at the pre-feasibility study stage that would have a decisive influence in formulating, inter alia, a sound concept of the industrial project by emphasizing that technology options, should be a basic element in a feasibility study. INTIB could also provide guidelines for choosing technologies that would help developing countries in assessing the full implication of their choices;

(c) Providing information on the implications of terms of contracts that would help those negotiating the acquisition of the technology selected. This information would relate particularly to previous contracts or ongoing negotiations in other countries for the acquisition of similar technologies from the same, or other, sources;

(d) Providing information and advice on the unpackaging of technologies. The ability of developing countries to separate the cost of know-how from that of hardware, engineering and other services rests on the capability of assessing each component separately;

(e) Supplying, through feed-back based on past experience, analyses of the results of operating different technologies in a variety of economic and social environments.

16. The Group noted that the activities (a) and (b) would be an extension of the scope of the work initiated in the pilot project through the publication of technological profiles, while (c) had already been started by TIES on a commendable scale. It envisaged (e) as an extension of the scope of the exchange of technical information.

17. In specifying the modes of operation of INTIB, so that it might play effectively its role in the process of making sound technology choices, the Group delimited the boundaries within which its activities should be maintained as follows:

(a) In assisting at the stage of choosing the proper technology, INTIB should leave the final decision to the users;

(b) It should not become involved in project implementation; by virtue of its mandate, it was limited to technology selection.

18. The Group was of the opinion that INTIB should now extend its activities to other industrial sectors, taking into consideration in the choice of these sectors the current needs of the users as reflected in the UNIDO consultation meetings and meetings such as that of the Heads of the Technology Registries and the International Forum on Appropriate Industrial Technology (see annex III).

IV. THE CONTINUING OPERATION OF INTIB

19. The Group visualized INTIB as a system having a specific function in assisting developing countries to select technology and linking together:

In-house information in the UNIDO secretariat

The network of information systems in United Nations organizations

Information from a variety of external sources

The users of technology

It would generate information using data from the first three sources as inputs. The output would be carefully selected, analysed and annotated information of the type and in the areas specified above (para. 15). It would provide closed-loop feed-back circulation between INTIB and the users of technology of information on technology contracts and experience in implementing industrial projects.

20. The Group noted with satisfaction that this view of INTIB was basically that presented in the report of the Executive Director (ID/B/183) and approved by the Industrial Development Board at its eleventh session. It felt that certain points should be elaborated within the framework given above:

(a) The in-house information in UNIDO was obviously the most accessible and basic input to INTIB. Efforts to mobilize and co-ordinate this information systematically should continue;

(b) INTIB operations should be integrated in the over-all UNIDO information system. It was hoped that it would be reflected more and more in the publications and operations of other components of the system. In this way, the work outlined here in the sphere of technology selection would become part of the continuous co-operation with other United Nations agencies and the technological exchange network called for by General Assembly resolution 3507(XXX);

(c) The external sources of information were numerous and diverse. While various types of information on technologies were available from the manufacturers, INTIB should be linked with technical institutes, research and development centres, specialized national and international centres, consulting firms and individual consultants. This would be carried out through special agreements and properly designed modes of communication and clear definitions of the type of information flows. INTIB could thus ensure that all relevant data available from these sources were flowing regularly to it. This was considered by the Group the most practical method of realizing the tasks envisaged for INTIB. It was hoped that INTIB could thus have a significant impact on the development of effective national capabilities in the domain of technology selection in a reasonable period of time.

21. As regards the users, the following points were made:

(a) Effective and well-publicized means of communication between INTIB and the users should be established and maintained. The national and regional industrial information centres and networks as well as the technology registries and institutions involved in technology selection, negotiation and contracting were all potential referral points for the exchange of INTIB special information;

(b) By ensuring effective linkages with institutions such as public enterprises and development finance institutes, INTIB would achieve considerable impact with its services, since it would also reach a large section of private concerns and individuals through these organizations.

V. OBSERVATION

22. The Group stressed, in conclusion, that the achievement of the tasks and the realization of the mode of operation of INTIB called for the allocation of sizeable financial and technical resources. Such resources should be allocated for the operation of INTIB as a permanent, continuing activity within UNIDO in a crucial field in which its services were urgently required.

Annex I

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Annex II

LIST OF DOCUMENTS

Prepared for the Meeting

Secretariat papers

- ID/WG.294/1 Provisional agenda
ID/WG.294/2 Provisional list of participants
ID/WG.294/3 Draft report
- Working Paper for Expert Group Meeting
- UNIDO profiles (reprinted from UNIDO Newsletter Nr. 126, October 1978)
- Sectors to be taken up by the Consultation Meetings
- Sectors recommended by the Meeting of Senior Officials and Heads of National Technology Registries or Similar Offices in Developing Countries, Vienna, 6-10 March 1978
- Recommendations of the International Forum on Appropriate Industrial Technology on INTIB

Other papers

- Considerations on the future development of INTIB
Vilen N. Tyurnin, USSR
- Some considerations on the results of the Pilot Operation of the INTIB, including proposals for its future activities
Prof. R.B. Seiful-Mulukov, USSR
- Experts Meeting on INTIB - Some thoughts for discussion
Patricio Castro, Peru

Documents and publications issued in
connection with INTIB

UNIDO Development and Transfer of Technology Series

- ID/187 No. 1: National approaches to the acquisition of technology
ID/189 No. 2: UNIDO abstracts on technology transfer
ID/193 No. 3: Manufacture of low-cost vehicles in developing countries
ID/200 No. 4: Manual on instrumentation and quality control in the textile industry
- ID/202 No. 5: Technology for solar-energy utilization
ID/203 No. 6: Audio-visual techniques for industry
ID/208 No. 7: Technologies from developing countries
ID/209 No. 8: Process technologies for phosphate fertilizers
ID/211 No. 9: Process technologies for nitrogen fertilizers
ID/212 No. 10: Brickmaking plant: industry profile
ID/218 No. 11: Technological profiles on the iron and steel industry

UNIDO Guides to Information Sources

- ID/199 No. 29: Information sources on petrochemical industry
ID/210 No. 30: Information sources on non-conventional sources of energy
ID/214 No. 31: Information sources on woodworking machinery

Others

- Directory of United Nations informations systems and services 1978
- ID/207 UNIDO Industrial Development Abstracts 07681-07900
ID/172 UNIDO thesaurus of industrial development terms
- PI/21 Your questions answered
- UNIDO/IOD.198 Industrial processing of groundnuts
UNIDO/IOD.190 Industrial processing of cotton-seed
- UNIDO/ICIS.99 Directory of industrial information systems and services
- ID/WG.282/123 International Forum on Appropriate Industrial Technology -
Report of the Ministerial Level Meeting
- ID/WG.282/124 International Forum on Appropriate Industrial Technology -
Draft report
- ID/WG.282/65 International Forum on Appropriate Industrial Technology -
Working Groups Nos. 1-12; technologies from developing
countries (a preliminary compilation); background paper
- ID/B/183 Establishment of an industrial and technological information
bank
- UNIDO Newsletter Nr. 127, November 1978 and Nr. 128, December
1978
- ID/B/C.3/INF.6 A clearing-house for industrial information

Annex III

LIST OF SECTORS SELECTED FOR INTIB ACTIVITY

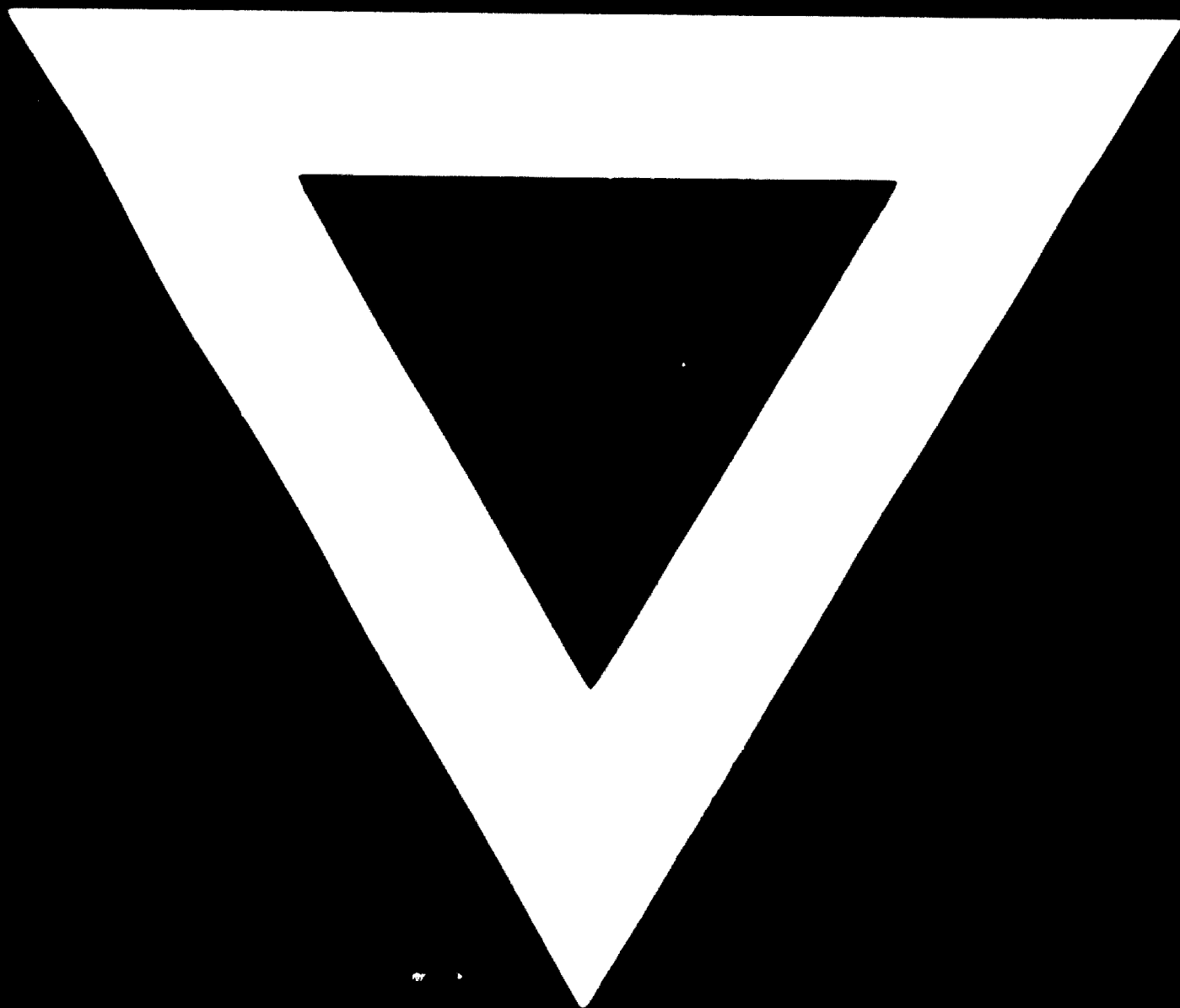
Sectors to be taken up by the consultation meetings:

Fertilizers
Petrochemicals
Pharmaceuticals
Iron and Steel
Agricultural machinery
Capital goods
Leather and leather products
Vegetable oils and fats
Food-processing industry

Sectors recommended by the Meeting of Senior Officials and Heads of National Technology Registries or Similar Offices in Selected Developing Countries, Vienna, 6-10 March 1978:

Ferrous and non-ferrous metallurgical industries
Chemicals and petrochemicals
Agro-based and resource-based industries, including mining and extractive industries
Agro- and food-processing industries, including fish processing
Engineering-goods industries, including metal-mechanic industries
Capital-goods production, including mechanical, electrical and transport equipment
Drugs and pharmaceuticals
Textiles and garments
Construction and building industries
Electronics

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