



**TOGETHER**  
*for a sustainable future*

## OCCASION

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UNIDO's Campaign in Improving Maintenance  
and Repair in Developing Countries 1/

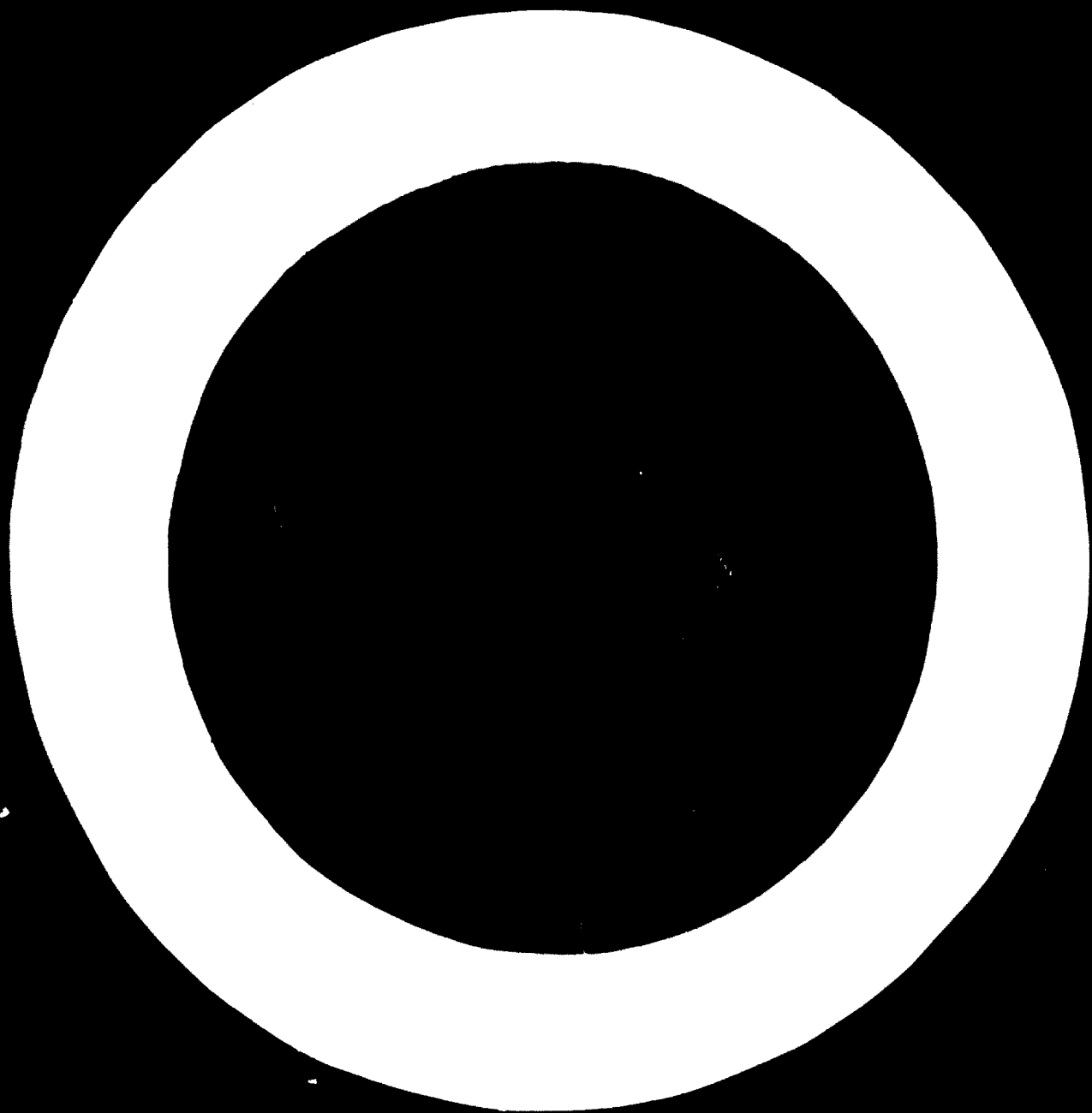
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### Introduction.

One of the main objectives of UNIDO is to assist the developing countries in achieving an efficient utilization of the existing and planned industrial capacities. UNIDO's role in attaining this objective and in promoting and accelerating industrialization in developing countries, as well as the types of technical assistance projects offered by UNIDO are fully explained in the pamphlets "Functions and Activities of UNIDO" and "Technical Assistance for Industry". These two booklets are made available to all participants. Establishment of long-term projects (Special Fund); short-term assistance to help solve the urgent industrial problems; preparatory studies and exploratory phases of field projects (SIS and TA); training of personnel; and supply of some equipment, all are included in UNIDO's system of technical assistance.

### UNIDO's Maintenance and Repair Campaign.

Maintenance and repair is one aspect of industrialization which is very much neglected in developing countries and which represents an obstacle to the efficient utilization of industrial equipment and to industrialization as a whole.

An exploratory expert group meeting was held in New York in 1966 to create a better understanding of maintenance and repair conditions in developing countries and to recommend how to cope with the problems. This was preceded by sending a detailed questionnaire to the governments and industry of selected developing countries. The answers to these questionnaires have been classified and analysed. On the basis of the information received the experts have submitted a report with valuable recommendations for developing and industrialized countries and for the United Nations.

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Towards the end of 1968, UNIDO started a long-term campaign to help developing countries in improving their maintenance and repair facilities. The strategy of the campaign is based on the understanding that maintenance activities cover many aspects and involve many groups, industry and governments of both developing and industrialized countries, UN and international organizations. It tackles the technical, economical and organizational aspects at the enterprise and country levels. In addition to its own technical assistance activities, UNIDO serves as a focal point of action through stimulation and co-ordination of activities and help of all concerned.

The campaign entails three inter-related activities.

- a) Direct field technical assistance to the developing countries;
- b) Supporting activities;
- c) Promotional activities.

#### Direct Field Technical Assistance to the Developing Countries.

Technical assistance to be given to developing countries, at their request, involves the following:

- 1) At the enterprise level, the following types of assistance are offered:
  - a) Management, organization and planning of maintenance and maintenance programmes is of utmost importance for the efficient use of physical facilities. Experts would be available to help in establishing and organizing maintenance depts., planning of maintenance work and establishing of maintenance programmes and schedules. They would instruct their counter-parts on the most up-to-date methods of management and organization of maintenance which is suitable for local conditions;

- b) Upgrading existing physical maintenance and repair facilities or establishing new ones. Experts are sent to advise on new equipment required, planning of repair shops, and demonstration and training of personnel on repair operations. Central maintenance and repair shops and mobile units form an important part in this respect;
  - c) Adequate supply of spare parts and organized stores are essential to efficient maintenance. This is an aspect also where specialists are made available to help;
  - d) Advice to top management on general policies and long-term planning of maintenance.
- 2) At the country level many activities are required to support the industrial enterprises in their efforts to improve their maintenance facilities. Institutional arrangements must be established, technical offices and similar facilities should be set up. Governments and industrial sectors are responsible for such activities. UNIDO is prepared to help both the government and industrial sectors in this respect. Experts would advise governments on establishing technical offices to support and advise industry on maintenance, on formulating policies to promote maintenance and setting up of technical institutions and societies. In addition central and specialised repair shops receive special attention and also organization of supply of spare parts at country level.

#### Technical Assistance Projects.

Direct field technical assistance to developing countries has already made a good start. Requests for technical assistance in the field of maintenance and repair have been received so far from about forty countries.

Twenty-five of these requests have already been approved by the United Nations Development Programme. Among the approved projects are two under UNDP/Special Fund: one in the Congo (Kinshasa) and the other in Cameroon. The Plans of Operations for these two projects are finalized and recruitment is under way.

The requests cover a wide range of activities and fields of maintenance and repair. Assistance is sought equally in planning and establishing maintenance systems as well as in establishing repair facilities; local production of spare parts; inventory problems; training considerations; etc. The fields of activities covered by the approved projects include the mechanical and electrical industries; textiles; transport; ship repairs; etc.

It is realized that in addition to the solution of certain specific crucial problems, maintenance problems can only be solved by long-term planning and action. Most of the short-term technical assistance projects are in fact on exploratory and preparatory phase to lead to long-term projects. A better understanding of local conditions and requirements will add materially to the chances of success of long-term projects.

The results achieved in the implementation of the initial twenty-five projects are closely watched and evaluated. It is anticipated that the experience gained would be of great use in the implementation of new projects now being negotiated with a number of countries.

#### Field Surveys.

To help the developing countries in formulating their needs and UNIDO in better understanding of local conditions and formulating the strategy for assistance, surveys of maintenance and repair facilities were carried out in 1969. Twelve countries were surveyed by five consulting firms. Wherever feasible, a staff member assisted the consultants during the first few days of work in each country. Final reports on the surveys have been sent to and discussed with the governments concerned. These reports have been of great value to the governments as well as UNIDO in the initial planning phase of assistance to these countries.



### Supporting Activities.

A series of activities, to support field projects and insure their success and also to help developing countries in overcoming their problems, are being planned and some are already under implementation. The following are some of these activities:

- a) In-plant training: Competent personnel, at the managerial and labour levels, are the backbone of maintenance activities. UNIDO has thus paid a special attention to this aspect of assistance.

In addition to the training of personnel attached to the different UNIDO field projects under fellowship programmes, special in-plant training of a duration of about three months, is planned to take place in different industrialized countries with their co-operation and help. A course already took place in Sweden during this year and was attended by twenty participants. With the kind help and co-operation of the Swedish Government, this course will be repeated annually over the next few years. Similar courses are being planned with the Governments of Italy and the Federal Republic of Germany who were kind enough to offer UNIDO substantive material and organizational help. It is hoped that other Governments of industrialized countries will follow suit to enable UNIDO to give in-plant training to the very big number of competent personnel required by developing countries in the field of maintenance and repair.

- b) Technical papers: UNIDO technical staff has prepared with the help of specialists, technical papers to be made available to developing countries on the different aspects of maintenance and repair. Many of these papers are submitted to you in this Symposium, in addition to the background papers.

c) Industrial Information: The activities of UNIDO in the field of industrial information are designed to further the worldwide flow of information and resources to meet the needs of developing countries along the three main lines of action:

- . by launching and operating an information transfer network designed to enable users in developing countries to have ready access to sources of information throughout the world;
- . by promoting the flow of technical and financial resources to industries by developing areas; and
- . by working with the United Nations Advisory Committee for the Application of Science and Technology to Development to help bring scientific resources to bear on the problems of industrial development.

Most of the industrial and technical information needed by developing countries for the expansion of their industries already exists. The problem is to establish an effect system, for providing to the developing countries that need it, ready access to this bank of relevant information. UNIDO acts in this field in accordance with General Assembly resolution 2152 (XXI) II, 2a (iv) and in response to recommendations and guidelines established by the Athens Symposium (ID/B/21, page 47, recommendation 24 and 26) and by the Industrial Development Board (ID/B/41, para. 56, 152-55). During the last three years UNIDO has been laying foundations for an industrial information service. When finalized, this service is expected to consist of a monitoring information network; special collections maintained at Headquarters (sources of industrial equipment; lists of consultants and service organizations; feasibility studies and reports; etc.); training and publication services; etc.

The technical information centre of UNIDO is always ready to supply developing countries with technical publications required by them and to collect information on the subject of maintenance or relating to specific problems by these countries.

Further supporting activities are being planned and it is hoped that the discussions and exchange of views which will take place during the Symposium will help in the future planning of this important aspect of assistance.

#### Promotional Activities.

Creating a general awareness of the maintenance aspect of industrialisation and maintenance mindedness and consciousness is a very necessary prerequisite to a successful handling of maintenance problems. UNIDO is planning to promote this by inter-regional and regional symposia and seminars and other activities. This Symposium is the first step towards this end.

UNIDO is ready to support the different developing countries in any activity they are planning to promote maintenance activities in their own countries. Technical meetings, seminars, etc. could be supported by UNIDO by technical literature, experts, etc.

#### UNIDO as Co-ordinator and Stimulator of International Assistance.

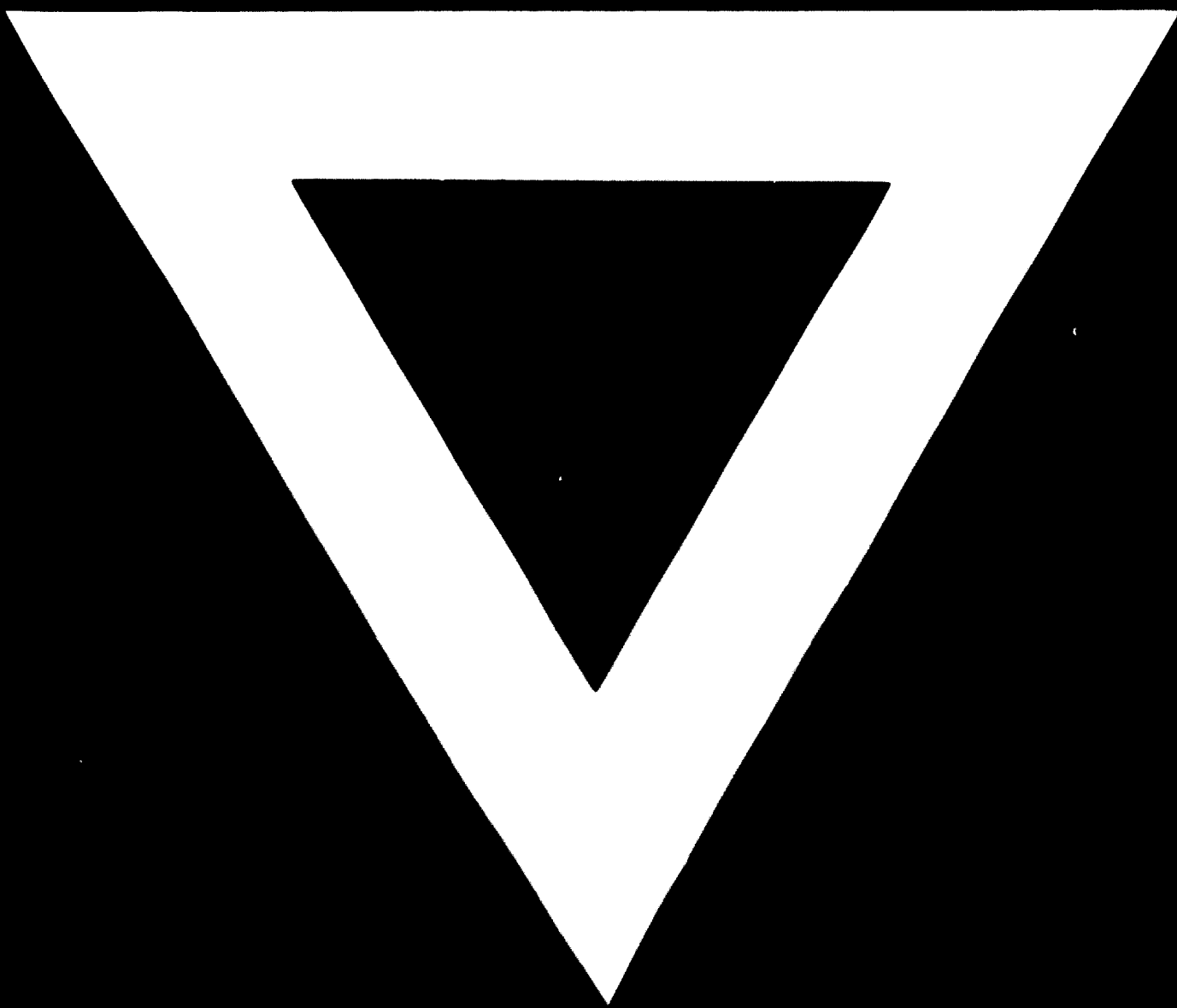
Many groups are concerned with the improvement of maintenance and repair facilities in developing countries, governments and industry of both developed and developing countries, UN agencies and international bodies.

According to resolution 2152 (XXI) of the General Assembly, UNIDO "shall play the central role in and be responsible for reviewing and promoting the co-ordination of all activities of the United Nations system in the field of industrial development". One of the important aspects of industrialization is maintenance and repair. UNIDO is co-ordinating its activities and co-operation with all UN agencies in this field.

Again UNIDO is planning to co-ordinate its field activities with bi-lateral assistance given by industrialized countries. Such bi-lateral help would support UNIDO projects by supplying equipment and experts. Now such plans are already being implemented and it is hoped that more will come. To support its own field activities and to help in making bi-lateral help more effective, UNIDO is co-ordinating its field projects with bi-lateral assistance planned by industrialized countries. Under such plan, the supply of repair equipment is a major phase. Few such plans are under implementation and it is hoped that more will materialize.

Other activities are being planned and it is hoped that discussions during the Symposium will help in this planning.





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