



TOGETHER
for a sustainable future

OCCASION

This publication has been made available to the public on the occasion of the 50th anniversary of the United Nations Industrial Development Organisation.



TOGETHER
for a sustainable future

DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

CONTACT

Please contact publications@unido.org for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at www.unido.org

19185



UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION



CONFERENCE ON
ECOLOGICALLY SUSTAINABLE
INDUSTRIAL DEVELOPMENT

Copenhagen, Denmark, 14-18 October 1991

Distr.
LIMITED

ID/WG.516/9
2 August 1991

ORIGINAL: ENGLISH

DRAFT CONCLUSIONS AND RECOMMENDATIONS *

Proposal submitted by

Secretary General of the Conference on ESID

* This document has not been formally edited.

V.91-28087

1. The Conference on Ecologically Sustainable Industrial Development (ESID) arranged by UNIDO was held at Copenhagen, Denmark, at ministerial level from 14 to 18 October 1991. Ministers and other representatives of Member States of UNIDO attended the Conference and a number of intergovernmental organizations as well as representatives of industry and Non-Governmental Organizations participated as observers.

2. The objectives of the Conference were as follows:

- (a) To clarify the issues related to Ecologically Sustainable Industrial Development (ESID), particularly in developing countries, and the manner in which such development could complement the ongoing industrialization process in those countries;
- (b) To delineate the roles of Governments, international organizations, industry, and Non-Governmental Organizations in this regard; and
- (c) To indicate the role that UNIDO, in co-operation with other United Nations organizations, should play in supporting such an effort, at both the policy and operational levels.
- (d) To provide an input on industry and the environment for consideration at the United Nations Conference on Environment and Development (UNCED) in June 1992.

3. The Conference was opened by His Royal Highness, Crown Prince Frederik of Denmark.

4. Ms. Anne Birgitte Lundholt, Minister for Industry and Energy of Denmark, presided over the Conference.

5. In the course of their work, the Ministers present at the Conference, examined a wide variety of issues relating to ESID. It was agreed that all issues were closely interrelated and that particular attention should be given to the problems confronting the developing countries. The Ministers agreed that their conclusions and recommendations should lead to specific proposals for implementing a strategy at the national level and through UNIDO in support of ESID. They agreed to transmit their conclusions and recommendations to the fourth regular session of the General Conference of UNIDO and recommended that those conclusions and recommendations should also form the basis of the contribution of UNIDO to the United Nations Conference on Environment and Development (UNCED), to be held at Rio de Janeiro, Brazil, in June 1992.

6. Finally, the Ministers expressed their appreciation to the Government of Denmark for its hospitality and cooperation in facilitating the work of the Conference.

I. GENERAL CONSIDERATIONS

7. The Ministers welcomed the fact that in global terms the rate of industrial output had registered an appreciable measure of growth in 1970-1990. In that period, industrial output grew twice as fast as population. That upsurge in industrial output had not only benefited the developed countries, but had also made a noteworthy contribution to the economies of some developing regions, particularly those of East Asia and South-East Asia.

8. The Ministers noted with concern that most of that success had occurred in the 1970s. In the 1980s, population growth exceeded growth in industrial output in some regions, particularly Africa and Latin America. Although the gap between developed and developing countries in terms of per capita income and per capita industrial output narrowed slightly between 1970 and 1990, industrialization, the well-trodden path to the achievement of higher standards of living and expanded economic development, remained a distant goal for many developing countries.

9. The Ministers noted that threats to the environment were a common concern. They stated that all countries should take effective action to protect and enhance the environment in accordance with their responsibilities and respective capacities. In this regard the Ministers confirmed that in developing strategies, and in endeavouring to secure agreement, on and commitments by Governments to major environmental issues it has been recognized that:

- (a) The greater part of current emission of pollution into the environment originates in developed countries;
- (b) These countries bear a major responsibility for combating such pollution;
- (c) International co-operation between developed and developing countries is essential to securing relevant scientific information and environmentally sound technologies.

Highly industrialized countries had significant experience with pollution prevention, cleaner production methods and pollution control technologies and should promote industrial pollution prevention and management worldwide. Economic growth is essential for achieving sustainable development and minimizing the degradation of the environment concomitant with such growth. Ministers called on governments and industry to co-operate at the local, national and regional levels in establishing effective mechanisms that promote pollution prevention, waste minimization, cleaner production, energy efficiency and rational use of natural resources and in making these techniques and technologies available to developing countries. This would entail the mobilization of financial resources and enhanced technical co-operation with developing countries, at both the bilateral and international levels.

10. Ministers affirmed that economic, social and environmental decision-making had to be fully integrated, and that there was a fundamental mutual dependence between economic growth and environmental protection. Ministers noted that sustained economic growth and effective environmental protection should be complementary rather than based upon competitive policy objectives.

11. In developing countries, environmental degradation is closely related to poverty and underdevelopment and the promotion of economic and social development is essential for the protection of the environment.

12. The Conference was held at a time when economic reforms to strengthen the private sector and harness market forces in support of economic development were being carried out in several countries. While affirming the need for economic instruments to supplement public regulations, the Ministers stressed that market-oriented instruments would play a major role in environmental policy. Assistance should be provided, upon request, to countries that needed to develop such instruments and to improve their systems of administration and law enforcement.

13. The Ministers called for new patterns of industrialization that would allow industry to contribute to economic and social benefits for present and future generations without impairing basic ecological processes. Those new patterns would enhance economic development over time while efficiently utilizing non-renewable resources, conserving renewable resources and not exceeding the waste assimilative capacity of the biosphere. They would differ from country to country depending on the resource endowment and the stage of development.

14. The Ministers agreed that the reduction of pollution intensity within industry, through cleaner production, was the key to achieving ESID. The objective of cleaner production, with its focus on source reduction, waste minimization, energy efficiency and low waste and non-waste technology, is to prevent or minimize, at the lowest cost, the short- and long-term risks to humans and the environment. Cleaner production would require a management approach that:

- (a) Assigned priority to the efficient use of resources, materials substitution and product reformulation, process modification and equipment redesign to lower waste technologies, and recycling and reuse as the primary options for pollution prevention and increased profitability;
- (b) Utilized environmentally sound processes, technologies and substances combined with safe operating procedures and the skilled operation of equipment;
- (c) Assigned clear responsibility and incentives for pollution prevention and control, in the context of a regulatory framework that established achievable environmental goals and that provided industry with the greatest possible flexibility in the choice of response actions.

15. The Ministers agreed to support action to overcome barriers to the achievement of ESID. Among those barriers are the difficulties of implementing policies both in the North and the South that would bring about a transition to ESID. Industry everywhere needed to re-examine its attitudes on pollution prevention and cleaner production.

II. INDUSTRY INITIATIVES IN ACHIEVING ESID

16. The Ministers recognized that industry and industrial institutions had to play a central role in the transition to ESID. While Governments can assist, regulate and control, it is essential that industry acts in accordance with the principles implied by ESID. The relevant organizations and institutions should promote managerial practices and technologies based on the principles of sustainability.

17. The Ministers agreed that, in order to achieve ESID, industry initiatives should include the following objectives:

- (a) Adoption of pollution prevention, the approach that prevents pollution at the source in products and manufacturing processes rather than removing it after it has been created;
- (b) Integration of environmental responsibility in decision-making at all management levels; introduction of waste minimization and environmental compliance auditing, establishment of emergency, risk and safety management systems, as well as training programmes;
- (c) Adherence to voluntary environmental codes of conduct for industrial investment and production;
- (d) Increase of R & D activities with emphasis on cleaner production technologies, giving priority to technologies that offer potential for improved efficiency and reduced pollution; and provide training facilities to developing countries for this purpose;
- (e) Consideration, where feasible, of the use of substitute materials and product reformulations, process modifications and equipment redesigns, renewable sources of energy and raw materials, recycling and reuse of waste materials;
- (f) Assumption of a "cradle-to-grave" approach to industrial products;
- (g) Application of cleaner industrial production processes and more rational use of natural resources;
- (h) Transfer and adaptation of environmentally sound technologies, know-how and skills to meet the needs of developing countries and mobilization of financial resources for this purpose;
- (i) Encouragement of large-scale industry to provide information on environmentally sound management and energy conservation.

18. The Ministers recognized that the Economic and Social Council at its second regular session of 1991, had addressed ways to encourage and mobilize industrial enterprises, including transnational corporations, to co-operate in efforts to protect and enhance the environment in all countries. In that regard, the Council adopted resolution E/1991/..., requesting, inter alia the preparation of action-oriented and practicable recommendations for consideration by the Commission on Transnational Corporations and by the Preparatory Committee of the United Nations Conference on Environment and Development.

19. The Ministers therefore recommended, among other things, that transnational companies and investors involved in international joint ventures or in the export of manufacturing processes, should apply standards of environmental responsibility to their foreign operations which, as a minimum, are consistent with those used in their home countries and in compliance with the laws and regulations of host countries. The incorporation of environmental concerns into their activities should be consistent with the economic policies and development needs of the developing countries and should not impair access to or transfer of technology.

20. The Ministers encouraged Non-Governmental Organizations representing all the parties involved in the industrial process, including industrial federations, trade unions and consumers and environmental groups, to carry out and participate in activities relevant to ESID.

21. UNIDO undertook five case studies for the preparation of the Conference to illustrate the scope for ESID. These case studies covered pulp and paper, leather industry, alumina industry, plastics and plastics waste recycling and phosphate fertilizers. The studies presented a number of problems related to unsustainable production processes and suggested measures to solve them. Ministers emphasized the paramount importance of ensuring close co-operation between industry, governments and international organizations in solving those problems, where they cannot be solved by industry itself.

III. GOVERNMENT INITIATIVES IN ACHIEVING ESID

22. The Ministers agreed that Governments should:

- (a) Review the environmental impact of current and planned policies, regulations and institutional infrastructure that affect industry and environment with a view to contributing to the transition to ESID through appropriate policies and measures;
- (b) Review the environmental impact of current and planned policies and build in the environmental concerns as an integrated part in such policies and strategies;
- (c) Design suitable methods and tools for quantification and valuation of natural and environmental resources used by industry;

- (d) Establish or strengthen existing environmental impact assessment review mechanisms governing approval of industrial projects with potential environmental effects. In countries where such approval procedures exist, the evaluation and assessment procedures should continue during and after completion of the projects;
- (e) Apply, with due consideration for the economic and social conditions in specific countries, a balanced mix of regulatory and economic instruments to reach the objective of industrial development without environmental damage;
- (f) Design policies based on the principles that the polluter should bear the costs of the damage caused, as well as application of a precautionary approach. Inclusion of the cost for pollution abatement in entrepreneurial calculations would thus be the basic principle governing the functioning of economic instruments and help achieve a better allocation of resources in the pursuit of environmentally sustainable manufacturing;
- (g) Implement schemes for increasing public awareness, particularly in the younger generation, of the necessity for ESID and the responsibility of the individual enterprises, managers, engineers, workers and other members of staff in that respect;
- (h) Give active encouragement to ESID, including pollution prevention and cleaner production systems, through research, development, acquisition and transfer of techniques/technologies, as well as efficient utilization of existing relevant technologies in the public and private sectors, and through public/private partnerships while ensuring occupational health and safety;
- (i) Promote technical and managerial training and education that incorporate ESID in both informal and formal sectors.
- (j) Promote ESID through environmental education and the participation by the general public and interested Non-Governmental Organizations, such as industrial federations, employees associations, community based groups, consumers, women's and environmental organizations;
- (k) Support exchanges of information and experience on ESID among developing countries, as well as between developing and industrialized countries.
- (l) Provide access to financing sources to small and medium scale enterprises in support of ESID oriented restructuring and modernization.
- (m) Provide all countries with a fair chance to participate in the industrialization process and in the wealth generated by industrial activities and to apply the same principles of equity also between genders and between present and future generations.

IV. INTERNATIONAL COOPERATION IN ACHIEVING ESID

23. The Ministers called upon Governments to enhance international co-operation in mobilizing financial resources for achieving ESID. The mobilization of financial resources is of vital importance to ESID, as well as to alleviating environmental problems in general. International sources of financing, particularly the development assistance programmes of developed countries, play a key role.

24. Noting that the transfer of techniques/technologies is one of the keys to the adaptation and absorption of pollution prevention techniques and cleaner production processes by industrial firms, the Ministers agreed to encourage international co-operation to the transfer of those techniques/processes and the requisite information, skills and know-how from developed to developing countries, as well as the means necessary to develop infrastructure and policies to support them.

25. The Ministers called upon Governments to seek international co-operation in addressing concerns about linkages between the environment and trade in manufactured goods. Not only could trade policies have an adverse impact on environmental concerns, but also environmental actions could alter international trade. The Ministers also noted that improved access to markets in general would improve the possibilities, particularly of developing countries, to finance the introduction of ESID-related technologies. That would have important balance of payment implications.

26. Ministers called for continued and enhanced coordination and cooperation between UNIDO and United Nations Centre on Transnational Corporations, United Nations Environment Programme, United Nations Development Programme, International Labour Organization, Food and Agriculture Organization of the United Nations, United Nations Educational, Scientific and Cultural Organization, World Health Organization, and other organizations of the United Nations system in carrying out measures related to the global, regional and national environment and issues of industrial development. Ministers also called for continued and enhanced co-operation among the various groups in different countries that are involved in programmes, projects and activities to promote ESID.

V. FUTURE ACTIVITIES OF THE UNIDO

27. The Ministers noted that the Environment Programme, which had been adopted by the Industrial Development Board of UNIDO in May 1990, provided broad guidelines to enable the Organization to assist developing countries in making the transition to ESID. Ministers invited UNIDO to develop a comprehensive programme for consideration of Member States to promote its activities toward the achievement of ESID. Such a comprehensive programme would build on the strengths of UNIDO and would constitute a logical extension of its capabilities and the experience it has already gained in implementation of its environment programme. In developing such a programme, UNIDO should take into account recommendations and guidelines from the UNCED Conference in Rio de Janeiro in 1992.

28. Action by UNIDO could make a significant contribution to the implementation of ESID. Because environmental management often involves complex issues and requires specialized skills, UNIDO would need to work in co-operation with other United Nations agencies to ensure the broadest possible input. In particular UNIDO should work closely with the United Nations Environment Programme, as the co-ordinating body for environment, in such activities as information exchange and training.

The following were some major directions for possible UNIDO action:

- (a) Assisting developing countries in building the technical and scientific capacity to develop, absorb and diffuse pollution prevention techniques and cleaner production processes essential to making the transition to ESID. This could be done by :
 - (i) Adapting ESID to special needs of developing countries within their means;
 - (ii) Demonstrating the financial and economic advantages and environmental benefits of ESID to present and future generations;
 - (iii) Providing technical support for the design, establishment, operation, evaluation and monitoring of pollution prevention techniques and cleaner production processes and technologies;
 - (iv) Establishing demonstration and training centres at new or existing industrial facilities, and providing support to centres of excellence;

- (b) Assisting in the implementation of international environmental conventions and protocols by:
 - (i) Providing technical assistance to developing countries to identify and implement the actions needed;
 - (ii) Helping developing countries to locate expertise and funding for projects that contribute to implementation;
- (c) Assisting developing countries in determining the environmental soundness of industrial technologies by:
 - (i) Preparing guidelines on environmentally sound industrial practice for selected sectors;
 - (ii) Promoting, in selected sectors, technical procedures to evaluate and to test processes, products and services;
- (d) Assisting developing countries in integrating environmental considerations into their industrial strategies and policies by:
 - (i) Identifying sectoral and subsectoral priorities for environmentally sound industrial activities;
 - (ii) Specifying the measures needed to rehabilitate existing industries so they could operate in a manner that is more "friendly" to the environment, and assessing the costs of such a transition and estimating a time-frame for achieving it;
 - (iii) Examining their current policies on such topics as industrial taxes and subsidies and pricing of resource in order to identify and remove factors that encourage inefficient and environmentally damaging activities.
- (e) Strengthening its existing database and its capacity to co-ordinate the dissemination of technical and policy information on ESID, by co-operating with United Nations Environment Programme on the building up and operation of the International Cleaner Production Clearinghouse (ICPIC), and through other means.

This document has been printed on environmentally friendly paper.