UNITED NATIONS **E**

Economic and Social Council

Distr.
GENERAL

E/CN.17/1994/11
14 April 1994

ORIGINAL: ENGLISH

COMMISSION ON SUSTAINABLE DEVELOPMENT
Second session
16-27 May 1994
Item 5 of the provisional agenda*

EDUCATION, SCIENCE, TRANSFER OF ENVIRONMENTALLY SOUND TECHNOLOGIES, COOPERATION AND CAPACITY-BUILDING

Report of the Inter-sessional Ad Hoc Open-ended Working Group on Technology Transfer and Cooperation

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* E/CN.17/1994/1.

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INTRODUCTION

1. The Commission on Sustainable Development decided at its first session to convene an Inter-sessional Ad Hoc Open-ended Working Group of experts, nominated by their respective Governments, to examine, in more detail, issues related to the transfer of environmentally sound technologies, as contained in chapter 34 of Agenda 21 (see E/1993/25/Add.1, chap. I, para. 50). Consistent with the decision of the Commission, the Working Group was expected to discuss these issues in both a cross-sectoral context and in relation to the five sectors under consideration by the Commission at its second session, namely, health, human settlements, freshwater, toxic chemicals and hazardous wastes.

2. The discussion of the Working Group was based on the report of the Secretary-General (E/CN.17/ISWG.I/1994/2) and other official documents. It also draws on contributions from the Oslo Workshop on the Transfer and Development of Environmentally Sound Technologies, organized by the United Nations Conference on Trade and Development (UNCTAD) and the Government of Norway and held from 13 to 15 October 1993, and the Preparatory Meeting on Technology Transfer, Cooperation and Local Capacities, held at Cartagena, Colombia, from 16 to 19 November 1993 under the sponsorship of the Governments of Colombia and the United States of America.

3. The report of the Working Group is not a negotiated text. Consistent with the expert nature of the Working Group and the functions assigned to it by the Commission, the report focuses on proposals for measures and mechanisms to promote the transfer, use and dissemination of environmentally sound technologies (ESTs).

4. The participants of the meeting realized that the implementation of some of the proposals listed in the report, particularly those related to the preparation of certain studies and inventories, could require additional financial resources. The meeting therefore encouraged countries in a position to do so, as well as other interested parties, to share in meeting those resources by conducting or providing funds for studies and other activities, as a contribution to the work of the Commission on Sustainable Development in the area of transfer of environmentally sound technologies.

5. A number of proposals contained in the present report are based on practical experiences gained in the sectoral areas that are under consideration by the Commission on Sustainable Development at its second session, in 1994. Though specific sectoral conditions need to be fully taken into account in further discussions and implementation of the proposals, many of the latter could be successfully applied to other sectoral areas as well. The Commission on Sustainable Development, in its deliberations on the thematic clusters of Agenda 21, should benefit from the information provided on sectoral areas and relevant proposals made in the report of the Working Group.

6. The Working Group invites the Commission to consider the present report in its deliberations on the relevant agenda item at the Commission’s second session, in May 1994, either for action or for further consideration.

I. ASSESSMENT OF THE CURRENT SITUATION AND TRENDS RELATED TO ENVIRONMENTALLY SOUND TECHNOLOGY TRANSFER AND COOPERATION

7. The Working Group identified the following developments and ideas.

8. Successful technology development, transfer and cooperation in the context of achieving sustainable development objectives involves the growth of a common understanding between technology owners and recipients on the content of the term "environmentally sound technology". This assessment can only be done in the context of the specific conditions in which the technology is expected to perform.

9. In this regard, further study and examination would be useful to make the concept of environmentally sound technology more operational. Substantial work could be devoted to the development of applicable criteria for assessing the "environmental soundness" of technologies. These criteria should be developed within the framework of the broader concept of sustainable development and indicators of sustainable development.

10. The development, transfer and use of ESTs functions best when there is a balance between demand and supply. The demand for environmentally sound technologies does not arise automatically but will gradually increase by building up the level of environmental awareness based on monitoring the state of the environment, and leading to sound government policy as well as developing the capacities of technology recipients to assess available technologies. Suppliers of ESTs have a particularly important role to play in providing appropriate information on available and emerging technologies, including on "best practices".

11. Developing countries face severe constraints in their efforts to promote or engage in technology transfer and cooperation, in particular the lack of adequate financial resources and limited human and institutional capacities. Specific action from the side of both Governments, in particular from the developed countries, and international organizations is required to support these efforts, through such measures as:

(a) Mobilizing new and additional resources and enhancing the efficiency of existing financial flows;

(b) Enhancing the efficiency of development assistance programmes;

(c) Improving access by developing countries to ESTs;

(d) Providing inventories or helping to provide inventories on technologies that are in the public domain as well as those that are protected by patents (privately or publicly owned);

(e) Promoting EST research efforts;

(f) Seeking ways to facilitate the greater availability of ESTs that exist in the public domain;

(g) Ensuring adequate coordination among bilateral and multilateral agencies that support the transfer of ESTs;

(h) Considering the use of innovative mechanisms for promoting technology transfer and cooperation.

12. The Working Group recalled paragraph 1.5 of Agenda 21, which states that:

> "In the implementation of the relevant programme areas identified in Agenda 21, special attention should be given to the particular circumstances facing the economies in transition. It must also be recognized that these countries are facing unprecedented challenges in transforming their economies, in some cases in the midst of considerable social and political tension."

13. Capacity-building for technology management and assessment in developing countries is essential to make effective and efficient use of technologies, whether transferred or self-generated, and to engage successfully in technology cooperation and partnership arrangements.

14. In order to take advantage of the know-how available in developed countries, economies in transition and developing countries, and to enhance the generation of indigenous technologies, countries should also have the capacity to maintain their own research and development (R&D) system of environmentally sound technological innovation. A sufficient R&D basis is needed to generate and adapt technologies and to engage successfully in international cooperation in R&D on ESTs. Where needed, developed countries should assist developing countries and economies in transition in building this R&D basis.

15. While recognizing the role of the public sector, the private sector is a key source of technological innovation and a principal conduit through which technology is transferred and disseminated. The availability of a suitable environment, including favourable market conditions for the development, use and transfer of ESTs, opens new business possibilities and raises the competitiveness of private companies, taking into account the need to protect intellectual property rights, in conformity with paragraph 34.14 (b) of Agenda 21. The owners of technology should be able to earn a commercial return on their investment, thereby encouraging innovation and technology transfer as well as providing appropriate return from the benefits derived from the owners of relevant traditional and local know-how, knowledge and practices. It also encourages linkages between those involved in research, development and commercialization of ESTs.

16. Governments and financial institutions have an important role to play by creating the enabling environment in which technology transfer operations can take place. Appropriate regulatory frameworks, environmental quality standards, enforcement practices and pricing policies are necessary instruments in promoting a more demand-driven approach in the development and commercialization of ESTs. They are also incentives to encourage and promote private sector initiatives in technology transfer and to discourage the transfer and use of environmentally detrimental technologies. National Governments of both developed and developing countries, and international organizations have a

responsibility for setting minimum environmental standards in technology transfer and cooperation and could enhance their efforts in coordinating and harmonizing minimum standards at the international level.

17. In defining strategies for the access to and transfer of technologies, operational and financial aspects and policy instruments need to be considered, taking into account whether the technology concerned is in the public domain or protected by patents (privately or publicly owned). If not considered separately, it would be extremely difficult to define the respective requirements and costs involved in the access to and transfer of these technologies.

18. Environmentally sound technology transfer and cooperation programmes should focus on the most effective means of managing natural resources and avoiding as well as ameliorating environmental degradation and promoting sustainable development. Among the areas that require new focus are the key role that education, training, management knowledge and know-how play in the technology transfer and cooperation process and the use of pollution prevention techniques as the primary tool of environmental protection programmes.

19. Small and medium-sized industries and enterprises are the "backbone" of business and industry in the majority of the developing countries and, therefore, an important target group in the flow of knowledge, technology and know-how. Ways should be considered to increase the appropriate involvement of these industries and enterprises in long-term technology partnership arrangements, through, for example, various forms of contracting and subcontracting, particularly in the preparation, execution and post-servicing of projects.

20. Some success has been achieved in promoting access to and transfer of environmentally sound technology, cooperation and capacity-building. Still, more needs to be done, in particular with regard to concrete action in both the national and the international context. The Commission could support progress on these issues by considering the proposals made in the present report.

II. IMPROVING ACCESS TO INFORMATION ON ENVIRONMENTALLY SOUND TECHNOLOGIES

A. General observations

21. There is widespread recognition that lack of access to reliable information on available technologies can be a significant obstacle to the adoption of ESTs. With this in mind, Agenda 21 called on the international community to take steps to improve the dissemination of information on available ESTs and to develop national, subregional, regional and international information systems linked through regional and international clearing-houses.

22. At the same time, there has been a proliferation of databases and information systems - public and private, national and international - dealing with particular types of ESTs, and with the provision of technological information more generally. Several international meetings have called for an

inventory of existing information resources related to ESTs, but, to date, no comprehensive study has been undertaken.

23. Governments, international organizations, the private sector, industry and professional associations, and other non-governmental organizations all have an important role to play in the process of improving access to information on ESTs. In considering this issue, the meeting focused its discussion on the following four aspects: (i) the kind of information needed; (ii) suitable institutional structures; (iii) appropriate sources of information; and (iv) obstacles to access to available information, including problems related to the availability of information in appropriate languages.

24. With regard to the kind of technological information that is available, it is important to distinguish between technologies that are in the public domain and those that are protected by patents (privately or publicly owned), since issues of access and cost are largely influenced by these dimensions.

25. Information should be embedded in the local context (e.g., policy and regulatory environment), be sectorally based, be linked to other services, and, in order to develop user confidence, be of high quality. It should incorporate data, including case-studies, on successful modalities of transfer, and the means to transfer the technology quickly, as well as on measures to deter the transfer of environmentally detrimental technologies.

26. The type of information is also determined by the needs of the intended clients. These include recipients, such as research institutions, those who actually acquire the technology, investors and decision makers. It is important to be able to integrate the needs of all of these users through the information provided.

27. In setting up information networks, the focus should be on the development and linking of already existing institutions at the national, subregional, regional and international levels, such as data banks, clearing-houses and environmental technology information centres. Establishing and networking information systems should follow the bottom-up approach and be based on decentralized institutional systems.

28. It is important that any information system be "user-friendly", capable of maintaining and updating information and well-financed. It is considered that interactive information systems, such as Internet, are most effective, but it was recognized that a number of cost and infrastructure constraints preclude the participation of potential users in many developing countries in such systems. Alternatively, stand-alone information systems based on exchange of CD-ROMs might be more appropriate. For example, the World Intellectual Property Organization (WIPO) is currently providing comprehensive patent information on CD-ROM. Training programmes for users should be included as an important element of any information service.

29. In examining practical examples of consolidating and disseminating information, the meeting took into account the recent experiences of developing and developed countries, and the initiatives of some financial institutions (such as the World Bank, the International Finance Corporation and regional

development banks) and private companies. The Organisation for Economic Cooperation and Development (OECD) is also undertaking a number of studies that bear on key issues related to information for the transfer of ESTs.

B. Proposals on measures and mechanisms to improve access to information on environmentally sound technologies

30. The meeting examined various proposals. The Commission may wish to give consideration to the following proposals:

(a) An assessment of existing information systems related to ESTs should be undertaken as part of a process to improve access to relevant information on the transfer of ESTs. It is suggested that this process could have three stages, under the overall coordination and guidance of an appropriate organization of the United Nations system:

(i) At the first stage, Governments could provide inventories of the relevant information systems, databases and clearing-houses within their own countries. Manuals containing this information, both in hard copy and electronic, would facilitate access to information;

(ii) At the second stage, a study would be initiated to compile and assess these, and other, data, as needed, taking inventory of the supply and demand of technological information and examining its effective utilization. It would attempt to identify gaps in the coverage of existing systems and promising models for future actions. Prior to the second session of the Commission, Member States are invited to consider precise terms of reference for this study and to report on their conclusions and suggestions at the second session of the Commission. In this regard, the International Development Research Centre (IDRC) of Canada would organize an informal meeting on "environment, development and information", on 11 and 12 April 1994;

(iii) During the third stage, national round tables or policy dialogues could be organized, as required, to identify the local and national demand for information on environmentally sound technologies. These could be supported by the United Nations system, financial institutions and bilateral donors, as appropriate;

Given the broad range of environmentally sound technologies, as a pilot project, emphasis may initially be placed on one sector from among those to be considered by the Commission on Sustainable Development at its second session. The sector proposed is freshwater, with an emphasis on technologies to prevent or clean up water pollution from agriculture and industry; technologies for recycling or reusing waste water; technologies for the management of water resources; technologies for desalination; and others, as relevant. Technologies that are in the public domain, as well as those protected by patent, whether privately or publicly owned, would all be included. This approach would also provide a first try at systematically identifying all three sources of information on technologies, on a sector-by-sector basis;

(b) Based on the above studies, consideration could be given to the establishment of an international network of clearing-houses for information on and referral to information on environmentally sound technologies and the conditions of their availability and transfer;

(c) Governments could be encouraged to establish centralized, national referral services for information on publicly owned technology. Non-governmental organization (NGO) groups and non-profit organizations may also be encouraged to participate in national referral services for information on publicly owned technologies;

(d) Specific experiences of countries, including those gained through round tables and demonstration projects, could be useful in identifying the national demands for ESTs, and Governments are encouraged to use their national reporting to the Commission on Sustainable Development to allow the Commission to benefit from their experience in this area.

31. The Commission may wish to give further consideration to the following proposals:

(a) There is a need to develop public information programmes, including audio/visual displays, and to support NGO public education programmes on urban and industrial pollution problems and ESTs;

(b) The concept of clearing-houses could also be expanded to private sector initiatives through the establishment of "independent technology transfer agencies" (ITTAs). ITTAs could serve as links between technology originators and technology recipients and encourage a greater contribution from the private sector to the transfer of ESTs;

(c) A study could be conducted on the issues and options concerning access to and transfer of information on technologies in the public domain. An inventory of technologies in the public domain could be undertaken on a sector-by-sector basis. This could be carried out in conjunction with the proposal for inventories of technological information and the conditions for its effective utilization as referred to in paragraph 30 (a), above.

III. INSTITUTIONAL CAPABILITIES AND CAPACITY-BUILDING

A. General observations

32. Capacity-building for technology management is a crucial element and should be considered as a precondition, together with public awareness building, to assess, transfer, adapt, use, manage, upgrade and develop environmentally sound technologies. It should focus on developing existing knowledge and infrastructure and be aimed at strengthening the ability to plan, monitor and stimulate programmes for technological innovation that benefit the environment and development. Capacity-building for technology management should not be considered in isolation but linked to the overall context of socio-economic development and take into account long-term development perspectives.

33. The concept of capacity-building for technology management should be considered in relation to information, institutional infrastructure, legal framework, decision-making, technology and environmental risk assessment capabilities, and training in intellectual property rights and patent negotiations. It is, thus, essential to go to the national level to determine local needs, demands and priorities through in-depth needs assessment. Capacity-building for technology management should basically be country- or demand-driven.

34. The United Nations system can play a vital role in assisting the developing countries in their capacity-building efforts for technology transfer and cooperation, including through technical cooperation among developing countries and programmes such as Capacity 21 which could be expanded and strengthened so as to support Governments in their efforts to strengthen their capacities related to ESTs.

35. In finding regional solutions to technological problems in a cost-effective way, while sharing similar socio-economic perspectives, the further potential for South-South cooperation should be promoted and supported.

B. Proposals on measures and mechanisms to enhance capacity-building efforts

36. The Commission may wish to give consideration to the following proposals:

(a) Case-studies on needs assessment at the national level. Assessment of needs for capacity-building and institutional development related to ESTs could be useful in enhancing development, deployment and transfer of those technologies. In order to benefit from the experiences gained from those exercises in a broader context, the Commission on Sustainable Development should encourage countries to conduct case-studies.

(i) The needs assessment. At the national level, the needs assessment should result in and function as:

a. A management tool for increasing efficiency and effectiveness in deploying ESTs;

b. Creating environmental awareness of both public and private sectors;

c. Transfer, adaptation, development and dissemination of endogenous and exogenous ESTs;

d. Adjustment of policies, legislation, enforcement mechanisms and finance;

e. A set of more specific recommendations to improve performance of relevant actors.

(ii) Methodology. The methodology consists of the following components:

a. Indicate, describe and prioritize the most crucial sectoral environmental problems, in the context of the national sustainable development planning process;

b. Identify at the sectoral level the scientific/technological profile and effectiveness of institutions and mechanisms involved (environmental policy, R&D infrastructure, NGOs, small and medium-sized companies). These may comprise the following: individual skills and expertise, mechanisms for institutional cooperation and mechanisms for ensuring accountability and compliance;

c. Assess the institutional, legal, technological knowledge, financial and other barriers that influence the effective and efficient development and application of ESTs;

d. Identify the dynamic linkages between the knowledge infrastructure and the following actors: government policy makers, businesses, monitoring institutions, civic organizations and international sources of information;

e. Prepare ways and means to remove the barriers and identify who should do what and at what cost.

The methodology should be composed in such a manner that it also stimulates international comparison and exchange of information.

(iii) Implementation structure. The needs assessments should preferably be carried out by experts in developing and developed countries. In carrying out these assessments, maximum use should be made of information available in United Nations bodies, such as studies undertaken by the United Nations Development Programme (UNDP) and UNCTAD, on priorities and needs of developing countries, as well as of existing national sustainable development strategies. All interested parties are encouraged to use the period prior to the second session of the Commission for further developing methodologies and identifying pilot countries and sources of financing.

(b) Environmental technology centres. Environmental technology centres are a promising instrument to promote transfer, adaptation and development of appropriate technologies, including from domestic sources, taking into account local conditions, resources and needs. Efforts should be promoted to initiate or strengthen environmental technology centres in developing countries at national and, where feasible, subregional and regional levels. Differentiation should be made either by sector or by geographical scope. Regional technology centres would have the advantage of, among others, shared social infrastructure and costs involved. The example of the Consultative Group on International Agricultural Research (CGIAR) could be reviewed for possible replication.

Environmental technology centres could initiate R&D on environmentally sound technologies and facilitate technological collaboration between different partners at the national and regional levels.

(c) "One-stop shops". "One-stop shops" could be established within developing countries in conjunction with environmental technology centres or as independent entities. They could assist investors, clients and other interested users to obtain all required information on investment conditions from one source. These "shops" would centralize information available within the country on all aspects of national conditions related to the transfer of technology. They would act as referral centres to provide information and other services (e.g., consulting services) relevant to technology transfer.

37. The Commission may wish to give further consideration to the following proposals:

(a) Benchmarking is an effective instrument for assessing, monitoring and encouraging best practice standards at the firm level. A collaborative effort between appropriate international bodies and private sector firms to find acceptable means of extending its effectiveness should be established;

(b) Teaming could be promoted between national and foreign experts, organizations and corporations, including transnational corporations, and between foreign and national municipalities to exchange know-how and technology. Teams to be constituted should be groups of partners with specific roles and mutual interests. Tasks of a team should be carried out with carefully defined targets and in a result-oriented way;

(c) National management teams could be established at the national level to manage specific activities on deployment of environmentally sound technologies in the priority sectors. Such teams should work with their counterparts in other countries, as well as with the international community to promote cooperation;

(d) National partnerships could be encouraged among various national constituencies, including the Government, the private sector, NGOs, the academic community and the public at large. The participatory approach in decision-making and implementation on priority areas of national concern would bring about a dynamic process to focus the knowledge and resources available in the country, as well as those from outside sources.

IV. FINANCIAL ARRANGEMENTS AND TECHNOLOGY PARTNERSHIP

A. General observations

38. The Working Group discussed the importance of examining practical and feasible measures and mechanisms to mobilize financial resources, including new and additional resources for financing technology transfer and capacity-building, in line with the pertinent chapters of Agenda 21. Recognizing that the issue of technology also depends on the availability of financial resources, it is essential that new mechanisms and means for technology financing be

explored and concrete and feasible measures considered. Though a number of various possibilities were addressed, the Working Group concentrated on a few proposals for consideration by the Commission. In this regard, it was noted that the in-depth discussion of funding arrangements and mechanisms for financing technology would be part of the overall discussion on financing implementation of Agenda 21, which was to take place in the context of the Inter-sessional Ad Hoc Open-ended Working Group on Finance to be held in New York from 28 February to 2 March 1994. Therefore, the Working Group found it useful to submit the findings of the report related to financing technology transfer and capacity-building to the Working Group on Finance for further consideration.

39. As noted in paragraph 1.4 of Agenda 21.

> "The developmental and environmental objectives of Agenda 21 will require a substantial flow of new and additional financial resources to developing countries, in order to cover the incremental costs for the actions they have to undertake to deal with global environmental problems and to accelerate sustainable development."

40. While recognizing the importance of encouraging mobilization of private sector investment in technology cooperation, transfer and capacity-building, including through various forms of technology partnership, the role of Governments in creating favourable conditions to encourage public and private sectors to innovate, market and use environmentally sound technologies was also stressed. Efforts to encourage private sector investment, such as reducing trade barriers, encouraging competition, opening up markets to foreign collaboration, reducing corporative taxes, allowing exchange rates to float and other market reforms and sector restructuring are likely to have a substantial impact on improving access to capital and for new technologies.

41. It was noted that rational pricing of natural resources is fundamental to technology transfer and cooperation. For example, the price of energy will directly affect the level of investment that is financially feasible, the size of potential markets and the willingness of firms and individuals to both develop and commercialize new technologies, as well as their willingness to buy and install them. Nevertheless, the social impact of accurate energy pricing could also outweigh the economic benefits of such pricing. Thus, subsidies for energy used by poor consumers are often a necessity but need not lead to generally subsidizing the entire energy sector.

42. In discussing innovative ways and means to finance transfer of environmentally sound technology, debt relief and other innovative mechanisms such as debt-for-EST swaps should be considered. In this regard, reference was made to the Cartagena meeting where it was suggested that a liquid waste fund could be established by combining funds from several debt swaps and other debt relief mechanisms.

43. The current level of funding for technology transfer assistance to developing countries could be enhanced through, for example, better coordination and leveraging the contributions of different donors.

B. Proposals on measures and mechanisms for improving technology financing

44. The Commission may wish to give consideration to the following proposals:

(a) Considerable interest was expressed in the potential for joint ventures, which were considered to be a useful mechanism for allocating financial resources for the development and commercialization of environmentally sound technologies. A financing facility, involving multilateral financial institutions, regional banks and bilateral donors and the private sector, could be created for such joint ventures. Such a mechanism could reduce the level of risk associated with new product development, and could provide incentives for bringing efficient technology into the market-place. Joint venture efforts could also encompass regional and multilateral organizations and other financial institutions;

(b) The establishment of a venture capital fund for certain types of environmental technologies received favourable consideration. Such funds could mobilize both public and private capital to leverage largely foreign private investment in environmental projects. These investments are seen as win-win investments in that they would provide developed and developing country private enterprise partners with acceptable returns on investments and developing economies with the know-how associated with commercially demonstrated new technologies and the potential spin-offs for economic growth. Feasibility studies are needed to examine in more detail modalities of setting up such a mechanism. The meeting encouraged countries to carry out such a feasibility study and to share the results achieved and experiences gained with interested member countries;

(c) Support was given to the concept of "BOT" (build-operate-transfer) arrangements, particularly for the construction, operation and cost recovery of big municipal waste treatment plants, as a relatively new approach to technology transfer. In this model, a private company builds a project, operates it long enough to pay back its debt and to achieve a return on equity, and then transfers it to the host Government. Project finance is normally on a "limited recourse" basis - only income from the project will be used to repay lenders and investors. BOT revenues are derived either from user charges or from a pre-determined payment by the Government, regardless of the amount of usage. Emphasis should nevertheless be on promoting national efforts and national capacities in such undertakings;

(d) It was felt that further study was needed regarding the idea of intermediate ownership arrangements, such as an environmentally sound technology rights bank (ESTRB), which would act as a broker for acquiring patent rights to sounder technologies and make them available to countries in need of technical assistance, and in particular to developing countries on favourable terms.

45. Proposals on measures and mechanisms for sector specific funding of technology transfer may warrant further discussion by the Commission.

V. OTHER MATTERS

46. The Working Group noted that inter-sessional work on issues to facilitate future sessions of the Commission was desirable. This Ad Hoc Working Group, it was felt, has itself been a useful arrangement and has been able to make progress in the area of technology transfer.

47. The Working Group recommended that, in future inter-sessional activities, the focus should shift from general to more specific discussions and proposals, in particular in relation to the sectoral and cross-sectoral issues of Agenda 21. The Working Group also recommended that future inter-sessional activities continue to involve experts, including those nominated by Governments and other parties, and that the intergovernmental character of any inter-sessional arrangement be preserved. In addition, close coordination with the work being done by other organizations of the United Nations system should take place.

48. The Working group recommended that the Commission, during its second session, take these views into account when considering possible future inter-sessional activities, including consideration of whether an ad hoc working group on technology transfer should be continued.

VI. ORGANIZATIONAL MATTERS

A. Opening and duration of the session

49. The Working Group met at United Nations Headquarters from 23 to 25 February 1994, in accordance with Economic and Social Council decision 1993/314 of 29 July 1993. The Working Group held six meetings, (1st to 6th).

50. The session was opened by the Chairman of the Commission on Sustainable Development, Mr. Razali Ismail (Malaysia).

51. Introductory statements were made by the Under-Secretary-General for Policy Coordination and Sustainable Development and the Chief of the Human Development Institutions and Technology Branch of the Department for Policy Coordination and Sustainable Development.

52. Statements were also made by the representatives of Colombia, the United States of America and Norway.

B. Attendance

53. Representatives of all States members of the Commission on Sustainable Development attended the session. Observers for other States Members of the United Nations and for non-member States, representatives of organizations of the United Nations system and observers for intergovernmental and non-governmental organizations also attended. A list of participants is contained in annex I to the present report.

C. Election of officers

54. At the 1st meeting, on 23 February 1994, the Working Group elected, by acclamation, Mr. Marius Enthoven (Netherlands) as Chairman.

D. Agenda and organization of work

55. At the 1st meeting, on 23 February, the Working Group adopted its provisional agenda, contained in document E/CN.17/ISWG.I/1994/1 (see annex II).

E. Documentation

56. The documents before the Working Group are listed in annex III to the present report.

Annex I

ATTENDANCE

Members

Algeria:	Murad Ahmia
Antigua and Barbuda:	Lionel Hurst, John Ashe
Australia:	
Austria:	
Barbados:	
Belarus:	Alexei A. Mojoukhov, Gregory A. Borushko
Belgium:	Henry Dumont, J. Engelen, Filip Peeters
Benin:	Rene Valery Mongbe, Rogatien Biaou
Bolivia:	Erwin Ortiz-Gandarillas
Brazil:	Ronaldo Mota Sardenberg, Pedro Motta Pinto Coelho, Regis Percy Arslanian, Luiz Antonio Barreto de Castro
Bulgaria:	Raiko Raichev
Burkina Faso:	
Canada:	John Fraser, Mark Gawn, Sushman Gera, Caroll Nelder-Corvari, Jennifer Irish
Chile:	Gonzalo Biggs
China:	Nie Meisheng, Wang Xialong
Colombia:	Rodolfo Jaramillo, Juanita Castaño, Hernando Clavijo
Cuba:	Ramón Pichs Madruga
Czech Republic:	Bedrich Moldan
Egypt:	Mostafa Tolba, Somaya Saad, Tarek Genena
France:	Monique Barbut, Bernard Devin, Philippe Delacroix
Gabon:	
Germany:	Edith Kuerzinger, Knut Beyer, Stefan Peterlowitz, K. J. Kresse, Jürgen Wenderoth
Guinea:	
Hungary:	Istvan Gyebnàr
Iceland:	
India:	
Indonesia:	
Italy:	S. Garibba, Walter Ganapini
Japan:	Takao Shibata, Kinki Shinoda
Malawi:	
Malaysia:	S. Thanarajasingam, Mohd. Noordin Hassan, Hussein Hannif, Badrudin Abd. Rahman
Mexico:	Gerardo Lozano, David Nájera, Patricia Belmar
Morocco:	Mustapha Bennouna, Ahmed Amaziane
Namibia:	Arnold van Kent
Netherlands:	Marius Enthoven, Joke Waller, K. J. Moning, Arjan Hamburger, Paul Hassing, P. I. Loeff, Margot de Jong
Nigeria:	
Norway:	Guttorm Vik, Paul Hofseth
Pakistan:	
Philippines:	Gil Beltran
Poland:	Pawel Blaszczyk

Republic of Korea:	Wonil Cho, Dong Wook Kim, Hong Jae Im, Hon Choi, Ho-Saeng Rhee
Russian Federation:	
Singapore:	Chew Tai Soo, Viji Menon, Burhanudee Gafoor
Sri Lanka:	C. B. Dissanayake
Tunisia:	Slaheddine Abdellah, Amor Ardhaoui, Friaa Jaafar, Salem Goulli, Ghazi Jomaa
Turkey:	Sema Alpan, Levent Murat Burhan, Hüseyin Avni Karshoglu
United Kingdom of Great Britain and Northern Ireland:	Suma Chakrabarti, Chris Austin, Christopher Yarnell, Ann Grant, Victoria Harris, Robin Barnett
United Republic of Tanzania:	
United States of America:	William Milam, Robert J. Ford, John P. McGuinness, George Herrfurth, Bisa Williams-Manigault, Michael Kaplan, David Jhirad, James Gallup, Mario Salazar
Uruguay:	
Vanuatu:	
Venezuela:	

States Members of the United Nations represented by observers

Argentina, Bahamas, Denmark, Estonia, Finland, Guinea-Bissau, Guyana, Iran (Islamic Republic of), Iraq, Ireland, Israel, Kenya, Latvia, Lithuania, Mauritania, Myanmar, Oman, Peru, Saudi Arabia, Spain, Sweden, Thailand, Trinidad and Tobago, Zimbabwe

Non-member States represented by an observer

Switzerland

United Nations Secretariat

United Nations Children’s Fund, United Nations University

Specialized agencies and GATT

United Nations Educational, Scientific and Cultural Organization

Intergovernmental organizations

European Community, Organisation for Economic Co-operation and Development

Annex II

AGENDA

1. Adoption of the agenda and other organizational matters.

2. Overview of the current situation and trends relating to the transfer of environmentally sound technologies.

3. Access to information on environmentally sound technologies.

4. Institutional capabilities and capacity-building.

5. Financial arrangements and technological partnership.

6. Other matters.

7. Adoption of the report of the Working Group.

Annex III

LIST OF DOCUMENTS BEFORE THE WORKING GROUP AT ITS FIRST SESSION

Document symbol	Agenda item	Title or description
E/CN.17/ISWG.I/1994/1	1	Provisional agenda
E/CN.17/ISWG.I/1994/2	2, 3, 4 and 5	Report of the Secretary-General on the transfer of environmentally sound technology, cooperation and capacity-building
E/CN.17/ISWG.I/1994/3	2 and 4	Letter dated 21 January 1994 from the Permanent Representative of Tunisia to the United Nations addressed to the Secretary-General transmitting the text of the document entitled "Environmental technology centre in Tunisia"
