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ENVIRONMENT AND SUSTAINABLE DEVELOPMENT: IMPLEMENTATION OF  
THE OUTCOME OF THE GLOBAL CONFERENCE ON THE SUSTAINABLE  
DEVELOPMENT OF SMALL ISLAND DEVELOPING STATES

Action taken at the international, regional and  
national levels to implement the Programme of  
Action for the Sustainable Development of Small  
Island Developing States

Report of the Secretary-General

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## I. INTRODUCTION

1. At its fiftieth session, the General Assembly adopted resolution 50/116, in which, inter alia, it called on Governments, as well as organs, organizations and bodies of the United Nations system, and other relevant organizations, to pursue effective follow-up and implementation of the Programme of Action for the Sustainable Development of Small Island Developing States. 1/ The Assembly also invited the United Nations Development Programme (UNDP) to continue to implement all the provisions of the technical assistance programme (SIDSTAP) and the information network for small island developing States (SIDSNET); requested the United Nations Conference on Trade and Development (UNCTAD), in collaboration with the Department for Policy Coordination and Sustainable Development of the United Nations Secretariat, to finalize plans for convening a high-level panel on external trade of island developing countries; and requested the Secretary-General to make provision for the development of a vulnerability index for small island developing States. The Assembly also requested the Secretary-General to report to it at its fifty-first session on action taken to implement the resolution; the present report has been prepared in response to that request.

2. The text of the present report will be posted on the Department's web site at <http://www.un.org/DPCSD>. Interested United Nations and non-United Nations organizations are invited to contribute information, on a continuous basis, on their initiatives to implement the Programme of Action.

### Methodology and structure

3. In the preparation of the present report, the deliberations and decisions of the Commission on Sustainable Development during its initial review of the Programme of Action at its fourth session in 1996 were of considerable relevance. In addition, organs, organizations and bodies of the United Nations system, including relevant regional commissions, were approached for submission of updated accounts of activities undertaken in the context of the Programme of Action. A number of those organizations responded, providing brief reports of activities initiated since June 1995; their submissions served as the sole source of information on their activities for that period. The present report does not repeat information on activities of the United Nations system presented in the previous report of the Secretary-General (A/50/422 and Add.1).

4. Unlike previous reports to the General Assembly on action taken to implement the Programme of Action, the present report includes information on activities undertaken at the regional level under the Programme of Action by non-United Nations intergovernmental regional bodies and by the Governments of a number of small island developing States at the national level.

## II. IMPLEMENTATION AT THE INTERNATIONAL LEVEL

### A. Initial review of the Programme of Action by the Commission on Sustainable Development

5. At its fourth session, in 1996, the Commission on Sustainable Development undertook an initial review of the Programme of Action, in keeping with its decision at its third session held in 1995. The review focused on the following thematic areas: coastal area management; tourism resources; air transport; telecommunication development; natural and environmental disasters; energy resources; maritime transport; and trade-related issues of small island developing States. The outcome of the review is contained in decision 4/16 of the Commission. 2/

### B. Implementation by organs and bodies of the United Nations system

6. Together with the Inter-Agency Committee on Sustainable Development (IACSD) task managers and UNCTAD, the Department provided substantive support to the Commission at its fourth session to facilitate its review of the implementation of the Programme of Action. In response to General Assembly resolution 50/116, the Department has also included in its work programme for the year 1996/97 the development of a vulnerability index for small island developing States and the exploration of modalities for mobilizing resources to implement the Programme of Action.

7. An account of the activities undertaken by other organs, organizations and bodies of the United Nations system in the respective programme areas since mid-1995 is set out below.

#### 1. Climate change and sea level rise

8. The United Nations Environment Programme (UNEP) has reported the commencement of projects on the impacts of climate change in Antigua and Barbuda, and on the strengthening of the tide gauge network for the Global Oceanic Observation System (GLOSS) among Caribbean small island developing States to provide information on sea level rise. It has completed a numerical model to assess the socio-economic impacts of climate change and sea level rise in small island developing States. The organization has continued its assistance to small island developing States in dealing with the phenomenon through studies on the impacts of climate change. The period under review also marked the completion by the United Nations Centre for Human Settlements (Habitat), in collaboration with UNEP, of an overview of the impact of climate change on coastal populations and human settlements. Habitat is currently planning a training programme on capacity-building for settlements planning and sea level rise in small island developing States.

## 2. Natural and environmental disasters

9. Several new actions have been reported under this priority area in the past year. The Department of Humanitarian Affairs of the United Nations Secretariat, in particular the secretariat of the International Decade for Natural Disaster Reduction (IDNDR), provided inputs to the report of the Secretary-General considered by the Commission at its fourth session, and prepared the addendum to that report on natural and environmental disasters in small island developing States. In the area of disaster relief, the Department responded to two disasters in Caribbean small island developing States caused by hurricane Luis and a volcanic activity. The Department was successful in mobilizing resources in cash and kind from the international community in addressing the most urgent needs. IDNDR activities in the Pacific region included convening the Fourth IDNDR Pacific Regional Disaster Reduction meeting; finalization and printing of disaster management plans for four countries; preparation of draft guidelines for disaster mitigation, public awareness, and education and information management; continuation of regional training courses; preparation of country work programmes; and initiation of pilot projects in applied disaster reduction in Fiji and the Cook Islands.

10. UNEP has adapted its Awareness and Preparedness for Emergencies at Local Level (APELL) process for application to port areas. Habitat has extended by three years its support programme to the Caribbean on settlements planning and related environmental management; has completed a proposal for a disaster rehabilitation project for a number of Caribbean small island developing States, in collaboration with UNDP; and is planning the establishment of a Caribbean construction training programme. A number of interventions were made by the United Nations Children's Fund (UNICEF) following natural disasters in small island developing States, which were targeted at Antigua and Barbuda, Saint Kitts and Dominica, following hurricane destruction, and at Papua New Guinea, following floods, landslides and volcanic eruption.

11. Under the Tropical Cyclone Programme of the World Meteorological Organization (WMO), the following events have been organized that either concentrate only on small island developing States or include them: a workshop on tropical cyclone forecasting and warning for the South-West Indian Ocean region; a joint seminar on meteorological and hydrological risk assessment for Asia; a hurricane conference for the Caribbean; and a training course on tropical meteorology and tropical cyclone forecasting. In addition, the Nadi Tropical Cyclone Warning Centre in Fiji has been designated a WMO regional specialized meteorological centre since June 1995. A satellite-based system in the Caribbean came into operation in April 1996, replacing the former terrestrial communications links. WMO has also provided assistance, through its public weather services programme, in the form of: (a) the publication of a guide on public weather services practices; (b) an expert meeting on public weather services and hurricane disaster preparedness, held in Trinidad and Tobago in December 1995; and (c) a training workshop on effective communication techniques and media relations for the Caribbean and the Americas, held in Costa Rica in May 1996. The Intergovernmental Oceanographic Commission (IOC) of the United Nations Educational, Scientific and Cultural Organization has set up the International Tsunami Warning System, which provides for the dissemination of

tsunami watches, warnings and advisory bulletins to member States throughout the Pacific.

### 3. Management of wastes

12. Under this programme area, Habitat is currently implementing projects covering settlements and infrastructure improvements, sanitation, waste-water treatment and solid waste management in Kiribati, Tuvalu and the Marshall Islands in the Pacific, and Grenada and Saint Vincent and the Grenadines in the Caribbean. A workshop on environmental management, focusing on solid waste management and water quality conservation, is planned by UNEP for 1996 for Asia and Pacific small island developing States. The World Bank recently published a paper entitled "Marine outfall", in which the experience of a number of small island developing States was used as examples of the need to improve waste-water treatment and disposal.

### 4. Coastal and marine resources

13. UNEP has reported the following activities: completion of a coastal profile for Grand Comoros; convening of an International Coral Reef Initiative workshop in Seychelles; launching of integrated coastal area management pilot projects in the Dominican Republic, Saint Lucia, and Saint Vincent and the Grenadines, with another planned for the Comoros; preparation of a protocol for land-based sources of marine pollution for the Caribbean; and the strengthening of International Environmental Information System (INFOTERRA) national focal points. The World Bank provided tangible support for a series of international coral reef management workshops convened in a number of small island developing States. The Bank is committed to providing support for the participation of small island developing States from the Indian Ocean and East African region in the forthcoming High-Level Intergovernmental Conference on Follow-up to the Arusha Resolution in Support of Integrated Coastal Zone Management, scheduled to be held in Seychelles in October 1996.

14. The Twenty-Eighth General Conference of UNESCO, held in October and November 1995, adopted as part of its medium-term strategy the six-year multi-disciplinary project entitled "Environment and development in coastal regions and small islands" (CSI). A number of pilot projects are being launched, and some existing projects, particularly in the Caribbean, are being reoriented to address a variety of coastal problems under the rubric of CSI. A draft programme document is being finalized by the Food and Agriculture Organization of the United Nations (FAO) for the establishment of a fisheries technical assistance programme for small island developing States focusing on institutional strengthening and capacity-building, conservation and management of exclusive economic zone (EEZ) fisheries and improved post-harvest management and marketing.

#### 5. Freshwater resources

15. Among the activities planned in this area are the publication in 1996 by UNEP of Sourcebook on Alternative Technologies for Augmenting Freshwater Resources in Small Island Developing States; various UNICEF projects in Haiti, Sao Tome and Principe, and Cape Verde for increasing access to drinking water and sanitation facilities; an International Research and Training Institute for the Advancement of Women (INSTRAW) colloquium on women's relationship to water supply and usage in the Dominican Republic; and a regional training seminar in water resources management for island countries of the Caribbean by the World Bank. INSTRAW and UNICEF jointly convened a workshop on the theme "Women, water and environmental sanitation" during the Fourth World Conference on Women (Beijing, 4-15 September 1995).

16. Other activities reported in this area include the preparation of a Latin America and Caribbean water resources assessment and management action plan by a WMO/Inter-American Development Bank (IDB) conference on water resources assessment and management strategies for Latin America and the Caribbean (May 1996); the proposed implementation of a Caribbean hydrological observation system for countries of the Caribbean Basin by WMO and the World Bank; and the development by UNESCO of a CSI pilot project in Kiribati, Tonga and Solomon Islands, addressing freshwater resource management as an integral part of sustainable development.

#### 6. Land resources

17. In this area, Habitat has expanded its programme on human settlements and related environmental management issues in the Caribbean, in collaboration with the Organization of Eastern Caribbean States (OECS), the Caribbean Community (CARICOM) and UNDP. In addition, it is collaborating with the Caribbean Development Bank and UNEP in formulating integrated settlements and coastal zone management plans in Grenada and Saint Vincent and the Grenadines.

#### 7. Energy resources

18. Under this programme area, UNEP has reported that it is providing assistance and information to small island developing States on energy policies and technologies through its Collaborating Centre on Energy and Environment.

#### 8. Tourism resources

19. UNEP has completed information on environmental codes of conduct for tourism, for dissemination to tourism boards, travel agents and tour operators, and inclusion in environmental action packs for hotels. UNEP/United States Agency for International Development (USAID) pilot case studies on the impacts of tourism activities on coastal and marine resources will be conducted in the Dominican Republic, Haiti and Saint Vincent and the Grenadines. In collaboration with the World Tourism Organization and a European non-governmental organization, UNEP is also developing award schemes to

recognize environmentally sound management of coastal tourist areas and to promote eco-labelling. Other activities being undertaken by the organization in cooperation with the tourism industry associations include the preparation of a booklet on environmentally sound technologies for hotels, the development of a curriculum for use in hotel and tourism professional schools, and the preparation of a case study booklet on successful examples in sustainable tourism.

20. With a view to increasing the representation of Caribbean small island developing States in UNESCO's Biosphere Reserves and World Heritage sites, a World Heritage promotion seminar was held in Saint Kitts and Nevis in March 1996. A regional seminar on cultural tourism was held in Papua New Guinea in December 1995, within the framework of UNESCO's proposed Vaka Moana ocean world programme in the Pacific; the seminar brought together experts from Pacific island States to discuss issues related to the impact of tourism on culture and the environment.

#### 9. Biodiversity resources

21. In January 1996, UNESCO launched an interregional project entitled "Integrated biodiversity strategies for island and coastal areas" with the aim of assisting in the formulation of integrated biodiversity strategies for interregional cooperation between coastal States and islands, and to promote implementation of the Convention on Biological Diversity. The World Bank has prepared a draft operational programme for marine protected areas for potential funding by the Global Environment Facility (GEF) under its biodiversity focal area. The draft programme, if approved for funding, will benefit many small island developing States through the provision of critical support for the establishment and management of such areas. UNEP has produced technical documents on the features of biodiversity in small island developing States using geographical information systems (GIS) databases, and is currently assisting the Bahamas, Antigua and Barbuda, Barbados, Seychelles, Solomon Islands and Vanuatu in developing national biodiversity action plans using GEF resources.

#### 10. National institutions and administrative capacity

22. UNEP has provided assistance to Kiribati for the finalization of a framework for environmental law, and will conduct later in 1996 a needs assessment for Vanuatu. It is currently studying requests for assistance in drafting environmental legislation for the Cook Islands and Tuvalu. As part of its technical cooperation programme, Habitat is supporting several small island developing States in the South Pacific and the Caribbean in building institutional capacity for formulating land-use and settlements development plans, development control and the application of management information systems. The Department of Humanitarian Affairs/UNDP Disaster Management Training Programme is focusing principally on national capacity-building for disaster reduction and management. During the reporting period, national training exercises were conducted in Papua New Guinea, Cuba and member States of the Indian Ocean Commission. Follow-up activities have been initiated at the

national and regional levels after completion of earlier workshops, and include the development of a country action plan for Papua New Guinea. A second phase of national activities has also been initiated for States of the Eastern Caribbean under this programme.

23. UNDP has continued its work in finalizing SIDSTAP, particularly in the assessment of priority gaps in technical cooperation under the Programme of Action in the African and Caribbean regions. For the former, a draft report on the assessment-cum-formulation exercises has been prepared and will be distributed shortly. One objective of the exercise is to seek concurrence on priority needs and subsequently to provide assistance for resource mobilization at the national, regional and international levels.

24. The first volume of the Directory of Institutions and Experts in Small Island Developing States, which has been prepared by UNDP, has been published, with work on the second volume nearing completion. Updating of the SIDSNET feasibility study has been completed and consultations have been conducted with the Association of Small Island States (AOSIS) group in New York on its further development. The United Nations University (UNU) has reported the launching, in June 1995, of its Internet-based Small Islands Network (SIN), designed to strengthen and link research, training and dissemination activities among small island developing States. UNU is considering plans for undertaking a joint project with the UNDP Sustainable Development Network to promote access to information in remote islands in the South Pacific. In March and October 1995, UNU organized two international symposia in Tokyo, on the themes "Small islands and sustainable development" and "Multimedia and human resource development".

25. Several training programmes and other projects aimed at enhancing national capacity in international trade have been conducted by the International Trade Centre (UNCTAD/World Trade Organization), including improvement of import management for Pacific Island countries, which became operational in January 1996; a pre-programming mission to Haiti in September 1995 to identify export/import technical cooperation needs; a trade programme support mission to Jamaica in September 1995; and a series of dissemination seminars and workshops held in the Caribbean between January and July 1996, on the theme "Business guide to the Uruguay Round". Two similar business guide seminars were also held in the Pacific in June 1996. Under the WMO Education and Training Programme, six fellowships were provided for the training of small island developing States participants during the latter part of 1995. INSTRAW, in collaboration with other institutions, prepared a training package on the theme "Women, environmental management and sustainable development".

#### 11. Regional institutions and technical cooperation

26. The UNDP Pacific subregional office is in the process of preparing a Pacific subregional programme. A dialogue on its implementation has begun between its Special Unit for Technical Cooperation Among Developing Countries and the three major intergovernmental bodies of the subregion, namely, the South Pacific Forum (SPF), the South Pacific Regional Environment Programme (SPREP) and the Economic and Social Commission for Asia and the Pacific (ESCAP) Pacific Operations Centre.

27. UNEP is serving as a regional contact point for the International Coral Relief Initiative in the Caribbean. In the African region, the Committee on Island Ecosystems has been established by the African Ministerial Conference on the Environment, with the involvement of UNEP.

28. FAO has established subregional offices for the Pacific (Samoa) and the Caribbean (Barbados) aimed at intensifying partnerships with regional institutions. At a meeting on technical consultations held in Apia, Samoa in May 1996, FAO also developed the Subregional Programme for Sustainable Development in Agriculture, Forestry and Fisheries for the Pacific. Similar technical consultations for the Caribbean are scheduled for 1997.

29. In late 1995, the United Nations International Drug Control Programme (UNDCP) launched a three-year project to support training by the South Pacific Forum secretariat for the enforcement of drug laws. In the Caribbean, a plan of action was adopted by a high-level meeting held in May 1996, focusing on drug controls, demand reduction, legislation, law enforcement and maritime cooperation. The United Nations Population Fund (UNFPA) field office in Jamaica convened a subregional meeting of government and non-governmental organization partners in February/March 1996 to review post-International Conference on Population and Development initiatives and needs and to develop a new subregional programme.

## 12. Transport and communication

30. As task manager for maritime transport, UNCTAD prepared a report entitled "Maritime transport in small island developing States" which was considered by the Commission on Sustainable Development at its fourth session, in 1996. The International Civil Aviation Organization (ICAO) prepared a report on air transport. In addition, ICAO evaluated a study on Pacific airports for the Asian Development Bank, and formulated a flight safety cooperation project for South Pacific States at a meeting held in Vanuatu in November 1995. An ICAO planning mission to Cape Verde in November/December 1995 led to the development of a project document and various project guidelines. In Haiti, ICAO is implementing a project for developing a civil aviation legal code and for familiarizing air traffic controllers with high-density traffic procedures.

31. In addition to its contribution to the Commission's review of the Programme of Action in 1996, the International Telecommunication Union initiated a number of projects in small island developing States, including the establishment of a regional satellite news network in the Caribbean, funding of a workshop in Grenada in 1996 and provision of training courses and fellowships for the region. In the Pacific, the second stage of a project on costing tariffing models in Papua New Guinea, as well as a radio and television master plan for Fiji, were completed in 1996. A study on the expansion of telecommunication services to outer islands was completed for Kiribati, and a study on rural telecommunication development is under way for Solomon Islands. In Africa, the organization provided assistance on tariff matters to Cape Verde. UNESCO provided equipment to national broadcasting systems for small island developing States in the Caribbean, trained news and information personnel, and coordinated community media projects.

### 13. Science and technology

32. UNEP is currently operating a network of cleaner production centres for exchange of information and experience at the international and national levels; one such centre has been established in Malta. Through its INFOTERRA focal point networks in Fiji, Samoa, Maldives and the Caribbean small island developing States, UNEP is supporting the exchange of environmental information services among those countries. Habitat is making available to small island developing States, as part of its operational activities, technical instruments for land-use and settlements planning, and GIS and visual information systems for settlements planning.

### 14. Human resource development

33. In Maldives, UNICEF provided support for on-site teacher training and the development of an accreditation system for in-service training. The organization assisted Cape Verde in conducting a survey aimed at improving educational quality and a study to determine the need for school meals and supplies. It also assisted in mounting a special education pilot project for handicapped children. UNICEF and UNESCO collaborated to support the implementation of an education reform strategy for OECS countries in the Caribbean. UNICEF also presented recommendations on education reform to the Government of Barbados, and supported the development and validation of didactic guides for elementary schools in Dominica.

### 15. Vulnerability index

34. Several organizations have undertaken work on this issue, some of it prior to the Global Conference. For example, UNCTAD and CARICOM commissioned studies in 1992 and 1993, respectively, that have resulted in a seminal literature. <sup>3/</sup> More recently, in 1996 the Commonwealth secretariat commissioned a study (not yet published) on the measurement of the vulnerability of small States. ESCAP has also begun work on a vulnerability index, particularly for Pacific small island developing States. The emerging body of work addresses issues of economic vulnerability, including vulnerability arising from environmental fragility; the incidence of natural disasters on a national scale; smallness; and distance from markets. Issues of economic vulnerability are also addressed in the work of the Committee for Development Planning on criteria for the identification of least developed countries. A working group of the Committee is scheduled to meet from 13 to 15 January 1997 to review the list of least developed countries and consider possible improvements in the criteria for identifying them, as provided for in General Assembly resolution 46/206. Several Committee members have expressed interest in the issue of a vulnerability index for small island developing States. The Department for Policy Coordination on Sustainable Development has planned to convene in 1996/97 an expert group on a vulnerability index, in collaboration with UNCTAD and other relevant organizations, as requested in General Assembly resolution 50/116.

### III. IMPLEMENTATION AT THE REGIONAL LEVEL

35. The present section of the report gives an account of implementation at the regional level. It focuses on the main small island developing States regions for which current data is available, specifically on the activities of the regional commissions and other regional intergovernmental bodies.

#### A. The African region

36. The Economic Commission for Africa has reported that its activities and programmes for implementation of the Programme of Action have continued as reflected in the previous report of the Secretary-General (A/50/422 and Add.1). Those programmes were initiated jointly with UNDP.

37. The Indian Ocean Commission (IOC) is currently in the process of implementing a regional environment programme, entitled "Appui aux programmes environnementaux dans les pays de la COI". The objective of the programme is to provide support to national policies for integrated management of coastal areas, and it is being funded under the financial and technical cooperation provisions of the Lomé IV Convention between the European Community (EC) and the African, Caribbean and Pacific Group of States. The regional programme focuses on the following five areas: elimination and management of solid wastes; elimination and management of liquid wastes; hydrocarbon pollution; air pollution; and water pollution by toxic wastes.

38. Under the Lomé IV Convention, the EC has also provided assistance to Cape Verde and Sao Tome and Principe as part of its regional programmes for West and Central Africa, respectively. Assistance to Cape Verde has concentrated on development of the capital, Praia, and on electricity, drinking water supplies and health care, while assistance to Sao Tome and Principe has supported fisheries development, the protection of forest ecosystems and the revamping of economic infrastructures. In Mauritius and Seychelles, EC resources have been directed to environmental protection and management, and coastal area management for the tourism industry.

#### B. The Caribbean region

39. The subregional headquarters of the Economic Commission for Latin America and the Caribbean (ECLAC) for the Caribbean has directed some of its efforts in the reporting period to a number of publications dealing with matters relevant to small island developing States of that subregion. In addition, a programme of implementation and the necessary institutional mechanisms are in the process of being finalized to facilitate coordination and implementation at the regional level. The proposed structure will include the establishment of a joint coordinating unit and a regional consultative group, while the work programme will emphasize capacity-building, information management, public awareness and financing.

40. The Pan American Health Organization (PAHO), operating as the regional office for the World Health Organization (WHO), provides assistance to Caribbean

small island developing States in the context of the "Caribbean cooperation for health" plan. The specific actions pursued under the plan are in the area of water supply and sanitation, solid waste management, disaster preparedness and response, health services and environmental management. A five-year operational plan has been developed as part of the OECS strategy for sustainable development; the plan centres on the concept of island systems management, and will address resource management priorities identified by the Eastern Caribbean States.

41. The Caribbean will also benefit from a GEF-financed project entitled "Caribbean: planning for adaptation to global climate change". The project was developed and will be managed by the Organization of American States (OAS) as executing agency for the World Bank, with start-up scheduled for September 1996. The project will assist Governments and regional institutions in strengthening capability for monitoring and analysing climate and sea level trends; identify areas vulnerable to the effects of climate change and sea level rise; develop an integrated management and planning framework; enhance regional and national capabilities through human resource development and institutional strengthening; identify and assess policy operations and instruments; and collect information for preparing national communications. OAS has also continued the implementation of a five-year Caribbean disaster mitigation project funded by USAID.

42. EC support has targeted tourism development, trade promotion, infrastructure development, and capacity-building at the national and regional levels. Environmental awareness-building through education and training programmes, institution-strengthening and the development of information systems are expected to benefit from EC regional allocations under the seventh European Development Fund.

### C. The Asia and Pacific region

43. ESCAP has reported the convening in November 1995 of the Ministerial Conference on Environment and Development in Asia and the Pacific. Among other things, the Conference considered actions to achieve the objectives of the Programme of Action. Inputs from Pacific island countries for the Conference were generated through a preparatory meeting held in Port Vila, Vanuatu, organized by the ESCAP Pacific Operation Centre (ESCAP/POC).

44. Other initiatives undertaken by ESCAP were the preparation of a case study on the incorporation of sustainable development considerations into economic decision-making for Solomon Islands and Vanuatu; the preparation of a state-of-the-environment report for Pacific island countries; the organization of several training courses, and the convening of workshops and seminars on trade and investment, tourism, statistics, remote sensing and GIS and other aspects of sustainable development; the publication of manuals and guidelines on hazardous waste management and sustainable tourism development; and the provision of technical assistance and advisory services. Progress has also been made in the development of sustainable development indicators, beginning with data collection in the economic sphere. Efforts are under way to develop a

vulnerability index for Pacific small island developing States. Trial computations have been made for some countries, using selected indicators.

45. EC support to the Pacific, at the regional level, is being provided through SPREP for the protection of biodiversity, coastal zone management and solid waste management. EC assistance has also been provided for sustainable tourism development, fisheries surveillance, and tuna resource assessment.

46. SPREP has reported convening jointly with ESCAP/POC, in October 1995, the first meeting of its Advisory Committee to coordinate and facilitate implementation of the Programme of Action. The SPREP has updated specific regional initiatives in each of the 14 substantive programme areas, including the convening of regional workshops and annual meetings of meteorological service directors and climate scientists in the area of climate change. A strategy for the protection of the marine environment in the Pacific region has been developed through the collaboration of SPREP, the South Pacific Forum secretariat and a number of bilateral and multilateral agencies; implementation of the strategy is expected to commence in the course of 1996. Implementation of the Regional Waste Minimization and Management and Pollution Prevention Programme has recently begun; SPREP is acting as coordinator of the Programme. In the area of management of waste, several training workshops in marine pollution assessment have been held, and a regional programme of targeted waste awareness and education campaigns, to be executed by SPREP, will commence soon.

#### IV. PROGRESS IN NATIONAL IMPLEMENTATION

47. The present section of the report summarizes information on action taken at the national level to implement the provisions of the Programme of Action. Information on national action was received from 12 small island developing States Governments (see list in annex II). That information was supplemented by information made available by the United Nations and non-United Nations regional organizations.

##### A. The African region

48. In the Atlantic, the Government of Sao Tomé and Príncipe is reportedly collaborating with European bilateral agencies and non-governmental organizations in national projects for forestry and environmental protection. The Government has instituted a requirement that investors should report on the environmental impact of their activities.

49. In Cape Verde, activities appear to be focused on the implementation of a long-term tourism development plan that envisages broad improvements in the physical infrastructure of the country, particularly its capital, along with the enactment of appropriate legislation, the establishment of a tourism development fund and improvement in tourism statistical data collection. Implementation of the plan is heavily dependent on funding by bilateral and multilateral sources.

50. In the Indian Ocean, the Government of Comoros has adopted a national environment policy document and an environmental plan of action, which together provide the basis for sustainable development and natural resource utilization policies. A large project for the preservation of biodiversity, to be financed by GEF, has been formulated for approval and implementation. The Government of Mauritius has also embarked on plans and programmes aimed at ensuring sustainable utilization of the country's resources for development. A major focus is on monitoring and controlling developments in the coastal areas. Planning controls are being strengthened to ensure that standards for new developments are adhered to, including restrictions on building height, size, location and use of materials. Laws have been enacted to provide for the issuing of development certificates, which include significant tax exemption and other incentives for compliance. Plans for the construction of hotels are now required to include sewerage treatment facilities as a compulsory element, and the regulation of yachting is to be addressed in legislation currently under consideration.

51. Since the adoption in September 1994 of legislation requiring the conduct of environmental impact assessments for all projects, the Government of Seychelles has directed its efforts at strengthening the regulatory framework for giving effect to the legislation. Meetings were held in December 1995 and March 1996 to discuss the application of the legislation in specific locations, especially sensitive areas. The training of staff in various aspects of the regulations is under way. Specific field activities have been reported, with programmes in pollution control and monitoring; waste management; water resources management; energy policy and conservation; forest management; and marine resources management. In the area of waste management, the Government recently expressed its interest in attracting private investment in developing a solid waste treatment scheme for Mahe, under a build-own-operate-transfer formula. In the area of energy, the Government hopes to secure adequate funding through the United Nations Industrial Development Organization (UNIDO) for implementing an energy conservation and efficiency programme that was designed in 1988 but was never fully implemented because of lack of financing. The current requirement is for US\$ 250,000 in assistance to revise, implement and monitor a downscaled version of the project.

#### B. The Caribbean region

52. A number of legislative actions have been taken by the Government of Barbados. An environmental levy has been introduced to defray the cost of disposal of refuse generated by imported goods. Town and country planning legislation has been amended effective January 1996, making mandatory the provision of water-storage tanks by certain categories of residential, commercial, industrial and other buildings. Also, a final draft of a national building code for Barbados has been completed, and a draft bill on coastal zone management has been prepared by the Government. The bill aims at further strengthening regulations for coastal zone development, and will include a coastal zone management plan and a guide to coastal activities. Consideration is being given to the establishment of a Barbados building authority, with responsibility for implementing the national building code. Technical and

professional staff have been added to strengthen the relevant government ministry dealing with the environment.

53. Other current activities include the ongoing clean-up of beaches and the launching of a community care project with the theme "Our earth, our habitat, our home". A national project, entitled "Environmental management and land-use planning for sustainable development", will commence shortly, and several sectoral projects are at various stages of preparation.

54. In view of the importance of tourism to the Bahamas, the Government of the Bahamas has centred much of its activities on the development of eco-tourism resources, in particular the development and conservation of the resources of its outer islands. It has initiated a project that will include a review of the country's natural resource base; the identification and promulgation of necessary legislation; capacity-building and institutional strengthening; water resource use and waste-water operations; public awareness; and the development of data banks. In Saint Lucia, the conduct of environmental impact assessments has been made mandatory for all investments with the review and updating of the Developmental Control Act. The country's Water and Sewerage Authority Act has also been revised, resulting in the introduction of tariffs for water use. Various other projects are either in place or under review by the Government, including the rehabilitation of sewage treatment and collection, and a coastal zone development project for the island's north-western corridor.

55. The Government of Cuba is in the process of reviewing existing environmental legislation with a view to elaborating a new framework legislation for the environment. A number of changes are already in progress, including the systematic development of technical norms; the passage of legislation in 1995, requiring mandatory environmental impact assessments for a number of economic activities in coastal areas, particularly in tourism; the approval of mining and external investment laws in 1994/95; and the preparation of legislation for coastal areas. A number of fiscal measures have also been instituted, including the introduction in August 1994 of an environmental tax covering the use and exploitation of all natural resources, and the development of a system of economic incentives for marine environmental protection. Additional instruments are being considered in the context of a proposed new law of taxes. The Government has reported much progress in the collection, reuse and recycling of certain industrial wastes, such as paper, cardboard, metals, glass, plastics, tyres, waste oil and lubricating grease. The establishment of a national centre for biodiversity and a biological security group are among the institutional arrangements put in place by the Government of Cuba to oversee the conservation of biodiversity. The Government reported that due to the current economic crisis facing the country and the effects of a trade embargo maintained by the Government of the United States of America, progress in realizing its goals is severely constrained by the lack of finance and appropriate technology.

#### C. The Asia and Pacific region

56. Samoa has reported slow progress in the implementation of its national environmental management strategy in a number of areas, including data collection and national reporting. The main hindrance to progress has been the

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lack of institutional and human resource capacity. However, four priority target environment components are being developed under the strategy's Capacity 21 programme, namely, waste management, population issues, water supply and land use. In 1995, a Montreal Protocol task team involving 12 government departments was established, and has begun work on developing policies and methods to gradually phase out the use of ozone-depleting substances. A draft country programme is being prepared and funding assistance is being awaited from the Montreal Protocol secretariat. A national biodiversity policy committee was formed in December 1995, in keeping with the country's obligation under the Convention on Biological Diversity. A draft document on Samoa's biodiversity conservation strategy is being finalized for implementation and a number of conservation areas are in the process of being established. In the area of climate change, two national workshops have been held and studies have been undertaken on greenhouse gas sources and sinks. Funding has been received through GEF to assist in meeting national reporting obligations under the United Nations Framework Convention on Climate Change. Workshops and programmes on assessing sea level rise activities, vulnerability and adaptation are continuing. In addition, programmes have been developed for water resource management, mangrove conservation and conservation of land resources.

57. Fiji has developed a preparedness plan for oil and chemical spills, but other countries in the Asia and Pacific region remain unprepared for such eventualities. Little has been done to develop national strategies for adaptation to climate change, although it is expected that the foundation for such strategies will emerge from ongoing work on vulnerability to climate change.

58. Samoa has instituted a deposit/refund system for beverage bottles, while Micronesia has taken similar action on aluminum cans. Biological toilets are being tried out in Micronesia, Kiribati and Palau. All the Pacific small island developing States, however, suffer from an acute lack of port facilities for ship-borne waste, mainly due to limited financial and other resources. Similar limitations account also for the absence, in almost all cases, of programmes to promote community participation and raise public awareness in the area of waste management or environmental conservation in the Pacific. Only Papua New Guinea, Fiji and Kiribati have reported progress in implementing integrated coastal area management plans. The lack of data throughout the region for monitoring coastal area management further inhibits progress. The widespread lack of trained personnel, technical equipment and appropriate data on water resources has also meant limited progress in the area of freshwater resources, as well as in land resources.

59. The Government of Maldives has established a task force, which began work in 1996, to review current national legislation on environmental management and examine the adequacy of the country's legislative and institutional frameworks. The Government has established a number of programmes to address beach erosion, and has started a programme of harbour-deepening using innovative methods. In 1995, 15 sites were designated as protected areas under the National Environment Protection Act, but it is felt that there is need for more detailed studies on the country's marine ecosystem before designating additional sites as protected areas.

60. Other initiatives embarked on by Maldives include consultations for preparation of the national Agenda 21 report, begun in December 1995; a million tree programme, initiated in January 1996; an integrated reef resources management programme, and an enabling activity (capacity-building) initiative, with anticipated financing by GEF.

61. The Government of the Marshall Islands has reported that a number of legislative actions have been put in place requiring the conduct of environmental impact assessments for new projects, as well as for general environmental improvements. However, most of those regulations are not observed, mainly due to a lack of resources, both financial and technical, for their enforcement: the shortage of properly trained personnel for undertaking the preparation and review of environmental impact assessments and managing disease identification and control techniques among immigration officials has been identified as a most acute need. Waste management and disposal is another area of great concern for the authorities, given the rapid population growth rate, coupled with the development of the tourism sector and the increased traffic in passenger cruise ships. In order to address some of those weaknesses at the national level the Government has begun to encourage greater community participation in the development process, as well as a greater utilization of traditional knowledge, skills and practices.

#### D. The Mediterranean

62. In Cyprus, national sustainable development efforts in recent years have focused much on reorientation of policies and controls to ensure the long-term protection of the environment and the incorporation of environmental considerations in all economic and developmental activities. The approach is largely based on the recommendations of a major study by the World Bank, which, among other things, gave rise to a series of studies on the use of fiscal instruments for the promotion of environmental policy; a conservation and management plan for the Akamas Peninsula; a coastal zone protection and management plan; and hazardous waste management.

### V. CONCLUSIONS AND RECOMMENDATIONS

#### A. Conclusions

63. The organizations of the United Nations system have begun a number of new initiatives to implement the Programme of Action since mid-1995. Much of the effort has been directed at strengthening institutional and human-resource capacity, which is needed for the effective implementation of the Programme of Action. A number of initiatives have been taken in recent months, particularly at the international and regional levels, to deal with the consequences of climate change and sea level rise, signalling a growing recognition of the critical nature of such phenomena for small island developing States. However, the deep concern about the critical nature of these phenomena persists in small island developing States. The high level of activity at the regional level is especially notable: the relevant regional commissions, as well as several non-United Nations regional and subregional intergovernmental bodies, are

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responding with new programmes and activities aimed mainly at waste management, capacity-building, water and sanitation, disaster preparedness and management of coastal areas.

64. The limited information obtained from national sources shows that a number of small island developing States have begun to implement parts of the Programme of Action that have especially high priority at the national level, including institution-building, particularly the strengthening of legislative frameworks; waste management; coastal area management; and to a lesser extent, the preservation of biodiversity. In order to enable an adequate review of action taken at the national level it will be important for small island developing States' authorities, with the assistance of relevant international organizations, as necessary, to provide information on all their major activities under the Programme of Action.

65. The cumulative record of implementation by the United Nations system since the Global Conference indicates that insufficient attention is being paid to some priority areas of the Programme of Action, in particular transport and communications; tourism; energy; science and technology; biodiversity resources; and climate change and sea level rise.

#### B. Recommendations for future action

66. The information contained in the present report supports the recommendations for future action to implement the Programme of Action contained in decision 4/16 of the Commission on Sustainable Development. 2/ The General Assembly may wish to endorse that decision.

67. The General Assembly may also wish to request the Committee for Development Planning to examine the report and recommendations of the expert group meeting on a vulnerability index for small island developing States, to be convened by the Department for Policy Coordination and Sustainable Development, in collaboration with UNCTAD and other relevant organizations, and may wish to request the Committee to make recommendations for consideration at its fifty-third session.

#### Notes

1/ Report of the Global Conference on the Sustainable Development of Small Island Developing States, Bridgetown, Barbados, 25 April-6 June 1994 (United Nations publication, Sales No. 94.I.18), chap. I, resolution 1, annex II.

2/ See Official Records of the Economic and Social Council, 1996, Supplement No. 8 (E/1996/28), chap. IC.

3/ See, for example, Lino Briguglio, "Small island developing States and their economic vulnerabilities", World Development, vol. 23, No. 9 (1995), pp. 1615-1632.

Annex I

List of small island developing States or areas

Africa

Cape Verde  
Comoros  
Mauritius  
Sao Tome and Principe  
Seychelles

Western Asia

Bahrain

Asia and the Pacific

Cook Islands  
Fiji  
Kiribati  
Maldives  
Marshall Islands  
Micronesia  
Nauru  
Niue  
Palau  
Papua New Guinea  
Samoa  
Singapore  
Solomon Islands  
Tokelau  
Tonga  
Tuvalu  
Vanuatu

Europe

Cyprus  
Malta

The Caribbean

Antigua and Barbuda  
Aruba  
Bahamas  
Barbados  
Cuba  
Dominica  
Dominican Republic  
Grenada  
Haiti  
Jamaica  
Netherlands Antilles  
Saint Lucia  
Saint Kitts and Nevis  
Saint Vincent and the Grenadines  
Trinidad and Tobago  
United States Virgin Islands

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Annex II

List of organizations and Governments that responded  
to the request for inputs to the present report

United Nations

Food and Agriculture Organization  
International Atomic Energy Agency  
International Civil Aviation Organization  
International Telecommunication Union  
International Trade Centre  
United Nations Centre for Human Settlements  
United Nations Children's Fund  
United Nations Conference on Trade and Development  
United Nations Development Programme  
United Nations International Drug Control Programme  
Department of Humanitarian Affairs/International Decade for Natural Disaster  
Reduction  
United Nations Education, Scientific and Cultural Organization  
United Nations Environment Programme  
United Nations Population Fund  
United Nations International Research and Training Institute for the Advancement  
of Women  
United Nations University  
World Bank  
World Health Organization/Pan American Health Organization  
World Meteorological Organization  
Economic Commission for Africa  
Economic Commission for Latin America and the Caribbean  
Economic and Social Commission for Asia and the Pacific

Non-United Nations regional bodies

Indian Ocean Commission  
Organization of American States  
Organization of Eastern Caribbean States  
European Community  
South Pacific Regional Environment Programme

Governments

Bahamas  
Barbados  
Cape Verde  
Comoros  
Cuba  
Cyprus  
Maldives  
Marshall Islands  
Mauritius  
Samoa  
Sao Tomé and Príncipe  
Seychelles