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**AD HOC TECHNICAL EXPERT GROUP ON
ISLAND BIODIVERSITY**
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**REVIEW OF ONGOING WORK ON DIFFERENT THEMATIC AREAS AND CROSS-CUTTING
ISSUES UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY AND RELATED WORK
BEING CARRIED OUT IN THE FRAMEWORK OF OTHER PROCESSES IN ISLAND
ECOSYSTEMS**

Note by the Executive Secretary

EXECUTIVE SUMMARY

1. In its decision VII/31, the Conference of the Parties requested the Ad Hoc Technical Expert Group on Island Biodiversity, among other tasks, to review how ongoing work under the Convention on Biological Diversity and related work in other processes, in particular in the framework of the Barbados Programme of Action, are contributing to the implementation of the three objectives of the Convention in island ecosystems; and identify significant gaps and constraints, relating in particular to mechanisms used to support implementation of the Convention.
2. To facilitate the work of the Expert Group, the Executive Secretary has prepared this note synthesizing information from the second national reports submitted by small island developing States (SIDS) in 2000 and 2001, and more recent information including from the United Nations Environment Programme, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the Food and Agriculture Organization of the United Nations (FAO), the International Coral Reef Initiative (ICRI) and its network, and the International Plant Genetic Resources Institute (IPGRI), some of the key international partner organizations carrying out projects in SIDS.
3. By 2001, most SIDS had not yet reviewed the programmes of work developed under the Convention. However, many of them reported that they accorded high priority to integrated management of marine and coastal ecosystems; coral bleaching; identification of wetlands important for conservation; supply and quality of freshwater; water pollution; sustainable forest management and agroforestry; invasive alien species, including in particular eradication of invasive animals; establishment of protected areas including biosphere reserves, world heritage sites and areas for the protection of endemic species; recovery of threatened species; ecotourism; inventory of species (e.g. threatened and endemic species) and ecosystems of particular interest; monitoring of beach changes; environmental vulnerability index; environmental impact assessment particularly for tourism development and in the field of invasive alien species; and access to genetic resources. For a number of these issues, SIDS are now receiving support from various organizations.

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4. Regarding capacity-building, some initiatives are on the way. They include:

(a) The FAO project on responsible fisheries for small island developing countries, launched in 2002, *inter alia*, to strengthen the capacity of fisheries administrations in SIDS;

(b) The Islands Cooperative Initiative on Invasive Alien Species launched in 2001 to facilitate cooperation and capacity-building in key areas of invasive alien species management on islands;

(c) The Capacity 2015 initiative of the United Nations Development Programme (UNDP), which is meant to respond to the capacity-building needs of countries including SIDS related to the implementation of the Millennium Development Goals as well as the Barbados Programme of Action;

(d) The FAO Plan of Action on Agriculture, which addresses changes in the global trading environment and builds SIDS capacity in the areas of sanitary and phytosanitary measures, technical barriers to trade, property rights, and food control systems and safety, and Codex Alimentarius; and

(e) The Caribbean Planning for Adaptation to Global Climate Change project, designed to prepare Caribbean countries to cope with the adverse effects of global climate change.

5. A number of subregional organizations or projects have been established for mobilizing regional expertise to address common needs in SIDS subregions. They include for example the Caribbean-wide programme involving school students and communities in beach management, which is being expanded to include islands in the Indian Ocean and Pacific regions; and the South Pacific Regional Initiative on Forest Genetic Resources to promote ecologically sustainable development in the forestry sector.

6. Available information indicates that there is a need for enhanced activities in a number of areas of importance for the conservation and sustainable use of biodiversity on islands. These areas include *inter alia*: capacity for the review of decisions of the Conference of the Parties and integration of the most relevant ones into national processes, programmes and plans; adaptation to climate change and natural disasters, and mitigation of their impacts; monitoring of invasive alien species and development of the necessary capacity for their control, preventing their introduction and mitigation of their impacts; knowledge of living freshwater resources; interlinkages between tourism and biological diversity and their consideration in tourism development; desertification and land degradation; taxonomy and inventory of wildlife; and involvement of the private sector and local and indigenous communities in various initiatives relating to the conservation and sustainable use of biodiversity.

7. Among the constraints to the implementation of the Convention on Biological Diversity listed in the Strategic Plan of the Convention, the following, to be considered in the context of the vulnerabilities of island ecosystems, were particularly emphasized in the second national reports prepared by SIDS:

(a) Limited financial resources resulting from a shortage of capacity for the preparation of projects to be submitted to the financial mechanism; lack of integrated and holistic approaches of Global Environment Facility (GEF) programming for island biological diversity, and complex disbursement procedures; administrative and bureaucratic delays for the receipt and management of funds at the national level;

(b) Limited human and infrastructural capacity at the national and subnational levels for implementing the programmes of work and other work requested by the Conference of the Parties, with limited resources for education and public awareness. In the context of the Cartagena Protocol on Biosafety, most SIDS lack an appropriate notification/authorization system required for the regulation of the transportation of living modified organisms;

(c) Lack of collaborative frameworks among SIDS, between SIDS and other countries, and among stakeholders at the national level; and

(d) Absence of operational national clearing-house mechanisms in many SIDS and absence of suitable frameworks for technology transfer.

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I. INTRODUCTION

1. Although the main mandate of the Ad Hoc Technical Expert Group on Island Biodiversity is the development of a programme of work on island biodiversity, the Group was also requested, *inter alia*, to review how ongoing work on the different thematic areas and cross-cutting issues under the Convention and related work being carried out in the framework of other processes, in particular the Barbados Programme of Action, are contributing to the implementation of the three objectives of the Convention in island ecosystems; and identify significant gaps and constraints, paying particular attention to mechanisms used to support implementation (e.g. financial mechanism, clearing-house mechanism, technology transfer, capacity-building).

2. As implied in the mandate of the Group contained in annex II to decision VII/31, the review of ongoing work should draw on material provided by the Secretariat. Accordingly, the Executive Secretary has prepared the present note containing in section II a review of ongoing work in island ecosystems on the different thematic areas and cross-cutting issues of the Convention, and the work carried out in the framework of other processes, in particular the Barbados Programme of Action, and a description of how this work has contributed to the implementation of the three objectives of the Convention in island ecosystems. Section III presents an overview of significant gaps and constraints identified in the implementation of the Convention in island ecosystems.

3. Information contained in the present note is derived mainly from the analysis of the second national reports submitted by SIDS ^{1/} in the framework of the Convention, relevant United Nations publications, ^{2/} submissions from United Nations agencies to the Executive Secretary, ^{3/} and the outcomes of the Island Biodiversity Electronic Forum launched for one month in March 2004. The electronic forum gathered comments and information from different stakeholders interested in the development of the programme of work on island biodiversity, including information on the status and trends of, and major threats to, island biodiversity; case-studies; information on the implementation of the provisions of the Convention in island ecosystems; and proposals for the programme of work on island biodiversity.

II. REVIEW OF ONGOING WORK ON THE DIFFERENT THEMATIC AREAS AND CROSS-CUTTING ISSUES UNDER THE CONVENTION ON BIOLOGICAL DIVERSITY AND RELATED WORK BEING CARRIED OUT IN THE FRAMEWORK OF OTHER PROCESSES AND THEIR CONTRIBUTION TO THE IMPLEMENTATION OF THE THREE OBJECTIVES OF THE CONVENTION IN ISLANDS ECOSYSTEMS

A. *Marine and coastal biodiversity*

Work carried out by island States

4. The programme of work on marine and coastal biodiversity adopted in 1998, and reviewed and updated in 2004, focuses on integrated marine and coastal area management (IMCAM), the sustainable use of living resources, marine and coastal protected areas, mariculture and alien species.

^{1/} SIDS that had submitted their national reports (2001-2002) are the Bahamas, Barbados, Comoros, Cuba, Dominican Republic, Federated States of Micronesia (FSM), Fiji, Grenada, Kiribati, Marshall Islands, Mauritius, Niue, Saint Lucia, Samoa, Singapore, Solomon Islands and Vanuatu.

^{2/} Information was also obtained from the National Assessment Reports of the Barbados Programme of Action submitted by SIDS (Bahrain, Cape Verde, Comoros, Mauritius, Seychelles, Singapore, Antigua and Barbuda, Belize, Cook Islands, Fiji, Marshall Islands, Samoa, Tonga and Tuvalu). These reports are available at: www.sidsnet.org/Mauritius2004/NAR.html

^{3/} Special thanks are extended to organizations that have responded to the call of the Executive Secretary for further information, including UNESCO, UNDP, UNEP and the CARICOM Secretariat.

5. In general, most SIDS recognized in the second national reports that high priority should be accorded to the implementation of this programme of work. However, at the same time, only two SIDS reported having reviewed the programme under consideration (decision IV/5, annex I) and identified priorities for national action. This is not a problem specific to SIDS, but rather a general reflection of the time it takes for a country to review specific decisions of the Conference of the Parties and make them part of their national strategies and action plans. This time lag is considered an impediment to the effective implementation of the Convention.

6. Although most SIDS had not undertaken a review of this programme of work by 2001, they had nevertheless included reference to conservation and sustainable use of biodiversity in their national plans. Moreover, the majority of SIDS reported that they had established or strengthened institutional, administrative and legislative arrangements for the development of integrated management of marine and coastal ecosystems. For instance, Mauritius had initiated an integrated coastal zone management pilot project, funded by the European Union and coordinated by the Indian Ocean Commission. Similar pilot projects were undertaken in all the Indian Ocean Commission member states. Cape Verde in collaboration with the European Union planned and managed an environmental conservation project that produced a strategy for conservation and sustained utilization of existing biodiversity on the islands' coastlines and a plan of action for the islands of Sal, Boavista and Maio. In Seychelles, the Biodiversity Centre (a national project) will address *ex-situ* conservation of coastal and marine resources.

7. More than half of the SIDS are now contributing to the implementation of the work plan on coral bleaching and implementing other measures in response to this problem. For instance in Barbados, a UNESCO-funded project executed by the Coastal Zone Management Unit looks at the incidence and frequency of diseases in coral reefs and utilizes video monitoring of transects as the method of data collection. Members of a local environmental dive club have been trained to assist the Unit in the monitoring programme. In Grenada, the biology unit of the Fisheries Division is participating in researches on coral bleaching and other phenomena such as Black Band and White Band diseases.

8. As far as monitoring activities are concerned, most SIDS with coral reefs have monitoring programmes in place and participate in the Global Coral Reef Monitoring Network, which is a partner of the International Coral Reef Initiative. Some specific activities can also be mentioned in this context. For example, several initiatives were undertaken in the Dominican Republic, such as the creation of catalogues and inventories of marine and coastal protected and endangered species, and reforestation programmes for coastal areas. Kiribati is undertaking biodiversity surveys on terrestrial and marine species that have ecological and cultural importance for local and indigenous communities. Samoa is using a community approach to coral reef monitoring.^{4/} Seychelles established in 1998 the Seychelles National Coral Reef Network to coordinate coral reef monitoring at national level. There are also ongoing inventory and assessment projects, of which main output would be the production of a national list of terrestrial and marine flora and fauna species.

Work supported by partner organizations

9. International organizations and initiatives, regional organizations, such as the regional seas conventions and action plans, local governments, research and non-governmental organizations, collaborate to the implementation of the programme of work.

10. In response to the specific environmental and sustainable challenges of SIDS, UNEP is revitalizing its assistance through the regional seas programmes. This will lead to improved and coordinated regional implementation of international agreements, programmes and initiatives related to oceans and seas. At regional levels, the regional seas conventions have provided an important mechanism to address coral reef issues in SIDS, as well as the regional development of marine and coastal protected areas and other activities implementing the Convention on Biological Diversity. For instance, the

^{4/} Payet, R A. (2004) "Coral Reefs in Small Island States: Status, Monitoring Capacity and Management Priorities", *INSULA: International Journal of Island Affairs*, February 2004.

regional seas network with support of the UNEP Coral Reef Unit provides an effective network for the implementation of key global programmes such as the International Coral Reef Initiative (ICRI), a main partner in implementing the Convention's coral reef related activities. ICRI has recognized operational networks to assist in implementation of actions set out in the Barbados Plan of Action and the Jakarta Mandate on the conservation and sustainable use of marine and coastal resources, such as the Global Coral Reef Monitoring Network (GCRMN) and the International Coral Reef Action Network (ICRAN).

11. The UNEP Global Programme of Action for the Protection of Marine Environment from Land-based Activities (GPA) harmonizes SIDS activities supported by UNEP. A major activity carried out by the GPA Coordination Office together with the Global Forum on Oceans, Coasts and Islands is the undertaking of several policy analyses (e.g. examination of how Type II initiatives adopted at the World Summit on Sustainable Development correspond to the SIDS targets and timetable agreed to in the Johannesburg Plan of Implementation) to identify possible gaps, financial needs, priorities and worldwide initiatives that can assist SIDS in addressing their environmental concerns. The GPA has recently published a review *UNEP's Assistance in the Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States* (2004), as a contribution to the preparations for the Mauritius Meeting. ^{5/}

12. Within UNESCO, ^{6/} the Intergovernmental Oceanographic Commission (IOC) provides a primary focus for improving scientific knowledge and understanding of oceanic and coastal processes. Among the initiatives supported by the Commission is the abovementioned Global Coral Reef Monitoring Network (GCRMN), cosponsored by UNEP, the World Bank and the World Conservation Union (IUCN). The Global Coral Reef Monitoring Network is responsible for the biennial publication on the Status of Coral Reefs of the World, the most recent version of which includes information on the status and changes of coral reefs in 36 SIDS.

13. Another initiative within UNESCO is the IOC/World Bank Study Group on Coral Bleaching and Local Ecological Responses. The group was set up in 2000, with the purpose of integrating, synthesizing and developing global research on coral bleaching. Among its specific objectives is the development of different indicators of coral bleaching at the molecular, cellular, physiological and community levels, capable of detecting stress responses due to changes in variables such as sea surface temperature and ultraviolet radiation.

14. In terms of intersectoral cooperation within UNESCO, the Coastal Regions and Small Island (CSI) Initiative was set up with the aim of catalysing joint action among sectors in headquarters and field offices in the various regions of the world. This initiative is promoting field projects addressing different aspects of problems shared among UNESCO chairs and university arrangements that work on cross-disciplinary expertise. These include contributions to the discussion forum on wise coastal practices and field experience in such locations as Portland Bight in Jamaica and the Surin Islands in the Andaman Sea, Thailand.

15. As part of the UNESCO CSI platform, two long-term initiatives in the Caribbean are focused on monitoring coastal marine productivity of mangroves, seagrasses and coral reefs, and on managing beach resources and planning for coastline change. The latter initiative, which focuses on capacity building in all sectors of society, has joined with the Associated Schools Project Network to implement a Caribbean-wide programme involving school students and communities in beach management. The programme is also being expanded to include islands in the Indian Ocean and Pacific regions.

16. In 2002, FAO initiated a project on responsible fisheries for small island developing countries, focusing on the implementation of the FAO Code of Conduct for Responsible Fisheries to strengthen the capacity of fisheries administrations in SIDS in order to promote social and economic development.

^{5/} This publication is available at: <http://www.gpa.unep.org/sids/documents/UNEP-SIDS2004.pdf>

^{6/} For an updated overview of UNESCO's work promoting sustainable development on island environments, territories and societies, please visit the portal that has been created for the BPoA+10: <http://portal.unesco.org/islandsBplus10>.

17. IOC/UNESCO, FAO and UNEP have been actively implementing initiatives that use the IMCAM framework. In addition, many regional seas undertake IMCAM-related activities. For example, the Caribbean Environment Programme is coordinating a number of regional-level IMCAM initiatives. These include projects of the Global Environment Facility (GEF) on reducing pesticide run-off to the Caribbean Sea and on integrating management of watersheds and coastal areas in Small Island States in the Caribbean. A broader regional initiative for ocean management is demonstrated by the Pacific Islands Regional Ocean Policy, which provides a basis for harmonization that strengthens national and regional actions in relation to ocean and coastal resources.

B. Inland water ecosystems

Work carried out by island States

18. Most SIDS have not yet reviewed the programme of work on inland water ecosystems as requested in annex I to decisions IV/4, at the time of submitting the second national report. However, most SIDS have included inland water biological diversity considerations in their work and have started developing national plans for the conservation and sustainable use of inland water ecosystems. For example, in Saint Lucia, the Water Resources Management Unit under the Ministry of Agriculture, Forestry and Fisheries is working on a project titled "Integrating the Management of Watersheds and Coastal Areas in St. Lucia". Selected areas have tentatively been identified to serve as pilot study areas. The Bahamas addressed consideration of inland water biodiversity as part of their commitment to the Ramsar Convention and the National Creeks and Wetlands Restoration Initiative (NCWRI).

19. Although most SIDS are not participating in the River Basin Initiative, most of them have initiated assessments of the status of island water biological diversity and half of them considered as a priority the identification of important areas for conservation, and the preparation and implementation of watershed, catchment and river basin management plans, in their requests for support of projects relating to inland water ecosystems from the Global Environment Facility (GEF). Since 1997, after the creation of the National Committee of Hydrographical Basins, Cuba initiated a process of environmental assessment in the main hydrographical basin of the country. Biological diversity was identified as one of the key elements to assess. In Fiji, a committee supported by the World Wide Fund for Nature (WWF) has collected information on various wetlands in the country and the type of biological resources found in particular sites. In Grenada, the Forestry Department has initiated a research programme to identify and catalogue all species of fauna found in inland water ecosystems. In Mauritius, numerous studies have been commissioned regarding the management and sustainable use of both surface and underground water resources. However, living freshwater resources have only been little studied.

Work supported by partner organizations

20. UNESCO's contribution to the development of approaches for sound water management is channelled primarily through the International Hydrological Programme (IHP) and through the World Water Assessment Programme (WWAP), which is a network of 23 United Nations bodies and programmes. Cross-cutting activities related to freshwater resources in small islands and sectors such as cities and tourism, biodiversity have also been promoted through the CSI platform.

21. Within the International Hydrological Programme, following an earlier (1991) wide-ranging review on the hydrology and water resources of small islands, work related to freshwater resources in small islands has included both reviews in particular technical areas and support to field operations, such as training activities of various kinds. At the regional level, in the Pacific, a series of studies have been carried out under the auspices of the IHP Pacific Working Group, including work on catchments and communities (Solomon Islands, Vanuatu), atoll groundwater recharge (Kiribati) and groundwater pollution (Tonga).^{2/}

^{2/} Findings and recommendations of several studies have been published by the IHP at:
www.unesco.org/water/ihp/index.shtml

22. Within the IHP network, UNESCO is involved in developing the tools and skills needed to achieve a better understanding of the basic processes, management practices and policies that will help improve the supply and quality of global freshwater resources. As part of the World Water Assessment Programme, a wide-ranging assessment of freshwater resources has been undertaken, culminating in the publication of the first World Water Development Report entitled *Water for People, Water for Life*. The report incorporates a number of experiences from individual SIDS in the use of freshwater resources.

23. UNEP is carrying out the GEF-funded Global International Waters Assessment (GIWA) directed at developing a global assessment of water resources, focusing primarily on freshwater systems and coastal areas, and aimed at identifying priorities for supporting projects within the international waters portfolio of GEF. GIWA focuses on five critical water-related issues: (a) freshwater scarcity; (b) pollution; (c) habitat modification and destruction; (d) over-exploitation of fisheries and other living aquatic resources; and (e) global changes. GIWA is being executed in 66 subregions in nine major regions, which cover most of the SIDS. ^{8/}

24. "Water quality" is being developed as a potential indicator for achieving sub-targets set under the 2010 biodiversity target of the Strategic Plan of the Convention (decision VII/30, annex). The UNEP Global Environment Monitoring System (GEMS) Water Programme already compiles water quality data submitted by countries. Data for water quality indicators for contributing SIDS can be disaggregated in future analyses.

25. As access to freshwater is a key issue in many islands, to demonstrate the effectiveness of rainwater harvesting and to boost women's role in water management, UNEP is working with the South Pacific Applied Geosciences Commission and the Tonga Community Development Trust in a project funded by the Swedish Government.

C. Agricultural biodiversity

Work carried out by island States

26. As stated in their second national reports, SIDS have different opinions on the priority that should be accorded to the programme of work on agricultural biodiversity. In general, they all consider that resources available for meeting the obligations and recommendations are generally limited. This is also reflected by the fact that most of the SIDS have not reviewed the programme of work (as contained in the annex to decision V/5) and identified how they can collaborate in its implementation. In most SIDS identification of issues and priorities is in progress, and methods and indicators to monitor the impacts of agricultural development projects, including the intensification and extensification of production systems, are in an early stage of development. SIDS have also started establishing or enhancing mechanisms for increasing public awareness and understanding the importance of sustainable use of agrobiodiversity components. However, although most SIDS are promoting the transformation of unsustainable agricultural practices into sustainable production practices adapted to local biotic and abiotic conditions, only two SIDS have developed strategies, programmes and plans which ensure the development and successful implementation of policies and actions that lead to the sustainable use of agrobiodiversity components. Most SIDS reported promoting the mobilization of farming communities for the development, maintenance and use of their knowledge and practices in the conservation and sustainable use of biological diversity.

27. The majority of SIDS did not carry out scientific assessments on ecological, social and economic effects of genetic use restriction technologies (GURTs) and have not identified the ways and means to address the potential impacts of genetic use restriction technologies on *in situ* conservation and sustainable use, including food security, of agricultural biodiversity. In Mauritius, in 1999, the Sugar Industry Research Institute prepared the report *National Biosafety Guidelines for the Safe Development and Introduction of Genetically Modified Organisms in Mauritius* with financial assistance from

^{8/} UNEP's Assistance in the Implementation of the Barbados Programme of Action for the Sustainable Development of Small Island Developing States, GPA, 2004:50.

UNEP/GEF. The guidelines describe procedures that are authorized for the safe application of genetic modification techniques in Mauritius and recommend practices and precautionary approaches to ensure the safe use and development of genetically modified organisms (GMOs) on the island.

SIDS and the Cartagena Protocol on Biosafety

The objective of the Cartagena Protocol on Biosafety is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms (LMOs) resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking into account risks to human health, and specifically focusing on transboundary movement.

In general, SIDS face tremendous challenges to translate the obligations under the Biosafety Protocol into national implementation. Most of them do not have legal and technical capacity to manage and control the risks that may be brought about by LMOs on the often unique and endemic biodiversity in their islands. As most transboundary movements of LMOs are effected by shipping, SIDS have concerns on what appropriate emergency measures to be undertaken to deal with the transit of LMOs in particular the incidents of unintentional release of LMOs that may happen during transit of ships (carrying such products) in their ports.

Another difficult issue for SIDS is the question of bilateral trade agreements with countries that export living modified organisms (LMOs). The challenge is how to maintain good trade relationship with those countries, with respect to the import of LMO products, so as not to be accused of contravening WTO agreements, for example. At the same time, most SIDS lack an appropriate notification/authorization system, as required by the Biosafety Protocol, to regulate the transportation of LMOs. In this respect, SIDS have particular concerns on the need to strengthen regional cooperation with the aim to develop a harmonized regulatory framework for LMOs and on how they could influence the international process to meet their interests.

As of 18 June 2004, twenty SIDS were Parties to the Biosafety Protocol. Some have not yet joined but participate in the relevant meetings and are developing national biosafety frameworks. However, almost all SIDS are unable to effectively manage their Exclusive Economic Zones.^{9/}

Work supported by partner organizations

28. Within the United Nations system, FAO is the task manager for the chapter on Land Resources within the Barbados Programme of Action. Specific activities have included the convening in March 1999 of a Special Ministerial Conference on Agriculture in Small Island Developing States and the preparation of overviews on the status of the environment and natural resources in SIDS, including a wide range of issues related to sustainable agriculture and rural development.

29. The main achievements made under the different priority areas of the FAO Plan of Action on Agriculture in SIDS focus on (i) global trading environment; (ii) sustainable agriculture; (iii) fisheries needs; (iv) forestry, environment and natural hazards; and (v) institutional strengthening. FAO is responding to the increased SIDS vulnerability of intensive agricultural systems by building on and enhancing traditional production systems, reviving interest in traditional food crops, and developing integrated approaches to pest and production management, as well as to land and water management.^{10/}

^{9/} As the financial mechanism of the CBD, the GEF is also called upon to serve as the financial mechanism of the Protocol. In order to assist GEF eligible countries to prepare for the entry into force of the Cartagena Protocol, the UNEP/GEF decided to support projects on the development of national biosafety frameworks (NBFs). For updated information on the situation of the implementation of the Biosafety Protocol in SIDS, consult the report of the Subregional Workshop for SIDS on Development of a Regulatory Regime and Administrative Systems for National Biosafety Frameworks (NBFs), May 11-14, 2004, Port of Spain, Trinidad and Tobago; and the report of the Subregional Workshop for SIDS on Risk Assessment and Management and Public Awareness and Participation, February 18-21, 2003, Sigatoka, Fiji, which are available at: <http://www.unep.ch/biosafety/devdocuments.htm>

^{10/} *FAO and SIDS: challenges and emerging issues in agriculture, forestry and fisheries*, Paper prepared by FAO on the occasion of the Inter-Regional Conference of Small Island Developing States, Bahamas, 26-30 January 2004.

30. As a response to the growing vulnerability of SIDS, FAO is also working on improving capabilities of national Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS). These tools aim at addressing the relative poverty and food insecurity which are emerging issues in SIDS. FIVIMS has been implemented in pilot SIDS as a means of reducing food insecurity and in order to allow donors and technical agencies to effectively respond to changing circumstances of individual countries.

31. Of major relevance to the Caribbean Community (CARICOM)^{11/} is the Caribbean Agricultural Science and Technology Networking System (PROCICARIBE),^{12/} an institutional framework for the integration and coordination of agricultural research at the national and regional levels with linkages to international organizations. PROCICARIBE aims to develop a science and technology system among public and private agricultural entities and NGOs, to support agriculturally based industries attain international competitiveness and the sustainable development of the Caribbean's agricultural sector while ensuring food security, poverty alleviation and environmental sustainability.

32. A few projects support the management of crop diversity in agroecosystems in SIDS. Madagascar, together with the International Plant Genetic Resources Institute (IPGRI), has carried out work in support of *in situ* conservation of crop wild relatives. Cuba, with IPGRI, maintains projects focusing on enhancing home garden biodiversity to improve family nutrition and income. In Guyana, research focuses on the dynamics of cassava genetic diversity. In Fiji, taro projects focus on on-farm conservation of taro. In Papua New Guinea, focus is on identifying and promoting profitable agrobiodiversity rich management systems and techniques (with the UNU/PLEC).

33. The People, Land Management and Ecosystem Conservation (PLEC), a United Nations University (UNU) project, addresses sustainable and participatory approaches to conservation of biodiversity, within small farmers' agricultural systems. PLEC includes field activities and demonstration sites in Jamaica (lower valley of the Rio Grande) and Papua New Guinea (mainly, Tumam-Nghambole in East Sepik Province). In response to a strong demand for models of biodiversity management in agricultural ecosystems, PLEC is identifying, testing and promoting locally developed management practices that combine traditional knowledge and approaches with new knowledge and technologies; and embrace ecosystem functions and processes for enhancing livelihoods, principally through optimal degree of structural, spatial, temporal, trophic, species and genetic diversity.

D. Forest biological diversity

Work carried out by island States

34. High priority is accorded in many SIDS to the implementation of the programme of work on forest biological diversity. However, until 2001, only two SIDS had reviewed the programme of work developed in 1998 (decision IV/7, annex).

35. In general, actions taken at the national level in SIDS to address the conservation and sustainable use of forest biological diversity conform to the ecosystem approach and take into consideration the proposals for action formulated by the Intergovernmental Panel on Forests and the Intergovernmental Forum on Forest. SIDS have also taken some measures to strengthen national capacities including local capacities to enhance the effectiveness and functions of forest protected area networks, as well as national and local capacities for implementation of sustainable forest management, including restoration.

36. In Kiribati, the Government carries out activities promoting the importance of trees and agro-forestry. Examples include studies on mangrove forests and the establishment of nurseries for native and indigenous trees as well as the conservation of *Pisonia grandis* forest.

11/ The membership of the CARICOM comprises Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, Montserrat, Saint Lucia, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

12/ For further information on this initiative, please consult: <http://www.procicaribe.org/>

Work supported by partner organizations

37. In 2002, FAO published a report *Forests and Forestry in Small Island Developing States* (2002), which provides an overview of the many current and potential roles of forests and trees in SIDS, as well as the major constraints and opportunities for the sustainable management of these resources.

38. Among the priority areas identified in the FAO Plan of Action on Agriculture in SIDS is the need to ensure the sustainable management of forestry resources, environmental protection and mitigation of damage to natural resources. FAO programmes are targeted at promoting sustainable management of forest resources through a holistic and integrated approach in the use of forest and tree resources to provide a wide range of wood and non-wood forest products, while simultaneously maintaining their environmental and socio-economic functions (such as rehabilitation of forestlands, coastal protection and ecotourism). However, many SIDS do not yet participate in any of the nine ongoing processes involving the development of criteria and indicators for sustainable forest management, although some countries may be active in developing their own criteria and indicators. ^{13/}

39. FAO has also provided assistance to forestry legislation and has participated in developing the Code of Practice for Forest Harvesting in Asia and the Pacific.

40. As an effort to contribute to the preparations for the review of implementation of the Barbados Programme of Action, member countries to the United Nations Forum on Forests (UNFF) recently held, during its fourth session in May 2004, a panel discussion on current experiences and lessons learned on the role of forests in SIDS.

41. Within the Global 2000 assessment recently completed in 2001 by the World Wildlife Fund (WWF), a large number of island forest ecosystems throughout the world are included to ensure that these ecosystem types are being represented within regional conservation and development strategies.

E. Biodiversity of dry and sub-humid lands

Work carried out by island States

42. The programme of work on dry and sub-humid lands includes drylands, Mediterranean, arid, semi-arid, grassland and savannah ecosystems (decision V/23, annex). In their second national reports, many SIDS indicated they accorded low priority to this programme or considered it not relevant in their countries. Desertification and land degradation are, however, important threats to dryland biological diversity in SIDS. Soil degradation and the loss of productivity both in natural and agricultural ecosystems are major concerns and are intimately linked to degradation of biodiversity resources. Desertification is a growing problem in the Caribbean region. Large areas of this region consist of arid, semi-arid and dry sub-humid lands and most countries have areas falling within the drylands category. A number of SIDS containing dry and sub-humid land ecosystems and biodiversity received general support for the formulation of the national biodiversity strategies and action plans and assessments of capacity-building needs from GEF, it is apparent that biodiversity related issues pertaining to dry and sub-humid lands represent an important issue to SIDS, particularly in the Caribbean region. However, resources allocated to implementation are scarce. Most SIDS are also not supporting scientifically, technically and financially, at the national and regional levels, the activities identified in the programme of work and they are not fostering cooperation for the regional and subregional implementation of the programme among countries sharing similar biomes.

43. SIDS representatives at the AHTEG on dry and sub-humid lands ^{14/} (i.e. from the Seychelles and the Bahamas) emphasized the importance of the programme of work especially in linking the Convention

^{13/} FAO/ITTO Expert consultation on criteria and indicators for sustainable forest management; Cebu City, Philippines, 2-4 March 2004.

^{14/} The second meeting of the AHTEG on dry and sub-humid lands took place in Montreal, Canada, 23-27 September 2002.

on Biological Diversity and the United Nations Convention to Combat Desertification (UNCCD) through the joint work programme between the two conventions.

Work supported by partner organizations

44. In order to implement the United Nations Convention to Combat Desertification (UNCCD), countries of the region requested the UNDP Drylands Development Centre ^{15/} to support this process. In the Dominican Republic, UNDP is funding a project for the UNCCD implementation, with focus on partnership building, gender and promotion of the role of women, community participation and participation of NGOs and other civil society groups.

45. In Grenada, a World Bank/GEF facilitated project has focused on the conservation of dry forest biodiversity. Another project of relevance to SIDS is the Land-Use and Land-Cover Change (LUCC), a joint endeavour between the UNESCO-IHDP on Global Environmental Change and the International Geosphere-Biosphere Programme (IGBP). LUCC aims to improve the understanding of the dynamics of land-use and land-cover change and their relationships with global environmental change.

F. Protected areas

Work carried out by island States

46. As reported in the second national reports, most SIDS are developing protected area systems aiming at conserving biological diversity. In eight SIDS, national protected area systems are already in place. For instance, in April 2002, the Bahamas added 10 new parks to its national system.

47. The majority of SIDS have adopted guidelines for the selection, establishment and management of protected areas. Measures, although considered not comprehensive by most SIDS, have been established for the promotion of environmentally sound and sustainable development in areas adjacent to protected areas. In the National Parks Act of 1994, Mauritius included guidelines and measures for the establishment of buffer zones in areas adjacent to protected areas and the application of environmental clearance or environmental impact assessment processes by competent authorities to undertakings whose proposed location is situated adjacent to protected areas.

48. Similarly, some measures are in place to promote the recovery of threatened species. For instance, in the Bahamas the National Creeks and Wetlands Restoration Initiative (NCWRI) was launched to re-link isolated wetlands to the ocean. Most SIDS reported having developed and implemented the necessary legislation and/or other regulatory provisions for the protection of threatened species and populations.

49. A number of island States such as Cuba and Samoa adopted the "micro-reserve" approach for the conservation of endemic species, supported by *ex-situ* programmes. Tuvalu has established a protected area on a number of islets in the Funafuti Atoll. This is an important step in restricting access and protecting the marine and island biodiversity of the coral atolls. Some land-based protected areas have also been established and managed by local councils (Kaupulu).

50. Several SIDS have also embarked on joint activities developed in collaboration with non-governmental organizations, for the establishment of protected areas. For instance the Federated States of Micronesia (FSM), in partnership with The Nature Conservancy, is implementing a process to identify high biodiversity areas which can be considered for protection. In Fiji some organizations such as WWF, other NGOs and government institutions are working with communities in rural areas for the conservation of wetlands and the establishment of marine protected areas.

Work supported by partner organizations

51. The UNESCO Convention on the Protection of the World Cultural and Natural Heritage provides a framework for international cooperation in contributing to the protection of the world's natural and

^{15/} For more information please consult: <http://www.undp.org/drylands/a-where-lac.htm>

cultural heritage. The focus is on sites of outstanding and universal value. The World Heritage list includes insular sites listed specifically for their biological processes and biodiversity values such as Fraser Island and Lord Howe Island group (Australia), Cocos islands (Costa Rica), Desembarco del Granma National Park and Alejandro de Humboldt National Park (Cuba), Morne Trois Pitons National Park (Dominica), Galapagos National Park and Marine Reserve (Ecuador), New Zealand Sub-Antarctic Islands, Aldabra Atoll and East Rennell (Solomon Islands).

52. UNESCO is promoting the use of biosphere reserve to enhance sustainable development and biodiversity conservation in small-island settings. UNESCO is also encouraging new nominations for potential biosphere reserves in SIDS, including support to community-based conservation areas. The World Network of Biosphere Reserves designed under the UNESCO-Man and the Biosphere (MAB) Programme, consists of over 440 sites in 97 countries and territories. Biosphere reserves from many SIDS (Cuba, Dominica, Mauritius, US Virgin Islands) are included in the network.

53. The UNEP-WCMC worked with the South Pacific Regional Environment Programme (SPREP) and the IUCN World Commission on Protected Areas to produce a database and a publication containing information on protected areas of the Pacific Islands. ^{16/} Although this information requires updating, it remains the only source of systematic information on the region's protected areas. Similar work was initiated in the Caribbean, in partnership with the UNEP Regional Coordinating Unit (RCU) based in Jamaica.

54. One of the pioneering endeavours to safeguard and develop a strong regional capability for the coordination of information exchange, training and technical assistance in support of national biodiversity conservation efforts in the Caribbean is the UNEP regional programme for specially protected areas and wildlife (SPAW) in the Wider Caribbean. This programme contributed to the management of national protected areas and species in the region, including the development of biosphere reserves and national management plans targeting endangered, threatened or vulnerable species. The SPAW programme supports the implementation of global conventions and initiatives such as the Convention on Biological Diversity, the International Coral Reef Initiative (ICRI) and the Global Coral Reef Monitoring Network (GCRMN). It provides specific and concrete guidance, in particular regarding protected area establishment and management, as well as species and coastal ecosystems management and conservation. A Memorandum of Cooperation was signed between the Secretariat of the Convention and UNEP Caribbean Regional Coordinating Unit to assist with the implementation of the Convention at the regional level.

G. Invasive alien species

Work carried out by island States

55. High priority is accorded by SIDS to the implementation of Article 8(h) to prevent the introduction of, and control and eradicate, alien species that threaten ecosystems, habitats or species. However, in the majority of SIDS, risks posed by the introduction of invasive alien species have been assessed only for some species of concern. By 2002, only in two SIDS comprehensive measures were in place to prevent the control or eradicate those species, which threaten ecosystems, habitats, and species. At the time of the submission of the second national report, only few SIDS were considering the interim principles for the prevention, introduction and mitigation of impacts of invasive alien species developed under the framework of the Convention, and only one country was actively implementing the principles in different sectors. SIDS use the ecosystem approach and the precautionary and bio-geographical approaches in their work on invasive alien species.

56. Various projects at the national, regional and subregional and international levels to address the issue of invasive alien species have now been implemented or are under preparation in the majority of SIDS.

^{16/}

Consult the information available at: http://www.unep-wcmc.org/protected_areas/data/pacific/

57. The Bahamas is developing a “comprehensive tracking system”, addressing in particular the introduction of known invasive alien species for landscaping purposes or as pets. The Dominican Republic is developing a project for an information network on invasive species, as part of the Inter-American Biodiversity Information Network (IABIN). A melon fly eradication project has been successfully carried out in Okinawa Islands and led to the increase of agricultural production. The Government of the Seychelles also led in 2000 a three-island rat and cat eradication campaign to enable the reintroduction of endangered bird species. In Mauritius, an integrated pest management programme and a fruit fly control programme are under implementation. An inspection and quarantine system was established in 2000 based on Ecuadorian legislation passed in 1998 and funded from fees collected from visitors to the Galapagos National Park. Pacific islands countries and territories (PICT) have established a Plant Protection Service in Fiji to limit the incursion of potential invasive alien species.

58. Most SIDS have also developed a number of initiatives for education, training and policy-public awareness concerning this issue. For instance, the Government of Mauritius has prepared and disseminated a number of pamphlets to this end.

59. In 2001, small island States and States with islands established an island cooperation initiative with the support of New Zealand, the IUCN Invasive Species Specialist Group and the Global Invasive Species Programme. The objective of the Islands Cooperative Initiative on Invasive Alien Species is to facilitate cooperation and capacity-building in key areas of invasive alien species management on islands. This will generate a significant improvement in the conservation of island biological diversity, ecosystem restoration and sustainable livelihoods. The scope of cooperation and capacity-building includes the full suite of management activities: prevention, eradication and control. The initiative builds on work already occurring, particularly in relation to island eradications; as well as long-term results from increased knowledge, capacity and cooperation. The initiative is focused on promoting awareness of invasive alien species impacts and support to their management; facilitating training and skills sharing programmes; sharing existing technical information and knowledge; promoting partnerships, research and adaptive management. ^{17/}

60. A Pacific Programme of the Cooperative Initiative on Invasive Alien Species on Islands is currently being developed as a WSSD Type II Partnership with multi-year funding support from the New Zealand’s International Aid and Development Agency (NZAID) and other partners, including NGOs, the University of Auckland, SPREP, the Secretariat of the Pacific Community, The Nature Conservancy and Conservation International.

Work supported by partner organizations

61. SPREP has developed a regional invasive species strategy and is conducting training of countries’ quarantine personnel to address issues relating to biodiversity needs.

62. UNESCO is contributing to field projects on the eradication of invasive species and protected area management in SIDS. An example of this work is provided by the World Heritage supported work at the Aldabra Atoll, the Seychelles. Also, the Galapagos Islands is among the World Heritage sites where a major partnership project is under way, involving the World Heritage Centre, the Charles Darwin Foundation and the United Nations Foundation. This partnership focuses on the control and eradication of introduced species, the most significant threat to biodiversity in those islands.

H. Traditional knowledge

Work carried out by island States

63. The majority of SIDS have not reviewed the programme of work developed by the Convention on Article 8(j) and related provisions (contained in the annex to decision V/16, annex) and have therefore not

^{17/} A detailed description of the Islands Cooperative Initiative on Invasive Species is available at www.issg.org/islandIAS.html

yet identified how to implement the tasks appropriate to national circumstances. Most SIDS lack national legislation and corresponding strategies for the implementation of Article 8(j).

64. In their second national reports, only four SIDS reported exchanging information with specific countries on traditional knowledge.

65. Most SIDS also reported not having allocated appropriate financial resources to the implementation of this programme of work. Moreover, the majority of them have not identified resources for funding activities identified in the programme of work. As far as participation to the Convention process is concerned, most SIDS reported having taken some measures to facilitate the full and effective participation of indigenous and local communities in the implementation of the Convention, although only one country reported having a representative of indigenous and local community organization participating in official delegations to meetings held under the Convention on Biological Diversity.

Work supported by partner organizations

66. The UNESCO Local and Indigenous Knowledge Systems in a Global Society (LINKS) project focuses on this interface between local and indigenous knowledge and the Millennium Development Goals (MDGs) of poverty eradication and environmental sustainability. It addresses the different ways that indigenous knowledge, practices and worldviews are drawn into development and resource management processes. It also considers the implications this may have for building equity in governance, enhancing cultural pluralism and sustaining biodiversity. UNESCO-LINKS is launching a pilot project to assist Vanuatu in redesigning science curricula to incorporate key elements of the vast body of indigenous knowledge that continues to thrive in the archipelago. By presenting indigenous and scientific knowledge systems side-by-side, it is hoped that the youth of Vanuatu will draw pride in their indigenous cultural heritage and make use of both local and scientific knowledge when making decisions on environmental issues. ^{18/}

67. UNESCO has also addressed the restitution and promotion of dormant wise indigenous practices of freshwater resources in several SIDS. An example is a study of community knowledge for the exploitation and conservation of a local variety of freshwater fish (Sarevera) in the Moripi Cultural area in Gulf Province, Papua New Guinea. ^{19/}

68. A decision on cultural diversity and the environment was adopted by the twenty-second Session of the UNEP Governing Council/Global Ministerial Environment Forum (decision 22/16). The decision called upon UNEP together with UNESCO and other relevant stakeholders and institutions, including the Convention, to examine the issue of cultural diversity and environment, by conducting a survey on the current state of work and possible developments on environmental and cultural diversity. The UNEP-UNESCO joint initiative on Environment and Cultural Diversity has created an inter-agency task group to facilitate the implementation of decision 22/16 and to integrate inputs from different relevant agencies. This initiative is of particular relevance to SIDS, given their unique and diverse traditional cultures, as it explores the relationship between cultural diversity and environmental sustainability.

69. People and Plants ^{20/} is a WWF/UNESCO-MAB initiative, in association with the Royal Botanic Gardens Kew, to promote ethnobotany and the increased involvement of local communities in conservation and sustainable use of plant resources. The new People and Plants Initiative network brings together local and international experts to combine traditional knowledge and biological sciences in the most advanced and integrated development, conservation, and education projects. This initiative is being implemented in the South Pacific, mainly in Fiji and Papua New Guinea.

^{18/} For more information on this project:
http://portal.unesco.org/sc_nat/file_download.php/vanuatu.html?URL_ID=3584&filename=10851552861vanuatu.html&filetype=text%2Fhtml&filesize=5509&name=vanuatu.html&location=user-S/

^{19/} For more information on this project: <http://www.unesco.org/csi/act/png2/summary15.htm>

^{20/} More information is available at: <http://www.kew.org/peopleplants/>

I. Sustainable use of biological diversity, including tourism

Work carried out by island States

70. Considerations of conservation and sustainable use of biological resources are being integrated into national decision-making in most SIDS. However few measures, not considered comprehensive by most SIDS, have been adopted addressing the use of biological resources that avoid or minimize adverse impacts on biological diversity or measures that protect and encourage customary use of biological diversity which are compatible with conservation and sustainable use requirements. Measures to encourage cooperation between government authorities and the private sector in developing methods for sustainable use of biological diversity are also in an early stage of development.

71. Mechanisms are under development in most SIDS to involve the private sector and indigenous and local communities in initiatives on sustainable use, and in mechanisms to ensure that indigenous and local communities benefit from such sustainable use. In Fiji, community-based projects are being undertaken to support the involvement of non-governmental organizations, women and indigenous Fijians in the conservation and sustainable use of biodiversity and biotechnology. The Marshall Islands Marine Resources Authority (MIMRA) has developed a national action plan which accounts for all the policy measures and strategies for the conservation and sustainable use of terrestrial and marine biodiversity, in particular endemic species, including protection from the introduction of certain non-indigenous species and the identification of sites of high biological significance for the conservation of biological diversity and/or eco-tourism and other sustainable-development opportunities.

72. Although in their second national reports, most SIDS recognized the strict dependence on biodiversity as the main asset of the tourism sector, and therefore the importance of conservation and sustainable use of biodiversity as a way to maintain a healthy tourism industry, policies, programmes and activities in the field of tourism are usually not based on the assessment of the interlinkages between tourism and biological diversity. In addition, enabling policies and legal frameworks to complement voluntary efforts for the effective implementation of sustainable tourism were either not established or were established to a limited extent in most SIDS. Examples of established policies include the national tourism policy of Barbados, the broad objective of which is to pursue sustainable tourism development through improvement and optimal use of human resources and services and through the conservation and managed use of cultural, and built and natural heritage. Cuba also reported undertaking several efforts to harmonize biodiversity conservation and tourism development, bearing in mind tourism development is mainly undertaken in marine and coastal fragile ecosystems. The Cook Islands will also adopt the Asian-Pacific Economic Cooperation (APEC)/Pacific Asia Travel Association (PATA) Code for Sustainable Development, which urges members to conserve the natural environment.

Work supported by partner organizations

73. UNDP Capacity 2015 is a global partnership mechanism assisting countries to develop the capacity of their professionals, institutions and systems to formulate and implement strategies for sustainable development to achieve local, national and international development goals.^{21/} The strategy is meant to respond to the capacity-building needs related to the implementation of the MDGs as well as the Barbados Programme of Action. Regional programmes within the Capacity 2015 are already in progress in Barbados, the British Virgin Islands, Dominica, the Dominican Republic, Grenada and Jamaica.

74. UNEP sub-regional activities have included the preparation of the “Guidelines for Municipal Solid Waste Management Planning in SIDS in the Pacific Region”, developed in conjunction with the

21/ Capacity 2015 builds on the lessons learned through UNDP's extensive capacity-development experience including Capacity 21, Local Initiative Facility for the Urban Environment, Public Private Partnerships for the Urban Environment and the Global Environment Facility's Small Grants Programme. For further background on these programmes please consult <http://www.undp.org/capacity2015/sids/>

South Pacific Regional Environment Programme (SPREP). A project is underway on integrated waste management in the Indian Ocean, Mediterranean and Atlantic regions (IMA/SIDS).

75. Amongst UNESCO's future priorities is the continued testing of the applicability of the CBD Guidelines for Sustainable Tourism also in small islands, using World Heritage sites and biosphere reserves.^{22/} The Guidelines, which cover not only ecotourism, but all forms and activities of tourism, such as conventional mass, culture-based, cruise, leisure and sports tourism, make explicit references to the biosphere reserve concept and the World Network of Biosphere Reserves. UNESCO-MAB has also been called upon to test and demonstrate the guidelines, through the implementation of pilot projects in biosphere reserves.

76. A more recent initiative of UNESCO is the "Small Islands Voice", a cross-cutting initiative designed to integrate all programme sectors of the organization, combining information and communication technologies with printed media, radio, television and other means in promoting the involvement of civil society, particularly the youth, in discussions on key environment-development issues. The initiative is not restricted to SIDS, but includes small islands in the Caribbean, Indian Ocean and Pacific that have other affiliations.

77. In response to the Trinidad and Tobago Regional Preparatory Meeting, the CARICOM Secretariat and the UNEP agreed to work on the design of a Caribbean SIDS Sustainable Development Programme. The main areas of focus would be to define a regional co-ordinating mechanism to mobilize resources and promote the implementation of a technical programme based on Caribbean priorities within the Barbados Programme of Action. The overall programme would be financed from a number of sources, including United Nations agencies, bilateral and multilateral programmes, and national and regional sources.

78. On tourism, the South Pacific Regional Environment Programme (SPREP) has developed the Ecotourism Tool Kit to assist Pacific islanders in their conservation work. The Tool Kit, launched in July 2002, and developed under the SPREP South Pacific biodiversity conservation programme (SPBCP), contains instructional material and resources to help with the management and development of ecotourism initiatives. It comprises conservation areas and ecotourism case-studies, a guide to ecotourism development, and practical resources.

J. Identification and monitoring

Work carried out by island States

79. Most SIDS reported in their second national reports that they had developed an ongoing inventory programme at the species level only for key groups (such as threatened or endemic species) or indicator species for a range of major taxonomic groups. At the ecosystem level, ongoing inventory programmes have been developed mostly for ecosystems of particular interest. At the genetic level, most SIDS reported minimal activity or the existence of minor programmes in some sectors. As far as ongoing monitoring programmes are concerned, the situation is very similar to the above. At the species level, monitoring programmes have been developed mainly for key groups or indicator species; at the ecosystem level mainly for ecosystems of particular interest. SIDS reported minimal activity at the genetic level.

80. The majority of SIDS seem to have identified activities having an adverse impact on biodiversity. Although most threats are known, gaps in knowledge still remain and monitoring of these activities and their effects is still at an early stage in most of them. In addition, most SIDS are at an early stage in the coordination of information collection and management at the national level.

81. By the time of the submission of the second national reports, an assessment of potential national indicators for biodiversity was under way in a number of SIDS, and there was little cooperation with other

^{22/} As contained in the "Review and further implementation of the Programme of Action for the sustainable development of SIDS, UNESCO contribution to the Report of the Secretary General of the United Nations", 4 February 2004.

contracting Parties on pilot projects to demonstrate the use of assessment and indicator methodologies. Cooperation is also limited with other countries in the respective regions in the field of indicators, monitoring and assessment, although almost half of SIDS reported sharing experiences with other countries in order to increase their capacity to develop indicators and monitoring programmes.

82. National taxonomic need assessments or workshops to determine taxonomic needs were in an early stage in almost half of the SIDS under consideration. An analysis of the second national reports indicates that only one SIDS reported having completed the assessment. At an early stage of development were also national taxonomic plans in few SIDS, although the majority reported not having developed one. The majority of SIDS also reported making available appropriate resources to enhance the availability of taxonomic information, although these resources do not seem to cover all known needs in an adequate manner. Indeed, investments on a long term-basis in the development of appropriate infrastructure for national taxonomic collections were judged inadequate by most. Barbados reported that, although the University of the West Indies has several faculty members working actively with overseas organizations in the identification of plants, animals and microbes, within the Ministry of Agriculture and Rural Development there is a lack of trained personnel to carry out taxonomic auditing and there are insufficient funds available to employ the required personnel to conduct the necessary auditing. A lack of qualified personnel was also regretted by Comoros and Marshall Islands. The lack of professional taxonomists and of facilities at the national level was also stressed by SIDS, in particular by Vanuatu.

83. The majority of SIDS reported not having worked to increase capacity in the area of taxonomic research. On this issue, the Bahamas reported that it had received GEF funding for biodiversity enabling activities including a taxonomic component. The project will enable a national assessment of capacity-building needs in the area of taxonomy as well as lead to the inclusion of taxonomy in curricula and the development of a training programme for para-taxonomists in the country.

Work supported by partner organizations

84. An Environmental Vulnerability Index (EVI) ^{23/} aimed at enabling SIDS to better understand their vulnerability and progress toward more sustainable development was launched in April 2004. Developed over the past five years by the South Pacific Applied Geoscience Commission (SOPAC) in partnership with UNEP, New Zealand, Norway, Italy, Ireland, AOSIS and others, the EVI was elaborated in response to a call made in the Barbados Programme of Action to develop a composite vulnerability index integrating both ecological fragility and economic vulnerability. The EVI is based on 54 indicators covering natural hazards, characteristics of the environment and pressures from human activities, which together characterize the vulnerability of natural systems at the regional, country, province or island level. Potential applications include use as a tool for adaptive management and monitoring sustainable development, and as a means of identifying issues that would benefit from external assistance.

85. A joint initiative of the Caribbean Development Bank and the UNESCO-CSI platform is the monitoring beach changes as an integral component of coastal management in the eastern Caribbean project, which focuses on the monitoring of physical changes in beaches, seeks to strengthen in-country capability to analyse and interpret beach-change data, and apply the knowledge gained to the planning and management of beach resources. A specially designed software (Beach Profile Analysis) was installed in environmental and planning agencies in the countries/territories included in this project, and training was provided on its use and application.

K. Incentive measures

Work carried out by island States

86. Programmes to identify and to ensure the adoption of economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity are in

^{23/} For further information on the EVI: <http://www.sopac.org/Projects/Evi/index.html>

an early stage of development in most SIDS. In general, existing incentive measures take into account economic, social, cultural and ethical valuation of biological diversity only to a limited extent. By 2001, only three countries reported having a programme in place. In most SIDS, legislation and economic policies have not been reviewed so as to identify and promote incentives for the conservation and sustainable use of biodiversity. Likewise, legal and policy frameworks for the design and implementation of incentive measures are also in an early stage of development. Most SIDS have not identified and considered neutralizing perverse incentives, but 6 of them have undertaken identification programmes.

87. Most SIDS do not have mechanisms in place to ensure adequate incorporation of both market and non-market values of biological diversity into plans, policies and programmes and other relevant areas. In general, SIDS have developed training and capacity-building programmes to implement incentive measures and promote private sector initiatives. Most of them have also incorporated biological diversity considerations into impact assessment as a step in the design and implementation of incentive measures.

88. Most SIDS have reviewed the incentive measures promoted through the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and are considering and exploring possible ways and means by which these incentive measures can support the objectives of the Convention in their respective countries.

Work supported by partner organizations

89. SIDS are facing serious challenges in the emerging global trade environment, as SIDS economies rely heavily on exports of agriculture, forestry and fisheries. Therefore, one of the priority areas of the FAO Plan of Action on Agriculture in SIDS addresses changes in the global trading environment. In order to assist SIDS' adjustment to the new trade environment, FAO conducted a series of capacity-building activities in the areas of sanitary and phytosanitary measures, technical barriers to trade, property rights, and food control systems and safety, and Codex Alimentarius. FAO is also working on assessing the implications of WTO Multilateral Trading System in the Agriculture Sector in the Pacific countries. In addition, since 1994, FAO provides assistance to SIDS in agricultural census and agricultural statistics.

L Impact assessment and minimizing adverse impacts

Work carried out by islands States

90. Legislation requiring an environmental impact assessment (EIA) of proposed projects likely to have adverse effects on biological diversity is in place, or in an advanced stage of development, in most SIDS. For instance, under the Environmental Management Land Use Planning for Sustainable Development Project (AMLUP) environmental impact assessment guidelines and procedures for Barbados were developed. However, in Barbados there is currently no formal legal basis for requiring environmental impact assessment. In the Dominican Republic, EIA is in its first phase of implementation. Fiji's proposed legislation on impact assessment contains provisions for the establishment of environmental management committees in all government and private organizations that employ 50 or more people, which will establish EIA in the respective workplaces.

91. In most SIDS, the following are under development: mechanisms to ensure that the environmental consequences of national programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account; bilateral, regional and/or multilateral agreements on activities likely to significantly affect biological diversity outside the country of jurisdiction; mechanisms to notify other States of cases of imminent or grave danger or damage to biological diversity originating in their country and potentially affecting those States; and mechanisms to prevent or minimize transboundary damage to biological diversity in areas beyond the limits of national jurisdiction, as well as mechanisms for emergency response to activities or events which present a grave and imminent danger to biological diversity.

92. In their second national reports, most SIDS reported that they were integrating environmental impact assessments into the work programmes on invasive alien species and tourism development, and

that they were addressing, either fully or partially, the loss of biodiversity and the interrelated socio-economic and human-health aspects relevant to biological diversity when carrying out environmental impact assessment. Moreover, at least in most if not all circumstances, most SIDS when developing new legislative and regulatory frameworks, have in place mechanisms to ensure the consideration of biological diversity concerns in the early stages of the drafting process.

93. Many SIDS also reported carrying out pilot environmental impact assessment projects, in order to promote the development of local expertise in methodologies, techniques and procedures. In general, in almost all SIDS the inclusion of development alternatives, and mitigation measures and consideration of the elaboration of compensation measures in environmental impact assessment are required.

Work supported by partner organizations

94. The Caribbean Disaster Emergency Response Agency (CDERA) ^{24/} set up by the CARICOM in 1991, has worked to create an expanding infrastructure for a methodical approach for developing disaster management programmes among member states, including multi-island projects. The idea of disaster reduction has been introduced into most regional initiatives at the policy level, including the Programme of Action for SIDS, and the programmes of the Association of Caribbean States. ^{25/} A long-term project on the management of beach resources and planning for coastline change has been under way since the mid-1980s, initially under what was known as the Coastal and Beach Stability in the Lesser Antilles (COSALC). Much of this work considers the impact of hurricanes on coastal areas. Also in the Caribbean, a number of collaborative activities have been undertaken on educational and communication aspects of disaster mitigation, such as the preparation of a disaster preparedness manual for Caribbean schools through a joint initiative with the Caribbean Disaster Emergency Response Agency (CDERA).

95. In terms of ocean-related hazards, UNESCO-IOC is centrally involved in international cooperation on tsunamis, the giant ocean wave or series of ocean waves produced by a large-scale disturbance on the ocean floor. In the mid-late 1960s, IOC took the lead in coordinating the efforts of its member States and formed the International Coordinating Group for the Tsunami Warning System in the Pacific, ^{26/} the main purpose of which is to assure that tsunami watches, warnings and advisory bulletins are disseminated throughout the Pacific.

96. Regarding mitigation of natural hazards, FAO helps countries set up warning and information systems and advises on the use of hurricane-resistant crops and forestry methods, as well as helping agricultural systems and coastal fisheries get reactivated in the wake of the storm. The interventions include prevention, preparedness planning, monitoring and early warning, assessment of impact and needs, relief, rehabilitation and reconstruction, and recovery. The FAO Global Information and Early Warning System is of particular relevance to SIDS. It provides policy makers and policy analysts with the most up-to-date information available on all aspects of food supply and demand and warning of imminent food crises, so that timely interventions can be planned. FAO organizes regularly impact assessment missions on tropical cyclones to SIDS. ^{27/}

97. The Millennium Ecosystem Assessment (MA) subglobal assessment is being conducted in Papua New Guinea's coastal zones. Local assessments will be conducted in Cape Vogel, the Lihir Island Group,

^{24/} CDERA is implementing a number of critical projects in collaboration with key partners. Examples include UNDP (i.e. Comprehensive Disaster Management, a Caribbean Risk Initiative, a Regional Forum on Information and Communication Technology in Disaster Management), UNESCO, the International Strategy for Disaster Reduction, the Pan American Health Organization and the Government of Japan.

^{25/} Briceño, S (2004). "The Impact of Natural Disasters on the Biodiversity of Small Island States", in *INSULA, the International Journal of Island Affairs*, special issue on Island Biodiversity: sustaining life in vulnerable ecosystems", February 2004, accessible at: <http://www.biodiv.org/programmes/areas/island/insula.asp>.

^{26/} More information is available at: <http://ioc.unesco.org/itsu/>

^{27/} In 2001, FAO published the "Analysis of the medium-term effects of Hurricane Mitch on food security in Central America". Through the FAO supported project, "Emergency Assistance for the Formulation of National Hurricane Disaster Preparedness" in 1998, the Governments of the Eastern Caribbean States have come together to formulate national and regional plans to improve hurricane readiness.

Buka and surrounding islands, and the Calvados Island Chain. The Millennium Ecosystem Assessment (MA) focuses on how changes in ecosystem goods and services (food, timber, water purification, flood protection, biodiversity, etc.) have affected human well-being (health security, livelihood security, cultural security, etc.), how ecosystem changes may affect people in future decades, and what types of responses can be adopted at local, national, or global scales to improve human well-being and contribute to poverty alleviation.

98. Small islands are particularly vulnerable to effects of climate change. The Caribbean Planning for Adaptation to Global Climate Change (CPACC) project is designed to support the participating Caribbean countries (including a number of islands) in preparing to cope with the adverse effects of global climate change, particularly sea-level rise in coastal and marine areas through vulnerability assessment, adaptation planning and capacity-building linked to adaptation planning.

M. Access to genetic resources

Work carried out by island States

99. The majority of SIDS are in the process of developing national systems to address access to genetic resources and benefit-sharing, in accordance with Article 15 of the Convention. Some measures are in place, and potential measures under review in most SIDS to ensure that any scientific research based on genetic resources provided is developed and carried out with their full participation. For instance, in the Bahamas, overseas scientists wishing to conduct any scientific research in the country must obtain a permit. The permit must state whether live or dead material, or specimen, may be removed. Such scientists are required to lodge reports on their work.

100. Half of SIDS also reported having some measures in place to ensure the fair and equitable sharing of the results of research and development, and the benefits arising from the commercial and other use of genetic resources with any Contracting Party providing such resources. The majority of these measures are of a policy or administrative nature.

101. Only one SIDS reported to be developing several capacity-building programmes to promote the successful development and implementation of legislative, administrative and policy measures and guidelines on access to genetic resources, including scientific, technical, business, legal and management skills and capacities. Other SIDS developed a limited number of programmes, covering few of the identified needs. However, in most SIDS analysis of experiences of legislative, administrative and policy measures and guidelines on access, including regional efforts and initiatives, for use in the further development and implementation of measures and guidelines is in progress.

102. In Fiji, the intellectual property rights (IPR) legislation was enacted in 2003 to ensure that the ownership of IPR is adequately and effectively protected but there is a need to establish an effective enforcement system.

Work supported by partner organizations

103. In SIDS, genetic resources represent the most important raw material for farmers and breeders, and serve as a repository of genetic adaptability and resilience, and thus as a safety net in the event of environmental change. The FAO Commission on Genetic Resources for Food and Agriculture has requested a study on individual countries' degrees of dependence on plant genetic resources from the primary centres of agricultural biodiversity. It represents a first step towards a quantitative estimation of countries' interdependence with regard to plant genetic resources. ^{28/}

104. The International Plant Genetic Resources Institute (IPGRI) collaborates with a consortium among the CSIRO Forestry & Forest Products, the Forestry Departments of Pacific Island nations, the South Pacific Commission's Pacific Islands Forests and Trees Program, the South Pacific Regional Environmental Program, University of the South Pacific and the FAO Forestry Department, in the

^{28/} FAO and SIDS: challenges and emerging issues in agriculture, forestry and fisheries, January 2004.

implementation of the South Pacific Regional Initiative on Forest Genetic Resources (SPRIG). The project goal is to promote ecologically sustainable development in the forestry and natural resources sectors leading to enhanced quality of life for present and future generations of Pacific Islanders. SPRIG is designed to help Pacific island countries (including the Cook Islands, Kiribati, Nauru, Niue, Papua New Guinea, the Solomon Islands, Tonga, Tuvalu, Vanuatu and Samoa) to conserve, improve and better promote the wise use of the genetic resources of regional priority, such as tree species, to enhance environmental protection, to alleviate poverty, and to promote economic and rural development.

III. GAPS AND CONSTRAINTS TO IMPLEMENTATION

105. Constraints to the implementation of the Convention are listed in the Strategic Plan of the Convention (decision VI/26, annex, appendix). Factors determining the vulnerabilities of islands constitute the main set of constraints to sustainable development in SIDS and the main challenges in the implementation of the Convention. The following section identifies main constraints and gaps in the implementation of the Convention in islands, focusing on mechanisms used to support implementation and based on the second national reports submitted by SIDS to the Secretariat.

A. *Financial mechanism*

106. The Conference of the Parties recognized the special needs of small island States in its guidance to the financial mechanism, for instance with respect to capacity-building to develop and carry out an initial assessment for designing, implementing and monitoring programmes in accordance with Article 7. At its sixth and seventh meetings, the Conference of the Parties specified that GEF shall provide financial resources to developing countries Parties, taking into account the special needs of the least developed countries and the small island developing States amongst them. GEF supports biodiversity activities in small island States through its enabling activities, regular operational programmes as well as small grants programmes. The GEF Council at its May 2004 session encouraged the GEF to continue its participation in the International Meeting for the 10-year Review of the Barbados Programme of Action for the Sustainable Development of the Small Island Developing States to be convened in Mauritius in early 2005. It is expected that the GEF will present a full and detailed description of its support to small island developing States to that meeting.

107. Almost all small island States, except Nauru, that are active in the GEF biodiversity portfolio have received financial support under the enabling-activity window, and as a matter of fact, most of them have hosted enabling activity projects to prepare national biodiversity strategies and action plans, national reports and participation in the clearing-house mechanism as well as to assess capacity-building needs and country-specific priorities. A number of small island States have only accessed the first round of enabling-activity financing, and therefore, the GEF enabling activity window remains to be further explored by small island States. Medium-sized projects may also be considered of more significance to small island States, but only seven of them have so far hosted medium-sized projects. The number of full-size projects in small island States are relatively less significant in relation to that of enabling-activity projects. One issue identified by the Conference of the Parties was the necessity of an appropriate balance between national and regional projects in the implementation of the decisions of the Conference of the Parties.

108. GEF small grants programme has increasing popularity among the small island developing States. It has been established in eight small island States, with one regional small grant programme covering additional six eligible small island States. The programme can be expected to expand further into other small island States.

109. Through their national reports, in particular, their second national reports, small island States identified the special needs of small island developing States, including *inter alia* improved capacity to access the financial mechanism; development of an integrated and holistic approaches of GEF

programming for island biological diversity; more efficient administrative systems for the receipt and management of funds; and simplified disbursement procedures.

B. Collaboration and cooperation mechanisms

110. The lack of collaborative frameworks among SIDS, between SIDS and other countries, and among stakeholders at the national level is an important constraint to the implementation of the provisions of the Convention in SIDS. In the second national reports, only one SIDS indicated that it had developed effective cooperation frameworks, for the sustainable management of transboundary watersheds and river basins, and migratory species through bilateral and multilateral agreements. The majority of SIDS reported that no collaboration is ongoing with other relevant bodies and initiatives to increase scientific knowledge and public awareness of the crucial role of biodiversity for sustainable development.

111. At the national level, Grenada noted that institutional arrangements for the implementation of the work programmes lack coherence due to inadequate collaboration and cooperation mechanisms among the various stakeholders. Barbados remarked that there is a significant cooperation between convention areas and focal points domestically, simply because within the current ministry, one officer coordinates all MEAs' matters related to biological diversity, including local biodiversity programmes. Similarly, in the Solomon Islands, the national focal point for the Convention on Biological Diversity is also the national focal point for the Ramsar Convention, the Convention for the Conservation of Migratory Species of Wild Animals and the Convention on International Trade in Endangered Species of Wild Animals (CITES), as well as the United Nations Convention to Combat Desertification (UNCCD) and other biodiversity-related conventions. The national focal point also contributes to the Commission on Sustainable Development.

C. Clearing-house mechanism

112. Most SIDS reported in their second national reports that they were cooperating in the development and operation of their respective clearing-house mechanism (CHM), and that they had designated CHM national focal points. However, the national clearing-house mechanisms are operational in only two countries.

113. There is a need to mobilize financial resources and strengthen the needed human and infrastructural capacities to develop and operationalize national clearing-house mechanisms in SIDS.

D. Technology transfer and cooperation

114. The majority of SIDS have not taken measures to provide or facilitate access for and transfer to other Parties of technologies that are relevant to the conservation and sustainable use of biological diversity or that make use of genetic resources without causing significant damage to the environment. It is expected that the programme of work adopted at the seventh meeting of the Conference of the Parties (decision VII/29) would facilitate and promote technology transfer and cooperation in the region with the support from the private sector.

E. Capacity-building, education and awareness

115. All SIDS have made mention of capacity limitations at the national and sub-national levels in different areas. For instance lack of capacity-building is identified as the main factor undermining the development of effective control and eradication mechanisms for invasive alien species in SIDS. Many SIDS also noted a high level of emigration of skilled human resources.

116. Although high priority is accorded by the majority of SIDS to the implementation of Convention provisions on education and public awareness, available resources are considered to be limiting by most SIDS. Also at the national level, most SIDS reported allocating limited resources for the strategic use of education and communication instruments at each phase of policy formulation, implementation and evaluation. Moreover, SIDS have only recently started integrating biodiversity concerns into education strategies. Similarly, most SIDS have not yet illustrated and translated the provisions of the Convention into any local languages to promote public education and awareness raising of relevant sectors.

F. Financial resources

117. In their reports under the Convention on Biological Diversity, many SIDS point to the lack of resources in different areas pertaining to biodiversity conservation and sustainable use. For instance, Vanuatu, reported the constraints to the setting of targets relating to biological or ecological parameters given the lack of baseline data on Vanuatu's biodiversity, and the limited resources available in the country. SIDS also consider the resources available extremely inadequate for meeting their obligations with respect to research and training. Some of them also noted the limited access to concessionary resources due to relatively higher per capita income than in other developing countries.

118. The majority of SIDS reported that they had not received new and additional financial resources to enable them to meet the agreed full incremental costs of implementing measures which fulfill the obligations of the Convention. For instance in the Bahamas, the activities of the Ministry in the area of biodiversity are funded through the programme budget and this is severely limiting. In Mauritius, most of the funding in the biodiversity sector is provided by the Government. These are mainly revenues derived from the taxations system prevailing in Mauritius. The Government has also created funds such as the National Parks and the Conservation Fund and the Environment Fund. Contributions to these funds include mainly levies/fees charged to the private sector.

119. However, a number of SIDS also reported that they had used financial resources related to the implementation of the Convention from bilateral, regional and other multilateral channels and were discussing ways and means to support implementation of the objectives of the Convention in their dialogue with funding institutions. Biodiversity-related activities in Kiribati are run through funding received from foreign aid. In most SIDS, no process has yet been established to monitor financial support to biodiversity.
