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Implementation of Article 4, paragraphs 8 and 9, of the Convention

Progress on the implementation of decision 1/CP.10

Adverse effects of climate change

**Report on the expert meeting on adaptation for small island developing States**

**Note by the secretariat\***

*Summary*

This document provides a summary of the expert meeting on adaptation for small island developing States (SIDS), which was held in two parts. The first part for the Caribbean and Atlantic Ocean SIDS took place in Kingston, Jamaica, from 5 to 7 February 2007 and the second part for the Pacific and Indian Ocean SIDS took place in Rarotonga, Cook Islands, from 26 to 28 February 2007. Discussions focused on impact and adaptation assessments; adaptation planning and implementation; and regional and international cooperation. This document also includes possible follow-up actions relating to specific regional adaptation needs and concerns to address the main outcomes identified at the meeting.

\* This document was submitted after the official deadline due to the timing of the meeting.

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## **I. Introduction**

### **A. Mandate**

1. The Conference of the Parties (COP), by its decision 1/CP.10, requested the secretariat to organize three regional workshops, reflecting regional priorities, and one expert meeting for small island developing States, in order to facilitate information exchange and integrated assessments to assist in identifying specific adaptation needs and concerns. It further requested the secretariat to prepare reports on the outcome of these workshops and meetings in order for the Subsidiary Body for Implementation (SBI) to consider what further actions may be required by the COP at its thirteenth session.

### **B. Scope of the note**

2. This note provides information on the expert meeting for small island developing States (SIDS) organized by the secretariat under the guidance of the Chair of the SBI in response to the mandate referred to in paragraph 1. It includes an overview of the proceedings, a summary of the discussion and a summary of possible follow-up actions relating to specific regional adaptation needs and concerns to address the main outcomes identified at the expert meeting.<sup>1</sup>

### **C. Possible action by the Subsidiary Body for Implementation**

3. The SBI may wish to consider this report together with the reports of the regional workshops on adaptation and the synthesis report of the four events at its twenty-sixth session, with a view to making recommendations to the COP at its thirteenth session.

## **II. Proceedings of the expert meeting**

4. Given that the SIDS are widely spread in different geographical locations of the world, and to ensure the participation of all the SIDS in the meeting, it was decided to organize this meeting in two parts in order to save and maximize resources.

5. The first part of the meeting, for the Caribbean and Atlantic Ocean SIDS, took place in Kingston, Jamaica, from 5 to 7 February 2007 and was organized by the secretariat, in collaboration with the Ministry of Local Government and Environment of Jamaica and the United Nations Environment Programme's Regional Office for Latin America and the Caribbean (UNEP-ROLAC). The second part of the expert meeting, for the Pacific and Indian Ocean SIDS, took place in Rarotonga, Cook Islands, from 26 to 28 February 2007 and was organized by the secretariat, in collaboration with the Environment Service of the Cook Islands.<sup>2</sup> Information was shared between the two parts of the meeting and some participants attended both parts. Mr. Bagher Asadi, Chair of the SBI, chaired both parts of the meeting.

6. Invitations to participate in the meeting were extended to all SIDS Parties to the Convention, and to representatives of Annex II Parties that provide support to adaptation-related activities in SIDS. Participants at both parts of the expert meeting included 38 representatives from SIDS, 10 representatives from Annex II Parties and 23 representatives from relevant international organizations, intergovernmental organizations (IGOs) and non-governmental organizations (NGOs) that are active in the region. Seven sessions at each part of the meeting considered (1) the introduction to the meeting and background information; (2) vulnerability and adaptation (V&A) assessments; (3) adaptation planning

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<sup>1</sup> The summary does not attribute specific deliberations or outcomes to either of the two parts of the meeting.

<sup>2</sup> The agenda, background paper and expert presentations from both parts of the expert meeting can be found on the UNFCCC website at:

<[http://unfccc.int/adaptation/adverse\\_effects\\_and\\_response\\_measures\\_art\\_48/items/3897.php](http://unfccc.int/adaptation/adverse_effects_and_response_measures_art_48/items/3897.php)>.

and implementation; (4) risk management and risk reduction; (5) insurance; (6) regional and international collaboration; and (7) outcomes and follow-up actions.

7. Financial support for the meeting as well as the regional workshops on adaptation was generously provided by the governments of Australia, Canada, Japan, New Zealand, Norway, Portugal, Spain and Switzerland.

### **III. Summary of the expert meeting**

#### **A. Introduction**

8. The background paper and other associated presentations confirmed that issues relating to vulnerability and adaptation in SIDS are of great importance and urgency, in particular because of the exposure of SIDS to the adverse impacts of sea level rise and other geophysical climate-related hazards such as shifting rainfall patterns and cyclones, typhoons and hurricanes. The specific socio-cultural and economic context, including low availability of resources, a small but rapidly growing population, remoteness, susceptibility to natural disasters, excessive dependence on international trade and vulnerability to global developments, is inextricably linked to the vulnerability of these States. Arable land, water resources and biodiversity are already under pressure from sea level rise, and increases in population on SIDS and the unsustainable use of available natural resources add further problems.

9. The projected impacts of climate change include: economic losses from reduced agricultural yields, for example from shortening of the growing season or drought; loss of mangrove forests and coral reefs due to sea level rise, bleaching and acidification of the oceans; damage to terrestrial forests due to extreme events; reduction in the size of freshwater lenses and general water resource availability due to decreased rainfall and saltwater intrusion; inundation of settlements and arable land on the coast and reduction in tourism due to increases in the frequency and severity of extreme weather; and environmental degradation.

10. Climate change, through its impacts, threatens the achievement of the sustainable development objectives as addressed in the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States<sup>3</sup> (Mauritius Strategy) and the attainment of the United Nations Millennium Development Goals (MDGs).

11. Possible adaptation options for SIDS range from 'hard' shore-protection measures such as sea defences, hurricane resistant buildings and the provision of water storage, to regulatory solutions such as protection of mangroves, revised building codes, land zoning around coasts and rivers and updating water policy, and could also include technological solutions such as using more resilient crops. However, there are constraints that can limit the adaptation options and their implementation, such as inadequate data and technical capacity, weak human and institutional capacity and limited financial resources. There are also natural limits to adapting such as the inability to retreat from rising sea levels. Mis-estimating the climate impact can also hinder the adaptation process, since it can result in inadequate, overambitious or inappropriate adaptation options.

12. To be successful and to facilitate sustainable development, responses to climate change and sea level rise should be coordinated and integrated with existing policies of socio-economic development and environmental conservation. In addition, strong mitigation actions need to be implemented by Parties to the Convention so that greenhouse gas emissions are stabilized at levels that will help prevent more catastrophic consequences.

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<sup>3</sup> <[http://www.un.org/esa/sustdev/documents/docs\\_sids.htm](http://www.un.org/esa/sustdev/documents/docs_sids.htm)>.

## **B. Integrated vulnerability and adaptation assessments**

13. Participants from Parties and organizations noted the availability of a number of methodologies and tools for vulnerability and adaptation assessments. However, there are major difficulties in utilizing these tools in the SIDS on account of their specific circumstances. High-resolution dynamic modelling or statistical downscaling techniques could be helpful for simulating local climatic variations and for conducting impact assessments. Jamaica informed on its work in cooperation with Barbados, Cuba, and Trinidad and Tobago under the Providing REgional Climates for Impacts Studies (PRECIS) Caribbean Climate Change Project to enable climate projections of their region for a 30-year period (2070–2100).

14. Participants noted, however, that using only the scenario-based approach is not sufficient for developing practical adaptation actions. Approaches that can provide a basis for formulating adaptation projects and are better able to represent local options and constraints must be based on the analysis of current vulnerabilities and existing adaptation practices as well as the involvement of stakeholders at all stages of the assessment. Representatives from Tuvalu, Kiribati and the Cook Islands demonstrated the application of bottom-up participatory approaches for formulating their assessments, including national adaptation programmes of action (NAPAs) where applicable, and associated projects to address urgent and immediate needs.

15. There was a call for integrating top-down and bottom-up approaches and the complementary use of these approaches for vulnerability and adaptation assessments. Presenters also stressed the need to link vulnerability assessment and long-term periodic and socio-economic assessment as well as for stakeholder involvement and information dissemination with all relevant decision-makers.

16. A representative from the International Global Change Institute, University of Waikato, presented a generic set of tools for evaluating projects. These tools demonstrated the frameworks for executing projects, taking into consideration integrated assessment, adaptation and sustainable development.

17. Parties reiterated the need for sound scientific information and public awareness on both long-term climate change and climate variability and societal vulnerability; and for accurate risk assessment based on adaptation needs with a long-term perspective and a systems approach including feedback and linkages.

18. Participants highlighted the importance of international and regional collaboration in developing and enhancing capacity for V&A assessments and data distribution, including building regional databases. The Inter-American Institute for Global Change Research (IAI) presented their research on hurricane risk and societal vulnerability in the Caribbean region. Research is undertaken with a firm belief that in tackling problems faced by SIDS, historical information and data must be linked to climate variability. The South Pacific Sea Level and Climate Monitoring Project is a data gathering network that both enables the monitoring of the sea level in the Pacific region and provides data to support the prediction of climate variability over three to six months. It was noted as a best practice in this regard.

19. Participants noted the existence of high-level technological solutions for monitoring and early warning data distribution, and also recognized that due to the specific circumstances of SIDS, in some cases, simple technologies can also provide reliable and timely information. For example, scientists in Cuba have developed an early warning system from which climate bulletins, agro-climate bulletins, climate summaries, seasonal predictions and special warnings are generated.

## **C. Adaptation planning and implementation**

20. Representatives of Parties and organizations revealed a number of useful examples of adaptation planning and development in priority sectors, such as health and coastal zones, as well as successful

practices of community based adaptation. Participants noted that there is sufficient information for adaptation action based on current climate variability and extremes, and that remaining uncertainties on climate change cannot justify inaction now on adaptation.

21. A representative from the South Pacific Regional Environment Programme (SPREP) reported that in the past most studies of adaptation options for Pacific Island Countries have largely focused on adjustments to sea level rise and storm surges associated with tropical cyclones. There was an early emphasis on protecting land through 'hard' shore-protection measures. More recently, the emphasis has become broader and looks at climate change impacts from a more comprehensive perspective.

22. Through recent studies and emerging practices, a number of important lessons have been learned. The flexibility of potentially vulnerable systems that are managed by governments or communities can be increased through adjustments in management practices, such as changes in use or location. The adaptability of vulnerable natural systems can be enhanced through reducing stresses due to non-climatic effects, removing barriers to the migration of plants or animals, and improving overall resource management practices. Improving public awareness and preparedness, setting up early-warning and monitoring systems for extreme weather events and developing overall communications strategies makes climate change science accessible to the average citizen and can reduce the vulnerability of human systems.

23. A representative of the Caribbean Community Climate Change Centre (CCCCC) gave two examples of projects dealing with adaptation. The Mainstreaming Adaptation to Climate Change (MACC) project carries out vulnerability assessments for communities at risk, exploring their history and possible climate change impacts in order to design adaptation options with the aim of influencing adaptation policy. Assessments are being undertaken in the tourism sector in Barbados and in the agriculture sector in Guyana, and may also be undertaken in Jamaica and Belize in the water resources sector. The Special Pilot on Adaptation to Climate Change supported by the Global Environment Facility (GEF), 2007–2011, is being undertaken in three SIDS (Dominica, St. Lucia, and St. Vincent and the Grenadines) to implement specific pilot adaptation measures addressing the impacts of climate change on biodiversity and land degradation.

24. Participants from least developed countries (LDCs) shared their experience on the NAPA process and noted its usefulness in facilitating adaptation planning and implementation as well as for integrating climate change into national policy. Representatives of Kiribati and Maldives stressed that adaptation needs a long-term process linking bottom-up consultation with top-down planning and policies, facilitating access to funding through the LDC Fund and increasing adaptation components in the official development assistance portfolios.

25. Many participants called for the consideration of applying a process similar to the NAPAs in non-LDC SIDS. The participatory bottom-up process of the NAPAs allows for buy-in from stakeholders and local communities and can lead to the implementation of specific adaptation actions in communities. It was noted that, from a country perspective, community based approaches provide the most effective capacity-building for practical adaptation actions through implementation and a 'learning by doing' process.

26. Participants emphasized the need for institutional capacity-building as well as training for stakeholders to aid the development of specialized tools for planning and implementing adaptation activities. Synergy among multilateral environmental agreements (MEAs) was also highlighted.

## 1. Support for adaptation in the context of sustainable development

27. A number of organizations provided information on existing support for adaptation in SIDS. The Economic Commission for Latin America and the Caribbean (ECLAC) approved the Caribbean Sea Initiative, of which adaptation is a key component. It is involved in capacity-building activities consistent with decision 5/CP.7 on disaster assessments to inform risk reduction; promoting adaptation within the context of the MDGs; and incorporating climate change into socio-economic and/or sectoral development frameworks.

28. The GEF informed participants about its rules relating to funding for adaptation. One of the main differences between the rules for funding under the GEF Trust Fund (Climate Change Focal Area) and the new funds, Special Climate Change Fund (SCCF) and LDC Fund, is that in these new funds Parties do not have to demonstrate that their projects will result in global benefits. Participants were informed about adaptation projects implemented by the World Bank in Kiribati, Colombia's Caribbean Insular Areas, Dominica, St. Lucia, and St. Vincent and the Grenadines.

29. The representative of UNDP highlighted that in order to support climate-resilient development, climate risks need to be integrated into development sectors, and short- as well as long-term adaptation to address current variability and long-term change must be considered. In order to support ecosystem resilience, adaptation must be integrated into GEF-supported activities where climate change risks are evaluated with regard to biodiversity, land degradation and international waters.

30. All representatives of the support organizations indicated that they are keen to ensure that the activities of their organizations incorporate adaptation and explained how they were supporting adaptation, although concern was expressed about the lack of adequate action on adaptation in the region.

31. From a country perspective, a representative from Nauru stressed the importance of multilateral projects such as the Assessments of Impacts and Adaptations to Climate Change project which was funded by the GEF and implemented by the United Nations Environment Programme (UNEP). The Pacific Islands Applied Geoscience Commission presentation described a technical assessment project for atolls. Participants stressed the importance of disseminating information from such projects to relevant decision makers and ensuring practical follow-up of the technical studies.

32. Presentations and ensuing discussions stressed the importance of coordinated and comprehensive approaches to supporting adaptation in the context of sustainable development and that adaptation and vulnerability should be considered as a development issue. For sustainable resources management, which forms a part of the adaptation process, to become established the behavioural pattern of resource owners and users and development programmes should be consistent and simultaneously planned at all of the five intervention levels: community, local, national, regional and international/global.

33. Several participants reiterated the need for improved and simplified access to funds from GEF. The complexity of securing such funding, including for urgent and immediate NAPA projects, was seen as an issue for further consideration.

## 2. Links between the Convention and the Mauritius Strategy

34. Participants responded to the invitation from the SBI at its twenty fifth session to consider how relevant provisions of the Mauritius Strategy are currently, or could be, reflected in the work of the Convention and its Kyoto Protocol. They acknowledged that there are linkages between these processes.

35. The representative of the SPREP secretariat said that the Convention and its Kyoto Protocol, and the Mauritius Strategy have common priorities that include work on adaptation, technology transfer, capacity-building, research and systematic observation, as well as efforts to reduce future greenhouse gas

emissions. He noted that the SIDS need to be proactive in taking advantage of this. Thus there was a need for strengthening their representation at the UNFCCC negotiations and finding ways of addressing UNFCCC agenda items in an integrated manner where linkages to sustainable development and the Mauritius Strategy are well explored.

#### **D. Risk management and risk reduction**

36. The background paper and discussions highlighted that risk assessment and risk management practices have the potential to greatly help SIDS in preparing for climate change impacts, especially those linked to the increased frequency of extreme events. Participants explored multiple measures on risk management and risk reduction at different levels.

37. For example, a representative from the Cook Islands informed participants about the country's experience of such measures, including incorporating risk management and risk reduction initiatives in their national sustainable development plans, in particular the 20-year preventative infrastructure master plan to ensure development of climate-proofed infrastructures; and the participation of communities in assisting in awareness and early warning programmes.

38. In the Caribbean, the Barbados model on coastal erosion risk mitigation was highlighted, although there were still many needs and gaps including the need to collect more oceanographic data to ensure entire coverage of the island and to train personnel in data interpretation and modelling. Coastal vulnerability assessments also need to be performed in a way that incorporates socio-economic considerations.

39. A representative from Belize gave a presentation on the warning system in the Caribbean supported by the World Meteorological Organization (WMO). The speaker highlighted a number of limitations to the full implementation of the system, including the small size of the islands, increased vulnerability to natural hazards and external shocks, low adaptive capacity and high costs, and political, social and economic problems. There is a need for downscaling global climate models for vulnerability assessments using, for example, objective techniques and integrated assessment models.

40. A number of organizations, networks and projects shared their experience of taking action to decrease risk to SIDS from natural disasters. At the international level, a representative from the International Strategy for Disaster Reduction explained the Hyogo Framework (2005–2015) and the activities they are undertaking in the Caribbean and the Asia-Pacific region in response to the adoption of the Hyogo Framework in order to increase the resilience of countries and communities to disasters.

41. They suggested ways to raise awareness of the links between disaster risk reduction (DRR) and adaptation to climate change and the need to integrate both in development plans. Participants highlighted many linkages between DRR and climate change issues and activities, including similar general aims that enhance sustainability, resilient societies and human security; similar sectoral focuses, complexities and challenges; and reliance on the same type of measures and policies. It was also noted that disaster risk reduction efforts offer opportunities for bottom-up strategies for adaptation to current climate variability and climate extremes.

42. At the regional level the Caribbean Hazard Mitigation Capacity Building Programme of the Caribbean Community and Common Market (CARICOM) is helping Caribbean countries create national hazard vulnerability reduction policies. The Caribbean Disaster Emergency Response Agency outlined its activities and identified hazard implications of climate change including how to deal with the increased frequency and intensity of inland flooding events and coastal inundation due to sea level rise. The need was expressed for enhanced capacity in flood contingency planning and assessment of potential damage impacts. In the Pacific region, the Pacific Islands Forum Secretariat (PIFS), an intergovernmental regional organization serving the leaders of the independent member States of the



Pacific, promotes and lobbies for increased priority for mainstreaming disaster issues, including those relating to climate change and adaptation strategies, into national planning and budgetary processes.

43. Participants noted the importance of strengthening links between relevant institutions for increased preparedness for climate related disasters, integration with the disaster risk reduction community on methods and tools, and identifying an appropriate mechanism and modalities for managing climate change related financial risks for SIDS.

### **E. Insurance**

44. The discussions on insurance related matters were extensive, indicating that this matter is of prime importance for SIDS. It was stressed that insurance is a 'no regrets' strategy because it enhances financial resilience. Nevertheless, the insurance market is limited in SIDS because of their small populations and geographical size, relative isolation, high risk of extreme weather events, limited economic assets in many countries, and limited private sector interest in insurance, particularly in the Pacific region.

45. Jamaica presented a number of findings which indicated that the distribution of natural disaster insurance is heavily in favour of developed countries. The Caribbean is highly dependent on the reinsurance market. Due to the Caribbean's high risk exposure and losses over the years, very few local insurance companies have developed significant capital bases to retain more risk and, as a result, the insurance industry is still very reliant on large international reinsurers in transferring risk. The insurance rates continue to increase in the Caribbean from year to year, irrespective of whether the region has been affected by a disaster or not. The speaker suggested that the region should consider effective insurance coverage for agriculture, property and infrastructure, and focus regional efforts to ensure improved resilience.

46. In the Pacific region, PIFS noted that a study on the issue of insurance was brought to the attention of governments in 2003. The World Bank and other bilateral donors were reluctant to consider insurance for disasters in the Pacific because of the high risk. It was noted that risk sharing and pooling could be a better option. Participants noted that there is a need to revisit the issue of insurance-related mechanisms such as microinsurance in the context of recent developments.

47. Nevertheless, some examples of insurance schemes exist from which lessons can be learned, for example the United Insurance Company of Barbados, which gives financial incentives for homeowners to put preventative measures in place, and the Catastrophe Risk Insurance Facility (CRIF) within the World Bank, which is piloting a scheme for small States to buy parametric insurance coverage against natural disaster risk. The Nairobi work programme on impacts, vulnerability and adaptation to climate change may also provide a valuable opportunity for furthering methodological efforts relating to insurance in the context of climate change adaptation.

48. Insurance-related action provides a unique opportunity to spread and transfer risk, and provides incentives for risk reduction and prevention which will also foster resilience to external shocks while engaging the private sector in climate change response action. One of the benefits of promoting insurance-related actions is that it will help advance efforts on quantifying risks and potential losses due to climate change. Serious dialogue between governments and the private sector (including banks whose loans can be affected by the lack of consideration of climate risks) needs to be initiated.

49. Participants suggested that the Convention process could provide support for the consideration of cost-effective insurance initiatives tailored to the unique circumstances of SIDS, such as multi-state risk pooling mechanisms; regional reinsurance facilities; catastrophe funds, linked to international financial markets; national/regional disaster funds, supported financially by the international community; micro-insurance; and private-public partnerships.

50. Participants expressed the idea of establishing a forum with broad participation of Parties and different stakeholders and/or technical group of experts to develop insurance options for SIDS, as well as an insurance facility for SIDS to provide financial support as a form of reinsurance.

51. The use of insurance could go beyond the traditional model, for example through innovative mechanisms such as enabling SIDS to generate carbon credits in exchange for support for insurance; through weather derivatives which provide payouts in response to weather triggers (such as a threshold wind speed as an index) rather than in response to demonstrated losses; or through a funding arrangement similar to the International Insurance Pool Proposal by the Alliance of Small Island States (AOSIS).

## **F. Regional and international cooperation**

### **1. South–South**

52. The importance of catalysing collaboration between institutions in SIDS was underlined, in particular the need to mainstream climate change into the work of different regional organizations and networks, and the need to share experiences and lessons learned by communities facing similar problems. Panel presentations and discussions underlined many useful regional initiatives and networks, in which organizations, including NGOs, promote regional cooperation on different climate change related issues.

53. The Water Center for the Humid Tropics of Latin America and the Caribbean explained its role in providing data and information infrastructures to support climate change adaptation in Latin America and the Caribbean. This includes strengthening capacity in environmental information such as the Mesoamerican Regional Visualization and Monitoring System (SERVIR), and helping to create mechanisms to enhance regional cooperation, for example through the memorandum of understanding with CCCCC (April 2006), the Ministerial Decision of the Iberoamerican Forum (September 2006) and the Global Development Alliance initiative with United States Agency for International Development (USAID) (through September 2008). The need for conducting joint project development, research and development on downscaling of climate scenarios as well as workshops and training activities was also identified.

54. SPREP pointed out that the Mauritius Strategy calls for greater SIDS–SIDS cooperation, in particular on adaptation, and recalled the productive cooperation among the SIDS regions, including early support to formulate a cooperation mechanism between Atlantic and Indian Ocean SIDS. He noted that the Pacific region requires detailed regional consultation; technical and financial assistance to complete priorities in the Pacific Framework, particularly on adaptation and climate change science relating to adaptation; improved opportunities for training and awareness; communications strategies; networking for information sharing and exchange; streamlined reporting; and databases.

55. UNEP-ROLAC explained their mechanisms for regional cooperation, including the Forum of Ministers of Environment of Latin America and the Caribbean; the Regional Seas Programmes (Caribbean Environment Programme); the UNEP Latin America and the Caribbean Civil Society Forum; PARLATINO (Latin American Parliament); and the Awareness and Preparedness for Emergencies on a Local Level programme.

56. The Pacific Islands Forum (PIF), which comprises 16 independent and self-governing States in the Pacific is the region's premier political and economic policy organization. Forum Leaders meet annually to develop collective responses to regional issues, which include strengthening responses to climate change.

57. Participants discussed regional and inter-regional collaboration. For example, Maldives and SPREP noted that although some initiatives are in place, the involvement of Indian Ocean SIDS in cooperation with Pacific and Caribbean and Atlantic SIDS is still in its infancy. There was a call to bring

Indian and Atlantic Ocean SIDS through institutions in the global SIDS collaboration to enhance exchange of appropriate expertise and technology and to use the Convention process to facilitate linkage of new centres in the Indian and Atlantic Oceans with other regional SIDS centres.

58. Participants stressed the usefulness of fully exploiting sectoral partnerships and networks at all levels for achieving effective collaboration and coordination of different regional efforts. The PIF secretariat noted that there are many sectoral partnerships in the region undertaking useful activities in, for example, the water, energy and agriculture sectors. However, there is still a lack of interaction and coordination of activities.

59. Among the challenges and constraints relating to effective and long-term cooperation, participants noted that external support activities were short-term and project-based, and often used a single task approach rather than a long-term programmatic comprehensive approach. Working groups that have been created under projects, and which show significant potential for providing technical and scientific support, often do not fully realize that potential in disseminating information and best practices. Participants noted the good practice of the SPREP programme on modelling that moved away from single projects to institutionalizing climate change across the region and linking external climate modelling institutions with regional institutions and disaster management and climate services, in order to advance work on modelling in the region, share information and avoid duplication.

60. Participants highlighted the importance of improved coordination of different efforts for enhancing effectiveness and delivery at the national level. It was stressed in this regard that the partners for development support need to fully exploit existing “nodes of excellence” and enhance coordination among them to provide a forum for collaboration on a sustainable and long-term basis. In addition to regional collaboration, some participants noted the need for a specific dedicated body to look into the coordination of different activities. Inter-linkages should also be strengthened between different institutions, activities and processes to enhance achievable co-benefits. Participants also stressed the need to involve more national NGOs, in particular organizations that host GEF small grant programmes.

## 2. North–South

61. During the discussions on North–South cooperation, representatives from Parties included in Annex II to the Convention (Annex II Parties) presented some of their initiatives. For example, in the Pacific region, the focus of Australia’s support is improving knowledge on climate and climate change related risk and vulnerability, as well as data rescue and monitoring. The Australian representative reported on enhancing support for ground-level adaptation projects, including a six-million Australian dollar project providing small grants for water security activities (water storage, protecting mangroves and crop diversification) and supporting a World Bank adaptation project in Kiribati.

62. A participant from New Zealand spoke about their adaptation work programme in the region focusing on merging top-down and bottom-up approaches, community based approaches, capacity-building and integrating climate change into existing development processes, through the involvement of key relevant stakeholders and adaptation practitioners.

63. The participant from France described its project on enhancing regional and national capacity-building for the Indian Ocean Commission in which the Comoros, France (Réunion), Madagascar, Mauritius and the Seychelles are involved. This project, which is supported by the French Global Environment Facility, aims at building capacity on climate observation, assessing and analysing climate change impacts, extreme event warning and risk reduction, strengthening adaptation policies and measures, and creating regional structures for cooperation and coordination.

64. The United Kingdom of Great Britain and Northern Ireland, through the Department for Environment, Food and Rural Affairs, is cooperating with the SIDS on applying the PRECIS system.

Over 200 researchers have been trained worldwide and two workshops have been held in the Caribbean. The United Kingdom is also supporting the MACC project and thus supporting 12 CARICOM countries to build capacity to assess vulnerability and risks associated with climate change, to access and use resources effectively to reduce vulnerability to climate change and to develop and implement a programme of public education and outreach.

65. The United States of America is aiding the collection and analysis of weather and climate data, the development of decision support tools and the integration of climate information into development programmes and projects in the Pacific and Indian Ocean SIDS and island territories, especially in Hawaii, American Samoa, Federal States of Micronesia, Palau and the Marshall Islands, focusing on climate change science for decision-making, adapting to climate variability and change, energy mitigation technology, and land use and forestry. Other USAID activities include supporting efforts of the Global Climate Observation System and Global Ocean Observation System, training of personnel in the region on integrated climate risk management in sectors, such as water resources management, coastal resources, agriculture, tourism and public health, and support to the International Coral Reef Initiative and efforts to enhance resilience to natural hazards.

66. From the SIDS perspective, the participant from Tuvalu spoke about the strategic, technical and financial cooperation between SIDS and Annex II country Parties. He noted that decisions by the COP, in particular 5/CP.7 and 1/CP.10, identified the actions for priority support through adaptation funding by the GEF. The speaker highlighted the need to ensure that this strategic direction is fully implemented. A special work programme for SIDS that would factor in the Mauritius Strategy, a special report by the Intergovernmental Panel on Climate Change on SIDS, a clearing house and a more simplified procedure for obtaining funds from the GEF were seen as ways to strengthen support for adaptation.

67. The participant from the Cook Islands emphasized the importance of having national development plans in place as a prerequisite for obtaining external assistance. He spoke of the need for better interregional and global cooperation to enhance the SIDS capacity, and the need for technical assistance in specialized areas, including insurance and technological options to advance practical adaptation to climate change. Participants also called for increasing official development assistance from developed countries while mainstreaming climate change adaptation into their development plans and priorities.

#### **IV. Main outcomes**

68. A number of outcomes emerged from the discussions at the expert meeting relating to vulnerability, adaptation and risk assessment; adaptation planning and implementation; risk management and risk reduction, including insurance; and regional and international collaboration.

##### **A. Vulnerability and adaptation assessments**

69. Vulnerability and adaptation assessments represent vital tools for SIDS to evaluate and implement responses to climate change. However, a major concern is the diminishing availability of international financing to support the customization of these tools to the specific circumstances of individual SIDS. Several options are available for improving V&A assessments in SIDS and their subsequent successful application. Efforts to improve and reduce the costs of adaptation assessments for both autonomous and planned adaptation are also vital. Such efforts to enhance assessments and related methodologies should aim to be consistent with the work undertaken within the framework of the Nairobi work programme.

70. Socio-economic information needs to be better integrated into V&A assessments. This includes linking climate vulnerability to socio-economic studies, long-term periodic and socio-economic

assessments, studies on coping strategies, and gender specific vulnerability assessment. There needs to be complementary use of top-down (scenario-based) and bottom-up (based on analysis of current vulnerability) approaches as well as consideration of community-based participatory approaches. Synergies between the climate change and the biodiversity and DRR contexts must also be considered.

71. The decision-making process, including pursuing policies to integrate assessment of V&A to climate change into development planning at the national level, requires effective application of tools and scientific input.

72. Sustainable high-quality and long-term observational monitoring of climate, agro-climate, and sea level is vital for SIDS. There is a need for improved data rescue and data inventories, and enhanced use of GIS as a tool to improve data access as well as for the integration of high-resolution downscaling models.

73. Additional resources are required for training and enhancing capacity for integrated vulnerability assessment, including integrated hazard assessments and special courses in SIDS Universities, as well as funding for special regional teams to provide sustainable support to countries in their vulnerability and adaptation assessments.

### **B. Adaptation planning and implementation**

74. A priority for SIDS is to implement practical adaptation measures at all levels – from community to national. There is a need to develop integrated, well planned and coordinated adaptation actions and adaptation projects, and to improve financial flows into adaptation-related activities through existing and new international, official development assistance and private sector mechanisms. International relocation is not an option for many SIDS; in addition to the socio-economic consequences, relocation would also mean an infringement on the sovereignty of SIDS.

75. Policy and development planners require effective tools for developing, disseminating and building capacity for adaptation, for example through building on existing planning frameworks such as ECLAC, the Organization of Eastern Caribbean States (OECS), and CCCCC. Knowledge of the availability of these tools must also be promoted.

76. Awareness on adaptation needs to be raised among critical sectors and mass media, by using current events, such as economic, weather and health crises, as a basis to promote adaptation measures with co-benefits.

77. Local and national capacities must be built and strengthened. This involves recognizing the role of universities, tertiary centres and centres of excellence, as well as training, educating and building the capacity of stakeholders in key sectors. Support for institutional strengthening, including regional centres, can be enhanced through multilateral and bilateral channels.

78. The private sector in the North and South must be fully engaged in both adaptation planning and implementation on a sectoral basis. Improved funding and access to funding through existing GEF funds is needed in order to effectively provide technical and financial support and capacity-building capabilities.

79. Sustainable practices in the tourism sector must be established, developed or promoted in synergy with adaptation activities and work to protect biodiversity. Links and synergy must also be encouraged between the programmes of work on biodiversity and climate change under the two conventions, in particular with regard to island biodiversity.

80. It is important to bridge the gap between assessment and planning and implementation of adaptation as well as community needs and national and sectoral planning, including through merging

top-down and bottom-up policy decisions and approaches for planning. Support projects need to be matched to priority needs, including enhanced funding and projects for community-based adaptation, as well as addressing the role and application of traditional knowledge. In order to avoid maladaptation, mechanisms must be introduced in order to validate adaptation options.

### **C. Risk management and risk reduction**

81. The vulnerability of SIDS to climate change and the related risks are substantially higher than for most other countries due to their small size. A disaster reduction management framework can provide a starting point for climate risk assessment, using, inter alia, available technical capacities, legislations and resources.

82. Climate change and disaster management must be integrated in risk management activities, including through structured planning frameworks, strengthening the links between institutions at the national and community levels for increased preparedness for climate-related disasters and building on existing mechanisms including early warning systems. In addition, a long-term perspective must be incorporated to inform risk assessment, and enable consideration of the frequency of extreme events and worst-case scenarios.

83. SIDS need enhanced capacity to understand current climate vulnerability and manage risk (e.g. by developing and implementing early warning systems). Increased collaboration between the climate change and DRR community on application and exchange of methods and tools can help, as well as enhanced public awareness using education, new technologies and strategies, and refining building codes and standards to include the key sectors and areas such as the agriculture sector, water, health, infrastructure and biodiversity. Region-specific scientific information must be used to inform risk management options.

### **D. Insurance**

84. Insurance is a vital instrument for most SIDS, particularly for coastal communities and sectors including tourism. Insurance-related action provides a unique opportunity to spread and transfer risk and provide incentives for risk reduction and prevention which will also foster resilience to external shocks while engaging the private sector in climate change response action. One of the benefits of promoting insurance-related actions is that these will help advance efforts on quantifying risks and potential losses due to climate change.

85. Current examples from which lessons could be learned include the Caribbean Catastrophe Risk Insurance Facility, which could be extrapolated and localized to the circumstances of other regions. The Nairobi work programme can also provide a valuable opportunity for furthering methodological efforts relating to insurance in the context of climate change adaptation.

86. A well-coordinated dialogue between the private sector and representatives from Parties would be useful to assess the actions that could be carried out in cooperation to increase the insurance coverage of the populations affected by climate change. It is necessary for the banking sector to be involved in the work relating to climate change insurance and mainstreaming adaptation, on the basis that many loans could be at risk because of the absence of climate-proofing in projects.

87. There is a need to develop innovative risk transfer mechanisms, assessing what cannot be done through market driven insurance, and thus obtain the support of the international community for new insurance mechanisms under the Convention process.

88. However, insurance alone will not be able to provide solutions to all the climate-related problems of SIDS and therefore government intervention will also be required to promote actions relating to national resilience to the impacts of climate change.

### **E. Regional and international collaboration**

89. Internationally coordinated capacity-building through the Convention and appropriate regional agencies is recognized as extremely important for advancing climate change adaptation in the region. Climate change should be mainstreamed into the work of different regional organizations and networks, and in particular through partnerships of sectors such as water, energy and agriculture in order to share experiences and lessons learned by communities facing similar problems.

90. There is a need to improve regional cooperation and to involve all sub-regions in regional and interregional collaboration, in particular that of Indian Ocean SIDS with Pacific and Caribbean and Atlantic SIDS. Improving coordination of different efforts is critical for enhancing effectiveness and delivery at the national level. It is also important to strengthen inter-linkages between different institutions, activities and processes including under different MEAs and IGOs and United Nations agencies.

91. In the context of external support and North–South cooperation, there is a critical need to ensure continuity (a programme-based rather than project-based approach) and adherence to the strategic direction for support identified by the COP, in particular by its decisions 5/CP.7 and 1/CP.10, as well as the Mauritius Strategy.

## **V. Possible follow-up actions**

### **A. Vulnerability and adaptation assessments**

92. Participants highlighted the following follow-up actions with regard to V&A assessments:
- (a) Make available the models, tools and methodologies that are appropriate for assessments in SIDS, facilitate training on their use, provide technical support and follow-up through regional centres of excellence and promote consistency with the work on the Nairobi work programme;
  - (b) Establish special mechanisms for sustainable V&A training, including short courses and longer-term professional training, incorporating capacity-building for participatory approaches;
  - (c) Establish a group of experts to facilitate assessments appropriate for specific circumstances of SIDS;
  - (d) Request the IPCC to develop a special report on SIDS;
  - (e) Increase efforts to assess, systematize and disseminate knowledge about existing adaptation technologies, including indigenous ones;
  - (f) Fully engage the private sector from the North and South in adaptation planning and implementation on a sectoral basis;
  - (g) Increase and improve access to GEF funding for special regional teams to support countries in their V&A assessment under their second national communications;

- (h) Recommend that the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention conduct hands-on training workshops in the SIDS regions;
- (i) Promote interregional and intraregional cooperation on modelling, economic valuation and adaptation assessments and quantifying costs of adaptation;
- (j) Establish a roster of experts with specialized skills at regional centres of excellence, thus helping to maintain experts working in the region.

### **B. Adaptation planning and implementation**

93. Participants identified the following follow-up actions relating to adaptation planning and implementation:

- (a) Establish a NAPA-like process for all SIDS, not just those that are LDCs, and reinforce the call for precautionary rather than reactive action;
- (b) Implement identified adaptation projects, including those proposed through the NAPA process;
- (c) Establish a SIDS funding window under the Adaptation Fund, and expand sources of funding through shares of proceeds under Joint Implementation and emissions trading;
- (d) Improve access to funding, and expedite funding to SIDS to facilitate learning through implementation via small grants (operational capacity-building) for community-based adaptation;
- (e) Encourage integration of climate change related issues and 'no regrets' measures in national sustainable development plans and strategies at the national level, and develop and implement communications strategies on adaptation at different levels of decision-making;
- (f) Encourage evidence-based practical, technical and financial programmes of assistance for adaptation to climate change;
- (g) Encourage Annex II Parties to provide funding for community-based adaptation;
- (h) Create a small grants programme fund for governments to provide the flexibility to avoid delays between project development and implementation;
- (i) Encourage international institutions to explore the role and application of traditional knowledge;
- (j) Separate negotiations on the adverse effects of climate change from those on the impact of the implementation of response measures.

### **C. Risk management and risk reduction**

94. Participants identified a number of follow-up actions relating to risk management and risk reduction, as follows:

- (a) Conduct a comprehensive economic assessment of the risks of impacts of climate change on SIDS, including 'hazard mapping';
- (b) Undertake stocktaking of risk management approaches based on the MDGs;



- (c) Strengthen and further develop the work of DRR with climate change, ensuring synergy between the Hyogo Framework and the Convention process;
- (d) Urge wide stakeholder involvement through participatory approaches and learning from the practice of the Hyogo Principles.

#### **D. Insurance**

95. A number of follow-up actions were identified as follows:

- (a) Identify specific issues/constraints relating to insurance and engage the insurance industry and finance experts on novel and innovative approaches to address insurance and relief funding in the context of risks relating to climate change through expert meetings and/or workshops;
- (b) Establish a forum within the Convention process to exchange and collect information on risk transfer mechanisms, including insurance (best practices and lessons learned); on international legal frameworks containing elements of loss sharing and risk managing; and on the feasibility of implementation of the original AOSIS insurance proposal. Emphasis in this process should be on bringing together actual practitioners and providers of insurance services with climate change stakeholders to devise appropriate responses to enhance the role of insurance as an adaptation tool for all SIDS. This will require the involvement of non-SIDS countries to ensure practical risk distribution.

#### **E. Regional and international collaboration and other cross-cutting issues**

96. Follow-up actions relating to regional and international collaboration and other cross-cutting issues were identified as follows:

- (a) Foster comprehensive regional and interregional SIDS exchanges and cooperation, ensuring involvement of all SIDS and applying lessons learned and sharing relevant results, including on traditional knowledge, from existing SIDS cooperation and networks;
- (b) Urge enhancing cooperation between SIDS and metropolitan territories in the regions, ensuring a structured approach and coordination of activities;
- (c) Strengthen the training component in international collaboration, including through divulging in a structured way the results of training and participation in climate change international and national activities to maintain experts working in the region;
- (d) Consider establishing a special work programme on SIDS that will incorporate the Mauritius Strategy, addressing current and future implementation of the Convention and its Kyoto Protocol to facilitate institutional coordination, ensure sustainability and monitor success;
- (e) Improve access to and availability of financial resources to implement specific projects/plans such as adaptation policies under regional projects;
- (f) Ensure the full participation of SIDS, including through their networks and organizations, in the Nairobi work programme.

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