



UNITED  
NATIONS



**Framework Convention  
on Climate Change**

Distr.  
GENERAL

FCCC/SBSTA/2009/6  
27 October 2009

Original: ENGLISH

**SUBSIDIARY BODY FOR SCIENTIFIC AND TECHNOLOGICAL ADVICE**

**Thirty-first session**

**Copenhagen, 7–18 December 2009\***

**Item 3 of the provisional agenda**

**Nairobi work programme on impacts, vulnerability  
and adaptation to climate change**

**Synthesis report on approaches to and experiences in integrating and  
expanding adaptation planning and action, and lessons learned, good  
practices, gaps, needs, and barriers and constraints to adaptation**

**Note by the secretariat\*\***

*Summary*

This report synthesizes information contained in submissions from Parties and relevant organizations on integrating and expanding adaptation planning and action across levels and sectors, together with information on related activities within and outside the UNFCCC process. It provides an overview of the current efforts of Parties and organizations to further integrate and expand adaptation, and a summary of lessons learned, good practices, gaps, needs, barriers and constraints.

\*Exact dates within the sessional period are subject to confirmation.

\*\* This document was submitted after the due date due to the time needed to analyze the information from the various sources.

## CONTENTS

	<i>Paragraphs</i>	<i>Page</i>
I. INTRODUCTION .....	1–14	3
A. Mandate .....	1–2	3
B. Scope of the note .....	3–4	3
C. Background .....	5–9	4
D. Methods .....	10–14	5
II. APPROACHES TO AND EXPERIENCES IN INTEGRATING AND EXPANDING ADAPTATION PLANNING AND ACTION ...	15–52	5
A. Integration of adaptation planning and action across levels .....	15–29	5
B. Integration of adaptation planning and action across sectors and livelihoods .....	30–40	8
C. Integration of planning and action across hazard types .....	41–46	10
D. Integration and expansion of adaptation across levels and sectors .....	47–52	11
III. LESSONS LEARNED, GOOD PRACTICES, GAPS, NEEDS, AND BARRIERS AND CONSTRAINTS TO ADAPTATION .....	53–86	12
A. Good practices .....	54–63	12
B. Gaps and needs .....	64–72	13
C. Barriers and constraints .....	73–86	15
IV. ISSUES FOR FURTHER CONSIDERATION .....	87	17
V. CONCLUSION .....	88	18

## I. Introduction

### A. Mandate

1. The Subsidiary Body for Scientific and Technological Advice (SBSTA), in its conclusions at its twenty-eighth session on the Nairobi work programme on impacts, vulnerability and adaptation to climate change, requested the secretariat to prepare, by its thirty-first session, a synthesis report containing views and information submitted by Parties and relevant organizations<sup>1</sup> on: approaches to and experiences in integrating and expanding adaptation planning and action at national, sub-national, community and local levels, including scaling up of local and community-based adaptation; and on lessons learned, good practices, gaps, needs, barriers and constraints to adaptation, including implementation of adaptation projects. In addition, the report is to include information from other relevant sources, including experiences gained during the national adaptation programme of action (NAPA) process.<sup>2</sup>

2. At the same session, the SBSTA requested the secretariat to organize, under the guidance of the Chair of the SBSTA and before SBSTA 31, a technical workshop to consider how to advance the integration of various approaches to adaptation planning, including scaling up of local and community-based adaptation.<sup>3</sup> The workshop was held with a view to making informed decisions on integrated practical adaptation actions and measures at various levels and for various sectors and livelihoods, taking into account the information in this synthesis report.

### B. Scope of the note

3. This document synthesizes the views and information submitted by Parties and relevant organizations on approaches to, and experiences in, integrating and expanding adaptation planning and action. It also contains relevant information from outputs of mandated Nairobi work programme activities under the work area of adaptation planning and practices in the first phase, which include: submissions by Parties and relevant organizations<sup>4</sup> and an associated synthesis report;<sup>5</sup> a synthesis report on the output of the work of the Least Developed Countries Expert Group, the Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention and the Expert Group on Technology Transfer relevant to adaptation planning and practices;<sup>6</sup> a workshop held in Rome, Italy, in September 2007;<sup>7</sup> and a web-based interface<sup>8</sup> providing information on existing adaptation practices and local coping strategies for adaptation. Insights from the NAPA and national communication processes are also considered.

4. In addition, examples of experiences from activities outside the UNFCCC process have been synthesized and integrated into the report. These include the work of the Organisation for Economic Co-operation and Development (OECD) on the integration of adaptation into development assistance, and adaptation portals such as the Adaptation Learning Mechanism and the World Bank Climate Change Data Portal. Relevant information contained in the NAPAs has also been integrated into this report.

---

<sup>1</sup> Submissions from Parties and organizations are compiled in document FCCC/SBSTA/2009/MISC.4.

<sup>2</sup> FCCC/SBSTA/2008/6, paragraph 59.

<sup>3</sup> FCCC/SBSTA/2008/6, paragraph 61.

<sup>4</sup> FCCC/SBSTA/2007/MISC.10 and FCCC/SBSTA/2007/MISC.11.

<sup>5</sup> FCCC/SBSTA/2007/9.

<sup>6</sup> FCCC/SBSTA/2007/10.

<sup>7</sup> See document FCCC/SBSTA/2007/15 for the report of the workshop.

<sup>8</sup> The database can be accessed at <<http://unfccc.int/4555.php>>.

### C. Background

5. The overall objective of the Nairobi work programme is to assist all Parties, in particular developing countries, including the least developed countries (LDCs) and small island developing States, to improve their understanding and assessment of impacts, vulnerability and adaptation, and to make informed decisions on practical adaptation actions and measures to respond to climate change on a sound scientific, technical and socio-economic basis, taking into account current and future climate change and variability.<sup>9</sup>

6. Activities in the area of adaptation planning and practices under the Nairobi work programme are undertaken in line with the objective in the annex to decision 2/CP.11 to advance sub-themes 3 (b) (ii), “Collecting, analysing and disseminating information on past and current practical adaptation actions and measures, including adaptation projects, short- and long-term adaptation strategies, and local and indigenous knowledge”, and 3 (b) (iv), “Facilitating communication and cooperation among and between Parties and relevant organizations, business, civil society and decision makers, and other stakeholders”.

7. Work in the area of adaptation planning and practices can contribute to efforts by Parties and organizations:

- (a) To exchange information on experiences, lessons learned, constraints and barriers with regard to past and current adaptation measures and actions, and the implications for sustainable development;
- (b) To promote different ways and means for information sharing and for the enhancement of cooperation among Parties and relevant sectors, institutions and communities, including in the areas of disaster risk reduction and management;
- (c) To promote understanding of response strategies, including early warning systems and local coping strategies, and of lessons learned that can be applied elsewhere;
- (d) To assess ways and means to support adaptation, and address barriers and constraints to its implementation.

8. The Nairobi work programme is in its second phase. Activities and deliverables from the first phase of the Nairobi work programme under the work area of adaptation planning and practices are summarized in document FCCC/SBSTA/2008/12.

9. Details of activities and deliverables mandated under the second phase, from 2008 to 2010, are included in document FCCC/SBSTA/2008/6. In addition to the submissions synthesized in this document and the related workshop mentioned in paragraph 2 above, other deliverables under the area of adaptation planning and practices include:

- (a) A technical paper and technical workshop on integrating practices, tools and systems for climate risk assessment and management and disaster risk reduction strategies into national policies and programmes;
- (b) Submissions by Parties and relevant organizations on efforts undertaken to monitor and evaluate the implementation of adaptation projects, policies and programmes and the costs and effectiveness of completed projects, policies and programmes as well as views on lessons learned, good practices, gaps and needs;
- (c) An enhanced interface on adaptation practices.

---

<sup>9</sup> Decision 2/CP.11, annex, paragraph 1.

## **D. Methods**

10. Submissions of views on approaches to and experiences in integrating and expanding adaptation planning and action, and lessons learned, good practices, gaps, needs, and barriers and constraints to adaptation were received from nine Parties (Belize, Colombia, Costa Rica, Czech Republic on behalf of the European Community and its member States, Japan, New Zealand, Saudi Arabia, Sri Lanka and Uzbekistan) representing the views of 23 Parties, one intergovernmental organization (Caribbean Community Climate Change Centre (CCCCC)), one United Nations organization (Food and Agriculture Organization of the United Nations (FAO)) and one non-governmental organization (Practical Action). Most submissions contained case studies showing how adaptation to climate change is being integrated successfully into national planning; in particular, the studies indicate that the inclusion of adaptation planning at the national level facilitates integration of adaptation planning and practice at subnational, local and community levels.

11. The term “integrating and expanding adaptation planning and action”, as mentioned in paragraph 1 above, may be interpreted in a number of ways. This paper uses the perspective taken in the submissions from Parties and relevant organizations and reports on other adaptation activities under the Convention. A wide range of activities has thus been included.

12. Each submission and document was analysed in relation to its mandate. Submissions contained information on integration activities and general adaptation approaches and needs. Information on sectoral approaches to adaptation or approaches confined to one level of government were generally excluded from the synthesis, unless they formed part of a larger, integrated approach. Similarly, general approaches and lessons learned on adaptation were excluded, since much work has been dedicated to learning from such experiences in other mandated activities of the Nairobi work programme. Furthermore, much information submitted by Parties and organizations on good practices, barriers, gaps and needs was not included because this has been covered in previous submissions.

13. Submissions from Parties demonstrated the progress made in developing and implementing national adaptation strategies. Some organizations, such as Practical Action, specifically addressed the expansion of integrating adaptation planning into relevant ongoing processes.

14. Some sources, such as the report of the workshop on adaptation planning and practices mentioned in paragraph 3 above, contained sections that are specific to the integration of adaptation. In others, such as the compilation of NAPA projects, integration of adaptation was not addressed specifically; NAPAs and national communications were analysed for activities spanning more than one sector or level. In sources that shared experiences on adaptation, searches were carried out for specific key words related to the mandate, such as “integration” and “expansion”, and for information on adaptation in more than one sector or level.

## **II. Approaches to and experiences in integrating and expanding adaptation planning and action**

### **A. Integration of adaptation planning and action across levels**

15. This section addresses the integration and expansion of adaptation planning and action across national, subnational, local and community levels. Subnational adaptation includes adaptation at state or province level. Local-level adaptation addresses municipal and town-level initiatives, and community-based adaptation refers to adaptation action undertaken at the level of an individual community.

16. The integration of adaptation planning and action across levels can take many forms. Top-down, central government-led integration includes:

- (a) National governments providing the enabling environment for adaptation to occur at lower levels;
- (b) National governments providing guidance and information specifically for such lower levels of government;
- (c) Ensuring that policy created at the national level is implemented at lower levels: the 'trickle down' of policy.

17. Another kind of integration is project or outcome based and involves different levels of government working together to solve a problem within a certain sector or one that is centred in a particular location; interventions can be made at all levels and under many different jurisdictions when this approach is adopted.

#### 1. Creating an enabling environment for adaptation to occur at lower levels

18. There were many examples in the submissions of national or regional governments providing the enabling environment for adaptation to occur at lower levels. Many European countries are developing national adaptation plans or strategies which will ensure the incorporation of adaptation planning into national-level documents and aid lower-level authorities in planning their adaptation. Such strategies are informed by all levels of government, including ministries and sectoral departments. They involve as many stakeholders as possible, and, as highlighted in the submissions, are based on existing adaptation knowledge and activities within a country.

19. Some countries, such as Uzbekistan, are well advanced in the development of their adaptation strategies. In Thailand, environmental conservation and protection has been included in national planning since the early 1980s through its five-year National Economic and Social Development Plans. More recently, climate change has been included in the plans.<sup>10</sup>

20. The formulation of most adaptation strategies begin with a stocktaking exercise. Latvia, for example, has recently started this exercise while the United Kingdom of Great Britain and Northern Ireland is further advanced in the process. Ireland is developing an adaptation database to support the development of its climate change adaptation strategy. Denmark's adaptation strategy includes a cross-ministerial Coordination Forum on Adaptation, an Information Centre on Adaptation and a Coordination Unit for Research on Climate Change Adaptation. Germany has developed the German Strategy for Adaptation to Climate Change.<sup>11</sup>

21. The European Union (EU) policies on adaptation are harmonized with national targets. The EU is currently forming a climate change adaptation policy based on the European Commission Green Paper "Adapting to climate change in Europe – options for EU action". The policy is intended to help to integrate climate change adaptation into sectoral and other relevant policies implemented at EU level in order to complement the work of the member States.

#### 2. Providing guidance and information

22. New Zealand has produced a range of materials that provide guidance to local government, acknowledging that this level of government is responsible for many functions that may be affected by climate change. At the community level, the New Zealand Ministry of Agriculture and Forestry

---

<sup>10</sup> See the initial national communication of Thailand at <<http://unfccc.int/resource/docs/natc/thainc1.pdf>>.

<sup>11</sup> <[http://www.bmu.de/files/english/pdf/application/pdf/das\\_gesamt\\_en\\_bf.pdf](http://www.bmu.de/files/english/pdf/application/pdf/das_gesamt_en_bf.pdf)>.

administers the Sustainable Farming Fund, which funds farmer- and forester-led community-based programmes that contain a specific climate change component.

23. To ensure that adaptation policy created at the national level is implemented at lower levels, sufficient information and guidance is required. There must be the capacity at the local level to identify and assess adaptation options. Parties mentioned the need of local planners for guidance, ideally from national governments and backed by sound science, that clearly identifies the advantages of action.<sup>12</sup>

### 3. Ensuring policy implementation

24. The United Kingdom's approach to multilevel integration of adaptation attempts to foster "nationally inspired but community-led initiatives"<sup>13</sup> such as user-relevant climate projections from the Met Office Hadley Centre, local authority targets and partnerships at the local level created to share best practices. This work takes place under the national-level Adapting to Climate Change Programme and the Climate Change Act.

25. It can be the case that adaptation policies put into place at the national level are not implemented effectively at the local level owing to a lack of knowledge or understanding of such policies.<sup>14</sup> Difficulties have already been encountered in implementing and enforcing environmental laws at the local level.<sup>15</sup>

### 4. Integration around projects and specific outcomes

26. The research programmes of EU member States are often demand-driven, defined by stakeholders from many sectors and focused on a specific vulnerable region. The Netherlands' Knowledge for Climate project, Ireland's Climate Change Research Programme and Germany's Competence Centre on Global Warming are examples of such initiatives. There are fewer examples of an integrated approach to the implementation of adaptation activities than examples of integrated research programmes.

27. However, Costa Rica has taken a sectoral approach to expanding adaptation planning and action at all levels, focusing on reducing the vulnerability of the most sensitive and nationally important sectors. For example, national water resources are being assessed in river basin vulnerability studies, with a view to assigning adaptation measures to each region with a clear division of responsibilities among institutions and associated resources for implementing these measures.

28. The Netherlands National Programme on Climate Adaptation and Spatial Planning and the National Adaptation Strategy were developed through collaboration between different governmental levels. In this approach, integration is recognized as key to adapting spatial matters to climate change.

29. Based on its experiences in implementing the INAP project,<sup>16</sup> Colombia noted that adaptation measures are more likely to succeed if they are based on current practices and involve local communities.

---

<sup>12</sup> FCCC/SBSTA/2007/9, paragraph 23.

<sup>13</sup> United Kingdom's submissions as contained in document FCCC/SBSTA/2009/MISC.4.

<sup>14</sup> Levina E and Adams H. 2006. *Domestic Policy Frameworks for Adaptation to Climate Change in the Water Sector. Part I: Annex I Countries*. Available at <[www.oecd.org/dataoecd/32/47/36835429.pdf](http://www.oecd.org/dataoecd/32/47/36835429.pdf)>.

<sup>15</sup> FCCC/SBI/2005/18, paragraph 27.

<sup>16</sup> Integrated National Adaptation Plan: High Mountain Ecosystems, Colombia's Caribbean Islands, and Human Health.

## **B. Integration of adaptation planning and action across sectors and livelihoods**

30. This section highlights ongoing activities to integrate and expand adaptation planning and practices across economic sectors and livelihoods. There are several mechanisms through which such integration has occurred:

- (a) Through adaptation projects that involve two or more different sectors;
- (b) Through the interconnected nature of the natural environment and the benefits that adaptation within one sector bestows on another;
- (c) Through focusing on geographical areas and the vulnerability of specific development plans;
- (d) Through the inclusion of adaptation planning in national-level policy documents and planning, together with the required resources;
- (e) Through a participatory approach being taken at a higher level of government, bringing a range of stakeholders together.

31. In its submission, Costa Rica provided an example of adaptation involving two sectors, describing the cross-sectoral efforts made through the National Adaptation Program for Biodiversity and Coastal Marine Areas to protect the country's biodiversity from the impacts of climate change. Climate risk assessments were carried out for the sectors of biodiversity and coastal zone areas, and incorporated into existing and new policy frameworks. Activities include monitoring, payment for environmental services and consolidation of protected coastal areas.

32. There are many examples of adaptation in one sector providing co-benefits to another. Integrated coastal zone management, integrated water resource management and restoration of ecosystems are established methods of bringing together a range of different sectors and priorities. The Intergovernmental Panel on Climate Change technical paper on climate change and water<sup>17</sup> systematically analyses the links between water resources and a range of other sectors such as biodiversity, agriculture and food security, land use and forestry, human health, sanitation, infrastructure and various aspects of the economy.

33. Previous submissions under the Nairobi work programme<sup>18</sup> provided examples of the co-benefits of projects. Some of the most common examples concern adaptation within the coastal zone – applying the concepts of integrated coastal zone management to adaptation to climate change. This can involve habitat restoration (e.g. dunes), biodiversity protection (e.g. coral reefs), disaster risk management (e.g. storm surges and cyclones) and the adaptation of agricultural practices (e.g. increased flood risk or salinization). Integrated coastal zone management also addresses afforestation, infrastructure protection and the sustainability of energy resources. Adaptation activity in island States is, by definition, multisectoral, since most of the infrastructure is located within the coastal zone.

34. Expansion of adaptation across sectors can also occur through focusing on geographical areas and the vulnerability of specific development plans. Regional-level authorities can bring together sectoral players to reduce the vulnerability of a certain geographical area. Such an approach has been taken by the Netherlands in its integration activities that focus on knowledge development around climate change 'hot spots'. This work involves the public and private sectors and scientific institutions.

---

<sup>17</sup> Bates BC, Kundzewicz ZW, Wu S and Palutikof JP (eds.). 2008. *Climate Change and Water. Technical Paper of the Intergovernmental Panel on Climate Change*. Geneva: IPCC Secretariat.

<sup>18</sup> <[http://maindb.unfccc.int/public/adaptation\\_planning/](http://maindb.unfccc.int/public/adaptation_planning/)>.



A team of people is brought together from local authorities, science and business to develop demand-driven knowledge for specific vulnerable areas/sites (such as the port of Rotterdam or Schiphol airport).

35. The heatwave plan developed by France and activated every summer is an example of a successful cross-sectoral adaptation action; the implementation of the plan requires input from the Ministry of Health, Météo-France and local government.
36. However, it is unlikely that sectoral agencies will actively seek cooperation on adaptation in other sectors unless a mandate, accompanied by incentives and resources, has been provided in national plans.<sup>19</sup> Parties are moving towards encouraging intersectoral adaptation at the highest levels of government.
37. The EU and its member States take a participatory approach to developing adaptation plans, creating cross-sectoral or ministry-based multi-stakeholder commissions or working groups. In Spain, the integration of adaptation across sectors has been facilitated through its National Climate Change Adaptation Plan, which aims to ensure a coherent overall approach while recognizing that climate factors will vary depending on the sector. Methods include developing a common approach, a knowledge base for adaptation within sectors, and regular exchange of data and results across sectors. The plan outlines methods of cooperation through existing bodies (government, research and non-governmental organizations, coordinated by the Spanish Office of Climate Change (OECC)). Other national mechanisms for cooperation include a working group on impacts and adaptation, and the Spanish Network of Cities for Climate. The OECC helps to define local policies on climate change.
38. New Zealand has produced a Five-Year Adaptation Programme for the agriculture and forestry sectors, which focuses on partnerships between land-based sectors (including agriculture and forestry), the Maori community and local government. Uzbekistan identified adaptation measures to be taken jointly by the agriculture and water resources sectors. Latvia includes adaptation in its National Security Concept and Civil Protection System, thus enhancing cooperation between the Ministries of Environment and Defence.
39. Sri Lanka has begun to integrate adaptation into the new Ministry of Disaster Management and Human Rights (responsible for adaptation planning for extreme events). The country has a Climate Change Secretariat, which acts as the national platform, and a National Advisory Committee on Climate Change. Japan's Asia-Pacific Network for Global Change Research and the Caribbean region's CCCCC operate in a similar way.
40. Another participatory approach to integration involves the private sector. The adaptation private-sector initiative under the Nairobi work programme aims to involve the private sector in adaptation and highlight how private-sector companies are approaching adaptation to climate change within their business strategies. Allianz (an insurance and financial services provider) has developed a number of adaptation-related products in cooperation with non-governmental organizations and development agencies in countries such as Egypt, India and Indonesia. Caisse des Dépôts fosters the integration of climate change among sectors at the local level through a focus on the problems that cities will face in relation to climate change. The Munich Climate Insurance Initiative aims to build technical and institutional capacity around climate insurance. Siemens is developing technology to help a range of sectors adapt to the changing climate, for example through their water purification technology. Sompo Japan Group is developing a weather index insurance scheme for farmers in Thailand to help them in adapting to climate change.

---

<sup>19</sup> OECD. 2009. *Integrating Climate Change Adaptation into Development Co-operation. Policy Guidance.*

### C. Integration of planning and action across hazard types

41. The integration of adaptation across hazard types is being assisted by the formulation of national adaptation strategies. It is also occurring within sectoral plans addressing those hazards that pose a danger to the activities of a specific sector. The key route through which adaptation planning and practices can be integrated and expanded across hazards is through the integration of disaster reduction plans into adaptation plans and poverty reduction plans. For example, FAO highlights the links that should be made between climate change adaptation, rural development and risk management at the local level. The integration of disaster risk management into development planning helps to prevent the increase of economic and livelihood losses associated with climate-related disasters and allows experiences from other sectors to be used in adapting to climate-related risks.

42. Views and information on ongoing efforts to integrate adaptation and risk management into development planning were submitted to the secretariat by Parties and relevant organizations<sup>20</sup> and discussed at the technical workshop on integrating practices, tools and systems for climate risk assessment and management and disaster risk reduction strategies into national policies and programmes, which took place in Havana, Cuba, on 10–12 March 2009.<sup>21</sup> Two broad types of strategy emerged from discussions at the workshop – a long-term perspective focusing on adaptive capacity and policy development and a short-term risk reduction strategy. The strategies are complementary to each other. There was consensus among participants that climate risk assessment and management and disaster risk reduction should be ‘internalized’ within development policy.<sup>22</sup>

43. A wide range of approaches to the integration of climate risk assessment and management and disaster risk reduction strategies into national policies and programmes was reported at the workshop and in the associated submissions. Disaster risk reduction can be integrated through national policy frameworks into adaptation and poverty reduction strategies. Furthermore, it is possible to create integrated plans for adaptation to climate change and disaster risk reduction, as another way of integrating disaster risk reduction into national policies.

44. Generic approaches identified in this workshop applicable to a range of hazards, sectors and levels include: engaging stakeholders, establishing multi-stakeholder committees, validating and using indigenous knowledge, and multi-hazard, multi-sector and adaptive management approaches.

45. Other processes are conducive to the integration of climate risks into national policy. These include: preparing national communications and NAPAs as well as facilitating interaction between stakeholder groups, including developers and users of information; strengthening key national institutions (e.g. hydrometeorological services); drawing on local knowledge; promoting coordination and cooperation; communicating in accessible languages; and encouraging interplay between science, policy and local knowledge. These approaches echo those highlighted in previous submissions and workshop reports on integrating adaptation into planning.

46. The United Nations International Strategy for Disaster Reduction (UN/ISDR) promotes and coordinates global efforts to reduce disaster risk and increase resilience through implementation of the Hyogo Framework for Action.<sup>23</sup> UN/ISDR uses existing platforms to support the development of legal and institutional frameworks and enhance collaboration between sectoral stakeholders on adaptation.<sup>24</sup> Its activities include: helping to ensure that adaptation strategies build on existing disaster risk reduction

---

<sup>20</sup> FCCC/SBSTA/2009/MISC.4.

<sup>21</sup> <[http://unfccc.int/adaptation/sbsta\\_agenda\\_item\\_adaptation/items/4742.php](http://unfccc.int/adaptation/sbsta_agenda_item_adaptation/items/4742.php)>.

<sup>22</sup> Document FCCC/SBSTA/2009/5 contains a summary of the workshop proceedings.

<sup>23</sup> <<http://www.unisdr.org/eng/hfa/hfa.htm>>.

<sup>24</sup> UN/ISDR Action Pledge to the Nairobi work programme. Available at <[http://unfccc.int/files/adaptation/sbsta\\_agenda\\_item\\_adaptation/application/pdf/isdr\\_march09.pdf](http://unfccc.int/files/adaptation/sbsta_agenda_item_adaptation/application/pdf/isdr_march09.pdf)>.

institutions, policies and mechanisms; identifying suitable adaptive strategies and actions by facilitating the exchange of expertise and experience on disaster risk reduction and adaptation; including adaptation in workshop agendas and preparing an analysis of barriers to, and needs for, the integration of risk reduction into adaptation plans at municipal and national levels.

#### **D. Integration and expansion of adaptation across levels and sectors**

47. Some processes are intrinsically integrative, working at multiple levels and with multiple sectors. These processes also deal with the integration of adaptation into planning and capacity-building. The NAPA and national communications processes are good examples of such efforts.

48. The NAPA process for LDCs has helped to facilitate adaptation planning across all levels and across all sectors. NAPAs are considered a success because of the wide engagement of stakeholders in their elaboration, both nationally and locally. NAPAs represent a consultative, participatory approach to adaptation and a method for incorporating vulnerability assessments and climate change adaptation considerations into national planning and development frameworks (e.g. poverty reduction strategy papers and United Nations Millennium Development Goals<sup>25</sup>). Furthermore, the role of indigenous knowledge is recognized explicitly in the NAPA process.

49. The NAPA process is a key entry point for the consideration of climate change in national planning decisions; enhanced implementation of NAPAs will allow their role in national planning to be strengthened.<sup>26</sup> The process aligns the identified priority adaptation projects with national development priorities (i.e. priority sectors including agriculture and forestry, fisheries, water resources and disaster risk reduction). Linking adaptation and development efforts will not only increase the sustainability of a NAPA project but also make it easier to execute, since existing channels and mechanisms can be utilized.

50. Moreover, the NAPA process is project-based and allows for integration between and within sectors. A preliminary analysis of the projects submitted to the secretariat reveals many projects spanning one or more sector. Some examples of projects which involve more than one sector include: those relating to water supply/agricultural production in coastal areas (e.g. in Bangladesh, Maldives); integrated water resource management (e.g. Cape Verde), integrated coastal zone management (e.g. Kiribati, Sierra Leone, Djibouti); ecosystem conservation and biodiversity (e.g. Sudan, Tuvalu); forest restoration and general watershed improvement to increase water resources and agricultural capacity (e.g. Malawi, Haiti); the development of sustainable tourism (e.g. Vanuatu, Samoa) and the development of sustainable rural livelihoods (e.g. Malawi).<sup>27</sup>

51. Likewise, national communications play an important role in the integration and expansion of adaptation across different levels, sectors and hazard types by requiring Parties to gather and summarize information on programmes relating to sustainable development. The national communications show that Parties have used Agenda 21 and the Millennium Development Goals to guide the formulation of policies concerned with integrating climate change into sustainable development. Poverty reduction and food security tend to be the overarching aims of sustainable development policies. Climate change is also being taken into account in policies addressing development priorities such as access to basic education and health care, control of population growth, rational use of energy and natural resources, promotion of ecologically sound technologies, and environmental protection.

52. The compilation and synthesis of initial national communications from Parties not included in Annex I to the Convention (non-Annex I Parties) highlights the role of national action plans in providing a framework for climate change planning and capacity-building at national and sectoral levels. However,

---

<sup>25</sup> <[www.un.org/millenniumgoals](http://www.un.org/millenniumgoals)>.

<sup>26</sup> FCCC/SBI/2007/32, paragraph 38.

<sup>27</sup> See <<http://unfccc.int/4583.php>> for a summary of NAPA projects submitted to date.

the national communications have also shown that national circumstances affect the ways in which climate change is incorporated into the planning process, by altering sustainable development priorities (e.g. the climate, geography, demographic and land-use profiles, natural resources endowment, energy mix and economic structures). Institutional and governmental initiatives are already under way in non-Annex I Parties to improve the integration, coordination and implementation of climate change activities at all levels.<sup>28</sup>

### **III. Lessons learned, good practices, gaps, needs, and barriers and constraints to adaptation**

53. This chapter highlights some of the lessons learned in the integration of activities undertaken to date. Good practices, gaps and needs, as well as barriers and constraints, with regard to all kinds of integration are addressed. The information in the following sections has not been subdivided according to category of integration, because many of the successful strategies, or barriers and needs, are common to all categories. One conclusion that can be drawn from the submissions is that the integration of adaptation is not necessarily complex, but can be as simple as sharing input data for models across levels within a country (as highlighted by Spain).

#### **A. Good practices**

54. Examples of good practices in integrating and expanding adaptation planning span all levels of government, from international to community level, and many different approaches and kinds of integration. The integration and expansion of adaptation has been most successful in the following areas:

- (a) Increasing, and improving the effectiveness of, cooperation between levels and sectors;
- (b) Scaling up pilot studies and expanding community-based adaptation;
- (c) Identifying the most effective entry points for integrating adaptation.

55. Furthermore, general good practices involve the recognition of co-benefits between adaptation to climate change, development and environment protection and of the importance of taking a 'no regrets' approach. Many Parties are already taking this approach.<sup>29</sup>

#### 1. Cooperation on adaptation

56. At the international level, cooperation between different actors on adaptation planning and practices is well developed, for example the collaborative activities of the World Health Organization with the World Meteorological Organization and the United Nations Environment Programme.<sup>30</sup> Numerous regional networks among countries within a geographic region also exist and have been collaborating to carry out adaptation activities.

57. At the national level, the NAPA process has been shown to be a successful way to integrate adaptation into national development plans. The formulation of the NAPA priority projects based on national poverty reduction goals, as in the case of Rwanda, ensures that adaptation will be a priority in national-level policy. Kiribati has created the Kiribati Adaptation Programme to address longer-term needs, in addition to the most immediate needs identified by the NAPA process (OECD, 2009).

---

<sup>28</sup> FCCC/SBI/2005/18, paragraph 26.

<sup>29</sup> See, for example, document FCCC/SBI/2005/18, paragraph 28.

<sup>30</sup> As demonstrated in previous submissions on adaptation planning and practices, contained in documents FCCC/SBSTA/2007/MISC.10 and Add.1 and FCCC/SBSTA/2007/MISC.11.

The formulation of NAPAs has allowed planning decisions to be based on a good knowledge of climate change and its potential impacts.

58. Also at the national level, the Government of India has established an Environmental Information System (ENVIS) designed to ensure the integration of national efforts on environmental data collection, management and dissemination. The ENVIS centres have been set up in different organizations/establishments that assess various environmental problems. Although not currently addressing adaptation specifically it is a good example of concrete integration between different sectors and activities on environmental issues.<sup>31</sup>

59. The United Kingdom Climate Impacts Programme provides a link between the top-down and bottom-up approaches to adaptation. It provides stakeholders with the tools required to plan and implement adaptation, as well as coordinating research on the impacts of, and adaptation to, climate change. Stakeholder involvement is seen as very important in this type of research.

## 2. Scaling up pilot studies and expanding community-based adaptation

60. Belize highlighted the usefulness of local-level case studies in the creation of higher-level policies. In the submissions from the CCCCC on adaptation practices in general, case studies are used to engage and inform stakeholders. The regional climate change projects carried out by members of the Caribbean community are examples of regional to national (and even subnational) cooperation; many of the case studies and projects carried out have informed national climate change strategies and sectoral climate change policies.

61. FAO and Practical Action are addressing the issue of scaling up community-based adaptation projects through the creation of partnerships with local community groups and the use of local development plans, as well as by strengthening institutions at the local and central government levels. Practical Action has developed an approach to scaling up based on the sharing of information and experiences through district- and national-level networks.

## 3. Identifying existing entry points for integration

62. There is widespread recognition of certain activities within sectors that act as useful entry points for integration across sectors and levels.<sup>32</sup> Disaster reduction mechanisms have already been mentioned in this document as a key entry point for adaptation; the existing institutional frameworks and partnerships for cross-sectoral work address current exposure to natural hazards. Food security is another policy priority that is pivotal to the integration of adaptation activities, since climate change, disaster risk reduction, and natural resource management and development are key to ensuring food security.

63. Environmental and health impact assessments are seen as another good entry point for intersectoral cooperation on adaptation, as are holistic approaches such as an ecosystem approach to planning or the use of geographical information systems to create vulnerability maps.

## **B. Gaps and needs**

### Common gaps and needs

64. The gaps and needs highlighted in the submissions and other documents considered in this paper focus on improving the availability of knowledge and information, enhancing the engagement of stakeholders and regional networks, and improving communications. The need to create a political

<sup>31</sup> See <<http://www.envis.nic.in>> and the national communication of India.

<sup>32</sup> FCCC/SBSTA/2007/9.

environment that recognizes the importance of the integration of risk management and adaptation is also a key requirement for the continued integration and expansion of adaptation.

65. The need for further integration in general is highlighted by two calls for action produced by the secretariat: one on enhanced integration of adaptation into development and budgetary planning and policies across subnational, national, regional and international levels; and the other on the requirement for approaches in and across sectors to prevent uncoordinated sectoral responses.<sup>33</sup>

66. In general, promoting adaptation planning and practices at all levels and across all sectors will require actions such as:

- (a) Undertaking more targeted research on practical adaptation options, including on their costs, benefits and possible trade-offs;
- (b) Developing conceptual frameworks for adaptation to assist in identifying the range of adaptation activities;
- (c) Promoting better communication between users and providers of data and information; developing good practice award schemes;
- (d) Taking stock of adaptation databases and disseminating the findings.<sup>34</sup>

67. Three major needs were identified in the submissions, NAPAs and national communications: the scaling up of community-based work; analyses of adaptation needs and responses involving more than one sector; and building capacity for responding to climate change along with other national concerns.

68. There is a need to focus on scaling up and coordinating community-based work through knowledge sharing (e.g. through web-based knowledge hubs), sound ecosystem management and the incorporation of conflict resolution into training programmes.<sup>35</sup> Challenges include changing government policy to support the most vulnerable, for example through a community-based extension service.

69. Little analysis of adaptation is being carried out outside sectoral boundaries. However, the need for integrated assessment models and for deriving insights from their results were often highlighted as a requirement for developing sectoral and subnational adaptation policies. Such assessments would foster both intersectoral and inter-level integration. Many stakeholders are required to develop and test such models, and they are often created at the national level to inform the decisions of subnational and sectoral decision makers.

70. The needs relating to integration in the national communications highlight the general lack of capacity in non-Annex I Parties to mainstream climate change into national development and sectoral plans, and into efforts to achieve the Millennium Development Goals. The lack of capacity for the formulation, analysis and implementation of specific integrated plans was also highlighted in national communications by non-Annex I Parties.<sup>36</sup> There is a need to develop institutional capacity to find synergy among conventions and to coordinate and support mechanisms at the national and local levels, and to improve the availability of data and technical skills to carry out integrated assessments.

---

<sup>33</sup> See calls for action 05 and 06 at <<http://unfccc.int/4430.php>>.

<sup>34</sup> FCCC/SBSTA/2007/15.

<sup>35</sup> See Practical Action's submission in document FCCC/SBSTA/2009/MISC.4.

<sup>36</sup> FCCC/SBI/2005/18, paragraph 31.

71. More specific gaps were highlighted by Parties in their submissions. In Costa Rica, the integration of adaptation into the development process calls for the integration of adaptation into land use at local government level, more assessments of critical areas and more economic evaluation of the most cost-effective adaptation options.

72. In its submission, Japan proposed some elements to enhance the integration and expansion of adaptation: a knowledge network to allow capacity-building on impacts, vulnerability and adaptation assessments and adaptation action; increased integration of information from bilateral and multilateral support projects into the UNFCCC process; and improved documentation and sharing of information regarding support for adaptation. Uzbekistan sees more education programmes at an international level and a “uniting of efforts” involving improved coordination between sectors as requirements for adaptation in developing countries.

### **C. Barriers and constraints**

#### **1. Common barriers**

73. Parties identified common barriers across all levels and types of integration. These include: the inability of institutions, departments, stakeholders and different levels of government to coordinate effectively; insufficient stakeholder engagement; a lack of documentation and dissemination of case studies; and a lack of cost-benefit analyses and information on costs at the appropriate level. Lack of political commitment was another key barrier. All these barriers have been mentioned in previous submissions and workshop reports on adaptation planning and practices.

74. The removal of some barriers may be particularly useful in developing cross-sectoral and cross-level adaptation, for example developing a common understanding of threats and opportunities and identifying roles and responsibilities. Such an exercise could be carried out across sectors at a national level and would ensure that all stakeholders viewed the threats and opportunities in a similar manner. More importantly, it would identify key players who can enable cross-sectoral or cross-level adaptation.

75. Crossing institutional boundaries between sectors would be even more difficult. Parties mentioned barriers to integration across sectors more frequently than barriers to the integration of adaptation across levels. Although there are still barriers to the efficient integration of adaptation between levels of government it would seem that, at least from the perspective of national-level government presented in the submissions, the channels for integration across levels of government exist, but need to be better exploited.

76. A major barrier to the integration and expansion of adaptation across levels and sectors concerns the nature of the funds available which, as stated in the synthesis report referred to in paragraph 3 above, “are often referred to as inappropriate for the kind of cross-sectoral, multi-level and flexible approach needed for adaptation”.<sup>37</sup> Such a project may combine aspects and aims from the fields of disaster risk reduction, food security and natural resource management. Available funding is insufficient and available only to specific sectors.

77. In the submissions, suggested ways to overcome such barriers range from the employment of a full-time adaptation coordinator to enhance the scope of activities and ensure their integration, to the creation of an international-level instrument calling for the elaboration of national adaptation plans.

78. Barriers to the integration of disaster risk reduction into planning are similar to those across sectors and levels. As with the integration of adaptation into planning, there is insufficient political commitment to allow much progress on climate risk management. The reasons for this are also the same,

---

<sup>37</sup> FCCC/SBSTA/2007/9, paragraph 64.

namely, the lack of certainty on climate-related impacts, lack of information on costs and the short-term nature of political cycles, compartmentalized operations and a lack of financial support for capacity development and maintenance in disaster risk reduction operations.

## 2. Barriers to integrating adaptation between levels

79. There are many barriers preventing a government-wide approach from being taken: the confinement of climate change issues to environment ministries, the lack of incentives to change existing structures and practices and the rigidities of regulatory frameworks. Integration of adaptation into national policy can take time and is hindered by changes in government and policy priorities. In addition, there is a lack of information on how climate change will impact on core governmental functions (OECD, 2009).

80. Incorporating adaptation into donor policies and processes requires action on increasing awareness of climate change adaptation in recipient countries. Since budgetary support mechanisms focus on partner country priorities, adaptation action will be implemented only when the partner country sees it as a priority.

81. Barriers specific to the implementation of NAPAs include: difficulties in finding and recruiting the appropriate technical experts; the lack of national institutional capacity to implement the NAPA projects; insufficient language support for French- and Portuguese-speaking LDCs; a lack of capacity within local agencies of the Global Environment Facility; and insufficient capacity for project design.

## 3. Barriers to integrating adaptation between sectors

82. Little information is available about sectoral-level vulnerability and impacts, and there is a lack of information on how climate impacts will interact with other associated changes within sectors, such as market forces and demographic trends. Climate change is often not a priority for sectoral authorities, which do not always have the capacity to undertake their own vulnerability analysis and may not have access to the climate expertise of the meteorological and environmental sections of government. There is little information on how much adaptation will cost, which is preventing sectoral authorities from accurately assessing what resources are needed and subsequently setting them aside.

83. More sector-specific information and greater flexibility should be incorporated into planning (especially where plans are based on historical climate) in order to boost in-house capacity for impacts assessments. Accurate resource allocation is prevented by a lack of information on the costs of adaptation measures (OECD, 2009).

84. Furthermore, the various stakeholders required to undertake adaptation are sometimes in conflict with each other.<sup>38</sup> However, integration across sectors is one of the easiest to envisage; sectoral activities do not have distinct boundaries. For example, agricultural and water resources activities or land-use planning and coastal defence.

85. Examples of barriers to the integration of adaptation between sectors include a lack of data sharing between meteorological stations and local farmers, and the inadequate flow of information/data from research institutes to the farmers, foresters or fisherfolk. Policy-related barriers include: the lack of legal frameworks and enabling environments; the lack of political commitment at the highest level to

---

<sup>38</sup> Levina E. 2006. *Domestic Policy Frameworks for Adaptation to Climate Change in the Water Sector. Part II: non-Annex I Countries. Lessons Learned from Mexico, India, Argentina and Zimbabwe*. OECD/International Energy Agency. Available at <[www.oecd.org/dataoecd/46/15/37671630.pdf](http://www.oecd.org/dataoecd/46/15/37671630.pdf)>; Levina E and Adams H. 2006. *Domestic Policy Frameworks for Adaptation to Climate Change in the Water Sector. Part I: Annex I Countries* OECD/International Energy Agency. Available at <[www.oecd.org/dataoecd/32/47/36835429.pdf](http://www.oecd.org/dataoecd/32/47/36835429.pdf)>.



coordinate and enable a cross-sectoral approach; and the absence of institutionalized cross-sectoral committees formed at the planning stage that would oversee the transition to the implementation stage.

86. At all levels, assessing the potential impact of climate change on policies, plans and projects is hindered by a lack of downscaled, region-specific climate and impacts data. Furthermore, intersectoral adaptation will require intersectoral climate impact models.

#### **IV. Issues for further consideration**

87. In view of the information in this paper on approaches and experiences, and lessons learned, good practices, gaps, needs and barriers, synthesized from the submissions of Parties and relevant organizations, and from the adaptation field in general, Parties may wish to consider the following points when continuing their work on integrating and expanding adaptation planning and action:

- (a) Submissions, workshop outcomes and policy recommendations all recognize the existing entry points for the integration of adaptation into planning, for example through strategic environmental impact assessments of policies, plans and projects, or through disaster risk reduction, poverty reduction strategies, integrated coastal zone management and integrated water resource management. How can these existing entry points be further understood and exploited?
- (b) Although the usefulness of applying a 'climate change lens' to overseas development assistance is widely recognized, few countries are systematically carrying out such an exercise when making planning decisions. Often, such consideration of climate change is carried out in an ad hoc manner when plans concerning particularly vulnerable sectors are being made. How can legal frameworks for the systematic consideration of climate change as part of the national-level planning process (and every level below) be created and adopted?
- (c) One of the key barriers to the integration of adaptation within sectors highlighted by Parties was the lack of efficient coordination between key institutions. Expanding the integration of adaptation beyond sectors and levels will imply another level of complexity. Therefore, ways in which intersectoral coordination can take place, despite a lack of coordination within sectors, should be identified. One possible approach could be to address coordination among institutions which perform similar functions within different sectors;
- (d) Submissions have highlighted the usefulness of increasing communication on climate change and raising awareness, of both policymakers and the public, to create enabling environments to assist integration. How can existing mechanisms for awareness-raising be stepped up and adjusted to meet the needs of integration?
- (e) Lessons learned from and experiences in integrating adaptation into development assistance were also highlighted in the submissions. Sweden has launched a commission to look at climate change and development. Japan has developed recommendations on international cooperation for adaptation to climate change in developing countries; it has partnerships with developing countries in the Asia-Pacific region on adaptation-related activities (e.g. the Water and Sanitation Broad Partnership Initiative) and is providing disaster reduction assistance to the Pacific Islands Forum member countries. The OECD has released policy guidance on integrating climate change adaptation into development cooperation. How can such activities be brought together in a coherent manner?

- (f) There is a need to further investigate the role of certain issues which up until now have not been considered fully as avenues for the further integration and expansion of adaptation. These include gender issues, the management of ecosystem services and activities on food security. Such activities are cross-sectoral and provide access to stakeholders not yet engaged in adaptation.

## **V. Conclusion**

88. The submissions demonstrate that progress has been made on expanding and further integrating adaptation since the last round of submissions in 2007. Examples of work include: research on more targeted adaptation options; improved provision of scientific information for decision-making; the engagement of the private sector in the formulation of national adaptation strategies; integration facilitated through relevant UNFCCC processes; and the work of Parties and organizations in integrating adaptation into development and support processes.

-----