LEAST DEVELOPED COUNTRIES

BEST PRACTICES AND LESSONS LEARNED

in addressing adaptation in least developed countries

LDC EXPERT GROUP 2015

volume 3

United Nations
Framework Convention on
Climate Change

United Nations Climate Change

BEST PRACTICES AND LESSONS LEARNED

IN ADDRESSING ADAPTATION IN LEAST DEVELOPED COUNTRIES, VOLUME 3

LDC EXPERT GROUP 2015

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FOREWORD

Almost all the least developed countries (LDCs) have prepared and submitted their national adaptation programmes of action (NAPAs) and embarked on the implementation of identified projects. Furthermore, some LDCs have also embarked on the process to formulate and implement national adaptation plans (NAPs). NAPAs and NAPs have raised awareness on climate change, imparted hands-on experience in implementing concrete adaptation projects on the ground, and increased collective knowledge on adaptation to climate change at national and international level.

Due to their increased vulnerability, LDCs are pioneers in addressing issues related to climate change adaptation. While LDCs are still faced with many challenges, the knowledge gained through the preparation and implementation of NAPAs and NAPs should also be recognized. This publication, which is the third volume in the series, builds on the first and the second volumes and communicates initial experiences made by LDCs and other developing countries in addressing adaptation through NAPs and other adaptation initiatives. It draws on these early experiences to present best practices and lessons learned from the process to formulate and implement NAPs. It showcases countries' best practices and lessons learned in eight focus areas which are essential in the process to formulate and implement NAPs, such as establishing an effective national mandate or identifying gaps and needs for support.

On behalf of the LEG, I would like to warmly thank all the countries that have provided invaluable contributions to this publication.

Batu Uprety, *Chair of the LEG*
December 2015

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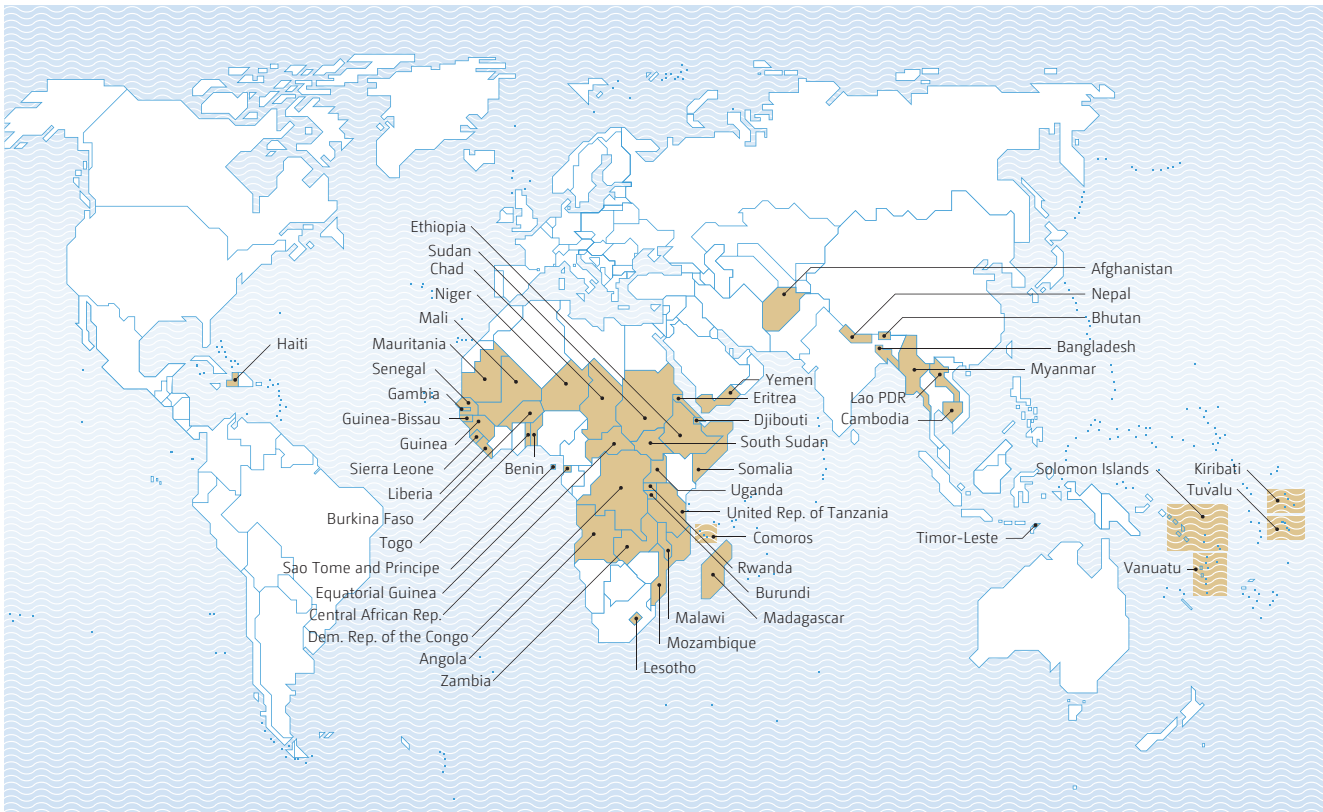
Figure 1: **Least developed countries that are Party to the United Nations Framework Convention on Climate Change as at July 2015**



ABBREVIATIONS AND ACRONYMS

AC	Adaptation Committee
CGIAR	Consortium of International Agricultural Research Centers
CIRF	Climate Impacts and Risk assessment Framework
COP	Conference of the Parties
GCF	Green Climate Fund
GEF	Global Environment Facility
GIS	Geographic Information System
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit (German agency for international cooperation)
IPCC	Intergovernmental Panel on Climate Change
LAPA	Local Adaptation Plans for Action
LDCs	Least Developed Countries
LDCF	Least Developed Countries Fund
LEG	Least Developed Countries Expert Group
NAP	National Adaptation Plan
NAP-GSP	National Adaptation Plan Global Support Programme
NAPA	National Adaptation Programme of Action
NWP	Nairobi Work Programme
OECD	Organisation for Economic Co-operation and Development
PACC	Pacific Adaptation to Climate Change
PACCSAP program	Pacific-Australia Climate Change Science and Adaptation Planning program
PMF	performance measurement framework
RAN-API	Indonesian National Action Plan for Climate Change Adaptation
SCCF	Special Climate Change Fund
UKCIP	United Kingdom Climate Impacts Programme
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organization

1. INTRODUCTION

As part of its support to least developed countries (LDCs) to address adaptation, the Least Developed Countries Expert Group (LEG) continuously captures and shares best practices and lessons learned by the LDCs as they undertake their work on adaptation. These are periodically compiled and published in the best practices and lessons learned publication.

This is the third volume of the publication and it focuses on the first experiences in the process to formulate and implement NAPs. The first two volumes focusing on national adaptation programmes of action (NAPAs) and the LDC work programme were published in 2011 and 2012, respectively.

This volume applies a revised methodology developed by the LEG through an advisory group on capturing and sharing best practices and lessons learned. The country experiences presented apply mainly to the early stages of the process to formulate and implement NAPs. In some instances, the LEG could only share the state of the current practice and lessons learned without clearly identifying a best practice.

The publication contains three major chapters: chapter one provides background information on the process of formulating and implementing NAPs and its essential functions; chapter two presents the methodology that was used for framing the best practices and lessons learned; and chapter three presents the best practices and associated lessons learned.

The following are the specific focus areas in the process to formulate and implement NAPs for which the best practices and lessons learned have been captured:

1. Initiating and launching of the national adaptation plan process;
2. Putting in place an explicit mandate for the process to formulate and implement national adaptation plans;
3. Developing a road map for the process to formulate and implement NAPs
4. Integrating adaptation into development planning from the onset;
5. Establishing effective institutional arrangements;
6. Effectively engaging stakeholders: identification, involvement and inclusion;
7. Assessing and managing climate risk and vulnerability;
8. Addressing capacity gaps and needs in the process to formulate and implement NAPs.

2. OVERVIEW OF THE PROCESS TO FORMULATE AND IMPLEMENT NATIONAL ADAPTATION PLANS

The process to formulate and implement NAPs was established in 2010 to enable LDC Parties to formulate and implement NAPs, building upon their experience in preparing and implementing NAPAs, as a means of identifying medium- and long-term adaptation needs and developing and implementing strategies and programmes to address those needs.

It has the following objectives:

a. To reduce vulnerability to the impacts of climate change, by building adaptive capacity and resilience;

b. To facilitate the integration of climate change adaptation, in a coherent manner, into relevant new and existing policies, programmes and activities, in particular development planning processes and strategies, within all relevant sectors and at different levels, as appropriate.[1]

The process enables countries to undertake a country-driven comprehensive approach to medium and long-term adaptation planning and implementation. It enables them to build and continuously strengthen the essential characteristics of a successful process at the national level. See box 1 for a list of the essential functions of the process.

Guidelines for the process to formulate and implement NAPs, and a variety of modalities to support developing countries to undertake the process have been established under the Convention. These include:

- Initial guidelines for the formulation of NAPs and the NAP technical guidelines, both providing the basis for undertaking the different steps of the process. The guidelines are available in multiple languages at <http://unfccc.int/7279>. The NAP technical guidelines are also available in hard copies from the UNFCCC secretariat;

- The LEG which is responsible for providing technical guidance and support to the LDCs on the process. Other bodies under the Convention within their respective mandates undertake activities related to the process;

- Parties, organizations and agencies at regional and international levels have been invited to provide financial and technical support to developing countries in the process.

Further information on the process to formulate and implement NAPs is available at <http://unfccc.int/6057>.

Box 1: Ten essential functions of the process to formulate and implement national adaptation plans

1. Helping governments to provide **national leadership** and **coordination** of adaptation efforts at all levels and to act as the main interface with regional and international mechanisms;
2. The collection, compilation, processing and dissemination of **data, information** and **knowledge** on climate change and relevant development aspects in support of adaptation planning and implementation;
3. Identifying and addressing **gaps** and **needs** related to **capacity** for the successful design and implementation of adaptation;
4. Assessing **climate development linkages** and needs and supporting the **integration** of climate change adaptation into national and subnational development and sectoral planning (through policies, projects and programmes);
5. **Analysing climate data** and **assessing vulnerabilities** to climate change and identifying **adaptation options** at the sector, subnational, national and other appropriate levels
6. **Appraising adaptation options** to support decision-making on adaptation investment plans and development planning;
7. Promoting and facilitating the **prioritization** of climate change adaptation in national planning;
8. Facilitating the **implementation** of adaptation at all levels through appropriate policies, projects and programmes, taking into account opportunities for **synergy**;
9. Facilitating the **monitoring, review** and **updating** of adaptation plans over time to ensure progress and the effectiveness of adaptation efforts and to demonstrate how gaps are being addressed;
10. Coordinating **reporting** and **outreach** on the process to formulate and implement NAPs to stakeholders nationally and internationally on progress to the Convention.

1 Decision 5/CP.17, paragraph 1.

3. METHODOLOGY FOR CAPTURING AND SHARING BEST PRACTICES AND LESSONS LEARNED

3.1 BACKGROUND

There are various methodologies for identifying and defining best practices and lessons learned in various fields of work. In 2010, the LEG developed an initial approach for capturing best practices and lessons learned.[2] That approach had been used in the first two volumes of the publication.

As a way to further improve the quality of the best practices and lessons learned, the LEG decided to review and enhance its methodology. For this is established an advisory group to identify the most suitable process for the selection of best practices and lessons learned. The advisory group consisted of four core members (two LEG members, one member of the Adaptation Committee, and one member of the LDC Group designated by the Chair of the LDC Group) and included engagement of representatives and/experts from relevant organizations.

The advisory group used a two-stage assessment approach to arrive at the best suitable methodology for the LEG to identify best practices and lessons learned. The first stage was the review of existing methodologies for capturing and sharing best practices and lessons learned. Through this, the advisory group analysed 41 methodologies developed by a wide range of organizations at the national and global level. From the analysis of these methodologies some common steps for capturing best practices and lessons learned were identified, including:

1. Collection of information related to relevant practices and/or lessons;
2. Analysis of the information collected using a set of selection criteria, which would have been defined earlier;
3. Establishment of a selection process, for example through a jury or peer review;
4. Development of a strategy for disseminating the selected best practices and lessons learned.

The advisory group then looked at different approaches to move efficiently from one of the common steps to the other.

The group recognized that the approaches can be classified into four broad groups. They then selected representative approaches from each group for further analysis. These are (see box 2 for further details):

1. The LEG approach from 2010 that builds on experiences and lessons learned to identify best practices through an advisory group ("jury");
2. The Consortium of International Agricultural Research Centers (CGIAR) model that identifies best-bet solutions to issues in a given sector. In this case it is agriculture, where documented solutions with quantifiable gains are presented;[3]
3. A hypothesis-based approach, where a best practice is posed and supporting evidence assembled to confirm it or otherwise;
4. A United Nations Environment Programme (UNEP) model for capturing lessons using tree structures to progressively aggregate experiences and lessons into main conclusions.[4]

The two-stage exercise conducted by the advisory group led to the validation of the LEG's current approach for capturing best practices, with a small amendment to include some elements of the hypothesis approach. For capturing lessons learned, the advisory group applied the UNEP approach, which was already used in the previous volumes of the publication.

FURTHER DETAILS ON THE METHODOLOGY TO CAPTURE BEST PRACTICES

The criteria for ranking candidate best practices as described in the LEG approach includes effectiveness/impacts, measurability, replicability, efficiency and sustainability.

The LEG noted that the development of the NAP technical guidelines followed a similar process to that proposed for capturing the best practices. The technical guidelines were developed from the initial guidelines adopted by the COP. The LEG elaborated indicative activities or tasks, which a country may undertake under each of the steps based on a broad literature review, covering approaches, experiences and lessons from NAPAs and other relevant adaptation activities in both developing and developed countries. The technical guidelines

2 LEG. 2011. Best Practices and Lessons Learned in Addressing Adaptation in the Least Developed Countries, Volume 1. Bonn, Germany, United Nations Climate Change Secretariat. Available at <http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FCCC/GEN/263%20E#beg>. and, LEG, 2012. Best Practices and Lessons Learned in Addressing Adaptation in the Least Developed Countries, Volumes 2. (Bonn, Germany, United Nations Climate Change Secretariat, 2012). Available at <http://unfccc.int/essential_background/library/items/3599.php?such=j&symbol=FCCC/GEN/278%20E#beg>.

3 CGIAR. 2008. Alliance of CGIAR Centers' Best Bets to Boost Crop Yields in Sub-Saharan Africa – Current Products of the Alliance of CGIAR Centers Research Rome, Office of the Alliance of CGIAR Centers.

4 Spilsbury, M. J. and others (eds.). 2007. Lessons Learned from Evaluation: A Platform for Sharing Knowledge. Nairobi, UNEP Evaluation and Oversight Unit.

Box 2: Description of the approaches for capturing and sharing best practices

The LEG approach is based on the concept of theory of change. For each selected focus area, specific steps/stages/benchmarks are identified to achieve a given goal (e.g. steps involved in the formulation of NAPs). Templates for the collection of relevant information are then developed based on the key variables to capture. After the collection of information (which can be done through e.g. surveys, questionnaires or focus group interviews), the information is aggregated along expected pathways of change until potential best practices can be identified. These candidate best practices are then ranked according to the criteria and guiding principles which have been defined to identify the best practices. The ranking is undertaken by a jury which determines the final list of best practices to be published.

For the CGIAR approach based on best-bet solutions, the application area has to be selected and the scope defined. Furthermore, a template including criteria for the best-bet solution has to be prepared. Once that exercise has been undertaken, the approach relies on the collection of sufficient information by means of a call for submissions addressed to stakeholders working in the field. The submissions are presented in pre-defined templates that document in quantitative terms the benefits of a particular approach or method. They are then compared and further classified as 'success', 'failure' or just 'average'. The best bets (i.e. the successful solutions) could then be published and disseminated.

A hypothesis approach poses a hypothesis on best practices or key lessons learned and then works backwards to analyse the case. All cases are then assessed through a selection process (e.g. a 'jury'), which will result in those cases being accepted or rejected.

A UNEP approach focuses on capturing lessons learned that are both positive and negative. It implies the hierarchical classification of collected lessons using mind maps or cause-and-effect diagrams. In other words, this approach is about identifying the root causes of positive or negative observed impacts. The results coming from this analysis are then validated through a peer review process and published. Ideally the lessons learned are then applied in that practices are modified.

Apart from the best-bet solution approach, which is a scientific method in order to identify best practices, the other three approaches depend either on a jury or an advisory group to ultimately identify the best practices.

were then reviewed through a technical meeting involving a wide range of experts and stakeholders from countries, agencies and organizations working on adaptation.

For this reason, the LEG concluded that the approaches presented in the technical guidelines serve as the best practices, given the expert input and wide consultations undertaken. These approaches are then blended with actual experiences from the countries at each stage to fit the context.

FURTHER DETAILS ON THE METHODOLOGY TO CAPTURE LESSONS LEARNED

The LEG is guided by the following two definitions of 'lesson learned':[5]

"A lesson learned is knowledge or understanding gained by experience. The experience may be positive, as in a successful test or mission, or negative, as in a mishap or failure. A lesson must be significant in that it has a real or assumed impact on operations; valid in that it is factually and technically correct; and applicable in that it identifies a specific design, process or decision that reduces or eliminates the potential for failures and mishaps, or reinforces a positive result (Secchi, 1999 in Weber 2001)."

The second definition, based on that of the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee, defines lessons learned as "Generalizations based on evaluation experiences with projects, programmes, or policies that abstract from the specific circumstances to broader situations. Frequently, lessons highlight strengths or weaknesses in preparation, design, and implementation that affect performance, outcome, and impact."

5 Spilsbury, M. J. and others (eds.). 2007. Lessons Learned from Evaluation: A Platform for Sharing Knowledge. Nairobi, UNEP Evaluation and Oversight Unit, p. 4.

Therefore, the goal is to frame lessons learned, based on experience, in a manner that will facilitate their use in future areas and applications and actively facilitate learning from experience in order to avoid repeating past mistakes or reinventing the wheel.

According to UNEP, a high-quality lesson must:

- Concisely capture the context from which it is derived;
- Be applicable in a different context (generic), have a clear 'application domain' and identify target users;
- Suggest a prescription and guide action.[6]

6 As footnote 9 above.

3.2 SELECTION OF THE FOCUS AREAS FOR THIS VOLUME

This volume is intended to contribute to supporting countries as they carry out the early steps of the process to formulate and implement NAPs. Thus, the best practices and lessons learned covered in this volume are based on eight focus areas with which one or several themes or steps from the process to formulate and implement NAPs can be associated. These focus areas can be considered as broad categories, closely aligned with the steps of the process and the essential functions mentioned above. These are:

1. Initiating and launching of the national adaptation plan process;
2. Putting in place an explicit mandate for the national adaptation plan process;
3. Developing a roadmap for the process to formulate and implement NAPs;
4. Integrating adaptation into development planning from the onset;
5. Establishing effective institutional arrangements;
6. Effectively engaging stakeholders: identification, involvement and inclusion;
7. Assessing and managing climate risk and vulnerability;
8. Addressing capacity gaps and needs of the national adaptation plan process.

4. BEST PRACTICES AND LESSONS LEARNED FOR THE PROCESS TO FORMULATE AND IMPLEMENT NATIONAL ADAPTATION PLANS

This chapter presents best practices and lessons learned in the LDCs and other countries that are related to the process to formulate and implement NAPs. The chapter is structured into eight sessions corresponding to the eight focus areas mentioned above. Each section begins with a description of relevant best practices lessons learned under the focus area. This is then followed by country case studies providing experiences in executing activities related to the focus area. Each section includes links to the NAP technical guidelines and other resources for further reading.

4.1 INITIATING AND LAUNCHING OF THE PROCESS TO FORMULATE AND IMPLEMENT NATIONAL ADAPTATION PLANS

FOCUS AREA I

Initiating and launching of the process to formulate and implement national adaptation plans

BEST PRACTICES

- A good starting point for the process to formulate and implement NAPs is for the UNFCCC focal point to explain and promote the process to all relevant stakeholders in the country to ensure full understanding of the opportunities and benefits of embarking on the process.
- Conducting stocktaking of policies, data, information and programmes of current and past adaptation activities at an early stage is useful to establish a baseline and to guide planned activities of the process.
- Having a dedicated lead institution for the process, with a delegated authority to manage the entire process, can be helpful to ensure a well-coordinated, coherent and effective process.
- Identifying how existing programmes can contribute to the process will ensure early success, help achieve a coherent adaptation response for the country and inform how individual efforts can best

LESSONS LEARNED

- The NAP process can be initiated from different entry points; over time, all relevant activities will be undertaken.
- A full mandate for the NAP process may take some time to be fully developed and approved. In many cases, countries will start with an interim arrangement.
- Funding is necessary to undertake most of the activities in the NAP process. However, many countries are finding it useful to carry out component activities with funding from different sources until core funding for the whole process is available.
- Stocktaking is more than just compiling lists of funded adaptation projects; it requires synthesizing the information to establish a baseline and assess the main adaptation gaps/needs and the effectiveness of past efforts. Lessons learned in past activities can help avoid past mistakes.

FURTHER READING

NAP Technical Guidelines

- Step A.1: Initiating and launching the NAP process
- Step A.2: Stocktaking: identifying available information on climate change impacts, vulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP

CASE STUDIES

- Experience on getting started by Tanzania
- Experience on launching the process to formulate and implement NAPs by Togo

There are multiple entry points to start the process to formulate and implement NAPs. However, it is important to achieve a high-level mandate as soon as possible. Pilot projects must not be implemented without buy-in from major decision-makers and beneficiaries.

A good starting point for the process to formulate and implement NAPs is for the United Nations Framework Convention on Climate Change focal point to explain and promote the process to all relevant stakeholders in the country to ensure full understanding of the opportunities and benefits of embarking on the process.

In order to start the process to formulate and implement NAPs, the country's UNFCCC focal point could undertake a targeted awareness-raising campaign. This campaign could describe the experienced and expected economic and social impacts of climate change and the actions required to adapt to those impacts. Furthermore, this campaign could introduce the process to ensure all stakeholders have the same understanding of its benefits. A good understanding of the process is key to a successful launch of activities.

Conducting stocktaking of policies, data, information and programmes of current and past adaptation activities at an early stage is useful to establish a baseline and guide planned activities of the process to formulate and implement NAPs.

One of the first exercises in the process to formulate and implement NAPs could be taking stock of the adaptation activities and compiling main development objectives, plans and programmes, and then trying to identify synergies between development and adaptation efforts. However, if such an exercise has already been undertaken in a similar manner, the process can start at a more advanced stage. Apart from the identification of existing experiences, best practices and lessons learned in the field of planning and implementing adaptation measures, the stocktaking exercise could be used to identify key leaders and stakeholders. Different methods can be used when taking stock of information on climate change, vulnerability, adaptation activities, and gaps and needs. Some important sources for stocktaking may include a country's NAPAs, national communications, national climate change strategy, relevant policies, and adaptation projects and programmes.

Having a dedicated lead institution, with a delegated authority to manage the entire process, can be helpful to ensure a well-coordinated, coherent and effective process

Designating the government agency (or agencies) or institutions responsible for spearheading the process to formulate and implement NAPs is an important step as it mobilizes dedicated human resources and ensures that the designated coordinating mechanism has the tools and means to reach the NAP governmental and non-governmental stakeholders. A multidisciplinary team of lead experts with functioning networks in each sector would be useful. The coordinating institution would oversee the activities, maintain a communications and outreach function, and coordinate the collection of information on the NAP activities for M&E purposes. The M&E system could be established during early stages of the process in order to guide data collection for reporting and facilitate learning-by-doing.

Once the coordinating mechanism is identified and a mandate or an interim arrangement has been established, a knowledge base for developing a NAP could be formed. A gap analysis will identify areas that require strengthening in order for the country to successfully undertake its process to formulate and implement NAPs. Potential barriers to the design and implementation of adaptation measures will be identified and a plan to address them developed.

Identifying how existing programmes can contribute to the process will ensure early success, help achieve a coherent adaptation response for the country and inform how individual efforts can best be scaled up to national level.

In order to gain an overview of already existing activities that have been designed and implemented, it would be useful for countries to compile (1) such ongoing activities (projects, programmes, policies and capacity-building efforts) and analyse how these have been developed, support and funding received, timelines, and the activities' overall effectiveness; and (2) available analyses of the current and future climate at the national and regional level. When synthesized, this information would give an indication of the status of the country's enabling environment for adaptation. The long-term goal of synthesizing data on the current climate and projected climatic changes would be to arrive at a structured database that systematically documents expert knowledge on impacts of climate change to avoid redundant assessments.

The process to formulate and implement NAPs can be initiated from different entry points; over time, all relevant activities will be undertaken.

The NAP process as explained in the NAP technical guideline in a step wise manner could be initiated from different steps as per the country situation. Depending on the country capabilities, relevant activities could be undertaken at different times based on the prioritised mandates of the governments and the levels of coordination and cooperation they exhibit. The counties could also choose those steps that add value to their planning process and could finely sequence the activities centrally to support decision making on adaptation. This will enable countries to align to a national road map to be followed as part of the national process.

A full mandate for the process to formulate and implement NAPs may take some time to be fully developed and approved. In many cases, countries will start with an interim arrangement.

A fresh and established mandate for the process to formulate and implement NAP in the form of an act, a directive, an executive order or a policy issued by the national government to guide action on adaptation is a time taking process. Looking into the impending needs of the countries to mitigate the effects of climate change and move upward in the sustainable development ladder, countries could start with the existing regulatory and legal framework that is already available to take the process forward. This will have the advantage of having already existing institutional mechanism available without spending much time on institution development.

Funding is necessary to undertake most of the activities in the process to formulate and implement NAPs. However, many countries are finding it useful to carry out component activities with funding from different sources until core funding for the whole process is available.

There are several cross cutting themes and indicative activities which will need to be taken into consideration in the multiple steps of the NAP process. Thus it will not be practically possible to expect to have core funding available for the whole process and then start. Looking at the priorities at the county level and extent to which adaptation activities are already undertaken, component activities could seek financing from different sources, as some countries have done with certain components with the NAP Global Support Programme.

Stocktaking is more than just compiling lists of funded adaptation projects; it requires synthesizing the information to establish a baseline and assess the main adaptation gaps/needs and the effectiveness of past efforts. Lessons learned in past activities can help avoid past mistakes.

A baseline-data based stock taking will enable countries to understand their position regarding short and long term adaptation activities and their impact. This will also help them realise the level of vulnerabilities after implementation and also help them to gauge the future climate risks. Information tagged with capacities, institutions, reliability and continuity is vital for ensuring all future engagements in the NAP process.

Boxes 3 and 4 below provide experiences from Tanzania and Togo in relation to initiating and launching of the process to formulate and implement NAPs.

Box 3: **Experience on getting started by the United Republic of Tanzania**

Climate change is bringing multiple challenges to Tanzania's major systems: coastal zones, public health, energy supply and demand, infrastructure, water resources, agricultural production and availability of ecosystem goods and services. For example, frequent droughts are causing food insecurity, water scarcity and power supply limitations. This is posing great difficulties to the economy and the livelihoods of the people.

The government of Tanzania has over the years undertaken various efforts to tackle the challenges posed by climate change through various measures, including: development of national strategies (e.g. the latest National Climate Change Strategy and the Zanzibar Climate Change Strategy developed in 2012 and 2014 respectively), putting in place climate change plans and programmes (e.g. the NAPA completed in 2007) and implementing projects and programmes (e.g. from the NAPAs). Despite these efforts, various constraints such as low level of awareness, inadequate information on climate change impacts and vulnerability, and inadequate capacity (financial and technical) to address the impacts continue to prevail.

As a way to further strengthen the efforts for adapting to the impacts of climate change on the one hand, the government decided to embark on a more comprehensive medium- and long-term approach. Taking advantage of the establishment of the process to formulate and implement NAPs under the UNFCCC, and through the leadership of the Vice President's Office Division of Environment, the government initiated its national process in January 2013. It established a multidisciplinary NAP team to develop a strategy and roadmap for the process. The team performed rapid stocktaking of existing policies and measures to adapt to climate change. It carried out multiple stakeholder consultations to inform the stakeholders of the process, gather relevant information and involve the stakeholders as appropriate. The consultations were further elevated by a national workshop on *Tanzania Coastal Climate Change National Adaptation Planning*, held in March 2013, with the support of the United States Agency for International Development. Though focused on coastal zones, the workshop served as a launching pad for building momentum on the initialisation of the process to formulate and implement NAPs in Tanzania. It was also used to reinforce the cross-cutting nature of climate change adaptation, and the need for a holistic approach towards adaptation.

Following the initial consultations and the workshop, the government was able to elaborate an initial strategy and roadmap for the process, drawing from the NAP technical guidelines. Initial activities identified therein included:

- Collection and analysis or critical geospatial socioeconomic data to underpin the national process;
- Comprehensive assessments of risks, vulnerabilities and impacts, including gaps and challenges;
- Review of existing institutional arrangements (national, local and/or sectoral policies, plans, strategies and programmes);
- Identifying and appraising adaptation options;
- Undertaking costing of adaptation interventions using appropriate methodologies;
- Preparation of implementation strategies, including frameworks for reporting monitoring and review modalities.

The government has been able to use the strategy and roadmap to: guide work at the national level, including through the steps identified above; to communicate to the LEG and various stakeholders (e.g. through the NAP Expo) on Tanzania's progress on the process; and to communicate the readiness to receive support to advance the process. The strategy and roadmap also served as the guidance for other sectors such as agriculture and water which developed their respective sectoral strategies and resilient plans. Tanzania has benefited to be among the first set of countries to be supported under the NAP GSP to further advance consultations and stocktaking at the national level.

Relevant documents

United Republic of Tanzania. 2013. *Process and Roadmap for Formulating National Adaptation Plans for Tanzania*. Dar es Salaam, Vice-President's Office. Available at: <https://unfccc.int/files/documentation/submissions_from_parties/application/pdf/tanzania_naps_rev.pdf>.

United Republic of Tanzania. 2012. *National Climate Change Strategy*. Government of Tanzania.

United Republic of Tanzania. 2012. *National Adaptation Programme of Action*. Government of Tanzania.

United Republic of Tanzania. 2012. *The Tanzania Five Year Development Plan 2011/2012-2015/2016 - Unleashing Tanzania's Latent Growth Potentials*. Government of Tanzania.

Box 4: Experience on launching the process to formulate and implementy national adaptation plans by Togo

Togo's efforts to address climate change started with the establishment of the national climate change in 1998, which initiated awareness-raising at national level and spearheaded the development of Togo's initial national communication to the UNFCCC. From 2004, the country elevated its efforts by adopting a national strategy to implement the UNFCCC. Since then, more works was carried out including on: vulnerability and adaptation studies in the agriculture, energy, water resources, human settlements, health and coastal areas sectors; completion and submission of the NAPA in 2009; and implementation of various projects and programmes in key sectors and themes of development. Under its current development plan (SCAPE 2013–2017), Togo identifies stronger action for adapting key development sectors to climate change as one of the primary challenges to improving the people's living conditions.

One of the key objectives in the Togo's NAPA was the integration of climate change adaptation into sectoral policies and national development planning. To address this, the Government of Togo took the opportunity of the renewal of its cooperation with Germany in 2013, and included the process to formulate and implement NAPs as one of the strategic priorities under the new cooperation framework. Subsequently, the government of Germany through the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Togolese Government through the Ministry of Environment and Forest Resources agreed to implement the support for national climate change adaptation planning in Togo.

The process was initiated in December 2013 with stakeholder consultation and information on the process to formulate and implement NAPs. An official launch of the process was done in March 2014 through a national workshop led by the Ministry of Environment, with the participation of all sectors including public, private and civil society.

In April 2014, the government of Togo with the support of GIZ conducted an analysis of the national planning and budgeting system in order to align the process to formulate and implement NAPs with existing procedures. The results showed that climate change adaptation is already taken into account in the national development strategy and sectoral plans. With important policy priorities already in place, the following areas of work were identified to be addressed in the future: enhancing national and sectoral planning and establishing a long-term vision, assessing financial resources and prioritizing specific activities, and strengthening the national regulatory frameworks in support for the process.

As part of strengthening the national regulatory frameworks, the government issued an Inter-ministerial order in July 2014, establishing an inter-sectoral committee for coordinating the national process. The committee is assigned to facilitate the process to formulate and implement NAPs and the mainstreaming of adaptation into development planning.

The following are the next steps envisioned under the process, building on what has been executed so far:

- Continue to raise awareness and develop capacity for the process to formulate and implement NAP in Togo;
- Integrate climate change adaptation into national policies, strategies and in sector programs. Agriculture sector has been identified to be the first pilot sector for integration of climate change adaptation
- Formulation of the NAP for Togo.

Relevant documents

Togo. 2013. *Strategy for Boosting Growth and Promoting Employment (SCAPE) 2013–2017*. Government of Togo.

Togo. 2009. *Plan D'action National D'adaptation aux Changements Climatiques – PANA*. Available at <http://unfccc.int/resource/docs/napa/tg001f.pdf>.

4.2 PUTTING IN PLACE AN EXPLICIT MANDATE FOR THE NATIONAL ADAPTATION PLAN PROCESS

FOCUS AREA II

Putting in place an explicit mandate for the process to formulate and implement national adaptation plans

BEST PRACTICES

- Developing a mandate for the process to formulate and implement NAPs cultivates a high level of engagement among senior policymakers.
- A mandate helps secure clear leadership and buy-in for the process and will facilitate access to data, personnel and resources from participating ministries.
- Communicating the arrangements defined in the mandate (interim or otherwise) will guide all partners and providers of support in contributing to the national process and will avoid stand-alone efforts that are less effective.

LESSONS LEARNED

- A national mandate for the NAP process establishes clear responsibilities for government ministries and departments and ensures the corporation of all actors.
- There are many ways to create a regulatory framework, guiding instrument or clear mandate for the NAP process.
- There are many activities and initiatives, including those from regional and international programmes and projects that can contribute to the national efforts of the NAP. In the absence of a clear and well-communicated mandate, activities will not contribute to the national effort in an effective manner

FURTHER READING

NAP Technical Guidelines

- Step A.1.C: Create or enhance a national vision and mandate for the NAP process, pp 30-31

Other resources:

- United States Executive Order 13514: http://www.whitehouse.gov/assets/documents/2009fedleader_eo_rel.pdf
- United Kingdom Climate Change Act 2008: http://www.legislation.gov.uk/ukpga/2008/27/contentsvulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP

CASE STUDIES

- Experience on formulating a mandate for the process to formulate and implement NAPs by Benin
- Experience on formulating a mandate to coordinate climate change activities by Indonesia

It is essential to establish an appropriate high-level mandate through which countries ensure long-term leadership and coordination of the process to formulate and implement NAPs. Such mandates have been established in the form of an act, directive, executive order or policy issued by the national government to guide action on adaptation.

Developing a mandate for the process to formulate and implement NAPs cultivates a high-level of engagement among senior policymakers.

The involvement of high-level government offices on adaptation and a clear mandate helps to establish clear roles and responsibilities for all actors and can lead to more effective coordination. LDCs could use their enacted national climate change policies as a starting point instead of creating a new mandate or policy.

A mandate helps secure clear leadership and buy-in for the process to formulate and implement NAPs and will facilitate access to data, personnel and resources from participating ministries.

Formulating a national mandate will help to establish a clear vision for the process to formulate and implement NAPs, including expectations and outputs. It will also help to create leadership and ensure stakeholder participation. In order to initiate the mandate and institutional arrangements for the process, the coordinating mechanism, which has been established at an earlier stage (see section 3.2.1), would recommend the creation and structure of the process. This recommendation would be made to a national policymaking body (such as the cabinet, senate or parliament).

Some countries may initiate their process to formulate and implement NAPs through an act of parliament, national directive, executive order signed by the president, national policy or other appropriate instrument based on the regular procedure for the country's national planning. Such an instrument does not need to represent the overall starting point. As the process of creating a national mandate can take a long time, other activities may already be initiated to lay the groundwork for the formulation of NAPs.

In countries where work relevant to NAPs has already been undertaken and appropriate mandates exist, this step would enhance those efforts and proceed to producing a road map for steps that would still need to be undertaken.

Many countries that have embarked on the process to formulate and implement NAPs have found it useful to create or strive for a formal binding national instrument in the form of a decree (e.g. Norway and Brazil), presidential regulation (e.g. Indonesia), an act (the United Kingdom of Great Britain and Northern Ireland) or executive order (e.g. the United States of America). Several LDCs have enacted national climate change policies to facilitate their work on aspects of climate change including adaptation. In cases where this is equivalent to a national policy that could drive the process, these national climate change policies could be used as a starting point without requiring the creation of a new mandate or policy. Table 1 shows components of mandated for adaptation plans for some countries that have already embarked on the process to formulate and implement NAPs.

Communicating the arrangements defined in the mandate (interim or otherwise) will guide all partners and providers of support in contributing to the national process and will avoid stand-alone efforts that are less effective.

Once the mandate has been formulated and adopted, it may be communicated formally to all government offices and the public. In cases where a mandate for the process to formulate and implement NAPs already existed, for example through published national climate change strategies, the relevant information may be communicated effectively.

Table 1: Components of mandates for the national adaptation plan process and similar processes

	Act, United Kingdom of Great Britain and Northern Ireland (2008)	Royal decree, Norway (2008)	Executive order, United States of America (2009)	Presidential regulation, Indonesia (2008)	Decree, Brazil (2007)	National adaptation plan, Colombia (2010)
Designation of leader for the national adaptation plan (NAP) process	X	X	X	X	X	X
Development of framework and/or strategy	X	X	X		X	X
Budget for process to formulate and implement NAPs			X	X		X
Reporting instructions on the outcomes of the process to formulate and implement NAPs over time	X	X	X	X	X	X
Assessment of progress made towards implementing the objectives, proposals and policies set out in the NAP	X				X	
Indicative timeline of key milestones and outputs	X		X			X
Instructions on how the formal outputs would be processed and approved, including endorsement, nature of public and stakeholder involvement and input, and an indication of triggers for revisions and updates to the NAP	X	X	X		X	X

A national mandate for the process to formulate and implement NAPs establishes clear responsibilities for government ministries and departments and ensures the corporation of all actors.

It is important to have a body coordinating national climate change policy which facilitates the integration of adaptation into other sectors. Coordination across different social groups and regional levels and across vertical structures of governance encourages multi-stakeholder involvement in the process and coordination across local, subnational and national levels is a key step in the process. The establishment of an appropriate national mandate is one essential means through which countries have advanced long-term leadership and coordination of the process to formulate and implement NAPs. Such mandates can be established in the form of an act, a directive, an executive order or a policy issued by the national government to guide action on adaptation. They help to establish clear responsibilities for government agencies and other stakeholders, and to specify key actions, milestones and outputs for the process.

There are many ways to create a regulatory framework, guiding instrument or clear mandate for the process to formulate and implement NAPs.

Policy frameworks including mandate for the process to formulate and implement NAPs is important to put in place an appropriate mandate that defines, inter alia, the lead agency or entity, the responsibilities of various national agencies and the operationalization of the national policy framework. Also, as to the policies, regulations and legislation, most of the countries have national climate change policies, frameworks, and/or strategies that define national goals, strategy and the role of the government and other actors with respect to climate change adaptation. Moreover, some countries have enacted legislation on climate change, while others are working towards enacting new or revising existing legislation. Creation of a specific national mandate for the process to formulate and implement NAPs is now on process in many countries.

> There are many activities and initiatives, including those from regional and international programmes and projects that can contribute to the national efforts of the NAP. In the absence of a clear and well-communicated mandate, activities will not contribute to the national effort in an effective manner

Many countries have now in the disposition of formulating mandate to national climate change agency or department: situated in one ministry with a focal point network of representatives from other ministries, tasked with coordinating development and implementation of sector strategies and plans and the integration of climate change adaptation into development planning processes. Based on the assessment of existing arrangements, capacity and information, several countries have started with NAP process activities, by putting in place road maps and/or strategies for the NAP process, defining, among others, specific goals and objectives for the national process, leadership arrangements and the timing of main steps. Some of the road maps already indicate specific timelines for the production of plans, for example, within the first three years of the launching of the process to formulate and implement NAPs, and review periods every five years for different activities or actions.

Boxes 5 and 6 below provide experiences from Benin and Indonesia in relation to putting in place an explicit mandate for the process to formulate and implement NAPs.

Box 5: Experience on setting up a mandate for the process to formulate and implement national adaptation plans by Benin

In 2013, the Government of Benin decided to further strengthen efforts to reduce vulnerability of the country's systems to climate change, and to facilitate integration of adaptation into national development plans, strategies, projects and programmes, building on the momentum generated by the national adaptation programme of action (NAPA) and other activities. To do this, the government initiated consultations with various stakeholders at the national level. The consultations were aimed at exploring ways to establish a process to enable comprehensive medium- and long-term adaptation process at the national level. This process was led by the Ministry of Environment, Housing and Urbanization and the National Committee on Climate Change (NCCC). During the same year, in March, Benin took advantage of the Least Developed Countries Expert Group (LEG) regional training workshop on adaptation held in Togo,[7] which included training on the process to formulate and implement national adaptation plans (NAPs). Immediately following the workshop, participants from Benin briefed the NCCC on the process and how it would serve to realize the desired national goals on adaptation. This motivated broader stakeholder consultations to raise awareness on the process, and stocktaking of existing adaptation policies and activities.

In August 2013, the country was then able to successfully launch the process to formulate and implement NAPs through a multi-stakeholder workshop. The national focal point, also a member of the LEG, Mr. Ibila Djibril, introduced the NAP technical guidelines at the launch workshop. Key outcomes from the workshop included the following:

7 <http://unfccc.int/7042>.

- Launching of the process in Benin was endorsed by the policy makers;
- Awareness and sensitization on the process to formulate and implement NAPs among the different stakeholders was achieved;
- The NAP technical guidelines and their application for the formulation and implementation of a NAP were understood;
- An over view on Benin vulnerability and was presented;
- Stocktaking on Benin adaptation actions was conducted;
- Benin technical and financial needs to formulate NAP were estimated;
- The technical and financial partners of Benin were informed of the process and accepted to contribute in formulation and implementation of the NAP;
- A ***clear mandate*** and ***institutional arrangements*** were proposed to the for approval by the Government;
- Primary stakeholders for the formulation of NAP were identified;
- A draft road map was developed;
- Five thematic reports were developed on: (i) Benin adaptation programmes and projects implementation; (ii) Research on climate change in Benin; (iii) Integration of climate change adaptation into national development plans, strategies, programmes and projects; (iv) Preparatory work to advance the process to formulate and implement NAPs; and (v) National institution arrangements for the formulation of a NAP.

Following the launch workshop, Benin organized two additional events to advance the process.

The second was a workshop of the Thematic Group on Environment and Climate Change in September 2013 to review and approve the five thematic reports mentioned above.

The third was a technical workshop held in October 2013 to validate a draft decree for the process. In addition to the roadmap, a clear mandate is required to implement any activity of a national scale under Benin's administrative practice. The launch workshop had established the following considerations for the mandate:

- A decree is necessary to ensure permanency and continuity of the process, regardless of changes in Government;
- It provides a binding commitment between and among government entities as long as it is in force;
- It provides reassurance of the continuity of the process to various partners who want to financially and technically support activities because of its long duration in national regulation;
- It enables creation of budgetary allocations by Ministry of Finance to the activities;
- The decree minimizes ambiguity and potential conflicts among government agencies because it articulates the responsibilities of the bodies established and how they relate with the rest of the others.

Following the above mentioned workshops, the Ministry of Environment submitted a formal request to the Government to implement the roadmap for the process and to obtain a decree. Approval was granted for implementing the roadmap. A separate process was set up for the decree.

The Ministry then set up ad hoc technical group composed of lawyers and technical officers of key ministries to elaborate the project of a decree which had been adopted by the NCCC. In September 2015 the Ministry submitted the decree to the Government for approval. The decree contains a mandate and institutional arrangement for the process. It establishes a national commission, steering committee and management team for the process to formulate and implement NAPs. It contains the functions to be performed by each of the bodies. The bodies will draw representation from government ministries, administrative authorities at national, municipal and local levels, and all the key stakeholders at the national level. The management of the bodies will have recruited experts based on expertize and excellence.

Once the decree has been approved by the government, the bodies will assume their responsibilities in advancing the process to formulate and implement NAPs. Meanwhile, Benin continues to implement various activities related to the process through the existing institutional arrangements and mandates.

Relevant documents

Benin. 2008. *Programme d'action national d'adaptation aux changements climatiques du Bénin (PANA-BENIN)*. Government of Benin.

Box 6: Experience on formulating a mandate to coordinate climate change activities by Indonesia

Indonesia is an archipelago comprising of thousands of islands situated in Southeast Asia. It is the world's fourth most populous country. Despite its large population and densely populated regions, Indonesia has significant areas of wilderness with the world's second-highest level of biodiversity. Climate change poses significant challenges to the country. The country has already experienced the impacts of climate change through extended dry seasons, floods and increased extreme weather events, affecting community health and degrading biodiversity. Based on future climate projections, Indonesia is expected to experience higher surface and sea surface temperatures and intensified precipitation, which will further exacerbate the country's vulnerability to climate change.

Over the years, the Government of Indonesia has progressively put in place various instruments to address climate change adaptation. The first is the National Action Plan on Climate Change in 2007. The national action plan is a guidance document to address various institutions in carrying out a coordinated and integrated effort to tackle climate change. The plan describes appropriate actions to reduce greenhouse emissions and adaptation activities in Indonesia. This will be achieved by reforming the implementation protocol by adjusting the mandates and roles of public institutions in the country and incorporating the plan into medium and long term development action plan.

In 2008, the Government recognized the need to improve the coordination of control over the climate change and to strengthen the position of Indonesia in international forums on climate change and deemed it necessary to establish a National Council for Climate Change (NCCC). This was done through a Presidential Regulation (mandate) that put in place the NCCC, defined its tasks, composition, thematic Working Units and their membership, secretariat, and working arrangements.

As articulated in the Presidential Regulation, the tasks of the NCCC are to:

- Formulate national policies, strategies, programmes and activities to control climate change;
- Coordinate activities for controlling climate change, including adaptation, mitigation, technology transfer and funding activities;
- Formulate mechanism and procedures for carbon trade;
- Monitor and evaluate the implementation of policies on the control of climate change;
- Strengthen the position of Indonesia to encourage developed countries to be more responsible for controlling climate change.

The Working Units are:

- Adaptation Working Unit;
- Mitigation Working Unit;
- Transfer-of-Technology Working Unit;
- Funding Working Unit;
- Post-Kyoto 2012 Working Unit;
- Forestry and Land Use Conversion Working Unit.

Each of the Working Units is composed of relevant government agencies and experts.

With the NCCC in place, the country was able to develop further instruments: the Indonesia Climate Change Sectoral Roadmap in 2010; and the National Action Plan for Climate Change Adaptation (RAN-API) in 2014. RAN-API is the first comprehensive strategy with exclusive focus on adaptation and involves coordination among all stakeholders, from the government, civil society, international cooperation agencies and other stakeholders. It carries the following four objectives:

- To provide direction for the mainstreaming of issues on climate change adaptation into national development planning process;
- To provide direction for sectoral and cross-sectoral adaptation actions that are more integrated in the short-term (2013-2014), medium-term (2015-2019), and long-term (2020-2025);
- To provide direction for priority adaptation actions in the short-term that can be processed and obtain international funding;
- To serve as direction for sectors and regions in developing adaptation actions that are in synergy and that endeavour to develop a more effective communication and coordination system.

RAN-API incorporates many of the elements of the process to formulate and implement NAPs and is envisioned to be the predecessor for the process. RAN-API is part of Indonesia's national development framework as a cross-cutting thematic plan for more climate-resilient

development at national level. It does not a separate document with its own legal power but is part of the national development planning documents. RAN-API formulated national adaptation actions that will be implemented within 1–2 years after its publication (2013–2014) and actions that will be mainstreamed in the next National Medium-Term Development Plans (2015–2019 and 2020–2025). It has been designed to be reviewed and updated on a regular basis.

Relevant documents

Indonesia. 2013. *Indonesia National Action Plan on Climate Change Adaptation (RAN-API) – Synthesis Report.* Government of Indonesia.

Indonesia. 2010. *Indonesia Second National Communication Under The United Nations Framework Convention on Climate Change (UNFCCC).* Available at <http://unfccc.int/essential_background/library/items/3599.php?rec=j&priref=7376#beg>.

Indonesia. 2008. *Presidential Regulation of the Republic of Indonesia on National Council for Climate Change.* Government of Indonesia.

Indonesia. 2007. *National Action Plan Addressing Climate Change.* Government of Indonesia.

4.3 DEVELOPING A ROADMAP FOR THE PROCESS TO FORMULATE AND IMPLEMENT NAPS

FOCUS AREA III

Developing a roadmap for the process to formulate and implement national adaptation plans

BEST PRACTICES

- A road map helps to organize activities towards desired goals and vision, thus leading to a successful process to formulate and implement NAPs;
- A clear roadmap would facilitate smooth integration of the process to formulate and implement NAPs into national development processes, including those for policies and budgets.

LESSONS LEARNED

- As it contains a plan of action for undertaking the process, the road map can be a good basis for identifying metrics for monitoring and evaluation of the process to formulate and implement NAPs;
- There can be different types of road maps depending on the stage of the process or the level at which the process is being considered

FURTHER READING

NAP Technical Guidelines

- Section A.1.E: Define a framework and strategy as well as a road map, including sequencing of various NAPs and a monitoring and evaluation plan, for the NAP process, pp 32-37

CASE STUDIES

- Experience on developing a roadmap by Liberia
- Experience on developing a roadmap by Comoros

A road map helps to organize activities towards desired goals and vision, thus leading to a successful process to formulate and implement NAPs

Countries may find it useful to scope their work towards setting up the process to formulate and implement NAPs by going through a list of the steps and indicative activities to identify what activities are needed, based on the extent to which adaptation activities have already been undertaken. By doing this, the country would identify "entry points", and would sequence the steps with the selected activities, into a road map to be followed as part of the national process.

The roadmap would therefore be a plan or strategy intended to achieve the desired national goals or vision on adaptation. It would include: the starting point for the process; actionable steps; actors to carry out the steps; milestones; timeframe; interdependencies of each steps; and risk factors that may affect realization implementation of the roadmap.

A clear roadmap would facilitate smooth integration of the process to formulate and implement NAPs into national development processes, including those for policies and budgets

A road map would contain specific actions to be undertaken including the lead for each activity, and how other agencies would be involved. That way a country would be able to clearly identify stages at which adaptation development linkages are addressed throughout the process.

For example, as part of the process, the country would need to determine the stages at which the following steps/activities will be undertaken:

- Characterization of the development context to identify development-adaptation themes and goals/objectives to focus on;
- Identification of adaptation options to address key vulnerabilities and activities to integrate adaptation in development planning;
- Visioning of the future to explore scenarios and pathways of development and adaptation actions in a changing climate.

As it contains a plan of action for undertaking the process to formulate and implement NAPs, a road map can serve as a good basis for identifying metrics for monitoring and evaluation of the process

Metrics for monitoring and evaluating progress, effectiveness and gaps in a complex program such as the process to formulate and implement NAPs will be diverse, measuring factors that range from programme planning, to resulting adaptation knowledge and practical applications, to the ultimate impact of policy decisions on society. By its design, a roadmap would contain well-articulated goals, activities and milestones. These would serve as the starting point for determining the metrics.

There can be different types of road maps depending on the stage of the process or the level at which the process is being considered

The road map for the process to formulate and implement NAPs can take different forms depending on the stage of the process. For example:

- Before initiating the process, the roadmap would contain the plan for the initiating the process, interim

institutional arrangements, preliminary stocktaking, possible launch of the process, key stakeholders, and potential support for the process;

- Once the process has been initiated, there would be a more detailed roadmap containing concrete activities to be executed, with associated timelines and resources. In the event that a country has decided to first on the formulation of NAP as the initial phase, the roadmap will also include the timeline for the completion of the NAP and how the formulation process will be coordinated;
- Once the NAP is in place, there would also be a different road map that would define implementation strategy, building capacity/readiness for implementation, resource mobilization, sequencing of programmes, policies and projects, etc.

In essence, consistent with the process to formulate and implement NAPs, the road map will be a living document that will evolve with the different stages of the process.

Boxes 7 abd 8 below provide experiences from Benin and Indonesia in relation to developing a roadmap for the process to formulate and implement NAPs.

Box 7: Experience on developing a road map for the process to formulate and implement naps by Liberia

Environment and climate change policy process in Liberia dates back to 1972 with the establishment of the Ministry of Lands, Mines and Energy, mandated to lead environmental protection as one of its functions. With the ratification of the UNFCCC in 2002, the formal process and policy initiatives on climate change adaptation were started. Since then, Liberia has developed and implemented various policies and plans for adapting the country's key economic sectors (agriculture, fisheries, forestry, energy and health) to the adverse effects of climate change. The period between 2008 and 2014, in particular, saw heightened national policy initiatives that included establishment of the National Climate Change Secretariat, development and approval of the NAPA and the preparation of the first national communication of Liberia.

As a way to further enhance efforts to protect the key economic sectors from the adverse impacts of climate change, the government decided to transition towards medium- and long-term approach on adaptation. The Environment Protection Agency kick started national consultations from January 2015 to pave way for the process to formulate and implement NAPs. To further advance the process, a three day workshop with the support of the NAP Global Support Programme was conducted in May 2015.8 The workshop facilitated stakeholder and actor mapping, analysis of existing programmes and policies and the assessment of gaps and needs. The stakeholder and actor mapping identified various stakeholders from government and non-government entities, donor and international agencies and the private sector. These were then classified according to their level of engagement or influence from, key, secondary to tertiary. Further analysis through the workshop was undertaken to identify strengths, weaknesses, opportunities and threats of the existing climate change adaptation processes in Liberia (see the table below).

Table 1: SWOT analysis of existing climate change adaptation processes in Liberia

Strengths (internal origin)	Weaknesses (internal origin)
· NCCSC and NCCS established · On-going experience with implementation of NAPA projects · Stakeholders already identified and their goodwill; they are motivated · Inclusion of climate change on Agenda for Transformation (National Development Plan) as a transversal issue · Available information	· Limited climate information (no early warning data or scientific data on climate impacts) · NCCS is not adequately staffed · Institutions are weak and underfunded · Weak institutional capacity; Relevant ministries do not have expert technicians · Lack of financial support · Lack of political will · NAPA intervention is minimal; lack of implementation capacity; not much implementation power

8 <http://www.undp-alm.org/projects/liberia-nap-process>.

Opportunities (external origin)	Threats (external origin)
• Donor funding; • Liberia is working to add the political will to complete the beginning of the NAP process by October 2015 • Forthcoming National Development Plan in 2017 • National policies go through consultation process • Experience from NGOs of climate change adaptation	• Sustainability; no long term plan on climate change; no policy on the books • Future political will (by 2017) • Limited institutional coordination • Lack of financial support the next phase • Limited time for information • Outside of agricultural, lack of inclusion of climate change on sectoral strategies or plans

From the SWOT analysis, the country was then able to identify/define the gaps and needs to be addressed through the process to formulate and implement NAPs. The NAP technical guidelines were then used as a framework against which a road map was developed.

On a well-defined time frame the NAP road map of Liberia covers a wide range of outcomes. In laying the ground work for the NAP process, the country looks at dynamic communication strategy having outreach products and reports as well as developing policy briefs and strategic capacity building initiatives. A situation analysis of Liberian climate change status and development of a sectorial vulnerability and risk matrix form part of the preparatory elements leading to NAP. The road map for the implementation strategy consists of a systematic process of national capacity need assessment and developing institutional capacities for implementation of adaptation in a coordinated manner. Liberia has also planned for an iterative process of monitoring and evaluation leading to improved information buildup and updating of NAPs. These two steps will lead to a targeted and time bound implementation of the activities identified and priorities under the various elements of NAP. The figure below shows indicative activities of the Liberia's roadmap under element A of the NAP technical guidelines.

Table 2: **Indicative activities of the Liberia's roadmap under element A of the NAP technical guidelines**

Activity	Year	1			2	3-5
	Month	1-3	3-6	6-12		
1. Lay the groundwork and address gaps (Element A)						
1.A. Conduct briefing to policy makers about CCA challenges and opportunities. Consultation with stakeholders						
2.A. Conduct a stocking of on-going and past adaptation activities						
2.B. Synthesize available analysis of current and future climate at the broad national/regional level						
2.C. Coordinate compilation and development of (distributed / shared) database for the NAP process						
2.D. Gap analysis to assess strength and weaknesses regarding capacity, data and information, and resources required for NAP						
3.A. Develop and enhance enabling institutional and technical capacity						
4.A Compile information on main development objectives, policies plans and programmes						

Relevant documents

Liberia. 2008. Liberia National Adaptation Programme of Action (NAPA). Available at <http://unfccc.int/resource/docs/napa/lbr01.pdf>.

Box 8: **Experience on developing a road map for the process to formulate and implement naps by Comoros**

The effects of climate change are already visible in Comoros and are undermining the national development efforts undertaken during the last decade.[9] The major climate hazards include increasing temperatures, rising sea level, increasing intensity of tropical cyclones, changing rainfall patterns, changing wind conditions and ocean acidification. These are resulting in accelerated reduction of agricultural and fishery yields, increased salinization of coastal aquifers, destruction of biodiversity and coral reefs, and an increased prevalence of malaria, dengue, hepatitis A and eye diseases.[10] According to the government economic assessment, without ambitious measures, the cost of climate-related impacts could rise to USD 836 million by 2050, representing 130% of actual GDP.[11]

Comoros has undertaken various measures to address climate change through the National Environmental Policy in 2013, the NAPA and the Framework strategic programming on the natural environment, climate change and reducing Disaster Risks for 2011–2016. Through the NAPA, Comoros similar to other LDCs has implemented several projects with the objective to increase the resilience of the most vulnerable populations against the impacts of climate change while.

To further advance the national efforts, Comoros decided to embark on the process to formulate and implement NAPs as a way to: engage in a strategic and coherent approach towards adaptation; enable a long-term approach towards adaptation to climate change; strengthen institutional and technical capacity; and to improve coordination, monitoring and evaluation of adaptation initiatives.

The process was initiated by the Ministry of Production, Environment, Energy, Industry and Handicrafts during the second half of 2014. The ministry conducted initial stakeholder consultations and mobilized resources for the launching of the process with the support of UNDP and UNEP. The consultations served to sensitize various stakeholders on the process, undertake preliminary stocktaking of relevant initiatives and identify entry points for the process.

In September 2015 the Government, with the support of the NAP Global Support Programme, organized a national workshop to: officially launch the process; validate the results of the initial stocktaking exercise and agree on the next steps; and to conduct initial training to national experts on the process.[12] The workshop involved experts and stakeholders from government and non-government entities working on climate and natural resources management.

Following the workshop, the country developed a roadmap for the process to formulate and implement NAPs. The road map is divided into three work areas as shown in the table below:

Work area	**Activities**
Strengthening the capacity of the national and island levels coordination mechanisms for the process to formulate and implement NAPs	• Identification of coordination mechanism with clear mandate to guarantee an successful NAP formulation and implementation process • Identify gaps and need for climate change adaptation • Organize key stakeholders consultation process • Adopt a NAP strategy • Organize a second workshop for progress check • Identification of coordination mechanism with clear mandate to guarantee an successful NAP formulation and implementation process • Identify gaps and need for climate change adaptation • Organize key stakeholders consultation process • Adopt a NAP strategy • Organize a second workshop for progress check

9 UNDP, processus de plan national d'adaptation aux Comores, 2014.
10 Évaluation des risques des catastrophes, 2014.
11 http://www.africaneconomicoutlook.org/fileadmin/uploads/aeo/2015/CN_data/Cn_Long_FR/Comores_2015.pdf.
12 <http://www.undp-alm.org/national-adaptation-plan-crucial-sustainable-development-comoros>.

Facilitating implementation of the activities necessary for the execution of the process to formulate and implement NAPs	• Establish partnership with other national and international institutions or organizations to elaborate programme of integrating climate change at different level local, sectoral, island, and national • Establish partisanship with donors to support the institutional capacity building for NAP formulation and implementation process • Integrate climate change adaptation in the Comoros SCAD2D action plan and adaptation indicators are integrated in all future development plan • Undertake study on vulnerability and define options for adaption for associate risk and vulnerability and prioritize them • Undertake climate scenario modeling • Compile the priorities options for the zero draft NAP document • Validate and make large diffusion of the NAP document
Strengthening systems for reporting, monitoring and review	• Collect and stock climate information • Harmonized and standardize analysis of the vulnerability will be done • Establish a mechanism of review in each specific sectoral areas • Establish a communication strategy on NAP implementation process • Review and update the process

Based on the roadmap, the country was able to compile activities to be submitted as part of the second phase of Comoros readiness programme under the GCF.

The process will be coordinated by the National Planning Commission and the Ministry of Production, Environment, Energy, Industry and Handicrafts. Other institutions to be involved include the disaster and risk management office, different islands governors, Rural Research Center for Economic Development, sectoral ministries, relevant NGOSs and civil society.13

Relevant documents

Comoros. 2006. *National action programme of adaptation to climate change (NAPA).*
Available at <http://unfccc.int/resource/docs/napa/com01e.pdf>.

13 Rapport de l'atelier de lancement de la feuille de route, 2014.

4.4 INTEGRATING ADAPTATION INTO DEVELOPMENT PLANNING FROM THE ONSET

FOCUS AREA IV

Integrating adaptation into development planning from the onset

BEST PRACTICES

- Taking a development-first approach is an effective way of undertaking the process to formulate and implement NAPs to ensure adaptation efforts contribute directly to resilient development.
- The process to formulate and implement NAPs should explore all opportunities for integrating adaptation into development planning from the onset.
- Planning the integration of adaptation into development planning from the onset will also lead to an alignment of different planning processes in the country and ensure coherence between adaptation efforts and broader sustainable development efforts.

LESSONS LEARNED

- The process to formulate and implement NAPs provides the necessary basis and motivation for developing countries to integrate climate change adaptation into longer-term development planning across various sectors and different levels of governance.
- Integration is itself a process that requires incremental and iterative steps and benefits from learning-by-doing and the experience of other countries.

FURTHER READING

NAP Technical Guidelines

- Step A.4: Comprehensively and iteratively assessing development needs and climate vulnerabilities, pp. 50–52
- Step B.5: Integrating climate change adaptation into national and subnational development and sectoral planning, pp 82–88

Other resources:

- Care International Toolkit for Integrating Climate Change Adaptation into Development:
- http://www.careclimatechange.org/tk/integration/en/quick_links/checklists.html
- Organisation for Economic Co-operation and Development (OECD) Practice-oriented Training on Integrating Climate Change Adaptation into Development Planning:
- http://www.oecd.org/dac/environment-development/integratingclimatechangeadaptationintodevelopmentplanningapractice-orientedtrainingbasedontheoecdpolicyguidance.htm

CASE STUDIES

- Experience on integrating climate change adaptation into policy making by Tuvalu
- Experience on integrating adaptation into development planning at by Cambodia

The integration of climate change adaptation into national and subnational development planning, policies and budgets is crucial. It is advisable that this be done throughout the whole process and especially during the development of the roadmap and strategy.

Taking a development-first approach is an effective way of undertaking the process to formulate and implement NAPs to ensure adaptation efforts contribute directly to resilient development.

The development of a NAP presents the opportunity for developing countries to integrate adaptation into longer-term development planning across sectors.

Synergies between development and adaptation objectives, policies, plans and programmes can be identified when developing NAPs. Part of this process could include determining and understanding the various processes, institutions, actors, mandates, existing policies and other factors that are relevant for the effort to integrate climate change into development.

The process to formulate and implement NAPs should explore all opportunities for integrating adaptation into development planning from the onset of the process.

By identifying and assessing climate risks associated with development priorities, adaptation actions can be identified that reduce the vulnerability of those priorities to climate risks. It is important to compile main development objectives, policies, plans and programmes in order to identify efforts that are most at risk from climate change and to climate-proof these aspects. A good knowledge of different development policies and activities at different levels would provide a good basis for subsequent planning and integration of climate change concerns into the planning process.

Integrating climate change adaptation into development would facilitate the identification of risks to investment and opportunities for collaboration and realization of co-benefits, including economic benefits. Addressing these risks would lead to the climate-proofing of development efforts.

Planning the integration of adaptation into development planning from the onset will also lead to the alignment of different planning processes in the country and ensure coherence between adaptation efforts and broader sustainable development efforts.

Regarding the linkages between adaptation and development, high-level coordination mechanisms for adaptation are reported to best enable the integration of climate change adaptation across different ministries/agencies, and hence into broader national development planning. Furthermore, many countries promote the broad participation of different agencies and stakeholders in their general policy process, which further enhances the integration of adaptation.

Integrating climate change adaptation into national and subnational development requires an understanding of relevant planning cycles as well as adaptation options relevant for those planning cycles. As the process to formulate and implement NAPs is closely linked to national or subnational development planning, the integration process could play an integral part. Continuous stakeholder interaction will give planners an appreciation of the underlying analysis and help to identify appropriate entry points for integration.

The prioritization of adaptation in the broader context of national development planning will help policymakers and relevant stakeholders select the most important adaptation measures to be implemented for a country or region given competing development needs. It will enable the identification of high-priority and feasible adaptation measures that will build on and complement existing adaptation activities, and fit with the national vision on adaptation as well as national goals for environmental, social and economic development.

The process to formulate and implement NAPs provides the necessary basis and motivation for developing countries to integrate climate change adaptation into longer-term development planning across various sectors and different levels of governance.

Countries are progressively integrating climate change adaptation into their national development frameworks. The frameworks contain specific objectives relating to nationwide actions on climate change adaptation, and have been used to mobilize and engage a wide range of stakeholders at the national level. Most of countries have now plans to enhance the integration of adaptation into national, subnational and local development frameworks. Increased awareness of climate change adaptation achieved through, for example, regional and/or international climate change events encourages participation of senior policymakers and of a wide range of stakeholders at the national level. This in turn generates high levels of support for adaptation from policymakers.

Integration is itself a process that requires incremental and iterative steps and benefits from learning-by-doing and the experience of other countries.

It is important that the process to formulate and implement NAPs takes an interdisciplinary, scientific approach to informing policy and solutions and setting priorities and those they take traditional knowledge into account. Thus, with regard to such possible goals and objectives, integration of climate change in development plan could serve a variety of needs, including the sharing of knowledge and facilitation of learning, providing a better understanding of the gaps and needs in the process to formulate and implement NAPs, communicating capacity-building needs, communicating achievements on reducing vulnerability to climate change, and matching needs with sources of support. Additionally, NAP process presents opportunities for national governments to establish longer-term approaches to widely engaging the scientific community in informing adaptation planning and implementation.

Boxes 9 and 10 below provide experiences from Tuvalu and Cambodia in relation to integrating adaptation into development planning from the onset.

Box 9: Experience on integrating climate change adaptation in policy making by Tuvalu

Tuvalu is the fourth smallest nation in the world. Despite being an island country particularly vulnerable to climate change, Tuvalu has limited ecological, socio-economic and technological capacity. The country's economy is mainly composed of subsistence farming and fishing, and it is very dependent on external economic and trade developments. The country faces multiple climate risks such as more intense and frequent tropical cyclones, prolonged periods of drought, storm surges, flooding, sea level rise, coastal erosion and loss of land, salt water intrusion and biodiversity loss. All these factors render Tuvalu uniquely vulnerable to the impacts of climate change.

In recognition of the significance of climate change to the country's economic development and people's livelihoods, the Government of Tuvalu took a number of measures to prepare for and adapt to the impacts of climate change. Three of the measures, two of which relate to the integration of adaptation into development planning, are described below.

The first measure involved conducting the first climate vulnerability and adaptation assessment in 1999, as part of the preparation of Tuvalu's initial national communication to the UNFCCC. This was further advanced through the preparation of the national adaptation programme of action (NAPA) from 2005–2007, whereby the country conducted detailed assessment of vulnerabilities to climate change and identified adaptation options, from which several projects have been and are being implemented.

The second measure involved the elevation of climate change considerations into the national development context. Under its National Strategy for Sustainable Development (NSSD) for 2005–2015 (*Te Kakeega II*), the country identified minimizing/mitigating the impacts of climate change as one of the key policy objectives. In line with recommendations from previous policies and plans, the NSSD also identified the need to establish national climate change adaptation and mitigation policies.

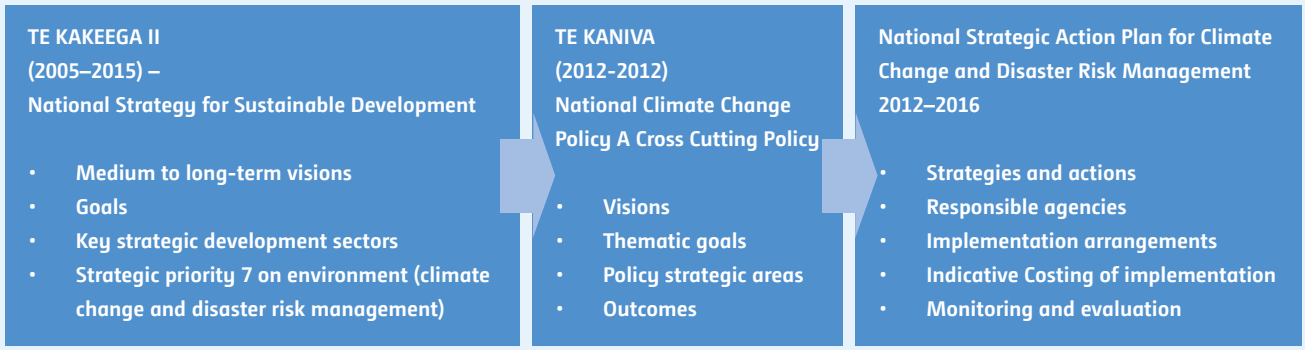
The third measure was the development of Tuvalu Climate Change Policy (TCCP), Te Kaniva, in 2012, prescribing the Government and the people of Tuvalu's strategic polices for responding to climate change impacts and related disaster risks over 2012–2021. It carries the vision *to protect Tuvalu's status as a nation and its cultural identity and to build its capacity to ensure a safe, resilient and prosperous future*. The policy was developed with a set of principles to guide implementation of activities based upon and consistent with those within NSSD (and subsequent revisions), the National Water Policy, the National Energy Policy and National Disaster Risk Management Plan. These included: ownership and implementation of the plan by the Government and the people of Tuvalu and respective local authorities of each island; a complimentary approach that builds on the NSSD, island strategic plans and relevant programmes; policy direction for the implementation of other related strategies and plans on climate change and disaster risk management; equitable development between population groups; respect for and preservation of values, culture and traditions of the country; respect for human rights, the rule of law, gender equality and sensitivity; support towards sustainable development; multidisciplinary and no-regrets approach to guiding adaptation decision-making, based on consultation, traditional knowledge, a scientific evidence base, policy monitoring and evaluation ; and the recognition of science, technology and methodological advancements to underpin the policy.

In combination with the TCCP and consistent with the NSSD, the Government of Tuvalu also developed the National Strategic Action Plan (NSAP) for Climate Change and Disaster Risk Management for 2012–2016. The strategy identified seven thematic goals covering adaptation, mitigation and disaster risk management. Given its shorter time frame as compared to the TCCP, the strategy is also perceived as an operational plan to implement the TCCP.

Examples of desired outcomes under the NSAP that explicitly relate to the integration of adaptation into development planning include:

- *With regard to strengthening adaptation actions*: climate change adaptation integrated into planning and development decision making including household daily activities;
- *With regard to governance and capacity*: there is capacity in each ministry and department to integrate climate change and disaster risks into project development and project monitoring and evaluation; climate change and disaster risks are incorporated in each sector's/agency's policies, plans and budgetary processes and in all new and ongoing development programmes; and effective and responsive island governance where climate change and disaster risks and impacts are integrated into Island Strategic Plans;
- *With regard to infrastructure*: improved and coherent physical planning; physical planning integrated into the Island Strategic Plan; building code is enforced for key infrastructure and construction of houses (wooden and concrete) in the context of climate change adaptation.

Figure x: Linkages between the National Strategy for Sustainable Development, National Climate Change Policy and the National Strategic Action Plan for Climate Change and Disaster Risk Management 2012–2016.



Source: Tuvalu. 2012. *Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management for 2012–2016*.

Apart from mainstreaming climate change adaptation into policymaking in Tuvalu, the approval of the policy and action plan also has great significance for the Tuvalu Pacific Adaptation to Climate Change (PACC) project, as these will be instrumental in implementing several initiatives of the project.

What next … [can we infer that with the TCCP and NSAP in place, planning at national, sectoral and island levels now incorporates climate change issues??]

Relevant documents:

Tuvalu. 2012. *Tuvalu National Strategic Action Plan for Climate Change and Disaster Risk Management for 2012–2016.*
Tuvalu. 2012. *Tuvalu Climate Change Policy.*
Tuvalu. 2007. *Tuvalu's National Adaptation Programme of Action.* Available at <http://unfccc.int/resource/docs/napa/tuv01.pdf>.
Tuvalu. 2005. *National Strategy for Sustainable Development: 2005–2015.*
Tuvalu. 1999. *Tuvalu Initial National Communication to the UNFCCC.* Available at <http://unfccc.int/resource/docs/natc/tuvnc1.pdf>.

Box 10: **Experience on integrating adaptation into development planning by Cambodia**

Since ratification of the UNFCCC in 1995, the Government of Cambodia has undertaken various measures to address climate change risks and vulnerabilities. Highlights of measures undertaken include the publication of the initial national communication to the UNFCCC in 2002, establishment of the National Climate Change Committee (NCCC) in 2006, publication of the national adaptation programme of action (NAPA) in 2007, launching of the Climate Change Strategic Plan 2014 – 2023 (CCCSP) in 2013, preparation of Sectoral Climate Change Strategic Plans and Action Plans (SCCSPs and SCCAPs) by line ministries by line ministries from 2014, launching of the process to formulate and implement NAPs in 2014, and targeted initiatives for mainstreaming climate change into subnational development plans in 2015.

Evidently, efforts towards integration of adaptation into development planning gained momentum as the country gained experience in dealing with climate change. The establishment of the NCCC in 2006 served an enabling pillar for a multidisciplinary approach to adaptation, and hence growing policy for integration of adaptation in development.

Cambodia's National Strategic Development Plan Update 2009 – 2013 included the following climate change adaptation related actions as part of the priority actions in the national development context:

- Secure resources, support and financing to solve climate change problems;
- Educate and propagate on climate change;
- Acceleration of the implementation of programme activities on national climate change adaptation;

- Development of national action plan on climate change;
- Creation of a national climate change fund.

Building from these priority actions, the Government prepared the CCCSP which was completed in 2013. The CCCSP is the first comprehensive national policy for Cambodia's response to climate change. It carries the Government's mission of *creating a national framework for engaging the public, private sector, civil society organizations and development partners in a participatory process for responding to climate change to support sustainable development.* The CCCSP contains three overarching goals and eight strategies objectives (see figure xx below).

Figure XX: Cambodia Climate Change Strategic Plan (CCCSP)

The National Strategic Development Plan for 2014-2018 states the importance of implementing CCCSP. It contains indicators related to climate change with major focus on increasing the public spending on climate change for mainstreaming climate change issues into national and subnational planning.

Meanwhile, the country has already made significant advancements on integration of adaptation into development planning processes. For example:

- Line ministries have developed Sectoral Climate Change Strategic Plans and Action Plans (SCCSPs and SCCAPs) covering the main sectors as identified in the NAPA and National Communications under the UNFCCC;
- The country has undertaken initiatives to mainstream adaptation into national development, and in specific sectors such as agriculture, forestry, human health and coastal zones;
- Cambodia launched the process to formulate and implement NAPs in 2014, to strengthen the ongoing climate change adaptation processes through cross-sectoral programming and implementation at national and sub-national levels. The process is in turn envisioned to inform future climate change strategies, financing frameworks, and national development planning and budgeting.

Relevant documents:

Cambodia. 2013. Cambodia Climate Change Strategic Plan 2014 – 2023. Government of Cambodia.
Cambodia. 2014. National Strategic Development Plan 2014-2018. Government of Cambodia
Cambodia. 2009. National Strategic Development Plan Update 2009-2013. Government of Cambodia.

4.5 ESTABLISHING EFFECTIVE INSTITUTIONAL ARRANGEMENTS

FOCUS AREA V

Establishing effective institutional arrangements

BEST PRACTICES

- Building on existing institutional arrangements enables the smooth integration of adaptation measures.
- Given the medium to long-term nature of adaptation, as well as the involvement of all parts of government, effective institutional arrangements are necessary to ensure a holistic and sustainable approach to adaptation.

LESSONS LEARNED

- The NAP process requires the involvement of many actors and stakeholders, both at the national level and internationally. Effective institutional arrangements that are well managed and communicated contribute to coherent approaches.
- Institutional arrangements set up at the highest policy level can ensure that work is coordinated across the different government agencies, that participation of all concerned is encouraged and that required resources are mobilized.

FURTHER READING

NAP Technical Guidelines

- Step A.2: Stocktaking: identifying available information on climate change impacts, vulnerability and adaptation and assessing gaps and needs of the enabling environment for the NAP process, pp. xx–yy
- Table 4: Institutional functions for adaptation, pp xx
- Step A.3: Addressing capacity gaps and weaknesses in undertaking the NAP process, pp xx–yy
- Step C.3: Enhancing capacity for planning and implementing adaptation

CASE STUDIES

- Experience on establishing effective institutional arrangement by Vanuatu
- Experience on establishing institutional arrangements by Colombia

Building on existing institutional arrangements enables the smooth integration of adaptation measures.

Building on institutional structures for adaptation and integrating them into existing national institutional arrangements can facilitate early success through the mainstreaming of adaptation in ongoing national development planning and the effective use of resources. The coordinating mechanism, which will have been established at an earlier stage, could be responsible for establishing the institutional arrangement or integrating the process to formulate and implement NAPs into an already existing arrangement.

Given the medium and long-term nature of adaptation, as well as the involvement of all parts of government, effective institutional arrangements are necessary to ensure a holistic and sustainable approach to adaptation.

It is recommendable to move beyond including only environment ministries in the institutional arrangement; all relevant ministries such as planning and finance should be included. It is possible to identify a lead ministry for the process to formulate and implement NAPs or to develop clear terms of reference for each ministry involved. It is advisable to identify key leaders at an early stage. Furthermore, it is crucial to also include local government bodies.

Stakeholder involvement is a critical element for the national institutional arrangement. Linkages to local governments or bodies are essential. Furthermore, involving national scientists and non-governmental organizations in the decision-making process can also be useful. The institutional arrangement has to ensure that there is an appropriate level of coordination and cooperation among all stakeholders.

Monitoring and evaluation should also be built into the institutional arrangement. Setting this up at an early stage will play a major role in facilitating data analysis at a later stage.

The process to formulate and implement NAPs requires the involvement of many actors and stakeholders, both at the national level and internationally. Effective institutional arrangements that are well managed and communicated contribute to coherent approaches.

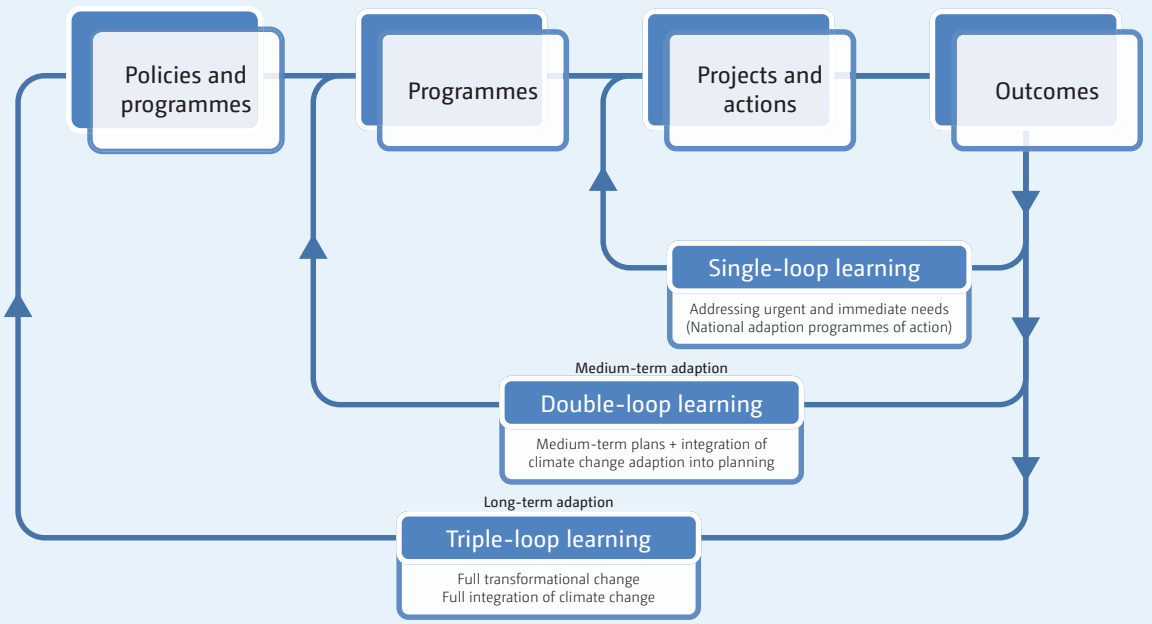
The process of formulating and implementing NAP process require coordination across different social groups and regional levels and across vertical structures of governance which encourages multi-stakeholder involvement in the process and coordination across local, subnational and national levels It is therefore important to ensure the involvement of all stakeholders from different levels of decision-making such as local communities, and local and central governments. Also it becomes critical to ensure that all the stakeholders clearly understand their roles in the development of adaptation plans, that their capacity to carry them out is adequately developed and that the needed resources are made available.

Actors and stakeholders could be multidisciplinary technical group, team or committee: composed of representatives of various agencies and institutions at the national level (usually technical experts from national ministries, local authorities, civil society, academia and research). Such group, team or committee could facilitate cooperation among the different agencies and institutions and coordinates the development of national strategies, frameworks and/or plans.

Institutional arrangements set up at the highest policy level can ensure that work is coordinated across the different government agencies, that participation of all concerned is encouraged and that required resources are mobilized.

Institutional arrangements set up at the highest policy level can ensure that NAP process activities are coordinated across the different government agencies, that participation of all concerned is encouraged and required resources are mobilized. Regarding governance structures, many countries have in place various national institutional arrangements related to climate change adaptation. Some countries are using the existing institutional arrangements to execute the process to formulate and implement NAPs, while others are enhancing the existing and/or establishing new institutional arrangements. For many of the countries, the institutional arrangements include the following three main categories. In many cases national climate change agency or department: situated in one ministry with a focal point network of representatives from other ministries, tasked with coordinating development and implementation of sector strategies and plans and the integration of climate change adaptation into development planning processes.

Box 11: **Example on learning loops**



Learning loops: pathways, outcomes and dynamics of single, double and triple-loop learning relating to adaptation[14]

Learning is crucial for the planning and implementation of adaptation. There are different kinds of learning processes which can be depicted as learning loops (see box 11). Single-loop learning processes address urgent and immediate needs and assess the efficiency of projects and actions. Double-loop learning processes look at larger scales, such as the programme level. Here, corrective measures can be undertaken that build on the lessons learned from the implementation of projects and actions. Triple-loop learning processes look at long-term processes, such as long-term adaptation, and question all constructs that mediate risk and risk management. Ideally triple-loop learning processes trigger transformational change, which, in the context of climate change, would mean the full integration of climate change into all policies and programmes.

14 Modified based on: Lavell, A., Oppenheimer, M., Diop, C., J. Hess, Lempert, R., Li, J., Muir-Wood, R. and Myeong, S. 2012. Climate change: new dimensions in disaster risk, exposure, vulnerability, and resilience. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation [Field, C.B., Barros, V., Stocker, T.F., D. Qin, Dokken, D.J., K.L. Ebi, Mastrandrea, M.D., Mach, K.J., Plattner, G.-K., Allen, S.K., Tignor, M., and Midgley, P.M. (eds.)].2013. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press,

Boxes 12 and 13 below provide experiences from Vanuatu and in Colombia in establishing effective institutional arrangements

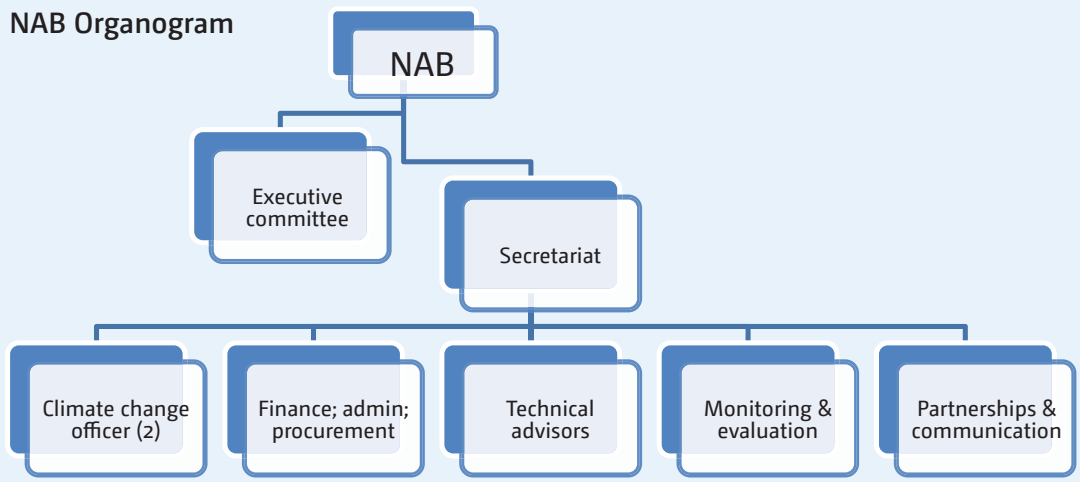
Box 12: Experience on establishing effective institutional arrangements for the process to formulate and implement naps by Vanuatu

Vanuatu is classified as highly vulnerable to all natural hazards: tropical cyclones, storm surges, coastal flooding, river flooding, droughts, earthquakes, land-slides, tsunamis and volcanic eruptions. The impacts thereof significantly hamper the economic development of the country. In order to safeguard economic development and achieve the vision of an "Educated, healthy and wealthy Vanuatu", the Government embraced the need to adapt to these natural hazards amidst other multiple stressors such as low economic base and rapid population growth.

Vanuatu has had submitted its initial national communication to the UNFCCC in 1999. The national communication enabled a first order assessment of the country's vulnerabilities to climate change and possible adaptation options. In 2005, the country initiated the preparation of its NAPA, which was then completed in 2007. The NAPA provided a country-wide programme of immediate and urgent project-based adaptation activities in priority sectors, in order to address the adverse effects of climate change. The NAPA was prepared under the guidance of the National Advisory Committee on Climate Change (NACCC) that was established in xxxx. The NCCC was mandated to xxx xxx xxx.

Following the NAPA, Vanuatu has initiated efforts to enhance the institutional set-up for climate change, to facilitate engagement or a broader set of stakeholders. The goal was to facilitate the integration of climate change issues into the national frameworks for development planning.

In this line a National Advisory Board on Climate Change and Disaster Risk Reduction (NAB) was set up in 2012 with members from government and non-government organisations. NAB was setup primarily to act as Vanuatu's supreme policy making and advisory body for all climate change and disaster risk reduction programs, projects, initiatives and activities.



The NAB is supported by an Executive Committee composed of the directors' of the Vanuatu Meteorology and Geo-Hazards Department (VMGD) and Vanuatu National Disaster Management Office (NDMO) as Co-Chairs; Department for Strategic Management (DSM) of the Prime Minister's Office; Ministry of Environment; Ministry of Finance; and representatives NGO. The roles and responsibilities of this Committee include the following functions;

- Present NAB activities, plans, policies etc. to national leaders and decision makers;
- Drive, minimize bottle necks, and follow up on the implementation of climate change and disaster risk reduction initiatives and programmes according to the schedule set by the NAB;
- Facilitate the unencumbered flow of funds (external and internal) to implementing agencies for climate change and disaster risk reduction activities;

- Provide regular guidance to Parliament and high level leaders on climate change and disaster risk reduction in Vanuatu (e.g. signing and ratification of major treaties, conventions, policies and legislations);
- Report regularly to Parliament on the progress of climate change and disaster risk reduction implementation activities including challenges to be addressed and activities planned for each financial year; and
- Make emergency or expedited decisions on behalf of the NAB for urgent DRR & CC issues.

The NAB is also supported by the NAB Project Management Unit which is the Secretariat of the NAB. The Project Management Unit is responsible for:

- **Strategic governance and policy**: Including implementation of actions associated with national, regional and international climate change and disaster risk reduction obligations; identification of positions for international summits, identification of climate change and disaster risk reduction priorities, and development of a national policy on CC and DRR
- **Technical advice, project monitoring and coordination**: Including providing technical advice to government departments and NGOs, acting as the coordination point for climate change and disaster risk reduction matters, starting a 'project endorsement process' and 'information materials endorsement process' and working to support standardized approaches.
- **Project management – financing, procurement and administration**: Including Secretariat duties for the NAB, investigating funding mechanisms for Vanuatu, providing support and advice on procurement for climate change and disaster risk reduction, and implementing projects.

[how has or is the NAB contributed to effective coordination?].

Relevant documents:

Vanuatu. 2015. Vanuatu Climate Change and Disaster Risk Reduction Policy 2016-2030. Government of the Republic of Vanuatu.

Vanuatu. 2007. National Adaptation Porgramme of Action. Available at <http://unfccc.int/resource/docs/napa/vut01.pdf>.

Box 13: Experience on establishing an institutional arrangement by Colombia[15]

Colombia faces a wide range of climate change-related threats, including loss of glacier coverage, sea level rise, heavy flooding, landslides and increasing severity of droughts etc. Their impacts exert extreme pressure on the national economy, leading to government prioritising four strategies aimed at comprehensively addressing climate change in its National Development Plan for 2010–2014. These are the Colombian Low Carbon Development Strategy, the National Adaptation Plan for Climate Change (PNACC), the National REDD+[16] Strategy and the Strategy for Financial Protection against Natural Disasters.

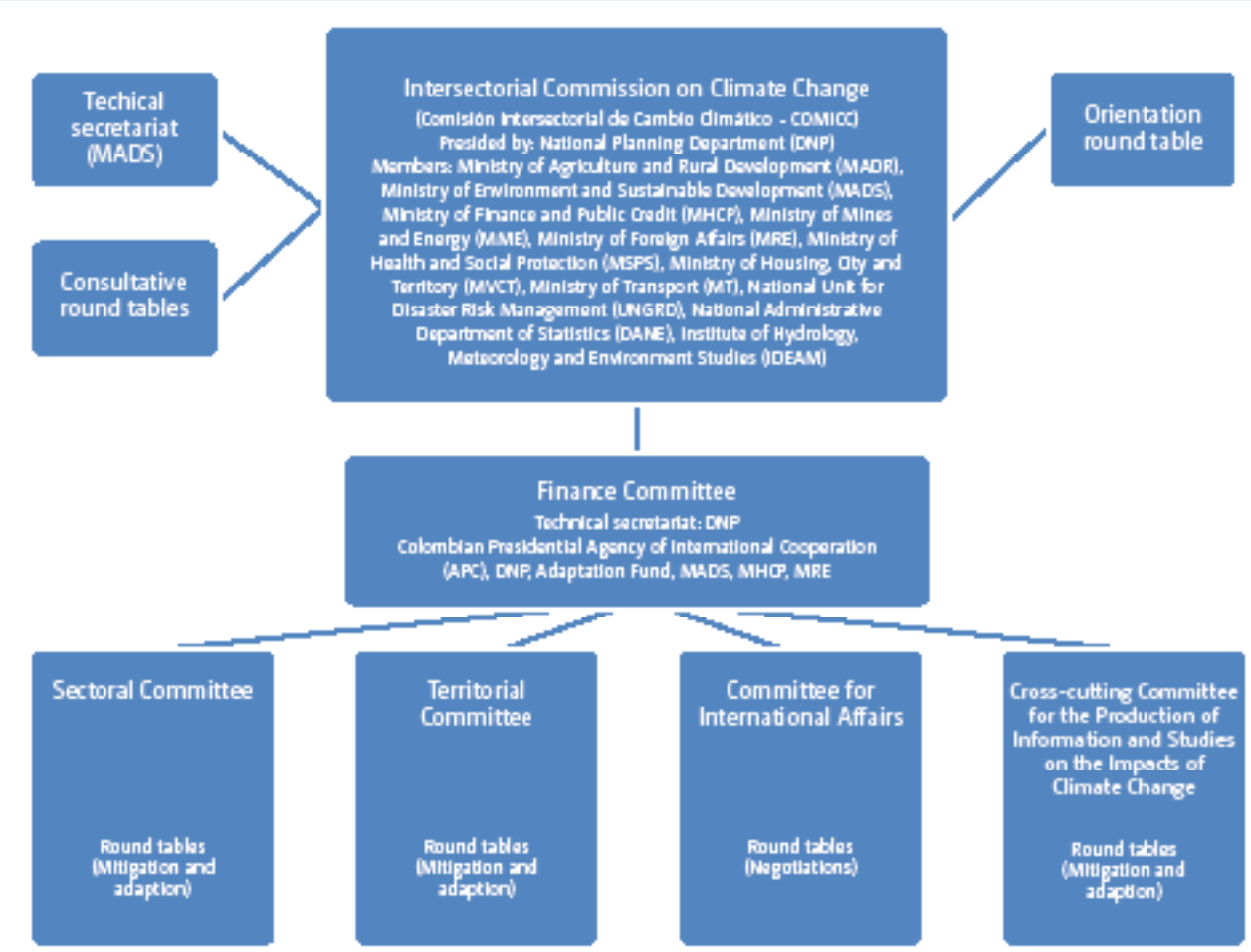
Colombia's National Adaptation Plan (PNACC) plays a role in the political strategies and institutional arrangements of the country. This is an initiative led by the National Planning Department (DNP), with the support of the Ministry of Environment and Sustainable Development (MADS), the Institute of Hydrology, Meteorology and Environmental Studies, and the National Disaster Risk Management Unit, with the participation of the productive sectors and the territorial stakeholders. Its main objective is to reduce the risks and the socioeconomic impacts associated with climate change in Colombia. The Plan has been constructed to set the conceptual bases and methodologies for sectors and territories to identify their risks, prioritize actions and formulate their own sectoral or territorial adaptation plan. In spite of the fact that these four entities are in charge of the PNACC, it is also the responsibility of the local environmental authorities, territorial entities (regional and local government), civil society and sectors to formulate their adaptation plans with the support of the national government and environmental, social and agriculture research institutes, among other entities.

15 Colombia. Departamento Nacional de Plaeneación, Adaptación en Colombia – Roles y Responsabilidades. Available at: <http://www.wilsoncenter.org/sites/default/files/Silvia%20L.%20Calder%C3%B3n%20D.,%20Departamento%20Nacional%20de%20Planeaci%C3%B3n%20-%20Rep%C3%BAblica%20de%20Colombia.pdf>.
Colombia. Departamento Nacional de Plaeneación. CONPES 3700 (Bogotá, 2013). Available at: <http://oab.ambientebogota.gov.co/es/con-la-comunidad/ES/conpes-3700-estrategia-institucional-para-la-articulacion-de-poli-ticas-y-acciones-en-materia-de-cambio-climatico-en>.

16 Institutional technical and scientific capacity to support REDD+ projects in Colombia.

As part of the PNACC, the Colombian Government started supporting territories at the end of 2014 in the development of their own adaptation plans (some have turned into climate change plans, some including mitigation measures). Currently 11 plans have already been developed and, with the support of MADS, about 13 more territorial plans will be in the formulation stage between 2015 and 2016. In addition, prioritized sectors such as transport, agriculture, energy, health and housing have started identifying their vulnerabilities and developing their adaptation plans in order to define concrete adaptation measures to be implemented and mainstreamed in their development planning.

Figure 2: Institutional arrangement of Colombia's National Climate Change System



Relevant documents and links:

Adaptation to Climate Change in Colombia, Effective institutional arrangements for NAP formulation and implementation, https://unfccc.int/files/adaptation/application/pdf/colombia___mariana_rojas_laserna_session_3.pdf

Columbias National Climate Change Process, http://ccap.org/assets/Colombias-National-Climate-Change-Process_CCAP-June-2012.pdf

Coordination of climate finance in Columbia, http://www.odi.org/sites/odi.org.uk/files/odi-assets/publications-opinion-files/9326.pdf

4.6 EFFECTIVELY ENGAGING STAKEHOLDERS: IDENTIFICATION, INVOLVEMENT AND INCLUSION

FOCUS AREA VI

Effectively engaging stakeholders: identification, involvement and inclusion

BEST PRACTICES

- Involving all relevant stakeholders continuously throughout the process to formulate and implement NAPs requires an explicit plan and is essential to ensure a transparent and effective process.
- Identifying stakeholders and their roles at an early stage of the process is essential to ensure all interests are met and that the process has buy-in from all stakeholders.

LESSONS LEARNED

- Adaptation benefits everyone. Effective involvement of all stakeholders requires management and clear guidelines to ensure everyone is represented.
- Non-governmental actors have much to contribute to all stages of the process to formulate and implement NAPs. This requires an open and ongoing dialogue and the joint design of adaptation solutions.
- Vulnerable communities can contribute to the design of interventions for their benefit.

FURTHER READING

NAP Technical Guidelines

- Step A.1: Initiating and launching the NAP process
- Step B.4: Compiling and communicating national adaptation plans
- Step D.4: Outreach of the NAP process and reporting on progress and effectiveness

CASE STUDIES

- Experience on stakeholder engagement by Malawi
- Experience on effectively engaging stakeholders in the formulation of nap by Burkina Faso

Involving all relevant stakeholders continuously throughout the process to formulate and implement NAPs requires an explicit plan and is essential to ensure a transparent and effective process.

Identifying stakeholders and their roles at an early stage in the process is essential to ensure all interests are met and that the process to formulate and implement NAPs has buy-in from all stakeholders.

Stakeholder engagement is a cross-cutting issue and should be considered throughout the whole NAP process. The broad participation of stakeholders as well as the communication of the national adaptation strategy can help promote synergy and the coordination of adaptation actions. Stakeholder engagement, including with local communities and with the consideration of gender issues, is an important component of assessments and appraisal for strategic planning.

In order to ensure transparency, stakeholder engagement could be undertaken through consultations and workshops. When organizing these kinds of workshops and consultations, stakeholders should be informed about the process to formulate and implement NAPs but also be given the opportunity to comment and contribute to it. Transparency and engagement is crucial in order to achieve acceptance by all stakeholders.

One important aspect in stakeholder engagement is to derive vertical coordination and horizontal linkages to address the actual needs and build consensus with scientists with the aim of turning data into knowledge (including the incorporation of traditional and indigenous knowledge). Science and policy interaction is decisive for effective decision-making. One way of integrating the latest scientific research into the process of formulating and implementing NAPs could be by organizing workshops and forums, bringing together scientists and national policymakers. This way, an exchange of information and knowledge can be ensured so scientists can respond to and engage with the evolving needs of the policymakers.

It is advisable to identify the relevant stakeholders and their specific roles at an early stage. For this to happen, an understanding of the stakeholders in government, the non-governmental sector and the broader development community, including relevant activities and how they relate to one another, is essential. An indicative list of stakeholders who could be part of the process to formulate and implement NAPs could be included in the initial framework and strategy. Depending on the activities and steps, different stakeholders may be relevant at different stages.

Once the relevant stakeholders have been identified, awareness-raising and communication of the national adaptation strategy and vision among the identified stakeholders can help to promote synergy of actions as well as identify possible obstacles. Creating a website containing information on climate change issues for the country and announcements on NAP activities could also be valuable in providing public access to data and information.

The process to formulate and implement NAPs needs to engage stakeholders at all levels of planning and develop a good understanding of climate change adaptation. Enhancing awareness among stakeholders of potential benefits for integrating adaptation into development planning provides an opportunity for knowledge-sharing and could trigger the development of the skills and competencies required to effectively integrate adaptation into development. Stakeholder engagement could therefore help to identify appropriate entry points for integrating adaptation into development at all levels.

The use of local experts and institutions in the design and implementation of national adaptation strategies increases country ownership and helps to build lasting capacity to address adaptation in the long-term, including through greater familiarity with the procedures of the Global Environment Facility (GEF) and the Green Climate Fund (GCF), among other entities.

Adaptation benefits everyone. Effective involvement of all stakeholders requires management and clear guidelines to ensure everyone is represented.

It is important to ensure the involvement of all stakeholders from different levels of decision-making such as local communities, and local and central governments. Management guidelines for involvement of all relevant stakeholders help to promote synergy and coordination of actions. A robust management structure with clear guidelines for institutional and intergovernmental coordination is essential, with a strong lead ministry driving the process.

The management structure should be rolled-out in a way that all the stakeholders clearly understand their roles in the development of adaptation plans, that their capacity to carry them out is adequately developed and that the needed resources are made available. Thus it is critical to ensure that all the stakeholders need to get equal representation in the management arrangement and the guidelines should have written elements to ensure the same.

Non-governmental actors have much to contribute to all stages of the process to formulate and implement NAPs. This requires an open and ongoing dialogue and the joint design of adaptation solutions.

At the national as well as the subnational levels, the Non-governmental actors have a larger influence and role to play. The outreach of the non-governmental actors especially at the subnational level with the communities and other stakeholders is substantial. With this outreach and with the long standing experience of community based adaptation planning, it will be really beneficial to involve the non-governmental actors in joint designing of the adaptation solution. Since non-governmental actors are represented in many of the national level institutions in many countries, they have already got the expertise and faith in developing policy decisions for countries dealing with the process of national adaptation plan process.

Vulnerable communities can contribute to the design of interventions for their benefit.

Participatory decision making is the corner stone of sustainable planning for many of the development sector programmes. It is certain that community based participatory climate change adaptation planning will result in more and more ownership of the most vulnerable sections of the society. The bottom-up approach in many sectors generally result in sustainable solutions rather than top down approach.

Box 14: Example on criteria of quality stakeholder engagement

Quality stakeholder engagement must:

- Have a clearly defined scope;
- Have an agreed decision-making process;
- Create opportunities for dialogue;
- Be integral to organizational governance;
- Be transparent;
- Have a process appropriate to the stakeholders engaged;
- Be timely;
- Be flexible and responsive.

Quality stakeholder engagement can:

- Lead to more equitable and sustainable social development by giving those who have a right to be heard the opportunity to be considered in decision-making processes;
- Enable the improved management of risk and reputation;
- Allow for the pooling of resources (knowledge, people, money and technology) to solve problems;
- Enable understanding of the complex operating environment;
- Enable learning from stakeholders, resulting in product and process improvements;
- Inform, educate and influence stakeholders to improve their decisions and actions;
- Contribute to the development of trust-based and transparent stakeholder relationships.[17]

17 AccountAbility. 2008. *AA1000 Stakeholder Engagement Standard 2011*. Available at: <http://www.accountability.org/images/content/3/6/362/AA1000SES%202010%20PRINT.PDF>.

Box 15: Example - the commonwealth scientific and industrial research organisation's (csiro) framework for stakeholder engagement on climate adaptation[18]

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) created a Climate Adaptation National Research Flagship to address the urgent national challenge of supporting Australia to adapt to the adverse impacts of climate change. As part of this project, a framework has been developed to identify best practice methods for engaging with stakeholders on the issue of climate change adaptation. This project had four goals:

1. Understand what nature and degree of engagement is required by different stakeholders;
2. Identify what sorts of information stakeholders need in order to make these decisions;
3. Work towards the development of a protocol for modes of engagement;
4. Develop a framework for monitoring the success of communication, engagements and research.

A five-stage process has started to address these four goals. Four stages have already been completed while the fifth one is currently ongoing. Recommendations for best practices for climate adaptation engagement can already be made based on the information collected during the first four stages.

Prior to engagement

- **Set goals and plan:** Clarify what should be achieved from the engagement;
- **Contextualize the issue:** Frame the issue so it is relevant for participants; presenting a practical and locally relevant problem together with projections of climate change impacts has proven to demonstrate the area's vulnerabilities to trigger behavioural change;
- **Define the stakeholder:** Recruit a wide range of stakeholders and concentrate on those who are most willing and/or influential.
- **Manage expectations:** Explain where there is potential to influence outcomes and where none exists.

Engagement process:

- **Use group discussions:** Allow people to develop a more complex understanding;
- **Use varied presentation formats:** Use a range of ways to present information to accommodate different learning styles and needs; complex information should be given in simple language and face-to-face;
- **Allow for mutual influence:** Give Participants the opportunity to influence decisions.
- **Foster trust, respect and ownership:** Help to increase participant motivation, promote behavioural changes and increase external recognition and impact.

18 John Gardner and others, *A Framework for Stakeholder Engagement on Climate Adaptation*. Climate Adaptation National Research Flagship working paper series, #3 Available at: <http://www.csiro.au/Organisation-Structure/Flagships/Climate-Adaptation-Flagship/CAF-working-papers/CAF-working-paper-3.aspx>.

Climate change issues:

- **Address gaps in knowledge:** Recognize that lack of understanding about climate change is common;
- **Acknowledge uncertainty:** Be honest and give examples of uncertainty in other areas;
- **Address scepticism:** Engage with stakeholders to combat scepticism regarding climate change;
- **Address emotional reaction:** When discussing personal vulnerability, individuals may feel helpless. Encourage them to focus on being part of a collective response to tackle vulnerability.

Follow-up and evaluation of the engagement

- **Maintain contact and feedback:** Try to ensure that all parties receive something from participation in the engagement process by maintaining regular contact with participants;
- **Plan evaluation from the outset:** Set priorities for outcomes and collect data to measure change;
- **Evaluate both process and outcomes:** Evaluate how engagement was done and the achievements;
- **Acknowledge other impacts:** Accept that any measured changes may have many sources apart from the engagement process.

Boxes 16 and 17 below provide experiences from Malawi and Burkina Faso in relation to effectively engaging stakeholders (identification, involvement and inclusion) in the process to formulate and implement NAPs.

Box 16: **Experience on stakeholder engagement by Malawi**

Malawi is a landlocked country located in the southern part of Africa, surrounded by the United Republic of Tanzania, Zambia and Mozambique. Lake Malawi takes up 20% of the country's territory. The majority of the population lives in rural areas and relies on agriculture for subsistence. The economy of the country largely depends on its natural resources, either land (agriculture), biodiversity (agriculture, forestry, tourism) and/or water (agriculture, fisheries, energy, health). The country has experienced various adverse climatic hazards over the last several decades. The increasing frequency and intensity of droughts and floods is leading to adverse impacts on food and water security, water quality, energy and the sustainable livelihoods of rural communities. In order to minimize future adverse effects of climate change and given the fact that Malawi has a low economic capacity to cope with climate change, it is urgent to plan and implement adaptation interventions.
Malawi launched its process to formulate and implement NAPs in 2014. The core team, consisting of 12 multisectoral members, is spearheading the process and reporting to Malawi's National Climate Change Technical Committee on progress.

Malawi identified several categories of engagement for the process. The three main categories of engagement identified for Malawi are: sectors, stakeholders and levels. Each of these categories can be divided into three subcategories. The three sectors that are engaged in the process to formulate and implement NAPs in Malawi are the environment, economic and social sectors. The stakeholders involved can be classified as belonging to the public sector, private sector or civil society. These stakeholders are engaged at international, national, or subnational/local level.

Malawi realized that it is critical to identify and involve stakeholders across sectors and levels both within and outside of the government. The identified stakeholders can develop a structure for multisectoral participation throughout the entire process. The extensive consultations involved in the stakeholder engagement process can lead to increased public awareness of and political buy-in to climate change science, policy, sustainable development priorities and actions. Furthermore, Malawi's NAP core team established that stakeholder engagement provides a good platform for developing a good governance framework to guide and provide a structure for the NAP.
Malawi conducted a NAP training workshop as part of the NAP launch event in September 2014. This workshop offered an opportunity to plan and develop activities to support long-term adaptation planning. Furthermore, it facilitated the stakeholder dialogue to determine the institutional arrangements for the process to formulate and implement NAPs. One of the objectives of the workshop was also to engage political decision-makers and policymakers at the very start.

Malawi is engaging various stakeholders including development partners such as the National Adaptation Plan Global Support Programme, Global Water Partnership, Deutsche Gesellschaft für Internationale Zusammenarbeit and the United Nations Development Programme. In order to make use of previously acquired knowledge, Malawi is also building on the work of its NAPA teams.
One of the key challenges that have already been identified in undergoing the process to formulate and implement NAPs in Malawi is the current lack of private sector involvement that could increase investments in climate change management.

Relevant documents:

Malawi. 2006. Malawi's National Adaptation Programmes of Action (NAPA). Available at <http://unfccc.int/resource/docs/napa/mwi01.pdf>.

Kossam, F. 2014. "Experiences in Initiating Multi Stakeholder Engagement for the NAP Process in Malawi", presentation at the NAP EXPO 2014, Bonn, 8¬9 August 2014. Available at: <http://unfccc.int/files/adaptation/application/pdf/malawi_fred_kossam_session_3.pdf>.

Box 17: Experience on effectively engaging stakeholders in the formulation of nap by Burkina Faso

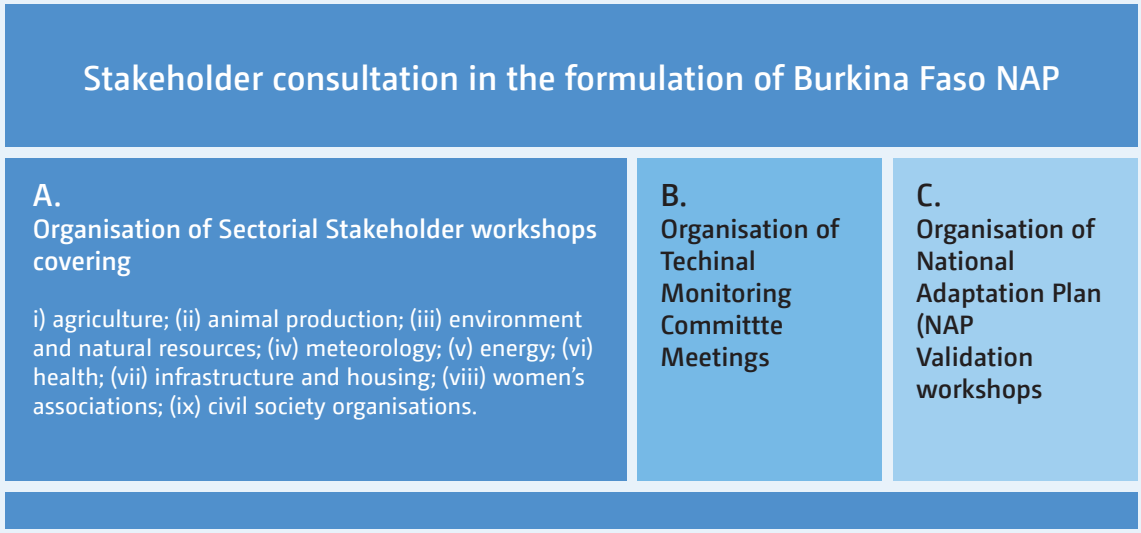
Climate variability is already a major constraint on food security and poverty reduction efforts of Burkina Faso. Droughts, floods, heat waves and dust storms are the major climatic hazards in Burkina Faso, and these contribute to problems such as desertification, land degradation and migration away from the central area. Thus the national government no longer considers adaptation as a choice, but as its only option in the quest for sustainable development and to effectively tackle climate change.

The country initiated the preparation of its NAPA in 2005, which was subsequently completed and endorsed by the government in 2007. Thereafter, the country was able to implement several projects to strengthen its adaptive capacity including early warning systems, with funding from the Least Developed Countries Fund, Denmark, Japan and UNDP. With the experience gained from the NAPA, Burkina Faso recognized that a more comprehensive approach for addressing adaptation is needed. Such an approach would encourage the engagement a wide range of stakeholders and hence facilitate the integration of adaptation into development policies and strategies.

With this background, and taking advantage of the establishment of the process to formulate and implement NAPs under the UNFCCC, Burkina Faso decided to embark on the process and start formulating its NAP. A multidisciplinary team of experts was set up to lead the formulation process. The experts were drawn from various sectors including agriculture, animal production, environment and natural resources, meteorology, energy, health, infrastructure and housing, women associations and civil society organizations.

The multidisciplinary team served as an important stepping stone for the engagement of all stakeholders at the national level. The experts started with a stakeholder and actor mapping exercise, ensuring that all stakeholders and actors from their respective areas are identified, and the right timing and level of engagement is explored. The stakeholders included development stakeholders (State, technical and financial partners, private sector, civil society organizations and the international community), sectoral stakeholders (government ministries, relevant organizations) and beneficiaries (local communities). The engagement of the stakeholders followed two goals: firstly to ensure their involvement throughout the relevant steps of the process and to provide relevant inputs; and secondly to empower the stakeholders by building their knowledge and capacity as a way to garner their commitment for the implementation of relevant actions. These two goals were pursued through various workshops organized at the national level as part of the formulation process.

This participatory and inclusive process gave rise to very helpful inputs from stakeholders. The country acknowledged that the great importance attached to stakeholder consultation is warranted by the very nature of the NAP formulation process, which is predicated on the participation and inclusion of all stakeholders concerned. Furthermore, it was recognized that quality of the monitoring process would be more important than the quality of the document produced due to the fundamental role that stakeholders will play during implementation and subsequent steps.



With this effort most of the development stakeholders have joined hands to combat climate change. With this involvement the formulation of Burkina Faso NAP has emerged as suitable reference framework enabling all stakeholders to pool their efforts with a view to help the country in reducing its structural vulnerability, increase its resilience and manage its development better.

Relevant documents

Burkina Faso. 2015. National Adaptation Plan. Available at <http://www4.unfccc.int/nap/sitepages/SharedNAPs.aspx>.

Burkina Faso. 2007. Programme D'action National D'adaptation a la Variabilite et aux Changements Climatiques (PANA du Burkina Faso). Available at <http://unfccc.int/resource/docs/napa/bfa01f.pdf>.

4.7 ASSESSING AND MANAGING CLIMATE RISK AND VULNERABILITY

FOCUS AREA VII

Assessing and managing climate risk and vulnerability

BEST PRACTICES

- There is no one perfect approach to undertaking climate risk and vulnerability assessments. A NAP will require multiple approaches.
- Chosen methods for assessment should take into account the quality and quantity of available data.
- Undertaking comprehensive climate risk and vulnerability assessments is necessary to be able to design adaptation plans for the medium and long term.
- Explicit consideration of climate change scenarios under the 2 degrees C global warming goal as agreed by the COP is necessary to constrain adaptation assessments given the wide range in results when the assessments use a wide range of global warming goals.
- Assessments are most effective when they involve stakeholders and multiple experts.

LESSONS LEARNED

- The process to formulate and implement NAPs provides opportunities to improve the use of climate information and research for evidence-based decision-making.
- Usually it should not matter how the vulnerability and risk assessments are undertaken; the different approaches in terms of how sectors and systems are broken down usually lead to the same outcome upon aggregation of results.
- Systematic observations and monitoring of different variables as well as outcomes from different interventions are useful inputs for assessments and require investment over the long-term.

FURTHER READING

NAP Technical Guidelines

- Step B.1: Analysing current climate and future climate change scenarios, pp xx
- Step B.2: Assessing climate vulnerabilities and identifying adaptation options at the sector, subnational, national and other appropriate levels, pp xx–yy
- Step B.3: Reviewing and appraising adaptation options

Other resources

- Definition of core set of 27 descriptive climate indices, http://www.climdex.org/indices.html

CASE STUDIES

- Experience on assessing climate vulnerability by Lesotho
- Experience on climate risk assessment by The Philippines

There is no one perfect approach to undertaking climate risk and vulnerability assessments. A NAP will require multiple approaches.

A country will most probably apply a range of assessment approaches that are not necessarily exclusive. These assessment approaches focus on different aspects such as hazards, risk management or vulnerability.[19] The World Meteorological Organization (WMO) defined a core set of 27 descriptive indices that can help when undertaking the climate risk assessment.[20]

Chosen methods for assessment should take into account the quality and quantity of available data.

There are many different approaches of vulnerability and risk assessments. The approaches each country may use will vary depending on factors such as major climate hazards the country is dealing with and the existing knowledge on impacts, vulnerabilities and risks. Furthermore, the level which has been identified in the framework and strategy, which determines whether a national assessment approach should be taken or whether issues should be assessed by sector or at subnational level, may influence the assessment approach.

Undertaking comprehensive climate risk and vulnerability assessments is necessary to be able to design adaptation plans for the medium and long term.

19 Fünfgeld, H. and McEvoy, D. 2011. "Framing Climate Change Adaptation in Policy and Practice". Working Paper 1. Melbourne, Victoria Centre for Climate Change Adaptation Research. Available at <http://climateaccess.org/sites/default/files/Funfgeld_Framing%20Climate%20%Adaptation%20in%20Policy%20and%20Practice.pdf>.

20 Klein Tank, A. M. G., Zwiers, F.W. and Zhang, X. 2009. Guidelines on Analysis of Extremes in a Changing Climate in Support of Informed Decision-making for Adaptation", Climate Data and Monitoring WCDMP-No. 72, WMO-TD No. 1500 Geneva, Switzerland, World Meteorological Organization. Available at <http://www.wmo.int/datastat/documents/WCDMP_72_TD_1500_en_1_1.pdf>.

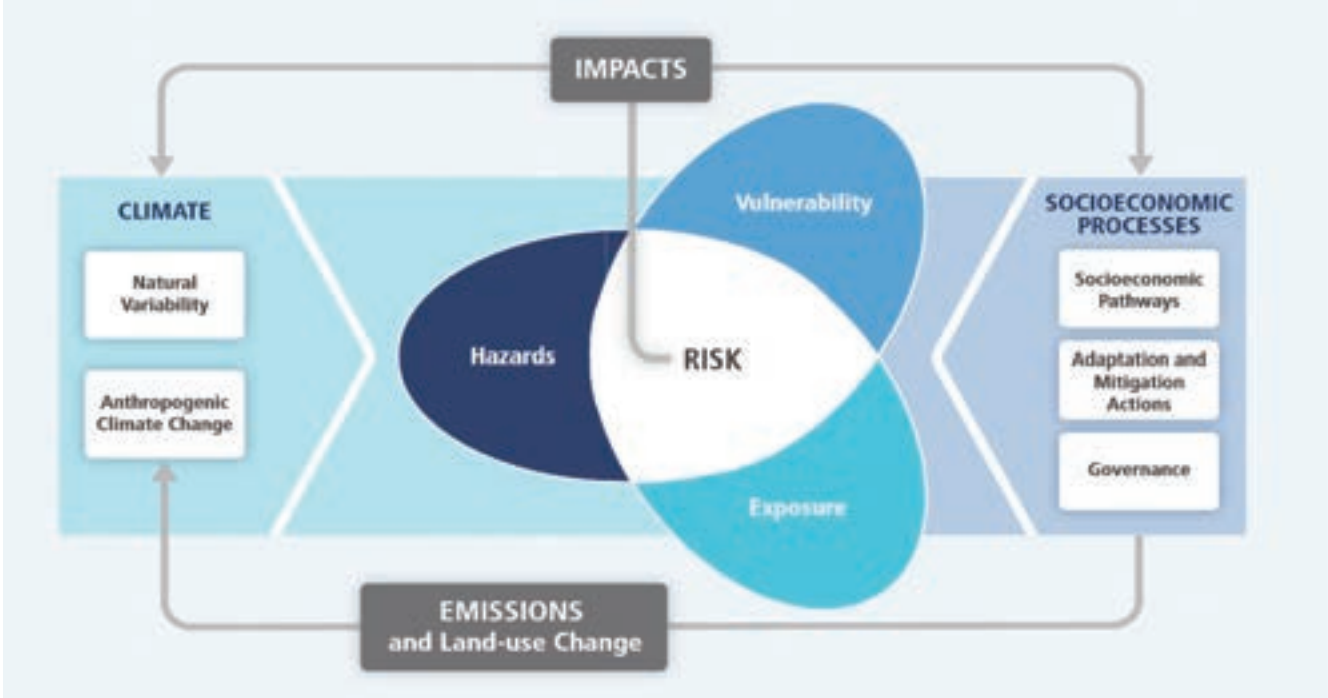
The process to formulate and implement NAPs requires comprehensive climate risk and vulnerability assessments. Some of the assessments undertaken by countries thus far are of a general nature and there is a need for more detailed assessments by region or sector, etc. Risk frameworks can be used in various sectors and the general methodology is common, even though application in specific areas or sectors requires context-specific data and variables.

Explicit consideration of climate change scenarios under the 2 degrees C global warming goal as agreed by the COP is necessary to constrain adaptation assessments given the highly varying results when the assessments use a wide range of global warming goals.

The process to formulate and implement NAPs provides opportunities to improve the use of climate information and research for evidence-based decision-making and to encourage institutions to manage adaptively in the context of uncertainty. In this context it is important to recognize that information other than scientific information on climate change needs to be collected to conduct climate risk and vulnerability assessments, for example information on local and traditional knowledge on disaster management and socioeconomic data.

Risks of climate-related impacts result from the interaction of climate-related hazards (e.g. hurricanes, storms, droughts and heat waves) with the exposure and vulnerability of human and natural systems. Changes within the climate system (natural variability and anthropogenic climate change) as well as within socioeconomic processes such as adaptation and mitigation are drivers of hazards, exposure and vulnerability (see Figure 10). While undergoing the process to formulate and implement NAPs, countries are encouraged to undertake an in-depth vulnerability and risk assessment in order to classify the risks and identify possible ways of managing these.

Figure 3: Risk of climate related impacts[21]



One of the most critical steps in adaptation planning and implementation is to understand the risks and vulnerabilities that have been identified. In order to get a better understanding, the risks and vulnerabilities could be ranked with respect to their threats or impacts. Subsequently this ranking could inform what kind of actions need to be taken. The ranking of risks could be a consultative process.

Building on the ranking of risks, the most appropriate adaptation strategy that is in line with national goals for sustainable development has to be identified. The appraisal of different adaptation options has to consider several factors such as timing, cost, co-benefits, efficiency and flexibility or robustness. There are many different frameworks for vulnerability assessments and risk management and the appraisal of adaptation options available. It is important to note, however, that the results from these assessments usually do not differ significantly and arrive at the same conclusions.

Assessments are most effective when they involve stakeholders and multiple experts.

While a vulnerability and adaptation assessment can be completed without the extensive analysis of climate data and scenarios, the analysis of climate data provides a scientific, quantitative basis for identifying how the climate is changing. Therefore the interaction between science and policy is crucial for effective decision-making. It is recommended to use climate scenarios when developing medium and long-term plans to manage the risks and vulnerabilities.

In order to prepare for future vulnerability and risk assessments, it is advisable to create a good knowledge base on observed impacts and vulnerabilities. A country may want to select its preferred way of synthesizing such data as it is dependent on criteria such as feasibility, availability, costs and expected benefits. Such knowledge bases could also include an inventory of adaptation options.

21 Intergovernmental Panel on Climate Change. 2014. "Summary for policymakers" in *Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change.* Cambridge: Cambridge University Press.

The process to formulate and implement NAPs provides opportunities to improve the use of climate information and research for evidence-based decision-making.

In the formulation of NAPs, scientific information on climate change needs to be collected to conduct risk and vulnerability assessments. This is one of the most important elements of the process to formulate and implement NAPs. Since the NAP decisions are very much dependent on the scale as well as precision of available information, this leads to fine tuning and scaling down of the climate information which will help in better decision making. To bring the information closer to reality for more effective decisions as well as to improve the quality of information in the ground, research and corroboration of scientific as well as local and traditional knowledge from the communities are also undertaken.

Usually it should not matter how the vulnerability and risk assessments are undertaken; the different approaches in terms of how sectors and systems are broken down usually lead to the same outcome upon aggregation of results.

There are two ways to approach assessments in terms of how to include sectors. Taking a cross-sectoral approach as the entry point, cross-cutting themes are addressed, and down the road, the issues are broken down into manageable modules by sector, to facilitate analysis and exploration of adaptation options. Implementation of the cross-cutting projects is also assigned to individual sectoral ministries. On the other hand, when taking a multi-sectoral approach, at some point, crosscutting issues will emerge, and these would need to be considered in a cross-sectoral manner. Using the development-centered approach being developed by the LEG, the two different entry points eventually lead to similar collection of systems to be analyzed and assessed, when a systems approach is used. The aggregation is governed by the underlying relationships in the issues, and not the design of the work.

Systematic observations and monitoring of different variables as well as outcomes from different interventions are useful inputs for assessments and require investment over the long-term.

One of the support needs for the least developed countries to undertake the process to formulate and implement NAPs was the design of research and systematic observations to support vulnerability and risk analysis and adaptation planning.

This will involve ensuring adequate infrastructure and capacity for: collection and compilation of data and information; quality control and processing; maintaining update database to meeting various national contexts; requisite tools and capacity for the analysis and visualization of data and information and for the generation of different user products; and ways to facilitate the application of data in various planning and implementation activities.

Box 18: **Example on how to conduct climate risk and vulnerability assessment[22]**

Conducting a rigorous and comprehensive climate risk and vulnerability assessment is critical in the adaptation planning process. It is necessary to analyse hazards, exposure and vulnerability for comprehensive risk assessment and management. Hazards can be defined as a situation that poses a threat; exposure is the presence of people and assets in places that could be adversely affected, and vulnerability is the propensity to be adversely affected.

Hazards

In line with the Copenhagen Accord, when analysing climate hazards the global target of staying below a 2 °C increase in global temperature should be used as an entry point for the assessment. However, the 2 °C target needs to be translated into the national context as most land areas are projected to warm more than the targeted 2 °C global mean. Furthermore, it has to be taken into consideration that hazards are also specific to regions. For example coastal regions face very different hazards than arid or polar regions. A hazard assessment requires place-based information on historic and future climate conditions. Time frames used for this assessment should be medium and long-term. One possibility to assess climate hazards is to determine the WMO core set of 27 descriptive indices such as maximum and minimum temperatures. This has been done for the Pacific as part of the Pacific-Australia Climate Change Science and Adaptation Planning (PACCSAP) programme. The PACCSAP programme is helping communities across the Pacific region gain a better understanding and respond better to the impacts of climate change. A comprehensive assessment of the climate hazards is crucial for an enhanced understanding of the future dynamics of extreme weather events in order to make good adaptation decisions.

Exposure

There are two main elements that need to be considered when analysing exposure: things that can be adversely affected by climate change such as people, livelihoods and assets, and the hazards that are threatening these things such as storms, floods and heatwaves. Exposure has two main dimensions: temporal and spatial. The temporal dimension can be short-term, such as day and night dynamics, whereas the long-term dimension of exposure can be influenced by migration and development. The spatial dimension can be local or regional. For example, at local level exposure can be influenced by urban heat islands or areas with increased flood risk. Regional effects of exposure could be influenced by heat waves or droughts that could have an impact on food security and thus even affect other locations indirectly. Sources of knowledge to measure exposure could be census and geospatial data as well as disaster planning information. Possible tools to measure exposure are GPS, remote sensing, geographic information system (GIS) and mapping. Lesotho conducted a detailed vulnerability assessment in three regions of the country, using GIS mapping as a tool to depict exposure and identify vulnerable areas.

Vulnerability

Vulnerability is a result of a broad range of factors such as location, sensitivity, and diverse historical, social, economic, political, cultural, institutional, natural resource and environmental conditions and processes. Collectively, these factors influence the likelihood of loss and damage in the event of exposure to a hazard. There are numerous conditions that can limit the capacity to plan and implement adaptation measures, which, as a result, increase vulnerability. Examples of these include lacks of information, good governance, human capacity and financial resources.

Sources of knowledge for vulnerability assessments could be traditional and local knowledge, financial and economic analyses, ethnographic studies and governance indicators. Possible tools for undertaking vulnerability analyses are vulnerability indices, socioeconomic scenarios, stakeholder interviews and literature reviews. Lesotho and the United Republic of Tanzania have already undertaken or are currently undertaking vulnerability assessments as part of their adaptation plan process.

22 Lavell, A., Oppenheimer, M., Diop, C., Hess, J., Lempert, R., Li, J., Muir-Wood, R., and Myeong, S. 2012. *Climate change: new dimensions in disaster risk, exposure, vulnerability, and resilience. In: Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation* [Field, C.B., Barros, V., Stocker, T.F., Qin, D., Dokken, D.J., Ebi, K.L., Mastrandrea, M.D., Mach, K.J., Plattner, G.-K., Allen, S.K., Tignor, M., and Midgley, P.M. (eds.)]. A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change (IPCC). Cambridge University Press, Cambridge, UK, and New York, NY, USA, pp. 25-64. Available at: <http://www.ipcc.ch/pdf/special-reports/srex/SREX-Chap1_FINAL.pdf>.

Box 19: **Example - The United Kingdom met office climate impacts risk assessment framework[23]**

The Climate Impacts Risk Assessment Framework (CIRF) was developed by the United Kingdom's Met Office to analyse weather and climatic changes in order to adapt to those. It is tailored to specific geographical areas and takes issues into account that are relevant to individual organizations and systems. The CIRF process consists of seven steps:

1. Identify the needs, objectives and extent of the project, including the required outcomes and expectations;
2. Explore how available data sets can meet the key requirements;
3. Assess existing risks due to the current weather and climate;
4. Assess in detail how the key risks identified in step 1 are likely to change in the future;
5. Work with the customer to explore suitable adaptation options associated with the key risks;
6. Communicate clearly the project results and outcomes;
7. Review that the assessment has met the customers' requirements, and identify future steps to be taken.

23 MetOffice. 2010. Prepare: Understand Your Weather and Climate-related Risks Exeter, Met Office. Available at: <http://www.metoffice.gov.uk/media/pdf/2/j/cirf-datasheet.pdf>.

Boxes 20 and 21 below provide experiences from Lesotho and United Kingdom in assessing risks and vulnerabilities.

Box 20: **Experince on climate vulnerability assessment by Lesotho**

Lesotho's medium- and long-term development goals are focused on fulfilling the pronouncements made in its National Vision 2020, reducing poverty and achieving sustainable development. Primary pillars of the economy as identified in the National Strategic Development Plan 2012/13-2016/17 (NSDP) include agriculture, manufacturing, mining, water resources and an abundant, literate and regionally competitive labour force. Key climate change threats are changing rainfall patters, more frequent and prolonged droughts, floods, increasing temperatures and strong winds. The country is particularly vulnerable to the impacts of climate change owing to multiple factors such as low economy base, reliance on rainfed agriculture, fragile mountainous ecosystem constituting 70% of the country, droughts and desertification.

Following ratification of the UNFCCC in 1995, Lesotho established a national programme of action on climate change (NAPCC) to initiate national policy and actions on climate change. Since then, Lesotho has executed various activities such as preparation of national communications, preparation and implementation NAPA, assessments related to technology and national capacity, and implementation of various programmes on strengthening institutional arrangements, education and public awareness.

Building on the findings from the initial work undertaken through preparation of national communications and the NAPA, Lesotho commissioned in-depth climate risk and vulnerability assessments at three community councils (namely Qibing in the western, Tosing in the southern and Linakaneng in the northern parts of the country) to set the stage for future proactive adaptation. The goal was to enable the local communities to better prepare for the impacts identified in previous studies, by developing detailed climate risk and vulnerability maps in key sectors: agriculture, water resources, livestock, forests, and relevant socio-economic data for the community councils.

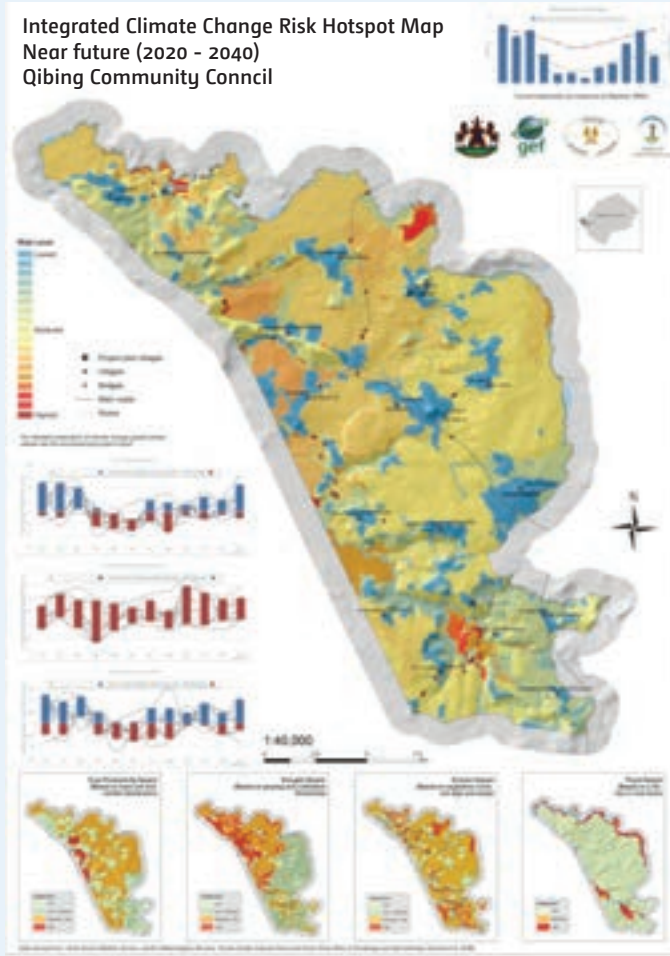
The methodology involved use of various models and data, and the engagement of stakeholders. The models were used to generate hazard maps for soil erosion, droughts, floods, heat units, and crop yield. For soil erosion the main variable was the erosion potential computed as a product of vegetation cover, slope, soil type and land use. The drought and heat units hazard maps were generated using gridded climate data from observations and model forecasts, calibrated to the specific altitude. The climate data was also used as input for the evaluation of crop suitability and yield potential using various climate and crop models. The hazard mapping was then followed by an integrated hotspot mapping based on the different input layers to determine the overall combined risk (calculated as a function of vulnerability and hazards). A graduated colour scale (on a scale of 0 to 3, with 0 being "no vulnerability" and 3 being "high vulnerability") was then used to demarcate risks over the community councils. Stakeholders from community leadership and district level authorities were engaged throughout the process with the aim to create awareness on climate change and adaptation, and to get them to apply the results of the vulnerability mapping in their planning. One of the key findings from the study was that cultivated areas are facing the highest risks to floods, drought

and soil erosion as compared to other land used types (settlements, rangelands, forests, industrial land and rivers). Figure xx shows the worst case projection of climate change hotspot vulnerability mapping for Qibing Community Council for the period the 2020–2040.

The outcomes of the vulnerability mapping were used to generate a toolkit to be used for planning, implementation, and management and training purposes. The toolkit consists of vulnerability mapping report providing background, methodology and findings; downscaled climate change projections; metadata on all maps generated for the project; and a geographic information system.

The country is planning to extend the mapping to cover the whole country. This would be a critical building-block for the process to formulate and implement NAPs which was launched in August 2015. This would also be responding to one of the key priorities identified in the Lesotho NAPA in order to enable medium- and long-term adaptation.

Figure 4: Lesotho Qibing Community Council projected climate change hotspot vulnerability map for the 2020-2040 Period (worst case projection)



Source: Lesotho Ministry of Energy, Meteorology and Water Affairs, 2015. *Vulnerability Mapping, Qibing Community Council – For the Improvement of Early Warning Systems to Reduce Impacts of Climate Change and Capacity Building to Integrate Climate Change into Development Plans.*

Relevant documents:

Lesotho. 2007. *National Adaptation Programme of Action (NAPA) on Climate Change under the United Nations Framework Convention on Climate Change.* Available at <http://unfccc.int/resource/docs/napa/lso01.pdf>.

Lesotho. 2012. *National Strategic Development Plan 2012/13 – 2016/17 - Growth and Development Strategic Framework.* Government of Lesotho.

Box 21: Experince on assessing climate risk and vulnerability in the Philippines

The Philippines is one of the most vulnerable countries to the impacts of climate change and natural hazards. Climate change and natural hazards are impacting on strategically important sectors for the growth of the economy such as agriculture, fisheries, and water resource management. In order to respond to these challenges, the government of Philippines enacted a Climate Change Act in 2009. The act established the National Climate Change Commission, with tasks including the development and coordination of the Framework Strategy and Program on Climate Change and the National Climate Change Action Plan.
In April 2012 the Climate Change Commission (NCCC) initiated a project entitled "Project Climate Twin Phoenix" with the support of the United Nations Development Programme and the Australian Government. The was the first stage of a more comprehensive and long term capacity development program for cities and municipalities, addressing both risks from climate change and other related natural hazards.

Through the project, Philippines generated high resolution flood hazard maps for different rainfall scenarios, showing, among other parameters, the extent of flooded area, depth of flood waters and period of flooding. The flood hazard maps provide a visualization of future flood events using data gathered from high resolution data from satellite imageries and remote sensing and validated by field surveys and river measurements and characterization. These climate adjusted flood hazard maps initially produced for select cities, along with refined climate projections were used as basis for the analysis of projected increases of rainfall on flooding (sample flood inundation map in figure x below).

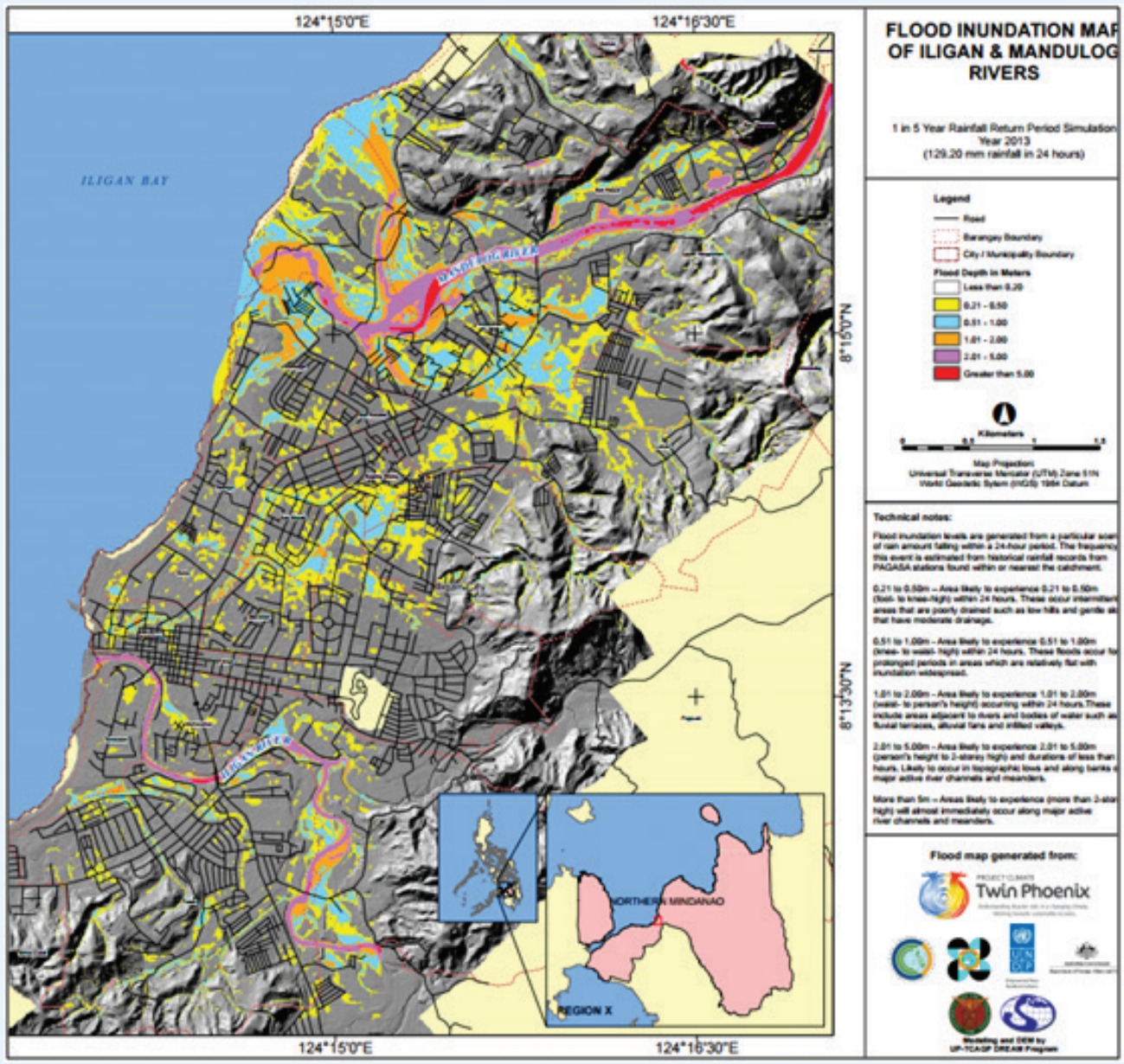
The preparation of the climate-adjusted flood hazard maps attempted for Cagayan de Oro and Iligan City covers the analysis of four river basins, namely, Cagayan de Oro (CDO), Iponan, Iligan and Mandulog. These outputs were achieved in partnership with climate change commission and technical experts from the University of Philippines-Training center on Applied Geodesy and Phogrammetry. Data generated under Project Climate Twin Phoenix such as the climate-adjusted flood hazard maps, vulnerability and risk maps, the exposure data and secondary data will be uploaded in the Climate change and Disaster Risk Information System for Planning (CRISP), a web based information management platform. Along with this rain induced land slide maps, storm surge and severe wind maps were also generated for some municipalities

The preparation of the climate-adjusted flood hazard maps used the integrated river basin approach by including water from upstream in modeling riverine flooding. In particular, the methodology involved watershed rainfall-runoff modeling, the results of which were used as inputs to flood modeling. The watershed rainfall-runoff modeling analyzes the relationship among land use, land cover, soil conditions, and watershed management conditions. These are the factors that will be used to generate information on total rainfall runoff from the watershed. Climate change was considered with simulations of the rainfall return periods applied on predicted land cover changes and respective rainfall-runoff for years 2013, 2020, and 2050.The major step in flood modeling is characterizing the rivers through several surveys. These river measurements are inputs to the flood model, along with setting of boundary conditions and other parameters.

The modeling initiatives are backed by solid field data gathering and validation and used state-of-the art high resolution data from satellite imageries and remote sensing. The watershed rainfall-runoff model will be used to determine the effects of various land cover conditions on rainfall runoff behavior for return periods of 5, 25, 50, and 100 year rainfall events. The results for 2030 were utilized for establishing the trend in land cover changes. The study utilized actual rainfall data collected from April to May, and June to July 2013, and hypothetical rainfall data based on the 24-hour rainfall intensity duration frequency (RIDF) curves from Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA). Return periods (or recurrence intervals) of 5, 25, 50 and 100 years were used to create hypothetical events with a 12-hour duration rainfall event and a maximum intensity while on the 50 percent of the duration, i.e., on the 6th hour. Changes in peak flows were examined for the years 2013, 2020, and 2050.

In the wake of increasing severity of flooding events, the need to plan and manage the consequences has now become a major imperative. While the usual response to go for capital investments, such as construction of dams and elevating of man-made structures, the flood modeling approach of Philippines highlights instead the need to restore rivers themselves and concentrate on building the capacities of the communities to manage their risks to flooding. This initiative of hazard mapping and vulnerability assessment will serve as valuable input for governments to mainstream climate change adaptation into land use planning and zoning, especially when used for regulating future settlements and devising development activities for the country.

Figure 5: Food Inundation Map of the Iligan & Mandulog Rivers in the Philippines (Source: http://projectclimatetwinphoenix.com)



Relevant documents and links:

Philippines. 2010. *National Climate Change Action Plan 2011-28*. Climate Change Commission.

Philippines. (2009). *Republic Act No. 9729: An Act Mainstreaming Climate Change into Government Policy Formulations, Establishing The Framework Strategy And Program on Climate Change, Creating for this Purpose The Climate Change Commission, and for Other Purposes*. Government of the Philippines.

Philippines, Project Climate Twin Phoenix, <http://climate.gov.ph/index.php/projects/adaptation/project-climate-twin-phoenix>

4.8 ADDRESSING CAPACITY GAPS AND NEEDS IN THE PROCESS TO FORMULATE AND IMPLEMENT NAPS

FOCUS AREA VIII

Addressing capacity gaps and needs in the process to formulate and implement national adaptation plans

BEST PRACTICES

- Undertaking gaps and needs assessments is decisive to identify areas of needed support.
- Setting up a monitoring and evaluation system at the beginning is essential to establishing a baseline in adaptation needs against which progress can be measured over time.
- Learning-by-doing is an effective approach to capacity development.
- Capacity-building and development is an ongoing process. Addressing the capacity for all aspects of the NAP process requires a deliberate plan and continuous investment.

LESSONS LEARNED

- The process to formulate and implement NAPs is an ongoing and iterative process that can be implemented through components that can be supported by different sources of funding. Good communication and good working relations with supporting agencies and institutions result in the smoother implementation of projects.
- There are gaps that must be addressed at the beginning of the process to formulate and implement NAPs, while more systemic capacity-building can be designed as part of the process in the longer term.
- Capacity is needed, and it resides in different organizations in the country, including in the private sector and in civil society. The P process should mobilize and utilize all these sources.

FURTHER READING

NAP Technical Guidelines

- Step A.3: Addressing capacity gaps and weaknesses in undertaking the NAP process, pp xx–yy
- Step C.3: Enhancing capacity for planning and implementing adaptation, pp xx–yy

CASE STUDIES

- Experience on enhancing the capacity of government and non-government institutions to implement national climate change policy by Nepal
- Experience on developing capacity by Mozambique

Undertaking gaps and needs assessments is decisive to identify areas of needed support.

The process to formulate and implement NAPs offers the opportunity to bridge the gap between the immediate needs related to current climate change and policy priorities as well as the long-term challenges associated with climate change and socioeconomic development.

Assessing the gaps and needs of the country regarding its ability in undertaking the process to formulate and implement NAPs is a crucial step in order to build capacity and to equip teams and institutions involved in the adaptation process with necessary skills. Gaps and needs can be of a financial or technical nature. There are a number of bodies under the Convention, United Nations organizations, multilateral, intergovernmental and other international and regional organizations, operating entities of the financial mechanisms of the Convention and private sector companies that offer support. Boxes 21 and 22 provide examples of possible sources for technical and financial support.

Technical support for the process to formulate and implement NAPs could be to provide tools for the stocktaking exercise, organize training workshops on various NAP-related topics such as vulnerability assessments and adaptation planning, the collection of climate data and development of scenarios, and the introduction of early warning systems.[24]

Financial support could be the allocation of funding for the organization of training workshops or through projects and programmes such as the Global Climate Change Alliance and the Pilot Programme for Climate Resilience. Budget support can improve the absorptive capacities of developing countries in the light of future increases of financial support for adaptation. Sector-level support can ensure the integration of adaptation into countries' development efforts.

Climate funding offers the opportunity to leverage other development funding. For example, countries can make use of adaptation funds in order to influence food security programmes.

Setting up a monitoring and evaluation system at the beginning is essential to establishing a baseline in adaptation needs against which progress can be measured over time.

Monitoring usually documents experiences and captures lessons learned. This is crucial in order to be able to intervene in processes. The purpose of evaluation or assessment is to identify to which degree the objective or target of an intervention has been reached and why, and whether it could have been done better or more efficiently by using an alternative measure. Only thorough M&E of the adaptation process will result in successful long-term adaptation because it allows for the undertaking of corrective measures and the consideration of lessons learned to apply best practices.

Furthermore, it is also useful to set up a system to monitor support needed and support received to facilitate reporting to the Convention.

Learning by doing is an effective approach to capacity-development.

An M&E system should be introduced in the early stages of the process to improve data collection needed for reporting and facilitate learning-by-doing.

24 More examples on technical support that has been provided by developed country Parties can be found in table 2 of document FCCC/SBI/2014/INF.25.

Capacity-building and development is an ongoing process. Addressing the capacity for all aspects of the process to formulate and implement NAPs requires a deliberate plan and continuous investment.

Identifying potential sources of funding and other forms of support for the formulation and implementation of adaptation activities is important. It is useful to collect these identified sources in a database of support to effectively address the needs.

The process to formulate and implement NAPs is an ongoing and iterative process that can be implemented through components that can be supported by different sources of funding. Good communication and good working relations with supporting agencies and institutions result in the smoother implementation of projects.

Financing or funding of national adaptation plans is a multi-step process and having multiple implementation components. Each component in the elements to formulate a NAP is designed to be flexible and non-prescriptive and is cross cutting in nature. This enables funding of the components at different points of time for implementation of the NAP. This will be largely based on country priorities and also the working relation of the implementing entities and the multiple funding sources including the understanding of their funding modalities, timelines and scale. Thus building the capacities of stakeholders to this direction is vital for better implementation of the projects.

There are gaps that must be addressed at the beginning of the process to formulate and implement NAPs, while more systemic capacity-building can be designed as part of the process in the longer term.

In the process of formulating a NAP it is more important to address gaps at the initial stages and take the process forward. This will help in taking necessary measures to go by the multiple steps successfully in coordination with the stakeholders. For doing this gap filling at the initial stages one should have the flexibilities and should not wait for a full-fledged systemic design to support. This could be developed in detail once the process flow for the NAP has started and could be thought of in the long term.

Capacity is needed, and it resides in different organizations in the country, including in the private sector and in civil society. The process to formulate and implement NAPs should mobilize and utilize all these sources.

Multiple levels of capacities under varied sectors exist in a country and this is distributes among the public sector, private, civil society and many others. Since NAP is a plan developed and implemented at the national level with strong subnational and regional coordination, an articulated approach by tapping the capacities of the different institutions at multiple levels and sectors is vital. Regional workshops and targeted meetings with exchange of experiences from multiples organisations on the elements of NAP could an important strategy to mobilise these capacities.

Box 22: Examples of technical support for the process to formulate and implement national adaption plans

Least Developed Countries Expert Group

The LEG was established by the COP in 2001. The COP requested the LEG to provide technical support and advice to LDCs on NAPAs and the LDC work programme, and to provide technical guidance and support to the process to formulate and implement NAPs. The LEG has provided a range of technical support activities to the process to formulate and implement NAPs, such as the establishment of NAP Central and the organization of regional training workshops to provide information on existing tools and resources.

Adaptation Committee

The overarching objective of the Adaptation Committee (AC) is to promote the implementation of enhanced action on adaptation in a coherent manner under the Convention. The AC established a task force to look at issues related to NAPs. Furthermore, the AC carried out several collaborative activities with the LEG, such as the review of the technical guidelines for the process to formulate and implement NAPs and the applicability of the guidelines to developing country Parties that are not LDCs.

Nairobi work programme

The Nairobi work programme on impacts, vulnerability and adaptation to climate change (NWP) was established in 2005 to facilitate and catalyse the development and dissemination of information and knowledge that would inform and support adaptation policies and practices. The NWP has produced a number of reports and compilations about national adaptation planning that can be used as sources for the process to formulate and implement NAPs.

National Adaptation Plan Global Support Programme

In 2013, UNDP and UNEP launched the NAP-GSP for LDCs. It assists LDCs in advancing the process to formulate and implement NAPs, bringing greater focus and attention to medium and long-term climate change adaptation planning and budgeting. NAP-GSP support is based on three main pillars: institutional support, technical support and knowledge brokering.

Box 23: Examples of funding sources for the process to formulate and implement naps

The Adaptation Fund

The Adaptation Fund was established in 2001 to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. The Fund was established in an effort to reduce the adverse effects of climate change facing communities, countries and sectors.

The Green Climate Fund

In 2010, the GCF was established as an operating entity of the Financial Mechanism of the Convention under Article 11 . The GCF will strive to maximize the impact of its funding for adaptation and mitigation, and seek a balance between the two, while promoting environmental, social, economic and development co-benefits and taking a gender-sensitive approach.

The GCF will support developing countries in pursuing project-based and programmatic approaches in accordance with climate change strategies and plans such as NAPs.
The GCF will provide resources for readiness and preparatory activities and technical assistance, such as the preparation of NAPs and NAPAs, and for in-country institutional strengthening, including the strengthening of capacities for country coordination and to meet fiduciary principles and standards and environmental and social safeguards, in order to enable countries to directly access the Fund.

In allocating resources for adaptation, the Board will take into account the urgent and immediate needs of developing countries that are particularly vulnerable to the adverse effects of climate change, including LDCs, Small Island developing States and African States, using minimum allocation floors for these countries as appropriate. The Board will aim for appropriate geographical balance.

The Least Developed Countries Fund

The Least Developed Countries Fund (LDCF) was created specifically to cater for the needs of LDCs in the Convention. In accordance with decision 1/CP.16, paragraph 11, the LDCF tasks were expanded to provide financial support for the process to formulate and implement NAPs for LDC Parties. The GEF, as an operating entity of the financial mechanism of the Convention, was requested to provide funding to the LDCF to mobilize activities on the preparation of NAPs for the LDC Parties.

The Special Climate Change Fund

The Special Climate Change Fund (SCCF) is a financial mechanism created to support adaptation, technology transfer and mitigation activities in developing countries. In decision 12/CP.18, paragraph 4, the GEF was requested, through the SCCF, to consider how to enable activities for the preparation of the process to formulate and implement NAPs for interested developing country Parties that are not LDCs.

Boxes 24 and 25 below provide examples from Nepal and XXX in relation to addressing capacity gaps and needs in the process to formulate and implement NAPs

Box 24: **Experience on enhancing the capacity of government and non-government institutions to implement national climate change policy by Nepal**

Nepal put in place a Climate Change Policy in 2011 to improve livelihoods by mitigating and adapting to the adverse impacts of climate change, adopting a low-carbon emissions socio-economic development path and supporting and collaborating in the spirits of country's commitments to national and international agreements related to climate change. The policy contains capacity building, peoples' participation and empowerment as one of the key components. It puts forward specific actions with regard to building capacity on climate change at all levels, access to information, ensuring and increasing participation of all stakeholders, implementing local climate change programmes, and outreach.

In 2012, the Government established the Nepal Climate Change Support Programme (NCCSP) with funding from The United Kingdom Department for International Development (7 million pounds) and the European Union (8.6 million euros). The programme was designed to run for a period of four years from January 2012 to December 2015. Part of the objective of the programme was to enhance the capacity of government and non-government institutions to implement the Nepal Climate Change Policy 2011.

To kick start the programme, Nepal conducted detailed capacity needs assessment at the central, regional, district and village levels. At the central level, the assessment involved engagement of relevant government ministries and other institutions and the review of available information from various documents. Of the key documents reviewed is the National Capacity Needs Self-Assessment (NCSA), the outcomes of which included a national capacity strategy and action plan for enhancing human and institutional capacity at different levels. At the regional, district and village levels the assessment focused on existing capacity in terms of delivery of services, with a view to developing a capacity development plan for government and non-government institutions. The assessments pointed towards the need for a long-term vision on climate change, and for building adequate capacity to be able to access and manage multiple forms of climate change finance. It also enabled identification of key considerations under each of the following eight capacity-building dimensions of the programme: leadership, policy and legal framework, mutual accountability mechanisms, public engagement, human resources, financial resources, physical resources and gender and conflict sensitivity.

The following are the core activities related to enhancing the capacity of government and non-government institutions under the NCCSP:

- Support in the formation and operationalization of Climate Change Coordination Committees (CCCCs) at regional (2), district (14), municipality (7) and village (90) levels;
- Development of guidelines and terms of reference for CCCC at different levels (regional, district, municipality and village level) and put into action;
- Support 816 capacity development activities/events related to CCCC including training and training of trainers, policy facilitation, orientation, logistic support and exposure visit for the stakeholders at regional, district, municipality and village levels;

- Support establishment of Local Climate Change Adaptation Funds in the districts;
- Support the local government to engage service providers and private sector and develop incentive mechanisms;
- Support Government in the preparation of climate change strategy (support coordination mechanism at the central level, workshop, orientation, training for district people, incorporation of incentives for private sector in climate change adaptation, fund flow mechanisms developed);
- Support in expansion of the role of Multi-Stakeholder Climate Change Initiatives Coordination Committee (MCCICC) and establishment of Climate Change Adaptation Funds at 14 District Development Committees;
- Develop and implement CCA projects with collaborative approach/model: (training of non-government organizations and the private sector on climate change adaptation, entrepreneurship development, exposure visit, policy incentive, training on equitable benefit sharing, leadership training, training on fiduciary risk, fiduciary risk assessment);
- Support staffing and office set up at central, regional, and district level (19 offices).

The programme also involved the formulation and implementation of 100 local adaptation plans of action (LAPAs) in 14 districts to execute the most urgent and immediate adaptation actions in order to increase the resilience of the climate vulnerable, and poor people of Nepal.

An assessment of the outcomes of the programme on 2014 revealed the following progress on national capacity (these are only on capacity and do not necessarily cover the outcomes of the project activities under the LAPAs):

- There have been noticeable changes in people's livelihoods and project beneficiaries;
- Community members have developed confidence and a sense of security due to their improved knowledge on climate change risks and vulnerabilities and the acquired skills to adapt to climate change;
- Institutional mechanisms are fully functional in the programme areas thus providing a platform for stakeholders to coordinate the implementation of LAPAs;
- District Development Committees have internalized climate change adaptation planning by elevating climate change within their institutional arrangements;
- Local planning process now captures climate change actions;
- Enhanced roles and responsibilities for the MCCICC.

In addition to the NCCSP, the Government of Nepal has implemented other programmes that included components of strengthening the capacity of the country to effectively undertake adaptation planning and implementation. These include, among others, the national adaptation programme of action and the Pilot Programme for Climate Resilience. The NCCSP and these other programmes have laid a solid foundation in terms of capacity building, from which future policies will build on. The government has meanwhile launched the process to formulate and implement national adaptation plans (NAPs) in October 2015, and will build on the established capacity.

Relevant documents and links:

Nepal. 2010. National Adaptation Programme of Action (NAPA) to Climate Change. Available at <http://unfccc.int/resource/docs/napa/npl01.pdf>.

Nepal. 2011. Climate change policy. Government of Nepal

UNDP. 2015. Nepal Climate Change Support Programme. Available at <http://www.np.undp.org/content/nepal/en/home/operations/projects/environment_and_energy/nccsp/home.html> (Accessed 12 November 2015).

Box 25: Experience on strengthening capacity under the pilot program for climate resilience by Mozambique

Mozambique is one of the most vulnerable countries in the world to the impacts of climate change. Increasing temperatures, changing rainfall patterns and rising sea levels all have implications to Mozambique, posing significant challenges to economic development. As a consequence, the Government of Mozambique acknowledged that addressing the impacts of climate change to the country's economy should be a responsibility of all agencies at the national level. It placed the strengthening of institutional and technical capacity at all levels as one of its core strategic objectives on climate change.

Mozambique included strengthening the capacity for climate resilient planning at national, sector and local levels as one of the key objectives under its Pilot Program for Climate Resilience (PPCR). Through the preparation of the Strategic Program for Climate Resilience (SPCR), the government therefore decided on the need to strengthen institutional and technical capacity in order to support the implementation phase. For that, a USD 2.53 million project was put in place to run from 2012 to 2016. The project was designed to strengthen the institutional and technical capacity of the Government of Mozambique to mainstream climate change resilience into key economic sectors and to improve the evidentiary basis for future development policy and planning. It was meant to enable the government in handling the increasingly complex climate change investment portfolio under Strategic Program for Climate Resilience (SPCR) and in delivering necessary policy and institutional reform in a timely manner. It targeted government agencies involved in climate change policy and institutional reform, in particular the Ministry for the Coordination of Environmental Affairs (MICOA) and the Ministry of Planning and Development (MPD). It contained the following components:

- *Policy and institutional reform* - to provide advice on strategy preparation, institutional and policy reform, building around three sub-components: (i) Preparation of the Mozambique Climate Change Strategy, (ii) Preparation of a Climate Change Development Policy Operation, and (iii) Support of policy and institutional reforms at the sector level;
- Knowledge Management and Evidence Building - to allow the Government to take full advantage of lessons learnt from PPCR investments and from implementation of the project objectives, and fill knowledge gaps in a number of important sectors through: (i) Design and implementation support for the SPCRknowledge management system; and (ii) Addressing evidence gaps.

Under this project, the Government of Mozambique has been able to operationalize the national climate change coordinating unit (Unidade das Mudancas Climaticas, UMC) in 2014. The UMC's roles include coordination of the implementation of the National Climate Change Adaptation and Mitigation Strategy (NCCAMS).

Relevant documents:

World Bank. 2012. *Mozambique Climate Change Technical Assistance Project*. Information on project available at <http://www.worldbank.org/projects/P131195/mozambique-climate-change-technical-assistance-project?lang=en> (Accessed 17 November 2015).

ABOUT THE LEAST DEVELOPED COUNTRIES EXPERT GROUP

MANDATE OF THE LEG

The LEG is mandated as follows (decisions 29/CP.7, 4/CP.11, 8/CP.13, 6/CP.16, 5/CP.17, 12/CP.18, and 3/CP.20):

(a) To provide technical guidance and advice on the preparation and on the implementation strategy of NAPAs, including the identification of possible sources of data and its subsequent application and interpretation, upon request by LDC Parties;

(b) To develop a work programme that includes implementation of NAPAs;

(c) To serve in an advisory capacity to the LDCs, for the preparation and strategy for implementation of NAPAs through, inter alia, workshops, upon request by LDC Parties;

(d) To advise on capacity-building needs for the preparation and implementation of NAPAs and to provide recommendations, as appropriate, taking into account the Capacity Development Initiative of the Global Environment Facility and other relevant capacity-building initiatives;

(e) To facilitate the exchange of information and to promote regional synergies, and synergies with other multilateral environment conventions, in the preparation and in the implementation strategy of NAPAs;

(f) To advise on the mainstreaming of NAPAs into regular development planning in the context of national strategies for sustainable development;

(g) To develop a work programme that takes into account the Nairobi work programme;

(h) To provide technical guidance and advice on the revision and update of NAPAs to further improve their quality, to facilitate integration of adaptation actions of LDCs into development planning and to reflect increased adaptation knowledge and changed priorities in the countries, upon request by LDCs;

(i) To provide technical guidance and advice on the identification of medium-and long-term adaptation needs, their integration into development planning and the implementation of identified adaptation activities;

(j) To provide technical guidance and advice on strengthening gender-related considerations and considerations regarding vulnerable communities within LDC Parties;

(k) To provide technical guidance and advice on the implementation of the elements of the LDC work programme other than the preparation and implementation of NAPA that are relevant to the expertise of the LEG.

(l) To provide technical guidance and support to the national adaptation plan process, as appropriate;

(m) To prioritize support for the formulation and implementation of national adaptation plans in carrying out its mandate to support the identification and implementation of medium- and long-term adaptation in least developed countries;

(n) To prepare technical guidelines for the national adaptation plan process, based on the initial guidelines, included in the annex to this decision;

(o) To arrange a review of the above-mentioned technical guidelines and to identify support needs for the process of formulation and implementation of the national adaptation plans;

(p) To invite the Adaptation Committee and other relevant bodies under the Convention to contribute to its work in support of the national adaptation plan process; and to report, as appropriate.

(q) To include information in their reports on how they have responded to the requests made in this decision and on their activities relevant to the national adaptation plan process, as per their respective mandates, and to make recommendations accordingly;

(r) To consider, with the Adaptation Committee and in collaboration with the Green Climate Fund, how to best support developing country Parties in accessing funding from the Green Climate Fund for the process to formulate and implement national adaptation plans, and to report thereon to the Subsidiary Body for Implementation as its forty-second session.

SELECTED LEG PUBLICATIONS

Least Developed Countries Expert Group. 2015. Sourcebook for the process to formulate and implement NAPs. UNFCCC: Bonn, Germany. To be made available at <http://unfccc.int/6110>.

Least Developed Countries Expert Group. 2015. Overview of the process to formulate and implement NAPs and the NAP technical guidelines. UNFCCC: Bonn, Germany. To be made available at <http://unfccc.int/6110>.

Least Developed Countries Expert Group. 2015. A tool for monitoring progress, effectiveness and gaps in the process to formulate and implement national adaptation plans. UNFCCC: Bonn, Germany. To be made available at <http://unfccc.int/6110>.

Least Developed Countries Expert Group. 2015. Regional synergy in addressing adaptation through the national adaptation programmes of action and the national adaptation plan process in least developed countries. UNFCCC: Bonn, Germany. To be made available at <http://unfccc.int/6110>.

Least Developed Countries Expert Group. 2015. Strengthening gender considerations in adaptation planning and implementation in the least developed countries. UNFCCC: Bonn, Germany. To be made available at <http://unfccc.int/6110>.

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Available at <http://unfccc.int/resource/docs/publications/publication_ldc_nap_techguidelines.pdf>.

Least Developed Countries Expert Group. 2012. The national adaptation plan process – a brief overview. FCCC/GEN/283 E, UNFCCC: Bonn, Germany.
Available at <http://unfccc.int/resource/docs/publications/publication_ldc_napp_2013.pdf>.

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