Various approaches to long-term adaptation planning

Adaptation Committee
Summary

Since the adoption of the Paris Agreement in 2015, countries are increasingly developing national long-term adaptation plans and strategies. This paper summarises different approaches to long-term adaptation planning ranging from ecosystem-based adaptation (EBA), community-based adaptation (CBA) approaches, to risk based approaches that countries can use individually or in combination. A long-term approach to adaptation can also facilitate the integration of adaptation into development planning processes and strategies, in a coherent manner within all relevant sectors and at different levels, as appropriate within each country. This paper is produced by the Adaptation Committee as part of its provision of technical support and guidance to the Parties to the UNFCCC with the aim of enhancing long-term adaptation planning and action, and to share information with Parties as they engage in the process to formulate and implement national adaptation plans.
# Table of Contents

INTRODUCTION 4

MAINTREAMING ADAPTATION INTO LONG-TERM DEVELOPMENT PLANNING AND CYCLES 5

CONNECTING SHORT-, MEDIUM- AND LONG-TERM ADAPTATION PLANNING 6

VARIOUS APPROACHES TO LONG-TERM ADAPTATION PLANNING 6
   - Adaptation pathways method 7
   - Ecosystem-based adaptation 7
   - Community-based adaptation 8
   - Livelihood diversification 8
   - Risk-based approach 8

INCREMENTAL VERSUS TRANSFORMATIONAL CHANGE 8

FOLLOWING AN ITERATIVE APPROACH TO LONG-TERM PLANNING 8

THE IMPORTANCE OF EFFECTIVE INSTITUTIONAL ARRANGEMENTS AND STAKEHOLDER ENGAGEMENT 9

CONCLUSION 11
Introduction

Long-term adaptation planning is increasingly receiving attention as a valued approach to enhanced action on adaptation. Since 2015, when the Paris Agreement was adopted, there has been an increase in the number of countries that have developed national long-term adaptation plans and strategies. The 2015 Paris Agreement includes a long-term global temperature goal that aims to keep the increase in global average temperature to well below 2°C above pre-industrial levels. It also calls for pursuing efforts to limit the temperature increase to 1.5°C, because this would significantly reduce the risks and impacts of climate change. Parties also agreed a long-term adaptation goal that aims to enhance adaptive capacity, strengthen resilience and reduce vulnerability to climate change.

Sustainable development needs a long-term vision and planning for transformation. To contribute to sustainable development and to ensure an adequate adaptation response, it is important to integrate adaptation with the Sustainable Development Goals (SDGs), as well as with long-term national development plans. Some countries have already integrated the process to formulate and implement National Adaptation Plans (the NAP process) into sustainable development planning.

Long-term planning refers to planning activities that take into account how climate and other factors are likely to change over future decades. The NAP process plays an important role in the evolution of long-term adaptation planning. Integration of NAPs into national development planning processes and strategies will help reduce vulnerability to the adverse effects of climate change. The NAP process can be useful in facilitating long-term planning, particularly as countries update NAPs periodically. This process enables Parties to identify medium- and long-term adaptation needs, and to develop and implement strategies and programmes to address those needs. It will assist with the integration of the global goal on adaptation, the SDGs, and the achievement of the goal to limit the rise in global average temperature.

There are various approaches to adaptation planning and actions, ranging from ecosystem-based adaptation (EBA), community-based adaptation (CBA) approaches, to risk based approaches that countries can use individually, in combination, or utilize elements of several approaches for a particular situation.

This paper is produced by the Adaptation Committee (AC) as a contribution to the AC’s work on offering technical support and guidance to the Parties on adaptation action. It addresses key topics related to various approaches to long-term adaptation planning with the aim to enhance long-term adaptation planning and action, and to share information with Parties as they engage in the NAP process.

Box 1 - Long-term adaptation planning through the NAP of Burkina Faso

Burkina Faso intends to manage its economic and social development more efficiently by implementing planning mechanisms and measures taking account of resilience and adaptation to climate change between now and 2050.

The long-term adaptation objectives based on that vision are to:
- Protect accelerated growth pillars;
- Ensure sustainable food and nutrition security;
- Preserve water resources and improve access to sanitation;
- Protect persons and goods from extreme climatic events and natural disasters;
- Protect and improve the functioning of natural ecosystems; and
- Protect and improve public health.

Burkina Faso’s NAP paid special attention to institutional, technical and financial aspects and the need for capacity. Experts at the University of Ouagadougou, with some external support, prepared climate forecasts for the country up to 2100 and evaluated the vulnerability of various development sectors in the long-term.

Source:
Burkina Faso’s NAP Available at https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx.
Mainstreaming adaptation into long-term development planning and cycles

It is beneficial for countries to integrate long-term adaptation planning into development planning. Such integration offers development benefits in the short-term while reducing vulnerability in the longer term. This is already happening in many developing countries. An example of a NAP that clearly elaborates its long-term perspective and links to development is that of Burkina Faso, described in Box 1.

The Least Developed Countries Expert Group (LEG) has focussed on the link between adaptation and development planning. Through its work supporting the adaptation efforts of developing countries, the LEG is advancing country-driven approaches to adaptation that integrate adaptation and development planning. The group has developed the NAP-SDG iFrame which is a methodology to help countries manage the synergy between sustainable development and adaptation goals. One of the activities under the NAP-SDG iFrame focuses on supporting the monitoring and evaluation of SDGs and adaptation concurrently. It can be also used to select adaptation priorities based on a combination of SDGs and climate risk factors. For example, adaptation strategies on food security can include aspects like crop production, distribution, affordability, strategic food reserves over time, as well as nutritional value.

The process of mainstreaming adaptation efforts into development strategies requires aligning adaptation with existing programme budgets at

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Box 2 - Mainstreaming at the national level in Fiji and Canada

Fiji’s NDC identified that development and climate change are inseparably linked. This link is important in enabling a full understanding of the impacts of climate change on development. Mainstreaming, as a theme, is evident in five of the six key challenges identified, and their associated solutions:

- There is a need to develop an integrated approach that includes establishing, reviewing and developing national platforms, strategic plans and management arrangements relating to climate change and disaster risk management;
- The development of a Local Government Self-Assessment tool for Climate Change Resilience and a review of town-plan regulations can help strengthen the role of local governments in building resilience;
- There is a range of activities that can improve understanding of the impacts of climate change to better plan for long-term development. This includes mainstreaming cost-benefit analysis into decision making processes, encouraging collaboration with development partners and tertiary institutions in conducting research on priority areas, and developing hazard maps and models;
- To ensure that adaptation becomes part of national and sub national development and budgetary planning, Fiji will integrate climate change and disaster risk reduction into the National Development Plan.

Source: Fiji’s First NDC. Available at: http://www4.unfccc.int/ndcregistry/pages/Party.aspx?party=FJl.

British Columbia is mainstreaming adaptation into planning through cooperation with local governments, indigenous peoples, NGOs and the private sector. The process also helps inform Canada’s more recent national climate change strategy, the Pan-Canadian Framework on Clean Growth and Climate Change. Three principles of British Columbia’s vision for climate resilience that facilitate mainstreaming are:

1. Build a strong foundation of knowledge and tools to help public and private decision-makers prepare for a changing climate. Actions include: engaging in climate science, building robust, cross-ministerial long-term climate monitoring programmes, and developing adaptation tools for a broad range of decision-makers;
2. Make adaptation a part of the Government of British Columbia’s business aims to ensure that climate change impacts are considered in planning and decision-making across government. Actions include incorporating adaptation in Ministry Service Plans and business planning, the integration of adaptation into government policies, regulations and legislation, and strengthening cross-government coordination to share experiences;
3. Assess risks and implement priority adaptation actions in key climate sensitive sectors. Actions include establishing Sector Working Groups with stakeholder co-chairs and input from social and natural sciences, and updating government policies, strategies and operational activities to ensure delivery of objectives.

national, subnational and sectoral levels (Figure 1). A good entry point for integrating adaptation measures into budgets may be the point at which strategies are up for review or revisions. There should also be a broad understanding of the whole political system, as it drives the linkages between planning and financing.¹

More than half of the countries that have submitted nationally determined contributions (NDCs) have also mainstreamed adaptation into sectoral development plans and/or various levels of governance (for examples, see Box 2). Analysis of the NDCs shows that initiatives such as changes to insurance structures, building codes, relocation, and urban planning have included long-term adaptation in their plans. Many developing country Parties (including Bangladesh, Costa Rica, Ghana, Guatemala, Indonesia, Jamaica, Malaysia, Namibia, Peru, Rwanda, Uganda, and Vietnam) also mentioned their intention to integrate adaptation with disaster risk reduction (DRR). A number of Parties (including Bahrain, Belize, Cambodia, Central African Republic, Guatemala, Honduras, Marshall Islands, Mongolia, Niger, Saudi Arabia, and the United Arab Emirates) focussed on adaptation initiatives that have mitigation co-benefits.

Connecting short-, medium- and long-term adaptation planning

There are important connections between short-, medium- and long-term adaptation planning and implementation. The NAP process, for example, builds upon the achievements and lessons learned from the national adaptation programmes of action (NAPAs), which focussed on urgent and immediate needs. It also builds upon existing institutional arrangements and capacity of countries.

Countries can integrate adaptation into national planning through the NAP process. Furthermore, the process to formulate and implement NAPs should be based on the best available data and science, and it is critical that such data is available to all countries through both relevant internal and international support processes. Adaptation can become more about transformational change when considering longer-term climate scenarios and building enhanced resilience. It can also extend beyond political cycles to become part of the way that communities operate. Box 3 below illustrates the different timescales and how they are connected in adaptation planning.

Various approaches to long-term adaptation planning

There is no one-size-fits-all solution to adapt to the adverse impacts of climate change in

the long term. Countries need to identify the optimal combination of approaches and methods. These include the adaptation pathways method, ecosystem-based adaptation (EBA), community-based adaptation (CBA), livelihoods and economic diversification as well as risk-based approaches. Such approaches can complement one another, allowing for synergy in enhancing resilience.

**Adaptation pathways method**

The adaptation pathways method shows a chain of actions over time to ensure the system adapts to the changing social, environmental and economic conditions. It is useful to build flexibility into an adaptation strategy. This approach prioritizes the management of existing risks. It then develops a set of long-term adaptation pathways from which to choose. Expert judgement, stakeholder consultation, and models can assist in identifying the pathways. A UK study, for example, used an adaptation pathways approach to respond to the increasing risk of heatwaves and mortality in London due to the effects of climate change and urban heat islands. Pathways that represented an array of adaptive strategies were selected. Each pathway had a clear portfolio of action and was to inform the planning process. Finally, the study used an impact assessment model, to evaluate the effectiveness of the different pathways and demonstrate to decision makers how climate risk could be managed. Examples of pathways (of the twelve described in the article) include: “urban greening” and “air-conditioning-100% uptake”, both of which included similar actions (increasing green roof areas, upgrading buildings, increasing the green space area and installing residential air-conditioning).⁶

**Ecosystem-based adaptation**

EBA is a nature-based solution that uses ecosystem services to reduce vulnerability and help people adapt to the impacts of climate change. EBA responds to the needs...
of the people primarily dependent on natural resources, and therefore directly affected by climate change impacts. The approach involves a range of stakeholders, aligns their needs to planning outcomes and forges partnerships for implementation.

**Community-based adaptation**

CBA emphasizes the importance of engaging local communities, especially vulnerable groups and people, in the adaptation process. CBA is in part a response to criticisms that previous adaptation policies were carried out in a top-down manner, without hearing about the priorities, needs, existing knowledge and capacity of people who are in the community and recipient of the benefits of adaptation action. Inclusion of the local community is critical in both EBA and CBA, and participatory approaches are a common element of both methods.

**Livelihood diversification**

Livelihood diversification is most applicable at community and household level. Its goal is to create an environment that enables people to shift to additional sources of incomes while maintaining a certain level of living quality. Providing a set of options is vital, given the bottom-up nature of the approach. Economic diversification aligns best with regional and national policy-making processes. Strong ownership of planning and strategy, inclusion of women, and inclusiveness of NAPs can assist economic growth and increase the income of vulnerable people.

**Risk-based approach**

The risk-based approach provides a common framework to analyze climate change risk and vulnerability. It focuses on reducing the identified risk and vulnerability. A risk-based approach includes four steps:

1. Identification of relevant risks;
2. Characterization of those risks;
3. Selection of policy options to address the risks;
4. Feedback to respond to developing risks.

There is a range of uncertainties around future risk scenarios and adaptation planning. Risk management is a commonly used strategy for long-term adaptation planning under such uncertainties.

There are several issues that arise in using the various adaptation approaches at the national scale. These include: lack of standardized tools and guidelines for tracking progress and assessing the outcomes; time needed to transform existing national, social and economic systems into climate resilient ones; support from the highest political level; inclusion of all stakeholders; endorsement from finance and planning ministries; and coordination between regional and national governments.

**Incremental versus transformational change**

There is an increasing interest to refer to “transformation” in the context of adaptation. Transformation addresses a need for greater, more profound adaptation responses to climate change. In contrast to incremental adaptation, which refers more to small improvements or changes, usually in the short term, transformational adaptation focuses on the future and long-term change. However, there is no common understanding, nor common definition, of what transformational adaptation is.

**Box 4 - Transformation and learning in Brazil’s NAP**

Brazil’s NAP is presented in two parts: Part 1 presents the “General Strategy”, focusing on a legal framework, objectives and governance. Part 2 presents “Sectoral and Thematic Strategies”.

The “General Strategy” focuses on the systemic nature of adaptation approaches as well as responses and adaptation measures. Thus, the NAP will use scientific evidence and practices that will assist in improving the essential actions for effective adaptation.

One of its important themes is to integrate climate-risk management into planning and management instruments for the drafting and review of public policies. It will be done based on technical, scientific and traditional knowledge. This approach paves the way for transformational change as a focus is placed on methods, tools and structures to bring about adaptation, such as the development of indices and long-term vulnerability indicators.

*Source: Brazil’s NAP. 2016. Available at https://www4.unfccc.int/sites/NAPC/Pages/national-adaptation-plans.aspx.*
Nevertheless, the concept of transformational change as a product of longer-term adaptation planning and implementation does seem to be broadly supported (for examples, see Box 4).

**Following an iterative approach to long-term planning**

There are uncertainties in the prediction of climate change impacts in many areas. Long-term adaptation planning needs to be flexible enough to allow the best use of data as it becomes available. Monitoring, review and evaluation are important aspects of iterative adaptation planning. A 2015 workshop exploring “experiences, good practices, lessons learned, and gaps and needs” related to the NAP process revealed the value of following an iterative approach to long-term adaptation planning. Some participants highlighted, for example, that by reviewing their national adaptation plans at four- or five-year intervals, their countries are able to consider the latest science and assessments of climate change impacts and adjust their adaptation planning accordingly.7

**Box 5 - M&E plan for Saint Lucia’s NAP**

Saint Lucia’s NAP has been defined as a 10-year process (2018-2028), comprising various elements, including Sectoral Adaptation Strategies and Action Plans (SASAPs) for key sectors; a transparent communication strategy with government and non-government stakeholders; and an M&E plan for Saint Lucia’s NAP. The M&E plan focuses on tracking the implementation of the cross-sectoral and sectoral measures included in the NAP and SASAPs. The M&E is simple and cost effective which increases its usability for immediate and long-term implementation.


Many countries, in the submitted NDCs, mentioned the need for adaptation monitoring. For example, Vietnam’s NDC mentioned specific metrics that would be used to monitor adaptation efforts. Some countries also included a monitoring and evaluation (M&E) plan in their NAPs (for an example, please see Box 5). The AC has long been at the forefront of international work on adaptation M&E, including by hosting workshops on key topics in M&E in both 2013 and 2018, synthesizing expert knowledge and good practices into reports, and making recommendations to the COP on advancing understanding of and progress on M&E.

**The importance of effective institutional arrangements and stakeholder engagement**

Enhancing institutional and technical capacity is essential to formulate and implement NAPs. Institutional arrangements are especially important to steer adaptation actions, such as assessing impacts, vulnerability and risks; planning for adaptation; implementation of adaptation measures; and monitoring and evaluation of adaptation.8 Box 6 illustrates an example of institutional arrangements in Jamaica that support long-term adaptation planning.

**Box 6 - Jamaica: institutional arrangements to support long-term climate adaptation**

Jamaica developed its Climate Change Policy Framework in 2015. The framework supports the integration of climate change adaptation into all facets of development planning and programmes. It supports the national development plan, Vision 2030, in accomplishing one of its desired national outcomes — “Hazard Risk Reduction and adaptation to climate change.”

The Framework supports a long-term approach to climate change adaptation through institutional arrangements. Such arrangements facilitate the mainstreaming and monitoring of climate considerations in relevant sectors and national policies. The Ministry of Water, Land, Environment and Climate Change (MWLECC), established in 2012, oversees the implementation of the Framework. Within the MWLECC, the Climate Change Division (CCD) coordinates climate change actions across all relevant sectors, ministries, and agencies that are working to create adaptation plans. The CCD ensures consistent distribution of information and technical guidance to these groups. All government ministries and selected departments regularly report to the CCD on the development of their sectoral climate change plans and actions.


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7 See document FCCC/SBI/2015/INF.6.
8 More information on the work of the Adaptation Committee on technical support and guidance available at https://unfccc.int/process-and-meetings/bodies/constituted-bodies/adaptation-committee-ac/areas-of-work-adaptation-committee#eq-3.
Institutional arrangements for long-term adaptation planning need to be appropriate to each country. Some countries are using their existing institutional arrangements for NAPs, while others are establishing new arrangements or enhancing existing arrangements. In some cases, the national climate change agency or department coordinates the integration of climate change adaptation into development planning processes between different sectors. In other cases, the coordination entity is a multidisciplinary technical group, team or committee, composed of representatives of various agencies and institutions at the national level. In some countries, a national climate change committee advises the government on long-term adaptation planning.

In long-term adaptation planning, stakeholder engagement is critical to ensure that the strategies are relevant and useful for those that will be implementing them or living with their consequences. Stakeholder engagement should involve a wide range of stakeholders such as policymakers, subnational entities, the private sector, civil society, local communities, indigenous peoples and the public in general in the process of planning and implementing adaptation activities. This helps to ensure that the results are understood and are useful in decision making. In this sense, adaptation is a way to help stakeholders to achieve their collective development and adaptation goals in a changing climate.

NAPs provide guidance to processes at the national level and beyond. These processes encompass not only government agencies and ministries, but also communities, the private sector, local municipalities, non-governmental organizations, and other relevant stakeholders. Those developing a NAP should consider the nature of public and stakeholder involvement and input, and provide an indicative list of stakeholders who will be invited to participate in the process. They should also define the reporting arrangements to various stakeholders in the country and beyond, and engage stakeholders in adaptation prioritization exercises. This will enable the various stakeholders to take precautions and to gradually incorporate the impacts of climate change into their private, business and public planning and activities.

There are challenges inherent to involving a wide range of stakeholders in decision-making, including navigating different power relations, and delays in policymaking by participatory approaches. Good planning processes can overcome these challenges, and the benefits of integrating a wide range of stakeholder inputs outweigh the challenges. By incorporating the voices of many stakeholders, and particularly those most vulnerable, adaptation interventions can, in the long-term, be far more tailored and effective.

In the submitted NDCs, a number of Parties mentioned the need to engage various actors (public agencies, NGOs, communities, and the private sector) in adaptation efforts. Few countries gave details on how this engagement would take place. Box 7 gives one example of adaptation with a long-term perspective that uses private sector investment.

**Box 7 - Sectoral adaptation action with a long-term outlook and investment by the private sector**

The AfricaFertilizer Org (AFO) initiative aims to address food insecurity and climate change. It supports African countries by increasing farmers’ access to both fertilizer markets and policy information. As climate models project higher temperatures and less rainfall in the region, exports of key crops will decrease by 2050. Sustainable farming is essential to build resilience in the longer-term. It leverages the opportunities offered by modern agricultural methods.

Climate change can exacerbate a number of challenges that Sub-Saharan Africa faces. These include a rising demand for key staples, declining soil health and crop yields, persistent malnourishment, and a lack of access to affordable agricultural inputs. AFO uses the internet, social media and mobile applications to grow fertiliser markets in the region. It empowers agro-dealers and farmers by providing fertiliser statistics, product catalogues, policy information, market news, and business directories.

One of the lessons learned from the project was that the private sector can also apply a long-term view, and can invest with the goal of more distant benefits. Currently, Sub-Saharan Africa only represents 1.5 per cent of the world fertiliser market and production in the region is very limited. The International Fertilizer Association’s (IFA) involvement is driven in part by a recognition of the long-term benefits of growing the market while acknowledging that its investment will not yield any near-term payoff in the traditional sense.

**Source:**

Conclusion

This paper summarises information on long-term adaptation planning that could be useful for Parties as they engage in the process of formulating and implementing NAPs. Given the long-term nature of climate change, long-term adaptation planning is necessary, and should also cover shorter timeframes. Long-term adaptation can take advantage of lessons learned from short-term projects by making use of the capacity built and the knowledge collected and generated. It is important to note that there is no "one-size-fits-all" approach to long-term adaptation planning. Countries have used different methods and approaches in planning over long time-frames. Each approach brings unique advantages. The approaches are also complementary and many adaptation planners and implementers are likely to utilize elements of several approaches, maximizing the advantages for a particular situation. A long-term approach to adaptation can also facilitate the integration of climate change adaptation into development planning processes and strategies, in a coherent manner between the NAPs and the SDGs, within all relevant sectors and at different levels, as appropriate within each country.