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# Section I

## User's Guidebook

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Section Co-ordinators:  
BO LIM (UNDP), ELIZABETH MALONE (USA)



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# User's Guidebook

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ERIKA SPANGER-SIEGFRIED<sup>1</sup> AND BILL DOUGHERTY<sup>1</sup>

## Contributing Authors

*Tom Downing<sup>2</sup>, Molly Hellmuth<sup>3</sup>, Udo Hoeggel<sup>4</sup>, Andreas Klaey<sup>4</sup>, and Kate Lonsdale<sup>2</sup>*

## Reviewers

*Ayite-Lo N. Ajavon<sup>5</sup>, Boni Biangini<sup>6</sup>, Yamil Bonduki<sup>7</sup>, Henk Bosch<sup>8</sup>, Nick Brooks<sup>9</sup>, James B. Chimphamba<sup>10</sup>, Kristie L. Ebi<sup>11</sup>, Ermira Fida<sup>12</sup>, Pascal Girot<sup>13</sup>, Mamadou Honadia<sup>14</sup>, Saleemul Huq<sup>15</sup>, Roger Jones<sup>16</sup>, Emilio L. La Rovere<sup>17</sup>, Elizabeth L. Malone<sup>18</sup>, Taito Nakalevu<sup>19</sup>, Isabelle Niang-Diop<sup>20</sup>, Nicole North<sup>21</sup>, Rosa Perez<sup>22</sup>, Olga Pilifosova<sup>23</sup>, Eduardo Reyes<sup>24</sup>, Andy Reisinger<sup>25</sup>, Othmar Schwank<sup>21</sup>, Barry Smit<sup>26</sup>, Jessica Troni<sup>27</sup>, and Gary Yohe<sup>28</sup>*

<sup>1</sup> Stockholm Environment Institute, Boston, United States

<sup>2</sup> Stockholm Environment Institute, Oxford, United Kingdom

<sup>3</sup> UNEP Collaborating Center on Energy and Environment, Roskilde, Denmark

<sup>4</sup> Centre for Development and Environment, University of Berne, Berne, Switzerland

<sup>5</sup> University of Lomé, Lomé, Togo

<sup>6</sup> Global Environment Facility, Washington DC, United States

<sup>7</sup> United Nations Development Programme – Global Environment Facility, New York, United States

<sup>8</sup> Government Support Group for Energy and Environment, The Hague, The Netherlands

<sup>9</sup> Tyndall Centre for Climate Change Research, University of East Anglia, Norwich, United Kingdom

<sup>10</sup> Department of Geography and Earth Sciences, University of Malawi, Zomba, Malawi

<sup>11</sup> Exponent, Alexandria, United States

<sup>12</sup> National Environmental Agency, Tirana, Albania

<sup>13</sup> Bureau of Development Policy – Latin American Region SURF, United Nations Development Programme, San Jose, Costa Rica

<sup>14</sup> Secretariat permanent du CONAGESE, Ougadougou, Burkina Faso

<sup>15</sup> International Institute for Environment and Development, London, United Kingdom

<sup>16</sup> Commonwealth Scientific & Industrial Research Organisation, Atmospheric Research, Aspendale, Australia

<sup>17</sup> Centre for Integrated Studies on Climate Change and the Environment, Rio de Janeiro, Brazil

<sup>18</sup> Pacific Northwest National Laboratory, Washington, DC, United States

<sup>19</sup> South Pacific Regional Environment Programme, Apia, Samoa

<sup>20</sup> Department of Geology, Faculty of Science, University Cheikh Anta Diop, Dakar, Senegal

<sup>21</sup> INFRAS, Zurich, Switzerland

<sup>22</sup> Philippine Atmospheric, Geophysical and Astronomical Services Administration, Manila, Philippines

<sup>23</sup> United Nations Framework Convention on Climate Change, Bonn, Germany

<sup>24</sup> Autoridad Nacional de Ambiente, Panamá City, Panamá

<sup>25</sup> Climate Change Office, Ministry for the Environment, New Zealand

<sup>26</sup> University of Guelph, Guelph, Canada

<sup>27</sup> Department for International Development, Oxford, United Kingdom

<sup>28</sup> Wesleyan University, Middletown, United States

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## Introduction

This User's Guidebook summarises guidance prepared by the United Nations Development Programme (UNDP) for the development and implementation of climate change adaptation strategies. The UNDP developed this Guidebook in collaboration with leading experts from around the globe.

### Why was this Guidebook written?

- The Guidebook was motivated by the lack of practical guidance on adaptation to climate change. While a substantial amount of literature exists regarding climate change impacts, information on adaptation policy and strategies is limited.
- The Guidebook explains how to use the Adaptation Policy Framework (APF). It is designed to provide user-friendly guidance on the most appropriate adaptation approaches and tools, customised to a country's unique national circumstances.
- For most countries, climate change adaptation is a new undertaking. In general, when examining adaptation strategies, numerous conceptual, technical and operational challenges arise. Developed as part of the APF, the Guidebook is a quick reference that addresses the above challenges in the nine Technical Papers (TPs) that comprise the Framework.

### What are the Guidebook's objectives?

- The Guidebook reviews key concepts, methods, and case studies to formulate adaptation strategies and measures – emphasising readability. Graphics, topic text boxes, and markers are used to present particularly important issues. The TPs are cited throughout this document for technical background. In this way, the Guidebook helps users understand their options for carrying out an adaptation project, as well as the range of technical and other resources available.
- Countries exhibit a great range in the types of vulnerability and adaptation projects they have undertaken, the role of stakeholders in development planning, and the degree of technical capacity. The APF can support the adaptation process at any point in this range depending on local constraints, resources, and opportunities.
- The Guidebook's major objective is to assist in the process of incorporating adaptation concerns into local, sector-specific, and national development planning processes.

### Who should read this Guidebook?

- Although anyone can use this Guidebook – policy-makers, the academic community, project developers, and local stakeholders – it is primarily designed for

technical analysts, climate project coordinators and developers, and climate change policy makers.

- The Guidebook will also be useful to stakeholders interested in sustainable development. It can promote dialogue among local communities, policy-makers, the private sector and the general public regarding adaptation to climate change in general, and the prospects for incorporating adaptation into national development priorities.

In short, this Guidebook articulates the APF's flexible approach to the design and implementation of climate change adaptation activities.

### How to use this Guidebook

Throughout this Guidebook, **adaptation** is used to describe a process by which strategies to moderate and cope with the consequences of climate change, including variability, are developed and implemented. The APF and its set of TPs have been developed to provide guidance to all climate adaptation efforts – from the national to the local scale.

Globally, countries are already adapting to current climatic events on different levels (national, provincial, and/or local) and over various time frames (short- to long-term). Adaptation planning occurs primarily through government policy making. When unplanned, adaptation tends to be triggered by unexpected changes in natural or human systems.

Developing an adaptation strategy for future climate change requires a set of key objectives. At the broadest level, these should fit within a nation's development priorities (e.g., poverty alleviation, food security enhancement, action plans under multilateral environmental agreements). At an operational level, there are at least five important objectives:

- Initiation of a process to reverse trends that increase maladaptation and raise the risks for human populations and natural systems;
- Reassessment of current plans for increasing the robustness of infrastructure designs and long-term investments;
- Improvement of societal awareness and preparedness for future climate change, from policy-makers to local communities;
- Increased understanding of the factors that enhance or threaten the adaptability of vulnerable populations and natural systems; and
- A new focus on assessing the flexibility and resilience of social and managed natural systems.

Developing an adaptation strategy that can respond to these objectives requires a vision that balances the need to reduce climate change impacts with the constraints of national policy-making processes. Whatever adaptation options and measures emerge, packaging these decisions into an effective adaptation strategy will require increased policy coherence across economic sectors, societal levels and time frames.

## Approach

The APF is designed as a roadmap rather than a cookbook. For users who want more details on analytical issues, this information is available in the references and citations in each TP of the APF.

In essence, the Guidebook is an interface between its users and the technical information in the accompanying papers (and, by extension, the general literature on climate vulnerability and adaptation). This Guidebook does *not* replace the APF Technical Papers; rather, it is part of a package of material to orient users to the key Components of the APF.

The Guidebook aims to strike a balance between encouraging flexibility in designing adaptation plans and providing concrete recommendations. Because each country's needs and resources are different, this Guidebook avoids presenting a step-by-step list. Instead, it outlines the basic parameters of the APF process and its major Components, while identifying the strategic issues and policy decisions involved.

This point deserves special emphasis. The APF is a flexible process that project teams use to formulate and implement their climate change adaptation strategies. It can be applied at various levels – e.g., policy development, project formulation, and multi-sectoral studies. Given the APF's flexibility, considerable effort is devoted in the Guidebook to helping users identify an appropriate entry point, key outputs, appropriate methods and tools, and the extent of analysis. Throughout the discussion, the underlying APF principle is that all adaptation activities should be compatible with a country's broader development context.

## Target audience

Users do not need any prior knowledge of climate vulnerability and adaptation techniques. The APF will be valuable to anyone who wants to know more about climate change adaptation, including those charged with making policy or developing projects.

## Structure of the Guidebook

The Guidebook starts with an overview of the APF, including the relationship between the seven APF Components and the nine Technical Papers, the range of options for using the APF, and important adaptation concepts.

The Guidebook devotes a section to each of the Components, addressing key concepts and tasks, as well as the challenges of carrying out these activities. To orient users to the principal themes of each APF Component, the **purpose**, **process**, and desired **outputs** are indicated at the beginning. TP references have been inscribed in the text throughout the Guidebook to facilitate easy reference to the TPs and to specific sections where the reader can find technical guidance.

Each Component section concludes with **Key Issues** and a **Checklist**. These highlight the major issues, decisions, and interim products that need to be addressed and/or developed within each Component.

## The Adaptation Policy Framework

### *What is the Adaptation Policy Framework?*

The APF is structured around four major principles:

- Adaptation to short-term climate variability and extreme events serves as a starting point for reducing vulnerability to longer-term climate change.
- Adaptation policies and measures are best assessed in a developmental context.
- Adaptation occurs at different levels in society, including the local level.
- The adaptation strategy and the process by which it is implemented are equally important.

*Think of the APF as a structured approach to formulating and implementing adaptation strategies, policies, and measures to ensure human development in the face of climate variability and change. The APF links climate change adaptation to sustainable development and global environmental issues.*

To address climate change impacts, countries add adaptation policies and measures to existing planning processes, including assessment, project development, implementation and monitoring. As a framework, it lays out an approach to climate change adaptation that enhances sustainable development, rather than the other way around. It also facilitates the process of identifying, characterising, and promoting “win-win” adaptation options.

The APF is about practice rather than theory. It starts with the information – which countries already possess – on vulnerable systems such as agriculture, water resources, public health, and disaster management. This information can be used to initiate a shift in the way risk, vulnerability and climate change are viewed. The APF builds on what is already known rather than “reinventing the wheel”. By making use of existing synergies and intersecting themes, this approach can ultimately lead to a more informed policy-making process.

### *Intended Adaptation Policy Framework outputs and outcomes*

The APF is capable of providing a variety of outputs, depending on how it is applied. While specific outputs depend on particular needs and goals, in general, a completed APF process leads to a clarification of adaptation strategies, policies and measures,

implementation plan, and enhanced adaptive capacity.

A particular use of the APF depends on the desired outputs. Several major outputs are envisioned, as follows:

- Policy development:** The APF can be used to identify policy options to reduce climate change impacts, either through measures that enhance society's resilience or actions that expand the range of coping strategies. This policy focus may be directed at certain aspects of a national development strategy, at specific geographic areas, or at important sectors of the national economy (e.g., agriculture, forestry, water resources, transportation, coastal zone management, public health, ecosystem management and risk management).
- Integrated assessments:** Adaptation in one sector often has consequences for another. For example, reduction of the impacts of drought can improve nutrition levels and overall public health. For this reason, the APF has been designed to facilitate a process of integrated assessment, including a consultation process in which links between sectors can be identified and assessed. Such assessments can also offer valuable input to National Communications under the United Nations Framework Convention on Climate Change (UNFCCC).

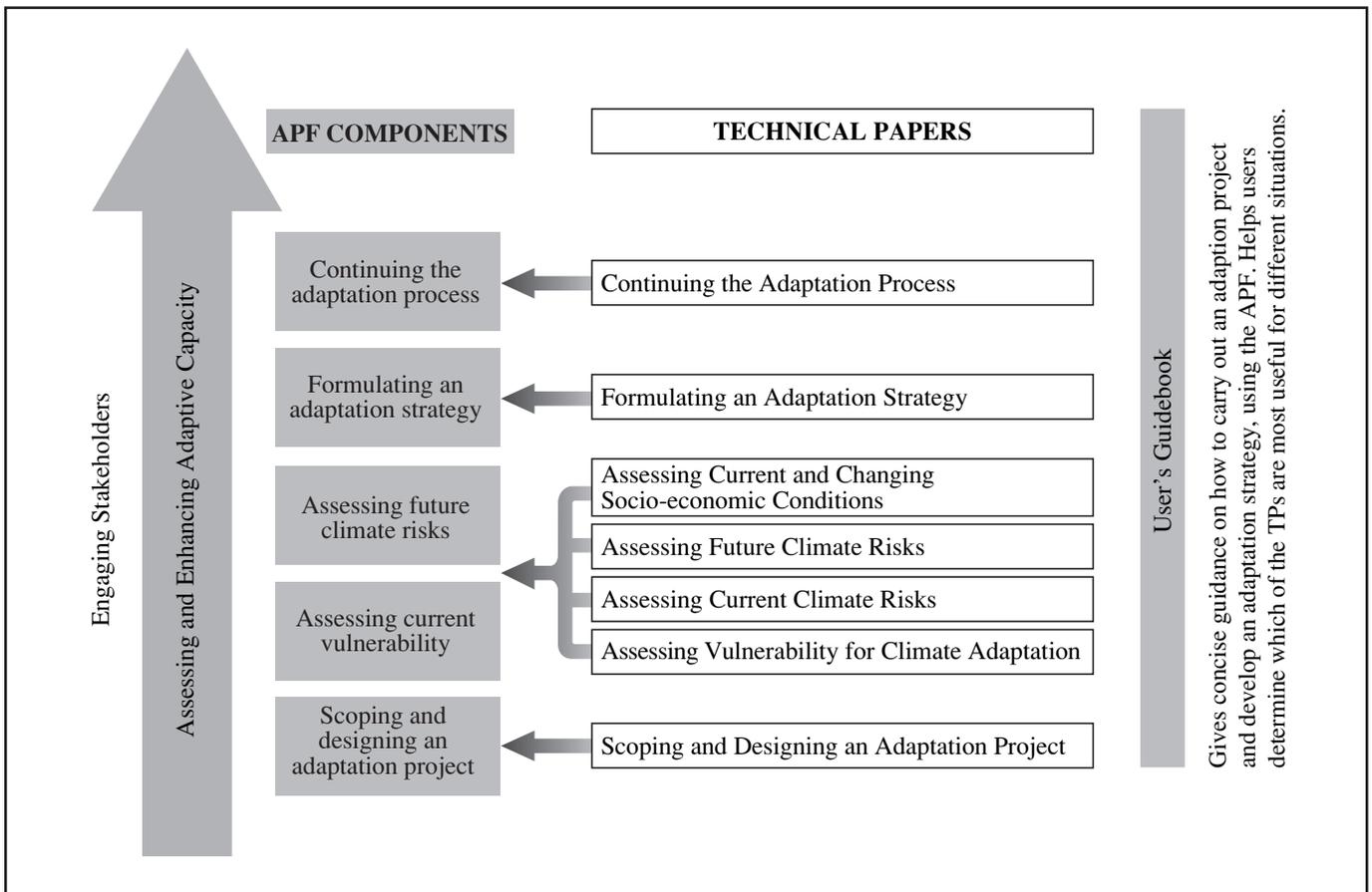
- Project formulation:** The APF process can be used for formulating adaptation projects, or for exploring the potential to add adaptation considerations to other types of projects. These projects can focus on any population scale, from the village to the national level.

A well-implemented APF initiative can catalyse a policy process that extends well beyond the project's lifetime. During the process of implementing an adaptation project, public awareness should be raised, individual, community, sectoral and national capacities enhanced, and policy processes established or modified.

Ideally, an "adaptation community" will be created – one that is capable of supporting the new adaptation process. At the end of the effort, both the team and the stakeholders should have a better understanding of the key strengths and vulnerabilities of their priority system, with respect to climate change.

**The Adaptation Policy Framework Components**

Figure 1 illustrates the APF process. Five basic Components (the shaded boxes) are linked by two cross-cutting Components (represented by the arrow (adaptive capacity) and



**Figure 1:** Outline of the Adaptation Policy Framework process

the larger frame (the stakeholder context) within which all Components are played out). Details regarding the technical underpinnings of the APF are provided by the nine TPs.

Since specific adaptation measures are usually implemented at various levels, the APF is intended to be accessible to technical analysts, the private sector, the general public and other stakeholders. In particular, the APF process emphasises both stakeholder engagement and the need to mobilise local action to increase adaptive capacity.

Each Component of the APF is briefly summarised below.

- *Scoping and designing an adaptation project* involves ensuring that the project is well designed and can be integrated into the national policy process.
- *Assessing current vulnerability* involves an assessment of the present situation. It addresses the questions: “Where does society stand today with respect to vulnerability to climate risks?” “What factors determine its current vulnerability?” And “How successful are its efforts to adapt to current climate risks?”
- *Assessing future climate risks* involves developing scenarios of future climate, vulnerability, and socio-economic and environmental trends as a basis for considering future climate risks.
- *Formulating an adaptation strategy* involves the creation of a set of adaptation policy options and measures in response to current vulnerability and future climate risks.
- *Continuing the adaptation process* involves implementing, monitoring, evaluating, and sustaining the initiatives started by the adaptation project.
- *Engaging stakeholders in the adaptation process* is crucial to the successful implementation of adaptation. This cross-cutting Component involves creating and sustaining an active dialogue among affected individuals and groups.
- *Assessing and enhancing adaptive capacity*, another cross-cutting Component, involves the integration of activities to better cope with climate change, including variability, into national capacity strengthening efforts.

Each of the above Components has its logic and purpose. However, the APF is sufficiently flexible to permit projects to use only one or two Components, or to apply modified versions of the Components. Decisions about how to use the APF will depend on a country's prior adaptation work, needs, goals, and resources (see *Getting started* and *Scoping and designing an adaptation project*).

### **The Adaptation Policy Framework Technical Papers**

As mentioned earlier, the APF is supported by a series of nine TPs, each of which explores a specific aspect of the APF and provides detailed guidance on one or more of the APF Components. Each TP also contains annexes with additional information on methodologies and tools.

- **Technical Paper 1:** *Scoping and designing an adaptation project* focuses on the first Component of the APF. It is a general guide to all of the tasks and activities involved in formulating and implementing adaptation.
- **Technical Paper 2:** *Engaging stakeholders in the adaptation process* focuses on the role of stakeholders in identifying appropriate adaptation strategies. This TP outlines a cross-cutting Component with implications for each of the other APF Components.
- **Technical Paper 3:** *Assessing vulnerability for climate adaptation* focuses on methods and tools for a vulnerability assessment for climate adaptation. This paper outlines the vulnerability-based approach to adaptation.
- **Technical Paper 4:** *Assessing current climate risks* outlines a conceptual framework for assessing current climate risks using the natural hazards-based and the vulnerability-based approaches. This TP emphasises the (natural) hazards-based approach to adaptation.
- **Technical Paper 5:** *Assessing future climate risks* describes risk assessment techniques for determining climate risks and adaptation needs under a changing climate. This TP also emphasises the (natural) hazards-based approach to adaptation.
- **Technical Paper 6:** *Assessing current and changing socio-economic conditions* presents how to characterise socio-economic conditions and how they relate to vulnerability and climate analyses. This TP outlines the policy-based approach to adaptation while supporting other approaches.
- **Technical Paper 7:** *Assessing and enhancing adaptive capacity* discusses how to assess and enhance the capacity of human systems to cope with climate change, including variability. TP7 outlines the second cross-cutting Component and has implications for each of the APF Components. This TP describes the adaptive capacity approach to adaptation while supporting other approaches as well.
- **Technical Paper 8:** *Formulating an adaptation strategy* focuses on how to formulate a strategy that responds effectively to a system's key vulnerabilities and to the project's unique policy context and national development goals.
- **Technical Paper 9:** *Continuing the adaptation process* focuses on the processes of barrier removal, incorporating adaptation into the development process, and improving implemented adaptation activity over time, through monitoring and evaluation.

### **Getting started**

Applying the APF – and its associated methods and tools – initially depends on the nature of the output desired (e.g., policy development, integrated assessment, or project formulation). Once this is established, APF users should identify specific approaches, methods, and tools that are appropriate, considering the resources available.

Given the range of potential uses of the APF, it is important that users evaluate project priorities, desired outcomes, and resources. They should address several aspects of an APF including:

- **Approach:** A variety of conceptual frameworks or approaches can be used when applying the APF. In fact, each of the four different methods – (natural) hazards-based, vulnerability-based, policy-based, and adaptive capacity-based – emphasises a different aspect or Component of the adaptation process.
- **Coverage:** Uses of the APF can vary considerably in the level of coverage. For example, one country's strategic focus may address all of its geographic areas and major sectors for some long-term planning period. Another's might be highly localised geographically (e.g., coastlines) and in terms of sectors (e.g., fisheries). An example of the latter would be an APF project to address the vulnerability of fishing communities to frequent storm surges and future sea level rise.
- **Methods and tools:** The methods and tools used will depend on the level of complexity and/or comprehensiveness of the effort. Within each of the four primary approaches indicated above, a variety of analytical tools are available. Some of these can be highly quantitative (e.g., agent-based simulation modelling, multi-criteria analysis, scenario analysis), while others are more suitable for qualitative assessments (e.g., stakeholder consultations, focus groups).
- **Components:** The specific tasks that are carried out will depend on the particular Components of the APF that are most relevant to a country's situation. For example, some countries have existing robust vulnerability assessments. In others, no one has ever explored the process of formulating and implementing an adaptation strategy.

Applying the APF does not necessarily require an abundance of high-quality data, or extensive expertise in computer-based models. It is possible to use the APF to conduct a project in entirely qualitative terms. Applying the APF requires thoughtful assessment of adaptation to climate change, a robust stakeholder process – and what would be considered manageable costs in terms of time and funding. For some countries, addressing all five basic and both cross-cutting Components of the APF process will be the most strategic, but more resource-intensive, option. Other countries may, e.g., already have significant information on current, but not future vulnerability. These countries may choose to fill gaps in information by focusing on the latter Components. In short, there are a number of options.

That said, implementing the APF will invariably be characterised by:

- careful application of the scoping and design process
- a strong stakeholder engagement process
- assessment and enhancement of adaptive capacity
- analysis of adaptation to cope with current and future climate change; and

- a programme to monitor and evaluate the impact of adaptation.

### **Implementing the Adaptation Policy Framework**

The following sections provide guidance on how to implement an APF process. As users proceed, it is important to remember that the detailed technical guidance is found in the accompanying TPs.

Each section corresponds to an APF Component; within it, the different key tasks are outlined. It is important to emphasise that the APF guidance should be tailored by users and adapted to local circumstances so that it is: (a) modified to national goals, resources, and expected outcomes; (b) limited to time and resource constraints; (c) as substantive as possible; and (d) designed to meet applicable standards and/or criteria of key national (i.e., sectoral ministries), multilateral (e.g., GEF), and bilateral (e.g., industrialised country donors) organisations.

It is possible that a reasonable outcome for a given project would be to carry out a subset of the tasks, or to modify the tasks to better fit existing resources and constraints.

The Guidebook helps users navigate the decisions that must be made to implement the APF process effectively. They include: (1) an appropriate project approach; (2) prioritising Components and tasks; (3) specific methods and technical resources; and (4) plans for implementation, awareness building and continuation of the process.

Users will note a more detailed description of the tasks in the *Scoping and designing an adaptation project* Component, particularly in comparison with those in subsequent Components. This Component is emphasised somewhat since getting the APF process off on the right track – the aim of Component 1 – is the most important aspect of the entire APF process.

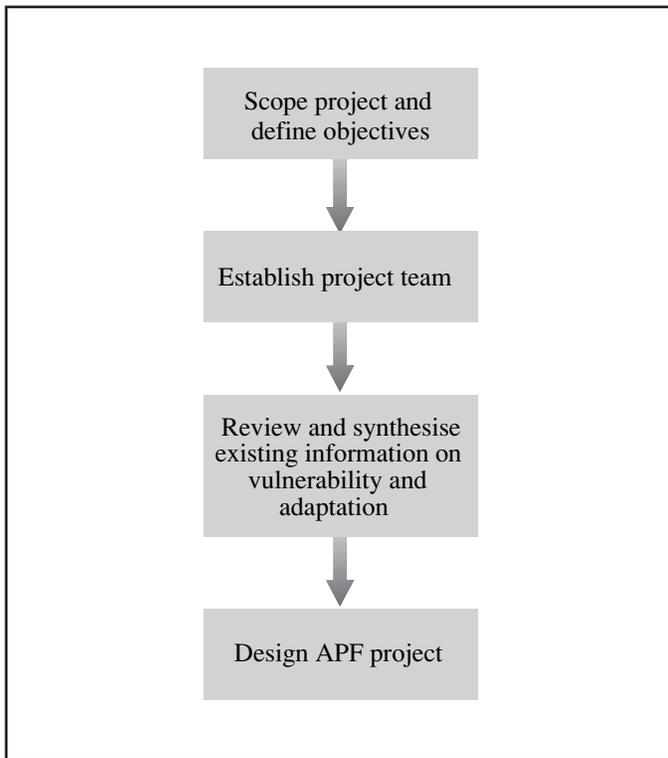
### **Scoping and designing an adaptation project**

**Key TPs: 1 and 2** This section introduces the process of scoping and designing adaptation projects – the focus of the first Component of the APF process. The main purpose is to establish an effective project plan, so that APF users can design adaptation strategies, policies and measures.

The **process** is illustrated by the flow chart in Figure 2, and includes four major tasks:

1. scope project and define objectives;
2. establish the project team;
3. review and synthesise existing information on vulnerability and adaptation; and
4. design the adaptation project.

The expected **output** is a detailed implementation plan, including clearly stated objectives, activities and outcomes.



**Figure 2:** Scoping and designing an adaptation project

*Think of scoping and designing an adaptation project as essentially a small-scale exploration of all of the APF Components to get a sense of the “big picture”.*

Since the full adaptation team will likely not have been assembled at this point, only the core team members will be participating. Although stakeholder input is valuable for determining project priorities and strategies, it is probably preferable to only include a small group at this juncture.

### **Task 1: Scope project and define objectives**

**TP1 Section 1.4** APF studies are intended to identify strategies, policies, and measures that will have far-reaching and long-lasting effects. To achieve this, the APF process starts by scoping the key elements to consider in (a) existing development policies and priorities, and (b) adaptation needs and constraints. The set of activities outlined below is intended to guide the initial project team through the process of identifying these key considerations.

#### *Establish the stakeholder process*

**TP1 Section 1.4.1, Box 1-1; TP2 Section 2.6.1** To establish adaptation priorities, needs and constraints, engaging stakeholders is essential. The core team members should initiate an inclusive stakeholder dialogue process – one that accommodates a range of diverse view-

points. This type of stakeholder input can help to ensure that the project will respond to critical adaptation priorities.

The stakeholder process may need to be iterative: the initial project team consulting with a small group of stakeholders to inform the initial development of the project objectives; the full project team engaging a broad group of stakeholders throughout the project. It is important to note that this activity is a subset of activities outlined under the cross-cutting Component, *Engaging stakeholders in the adaptation process*.

#### *Prioritise key systems*

**TP1 Section 1.4.1; TP6 Section 6.4.1** Countries have a range of vulnerabilities to climate change from drought risk to an increased burden of vector-borne diseases. Users will need to narrow the focus of their project to a strategic subset of adaptation priorities. In principle, priority should be placed on systems where there is both high vulnerability and a high likelihood of significant impacts from climate hazards.

**TP1 Section 1.4.1, Annex A.1.1; TP3 Section 3.4.2** Some adaptation projects will start with a clear choice of priority system. For others, users can develop a list (ranked or unranked) of who is vulnerable, to what, where and to what extent. The information, although somewhat general at this stage, should be adequate to make the necessary comparisons and prioritisations. In addition to the list, a qualitative description of the reasons underlying the choice of priorities can be helpful.

Adaptation priorities can be identified using existing vulnerability assessments, consultations with people likely to be affected, the advice and needs of decision makers, scientific experts, etc. However, to be legitimate in the public eye, the prioritisation process should include some form of stakeholder input.

#### *Review policy process*

**TP1 Section 1.4.1** The major goal of reviewing policy processes is to recognise how adaptive capacity can be developed. Understanding national, sectoral and local policy-making processes is essential for assessing how an adaptation strategy might be implemented through these processes.

Output for this activity might include a brief overview of:

- relationship between key policy processes and climate change adaptation;
- potential for integrating adaptation concerns into policy agendas; and
- ways to improve existing linkages for policy coherence and to strengthen commitment to adaptation.

It will be especially useful to identify situations within the policy process where adaptation recommendations may be diffi-

cult to implement or sustain. Once identified, approaches may then be developed to manage these barriers.

#### *Determine project objectives and outcomes*

Framing the project objectives and expected outcomes is a critical step. This process will determine whether the project is responsive to the needs of stakeholders and policy makers.

This process should result in a set of concise objectives and a corresponding set of expected outcomes that are achievable within the scope of the project. The process of setting objectives can be accomplished using facilitated stakeholder fora, expert opinion and input from policy makers.

As an aid to future monitoring and evaluation (M&E) efforts, the APF project team should also develop criteria to evaluate the APF's success at this point. These can help to judge the degree to which the expected outcomes have been achieved.

#### *Develop communication plan*

**TPI Section 1.4.1** The results of the adaptation process will be most useful if they are shared with key stakeholders, decision makers and the general public. Therefore, it is important to produce a communication plan that is tailored to the needs of target audiences. The communication strategy should be designed in such a way that its effectiveness can be monitored and evaluated, and it can be adjusted and modified on the basis of such an evaluation.

#### **Task 2: Establish project team**

**TPI Section 1.3** Effective adaptation requires a team that closely reflects the needs and objectives of the project. In selecting the team, the goal will be to develop an interdisciplinary panel that both represents a range of sectors and scales of society and is capable of responding to each of the project's priorities. Ideally, team members should be able to commit for the duration of the APF process.

#### **Task 3: Review and synthesise existing information on vulnerability and adaptation**

**TPI Section 1.4.2** In some countries, work on vulnerability and adaptation may have already been carried out. Task 3 involves identifying such resources and distilling the most important information for input to the development of a **project baseline**.

Baselines are used to sketch the current situation and to give researchers a snapshot against which to view change. It is against this baseline that the effectiveness of adaptation action can later be assessed. A well-defined project baseline should

outline the current level of vulnerability and adaptation in the system of interest. Though this is a preliminary baseline to be refined in later tasks, it is a critical APF task, as the project baseline serves as the point of departure for the entire process.

#### *Develop indicators*

**TPI Section 1.4.3; TP6 Section 6.4.2** Current vulnerability is often assessed through the use of indicators – quantitative, qualitative, or both. These are used to describe various characteristics of vulnerable systems. The approach chosen (e.g., policy-based, vulnerability-based, etc.) will dictate which indicators will be relevant.

After review of the available information, indicators may be identified that can be used to sketch the baseline for the priority system(s). This baseline will include current vulnerability and level of adaptation. The baseline should be described as fully and clearly as possible. Ideally, indicators chosen to describe the project baseline will also be used in the project monitoring and evaluation process.

#### *Review and synthesise existing information*

APF users can gain insight from previous studies, expert opinion and the policy context into the vulnerability of key systems. Examples include national development plans, Poverty Reduction Strategy Papers, environmental sustainability plans and natural hazards assessments. These and other existing sources should be identified and explored, and information can be extracted for use in developing the baseline. The focus of this effort should be on both key concerns of the priority system(s) – e.g., the history of drought and crop failure in a region – and the relationship between risk and the priority system(s) – e.g., the impact of drought on smallholders.

**TPI Section 1.4.4** Users can refer to expert opinion, analogue or historical studies, and/or modelling to understand available information. Existing sources of information include: (a) studies/projects that have focused on climate change-related impacts (e.g., previous vulnerability and impact studies); (b) studies/projects that have been carried out that may not have an explicit focus on climate change (e.g., national action plans under the Desertification Convention), but are nonetheless highly relevant; and (c) the existing policy context for coping with current climate risks and variability. This material may provide information necessary for constructing a baseline.

**TPI Section 1.4.3** Where specific actions or programmes have been implemented to address the threat of climate-related hazards, there may be an extensive national literature to draw from. In addition, APF users may review studies, policies and measures that were designed to address other problems (e.g., disasters, poverty, resource management, biodiversity conservation), as such information often contains examples of very relevant forms of adaptation.

#### Task 4: Design the adaptation project

The completion of the previous tasks will determine a certain pathway for the APF process. For example, in countries in which substantial prior work on current and future vulnerability assessment has been done, the APF could be used to formulate an adaptation strategy and provide advice on continuing the process. In this case, less emphasis would be placed on the Components dealing with current and future vulnerability assessment, and the project's unique needs would define its pathway. If none emerges, the user will have to identify and revisit the particular activity that requires clarification. The rest of Task 4 provides guidance on defining specific characteristics of the proposed pathway.

##### Select approaches and methods

The Objective of Task 4 is to select an approach that both fits with the scope of the adaptation project, and is compatible with the available resources. In choosing an approach, the user begins to put clear parameters on priority steps and methods (see Box 1 for approaches recommended for use in an APF process).

#### Box 1: Recommended approaches to Adaptation Policy Framework studies

- **(Natural) hazards-based approach:** Analyse possible outcomes from a specific climate hazard
- **Vulnerability-based approach:** Determine the likelihood that current or desired vulnerability may be affected by future climate hazards
- **Adaptive-capacity approach:** Analyse the barriers to adaptation and propose how they can be overcome.
- **Policy-based approach:** Investigate the efficacy of an existing or proposed policy in light of a changing exposure or sensitivity

These approaches are complementary rather than mutually exclusive. The vulnerability-based and adaptive capacity approaches resemble two sides of a coin on which the climate hazard approach could be overlaid.

If there is an approach already in use – for instance in development planning – then it may make sense to adopt it. Alternatively, if existing reviews and plans are not available or suitable, the team will need to develop its own approach. Stakeholder-led exercises and the scoping activities outlined in Task 1 can be very useful for this decision-making process. Users will need to make this choice carefully, with an eye to the effect it will have on the nature of the APF process.

#### TPI Sections 1.4.3 and 1.4.4

The choice of approach has direct implications for the level of effort associated with data acquisition, modelling, and

other aspects of adaptation. For instance, if a (natural) hazards-based approach has been selected, significant effort will need to be devoted toward the assessment of current and future climate risks, which will influence the choice of methods for these tasks. If a policy-based approach has been selected, more resources may need to be focused on understanding socio-economic aspects of current vulnerability and developing socio-economic scenarios. The selection of methods will often flow from the selection of approach, as is discussed in each of the corresponding TPs.

##### Develop synthesis plan

**TPI Section 1.4.4** Any adaptation project, regardless of approach, will require a careful synthesis in order to be useful to the overall goal of the adaptation process. At this early stage, users are encouraged to outline a preliminary plan for synthesising results and for providing input to the identification of adaptation options and recommendations.

##### Develop monitoring and evaluation strategy

**TPI Section 1.4.4; TP9 Section 9.4** The key outputs of an adaptation project are the strategy, the policies and/or the measures for reducing vulnerability and increasing adaptive capacity in the priority system(s). How effectively these recommendations are implemented needs to be monitored and periodically evaluated. APF users should develop indicators for each element of the strategy, policy and measure to assess their effectiveness. Having a strategy in place can help to ensure that indicators are developed to enable effective M&E at a later stage.

##### Develop terms of reference

Finally, terms of reference should be developed that clearly describe the project objectives and expected outcomes, the respective project activities, the stakeholders involved in the project, the budget, timelines, etc. This activity is integral to any project planning process. Many techniques are available to accomplish this. Perhaps the most useful is the logical framework analysis approach. Users may also find it useful to consult with additional stakeholders and the general public. Their input can help refine or reframe the policy context or the project objectives, if necessary. Wide dissemination of the terms of reference will help ensure that the process remains open and transparent.

##### Key issues

The tasks above raise a number of institutional, analytical, and operational issues. This section reiterates the key issues and outlines some overarching considerations.

*Project linkages:* Most likely, there are ongoing and/or planned projects within the user's country that are highly relevant to adaptation. These projects may have complementarities and synergies

that could (a) increase the strategic value of the adaptation process, (b) enable more detailed assessments, (c) increase the impact of results, and (d) increase the efficiency of available funding.

*Engaging stakeholders:* APF studies may require two stages of stakeholder dialogue. The first is a pilot stage, in which the initial project team consults with a small stakeholder group in order to develop appropriate priorities and objectives, and then identifies additional stakeholders. The second is a longer-term process that engages a larger stakeholder group. This process is sustained for the duration of the project.

*Method selection:* The methods used will vary significantly from one adaptation project to the next. Methods chosen should:

- respond to project goals;
- respect the constraints of project resources;
- have political support; and,
- if applicable, be sufficiently credible for potential donors.

*Uncertainties:* There are several key points in the project design process for addressing uncertainty. By taking the time to understand and articulate uncertainties and assumptions (e.g., with regard to developing indicators and baselines), users can plan a project that both minimises and accounts for uncertainties.

*Policy process:* The project team should start their project with a clear understanding of the policy processes they wish to inform. The team must identify potential obstacles within the policy process that may make it difficult to implement or sustain adaptation policies and measures. Examples include a particular inertia of the policy process, vested interests of groups or individuals, and unclear priorities.

### Checklist

This checklist is a quick reference to the activities in the *Scoping and Designing an Adaptation Project* Component of the APF. Before proceeding to the next APF Component, users may want to consider whether they have:

- Defined **priority systems** and project boundaries?
- Established a plan for identifying and engaging **stakeholders**?
- Determined project **objectives** and desired **outcomes**?
- Developed a **plan for communication** of results to stakeholders and decision makers?
- Selected the adaptation project **team**?
- Identified, assembled, and reviewed **pertinent information**?
- Selected an **approach** (e.g., from the four recommended)?
- Analysed the national **policy-making process and barriers** in the context of adaptation?
- Prepared **terms of reference** for the overall project?

### Assessing current vulnerability

One of the APF's key innovations is that it begins with an emphasis on current climate conditions since, for many countries, adaptation to current climate risk is the most immediate adaptation task.

**Key TPs: 3, 4, 6 and 7** The second Component of the APF addresses two key aspects of current conditions –vulnerability to current climate, and the scope and effectiveness of existing adaptation measures. Starting with the current conditions helps ensure that any resulting policies and measures are based on current experience.

*Think of this APF Component as a process that helps to distinctly define current vulnerability and adaptation in the context of the priority system.*

The main **purpose** of assessing current vulnerability and adaptation is to understand the characteristics of climate-related vulnerability in the priority system and the scope of the system's adaptive responses. Specifically, APF users must address three key questions:

1. What is the status of national development policies and plans with respect to the vulnerability of priority system(s) to current climate risks?
2. Which factors determine the vulnerability of those priority systems?
3. How successful are current adaptation approaches?

Component 2 of the APF is an early point at which adaptation projects can take very different pathways, depending on project priorities.

The **process** includes four major tasks to assess:

1. Climate risks and potential impacts;
2. Socio-economic conditions;
3. Adaptation experience (including policies and measures) and adaptive capacity; and
4. Vulnerability (to both socio-economic conditions and climate).

Rather than being sequential, these tasks are interactive.

The expected **output** is a comprehensive assessment of the priority system's vulnerability to current climate and the adaptation options it uses.

#### *Task 1: Assess climate risks and potential impacts*

Under this task, users acquire an understanding of current climate risks. This understanding provides a basis for formulating adaptation strategies to manage future climate risks.

The assessment of current risks can be either qualitative, quantitative or a combination of the two. In its most comprehensive

form, Task 1 entails: characterising climate variability, extremes and hazards; assessing impacts; developing risk assessment criteria; and assessing current climate risks.

**TP4 Sections 4.1-4.4** The two key elements for Task 1 are a conceptual model of the system, and an understanding of the hazards and vulnerabilities in order to prioritise risk (Component 1).

**TP4 Section 4.4.6; TP6 Section 6.4.5; TP7 Section 7.4.2** How current climate risks are assessed depends on the approach selected (i.e., (natural) hazards-based approach, vulnerability-based approach, policy-based approach, or the adaptive-capacity approach). With any of these approaches, qualitative and quantitative methods are available for assessing risk. The methods will depend on a number of factors, including the level and quality of information needed by stakeholders (Box 2).

### Task 2: Assess socio-economic conditions

**TP6 Section 6.4.3** The purpose of this task is to assess current socio-economic conditions within the priority system. The task output is a concise description of current conditions affecting vulnerability and risk. This description can also be used later in the project to develop socio-economic scenarios to inform projections of future vulnerability and climate risk.

A comprehensive assessment of current socio-economic conditions can include: (1) clarifying system boundaries, (2) developing system indicators, (3) describing socio-economic conditions today, and (4) analysing critical characteristics. This assessment can be a detailed process, or it can be qualitative

#### Box 2: Key points for assessing current vulnerability and climate risks

- **Approach:** Climate vulnerability and risk arise from interactions between climate and society. There are different ways of assessing these. They can be approached from their social aspects, through vulnerability-based assessment; from their climatic aspect, through natural hazards-based assessment; or through complementary approaches that combine elements of both.
- **Quantitative versus qualitative methods:** A key decision is how quantitative or qualitative the climate risk assessment should be. In Component 1, Task 3, preliminary methods were selected which users can now begin to apply. It may be useful to revisit decisions on methods and adjust as needed, as understanding of the specific project direction grows.

input to other tasks, such as the vulnerability assessment. It is likely to involve working with stakeholders to determine the most appropriate socio-economic indicators (e.g., qualitative, quantitative or mixed), and assembling descriptions (e.g., data-rich or qualitative) on current socio-economic conditions. These descriptions should include demographic, economic, natural resources, governance/development and cultural aspects of current conditions.

### Task 3: Assess adaptation experience

To be effective and acceptable to stakeholders, adaptation measures must be consistent with past experience, current behaviour and future expectations. Characterising this collective adaptation experience is essential.

The purpose of this task is to evaluate the success of the priority system's current adaptation (baseline). This baseline is a description of the recent and current adaptation experience, including policies and measures currently in place, as well as an assessment of current adaptive capacity. (This should not be confused with a "project baseline" discussed under Component 1.)

Assessing adaptation experience involves two main processes. First, thorough scoping and synthesis of information on existing policies and measures relevant to adaptation in the priority system(s). Second, an assessment of the system's capacity to adapt to current hazards – i.e., how well have these policies and measures worked? Both autonomous and planned adaptations should be explored.

### Task 4: Assess vulnerability

**TP3 Sections 3.1-3.4** The purpose of this activity is to identify and characterise the priority system's sensitivity to climate hazards. The primary output of this task will be a rich description of current vulnerability – both socio-economic and climate. This description can build on the outputs of the previous three tasks. Task 4 can also provide key input to the assessment of future climate risks by describing potential future vulnerabilities.

Vulnerability assessment can involve a detailed synthesis of the assessments in the preceding tasks (e.g., climate risks, socio-economic conditions). It can be a simple synthesis of pre-existing vulnerability assessments. Or it can be something in between. Vulnerability assessment can be a stand-alone process or input to an assessment of current climate risks.

This current vulnerability assessment can be used later in the adaptation project to describe potential future vulnerabilities, to compare vulnerability under different socio-economic and climatic futures, or to identify key options for adaptation. All of these activities intersect in important ways with efforts to enhance adaptive capacity.

In its most complete form, assessing current vulnerability can clarify definitions and analysis questions; define key vulnerable groups (priority systems); define exposure to climate risk (using socio-economic indicators); and assess current vulnerability (the conjunction of climate hazards and socio-economic conditions).

### Key issues

The tasks above raise a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

*Current climate:* Several types of statistical data can be used to describe current climate (e.g., mean, standard deviations, the frequency of extreme events). Some stakeholders may be keen to define variability in a more people-centred way that ties processes within the climate system to changes in readily observed patterns.

*Understanding climate risk:* Risk refers to the combination of: the magnitude of a climatic event; the likelihood of that event; and the consequences of that event. Stakeholders should understand these elements of risk early in the APF process.

*Defining vulnerability:* Stakeholders are likely to have different definitions of vulnerability. For clarity in communication, the project team should agree on a definition to use with stakeholders throughout the APF process.

*Types of baselines:* Two types of baselines should be developed for most adaptation projects. The first is the project baseline, described under Component 1. The second, the adaptation baseline, describes adaptations to current climate. These baselines can provide input to future reference scenarios, which are touched on in the following section.

### Checklist

This checklist is a quick reference to the activities in the *Assessing Current Vulnerability* Component of the APF. Before proceeding to the next APF Component, users may want to consider whether they have:

- **Characterised** climate variability, extremes, and hazards?
- Described **socio-economic conditions** affecting current vulnerability and risk?
- Conducted an assessment of the **adaptation baseline**?
- Identified and characterised the **vulnerability** of the priority system to current climate hazards?

### Assessing future climate risks

**Key TPs: 3, 5, 6 and 7** While improved adaptation to current climate risks is important, it is not sufficient to deal with all of the possible future risks of climate change. To understand these risks, APF users should take into account future scenarios of climate change, vulnerability to climate impacts, and socio-economic dynamics. This section outlines the process of assessing future climate risks in the priority system(s).

Another APF innovation is its expanded view of the analytical techniques for assessing future climate risks. The conventional approach has been to develop a climate change scenario by perturbing a baseline climate scenario, use a modelling system to assess the impact of the perturbation, and evaluate adaptation options to mitigate those impacts. The types of assessments and their analytical needs have multiplied since that method was first formulated. Today, more robust assessment techniques are available.

***Think of this APF Component as a process that most closely resembles the analyses that have been conducted as part of earlier climate change vulnerability assessments, in which the focus was on future climate trends.***

With the APF approach, many different analytical techniques can be used to assess future climate risk. These range from qualitative analysis (e.g., partitioning the outcomes into low, medium and high risk) to highly sophisticated quantitative techniques (probabilities calculated using statistical and/or modelling techniques).

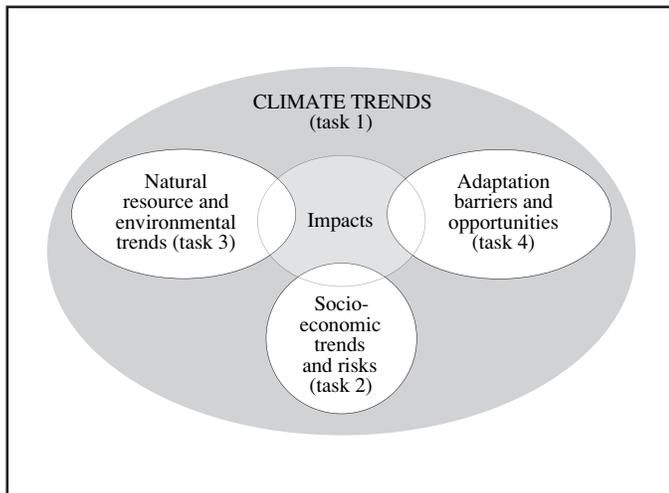
**TP6 Section 6.4.6** The assessment of future climate risks involves examining intersections between trends (e.g., climate, natural resources, socio-economic conditions) and factors that influence the development of adaptive responses (i.e., barriers and opportunities). Figure 3 illustrates these intersections. Against the background of climate trends are socio-economic trends, adaptation barriers, and environmental trends. The points of overlap represent impacts caused by future climate change. These impacts may be diminished or increased, depending upon a system's level of adaptation or adaptive capacity.

The main **purpose** of this APF Component is to characterise future climate risks in a priority system so that adaptation policies and measures can be designed to reduce the system's exposure to future climate hazards.

This **process** includes four major tasks to characterise:

1. Climate trends, risks and opportunities;
2. Socio-economic trends, risks and opportunities;
3. Natural resource and environment trends; and
4. Adaptation barriers and opportunities.

The **output** will be a series of potential scenarios, outlining future climate change and vulnerability, socio-economic conditions, and trends in natural resource and environmental management.



**Figure 3:** Conceptualisation of tasks for Component 3

For these tasks, users will continue to apply the approach that was adopted in the previous Component, *Assessing Current Vulnerability*. As discussed earlier, two major approaches to risk assessment are the natural hazards-based and the vulnerability-based approaches; others can also be used. The choice of one approach over the other has important implications for the nature of the tasks outlined below.

### **Task 1: Characterise climate trends, risks and opportunities**

**TP6 Sections 6.4.4, 6.4.6  
TP7 Sections 7.3.5, 7.4.3** The purpose of this task is to describe potential future climate risks and opportunities associated with it. Generally, the output of Task 1 will consist of two elements – a set of future climate change scenarios and an analysis of associated risk.

A comprehensive characterisation of climate trends, risks and opportunities can require: clarification of the priority system's sensitivities to climate change; construction of appropriate planning horizons; development of climate change scenarios; linkage of scenarios to impact models (with input from socio-economic scenarios); and risk analysis. To implement these sub-tasks, a range of methods and options is available.

### **Task 2: Characterise socio-economic trends, risks and opportunities**

**TP5 Section 5.4;  
Annex A.5.1** In order to design adaptation strategies for the unknown hazards of future climate change, it is useful to construct possible accounts of what the future might be like – i.e., in what kind of future world (or in what kind of priority system) will adaptation be taking place?

The purpose of this task is to develop and describe prospective socio-economic conditions for the priority system. Characterising

future socio-economic conditions involves building on an assessment of current conditions. There are two primary tasks involved. The first is to develop alternative “storylines” of the future for an appropriate time period (e.g., between 20 and 50 years into the future). The second is to make projections about how certain socio-economic conditions will change in the future under these alternative storylines.

The output will be a series of qualitative and/or quantitative scenarios. When integrated with additional trends, this series can include baselines without new adaptation (i.e., the adaptation baseline or reference scenario), and two or three scenarios incorporating additional adaptation policies and measures. These scenarios can then be used as input to projections of future vulnerability and climate risk. This can be done by applying various climate scenarios to each of the socio-economic scenarios and assessing future vulnerability and risk.

To develop socio-economic scenarios, users can build their own, or use/adapt existing ones. This can be a detailed, quantitative process, or a more qualitative one. Either way, the process will likely involve working with stakeholders to determine the most appropriate storylines and scenarios for the priority system(s).

### **Task 3: Characterise natural resource and environmental trends**

The growth in consumption of natural resources raises important issues regarding vulnerability to future climate risks. There are many current examples of serious environmental degradation caused by the exploitation of fossil fuels, mineral, and other resources. Since climate impacts are likely to be exacerbated as environmental degradation increases, an assessment of natural resource management trends can provide essential input to assessments of the risks associated with future climate change. Such an assessment links the communities who may be vulnerable to climate change impacts with the potential sources of their vulnerability.

Environmental scenarios may need to be developed in which important feedbacks exacerbate climate risks, where environmental conditions influence adaptive capacity, or where environmental management options can be used to assess adaptation. Environmental scenarios can be developed from models via socio-economic storylines or as regular changes in conditions designed to assess sensitivity. Such scenarios include land-use/land cover change, ozone depletion, ultraviolet exposure and water resource scenarios. More information on the construction of these scenarios can be found in Chapter 3 of the IPCC Third Assessment Report.

**TP6 Section 6.4.6  
TP7 Section 7.4.3  
TP9 Section 9.3** The purpose of this task is to develop and describe prospective natural resource management conditions in the priority system(s). This will typically require that storylines be integrated into the socio-economic assessment described in the previous task. The output will be a series of qualitative and/or quantitative scenarios.

#### Task 4: Characterise adaptation barriers and opportunities

Aspects of current development and environmental policy are essential for assessing potential barriers to adaptation. Especially important are recent or planned state reforms for economic development (e.g., privatisation and liberalisation of trade). Policies and programmes related to the priority system should be evaluated for their potential to support effective adaptation to climate change, in the context of sustainable development.

The purpose of this task is to identify aspects of national decision-making processes that either pose potential barriers to incorporating adaptation into development planning, or that provide important opportunities to build adaptive capacity. This will typically require that the institutional, environmental, and participatory aspects of the planning and policy-making process be well understood, and that the pathways for implementing policy (e.g., laws, standards, regulations) are assessed regarding their roles, effectiveness and institutional linkages.

#### Key issues

The tasks above raise a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

*Dealing with uncertainty:* Since uncertainty permeates climate change assessments, projects have relied on specialised methods, such as the development and use of climate scenarios. But the uncertainty in predicting future climate is one reason why the APF recommends that adaptation assessment be anchored with an understanding of current climate risk. This helps to provide a road map from known territory into uncertain futures.

*Scenario development:* APF users should verify that the scenarios incorporated in their assessments are based on an internally consistent set of assumptions about driving forces and key relationships (e.g., between socio-economic conditions, natural resource management, and policy-making processes).

#### Checklist

This checklist is a quick reference to the activities involved in the *Assessing Future Climate Risks* Component of the APF. Before proceeding to the next APF Component, users may want to consider whether they have:

- **Characterised** climate trends, risks and opportunities?
- Described scenarios of **socio-economic (and environmental) conditions**?
- Addressed **uncertainties** in the choice of methods and tools for trend predictions?
- Laid a basis for its incorporation into **risk management strategies**, and planning under uncertainty?

#### Formulating an adaptation strategy

**Key TPs: 8;  
TP2 Section 2.6.4;  
TP7 Section 7.4.4**

An adaptation strategy for a country refers to a broad plan of action for addressing impacts of climate change. The APF was developed to provide guidance on adaptation assessment.

Operationally, the formulation of an adaptation strategy can pose a big challenge. It means situating the climate change issue in a policy world that is full of competing priorities, interest groups, short attention spans, election-driven priorities and a host of potential unpredictable events. Ultimately, whatever options and measures the project team proposes to reduce the priority system's vulnerability to climate risks, packaging those decisions into an adaptation strategy will require overcoming practical constraints.

*Think of the process of formulating an adaptation strategy as trying to identify a suite of policies and measures that are extensions of the previous Components and fit within the priority system's unique policy-making process.*

Clearly, significant momentum has occurred in recent decades through international participation in multilateral environmental agreements (e.g., the United Nations Convention on Desertification, United Nations Framework Convention on Climate Change) that could be effectively leveraged. Although this effort was not directly motivated by climate change adaptation, their objectives overlap. The adaptation strategy development process should build on such experience.

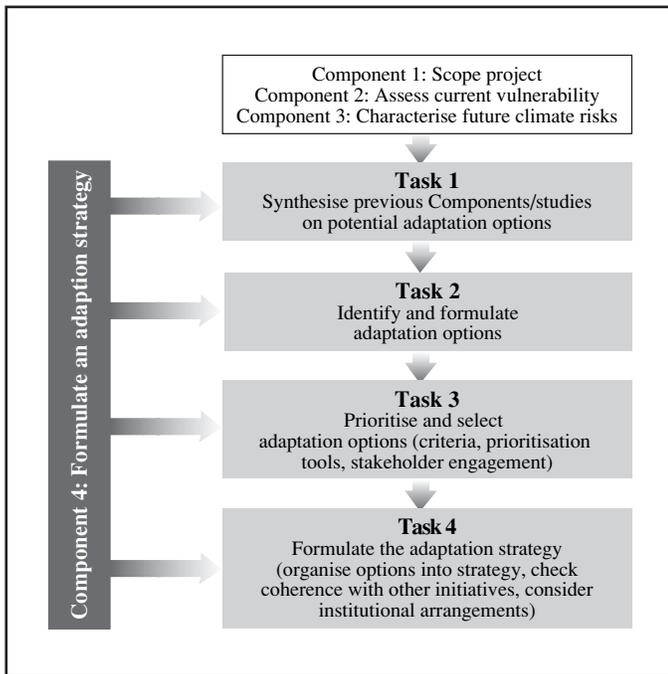
The **purpose** of this APF Component is to integrate all of the preceding APF work into a well-defined strategy to direct adaptation action.

As Figure-4 illustrates, the **process** will generally include four major tasks:

1. Synthesise previous steps/studies on potential adaptation options;
2. Identify and formulate adaptation options;
3. Prioritise and select adaptation options; and
4. Formulate an adaptation strategy.

The **outputs** will be the adaptation strategy itself, including recommendations for planning policies and specific measures.

To help ensure broad-based endorsement and effective implementation of the resulting adaptation strategy, the full group of stakeholders should be involved in this Component. The formulation of an adaptation strategy should proceed in conjunction with the guidance discussed in the *Assessing and Enhancing Adaptive Capacity* Component.



**Figure 4:** Tasks in formulating an adaptation strategy

### **Task 1: Synthesise previous Components/studies on potential adaptation options**

The main goal of Task 1 is to take stock of what has emerged so far in the APF process. Once the assessments of current and future climate risks have been completed, the results can be synthesised. The output will be a preliminary, non-prioritised list of potential adaptation options.

**TP8 Section 8.4.2** From these preceding efforts (especially, Component 2, *Assessing current vulnerability*), APF users will have identified adaptation options currently in place. In addition to collating potential options in a list, the project team should also provide a brief assessment of these experiences – i.e., what worked and why? Of course, an adaptation strategy should also respond to an analysis of future climate risks. Suggestions for options can be obtained from the previous APF Component as well as from studies in the literature from countries facing similar adaptation challenges.

### **Task 2: Identify and formulate adaptation options**

**TP8 Section 8.4.3** The main goals of Task 2 are to characterise adaptation options in terms of their costs, impacts, and potential barriers, and to develop criteria for prioritising options.

The development of criteria should be a stakeholder-driven process. To ensure that criteria reflect the needs of the priority

system, stakeholder input is critical. The criteria developed will be used to prioritise measures and policies. They can also act as indicators of the project's longer-term success in achieving the adaptation objectives.

An example of a set of criteria is provided by the National Adaptation Programmes of Action (NAPA) Guidelines<sup>1</sup>. As the NAPA and APF are highly complementary processes, these criteria may be of use:

1. *Expected level of damage* as an indication of the benefits to be gained by preventing or mitigating damage;
2. *Poverty reduction* as an indication of enhanced adaptive capacity;
3. *Synergies with multilateral environmental agreements* as an indicator of cost savings and/or additional benefit;
4. *Cost effectiveness* (or just costs). Even in cases where existing criteria are used, they should be adjusted as needed.

### **Task 3: Prioritise and select adaptation options**

**TP8 Section 8.4.4;  
TP8 Annex 8.1** The goal of Task 3 is to identify priorities from the array of possible adaptation policy options and measures. Using selected criteria and prioritisation methods, the output will be a ranked list of adaptation options.

This task involves selecting and applying prioritisation methods. In view of the diversity of climate change adaptation options, probably more than one method may be needed to review all choices. To decide which should be used in the prioritisation process, users should carefully consider the available methods (e.g., cost benefit analysis, cost effectiveness analysis, multi-criteria analysis, expert judgment). Some methods require higher levels of data and resource inputs (in terms of time and skills of stakeholders).

### **Task 4: Formulate the adaptation strategy**

**TP8 Section 8.4.4;  
TP8 Annex 8.1** The goal of Task 4 is to assemble priority adaptation options into a cohesive strategy. The output will be a strategy document that outlines an alternative package of policy mixes and measures, implementation plans (who, where, with what resources), time frames (when) and operational issues (what types of institutional support).

This task will generally involve the following activities:

<sup>1</sup> Annex C, Global Environment Facility Operational Guidelines for Expedited Financing for the Preparation of National Adaptation Programmes of Action by Least Developed Countries (April 2002).

1. Drafting the adaptation strategy;
2. Reviewing the coherence of the strategy with existing strategies;
3. Scoping issues related to strategy implementation (e.g., barriers and barrier removal plans); and
4. Finalising the strategy.

Stakeholder support may be the single most important factor in determining whether the adaptation strategy is successfully implemented. For this reason, broad stakeholder input to the strategy development process is critical.

### Key issues

The tasks above raise a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

*Approach for formulating adaptation strategy:* The choice of approach depends on the dynamics of the stakeholder process that has unfolded. If this process has been dominated by high-level policy-makers and technical analysts, the top-down approach is likely to work best. If stakeholder engagement has been broad and inclusive, a bottom-up or hybrid approach may serve best.

*Designing the implementation strategy:* The formulation of the adaptation strategy is not the end of the APF process. The strategy then needs to be implemented and sustained. Given this, the strategy should be designed with the specific needs of the implementation process in mind. The strategy should be coherent and fit the dictates of the policy process. The adaptation strategy is thus a “living” document – a continuous process, flexible enough to integrate new elements, including the climate “surprises” that will certainly occur in the future.

### Checklist

This checklist is a quick reference to the activities involved in the *Formulating an adaptation strategy* Component of the APF. Before proceeding to the next APF Component, users may want to consider whether they have:

- **Taken stock** of what has emerged thus far in the APF process?
- Characterised **adaptation options** in terms of their costs, impacts, and barriers?
- Created a **ranked set** of adaptation interventions?
- Prepared the adaptation **strategy document** that outlines measures, implementation plans, time frames and operational issues?

### Continuing the adaptation process

**Key TPs: 8; 9;  
TP2 Section 2.6.5;  
TP7 Section 7.4.5**

To be effective over the long term, the adaptation process should lay the groundwork for similar efforts in the future in ways that support overarching national development objectives. To do so, the adaptation strategy must be integrated with processes to update plans, policies and programmes.

Effectively incorporating adaptation into a country's development planning is a challenging endeavour. It requires cross-sectoral cooperation, an interdisciplinary approach and considerable political will. Monitoring implemented adaptation strategies is also demanding. It requires both an ongoing commitment to monitoring and evaluation (M&E) and a high-level government response to addressing barriers that are impeding the strategy.

***Think of this APF Component as the start of a long-term process of adaptation, begun by your project.***

The **purpose** of this APF Component is to implement and sustain the adaptation strategy, policies and measures, through:

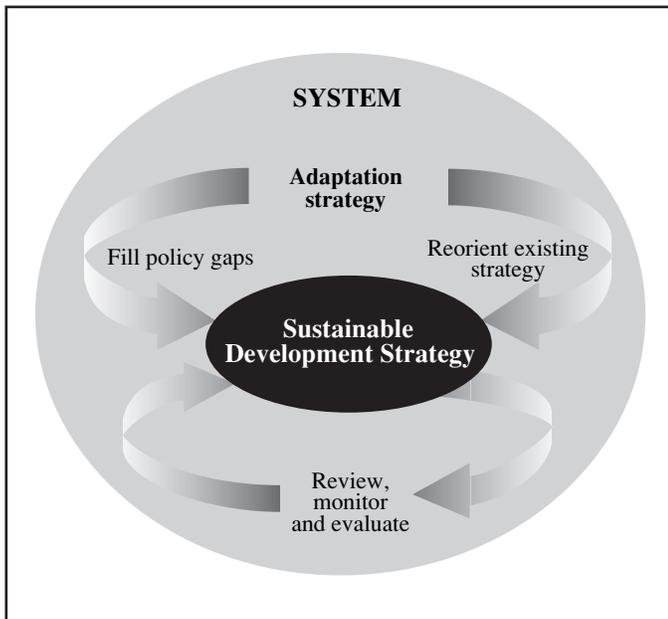
- effective integration with existing processes and plans;
- strong institutional support;
- M&E processes;
- responsive mechanisms for adjusting the adaptation process; and
- creative mainstreaming strategies.

The **process** will generally involve three major tasks:

1. Incorporate adaptation policies and measures into development plans;
2. Implement the adaptation strategy and institutionalise follow-ups; and
3. Review, monitor and evaluate the effectiveness of policies, measures and projects.

There is no single **output** from this APF Component. Instead, it is the starting point of what will hopefully be a sustained adaptation process. The set of tasks seeks to initiate new adaptation action through policies and measures, to promote a supportive institutional structure, and to launch iterative feedback loops designed to improve the process over time.

As in other APF Components, stakeholders play an essential role. For example, integrating the strategy with existing development plans will require the close involvement of selected government stakeholders. They represent key parts of the institutional framework and can help to build and sustain the necessary M&E process. Engaging stakeholders for this longer-term activity should not be an afterthought. Instead, users are encouraged to plan carefully for this phase in the stakeholder engagement strategy (discussed in the next section and in Component 1).



**Figure 5:** Conceptualisation of continuing the adaptation process

Figure 5 illustrates the activities and feedback loops in this APF Component. The underlying concept is that there are two approaches to continuing the adaptation process. On one hand, countries can re-orient existing policies and practices to make them more responsive to the increased vulnerability caused by increased variability and change (right top arrow). Disaster management practices are a good example of this phenomenon.

Alternatively, countries can choose to address policy gaps regarding climate risks, while also enhancing the resilience of the priority system (left top arrow). These interventions remove existing barriers to the adoption of policies that are sensitive to the impacts of climate change, including variability.

**Task 1: Incorporate adaptation policies and measures into development plans**

**TP8 Section 8.4.5**  
**TP9 Sections 9.4.2, 9.4.3** An adaptation strategy needs to be incorporated with key development policies, processes and plans. The strategy is likely to have significant co-benefits in terms of improving resource management, enhancing capacity development, reducing poverty, and reducing vulnerability to a variety of current stresses. Integrating the adaptation strategy – e.g., by “piggy-backing” it onto related plans and activities – can make its implementation more efficient. In fact, given the competitive nature of policy-making, a fledgling policy such as climate change adaptation may be unlikely to succeed if it is not integrated with other more familiar and established issues.

The goal of Task 1 is to effectively incorporate the adaptation strategy, policies and measures into relevant existing processes and plans. The output may include a detailed plan for integra-

tion and an ongoing process through which strategy is actively integrated.

The integration plan should pay particular attention to potential barriers, including capacity. Users will need to be open and creative about addressing the challenges. Institutional inertia and ongoing policy debates, for example, can thwart the integration process. Understanding these and formulating strategies to overcome them will significantly improve chances of success.

Incorporating adaptation policies and measures refers to their formal integration into national and/or regional development process and budgets. The idea is to make the adaptation strategy a basic Component of existing national development plans. To start with, it is recommended that users establish common ground between the adaptation strategy and existing policy processes. This will enable an assessment of how the adaptation strategy complements – or even advances – the system’s broader objectives of poverty reduction and sustainable development. The following are likely places to incorporate Components of a climate change adaptation strategy:

- environmental management plans (particularly when they incorporate environmental impact assessments);
- national conservation strategies;
- disaster preparedness and/or management plans; and
- sustainable development plans for specific sectors (e.g., agriculture, forestry, transportation, fisheries).

**Task 2: Implement the adaptation strategy and institutionalise follow-ups**

**TP9 Sections 9.4.2, 9.4.3** The goal of Task 2 is to transform outputs – in particular, the adaptation strategy – into an ongoing adaptation process. The output is likely to include a well-documented implementation plan, including details on establishing an institutional support structure. The less tangible – but more important – output will be the adaptation process itself.

This task will generally involve the following activities:

1. Assembling the resources for implementation of the adaptation strategy (e.g., staff, facilities, funds);
2. Launching management and oversight structures for each aspect of implementation (e.g., local teams, national managers, advisory groups);
3. Initiating the implementation activities; and
4. Formalising an institutional structure for follow-up and support.

Activity 3 might also include the launch of policy integration meetings (e.g., on integrating adaptation with activities of the national poverty reduction strategy), new sectoral strategies (e.g., to provide improved support to water harvesting activities) and/or specific adaptation projects.

### Task 3: Review, monitor and evaluate the effectiveness of policies, measures and projects

**TP9 Section 9.4.1** The goal of Task 3 is to enable the necessary M&E so that the adaptation process can be sustained and improved over time: an M&E system that identifies what aspects of the adaptation process are working, are not working, and why, and that provides mechanisms for adjusting the adaptation process as needed. The output will be a detailed M&E plan.

This task will generally involve scoping and planning for M&E and launching the M&E framework. To do so, users will want to consider key M&E options and approaches, such as participatory monitoring and evaluation (i.e., “learning by doing”).

#### Key issues

The tasks above raise a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

*Confronting barriers to adaptation M&E:* Barriers may exist to implementing adaptation strategies, policies and measures. These may be due to resource constraints and governance issues. These barriers need to be openly confronted and possible solutions explored.

*Linking indicators:* The APF provides insight into who will be adapting to what, how they will be adapting, and why. Answers to these questions define, not only the scope of prospective adaptation, but also the basis for monitoring and evaluation.

#### Checklist

This checklist is a quick reference to the activities involved in the *Continuing the adaptation process* Component of the APF. Users may want to consider whether they have:

- Developed a detailed plan for effective **incorporation** of the adaptation strategy into national development plans?
- Prepared an adaptation **implementation plan** and identified how to institutionalise follow-up?
- Assembled a strategy for **reviewing, monitoring, and evaluating** adaptation impacts?

### Engaging stakeholders

**Key TPs: 1, 2; TP2 Section 2.6** The APF is an explicitly stakeholder-driven approach to climate change adaptation projects. Engaging stakeholders is a universal activity that cuts across all APF Components. Stakeholders can contribute significantly to understanding current vulnerability and adaptation and to identifying the necessary adaptation measures. At the same time, their involvement in a project can educate stakeholders about the risks associated with climate change, and encourage them to support the adaptation process. Done well, this process of engagement can assist the implementation of adaptation policies and the formation of an adaptation community. More important, it can provide the momentum to carry the adaptation process forward.

#### *Stakeholder involvement at different levels and stages is crucial to successful adaptation.*

The **purpose** of this cross-cutting Component is to ensure that key stakeholders are fundamentally engaged in the adaptation project. Here “key stakeholders” refers to both those affected by climate change and those positioned most effectively to advance adaptation.

This **process** will include three major tasks:

1. Identify stakeholders;
2. Clarify the roles of stakeholders; and
3. Manage the dialogue process.

The **output** should be an active, inclusive stakeholder dialogue that is developed and sustained over the course of the project.

#### *Links with Adaptation Policy Framework Components*

In broad terms, stakeholder-related tasks and participation levels should be closely linked with the APF Components, as outlined below.

- *Scoping and designing an adaptation project:* Key tasks should focus on reviewing existing policies, identifying stakeholders, and clarifying stakeholder interests and roles. At this stage of the process, stakeholder participation should be rather limited and focused on a subset of the stakeholder group.
- *Assessing current vulnerability:* Key tasks should focus on developing a common understanding, identifying successful coping strategies, and providing equitable access to information. Participation should be extended to representatives of the most vulnerable groups, technical specialists, and policy makers at the appropriate levels (local, regional, and/or national).
- *Assessing future climate risks:* Key tasks should focus on defining planning horizons and other parameters, and stakeholder perceptions (e.g., with regard to future

scenarios). Participation for this Component should be the same as for the previous Component.

*Formulating an adaptation strategy:* Key tasks should focus on assessing and prioritising adaptation options. Participation should be very broad for this Component.

*Continuing the adaptation process:* Key tasks should focus on fostering stakeholder action on, and support of, adaptation activities. As with the previous Component, participation should be as broad as possible – essentially all stakeholders should be involved.

Conducting stakeholder tasks and facilitating their participation does not in itself guarantee equity, fairness or acceptance. The process must be carefully designed, implemented and managed. Some stakeholders will be centrally involved throughout the process. Others may play more specialised roles. The aim is to create a stakeholder engagement process that leads to open dialogue, mutual learning, and consensus decisions.

To achieve this, each of the three major task areas is summarised below.

### **Identify key stakeholders**

Major stakeholders include the most vulnerable groups and those who have a role in influencing climate change adaptation in the priority system.

**TP1 Section 1.4.1; TP2 Sections 2.5, 2.6** Identifying stakeholders is a key task in the initial APF Component (i.e., *Scoping and designing an adaptation project*). The selected stakeholders should not simply be those known to be involved in these issues, such as government representatives, non-governmental organisation (NGO) volunteers, and academics. Every effort should be made to include other individuals, particularly the highly vulnerable in society, so that they are represented in the adaptation process.

A simple but effective way to identify stakeholders is as follows:

1. Conduct initial scoping of stakeholders and identify a core group;
2. Ask this core group to suggest other stakeholders; and
3. Ask this larger group to ask whom they consider to be relevant stakeholders until no new names are identified.

Those invited to participate should have the capacity to influence the adaptation process, or be part of a group that will be directly affected by a predicted climatic impact and willing to participate in the process. Preliminary outputs of this process are a thorough scoping of the key stakeholders to engage in each of the five APF Components, and a plan for soliciting their participation.

### **Clarify stakeholder roles**

**TP2 Section 2.5, Box 2.4, Annex A.2.2** Stakeholders involved throughout the APF process should have suitable and productive roles. Stakeholder roles can be defined in a number of ways. One useful option is to organise roles according to stakeholder type and their influence/potential. This enables: a clarification of appropriate general roles for each stakeholder type; suggestions of more specific roles for particularly pivotal stakeholders, to the advantage of the project; and clarification of expected level of contribution for each APF Component.

Each of the APF Components implies a different project role for the stakeholders involved. A plan should be developed that outlines what specific stakeholder activities will be useful in each Component; which stakeholders are best suited to carrying out these activities; and what methods will be used to engage these stakeholders in these activities. Attention to these issues will help ensure that expectations regarding stakeholder contributions are consistent with the demands of the particular APF Component.

### **Manage the dialogue process**

Stakeholders, particularly those whose livelihoods are directly affected by the impacts of current climate variability, will often have a rich experience of, and knowledge about, what kind of adaptation is practical. However, these people may face greater logistical challenges to participating in the project. Furthermore, they may distrust or feel uncomfortable with the process. Since the involvement of these groups is essential, it may be necessary to devote more effort or support to effectively manage the sustained involvement of these groups.

Stakeholder dialogues need to be transparent in order to be effective. There are many techniques available to accomplish this, including techniques to: explore expectations and build trust; promote discussion and scope issues; conduct participatory analysis; and evaluate the process. These techniques should be applied flexibly and in response to project needs and those of stakeholders. At a strategic management level, this will require a broad-based plan for effective stakeholder communication and a plan to help stakeholders sustain the adaptation process after completion of the adaptation project.

### **Key issues**

The discussion above raises a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

*Communicating project outputs:* Stakeholders may be the most effective resource for communicating project outputs. A key aspect of the stakeholder engagement plan should be a strategy for communicating with stakeholders and the broader groups they represent. Stakeholders themselves can help to construct

this communication strategy. Key stakeholders can provide guidance (prior to and during the project) on how best to communicate with certain groups. This guidance can be used to develop and improve the project's stakeholder process, and as input to a larger strategy for communicating project outputs.

*Ensuring representation and inclusiveness:* The aim in creating a stakeholder dialogue is to enable open exchange and foster mutual (team and stakeholder) learning. Through listening to the views and experience of other people involved in the process, stakeholders can build a shared understanding of the issues. Priority areas for action can emerge that take account of everyone's perceptions. This process can build mutual understanding and trust between the groups and individuals involved. A substantial literature on working with stakeholders exists, including engagement approaches and principles of effective engagement.

### Assessing and enhancing adaptive capacity

#### Key TP: 7

Identifying ways to increase adaptive capacity is a universal activity that cuts across all APF Components. The focus should be on adaptive capacity that is directly relevant to climate change including variability.

#### TP7 Section 7.4

One of the APF's innovations is that it urges countries to view adaptive capacity as a policy change process, and stakeholders as change agents. Furthermore, it treats adaptive capacity as a multidisciplinary approach to respond to different dimensions of climate change, e.g., temporal (current and future); strategic (policy and governance implementation); or operative (assessment determinants and indicators).

*Adaptive capacity is the property of a system to adjust its characteristics or behaviour, in order to expand its coping range under existing climate variability, or future climate conditions.*

The main **purpose** of this cross-cutting Component is to provide guidance on how adaptive capacity can be assessed and enhanced.

The **process** includes three major tasks:

1. Assessing current adaptive capacity;
2. Identifying the constraints of adaptive capacity; and
3. Developing actions to enhance adaptive capacity.

The expected **outputs** of this cross-cutting Component should be an assessment of current adaptive capacity in the priority system(s), and a strategy for enhancing adaptive capacity in response to project results.

### Links with Adaptation Policy Framework Components

Consider the assessment of adaptive capacity as a set of questions that can be introduced and explored during the stakeholder dialogue process within each of the five APF Components. In effect, the discussion of adaptive capacity should be integrated into the broader stakeholder engagement process as early in the project timeline as possible. A set of exploratory questions to help to highlight key linkages between adaptive capacity and each APF Component is outlined below.

- *Scoping and designing an adaptation project:* What baseline capacity is evident from existing development and poverty studies and from recent country experience?
- *Assessing current vulnerability:* What adaptive capacity already exists to reduce current vulnerability to familiar hazards? Among which vulnerable groups and systems?
- *Assessing future climate risks:* What additional capacity is needed for vulnerable population groups, regions and sectors to adapt to future climate hazards? Given existing socio-economic and environmental trends, how would systems and population groups cope with increasing frequency and severity of existing hazards, or with new hazards?
- *Formulating an adaptation strategy:* How can national capacity be enhanced to promote autonomous adaptation? What barriers confront the implementation of adaptation strategies? What strategies can be formulated to encourage people to be more receptive to and positive about adaptation? Who needs to adapt?
- *Continuing the adaptation process:* What types of monitoring and evaluation protocols can help to continuously involve stakeholders in the adaptation process?

### Assess current adaptive capacity

To assess adaptive capacity, indicators may be developed. Adaptive capacity indicators are more difficult to identify than, e.g., risk indicators. However, with care, users can develop a set of indicators that will be applicable to the priority system(s) under consideration. Determinants and indicators of adaptive capacity may be identified by, e.g., posing a set of targeted questions to the range of stakeholders.

#### TP1 TP7 Sections 7.3.7, 7.4

Based on the set of indicators and determinants that have been developed, a qualitative assessment of adaptive capacity in the priority system can be carried out. Adaptive capacity can be generic (i.e., a population's ability to cope with a range of climatic, environmental, economic or other stresses) or specific (i.e., capacity to cope with specific current climate). The output of this activity will consist of the identification of the level to which adaptive measures have already been implemented, and the implications of promoting future adaptive capacity. This task is relevant to Component 2, *Assessing current vulnerability*.

### ***Identify barriers to, and opportunities for, developing adaptive capacity***

It is important to identify the existing barriers to implementation of adaptive measures, as well as the particular opportunities and strengths that may facilitate the introduction of adaptive measures. Generally, the output of this activity will consist of a description of local, regional, and national policy and governance roles for enhancing adaptive capacity. This task is relevant to the assessment of future climate risks and the characterisation of adaptation barriers and opportunities in the formulation of an adaptation strategy (Components 3 and 4).

### ***Develop strategies to integrate adaptive capacity into adaptation***

**TP7 Section 7.4** The purpose of this task is to develop strategies to enhance both generic and specific adaptive capacity, facilitate anticipatory adaptation, and promote enabling environments for autonomous adaptation. There are seven steps in this process that cut across each APF Component and, in particular, Component 4, *Formulating an adaptation strategy*. The output for this activity will consist of a set of policy and governance initiatives that will enhance adaptive capacity.

#### ***Key issues***

The discussion above raises a number of institutional, analytical and operational issues. This section reiterates key issues and outlines new, overarching considerations.

**TP7 Section 7.4** *Governance strategies for enhancing adaptive capacity*: These refer to multiple ways (e.g., institutional, regulatory, educational) that governments respond to elements in society to implement adaptation policies.

*Policy strategies for enhancing adaptive capacity*: These strategies may be viewed as the fiscal, legislative and other instruments for addressing climate change. Policy strategies encompass a range of options including, e.g.:

- TP8 Box 8.2**
- Changes in taxation or regulatory regimes;
  - Redistribution or reallocation of resources; and
  - Support for research agencies and public information projects.