

Bellagio Framework for Adaptation Assessment and Prioritization

Even though climate change affects countries differently, all countries will need to perform many of the same **adaptation functions**, such as climate information management and public engagement in adaptation planning. At the end of 2008, the World Resources Institute convened a technical workshop in Bellagio, Italy to begin enumerating a shared set of critical adaptation functions. The resulting **“Bellagio Framework”** can help identify strengths and gaps in adaptation capacities in a given country, as a basis for prioritizing adaptation actions and investments.

As climate negotiators, international funders, and national governments all begin to develop climate adaptation agendas, it is getting more urgent to have a shared approach to identifying priorities for action. A shared approach could help catalyze coordinated action among diverse funders, and could provide a common basis for assessing progress in different places. However, finding a systematic way of identifying priorities at the international level is hard because of the huge array of potential climate impacts, the different types of societies they will hit, and the wide range of potential adaptation strategies and measures.

THE BELLAGIO FRAMEWORK APPROACH: IDENTIFYING NATIONAL ADAPTATION FUNCTIONS

One approach to this challenge is to identify a set of fundamental functions that all countries must perform if they are to respond effectively to climate change. For example, these functions might include things like managing information needed for adaptation decisions, involving stakeholders in adaptation planning, creating incentives for the private sector to adapt, or integrating climate change into disaster risk reduction. Countries will all perform these functions differently, depending on their national circumstances, but the core of the function is the same.

The capacities needed to perform key adaptation functions can be thought of as elements of a national *“adaptation system”* that will support society in the long-term, iterative process of adjusting as the climate changes. Unfortunately, few countries are fully equipped with the information systems, policy structures, and basic institutions that provide such capabilities. Moreover, to date there have been few systematic efforts even to enumerate key national adaptation functions or the activities and capabilities needed to perform them.

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WHY DO ADAPTATION FUNCTIONS MATTER?

Failure (thus far) to identify and clearly articulate a core set of national functions has contributed to widespread confusion about the overlap between adaptation and development. This confusion has made it more difficult to build the political will needed to generate truly additional adaptation funding, both within the UNFCCC and in funding decisions elsewhere. Perhaps more important, the lack of a concise, user-friendly articulation of key adaptation functions increases the difficulty of building robust, far-sighted national approaches to adaptation. Decision-makers are lacking:

- a framework with which to *identify strengths and gaps* in adaptation capacities in a given country, in order to prioritize actions and investments, and
- a reference against which to *assess progress* on adaptation, in order to adjust course if necessary.

A FIRST STEP: THE BELLAGIO FRAMEWORK WORKSHOP

In November 2008, the World Resources Institute (WRI) hosted a small technical workshop to begin developing a broadly applicable framework of national adaptation functions. The workshop was held in Bellagio, Italy, with the generous support of the Rockefeller Foundation. The objective of the workshop was two-fold:

- to identify a core set of *major adaptation functions* needed in a broad spectrum of countries, and
- to explore options for building *progress metrics* to assess effectiveness in performing the functions.

Criteria for the functions framework included:

- Broad applicability
- Flexibility to accommodate national circumstances
- Logic and straightforwardness
- User-friendliness and common sense
- A top-down approach that empowers bottom-up action
- Comprehensiveness with regard to key national adaptation functions
- Compatibility with other tools, frameworks, and decision criteria

The table on the following pages lists the key adaptation functions identified by the workshop participants, which are now under further development by workshop participants and their partners.

NEXT STEPS

Clearly, different stakeholders (e.g., planners, negotiators, funders, project implementers, NGOs, evaluators) who may use the framework will focus on different adaptation functions and will approach them from different perspectives. Moreover, countries will each build the capacities needed to perform the functions at different rates and in different sequences. To address these considerations, WRI is now exploring possible development of different assessment and planning tools, based on the functions in the framework. Options for further development include:

- Function-by-function guidance to assist policy-makers and planners, including links to existing tools and relevant information sources
- Development of assessment questions for each function, for use in establishing monitoring and evaluation programs
- Institutional analysis to better link each function with the types of stakeholders or agencies likely to be responsible for it
- “Sector-based” tools that translate the generic framework into functions specific to health, agriculture, water, and other issue areas

A key next step is to test the framework — or part of it — through a practical pilot assessment in a developing country.

Table of National Adaptation Functions

PLANNING FUNCTIONS	<p>1. Assessment – as an input to identifying adaptation needs and options</p> <ul style="list-style-type: none"> • Vulnerability and impacts assessment • National inventory of existing adaptation efforts (including community-based initiatives) • Assessment of climate risks to priorities in major existing national planning documents (e.g., poverty reduction strategy, national development strategy) • National system for regular assessment updates in the future <p>2. Prioritization – based on assessment findings and current national development priorities</p> <ul style="list-style-type: none"> • Identification of priority sectors for integrating adaptation • Identification of priority geographic regions for adaptation action • Identification of priority populations that may need special attention • Identification of any national institutions that may need reform or strengthening for adaptation to proceed effectively • Identification of critical ecosystems and their services • Identification of critical infrastructure <p>3. High-level Coordination – to enable cross-sector action and alignment</p> <ul style="list-style-type: none"> • Identification (or creation) of a national platform (or network) for stakeholder engagement and public information sharing • Identification (or creation) of a mechanism for adaptation coordination among national ministries • Provision of a mandate and resources to an authoritative national body for conducting coordination
MANAGEMENT FUNCTIONS	<p>1. Information Management</p> <ul style="list-style-type: none"> • Development, maintenance, and regular updating of systems for observation/monitoring of: <ul style="list-style-type: none"> – Key climate variables – The status of vulnerable natural and human systems – Current coping strategies • Updating of key definitions (e.g., of “normal” precipitation levels, “drought,” and important system “thresholds”) • Consolidation and analysis of historical climate information • Development of climate projections, including uncertainty estimates • Development, maintenance, and regular updating of demographic information systems • Development of platforms/networks for active engagement of stakeholders in information gathering/dissemination • Making information accessible and easy to use (e.g., compatibility of different sources, “packaging” of related information, cost, analysis, access rights) • Building the capacity of various stakeholders to use information for adaptation decisions <p>2. Addressing Adaptation Incentives and Barriers</p> <ul style="list-style-type: none"> • Identification of incentives needed to foster adaptation – including who should be incentivized to do what • Identification of barriers to adaptation, including through: <ul style="list-style-type: none"> – Policy framework? – Enforcement failures? – Rates, charges, taxes, permits, or tariffs? – Zoning regulations? – Insurance premiums? – Standards? – Land tenure or other ownership structures? – Lack of awareness or information? – Lack of resources? – Sub-national institutional structure? • Identification and selection of options for creating new incentives for adaptation action • Provision of resources for incentive creation/barrier removal • Implementation of steps to create incentives or reduce barriers • Establishment of a system for monitoring and reviewing the effectiveness of incentive systems <p>3. COORDINATION ACROSS SERVICES AND LEVELS OF GOVERNMENT</p> <ul style="list-style-type: none"> • Identification of services and sectors where coordination may be needed for successful adaptation • Identification of instances where new authority or resources may be needed at lower levels of government • Identification, assessment, and selection of options for coordinating service delivery • Incentivizing and empowering engagement by appropriate agencies/stakeholders in coordinated activity • Monitoring/evaluation of coordination effectiveness • Integrating disaster risk management into public services • Integrating natural resources management into public services

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Table of National Adaptation Functions, *continued*

SERVICE DELIVERY FUNCTIONS

1. Infrastructure Functions**a. Reducing Climate Risk in Infrastructure Planning and Maintenance**

- Development and implementation of a system for assessing climate impacts on existing and planned infrastructure
- Identification, assessment, and prioritization of options to decrease the vulnerability of infrastructure to climate risks, including:
 - “Soft” infrastructure options?
 - “Hard” infrastructure options?
 - Retirement of at-risk infrastructure?
 - Costs of each option?
 - Comparative effectiveness of the options?
- Provision of appropriate resources for adaptation of existing or planned infrastructure
- Implementation of infrastructure adaptation options (based on above)
- System for ongoing monitoring and reviewing of the effectiveness of climate risk reduction for infrastructure

b. Infrastructure As a Climate Solution

- Identification of risks to key sectors/regions/populations for which construction of new infrastructure may be an adaptation solution
- Identification of risks to key sectors/regions/populations for which existing or planned infrastructure may be contributing to maladaptation or restricting implementation of adaptation options
- Consideration of the full range of options to address the climate risk(s) above, including:
 - “Soft” infrastructure options?
 - “Hard” infrastructure options?
 - Nature-based solutions?
 - A combination of soft/hard/nature-based solutions?
 - Costs of each option?
 - Comparative effectiveness of the options?
 - Likely performance of the options over both short- and long-terms?
 - Synergies/trade-offs between each option and adaptation needs across sectors/regions/populations?
- Prioritization of adaptation options based on the above assessment
- Provision of appropriate resources for adaptation option(s) above
- Implementation of selected adaptation options
- System for monitoring/reviewing of steps taken

2. Natural Resources Management**a. Reducing Climate Risk to Natural Resources**

- Development and implementation of systems for integrated management, including:
 - Integration of climate risk into management planning
 - Updating/development of monitoring and observation systems
 - Creation of management processes/institutions where they don't exist
 - Frequent review of management plans and systems
 - Identifying synergies or conflicts between management needs of different systems (e.g., upstream/downstream issues, or effects of urban systems on neighboring ecosystems)
- Systems for managing tradeoffs between natural resources management (NRM) and other priorities
- Systems for valuing ecosystems that account for their resilience-building function and provision of other key services

b. Natural Resources Management as a Climate Solution

- Identification of risks to key sectors/regions/populations for which new NRM practices may be an adaptation solution
- Identification of risks to key sectors/regions/populations for which existing NRM practices may contribute to maladaptation or may restrict implementation of adaptation options
- Consideration of the full range of options to address the climate risk(s) above, including:
 - Technology or infrastructure options?
 - Various nature-based solutions?
 - A combination of technology/infrastructure and nature-based options?
 - Costs of each option?
 - Comparative effectiveness of the options?
 - Likely performance of the options over both short- and long-terms?
 - Synergies/trade-offs between the options?
 - Synergies/trade-offs across sectors/regions/populations?
- Prioritization of adaptation options based on the above assessment
- Provision of appropriate resources for adaptation option(s) above
- Implementation of selected adaptation options
- System for monitoring/review of steps taken

Table of National Adaptation Functions, *continued*

SERVICE DELIVERY FUNCTIONS (continued)

3. Social Protection***a. Reducing Climate Risk to Existing Social Protection Goals***

- Development and implementation of a system for assessing climate change implications on existing social protection programs
- Identification, assessment, and prioritization of options to decrease the vulnerability of social protection efforts to climate risks, including:
 - Options to revise program design in light of climate risks?
 - Options to end maladaptive initiatives?
 - Costs of each option?
 - Comparative effectiveness of the options?
- Provision of appropriate resources for adaptation of existing social protection efforts
- Implementation of adaptation options (based on above)
- System for monitoring and reviewing the effectiveness of climate risk reduction for social protection

b. Social Protection As a Climate Solution

- Identification of risks to key sectors/regions/populations for which new social protection initiatives may be an adaptation solution
- Identification of risks to key sectors/regions/populations for which existing social protection initiatives may contribute to maladaptation or prevent implementation of adaptation options
- Consideration of the full range of options to address the climate risk(s) above, including:
 - Costs of each option?
 - Comparative effectiveness of the options?
 - Likely performance of the options over both short- and long-terms?
 - Synergies/trade-offs between the options?
 - Synergies/trade-offs across sectors/regions/populations?
- Prioritization of adaptation options based on the above assessment
- Provision of appropriate resources for adaptation option(s) above
- Implementation of selected adaptation options
- System for monitoring/reviewing of steps taken

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