

# Financing local adaptation to climate change





# FINANCING LOCAL ADAPTATION TO CLIMATE CHANGE

Experiences with  
performance-based  
climate resilience  
grants

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# PREFACE

Local authorities in least developed countries (LDCs) are in a unique position to identify climate change adaptation responses that best meet local needs, and typically have the mandate to undertake the small- to medium-sized adaptation investments required for building climate resilience. Yet they frequently lack the resources to do so – particularly to do so in a way which is aligned with established local decision-making processes and planning and budgeting cycles.

The LoCAL Climate Adaptive Living Facility (LoCAL) has been designed to address this challenge, building on over two decades of UNCDF experience in fiscal decentralization, local public financial management, and local investments and procurement around the world.

LoCAL is a further refinement of these experiences and has shown that performance-based grants for climate resilience can build local government capacities to handle climate finance and draw attention to the role of local authorities in addressing the climate change challenge at the local level.

Experiences from the first five years of piloting and scaling up the mechanism in Africa, Asia and the Pacific have provided a range of lessons and good practices for design and implementation, bringing the existing knowledge and 20 years of UNCDF experience with performance-based grants to a new area of work.

As LoCAL expands, it is critical to collect and document experiences, lessons and good practices; continue raising awareness of and trust in the role local governments should play in adapting to climate change; build

understanding of the LoCAL mechanism; and share the knowledge created with existing and new participating countries, practitioners, development partners and the international community at large.

This publication builds on the outcomes of the first global LoCAL lessons learned workshop, Strengthening Resilience and Adaptation to Climate Change through Local Government Systems, convened in Cambodia in November 2015 as well as on more recent developments as the pace of implementation continues to accelerate in newer participating countries.

The material is organized into 10 chapters: Chapter 1 introduces the LoCAL mechanism and its rationale. Chapter 2 describes the steps entailed in assessing the context and conditions to establish a LoCAL initiative in a country; Chapter 3 reviews the key elements developed when designing the mechanism. Chapters 4–9 explore the various stages of a LoCAL cycle as it is integrated in the local public planning and budgeting cycle, specifically touching on climate assessments (Chapter 4), planning (Chapter 5), budgeting and financing (Chapter 6), implementation of adaptation measures (Chapter 7), performance assessments (Chapter 8) and national roll-out (Chapter 9). Chapter 10 describes options for the way forward.

The publication also aims to shed light on LoCAL as it moves towards becoming a standard, internationally recognized country-based mechanism, informing the expansion of LoCAL at the national level and in the many countries which have requested to participate in the programme.

# ACRONYMS

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FADeC	Fonds d'Appui au Développement des Communes	LoCAL	LoCAL Climate Adaptive Living Facility
GCF	Green Climate Fund	MoU	memorandum of understanding
GEF	Global Environment Facility	PBCRG	performance-based climate resilience grant
LAPA	local adaptation plan of action	UNFCCC	United Nations Framework Convention on Climate Change
LDC	least developed country		
LGCC	Local Governance and Climate Change		



# 1



WHY LoCAL?



## Why finance adaptation at the local level?

Local authorities are increasingly seen as key actors in climate change adaptation and in building resilience to climate change (OECD, 2009; UNCDF, UNDP and UNEP, 2010; UNFCCC, 2015; see Box 1.1 and the [glossary](#) for definitions of climate change-related terminology).<sup>1</sup> They are uniquely positioned to tackle these climate change-related challenges:

- Climate change adaptation **responses differ from place to place** and are highly context sensitive. Local authorities are well positioned to **understand the diversity and complexity** of local ecosystems as well as the needs and priorities of local communities. And, to be fully effective, large-scale investments need local complementary actions.
- Climate change adaptation largely falls within the scope of the **mandate and responsibilities of local authorities**. Although their mandates vary from country to country, local authorities have historically been responsible for land use planning, environmental and construction regulation, and investments in infrastructure including irrigation and drainage and defence from natural hazards. These activities are fundamental to climate change adaptation and to building community resilience.
- Local authorities have unique local-level **opportunities and potential to work across**

<sup>1</sup>The terms 'local authority' and 'local government' are used interchangeably throughout this document. Both cover the broad range of local government structures, mandates and authorities specific to the country context (e.g. *gewogs*, community councils, communes and districts).

**sectors and to bundle activities**, which – given the appropriate funding and conditions – will ensure enhanced resilience.

- Climate change adaptation requires effective coordination between various stakeholders with different mandates and interests. Local authorities have the **legitimacy and convening power** to coordinate, co-finance and interact with stakeholders including national-level institutions, civil society bodies, the private sector and various local government departments.

The 2015 Paris Agreement of the United Nations Framework Convention on Climate Change (UNFCCC) highlights the need to integrate adaptation in policies and actions, particularly at the sub-national level:

Parties to the UNFCCC acknowledge that adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems...with a view to integrating adaptation into relevant socioeconomic and environmental policies and actions... [Article 7]

Capacity-building should [therefore] be country-driven, based on and responsive to national needs, and foster country ownership of Parties, in particular, for developing country Parties, including at the national, subnational and local levels. [Article 11]

Yet there is strong evidence that most local authorities in least developed countries (LDCs) are unable to contribute effectively to climate change adaptation and resilience building due to:

- A lack of awareness and incentives to focus on the issue of climate change adaptation

## BOX 1.1

## Definitions of climate change adaptation concepts

- **Adaptation:** The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects.
- **Exposure:** The presence of people, livelihoods, species or ecosystems, environmental functions, services and resources, infrastructure, or economic, social or cultural assets in places and settings which could be adversely affected.
- **Hazard:** The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources.
- **Mitigation (of climate change):** A human intervention to reduce the sources or enhance the sinks of greenhouse gases.
- **Resilience:** The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or reorganizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation.
- **Risk:** The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of vulnerability, exposure and hazard. As used here, 'risk' refers to the risks of climate change impacts.
- **Sensitivity:** The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g. a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g. damages caused by an increase in the frequency of coastal flooding due to sea level rise).
- **Transformational adaptation:** Adaptation that changes the fundamental attributes of a system in response to climate and its effects.
- **Vulnerability:** The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope (i.e. resilience) and adapt.

Source: IPCC, 2014a, Annex II.

- An inability to finance the incremental costs of climate change adaptation
- A lack of financing for revenue-generating public/private adaptation actions at the local level
- A lack of appropriate budgetary allocations from the national level
- The availability and accessibility of the main sources of climate finance frequently only

being through application to national or international programmes

In sum, local authorities in LDCs are in a unique position to identify the climate change adaptation responses that best meet local needs, and typically have the mandate to undertake the small- to medium-sized adaptation investments required for building climate resilience. Yet they frequently lack the resources to do so – particularly in a manner aligned with established local decision-making processes and planning, budgeting and budget execution cycles.

### What is LoCAL?

The Local Climate Adaptive Living Facility (LoCAL) was established to address the unfunded mandate or role of local authorities in addressing climate change adaptation.

LoCAL is a **mechanism which can be tailored to specific country circumstances** to increase awareness of and responses to climate change at the local level, integrate climate change adaptation into local government planning and budgeting systems, and increase the amount of finance available to local governments for climate change adaptation (Figure 1.1).

## LoCAL helps local authorities meet the challenges of climate change

LoCAL combines performance-based climate resilience grants (PBCRGs) with technical and capacity-building support. PBCRGs ensure programming and verification of climate change expenditures at the local level and offer strong incentives for general performance improvements targeting areas of importance for enhanced resilience.

The flow of funds is designed to ensure that LoCAL grants are – to the extent possible – **channelled through established systems**, rather than parallel or ad hoc structures, and assessed on the basis of outputs and outcomes.

LoCAL uses a demonstration effect to trigger further funding flows for local adaptation, including both national fiscal transfers and transfers of global climate finance through central governments to local authorities.

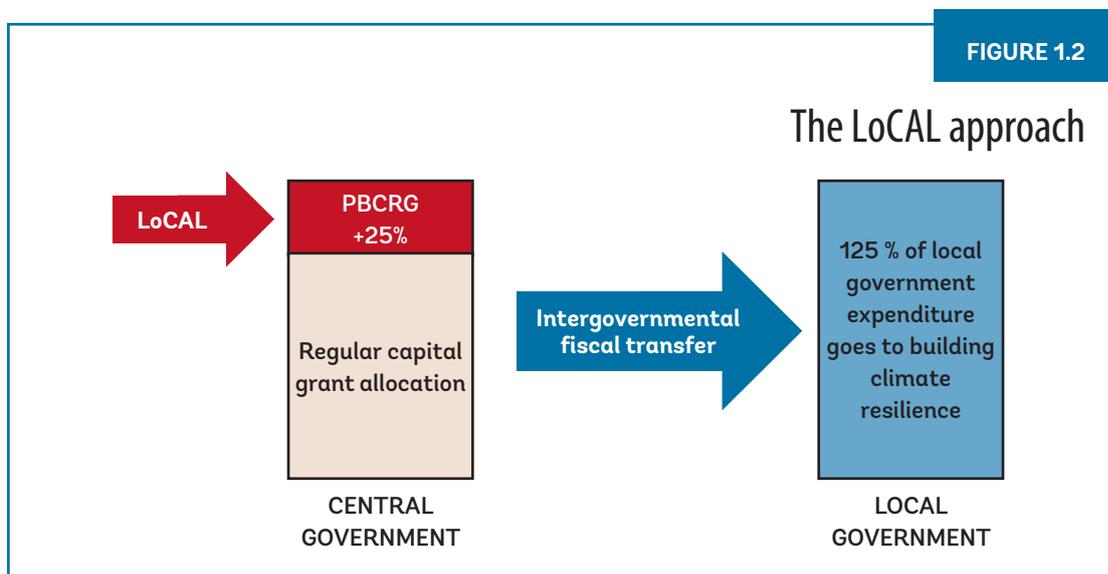
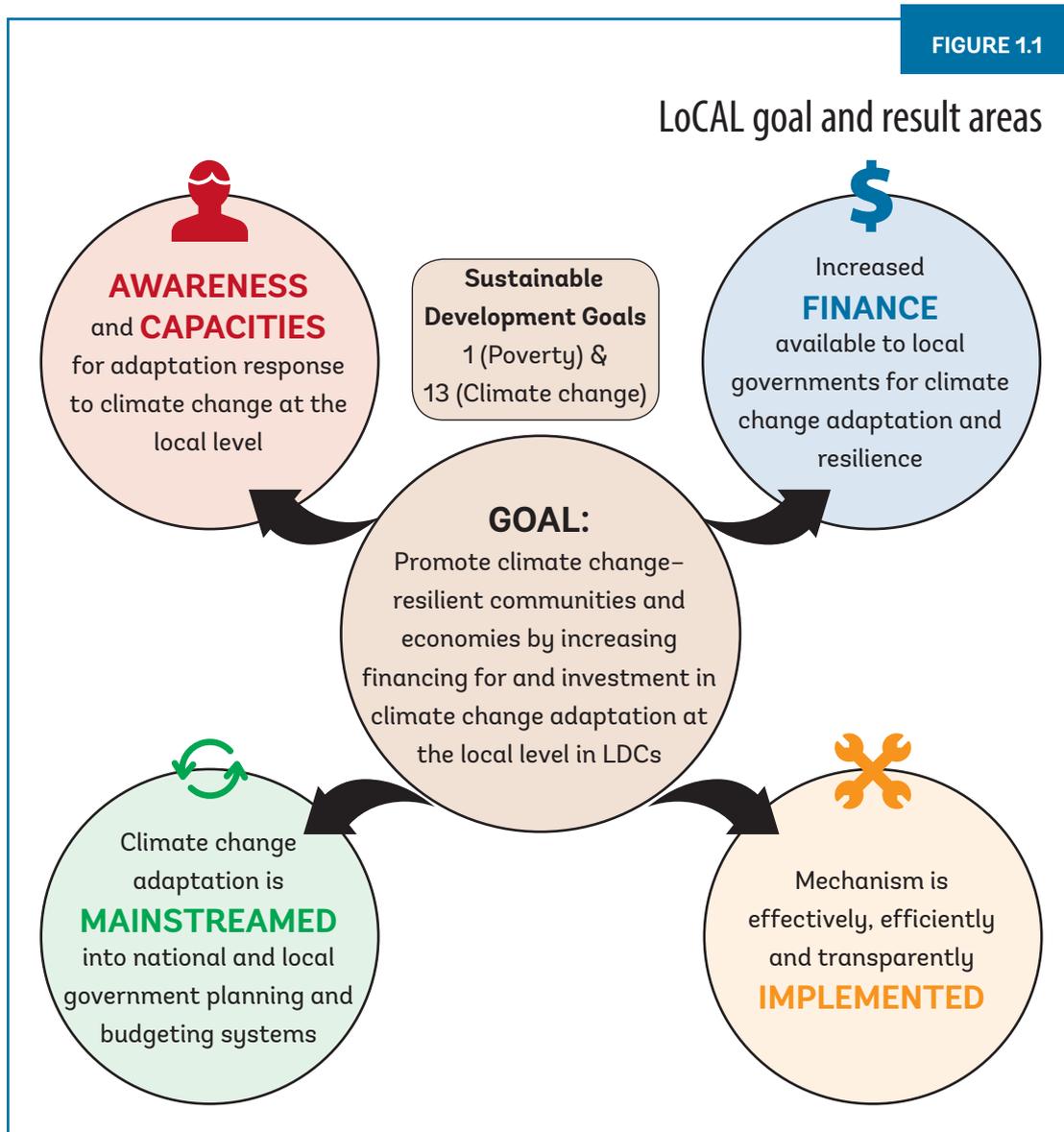
### The approach

LoCAL operates through PBCRGs, which consist of a financial top-up to cover the additional costs of making investments climate resilient and/or of additional investments for climate change adaptation (Figure 1.2). These grants complement regular allocations made by the central level to local governments through the respective intergovernmental fiscal transfer system. Their technical features include a set of minimum conditions, performance measures and a menu of eligible investments.

The PBCRG can be seen as an earmarked cross-sectoral grant with conditions attached to the use of its funding for climate change adaptation beyond business as usual. Combined with regular grant allocations, PBCRGs enable 100 per cent of the investments in climate-sensitive sectors to become climate resilient over time.

The cycle typically involves a number of key elements:

- **Climate risks, vulnerability and adaptation assessments** are reviewed or undertaken to inform the adaptation planning and mainstreaming process. Needs and capacities are assessed.
- Local authorities **integrate adaptation in their own local development planning and budgeting** processes, and cost, prioritize and select adaptation measures within



the boundaries of the investment menu to be financed through the PBCRG. They develop **local adaptation programmes** in a participatory manner.

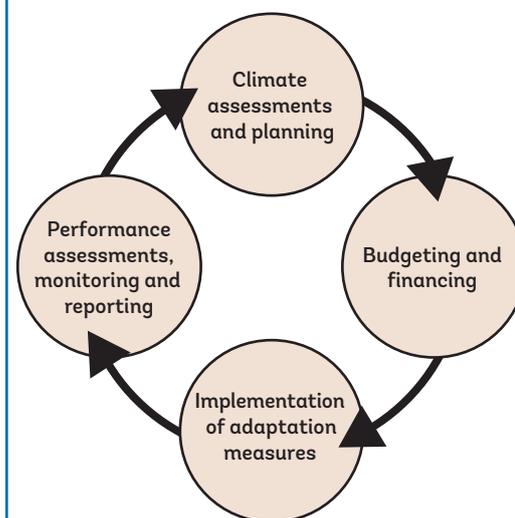
- Local authorities are assessed yearly against minimum conditions. PBCRGs are disbursed to support implementation of LoCAL adaptation measures in the context of local authorities' annual planning and budgeting cycles, and **selected adaptation interventions are implemented by local authorities**.
- **Performance of local authorities' operations is appraised** on an annual basis. This assessment determines the degree to which additional resources have been used efficiently and effectively to perform core functions and promote adaptation to climate change; audits are undertaken as part of the regular national process. Lessons are learned, and systems and procedures are gradually improved.
- The performance results inform the **PBCRG allocations for the subsequent year** based on a pre-agreed formula and priority capacity-building interventions designed to address weaker performance areas. This strengthens local authorities' incentives for continuous performance improvement and targeting of the most-needed adaptation interventions.
- A new cycle starts, based on refinement of previous cycles.

**Capacity-building** activities are undertaken at various stages according to identified needs; these target the policy, institutional and individual levels.

LoCAL **promotes linkages** between climate risks, vulnerability and adaptation assessments, integrated and participatory planning, budgeting and budget execution. It supports all phases of the public financial management cycle from the start of the planning process to accountability, audit and evaluation (Figure 1.3). It has a strong focus

FIGURE 1.3

### LoCAL integrated in local public planning and budgeting cycle



on technical assistance and capacity development through learning-by-doing approaches and introduction of incentives for focusing on climate-related challenges and performance.

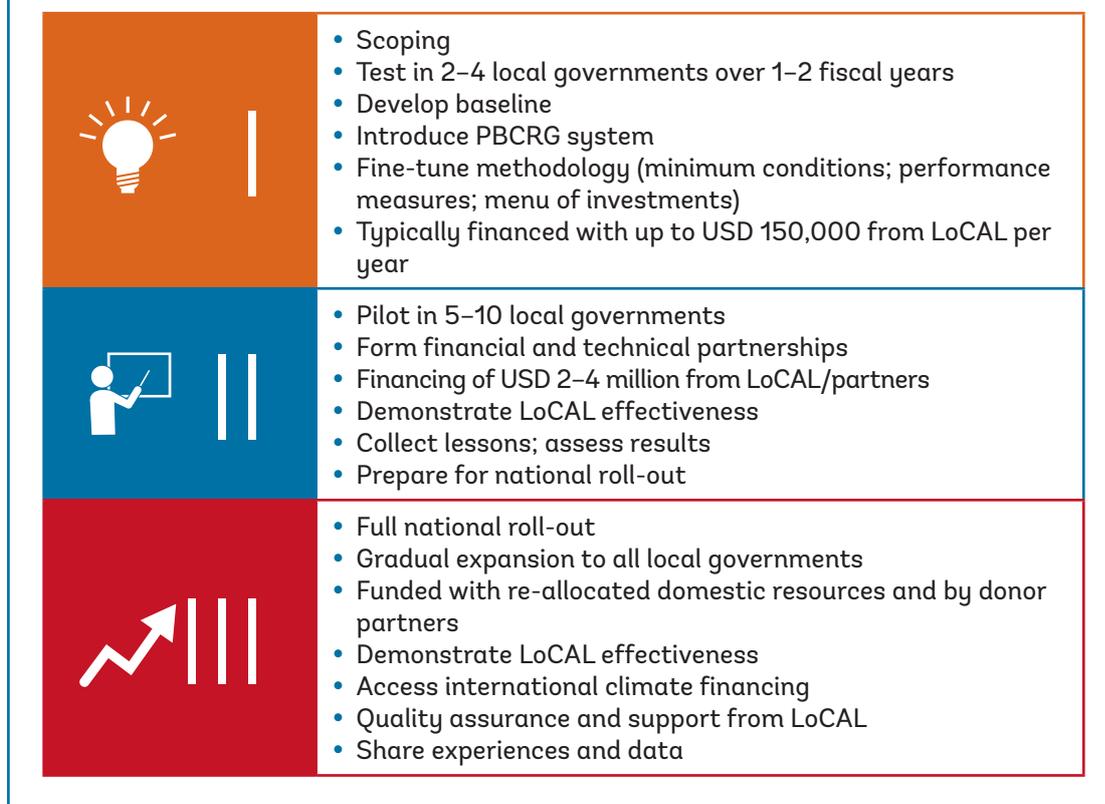
### Phases of operation

LoCAL is designed to operate through three phases (Figure 1.4).

**Phase I: Testing.** Following scoping and design, the first phase entails testing the mechanism in a small number (two to four) of local governments at the appropriate level or tier. Phase I is financed directly with LoCAL global programme seed capital and has an estimated budget of USD 150,000 per year. It can include co-financing from government or other partners. Phase I introduces the PBCRGs over one or two fiscal cycles; it tests the PBCRG minimum conditions and performance measures, as well as the relevance of the menu of investments (eligible adaptation measures) and other technical guidance. The design builds on existing national systems. It provides the necessary experience and lessons

FIGURE 1.4

## The LoCAL phases



for refinement of the approach and design of Phase II in conjunction with the appropriate national authorities and partners. Countries in Phase I are **Ghana, Lao PDR, Mali, Mozambique, Nepal, Niger, Tanzania** and **Tuvalu**.

**Phase II: Learning.** Phase II takes place in around 5–10 local governments at the appropriate tier in a country. It is financed by UNCDF together with financing partners and the country government, and has an estimated budget of USD 2–4 million depending on the country context and resource availability. Funding can be channelled directly through the LoCAL programme or through parallel financing, if the government or other development partners make resources available to the LoCAL methodology. The purpose of this phase is to demonstrate LoCAL effectiveness and create the conditions for a realistic, viable full national roll-out of the approach. Countries in Phase II are **Bangladesh, Benin** and **Cambodia**.

**Phase III: Scaling-up.** Phase III consists of a full national roll-out of the PBCRG mechanism in the country, based on the results and lessons of the previous phases. During roll-out, LoCAL is gradually extended to all climate-vulnerable local governments at the appropriate tier. Phase III is expected to be financed by the central government through a re-adjustment of the architecture of existing resources to enable financing of local adaptation; as well as through financing from international organizations (e.g. through budget support), financing institutions and climate funds such as the Green Climate Fund (GCF). Funding from the European Union has been approved for **Bhutan's** Phase III, and **Cambodia** has begun its Phase III preparations.

Through this phased approach, technical assistance from LoCAL gradually moves away from design and implementation support to overall quality assurance – an element provided

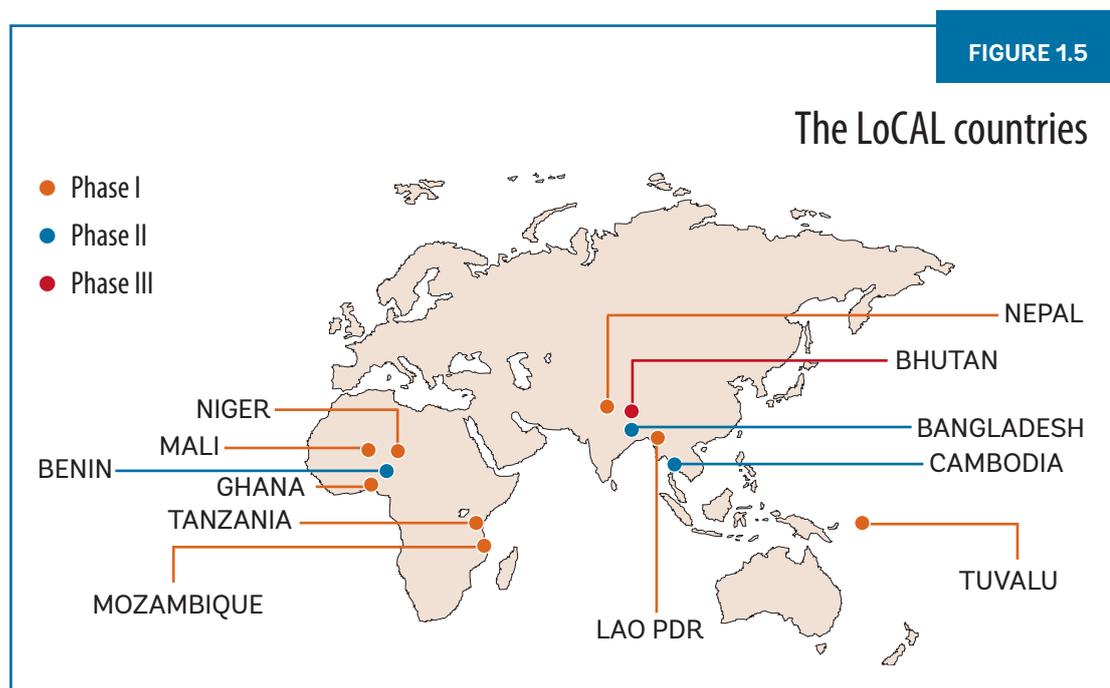
across all phases. The funding level for climate change–resilient investments gradually increases over time in line with the phased roll-out. The phasing and speed may vary across countries.

### Where does LoCAL operate?

Since 2011, LoCAL has been introduced and tested in 12 countries in Africa (**Benin, Ghana, Mali, Mozambique, Niger** and **Tanzania**), Asia

(**Bangladesh, Bhutan, Cambodia, Lao PDR** and **Nepal**) and the Pacific (**Tuvalu**) (Figure 1.5).

To date, LoCAL has provided USD 8.3 million in grants to 64 local governments, reaching a population of over 5 million across the 12 participating countries. The objective of LoCAL support is to pilot a mechanism that can be scaled up to the national level, thus targeting over 350 million people in these 12 countries alone.



2



## SETTING UP A COUNTRY INITIATIVE



**A** key LoCAL advantage is that it requires very few specialized systems and procedures, as it builds on the national systems and procedures which already exist within a country – including existing cross-sectoral cooperation and coordination with other global, regional and country-specific initiatives. LoCAL thereby avoids parallel, project-specific operations, and instead **supports strengthening of national systems** to facilitate future scale-up and attract additional funding – thus promoting harmonization, alignment and sustainability.

## LoCAL works with and through existing systems and procedures

To ensure the best fit, LoCAL has certain core design features, but is flexible and adjusted to the country context.

### Scoping analysis

A country initiative begins with a scoping analysis. This stocktaking exercise identifies the relevant political and institutional strategies and structures in place in a country. Specifically, it reviews the entire system of local government service delivery (e.g. functions, funding, capacity). It also examines and assesses the entry points and conditions for successful launch and implementation; this ensures the mechanism will benefit local governments and their communities.

The scoping analysis typically generates preliminary inputs and ideas for the design of the PBCRG system (discussed in [Chapter 3](#)). The

scoping analysis through in-country missions draws on international and national expertise in the areas of climate change, decentralization (including fiscal decentralization and public financial management) and capacity building. The exercise entails collecting and reviewing information on the following:

- Existing climate change information in terms of **climate risks, vulnerability and adaptation assessments**, as well as possible gaps in terms of information, systems or guidance, especially at the local level and in candidate pilot authorities
- National **development strategies** and priorities, planning and budgeting **guidelines** and how they relate to climate change adaptation and local authorities
- **Decentralization strategies** (e.g. delegation in **Mozambique** and devolution in **Bhutan**) and status, and level of integration of climate change adaptation in decentralized authorities' public expenditure management systems
- **Climate-related policies and strategies**, particularly relating to adaptation, mainstreaming and local authorities
- Existence and effectiveness of **inter-governmental fiscal transfer systems** and **performance-based grant systems** where applicable
- **Institutional set-up, roles and mandates** of central ministries (e.g. finance, planning), line ministries (e.g. agriculture, natural resource management, water and public works, health and education) and climate-related institutions in the context of decentralization, local development and climate change

- **Local government** legal framework, guidelines and manuals; monitoring and evaluation, audit and reporting systems
- Ongoing and planned climate change adaptation and decentralization/local governance **programmes or initiatives** by governments and development partners
- Technical and management **capacities and needs** of local authorities and ministries responsible for climate change, finance, planning and local government (e.g. staffing and skills for planning and procurement functions)

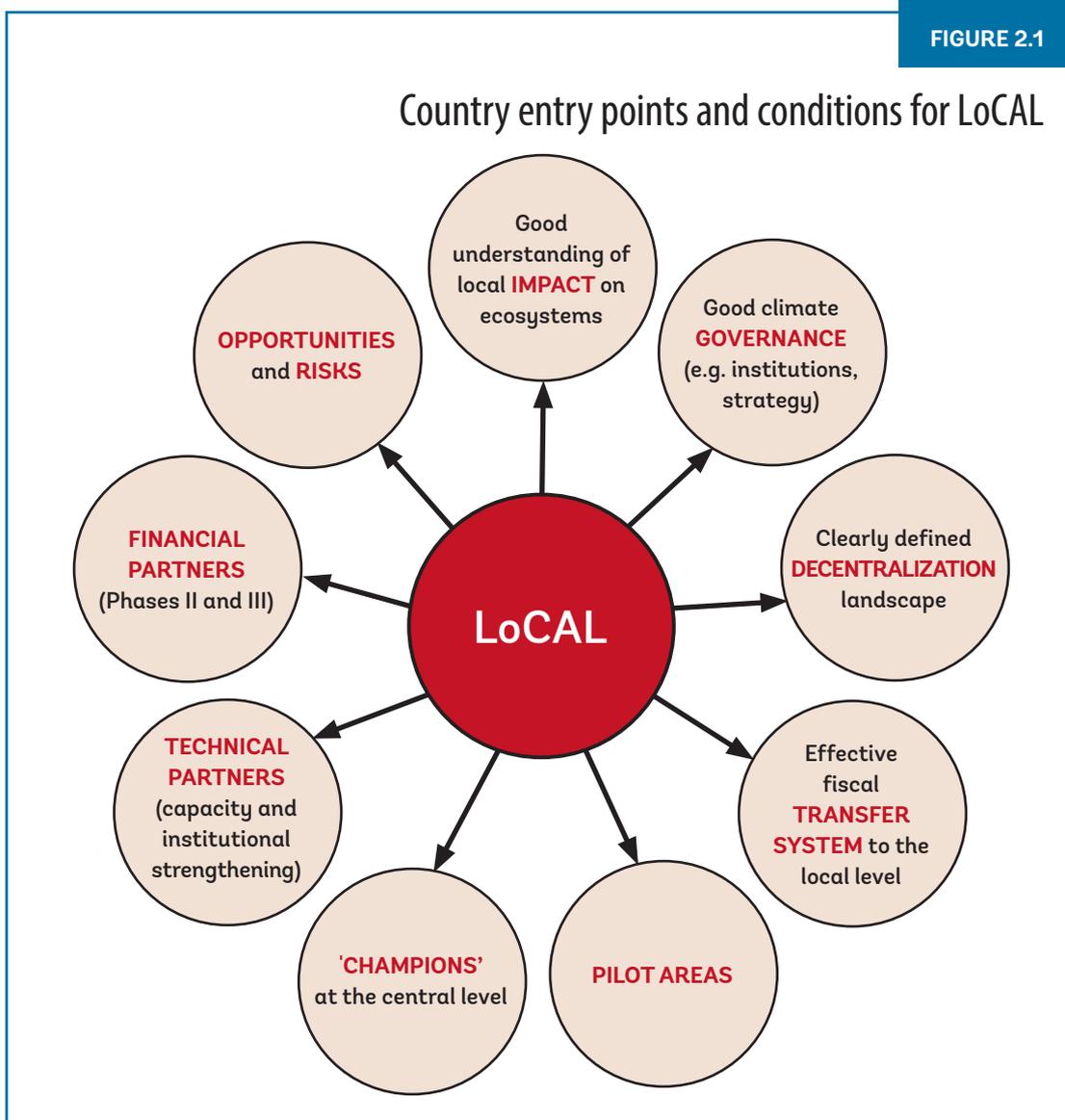
Through this analysis, the effort is grounded in a thorough review of opportunities for local authority involvement in climate change adaptation and of the existing decentralization landscape. Implementation can thereby take into account – among other considerations – functions assigned to local authorities, budgets and public financial management systems. This grounding allows the mechanism to be designed to strengthen local capacities for climate-resilient service delivery and investments and the resilience of communities themselves.

## Assessing conditions for a successful launch

Using the data and information collected in the scoping analysis described above, the specific conditions and entry points for a successful launch are assessed. The key points covered in this assessment are summarized below and illustrated in Figure 2.1.

- **How is the country affected by climate change?** Does the country face significant climate adaptation challenges which need to be addressed through rural local governments and small cities? If so, which sectors are most vulnerable, and what proportion of the population lives in vulnerable areas? How are livelihoods affected, and what are the vulnerability and poverty levels? Are there national assessments available on existing and projected climate change impacts and related costs?
- **What is the climate change governance landscape?** Is there a national-level climate change policy or adaptation strategy? Is there a national coordinating mechanism for climate change? What agencies are responsible for climate change? What are the national designated authorities and national implementing entities, if any, to international climate funds such as the Adaptation Fund and the GCF? To what extent are local governments assigned a mandate for climate adaptation, and how are they represented in national mechanisms? Which development partners provide programmes and support on climate change, and how is the development partner community organized?
- **What is the (fiscal) decentralization landscape?** To what extent are sectors and funds decentralized from central government? Which sectors have the most interaction with local governments on local development, planning and funding systems as well as monitoring and evaluation? Are local governments in charge of climate-sensitive sectors and/or functions? On which tiers of local government should the mechanism focus? Which ministries or agencies are involved? If several are involved, which is the most relevant for planning, funding and monitoring? What are the planning, budgeting and sector coordination arrangements? What are the costs of typical small-scale climate change-related investments, the size of local governments' budgets and the size of meaningful PBCRGs to make an impact and create sufficient incentives for improvement? Who is in charge of the flow of funds, coordination of performance assessments, and monitoring and evaluation systems? What provisions

FIGURE 2.1



exist for reporting, accountability and audits? Which institutions are in charge of what aspects, and how could LoCAL fit in with these?

- **Is a functioning intergovernmental fiscal transfer system to the local level in place?**

Could it provide the basis upon which LoCAL can build, and/or can LoCAL support establishment of such a system? How do the planning, budgeting and public financial management systems work? Is an existing performance-based grant system in place for local governments? If not, is there an

interest in piloting such a system? Does the existing system contain a set of minimum conditions and/or performance measures? Are grants targeted at certain geographical areas (rural, urban)? Are grants targeted at certain sectors, or are they cross-sectoral? What are the sources of funding? How are they managed? Could the mechanism work as a 'top-up' to existing cross-sectoral grants or sector-specific grants? Alternatively, could PBCRGs serve as an example for other grants? Are there annual performance assessments? Are they credible and robust, and do they offer systems of quality assurance?

- **What are the possible pilot areas?** Is there a set of local governments with requisite conditions to pilot PBCRGs? What climate change risks are they facing? How are they affected by climate change? What are the (livelihood and sector) vulnerabilities, and what is the poverty level? Do they represent various geographical or climatic zones? Are they diverse, offering the possibility to pilot a broad range of adaptation interventions? Are they aware of the climate challenge they face and committed to testing the approach? Are there existing programmes related to local governments' financing and climate change to which to link? Is there sufficient capacity, and/or are there capacity-building partners with which to connect efforts? Are the pilot areas accessible?
- **Is there strong commitment supported by 'champions' within government?** Is there strong ownership and commitment from the ministries responsible for climate change and local governments at the central level? Is there a clear demand expressed? Are there champions ready to support design and implementation?
- **Are there possible technical partners?** Are there civil society organizations, development partners or programmes working at the central and local levels with which to partner (Box 2.1)? What relevant programmes exist? What synergies can be established? Could they provide complementary capacity-building support to the participating local governments? What is the focus of their work (e.g. climate assessments, integration into planning, adaptation, local governance, training)? What methods and toolkits are available for use in e.g. climate risks and vulnerability assessments, adaptation planning and climate-resilient technical design? Do they have sufficient flexibility to develop a partnership with LoCAL?
- **What is the scope for scaling up** to Phase II and Phase III – either through additional support from financial partners or greater fiscal resources from the central government? Who is interested in strengthening the decentralization and broader public financial management which could be facilitated by LoCAL? Who is interested in climate change finance and local resilience, or in furthering both agendas? What are the key strategic interests which could be an entry point?
- **What are the opportunities and risks associated with different entry points?** What are the main design issues to be tackled in the design phase?

Based on a thorough review of these issues, a **detailed scoping report or concept note** is produced, that includes clear recommendations on the way forward and on the possible future design. In some cases, a number of initiatives or reforms are needed before final design and launch. The move from scoping to the design phase requires agreement on the overall concept and strong government commitment. In this process, exploring potential partnerships is critical (Box 2.1).

## Examples of in-country partnerships

LoCAL promotes collaboration with other initiatives, with a focus on capacity building and learning through Phase II.

- In **Bangladesh, Bhutan, Mali** and **Nepal**, LoCAL is collaborating with the UNDP–UN Environment Poverty-Environment Initiative (PEI) in local mainstreaming and capacity building. In Bhutan and Nepal, the partnership is embedded within, respectively, the Local Governance Sustainable Development Programme II supported by the European Union and the Swiss Agency for Development and Cooperation, and the Local Governance and Community Development Programme II. In Mali, LoCAL and PEI jointly implement local capacity-building activities, coordinate on work planning and share experiences at the regional level.
- In **Bangladesh**, LoCAL has established linkages with local governance programmes such as the Union Parishad Governance Programme and the Upazila Parishad Governance Programme, supported by a range of development partners including the European Union, Danida and UNDP.
- In **Lao PDR**, the Global Environment Facility (GEF), in an initiative implemented through UNDP, is providing parallel funding for local adaptation through the LoCAL PBCRG system. LoCAL is also working with the local government strengthening programme, which is promoting a performance-based grant system for local governments.
- In **Mali**, LoCAL, the International Institute for Environment and Development (IIED) and the Near East Foundation are exploring options for a joint approach to Phase II.
- In **Mozambique**, LoCAL was launched with financial support (USD 1.9 million) from the Belgian Development Cooperation, enabling LoCAL to work directly in four districts of the Gaza Province and in close coordination with a Belgian-funded food security programme, sharing a joint programme board, staff, etc.
- In **Tanzania**, LoCAL was launched in partnership with the IIED in the context of a programme on devolved climate finance which will make use of the LoCAL PBCRG system.
- In **Tuvalu**, LoCAL was developed as a full-scale mechanism for local government financing in accord with the country's decentralization policy. LoCAL has developed synergies with the National Adaptation Programme of Action (NAPA) II and the Public Service Reform programme to coordinate support on vulnerability assessments, strategic adaptation planning and staff organizational development.

# 3



## DESIGNING THE PBCRG SYSTEM



**A**fter the scoping analysis, the next step consists of designing the PBCRG system and related guidance and support systems (e.g. capacity development and procedures).

As mentioned earlier, PBCRGs are performance-based grants that provide a financial top-up to cover the additional costs of making investments climate resilient. They complement regular allocations made by the central level to local governments through the intergovernmental fiscal transfer system. Their technical features include a set of minimum conditions, performance measures and a menu of eligible investments.

## Minimum conditions and performance measures

The PBCRG system is based on a set of minimum conditions and performance measures to provide sufficient safeguards for capacity to handle funds and promote strong incentives for performance improvements and targeting.

- **Minimum conditions** are the basic requirements with which local governments have to comply in order to access the grants. These conditions are formulated to ensure that a minimum absorptive capacity is in place to handle the funds. The entire set of minimum conditions needs to be met before local authorities can access their grants. In general, minimum conditions are concerned with good governance and public financial management. Between 3 and 10 minimum conditions are typically set. They act as on or off triggers and basic safeguards.
- **Performance measures** are the set of indicators against which local governments

are assessed on an annual basis (see [Chapter 8](#)). They are more qualitative and variable measures than the minimum conditions, and cover core functional areas – e.g. quality of the planning and integration of climate change adaptation and the execution of adaptation measures, governance and accountability – in some detail. Local authorities' overall performance against these measures is used to adjust the level of funds made available to local governments, subject to compliance with the minimum conditions.

The minimum conditions and performance measures can be broadly clustered into three sets of indicators.

- **Good governance and public financial management.** This set includes indicators related to planning, budgeting, procurement, transparency, accountability and reporting on physical and financial execution.
- **Climate related.** These indicators relate to the use of climate information such as climate risk assessments and vulnerability assessments; mainstreaming of adaptation in local planning, budgeting, procurement/contracting and execution; and technical compliance for climate proofing.
- **Interface between good governance and climate adaptation.** This set is of particular importance for climate finance. These indicators include participation of vulnerable groups, gender equality, transparency, and environmental and social safeguards. The aim is to ensure that adaptation capacities and community resilience are strengthened through the participatory local planning process as well as the actual adaptation measures.

Good governance indicators tend to be highly relevant in defining the minimum conditions, while climate-related indicators feature more prominently in the set of performance measures. As an example, minimum conditions are essential in ensuring that LoCAL builds robust transfer systems for climate finance and strengthens the accountability of local governments. Performance measures tend to focus more on the participation of communities, including vulnerable groups and women, in decision-making and monitoring; and the quality of adaptation interventions in terms of relevance for climate change and their effective implementation. Key principles in defining indicators for minimum conditions and performance measures are presented in Box 3.1.

To be effective, performance measures should **target the objective(s) of the grant system**. Performance measures should be cross-sectoral and measurable on an annual basis (as performance affects yearly grant allocations), and provide clear signals for areas for improvement with a focus on climate change adaptation. They should be realistic but challenging, and need to be updated periodically to improve performance.

Important lessons learned in developing minimum conditions and performance measures are to **not overload** an already complex system in which LoCAL is trying to mainstream climate change adaptation and finance for investments; and to **focus on a limited set of indicators** (e.g. five to seven minimum conditions and a short list of prioritized performance measures) to ensure simplicity. Keeping the set of indicators streamlined establishes a clear incentive mechanism for performance reward, while maintaining system robustness and sustainability. However, the system should provide sufficient information to make a balanced performance assessment and provide local authorities with sufficient guidance on areas to improve as well as inputs for identification of capacity development support (learning tool).

The structure and design of performance measures in a country will depend on the existing performance-based grant system, as LoCAL will build on this system. LoCAL may use existing cross-sectoral performance measures with a certain weight (e.g. 30 or 50 per cent) which will promote overall, balanced performance of local authorities and then add 5–10 climate-specific indicators for climate resilience. The specific setting will determine whether LoCAL fits into an existing system, adding a few more specific indicators on climate change; or if it will support a new performance-based grant system, as in **Tuvalu**.

## Performance measures should target grant system objectives

Experience has also shown the importance of defining the system of minimum conditions and performance measures in a comprehensive and comprehensible **manual**. Clearly defining the indicators (and ensuring that they cover the areas of local authority attribution) helps ensure system acceptance and credibility at the local level (Box 3.2). Calibration of scores and defined levels need to be clearly spelled out, with a description of the verification source and documentation. The manual should also provide guidance to ensure a system of prior training or awareness raising of both the performance assessment teams and the local governments to be assessed, as well as steps to disseminate results.

### Size of grants and allocation formula

PBCRGs need to be large enough to provide an incentive, cover the additional costs of adaptation, and have an impact in terms of investments and service delivery in areas key to enhanced climate

## Principles for defining indicators for minimum conditions and performance measures

- To the extent possible, attempt to identify and select minimum conditions and performance measures from the **national intergovernmental fiscal transfer system and/or monitoring system** (such as those used by the inspection function, available audit reports and statistical surveys). Support filling the gaps which might exist in the performance system, so that minimum conditions and performance measures can be developed with a view to being included in the national system (e.g. climate-related performance measures in **Ghana**) or – where such systems do not yet exist – providing experience for the country to draw on (e.g. **Bhutan** and **Tuvalu**).
- Start with the **core functions** under the control (attribution) of local governments – such as good governance, participation, transparency and financial management, particularly for minimum conditions – and **mainstreaming of climate change adaptation** into planning and budgeting.
- Support local government compliance with statutory requirements (e.g. government laws and regulations), especially for minimum conditions. Combined with adequate capacity-building support, performance measures may also target areas outside of statutory requirements (i.e. anticipate the legal framework).
- Ensure that the indicators target key **drivers of changes** and core bottlenecks for improvement in line with the objectives (e.g. if procurement is not working, it leads to inefficiency in all operations).
- Ensure that the core areas are **well targeted**, selecting a limited number of minimum conditions and a balanced number of performance measures. Indicators or targets can be reviewed as collective performance improves, or new indicators can be phased in over time. Performance measures can become more demanding, with new conditions added in line with national system requirements.
- Seek to identify **performance priorities** and weight indicators accordingly. For example, the use of climate information, risk and vulnerability assessments for planning purposes and participatory planning may be seen as some of the core areas where improvements are most urgently required.
- Base the system on a **clear and simple scoring system**. Indicators should be accompanied with clear definitions, sources of verification and scoring guidelines so that evaluation is as objective as possible and results can be compared from year to year, independent of the actual composition of the assessment team.
- Indicators have to be **SMART** (specific – targeting a specific area for improvement; measurable – quantitative or at least providing an indicator of progress; assignable – specifying who is responsible; realistic – stating what results can realistically be achieved, given available resources; and time-related – specifying when the results can be achieved). There is a clear relationship between indicator simplicity and the ability to conduct an objective, neutral and professional performance assessment.

Source: UNCDF, 2010.

## BOX 3.2

## Process or outcome and impact indicators?

Although it might be tempting to include outcome or impact indicators (e.g. improving service delivery, enhancing climate resilience, reducing poverty) in performance measures, such indicators are best measured over longer periods of time than the annual PBCRG cycle. The influence of grants on outcomes is largely indirect (through enhanced participation, citizen involvement, etc., or by providing incentives for improvements in how local governments work and function, plan and allocate resources, and execute) – raising questions of attribution (other non-local authorities' attributable factors may be more important). Also, based on local needs, local authorities may focus on various sectors, which cannot be compared directly. The indicators should be reviewed on a regular basis and the linkages between intermediate or process indicators and subsequent impact be determined through reviews and annual performance assessments.

Source: UNCDF, 2010 and system development experience.

resilience. On the other hand, they must also be small enough to match the absorptive capacities of local governments and be fiscally sustainable and scalable. Funding availability also influences the size of grants, especially during the pilot phase.

Ideally, the PBCRG should provide sufficient funding for a 10–20 per cent average top-up of current discretionary funding available for local development investments. Examples of the size of the top-up for existing capital grants are 8.5 per cent of un-earmarked Fonds d'Appui au Développement des Communes (FADeC) in **Benin**, 10 per cent in **Tuvalu**, and 15–20 per cent

in **Mozambique** and **Bhutan** for Phases I and II, respectively.

Another question to be addressed is how funds should be allocated across the enrolled local authorities – i.e. the horizontal allocation. The criteria should not distort existing resource allocations and should provide equal incentives (in percentages) to all local authorities involved – small or large, poor or better off. Hence, the design will always assess whether the current formula for development grants can be applied. As data are not readily available for factoring in vulnerability and expenditure needs, simple factors are often applied such as population, land size, poverty, equal share and performance. Criteria are expected to be based on objective, simple, transparent, reliable and official data sources.

Most LoCAL countries use the basic allocation formula available for development grants and weight this with the performance element. Performance represents a percentage, which varies from 14 per cent in **Benin**, as aligned with the existing national FADeC system; to 50 per cent in **Mozambique** and **Tuvalu**; and 70 per cent in **Bhutan** (Table 3.1).

Because local authorities need time to respond to the performance component of the formula, most countries have introduced a transition period during which only the basic formula is applied in the first year or two, with performance measures introduced in the second or third year. During this transition period, participation in the mechanism remains conditioned upon compliance with the minimum conditions, as explained above.

From Year 2 or 3 onwards, the allocation is adjusted against the performance of the local authorities involved – providing an incentive for improvements – together with other factors such as awareness raising, publicity regarding results, competitiveness of local authorities and support for capacity building.

TABLE 3.1

## Examples of allocation criteria applied

Country	Basic allocation criterion	Performance measure
Benin	86% calculated based on population (29%); poverty (29%); area (13%); and equal share (15%) (aligned with the FADeC formula)	14% based on a weight of 30% for good governance indicators and 70% for climate-related indicators
Bhutan (Phase I)	30% calculated based on an equal share (7%) with the remaining divided on: population (35%); poverty level (45%); cost index (10%); area (10%)	70% based on a weight of 50% for good governance indicators and 50% for climate-related indicators
Mozambique	50% calculated based on population (60%); area (20%) and equal share (20%)	50% based on a weight of 50% for good governance indicators and 50% for climate-related indicators
Nepal	Population (40%); weighted poverty (25%); area (10%) and weighted cost index (25%) (aligned with the District Development Fund formula)	The District Development Fund has a number of performance measures, which will be augmented with LoCAL performance measures

LoCAL consequently needs to remain limited and simple, particularly in Phases I and II, and slowly build capacity at the local level while engaging with donors and governments to share experiences and build capacity and robust fiscal transfer systems.

LoCAL does not have the mandate or resources to take the lead in promoting broad decentralization reforms. However, in many countries, LoCAL is integrated in a decentralization programme. By opening a dialogue between donors, central government and local levels on a specific issue (i.e. climate change adaptation) and by testing systems and identifying challenges, LoCAL acts as a catalyst for progress in decentralization. In **Bhutan, Cambodia, Mali, Mozambique** and **Tuvalu**, LoCAL was the first initiative to introduce performance-based grants; Tuvalu is already considering expanding to other funding streams.

### Menu of eligible investments

The **menu of eligible adaptation investments or measures** identifies broad areas of adaptation actions within the local authorities' remit that can promote climate resilience; Box 3.3 provides an example from **Bangladesh**. The menu includes positive items that are meant to inform the integration of adaptation in local development

and investment planning. It also provides an overview of adaptation measures which often go beyond existing local government investments, and can guide them in expanding the range of adaptation opportunities (e.g. additional measures to strengthen infrastructure resilience).

Menu categories largely depend on the (anticipated) climate change impacts identified and the local authorities' mandates in a given country. The menu typically covers the following areas:

- Strengthening the climate resilience of new or existing infrastructure works, when the need for the infrastructure itself is not directly related to climate change (e.g. school buildings, health centres, rural access roads)
- Climate-adaptive infrastructure, i.e. infrastructure that is needed specifically to adapt to climate change; this can include water infrastructure such as water storage, improved irrigation or additional domestic water supplies to cope with more intense and prolonged drought periods
- Ecosystem-based adaptation, which uses a range of opportunities for sustainable management, conservation and restoration of ecosystems to provide services that enable

## BOX 3.3

## Menu of eligible investments: Bangladesh

In general, an activity is eligible for financing from PBCRG resources provided that it is (i) a type of activity identified in the Bangladesh Climate Change Strategy and Action Plan and (ii) within the mandate and capacity of the local government as defined by the Upazila Parishad Act or the Pourshava Parishad Act. An investment menu (positive items) lists common types of activities eligible for financing (see table below). Activities not on this list may be proposed for financing and will be considered on a case-by-case basis to determine whether they meet the general criteria.

There is also a negative list of activities which may not be financed through PBCRG resources under any circumstances. These items include salary costs; water, electricity or maintenance of administrative facilities; vehicles; administrative equipment; construction of administrative buildings; religious facilities or activities; security facilities or operational costs of security services; private goods or equipment used by only one household; and livestock purchases.

The Upazila Parishad may use the PBCRG to fund expenditures in the following categories:

- Support for the preparation of the Upazila Climate Resilience Strategy and Action Plan
- Local services for climate resilience
- Local infrastructure for climate resilience

Climate Change Strategy and Action Plan Activity	Examples of eligible activity
1	Food Security, Social Protection and Health
1.1	Community level adaptation
1.2	Climate resilient cropping systems
1.3	Disease surveillance systems
1.4	Drinking water and sanitation programmes
2	Comprehensive Disaster Management
2.1	Strengthen capacity to manage natural disasters
2.2	Strengthen community-based programmes
2.3	Strengthen cyclone, storm surge and flood early warning systems
3	Infrastructure
	Repair and rehabilitate existing infrastructure [at risk from climate change]
	Plan, design and construct urgently needed new infrastructure [to address climate change]
4	Research and Knowledge Management
5	[Measures with co-benefits for Adaptation and] Mitigation/Low Carbon Development
5.2	Expand social forestry programme
5.3	Expand the greenbelt coastal afforestation programme
6	Capacity Building and Institutional Strengthening
6.2	Mainstream climate change in development planning (local government)
6.3	Build capacity to take forward climate change adaptation

people to adapt to the impacts of climate change (CBD, 2009)

- Awareness raising and capacity building (e.g. training on water use efficiency, climate-resilient agriculture techniques, emerging climate-related diseases)
- Sector services for climate change adaptation (e.g. support to diversification of agriculture production through resilient seed production and establishment of demonstration and testing farms) and services to local populations to help develop their resilience to climate change and climate-induced natural disasters (e.g. early warning systems)
- Institutional strengthening for climate change adaptation (e.g. planning, design, appraisal and monitoring), which is tentatively limited in some countries to 10 per cent of the grants

This last category of institutional strengthening is especially relevant in designing adaptation measures which need to address more complex underlying causes.

The investment section of the menu can be organized in line with local development priorities such as agriculture, education and health, water and sanitation, transport and storage and forestry.

Besides the positive list, from which areas are described above, the menu can include a short negative list detailing items that cannot be financed by the PBCRG, such as government transport and administrative buildings, staff housing, salaries, private goods and services, microcredit, general administrative costs and loans.

Depending on the country context, some additional eligibility issues can be included in the investment menu to ensure relevant targeting of resources. Similarly, choices can be made in the investment menu to emphasize or exclude certain sectors or investments – e.g. those that are more complex in design or that require

implementation modalities beyond current capacities (Box 3.4).

The menu provides local authorities with sufficient flexibility to address local issues of relevance for climate change adaptation. However, it is essential for local governments to understand that the investment menu should be interpreted in light of the local context, climate risks and vulnerabilities. Climate information and the process that leads to the decision to implement a specific adaptation measure and how it is implemented are more important than the individual measures themselves (see Chapters 5 and 7). The climate justification for the individual adaptation measures financed under LoCAL is thus essential. For example, in a water-scarce area, boreholes can be included on the menu. However, if the local government decides to dig a new borehole because the existing ones have been poorly maintained, this should be considered business as usual, not adaptation to climate change. Similarly, if the location of the borehole is not informed by the level of groundwater in light of climate change, this can lead to maladaptation.

The menu should be viewed as a safeguard that avoids investments that are clearly not relevant for adaptation and thus ensures that the PBCRGs target climate change-relevant issues. This is critical, as the funding for the grants is conditional on climate change adaptation relevance. Focusing on measures that are on the menu should thus be seen as a necessary but not sufficient condition. The use of local climate information in terms of climate risks and vulnerabilities (also promoted through performance measures) remains essential to ensure investments are indeed contributing to increasing climate change resilience.

Over time, with increasing capacities for assessments, planning and adaptation measure development, as well as a more varied range of local governments in terms of climate risks and vulnerabilities, the investment menu can evolve

## BOX 3.4

## Special conditions for investment menus

Nepal and Lao PDR provide examples of tailoring an investment menu. In **Nepal**, the investment menu contains the following eligibility and exclusion criteria, in addition to general guidance on types of investments from the menu:

- Proposed adaptation measures from the annual District Development Plan are only eligible if they have been prioritized from a lower-level ward plan, where community representation is relatively strong. This to avoid a top-down push for local investments re-prioritized at the district level.
- Resilience investments in new rural roads and in upgrading of existing rural roads are not eligible, as the existing road standards and construction methods used by the government do not ensure an acceptable quality of works implemented. However, investment in measures to improve drainage, slope stability and e.g. erosion protection on existing rural roads constructed with the Environment Friendly and Labour-based construction method is allowed, to promote this construction method.
- Investments in renewable energy are excluded since they mostly target mitigation, and large funding channels to local governments already exist for such interventions.

In **Lao PDR**, LoCAL has been designed as an integrated part of a project funded by the Global Environment Facility (GEF), with linkages to a local government-strengthening project implementing a performance-based grant system and District Development Fund. As the GEF project focuses on water-related climate-resilient infrastructure, the investment menu was accordingly limited to this focus. Once the GEF project phase is over and the mechanism is upgraded, a broader investment menu will be utilized.

to capture broader and more complex types of interventions.

To date, over 330 small-scale adaptation measures or investments aligned with local development priorities have been supported by LoCAL across 10 countries. Figure 3.1 shows a breakdown of investments by sector. In the early stages of LoCAL, interventions tend to focus on hard measures such as water and sanitation, transport and key sectors such as agriculture. As awareness increases, soft and more strategic measures as well as other climate-sensitive sectors – such as education and training, disaster risk reduction, strengthening of government and civil society and health – tend to be increasingly addressed.

## Capacity building and institutional strengthening

LoCAL combines PBCRGs with technical and capacity-building support. The design and implementation stages therefore entail review and providing recommendations to strengthen local governments and their operations throughout the stages of the LoCAL approach. Such reviews and recommendations address climate risks and vulnerability and adaptation assessments; participatory and gender-sensitive approaches; adaptation programming and integration in local development plans, budgets and investments plans; public financial management of climate finance and procurement; costing, preparation and implementation of adaptation measures; and performance assessments, monitoring and reporting.

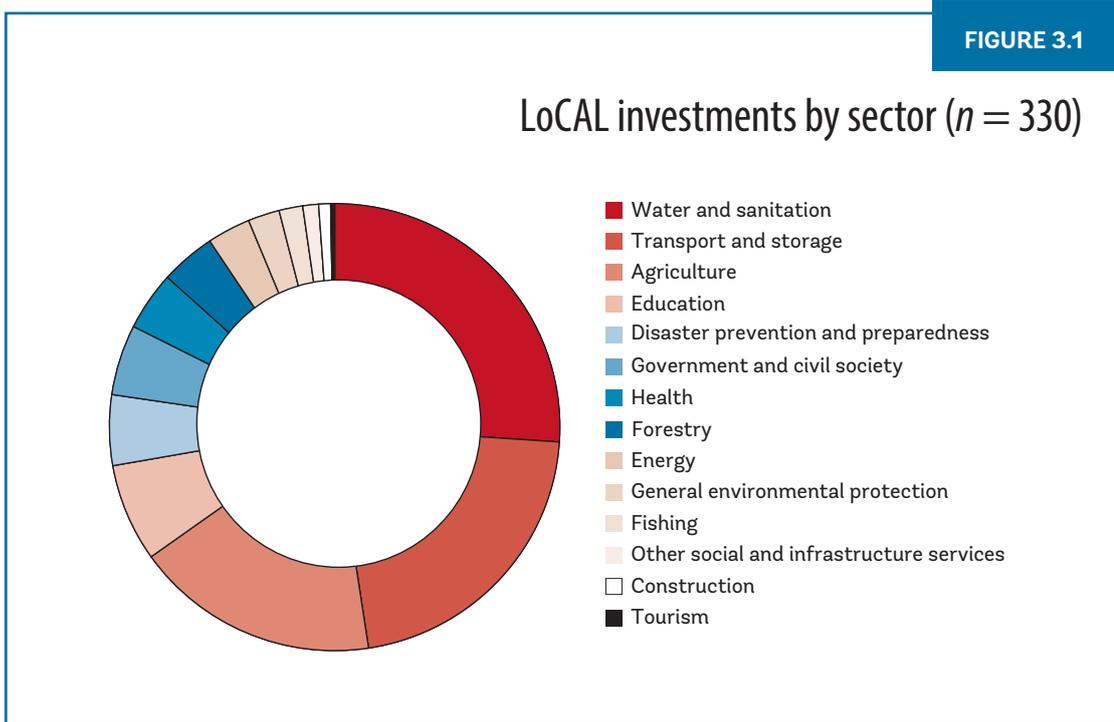
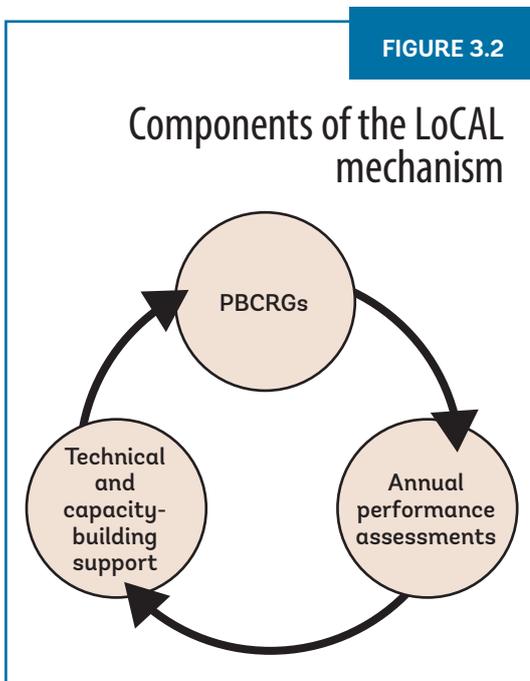


Figure 3.2 illustrates the three mutually supportive components of the LoCAL mechanism: PBCRGs, technical and capacity-building support; and



annual performance assessments, providing incentives for local authorities to improve performance and target climate change adaptation. The annual performance assessments (discussed in [Chapter 8](#)) support the process by identifying capacity needs and promoting incentives for performance improvements. In the event that a local government does not meet the minimum conditions for the following year, it will not receive the grants, but will receive support in identifying and implementing corrective actions and targeted capacity building. More broadly, local governments are encouraged to review their performance assessment and identify areas with potential for improvement. For example, in **Cambodia**, follow-up to the performance assessments helped local governments look for ‘low-hanging fruit’ – areas where their score was low but could easily be improved. In **Tuvalu**, local authorities were supported in beginning to improve on the performance measures after

the baseline was tested and conducted, well in advance of the first performance assessment. In **Cambodia, Benin, Ghana, Mali** and **Niger**, local governments undertake self-assessments several weeks before the annual performance assessments to make sure they address any pending issues.

National and local governments and development partners can target capacity-building support towards weaker areas of local government performance as identified in the annual performance assessments. These can include

technical training, institutional strengthening, vulnerability-based local planning, or local procurement, among others.

At the national level, LoCAL supports strengthening of public financial management systems for climate change adaptation over the long run (e.g. development or revision of guidelines and manuals; integration of climate change in tendering, procurement and delivery processes; reporting practices and creation of budget codes). Box 3.5 provides examples of capacity-building initiatives.

## BOX 3.5

### Examples of capacity-building initiatives with partners

- In **Benin**, LoCAL is working with the German Society for International Cooperation (GIZ) and the Swiss Agency for Development and Cooperation to operationalize a guide for the development of the third generation of local development plans, which now includes climate change. Trainings are organized jointly to support communes in integrating climate change adaptation in their new local development plans.
- In **Cambodia**, to sensitize and train local governments, LoCAL has teamed up with the UNDP–Global Environment Facility (GEF) Small Grants Programme and has organized joint workshops, complementing each other’s resources and expertise.
- In **Lao PDR**, a GEF-funded project integrated with LoCAL is providing capacity development support to local governments on vulnerability assessment methodology, local planning and budgeting, climate-resilient design and strategic resilience planning, and financial management.
- In **Mali**, LoCAL and the UNDP–UN Environment Poverty–Environment Initiative (PEI) have started up a collaboration to increase understanding of climate change and its impacts on local economies; share best practices and experiences; and train local authorities in tools to integrate climate change in local economic and cultural development plans, budgeting, execution and monitoring. Similar collaboration with PEI was successfully applied in the LoCAL start-up in **Bhutan**, where PEI provided capacity development support to local governments for mainstreaming climate change in local planning and budgeting processes, as well as for environmental assessments.
- In **Nepal**, implementation guidelines and capacity development plans to strengthen capacities of district and village development committees, service provider staff and staff of programmes in the pilot districts were jointly developed with the Local Governance Community Development Programme and PEI.
- In **Tuvalu**, LoCAL is working with the National Adaptation Programme of Action (NAPA) II to support the *kaupules* (local authorities) in addressing climate change issues in local development planning and project identification.

## Institutional set-up

The institutional set-up for LoCAL includes agreement on the lead ministries that sign the memorandum of understanding (MoU), and definition of the roles and responsibilities of different government counterparts with respect to the various elements of the PBCRG system and capacity building – e.g. flow of funds, financial oversight and transfers; coordination and oversight of local authorities in terms of adaptation planning, investment execution, monitoring, reporting, financial accountability and audits; and the provision of technical support to local authorities.

An appropriate host ministry is selected. Examples of host ministries are the Ministry of Home and Cultural Affairs in **Bhutan** (which is also responsible for local government capacity development), the Ministry of Federal Affairs and Local Development in **Nepal** (which is responsible for other performance-based grant systems) and the Ministry of the Environment, Urban Sanitation and Sustainable Development in **Niger**.

Other core ministries also have important roles, such as the ministry of finance (to handle funding flows and releases) and line ministries responsible for climate change or local-level planning, e.g. **Ghana's** Ministry of Environment Science Technology and Innovation and **Bhutan's** Gross National Happiness Commission. These bodies provide policy and strategic guidance and technical support to the LoCAL initiative.

In addition, a government institution often takes the lead for coordination of day-to-day operations including monitoring and capacity building, and agreements with line ministries on specific activities and tasks.

Generally, a steering and/or technical committee is established early on at the central level to provide both strategic direction and oversight to LoCAL design and implementation. The committee usually includes key implementing departments

such as those responsible for finance, planning, local government and climate change. The committee should also include representatives from local governments themselves, as well as from civil society. Whenever possible, LoCAL makes use of existing committees by expanding on their mandates and membership. In **Tuvalu**, for example, steering at the national level is done by the existing Development Coordination Committee, of which the secretaries of all ministries are members. Technical coordination at the local level is handled by the revived and adapted Kaupule Development Coordination Committee. The Tuvaluan Government opted to provide a broad development coordination mandate beyond LoCAL for this committee, as the need for better support to decentralization and development of the outer islands was acknowledged during the design process. In **Bhutan** and **Nepal**, existing local governance support programmes were preferred by the respective government as the home for LoCAL and its coordination arrangements.

The institutional set-up can – and likely should and will – evolve from one phase to the next, in response to evolving national circumstances.

Table 3.2 presents an overview of institutional configurations for LoCAL in various countries. The configuration, built on national systems, is tailored to country conditions and needs, and documented in an MoU with the lead government institutions. The MoU is a cornerstone in the design and delineates and regulates the flow of funds from UNCDF and other partners, if applicable, to the central government and from the central government to the local governments.

## Flow of funds

As part of the system design in each country, LoCAL clearly defines how funds will flow from UNCDF or other partners to the national government and from the national government to local authorities. The aim is to use the government treasury

TABLE 3.2

## Overview of institutional anchors across LoCAL countries

Country	Lead ministry for PBCRG system (MoU)	Other government partners (steering committee)	Lead government entity for day-to-day operations (letter of agreement)
Bangladesh (Phase I)	Local Government Division, Ministry of Local Government, Rural Development and Co-operatives	Planning Commission; Economic Relations Division; Ministry of Disaster Management and Relief; Ministry of Forests and Environment	Local Government Division, Ministry of Local Government, Rural Development and Co-operatives
Benin (Phase II)	Ministry of Living Environment and Sustainable Development; Ministry of Decentralization and Local Governance; Ministry of Economy and Finance	National Association of the Communes of Benin; National Commission for Local Finance; National Fund for Environment and Climate; prefectures (Atacora-Donga and Alibori); UNDP	Ministry of Living Environment and Sustainable Development
Bhutan (Phase II/III)	Department of Local Governance, Ministry of Home and Cultural Affairs	Gross National Happiness Commission Secretariat, Ministry of Agriculture and Forest, Ministry of Economic Affairs, Ministry of Finance, and National Environment	Department of Local Governance, Ministry of Home and Cultural Affairs
Cambodia (Phase II/III)	National Committee for Sub-National Democratic Development	Secretariat of the National Committee for Sub-National Democratic Development under National Programme for Sub-National Democratic Development	National Committee for Sub-National Democratic Development
Ghana (Phase I)	Ministry of Environment, Science, Technology and Innovation; Ministry of Local Governments and Rural Development/District Development Facility; Ministry of Finance	Environment Protection Agency; National Development Planning Commission; National Disaster Management Organisation	Ministry of Local Governments and Rural Development/District Development Facility
Lao PDR (Phase II)	Ministry of Natural Resources and Environment in coordination with Ministry of Home Affairs using its District Development Fund		Ministry of Natural Resources and Environment
Mali (Phase I)	Ministry of Environment, Sanitation and Sustainable Development; Ministry of Foreign Affairs and International Cooperation; Agency for Environment and Sustainable Development	Ministry of Territorial Administration and Decentralization; Food Security Commission; Ministry of the Economy and Finance; National Agency for Local Authorities Investments; Ministry of Rural Development; Ministry of Livestock Farming and Fishing; Ministry of Planning	Agency for Environment and Sustainable Development
Mozambique (Phase I)	Ministry of Economy and Finance	Ministry of Land, Environment and Rural Development; Ministry of Administration and Public Service	Ministry of Economy and Finance
Nepal (Phase I)	Environment Section of Ministry of Federal Affairs and Local Development	Ministry of Federal Affairs and Local Development and Local Bodies Fiscal Commission	Environment Section under Local Governance and Community Development Programme/ Ministry of Federal Affairs and Local Development

(continued)

TABLE 3.2

 Overview of institutional anchors across LoCAL countries *(continued)*

Country	Lead ministry for PBCRG system (MoU)	Other government partners (steering committee)	Lead government entity for day-to-day operations (letter of agreement)
Niger (Phase I)	Ministry of the Environment, Urban Sanitation and Sustainable Development	Ministry of Interior, Public Security and Decentralization and Customary and Religious Affairs; National Council of the Environment for Sustainable Development; National Agency for Local Authority Funding; High Commission for the 3N Initiative; Ministry for Planning, Territorial Planning and Community Development; Ministry of Agriculture; Ministry for Livestock Farming; UNDP; non-governmental organization/development agency groups	Ministry of the Environment, Urban Sanitation and Sustainable Development
Tanzania (Phase I)	President's Office Regional Administration and Local Government	Ministry of Finance and Planning; Vice President's Office; International Institute for Environment and Development; Institute of Rural Development Planning; Local Government Training Institute – Hombolo; Tanzania Meteorological Agency; Hakikazi Catalyst; Tanzania Natural Resources Forum	President's Office Regional Administration and Local Government
Tuvalu (Phase I)	Department of Rural Development, Ministry of Home Affairs and Rural Development	Development Coordination Committee of all ministry secretaries and members	Department of Rural Development, Ministry of Home Affairs and Rural Development

system and ensure a high level of mainstreaming and alignment with existing public financial management procedures. LoCAL assesses the feasibility of such alignment, considers various options and puts risk and mitigation strategies in place as necessary, usually as interim measures, with strategies for gradual mainstreaming.

Generally speaking, grants are transferred directly to the treasury and follow the existing modalities of the intergovernmental fiscal transfer system and existing performance-based grant systems, where applicable (Box 3.6). When this is not possible, funds are routed through the relevant ministry – e.g. the Ministry of Local Government, Rural Development and Co-operatives in **Bangladesh** and the Ministry of Federal Affairs and Local Development in **Nepal** – to top up current development grant schemes.

The number of yearly tranches (one or two) and the timing of their release are set to align with the relevant intergovernmental fiscal transfer system – or, more specifically, the performance-based grant system. In countries where effective and regular funds transfers cannot be guaranteed, LoCAL sometimes takes the pragmatic approach of releasing the PBCRG in one tranche and as early as possible in the fiscal year – or, for subsequent years, immediately after the performance assessment of the earlier cycle of investments (see [Chapter 8](#)) – so as not to delay fiscal flows to local authorities, while gradually adjusting to the country cycle. For example, in **Mali** and **Niger**, funding for the first two years of funding was channelled directly from the lead ministry to the local authorities to align with national annual budgeting and planning; it was subsequently aligned with the respective

## BOX 3.6

## Aligned intergovernmental fiscal transfer or performance-based grant systems

- **Bangladesh:** Upazila Grant Facility
- **Benin:** Fonds d'Appui au Développement des Communes
- **Bhutan:** Annual Block Grants (for capital investments)
- **Cambodia:** District/Municipal Fund and Commune/Sangkat Fund
- **Ghana:** District Development Fund and District Assembly Common Fund
- **Lao PDR:** District Development Fund
- **Mali:** Fonds National d'Appui aux Collectivités Territoriales
- **Mozambique:** District Development Fund and District Infrastructure Fund
- **Nepal:** District Development Fund
- **Niger:** Fonds d'Appui à la Décentralisation and Fonds de Péréquation

intergovernmental fiscal transfer system or performance-based grant system.

In all cases, funding use should be clearly tracked to ensure it is applied within eligible climate change adaptation activities. Arrangements will vary from country to country (see [Chapter 6](#)).

Each country's MoU clearly describes the responsibilities and tasks of each party in fund flow arrangements, including requirements and conditions prior to release; timing of the release; reporting requirements; and accounting, accountability and auditing conditions.



# 4



## KEY CONCEPTS AND ASSESSMENTS

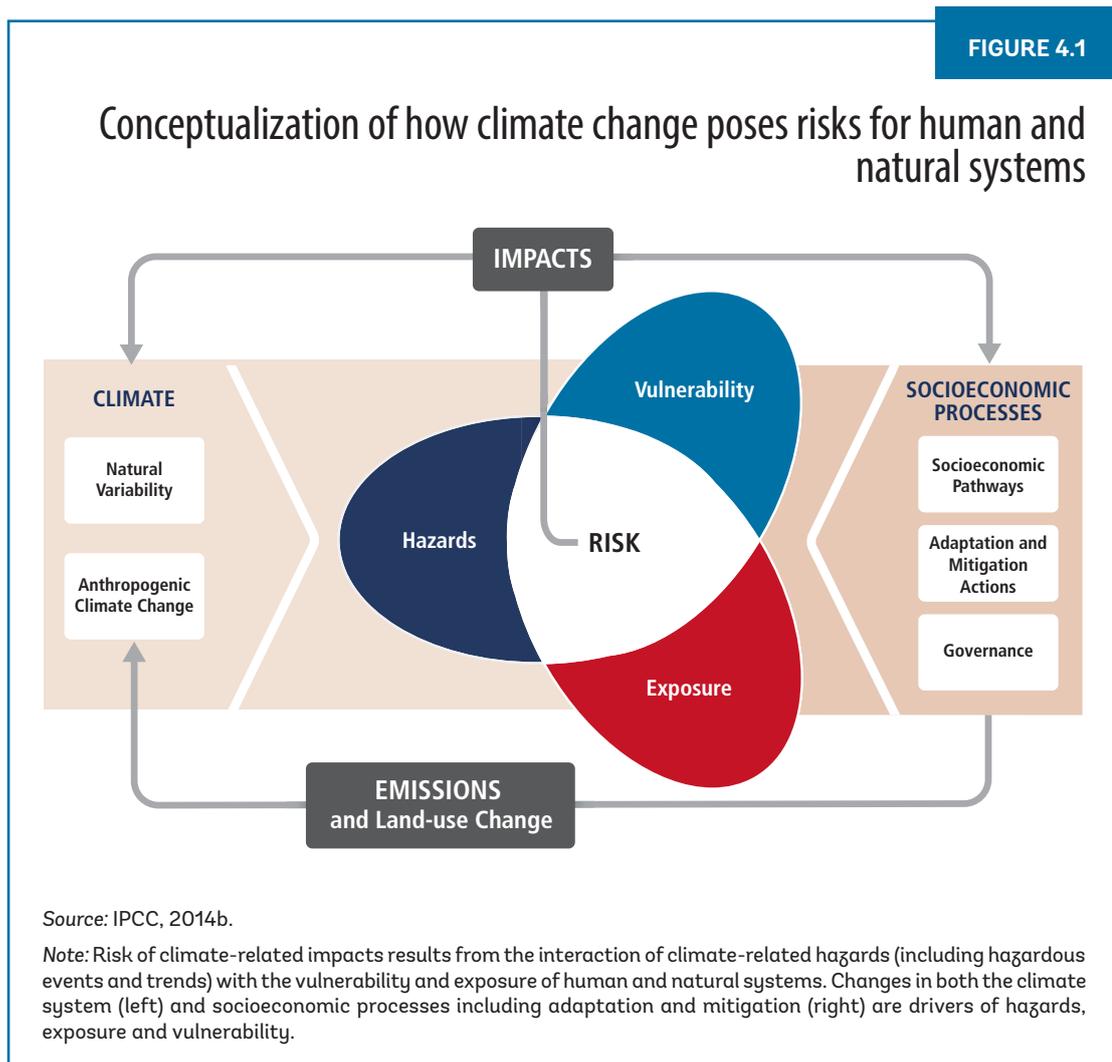


## Understanding key concepts

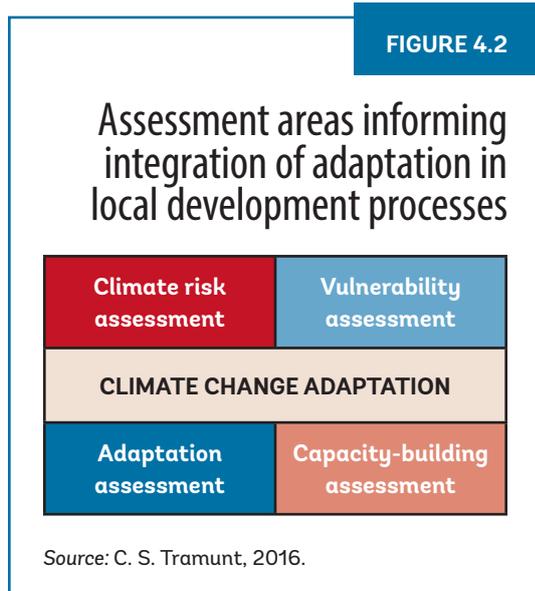
LoCAL aims to integrate climate change adaptation into existing local development planning and budgeting processes. Such integration requires a good understanding of both key climate change concepts and on-the-ground climate risks, vulnerabilities to climate change, and adaptation options. Figure 4.1 presents a useful overview of how climate change poses risks for both human and natural systems. Essentially, the intersection of **climate hazards** with **exposure** and **vulnerability** conditions

leads to different levels of **climate risk**; [Box 1.1](#) defines these and other relevant terms in climate change adaptation.

Adaptation involves the management of climate risks by the identification, characterization and reduction of the manner in which human and natural systems are vulnerable to climate change, focusing on developing and reinforcing adaptive capacities. In addressing climate risks and vulnerabilities using the LoCAL mechanism, there is a progression from resilience to adaptation to transformational adaptation.



Climate change integration requires translating these concepts into an on-the-ground understanding of climate risks, vulnerabilities and adaptation options, as well as related capacity-building needs. This translation can be achieved through a series of assessments (Figure 4.2); these are explored in more depth in the remainder of this chapter.



Consideration of assessment findings is therefore essential in guiding transformations towards climate-resilient development. They are typically addressed through the PBCRG framework, specifically through the establishment of relevant performance measures (Box 4.1). They are also addressed through support to improving guidelines and manuals and to capacity building for local authorities to facilitate better consideration of how climate change issues can be integrated in all processes from planning to reporting. In addition, a four-component methodology looking at risks, vulnerability, adaptation options and capacity-building needs is being piloted in **Benin, Ghana, Mali** and **Niger** (Box 4.2).

**BOX 4.1**

### Examples of performance measures promoting understanding of climate risks, vulnerabilities and adaptation options

- Climate risks, vulnerability and adaptation assessments are undertaken or improved and used for decision-making. The quality is evaluated based on a series of dimensions: use of quantitative historical data (weather, climate and extreme events), use of quantitative projections, participation and spatial information (**Benin**).
- Climate change vulnerabilities and assessment of their impacts on local livelihoods and livelihood assets are identified and documented in a report. The assessment is expected to provide gender-disaggregated findings and poverty alleviation linkage (**Bhutan**).
- The three-year planning process is strategic and based on data sets from relevant sectors which have been processed as easily accessible geographic information system (GIS) maps. The mapping and data overlays include climate change impacts, and the plan document reflects an analysis of climate change vulnerabilities and appropriate adaptation strategies. Justifications for selected plan projects include climate resilience (**Lao PDR**).
- The *kaupules* have started data collection on climate change-relevant indicators such as temperature, areas with draught, rainfall, etc.; these are stored in a database for planning. *Kaupules* have initiated vulnerability assessments and consultations with citizens on climate change-related issues (**Tuvalu**).

## BOX 4.2

## Comprehensive LoCAL pilot approach to climate risk, vulnerability and adaptation assessments

In **Benin**, **Ghana**, **Mali** and **Niger**, LoCAL has undertaken a comprehensive review of the country landscape for climate risk assessments, vulnerability assessments and climate change adaptation assessments with a view to strengthening the respective LoCAL initiative. The review included:

- National climate change policies and strategies theoretically with direct application in the metropolitan and municipal district assemblies and communes
- National policy documents and sectoral strategies at the national level relevant to local development plans
- Climate risk, vulnerability and adaptation assessments at the national level and their relevance for local-level assessments
- Existing methodological and guidance documents

The review helps assess the degree to which climate change has been included in local development plans, and to make recommendations for capacity building of metropolitan and municipal district assemblies, communes and central-level agencies as well as improve the LoCAL mechanism overall.

This successful effort is being followed up by in-country trainings in **Benin** at the government's request and by more robust climate, vulnerability and adaptation assessments in local governments participating in LoCAL. It is also being replicated in **Mali** and **Niger**.

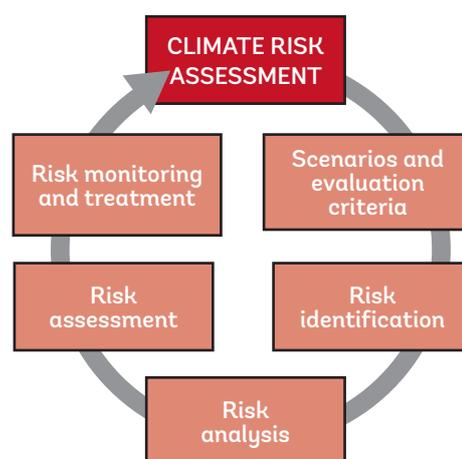
## Assessing climate risks

In the LoCAL context, climate risk assessments seek to understand the nature and level of climate risks on an exposed territory by determining the probability of occurrence of climate-related events (e.g. droughts, floods, windstorms) and slow-onset events (e.g. increased temperature, changing weather patterns) and their impacts. Climate risk assessments typically entail five steps (Figure 4.3).

Global and regional climate change models provide climate projections under various scenarios and confidence levels. To the extent possible, local climate risk assessments should draw on the down-scaling of national scenarios using available methods. They generally rely on quantitative data and are spatialized (risk mapping).

FIGURE 4.3

### Steps in climate risk assessment



Source: C. S. Tramunt, 2016.

Understanding climate risks enables local governments and communities to differentiate development challenges resulting from climate change and those resulting from existing (mainstream) development pressures (business as usual) such as high population growth, over-exploitation of natural resources, environmental degradation and pollution, and infrastructure development and urbanization. Climate risk assessment is the first step leading towards local government action to prevent or minimize the impacts of climate change.

Examples of LoCAL initiatives regarding climate risk and related assessments are presented in Box 4.3. Selected criteria from a quick diagnostic assessment tool introduced by LoCAL **Ghana** in three metropolitan, municipal and district assemblies to assess climate change risk considerations are presented in Table 4.1.

## Assessing vulnerabilities

While improved climate change projections are the focus of many large-scale research agencies, these may not meet the needs of local governments, due to difficulties in down-scaling from global predictions to the local level. Vulnerability assessment offers a way to circumvent the absence of detailed climate change projections at the local scale.

Climate risk and vulnerability assessments are complementary processes, each of which enhances a local government's understanding of the risks it faces due to climate change as well as its capacity to address them. Risk assessments look **outwards** to assess the likelihood and consequences of a specified harm occurring, while vulnerability assessments look **inwards** and measure the predisposition of local governments and their populations to harm.

Vulnerability is thus applied as an additional layer or filter on top of the results of a risk assessment. Local governments can compare areas of risk and

### BOX 4.3

## Examples of LoCAL initiatives on climate risk and related assessments

- In **Bhutan** and **Cambodia**, LoCAL and the Korea Environment Institute are developing scientific frameworks of climate change for enhancing the climate change adaptation capabilities of local governments. Drawing on experience from Korea, the framework considers both climate risk and vulnerability analysis and aims to strengthen the capacities of local governments with state-of-the-art climate information.
- In **Ghana**, LoCAL has developed quick diagnostic assessments for LoCAL districts for climate risk, vulnerability and climate change adaptation. The tools aid in setting up a baseline and monitoring progress.
- In the **Pacific**, where joint approaches towards climate change adaptation and disaster risk reduction are promoted, LoCAL addresses the two issues jointly, under the rubric of climate adaptation and risk reduction.
- In **Lao PDR**, a provincial-level climate risk and vulnerability assessment was prepared as part of the design of a project funded by the Global Environment Facility (GEF), in which LoCAL is integrated. For each adaptation activity, a localized climate risk and vulnerability assessment was conducted to inform activity viability and adaptation design. These assessments were also used as an entry point to build capacities for climate resilience.

TABLE 4.1

## Selected criteria to assess climate change risks in local development planning

Criterion	Assessment	Score	Result
1. The district has adopted a climate change scenario (from national climate change communications and/or national adaptation plans)	The district is not at all familiar with the climate change scenarios considered in the national policies and/or national climate change adaptation plans (CCAP).	1	
	The district knows climate change scenarios considered in the national policies and national climate adaptation plans, but does not consider them for local development plans (LDPs) and local CCAPs.	2	
	The district knows climate change scenarios considered in the national policies and national climate adaptation plans, and considers them in the LDPs and local CCAPs.	3	
	The district considers climate change scenarios from national policies and plans, deepens a local scale and/or updates them in the LDPs and/or local CCAPs.	4	
2. Climate change risks analysed by past events and historical record data assessment (probability based on registered frequency and consequences; control implemented mechanisms)	The district has no historical data record of the risks affecting it.	1	
	The district has historical data not recorded and not used to assess main risks in its territory.	2	
	The district has historical data on risks recorded affecting it but not complete and partially used for main risk assessments.	3	
	The district has historical records of risk that affected it and uses this information to characterize all major risks in its territory.	4	
3. Establishing a framework of risk assessment criteria for the definition of risk intensity (risk intensity = scale of probability + scale of impacts)	The district has not already defined scale of probability and scale of impacts for all risks affecting the territory.	1	
	The district has defined scale of probability and scale of impacts for the risks in the territory but has not crossed them to define the risk intensity (for each of them).	2	
	The district has defined probability, impact and intensity scales for the risks affecting the territory but has not prioritized actions based on that assessment.	3	
	The district has defined probability and impact scales, and the intensity of each of the risks in the territory and prioritizes actions in the local development plan and local CCAP based on that assessment.	4	
4. Analysis of risk monitoring and effective control mechanisms for risk prioritization (Priority = intensity – existing effective control mechanisms)	The district has no mechanism for monitoring and controlling the risks affecting it.	1	
	The district has mechanisms for monitoring and controlling the risks affecting it, but these are not effective and/or updated.	2	
	The district has effective mechanisms for monitoring and controlling the risks affecting it, but these are not updated.	3	
	The district has effective and updated mechanisms for monitoring and controlling the risks affecting it.	4	
5. Development of risk maps to identify geographical areas that may be affected by each of the present risks	The district has no information to develop risk mapping and does not know the areas that could be most affected for each of them.	1	
	The district has biased information to develop risk mapping and has not developed any map.	2	
	The district has information and risk mapping, but it is not complete and/or updated.	3	
	The district has information and risk mapping is developed and updated.	4	
6. Integrated risk map (if possible) to assess the interaction between different risks and define the most critical areas (where the risk impacts focus more)	The district has no information to develop multi-risk mapping and does not know the multi-risk areas that could be most affected.	1	
	The district has biased information to develop comprehensive/multi-risk mapping.	2	
	The district has information and risk maps for each risk affecting it, but these are not completed and/or updated to allow a multi-risk mapping.	3	
	The district has information and risks and multi-risk mapping is completed and updated.	4	

Source: C. S. Tramunt, 2016; based on Adapt-Chile, 2014.

vulnerability in order to prioritize their response. For example, there may be areas where a local government faces medium risk but has high vulnerability, in which case action may be more urgent. Alternatively, it could be useful for a local government to conduct a vulnerability assessment and then use a risk assessment framework to analyse the areas of key vulnerability. For example, if a local government determines that its water supply is vulnerable under climate change, it may be worthwhile to conduct a quantitative risk assessment to analyse how much supply will change so that it can better plan to augment supply.

The projected climate change risks therefore need to be understood against vulnerabilities of

communities and vulnerable groups, sectors (e.g. agriculture, livestock and fisheries, infrastructure, education, health), ecosystems (e.g. coastal, dryland, island, mountain) and natural resources (e.g. water, forests, land).

Examples of LoCAL initiatives in the area of vulnerability assessments are presented in Box 4.4. Table 4.2 presents selected criteria from the LoCAL **Ghana** quick diagnostic assessment tool to assess vulnerability considerations. The tool assesses vulnerabilities along five dimensions: human, social, institutional, ecological and economic capital. Examples of selected criteria for human, social and institutional capital are presented in the table.

## BOX 4.4

### Examples of LoCAL initiatives on climate vulnerability assessments

- In **Benin**, LoCAL has undertaken, in its first year of operations, participatory diagnostics of the vulnerabilities of populations in the three pilot communes. The assessments have informed a first generation of local adaptation plans. Benin has since benefited from technical assistance to address the four assessment areas (climate risk, vulnerabilities, adaptation and capacity building) including through the use of and training in geographic information systems (GIS).
- In **Bhutan**, the participatory rural appraisal (PRA) methodology was used as a starting point, customized for climate change vulnerability assessment and adaptation planning. Local extension agents for agriculture, forestry and livestock development, who already have basic PRA training from their formal degree courses, were trained in the use of the customized methodology.
- In **Cambodia**, LoCAL is systematically using the vulnerability reduction assessment (VRA) methodology to identify and design climate change vulnerability reduction projects that reflect community needs. The VRA is a perception-based tool that can be used to develop a vulnerability baseline, and monitor and evaluate the success of community-based adaptation activities and progress towards set achievement of outcomes. The VRA focuses on understanding how climate change now affects, and will affect, the lives and livelihoods of targeted communities. It examines climate-related hazards, vulnerabilities and adaptive capacities with a view to building resilience for the future (UNDP Cambodia, 2014).
- In **Tuvalu**, all enrolled *kaupules* were supported prior to the actual launch of the PBCRG with community-based climate vulnerability and capacity assessments to identify areas affected by climate change, adaptation measures and relevant immediate investments. During the first year of LoCAL implementation, *kaupules* were supported in developing strategic island development plans; these will be used in developing annual *kaupule* development plans with climate-appropriate investments.

TABLE 4.2

## Selected criteria to assess vulnerability considerations in local development planning

Criterion	Assessment	Score	Result
<b>HUMAN CAPITAL</b>			
1. Knowledge of the most vulnerable populations and exposed areas to the effects of climate change (women, children, elderly, disabled, etc.)	The district does not know who the most vulnerable groups are and where they live in the territory.	1	
	The district identifies the most vulnerable groups, but does not know their dispersion in the territory.	2	
	The district knows vulnerable groups and their location in the territory, but there are no plans to reduce their vulnerability.	3	
	The district knows the vulnerable groups, their location in the territory and implements vulnerability reduction strategies included in the local development plans and local climate change adaptation plan.	4	
2. Knowledge of vulnerable habitat and places where habitat is exposed to the effects of climate change	The district does not know who the vulnerable habitat groups in the territory are.	1	
	The district identifies vulnerable habitat groups, but does not know their dispersion in the territory.	2	
	The district knows the vulnerable habitat groups and their location in the territory, but there are no plans to reduce their vulnerability.	3	
	The district has a register of vulnerable habitats, location in the territory and implements vulnerability reduction strategies included in their local development plans and local climate change adaptation plan.	4	
3. Knowledge on the situation of food insecurity and the most exposed places/population to the effects of climate change	The district does not know who the groups are that suffer from food insecurity and where they are located in the territory.	1	
	The district identifies which groups suffer from food insecurity, but does not know their location in the territory.	2	
	The district knows the groups that suffer from food insecurity and their location in the territory, but there are no plans to reduce their vulnerability.	3	
	The district has a register of groups that suffer from food insecurity, knows their location in the territory and has vulnerability reduction strategies included in the local development plans and the local climate change adaptation plan.	4	
4. Knowledge about access to water and sanitation and the most vulnerable areas exposed to water shortages due to climate change effects	The district does not know the people without access to water and sanitation and their location in the territory.	1	
	The district identifies inhabitants without access to water and sanitation, but does not know their location in the territory.	2	
	The district knows the inhabitants who have no access to water and sanitation and their location in the territory, but there are no plans to reduce their water access vulnerability.	3	
	The district has the land registry of the inhabitants who have no access to water and sanitation, their location in the territory and has strategies to reduce their vulnerability included in local development plans and local climate change adaptation plan.	4	
5. Knowledge about access to energy and transport as well as the most vulnerable infrastructures exposed to climate change effects	The district does not know the inhabitants without access to energy and transport and their location in the territory.	1	
	The district identifies which habitats are without access to energy and transport, but does not know their location in the territory.	2	
	The district knows the inhabitants who do not have access to energy and transport and their location in the territory, but there are no plans to reduce their vulnerability.	3	
	The district knows the inhabitants who do not have access to energy and transport and their location in the territory, and has strategies to reduce their vulnerability included in the local development plans and local climate change adaptation plan.	4	

(continued)

TABLE 4.2

## Selected criteria to assess vulnerability considerations in local development planning *(continued)*

Criterion	Assessment	Score	Result
6. Knowledge about the incidence of diseases and their aggravation due to climate change effects	The district does not know the most vulnerable inhabitants affected by diseases related to climate change and their location in the territory.	1	
	The district identifies the most vulnerable inhabitants affected by diseases related to climate change but does not know their location in the territory.	2	
	The district knows vulnerable inhabitants to diseases related to climate change and their location in the territory, but there are no plans to reduce their vulnerability.	3	
	The district knows vulnerable inhabitants to diseases related to climate change and their location in the territory, and has strategies to reduce their vulnerability included in the local development plans and local climate change adaptation plan.	4	
<b>SOCIAL CAPITAL</b>			
1. Presence and effectiveness of early warning systems	There are no early warning systems in the district.	1	
	Existence of some early warning systems in the communities but neither dissemination nor updated protocols.	2	
	Existence of early warning systems for the communities, updated protocols but it lacks their dissemination.	3	
	There are efficient early warning systems, with protocols disseminated and reinforced by the community and updated evaluations.	4	
2. Cohesion and strength of civil society organizations at the local level	Local civil organizations have very low cohesion and ability to manage contributions to local plans. They do not participate in district development.	1	
	Local civil organizations exist, but have a weak organization and cohesion as well as low persuasiveness and diffusing capacity. They are sometimes involved in local development.	2	
	Local civil organizations are cohesive, organized and persuasive. They have convening power and participate in local development temporarily.	3	
	Well-organized local civil organizations with authority to convince and disseminate support local development.	4	
3. Degree of coordination among the organizations of civil society and local government	The coordination spaces do not exist.	1	
	There are spaces and coordinating bodies, but they are not used, are not sufficiently disseminated or coordination is not sufficiently encouraged.	2	
	Spaces and existing instances help to promote coordination between stakeholders.	3	
	There is a strong culture of coordinated collaboration between local government and the community.	4	
4. Encouraging local participation in decision-making and improving the district territory	The district does not have the ability or the means to encourage local participation.	1	
	The district may occasionally manage calls for participation, but not sustained over time.	2	
	The district regularly invites the community to review the decisions of the local administration.	3	
	The district actively seeks citizen participation in the design of local plans and local policies.	4	

*(continued)*

TABLE 4.2

## Selected criteria to assess vulnerability considerations in local development planning *(continued)*

Criterion	Assessment	Score	Result
<b>INSTITUTIONAL CAPITAL</b>			
1. Influence of the impacts of extreme weather events in the services provided by the district	Past impacts have completely surpassed the capacity of local government to ensure continuity of its services.	1	
	Past impacts generated the danger of cutting the continuity of services provided by local government.	2	
	Past impacts generated isolated severe pressure and/or high pressure on several fronts.	3	
	Past impacts generated relative pressure on certain areas of local management, but manageable.	4	
2. Policies and development regulations for the infrastructure in the territory (housing, communication, transport and energy) take into account risk reduction	Local regulations and policies do not take into account climate change risk reduction.	1	
	Some sectors consider some climate change risks, but not under the laws.	2	
	Some sectors consider some climate change risks under municipal by-laws.	3	
	Climate change risks are part of the management regulations of the district as well as the local infrastructure regulations.	4	
3. Existence of plans and/or regulations for climate change adaptation at the local level	There are no policies or adaptation plans regarding local climate change context.	1	
	There is a policy for climate change adaptation.	2	
	There is a policy and plans for local climate change adaptation.	3	
	The district has a climate change adaptation policy and consistent respective plans and maps that are applied, updated and evaluated.	4	
4. Existence of measures to protect vital public facilities (water and sanitation infrastructure, health, education, energy and transport) from the potential damage caused by extreme weather events	There are no safeguards for the equipment and local public infrastructure.	1	
	There are support and protection of vital public local facilities, but only in a reactive manner.	2	
	Local measures have been developed to protect public local facilities, but are not updated.	3	
	There are measures to protect vital public facilities implemented by updated and evaluated action plans.	4	
5. Allocation of financial resources for climate change adaptation and disaster risk reduction activities including post-disaster recovery	The district does not have sufficient capital or access to external funding for climate change adaptation and risk reduction activities.	1	
	The district has insufficient funds, but can access external funds to coordinate measures for climate change adaptation and risk reduction local activities.	2	
	The district has sufficient capital to coordinate measures for climate change adaptation and risk reduction local activities.	3	
	The local government has sufficient internal and external funding to coordinate measures for climate change adaptation and risk reduction local activities.	4	

Source: C. S. Tramunt, 2016; based on Adapt-Chile, 2014.

## Assessing adaptation options

Following assessment of climate risks and vulnerabilities, adaptation options are considered with a view to answering a series of questions:

- Which current and future climate risks require adaptation?
- What are the key dimensions of vulnerabilities?
- Which risks and vulnerabilities must be addressed as a priority?
- Which areas are under the local authorities' mandate and where can they have an impact?

**Adaptation assessment** is defined as the practice of identifying options to adapt to climate change and evaluating them in terms of criteria such as availability, benefits, costs, effectiveness, efficiency and feasibility (IPCC, 2014a). Adaptation assessments can be organized in a five-step process, as shown in Figure 4.4.

Evaluation of identified adaptation options is based on the advantages and disadvantages of each proposed intervention. This includes a recognition that adaptation measures with a

high participatory process in planning, design and implementation also strengthen community engagement and capacities, and therefore community resilience. Ultimately, the selected adaptation measures need to help achieve local development goals in the most effective and efficient manner, within the institutional capacities available. All benefits and costs should thus be considered.

## Adaptive alternatives should respond to the most urgent problems and focus on the most vulnerable

A main objective of adaptation is to reduce exposure (e.g. move inhabitants away from floodplains) and sensitivity (e.g. choose plant varieties based on new climate conditions), as well as increase adaptive capacity (e.g. adjust sources and energy networks to new consumption patterns) to reduce climate change vulnerability. Adaptive alternatives should be defined to respond to the most urgent problems identified and focused on the needs of the most vulnerable populations.

To better understand adaptation options and their costs and benefits, consider the following two examples, illustrated in Figure 4.5.

- Farmers suffer crop losses due to drought. Without climate change (business as usual), farmers already suffer a loss. The more severe climate change becomes, the bigger the crop losses will be. An irrigation project prevents the crop losses. There is already benefit without climate change (business as usual) but the benefit (crop loss avoided) increases as the climate changes. The intervention is a **'no regret' measure**, as it allows a benefit

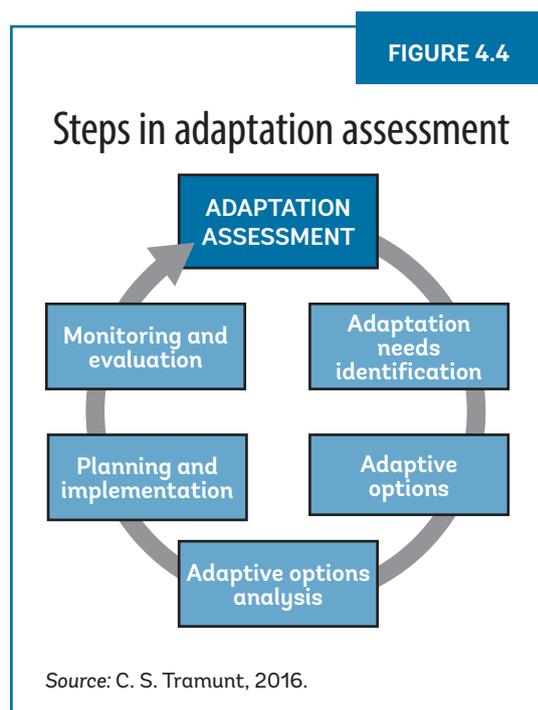
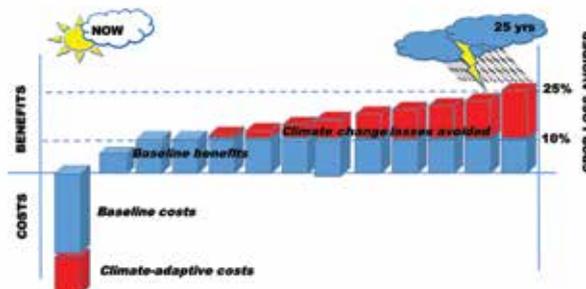


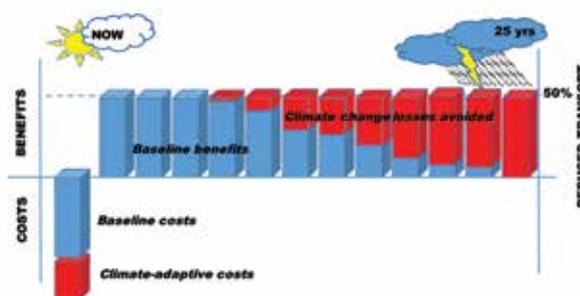
FIGURE 4.5

## Benefits and costs of climate-adaptive irrigation and improving climate resilience of a road

	Without adaptation intervention	With adaptation intervention
Business as usual	Farmers suffer loss of 10% of crops due to drought	<ul style="list-style-type: none"> <li>No crops losses</li> <li>Baseline benefits: 10% of crop value saved</li> </ul>
With climate change	Over 25 years, crop loss increases to 25% because of climate change	<ul style="list-style-type: none"> <li>No crop losses</li> <li>CCA benefit: increase to additional 15% of crop value saved after 25 years</li> </ul>



	Without adaptation intervention	With adaptation intervention
Business as usual	Farmers have high transport costs to transport crops to markets	Baseline benefits: 50% reduction in transport costs which is sustained as road is maintained in good condition
With climate change	Farmers have high transport costs and sales losses when they cannot reach the market	50% reduction in transport costs which is sustained as road is climate proofed and maintained in good condition



Source: J. Abrams, 2015.

both under the business as usual and climate change scenarios. No regret measures are of particular importance as LoCAL works primarily in LDCs and in the poorest and most vulnerable areas where populations facing daily livelihood challenges might find it difficult to prioritize longer-term interventions over today's urgent needs.

- Farmers face high costs to transport their crops to market. A new road reduces these costs. Climate change will cause increased flooding, and this may damage the road unless it is constructed to a new, higher-cost climate-resilient standard. As the climate changes, the benefit from the road (reduced transport costs) stays the same; but without strengthened climate resilience, the benefit would be lost. In a scenario without climate change, only the extra cost of investing in

climate-resilient standards would be lost (although the higher standard and quality of the road will likely increase its lifetime and reduce maintenance costs).

It is thus generally best to seek interventions that produce a worthwhile return in current conditions and that are expected to provide long-term adaptive benefits as the climate changes (no regret measures). This approach is in line with the needs of beneficiary communities, which expect immediate benefits as well as protection against future threats.

In practice, it is difficult to separate baseline and adaptive costs and benefits. In **Cambodia**, LoCAL typically funds one-third of infrastructure investments, considering that as a proxy figure for the climate-adaptive part of the cost. In countries faced with challenges regarding timeliness

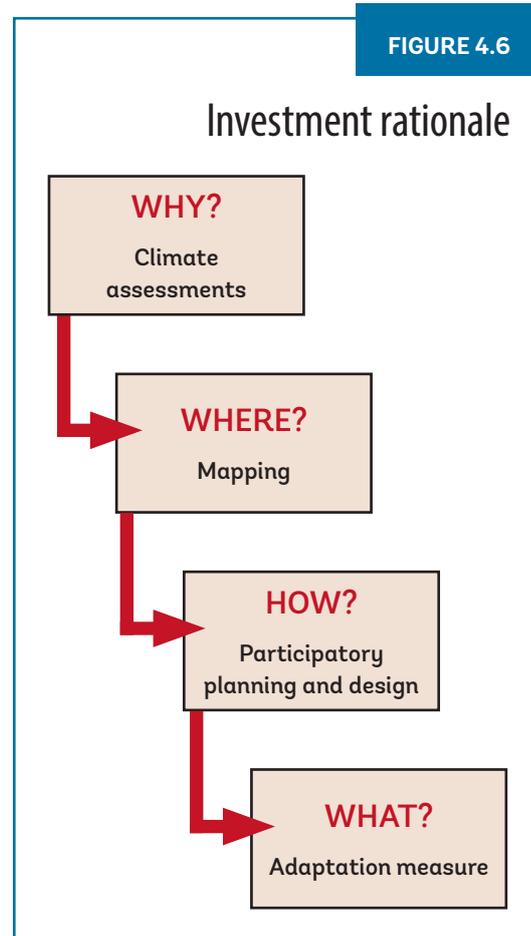
and the size of regular transfers from central governments, LoCAL can fund 100 per cent of the climate-related interventions (see [Chapter 6](#)). This can also be the case for urgent investments (e.g. relocation or shelters in [Tuvalu](#)).

In all cases, adaptation measures proposed for funding under a PBCRG should be clearly described and include a justification to explain climate relevance. Analysis of the underlying causes of the issues to be solved – in terms of climate risks and vulnerabilities – aids greatly in determining whether the proposed intervention is meaningful and addresses climate change or whether it is just business as usual. For example, water scarcity can have many causes: population pressure, pollution, unsustainable agricultural practices, water system leakages, as well as climate change-related causes such as changing rainfall patterns and increased evaporation. Thus, not all water-related interventions are necessarily justified under the climate change conditionality.

Furthermore, climate risks and vulnerabilities manifest themselves at various scales – through upstream and downstream linkages (flash flooding, deforestation, slope erosion and coastal erosion) and where solutions require comprehensive action and more resources (e.g. watershed management and conservation planning, large-scale water storage facilities, coastal protection works and coordinated disaster preparedness interventions). In answering to community needs, adaptation options should be assessed at various scales, since addressing the underlying causes may well be beyond the reach of local communities.

In conclusion, along with checking the conformity of adaptation measures against the investment menu, the climate rationale – i.e. **why** (assessments), **where** (location) and **how** (the way adaptation options have been identified and selected, e.g. in a participatory and gender-sensitive manner; and the way specific measures will be executed, e.g. in terms of climate-relevant technical specifications, discussed in [Chapter 7](#) – is

just as important as the interventions themselves (**what**) (Figure 4.6).



Ultimately, the adaptation options identified through the various assessments need to be taken up by and addressed through the local development planning process (see [Chapter 5](#)).

### Assessing the needs for capacity building

The findings of the above assessments provide useful information in assessing existing adaptive capacities of communities and local governments, as well as the priority needs for capacity building. These are also informed by the annual performance assessments (see [Chapter 8](#)).

Examples of criteria from the quick diagnostic assessment tool introduced by LoCAL [Ghana](#) for assessing adaptive capacities are presented in Table 4.3.

TABLE 4.3

## Selected criteria to assess adaptive capacities in local development planning

Criterion	Assessment	Score	Result
1. Institutional capacity in the district teams to adapt to impacts of projected climate change scenarios	Not possible now: it requires a very high planning effort, high costs and/or additional staff to cope with projections.	1	
	Not planned now: it will require major adjustments in planning, costs and/or additional staff to cope with projections.	2	
	May be possible soon: with adjustments to planning, considerable costs and/or additional staff to meet projections.	3	
	It is already in development: efficiently and taking the least possible additional cost and efforts.	4	
2. Knowledge of the impacts of climate change on the district	The district does not keep information about past climatic event experiences.	1	
	The district maintains a database of past weather events, but not integrated into local planning.	2	
	The district integrates past experience of extreme weather events visible through protocols, regulation or others.	3	
	The district integrates past extreme event information in local development plans and/or climate change adaptation plan, and any other territorial planning instrument.	4	
3. Capacity in maintaining the functionality of municipal services despite extreme weather events	There are no district service continuity plans for extreme weather events.	1	
	There are continuity plans for communal services due to extreme weather phenomena, but these are not enforced.	2	
	There are continuity plans for district services due to extreme weather phenomena, but these are not evaluated.	3	
	There are continuity plans for district services due to extreme weather events that are evaluated and updated.	4	
4. Local economic resources to work on climate change adaptation	The district does not have the resources to work on climate change adaptation nor qualified personnel.	1	
	The district has very limited funds and certain professionals with the skills to work on climate change adaptation.	2	
	The district has limited funds, but is investing in capacity building for the management of climate change adaptation.	3	
	The district has sufficient funds to integrate consideration of climate change adaptation into its decision-making routine.	4	
5. Access to and use of technology (communication technologies, surveillance technologies, and access to climate change adaptation knowledge); level of digitalization.	The district has no access to the relevant technology to work on climate change adaptation.	1	
	The district has very limited access to the relevant technology to work on climate change adaptation.	2	
	The district has limited access to the relevant technology to work on climate change adaptation.	3	
	The district has access to the relevant technology to work on climate change adaptation.	4	
6. Capacity of the district to develop knowledge and support networks to address climate change	The district does not seek to create partnerships to develop the knowledge and skills to work on climate change adaptation.	1	
	The district has tried to establish partnerships in knowledge and skills on climate change adaptation, but without success.	2	
	The district has developed partnerships with other organizations and institutions for climate change adaptation.	3	
	The district is actively developing partnerships with other districts, municipalities, regional government, national government or universities.	4	

Source: C. S. Tramunt, 2016; based on Adapt-Chile, 2014.

# 5



## INTEGRATION IN LOCAL DEVELOPMENT PLANNING



In many countries, **methodologies or guidelines** are already in use to support the integration of climate change in local development plans. If such methodologies exist – e.g. the climate vulnerability and risk assessment methodology in **Nepal** – LoCAL will reference these. In countries where such methodologies are not yet embedded within local planning processes, LoCAL will support national efforts to integrate climate change in planning guidelines (Box 5.1).

As touched on in [Chapter 3](#), **minimum conditions and performance measures** also support improvement of the planning process and integration of adaptation in terms of the actual steps taken and of their quality. Minimum conditions ensure some level of preparation to embark on climate change interventions funded by the PBCRG – e.g. by having an approved and costed annual adaptation programme as in **Benin, Mali, Niger** and **Tuvalu**. Performance measures help improve quality over time;

#### BOX 5.1

### Examples of LoCAL integration of adaptation in local development guidelines and manuals

- In **Benin**, LoCAL supported the inclusion of integration of climate change in the guidelines for its third generation of local development plans and operationalization of guidelines in pilot communes. This support included learning by doing as well as training and capacity building with development partners, the German Society for International Cooperation (GIZ) and the Swiss Agency for Development and Cooperation.
- In **Bhutan**, a local development planning manual was produced in 2010, but did not adequately address climate change mainstreaming. LoCAL developed a simple climate vulnerability and risk assessment methodology and an annex to the manual highlighting how to integrate climate change in each of the planning steps, as well as how to ensure a clear link with the annual budget.
- In **Lao PDR**, climate change was mainstreamed in the existing District Development Fund planning guidelines. These adapted guidelines were tested under an initiative involving LoCAL funded by the Global Environment Facility (GEF) and ultimately received ministerial approval for nationwide use in local planning processes.
- In **Nepal**, the existing 14-step planning process already reflects many good practices, including climate vulnerability and risk assessment and community-based planning. LoCAL therefore focuses on ensuring all steps are implemented, quality outputs are produced, and community demands are included in final district annual plans and budgets.
- In **Tuvalu**, planning guidelines existed only for a special fund but not for local government, and climate change issues were not addressed. Based on the existing local government act and rules and regulations, LoCAL supported the development of step-by-step planning and budgeting guidelines that take climate change into account.

initially, indicators tend to highlight whether specific steps or approaches in the planning and budgeting process were actually implemented in line with development guidelines – e.g. in a participatory and gender-sensitive manner. As local governments develop their capacities, the quality of the specific planning steps and annual plans and budgets gradually increase. Special emphasis is given to ensure climate change adaptation is adequately addressed in local planning processes, medium-term plans and annual programmes. Box 5.2 presents examples of performance measures which improve integration of climate change adaptation in planning processes.

In countries that have developed local adaptation plans of action (LAPAs), such as **Mozambique** and **Nepal**, LoCAL builds on these by funding selected adaptation activities identified as part of the local governments' annual plan. Furthermore, LoCAL promotes full integration of the LAPAs (often developed through stand-alone project support) into the planning cycle of local governments. In other countries, LoCAL emphasizes the quality and use of climate risk and vulnerability assessments to support integration of adaptation into the local development planning process, rather than promoting the creation of additional plans, as explained in Box 5.3.

## Promoting good governance and participatory approaches

PBCRGs are used to help build stronger and more transparent government systems. The indicators for minimum conditions and performance measures typically include a number of good governance indicators, related to, among other items, public financial management, procurement, transparency and accountability, as well as measures that promote participation and equality (see [Chapter 3](#)). Examples of performance measures that promote good governance and participation are presented in Box 5.4. Such indicators are particularly important in countries

### BOX 5.2

## Examples of performance measures which improve integration

- Climate change challenges and risks are well integrated in the statutory planning process and reflected in the plan document (**Bangladesh**).
- Climate change adaptation is integrated in local development plans by making use of climate and vulnerability data to justify specific investments and related costs included in the plan and by clearly explaining how the investment will strengthen resilience to climate change (**Benin, Mali and Niger**).
- Climate change data analysis is conducted, yielding a list of risks, issues and areas; the related analysis is applied in planning (**Ghana**).
- Climate change is mainstreamed in the annual development plan as a chapter, with a clear description of the areas to be addressed (**Mozambique**).
- Climate change is mainstreamed in the local strategic island development plans, with linkages to the three-year capital development plan and the annual development plan/budget as a chapter, with a clear description of the areas to be addressed (**Tuvalu**).

where weaker governance, financial management, transparency and accountability have a negative impact on effective service delivery and the targeting of local needs; where democratic institutions are not in place or are not sufficiently strong at the local level; or where countries face political constraints. Examples include **Mali** or **Nepal**, where there are no elected bodies at the sub-national and local levels, and citizen

## BOX 5.3

## Developing or integrating local adaptation plans

During the first cycle of planning and investments in **Benin**, LoCAL supported the development of participatory vulnerability assessments and local adaptation plans in the three pilot communes. Following the performance assessment of the first cycle of operations, the evaluation team recommended revising the minimum condition on local adaptation plans to instead focus on improving climate assessments and integration into local development plans. Similar recommendations were made in **Mali** and **Niger**.

In **Mozambique**, at the time of LoCAL initiation, the Massingir District was at an advanced stage in the elaboration of its local adaptation plan; in Mabalane, the process had not yet begun. In capacity-building interventions with that district's technical teams, the pros and cons of integrating the local adaptation plan at the district level were discussed and debated in depth.

## BOX 5.4

## Examples of performance measures that promote good governance and participation

- Public hearings/social audits/discussion forums are organized (**Bangladesh**)
- The district has facilitated transparency and organized public meetings, presented their physical and financial progress, interacted with citizens as well as presented plans for the coming fiscal year (**Mozambique**)
- Records show at least 25 per cent of households are represented in participatory planning meetings (**Cambodia**)
- Plans and budgets, final accounts (use of previous year's funds), financial statement Upazila/Pourshava Parishad Development Fund account, audit reports, Upazila/Pourshava Parishad annual report/progress reports about the development in projects, and annual performance assessments are published (**Bangladesh**)
- Procurement rules and regulations and community contracting rules are complied with (**Bhutan**)
- Audit findings from previous audit are rectified within the required time (**Bhutan**)
- Public meetings, community monitoring, progress reviews and sharing of core information (budgets, plans, progress reports with the public) are organized (**Tuvalu**)
- Communities participate in a screening of projects identified in the Three-Year Strategic Plan and in the outcome of the screening in terms of validation, cancellation or re-prioritization of projects, which is reflected in the annual plan document (**Lao PDR**)

participation and downward accountability are therefore quite weak.

Planning is by definition a multi-stakeholder process and benefits greatly from a vibrant community, and civil society and private sector engagement. Participation is also in itself a powerful means to strengthen community resilience and adaptation capacity. It is thus important to ensure that local development processes support increased community resilience, adaptability and – ultimately – transformability.

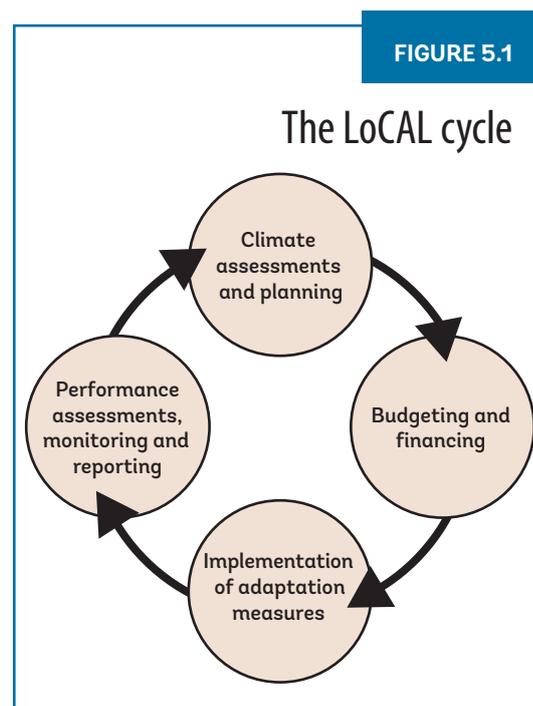
In promoting participation, the **asset-based planning approach** was piloted in **Bhutan, Cambodia** and **Tuvalu**. The approach takes as its starting point the existing assets and capacities of communities and identifies which adaptation priorities communities can initiate by themselves. Only thereafter is the external support required to facilitate community development identified and agreed upon with local authorities. The various community-level planning processes are then aggregated at a larger scale, with the participation of all involved communities. Existing capacities and related needs for each community are jointly assessed, as well as adaptation measures required at a larger scale (e.g. local government, watershed, ecosystem). Community and external resources are then jointly allocated where most appropriate. As a result, communities both appreciate the support they receive to address their own needs – and that provided to other communities, as they are aware of the conditions and challenges these face. Also, more focus is often placed on larger-scale adaptation interventions which address underlying causes and which benefit multiple communities. This contrasts with many local government planning processes, which tend to aggregate an inventory of community demands into the annual plan, thereby missing larger-scale challenges or support across communities.

## Addressing the needs of communities and gender equality

The participation of vulnerable groups is integral to successful adaptation at the local level. Consequently, LoCAL seeks engagement with communities, women and other vulnerable groups to promote their inclusion in various ways throughout the LoCAL cycle (Figure 5.1), as discussed in the following examples.

Performance measures can also provide incentives for better including and addressing the needs of citizens, communities and women (Box 5.5).

- In **Cambodia**, LoCAL uses participatory vulnerability reduction assessments as part of its local development planning process and as a basis for responding to local adaptation needs.
- In **Nepal**, LoCAL only funds climate change interventions from the local government plan, which are also reflected in the sub-district (ward) plans; the latter are more



## Examples of performance measures promoting the inclusion of citizens, communities and women

- Representation of women on the District Consultative Committee is a minimum of 30 per cent (**Mozambique**)
- Women members in Upazila/Pourshava Parishad actively participate in meetings: all women members were present in at least two-thirds of the regular monthly Upazila/Pourshava Parishad council meetings held and women members raised issues for debate – a minimum of one per meeting (**Bangladesh**)
- Issues related to women and strategies to improve access to services and general conditions for women are considered in the five-year plan (**Bangladesh**)
- There is evidence of women representatives' participation in planning meetings on the annual plan (**Bangladesh**)
- Climate change adaptation measures are identified and prioritized in a participatory and gender-sensitive manner and based on a multi-criteria analysis (**Benin**)
- Involvement of and information to citizens in climate change activities is demonstrated (**Ghana**)
- Local citizens (in addition to community councils and village authorities) are involved in preparation and implementation of PBCRG-funded activities (**Cambodia**)
- There is evidence that climate change projects have addressed vulnerable groups such as women, children and the elderly (**Mozambique**)
- Citizen report cards are used to assess public satisfaction and views on performance (**Bhutan**)
- There is evidence that climate change projects have addressed the needs of vulnerable groups such as women, children and the elderly, as documented in the narrative of the annual development plan (**Tuvalu**)
- The head of the district women's union and a female village representative are members of the District Development Support Team, which will be established in each district to ensure facilitation of and technical input into the district investment planning process (**Lao PDR**)

representative of community demand. In this way, the risk of having bottom-up demand overruled by central demand is addressed.

- In **Benin, Mali** and **Niger**, the menu of investments includes measures that are specifically targeted at women. The performance assessment manual advises that a number of performance indicators be assessed through, among other means, dedicated interviews with at least two to

three different communities and separate interviews with women and children.

- In **Bhutan**, community vulnerability assessments and adaptation activity prioritization were conducted separately with female and male groups. Subsequently, a discussion was facilitated on the commonalities and differences of the outcomes, as well as the underlying reasons for the differences in plans and priorities.

- In **Mali**, one of the first two interventions of the pilot commune specifically targeted village women through the training of 238 women and a 2.5 hectare garden with solar-powered irrigation, water storage, composting facilities and vegetable hedges. Village authorities of Diadiéla and the head of the women's association welcomed this intervention and its multiple climate, environmental and social benefits.
- In **Niger**, women were paid to implement anti-soil erosion measures from the first cycle of planning and investments. Women beneficiaries explained that they used the cash for daily necessities and to invest in school supplies.

### Taking environmental considerations into account

Climate change affects both the environment and people. Ecosystem-based adaptation provides interesting avenues to deal with climate change at the local level. LoCAL therefore includes such measures in its investment menu and systematically applies environmental standards and practices, as illustrated in Box 5.6.

#### BOX 5.6

### Examples of application of environmental standards and practices through performance measures

- In **Bhutan**, climate change adaptation investments need to be designed with minimum potential adverse environmental impacts. Where such impacts are anticipated, investments need to fully consider proper environmental safeguards (e.g. choice of species in reforestation/crop diversification, downstream effects when developing drainage system for road/building, irrigation system, choice of structure and construction materials).
- In **Benin, Mali and Niger**, communes are assessed on whether feasibility studies for investments consider environmental risks and minimize them.
- In **Ghana**, in line with the District Development Fund, performance indicators consider evidence of compliance with environmental and social impact assessments and whether the district has an active committee in place for climate change, environment and disaster risk management.



# 6



## INTEGRATION IN BUDGETS



LoCAL is designed to adapt to individual national circumstances, regardless of whether the respective fiscal transfer mechanisms are well-established and functional as in **Bhutan**; challenged by political instability as in **Mali**; or otherwise constrained as in **Bangladesh, Cambodia, Ghana, Lao PDR** and **Nepal**; or in the process of being established, as in **Niger**. In fact, in many countries where LoCAL operates, the ability to transfer funds effectively and efficiently to local authorities is significantly constrained, as shown in Table 6.1.

LoCAL is sufficiently flexible to adapt to increasing decentralization, adjusting fund flows, minimum conditions and performance measures to ensure integration into evolving country systems. Conversely, LoCAL experience feeds into this evolution. For example, changes in fiscal transfer

mechanisms are anticipated in **Ghana, Mali, Niger** and **Tuvalu** as a result of a reflection and learning process.

## Using and strengthening country systems

PBCRGs consist of a financial top-up to cover the additional costs of making investments climate resilient. They complement regular allocations made by the central level to local governments through the intergovernmental fiscal transfer system. Using and strengthening country systems is therefore at the core of LoCAL. In **Bhutan**, the original pilot country where LoCAL has been operating the longest, LoCAL relies entirely on the country system. The key questions in Box 6.1 help in assessing the ability of country systems to transfer and use PBCRGs.

TABLE 6.1

### PEFA scores on transparency of intergovernmental fiscal relations for several LoCAL countries

Sub-indicator	Bangladesh	Benin	Bhutan	Cambodia	Lao PDR	Mali	Mozambique	Nepal	Niger
(i) Transparent and rules-based systems in the horizontal allocation among sub-national governments of unconditional and conditional transfers from central government (both budgeted and actual allocations)	D	C	A	A	D	A	A	C	D
(ii) Timeliness of reliable information to sub-national governments on their allocations from central government for the coming year	D	D	A	A	D	D	C	C	NA
(iii) Extent to which consolidated fiscal data (at least on revenue and expenditure) are collected and reported for general government according to sectoral categories	D	D	A	D	D	C	D	B	D

Source: Analysis by J. Dendura, based on PEFA data for assessing public financial management performance, Indicator 8 ([www.pefa.org](http://www.pefa.org)).

Note: NA = not available.

## BOX 6.1

### Key questions to assess the ability of country systems to transfer and use grants

- Can PBCRG funds be released to the national treasury or to a special account not controlled by the national treasury?
- Can the release of funds to local governments be controlled by the ministry of finance or equivalent or by the LoCAL technical committee?
- Can LoCAL use the local government treasury or other account for all national transfers, or a local government special account (commercial)?
- How well developed is the chart of accounts, and can it be adjusted to fit LoCAL reporting needs without major transaction costs?
- Is an adaptation plan required in addition to usual planning practices?
- Are local governments' financial management rules applicable to PBCRG budget execution, or are there special rules for budget execution?
- Is the existing monitoring and reporting system for annual plan implementation adequate for generating required LoCAL monitoring data?

In all countries, local government financial management procedures are applied (and sometimes augmented – e.g. strengthening reporting systems), along with the investment menu (see [Chapter 5](#)) which is usually large and matched to the devolved competencies of the targeted local government level, thus not creating any limitations. In most cases, funds are released to existing local government accounts. Similarly, audits are under the remit of the national audit institution – although in a number of cases, such

audits are not undertaken in a regular or timely manner due to limited capacities or financial resources. In such cases, as in [Mali](#) and [Niger](#), LoCAL provides an opportunity to involve relevant institutions in the annual performance assessments.

In the early stages of a LoCAL initiative, PBCRGs are sometimes released to a special account not controlled by the national treasury, meaning that the ministry of finance does not always control PBCRG release to the local governments. The LoCAL committee – under the coordination of the lead ministry or institution – ensures compliance with minimum conditions (with quality assurance from LoCAL), requests the release of the tranches and later coordinates reporting to LoCAL. [Benin](#) provides an example of the LoCAL flow of funds (Box 6.2).

## As a top-up mechanism, LoCAL relies on existing mechanisms and their credibility

### Linking planning and budgeting

Planning is a key issue for any LoCAL initiative. As a top-up mechanism, LoCAL relies on existing mechanisms and their credibility: effective transfers of resources, based on predictable allocations, allow planning.

However, some countries may experience fragmented sources of funding, unclear or delayed budget allocations and a history of late or lower-than-budgeted releases, which do not support meaningful planning at the local level. This lack in turn affects the ability of local administrators to engage either with communities or politically. With fewer activities ultimately implemented in

## Example of LoCAL flow of funds: Benin

In Benin, LoCAL is aligned with the national financing mechanism for local development (FADeC). For the first two years, LoCAL PBCRGs represented a top-up of about 8 per cent of the un-earmarked portion of the national fund for the targeted communes in terms of investment and operations. For the second year, the grant for the six participating communes varied from USD 30,000 to USD 74,000, depending on country allocation criteria such as surface area and population. The current LoCAL flow of funds follows a number of steps:

- The General Directorate of the Treasury and Public Accounting notifies the General Directorate of Budget, which registers the funds as credits in the budget of the Ministry of Living Environment and Sustainable Development, under a separate budget line (for transparency and traceability purposes).
- The funds are transferred to the designated bank account from the Treasury via the Central Bank.
- Upon confirmation of the minimum conditions to access the PBCRG, the Ministry of Living Environment and Sustainable Development issues an authorization to transfer the funds to the pilot communes through the Treasury.
- Upon receipt of the funds, the public accountant of the municipality notifies the mayor, who can commission services and works in accordance with public financial management rules and procedures and in line with the additional provisions for PBCRGs, particularly with regard to the menu of eligible investments.
- The LoCAL allocation is included in the municipal budget revenue (as a separate line) and expenses (if possible, in one or more separate lines). If it is not possible to reflect the expenditure financed by the LoCAL grant as a specific budget line, a detailed list of activities, including their costs, is attached to the municipal budget as an annex.
- In addition to the regular performance criteria of the national financing mechanism for local development (FADeC), PBCRG performance is assessed annually against a series of criteria related to good governance and climate change adaptation. From the second year onwards, this assessment will be in the context of the annual audit by the General Inspection of Finance and of Administrative Affairs.
- Subsequent year allocations are adapted based on performance, and the new allocations included in the budgets of the communes, to be adopted by their councils.

this environment, citizen motivation to participate in planning processes is likely to diminish over time. This situation makes a top-up mechanism difficult to implement, as local authorities cannot adequately plan the base budget to be topped up, and committed budgets – and thus plan activities – may well be cancelled.

While LoCAL seeks to integrate its PBCRGs into fiscal transfers or performance-based grants from central to local governments, the lack or deficiency of such existing mechanisms is not a deterrent. In fact, it is anticipated in targeting LDCs that such fiscal transfer mechanisms will face challenges. It is necessary, however, to ensure

that LoCAL supports the further development of such mechanisms as well as the accompanying capacity to integrate climate change and PBCRGs into country systems (Box 6.3).

## Tracking adaptation funding

PBCRG funds transferred to local governments must be tracked to clearly identified eligible

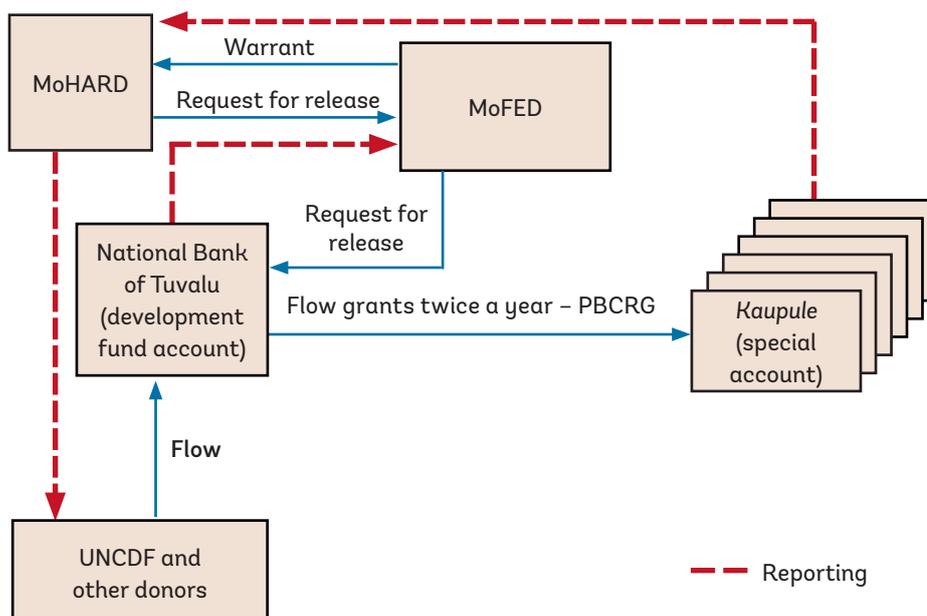
expenditures, i.e. activities that contribute to improved climate resilience.

In countries where the budget classification and chart of accounts permit tracking of funds and their use at the local level and by themes, the chart of accounts was adjusted to report on adaptation activities at the local level (e.g. through the financing item code in **Bhutan**). In

### BOX 6.3

## Example of strengthening planning and budgeting: Tuvalu

In Tuvalu, LoCAL supported the development of local-level planning and financial guidelines for local governments, that had previously been largely absent. The ministry in charge of local governments adopted the planning, budgeting and financial guidelines as a national standard with a view to developing further supporting manuals, as well as use them as a guide for the new five-year local government strategic plan development process. Funds for coverage of the PBCRG flow from development partners under LoCAL to a bank account in the National Bank of Tuvalu upon request from the Ministry of Home Affairs and Rural Development (MoHARD). Funds are transferred to the current development fund account in the bank. The account holder is the Ministry of Finance and Economic Development (MoFED). Upon agreement with UNCDF, and documentation by MoHARD that conditions are fulfilled by *kaupules*, MoHARD sends a fund request to MoFED to transfer the funds (based on a warrant from MoFED to MoHARD) to the *kaupules* in a dedicated account in each *kaupule* (in the National Bank of Tuvalu) for LoCAL. This request contains information on amounts to each *kaupule* based on the allocation formula and the performance of each *kaupule*. MoFED then requests the bank release the funds to the *kaupule* PBCRG account. The figure below shows the funding flows and reporting streams.



**Mozambique**, LoCAL reached agreement with the Ministry of Economy and Finance to establish special coding for PBCRG funds within the State Financial Administration System (e-SISTAFE), as described in Box 6.4.

This may not be easily achieved or possible in some countries (e.g. **Benin, Ghana, Mali** and **Niger**). Special reporting may have to be established in the short term, aligned to the extent possible with the existing system (e.g.

**Bangladesh, Ghana**). The approach therefore relies on identifying LoCAL funding as receipts and reporting on the adaptation activities funded by the local governments' budget. Clear banking arrangements need to be determined to specify whether funds are transferred to a central government account (special) and, from there, to the local governments, or if they flow through the country's consolidated fund. In **Tuvalu**, funds flow through the Treasury's

**BOX 6.4**

### Establishing codes for the PBCRG system in Mozambique

In 2002, Mozambique established the State Financial Administration System (SISTAFE) under Law Number 09/2002. SISTAFE objectives are, among others, to establish and harmonize rules and procedures for programming, expenditure, control and evaluation of public resources and to establish, implement and maintain a system of procedures sufficient to ensure the correct, effective and efficient economic management of activities resulting from programmes, projects and all other operations within the context of structured programmatic planning and related intended objectives. After signing an MoU with the government in July 2015, a number of steps were taken to inscribe LoCAL into the system.

- LoCAL is inscribed in e-SISTAFE from 2015 to 2018; this can be extended for another four-year period upon signature of a new MoU.
- A foreign exchange account for LoCAL was set up at the central bank (Banço de Moçambique), which is controlled by the National Directorate of the Treasury. On request from the National Directorate of Planning and Budgeting, the National Directorate of the Treasury is responsible for opening the account and allowing the channelling of funds mobilized by LoCAL to the Unified Treasury Account.
- Upon request from the National Directorate of the Treasury to UNCDF and transfer of funds, the National Directorate of Planning and Budgeting determines the budget allocation and the appropriate budget code for the type of investment. This information is communicated to the Treasury for financial programming, and the National Directorate of Public Accounting proceeds with registration of the accounting regulations for the investment type.
- The funds are made available electronically in the e-SISTAFE window to district and provincial profile holders. The latter are located in the Provincial Directorate of Economy and Finance and responsible for support and monitoring of expenditures.
- In November 2015, the Centre for the Development of Information Systems and Finances confirmed electronically the availability of LoCAL funds, and the Gaça Provincial Directorate of Economy and Finance informed the district that payment to the service provider could proceed.

general development account at the central level but to a specific bank account at the local government level to ensure that funds can be reported<sup>1</sup>. In any case, it is receipt of the funds reported by the targeted local government which allows tracking funds to the local government. **Cambodia** therefore maintains additional records to track the use of LoCAL funds, and **Tuvalu** has established the source of funding in the reporting framework.

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<sup>1</sup>This is seen as an interim phase until general public financial management procedures are strengthened.

Tracking adaptation can also be achieved when a country shifts to a programme-based budget with performance information. As most countries have now embarked upon such reforms, it is possible to assess expenditure towards adaptation using the country's programmatic classifications.

These issues highlight the importance of annual performance assessments. Such assessments enable determination and examination of the extent to which climate change adaptation is integrated into local plans and budgets, and is effectively addressing and responsive to identified climate change impacts and vulnerable groups (see [Chapter 8](#)).



# 7



## IMPLEMENTING ADAPTATION MEASURES



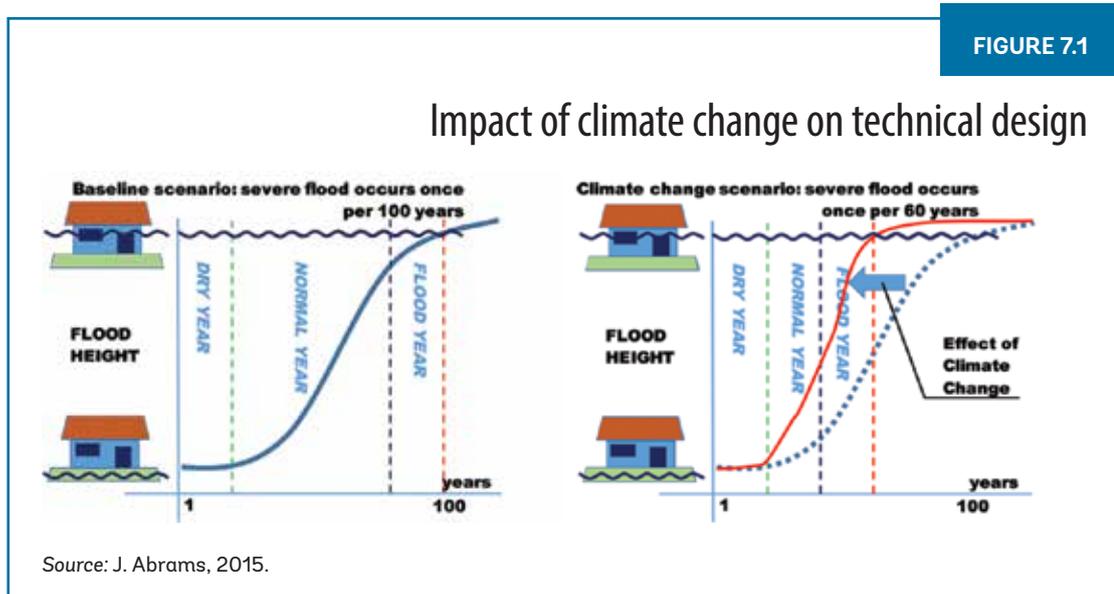
The climate change adaptation measures financed by LoCAL PBCRGs can address various types of climate risks and vulnerabilities and can include both hard and soft measures. Typically, these measures range from increasing the climate resilience of new or existing infrastructure to climate-adaptive infrastructure, ecosystem-based adaptation, awareness raising and capacity building, services to the local populations to help develop their resilience to climate change, and institutional strengthening for climate change adaptation. This chapter looks at various issues involved in implementing these measures to ensure best use of PBCRG funds.

## Understanding climate resilience and its additional costs

Infrastructure is generally designed to withstand the expected climate conditions in a particular location. Traditionally, infrastructure (e.g. a road,

bridge or dam) is designed to withstand the most extreme climate event likely to occur during the useful life of the structure. For rural infrastructure, this is often taken to mean the 50- or 100-year event – i.e. the event that is so extreme it will occur only once in 50 or 100 years on average. The risk of an event of a magnitude greater than the 100-year event occurring within the lifespan of the infrastructure is assumed to be acceptably small. The 100-year event is normally identified by analysis of past climate records. Unfortunately, with the acceleration of climate change, the past is no longer a reliable guide to the future, as shown in Figure 7.1.

Climate change models can be used to project what these conditions will be in the future. In most cases, it is difficult to do this accurately, given the issues associated with down-scaling from global projections to the local level, and because climate change models project a range of possible conditions around a central trend. Nevertheless, recent trends can provide direction on what can be expected in the near future and



how it may influence infrastructure design and its cost.

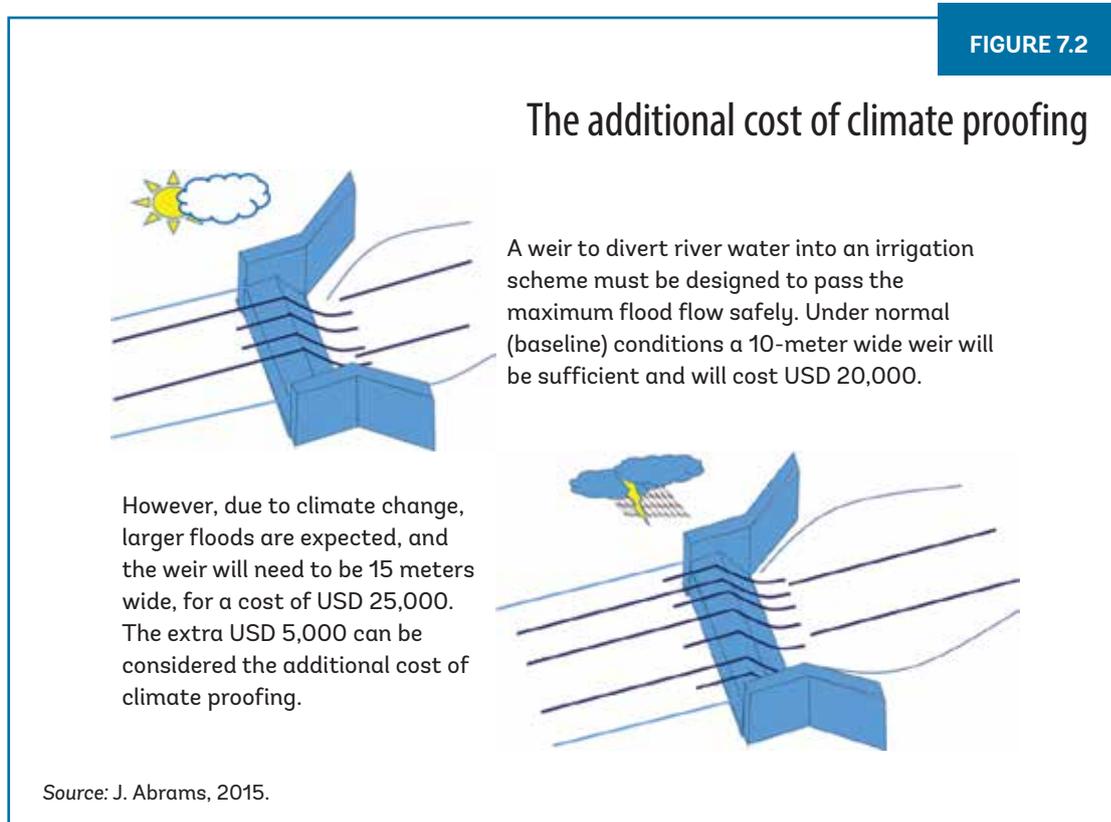
The cost of climate-resilient investments (e.g. infrastructure) consists of the baseline cost (the level of investment spending that would have been needed even without climate change) and the additional cost needed because of climate change (Figure 7.2). Also, the investment benefits can be considered as the baseline benefits which would arise from the baseline investment plus the additional, climate-adaptive benefits. Such benefits are usually in the form of climate-related losses avoided as a result of the investment.

## Feasibility studies and technical design

Following the assessment and prioritization of options as described in Chapters 4 and 5, hard measures for strengthening the climate resilience of new or existing infrastructure or climate-adaptive infrastructure are subjected to feasibility

study. The main purpose of the feasibility study is to collect all the information needed to prepare an appropriate technical design. Feasibility study activities may include the following:

- **Physical surveys and data collection**, including data on geography, geology, climate and hydrology, and how these will be affected by climate change
- **Preparation of a scheme layout design**, showing the position, general dimensions and technical requirements of each element in an infrastructure scheme
- **Operations and maintenance plan**, including activities that will be needed, who will be responsible, and how the activities will be funded
- **Social and environmental impact assessments**, which may include ensuring that the land needed for the scheme is available or can be acquired without harm to existing land users



- **Verification that the expected benefits** from the scheme are realistic

The feasibility study stage should include consideration of how climate change will affect the investment and an estimation of expected climate change benefits. Feasibility studies should always be conducted with the participation of the beneficiaries.

In **Benin**, **Mali** and **Niger**, infrastructure projects are required to be evaluated at the feasibility study stage in terms of whether they have considered potential climate change impacts. The investment projects from the stage of pre-feasibility are expected to reflect the results of analysis of climate change data collected by the commune. In addition, the additional costs to make investment projects resilient need to be estimated and used for decision-making.

Good practice in conducting feasibility studies can be rewarded through the performance assessment system. In **Bangladesh**, the performance measures establish that ‘feasibility studies of local infrastructure schemes are conducted, integrating considerations on climate change adaptation/mitigation proofing’. More examples of such performance measures are provided in Box 7.1.

In most LoCAL countries, there is an existing set of technical standards that applies to construction of rural infrastructure. In some countries, there may be a set of template designs for common types of rural infrastructure; these can be very useful in ensuring consistent design standards, reducing design costs and overcoming the problem of lack of technical resources. In **Cambodia**, the NCDD-S templates are a set of about 30 standard design drawings for common types of small-scale local infrastructure such as water supplies, roads, bridges, canals and small buildings designed for use by Cambodia’s commune councils. An estimated 50,000 small structures have been constructed using these designs since they were first introduced in the late 1990s.

## BOX 7.1

## Examples of climate change–related performance measures in local interventions

- Percentage of planned climate change adaptation investments responding directly to the findings of the climate change vulnerability assessment (**Bhutan**)
- Collection, analysis and use of climate data (e.g. rain and temperature) in the design of climate change adaptation investments (**Bhutan**)
- Climate change projects are implemented on time and according to original design and costing, and/or percentage of climate change activities implemented as per the plan (**Bangladesh**)
- Identification of extra costs of climate change adaptation or climate proofing and inclusion of these costs in the budget (**Bhutan** and **Tuvalu**)
- Additional costing of climate proofing of investments has been conducted in a minimum of 50 per cent of the projects (**Mozambique**)

But template designs cannot substitute for technical skills. If technical staff do not fully understand the design requirements, they may select template designs to use in locations where they are not suitable. There is also the risk that an unsuitable design is used just because it is available ‘in the book’ and saves time, compared with preparing a more suitable new design. Local governments are often challenged by a lack of skilled personnel for carrying out technical surveys and preparing designs. LoCAL generally facilitates extra support either from engineers or technicians working for a higher sub-national level or from outside the government. In **Bhutan**, technical staff from the *dzongkhag* administration

support the *gewog* administration in preparing designs. In **Cambodia**, LoCAL has experimented with using a portion of the PBCRG funds to hire a technician from the private sector. In **Lao PDR**, LoCAL, integrated into a project funded by the Global Environment Facility (GEF), developed standards and capacity for climate-resilient infrastructure at the local level funded through the PBCRGs. In **Tuvalu**, LoCAL has spearheaded strong and more consolidated support from the Ministry of Home Affairs to the *kaupules* in the preparation, feasibility reviews and assessments prior to the actual planning of PBCRG-supported investments.

## Procurement, monitoring and implementation

LoCAL financing is in the form of grants to local governments, and the procurement rules and implementation procedures that apply fall within the normal practices of the local government. Nevertheless, LoCAL seeks to strengthen local procurement practices, either by ensuring that the existing procedures are implemented to a high standard or, where necessary, supporting the introduction of improved procedures, including integration of climate-relevant measures in tender procedures and contract monitoring.

There are essentially three approaches to procurement in LoCAL investments.

- **Competitive bidding**, which usually means that a private firm is selected as the contractor or service provider based on offering the most competitive price
- **Community implementation**, whereby the beneficiary community directly implements the project; when this is conducted under a formal contract arrangement with the local government, it is known as community contracting
- **Direct implementation**, where local government staff are directly involved – e.g.

organizing works, employing labour, buying materials – or where services are delivered directly, such as agriculture officials providing direct training to farmers

All three modalities can be appropriate depending on the specific circumstances and normal practices of the local government, and all three have been used in LoCAL work (Box 7.2). A mix of modalities is also possible – e.g. community implementation with materials purchased by local government officials; or some parts of the work implemented by a specialist contractor, with other parts done by community labour.

The next step is to ensure that the works are constructed or services delivered with high quality. If the design is appropriate, and

### BOX 7.2

## Approaches to procurement

- **Competitive bidding**: In **Benin** and **Cambodia**, all works to date were tendered. Cambodia uses a very simple bidding system suitable for local firms.
- **Community implementation/contracting**: In **Bhutan**, works valued at less than about USD 23,000 can be implemented under the Community Contracting Protocol. In **Niger**, women were paid for implementing anti-soil erosion adaptation measures. In **Tuvalu**, climate change considerations are included in relevant projects in the tender documents and contract work description within the ceilings and documentation for which *kaupules* are responsible.
- **Direct implementation**: In **Bhutan**, some works projects are managed directly by the local government, often employing local labour. In **Cambodia**, agriculture trainings are delivered by District Agriculture Office staff.

procurement has resulted in a competent contractor, service provider or other agency selected to implement the contract, the key to successful implementation is often high-quality supervision. For works contracts, there should be a technical supervisor to check the quality of implementation. This includes ensuring that the materials used are the correct quality according to the technical specifications; that the contractor's working methods and workmanship are acceptable; that construction is according to design; and that the contractor complies with contract conditions, including measures for environmental protection, worker safety and working conditions. The supervisor also coordinates with the contractor to discuss any problems that arise during implementation and to try to find a solution, and verifies contractor claims for payment.

conditions of the contract such as environmental and social safeguards, worker safety and welfare, employment of local labour, and avoiding damage to crops and property adjacent to the work site. Examples of community monitoring arrangements are provided in Box 7.3.

## Engaging with communities and raising awareness

As noted, the beneficiary community should always be consulted during the feasibility study stage. Depending on the type of scheme and local practice, the community may become involved in monitoring or even take a direct role in implementation. The construction or service delivery phase can be an opportunity to generate additional benefits for the local community. Effective involvement of the community, either

## LoCAL seeks to strengthen local procurement practices

The beneficiary community should always play a part in monitoring. The main purpose of community monitoring is to increase the confidence of the local community that the works are being implemented to a good standard and that their views and needs are being considered. The community monitoring committee can also help ensure effective liaison and communication between the contractor and the local community. Normally, a community monitoring committee will not have a high level of technical skills. However, if the technical supervisor is not able to visit the site every day, he or she may train the community monitors to check on key aspects of construction quality.

The community monitors can also verify contractor compliance with non-technical

### BOX 7.3

#### Examples of community monitoring arrangements

- For farm road projects in **Bhutan**, it is mandatory to form a road construction and monitoring committee with representation from the community and elected members of the constituency.
- In **Cambodia**, all commune-level infrastructure projects have a project management committee led by the commune council with beneficiary representation.
- In **Tuvalu**, performance measures comprise evidence that the *kaupule* has established a project monitoring facility to review ongoing projects as well as evidence that the climate change investments have been reviewed after implementation and discussed in the *falekaupule* (elders) assembly and other consultative meetings.

as direct implementer (community contracting) or in a monitoring role, will increase awareness and understanding of the measure and generate an enhanced sense of ownership. This is especially important if the community is to be responsible for operation and maintenance of the constructed works, as is the case with the management committee for rehabilitated village wells in **Niger**.

Construction of local infrastructure schemes or rehabilitation of ecosystems can create employment opportunities for the local community. If works are carried out mainly by machine, the amount of unskilled labour needed may be quite small. In a situation where machine works are expensive (e.g. in remote or mountainous areas as in **Bhutan** or **Nepal**), labour-based construction or rehabilitation may be more cost-effective and will require

recruitment of a large number of temporary workers. In this situation, it is important to ensure that all community members who wish to participate have fair and equal opportunities to do so.

New interventions or construction tend to generate interest among local people. Capacity-building projects usually involve meetings and/or trainings that bring large numbers of local people together. This creates an opportunity to raise general awareness of climate change and the need for climate change adaptation. Using this opportunity to explain to the local community about the challenge of climate change and how the project contributes to building resilience improves community understanding and appreciation of LoCAL as well as promotes a broader understanding of climate change.



8



# ANNUAL PERFORMANCE ASSESSMENTS



Local government performance with regard to their PBCRGs needs to be assessed on an annual basis. These assessments serve a number of objectives:

- To provide an **incentive** mechanism for continuous improvement in addressing climate change, as comparing results across local governments will influence the subsequent year grant allocation
- To review **progress** made by participating local governments against their own past performance
- To provide valuable information on stronger and weaker performance areas for **capacity building** and for **institutional learning** by local governments and other stakeholders on what, how and when to improve
- To contribute to the overall **monitoring and evaluation system**, especially on issues

related to systems and procedures as well as outputs

- To provide useful **lessons in improving the LoCAL mechanism**, especially in the early stages

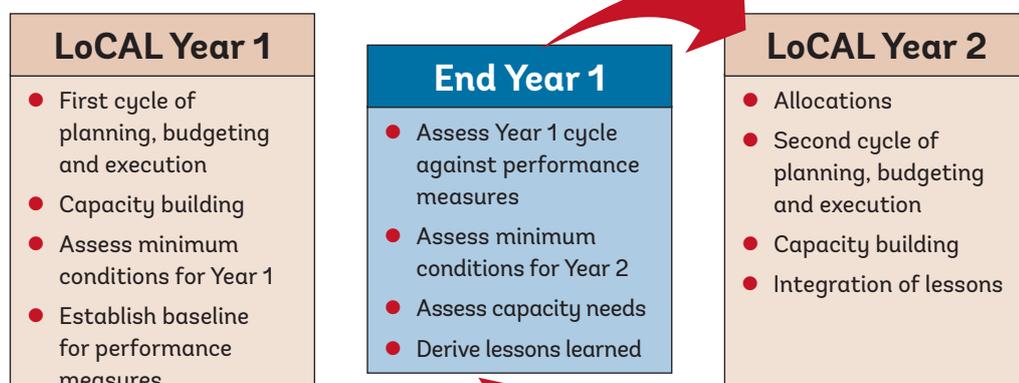
## Understanding annual performance assessments

Annual performance assessments review local government performance for the previous year against a set of predetermined performance measures. As the results influence allocations for the following year (Figure 8.1), it is important that these results and allocations be well known prior to the start of the local-level planning and budgeting process.

The annual performance assessments also provide an opportunity to assess the minimum conditions for the following year before embarking on a new

FIGURE 8.1

### Annual performance assessments feed into LoCAL allocation decisions



cycle of planning, budgeting and execution. The process allows local governments to identify possible strengths and weaknesses, needed corrective and capacity-building measures, and lessons or recommendations to improve government systems and procedures and the LoCAL mechanism itself.

Practically speaking, aligning the LoCAL scheme with the government's fiscal year might prove challenging at first, but these synchronization issues tend to diminish over time. Possible stumbling blocks might be the timing of LoCAL fund mobilization, pressure to start, delays in setting up the LoCAL initiative in the country and/or delays in transferring funds from the central level to local governments. Past experience indicates, however, that LoCAL countries gradually catch up with the fiscal calendar. For example, within an initial 12-month period, **Mali**, **Niger** and **Tuvalu** successfully planned and implemented adaptation activities as part of the first cycle of investments and conducted their first annual performance assessment. They are now positioned to align the LoCAL initiative with the country cycle for the second year onwards.

### Coordinating with existing performance assessments and audits

To the extent that countries already have a performance-based grant system in place – as in **Bangladesh** (the Upazila Grant Facility), **Benin** (FADeC), and **Ghana**, **Lao PDR** and **Nepal** (the respective District Development Fund) – the LoCAL PBCRGs and assessments aim to link closely with the existing system and its assessments.

LoCAL engages in a dialogue to undertake joint assessments and support integration of climate change adaptation in the current system (e.g. through mainstreaming in planning and reporting), adding only a limited number of adaptation-specific indicators.

When general and LoCAL assessments cannot be synchronized – in particular in Phase I – or when general assessments are not taking place, LoCAL builds on past assessments (e.g. in **Benin** with its FADeC audits) and/or provides an opportunity for relevant institutions to join in the LoCAL annual performance assessment exercises.

If the existing assessment system does not include critical information such as audit results, these remain LoCAL minimum conditions as a key element of capacity for funding management.

## LoCAL uses existing performance assessments as much as possible

If no other performance-based grant system is in place, LoCAL supports its start-up (as in **Bhutan**, **Mali**, **Mozambique**, **Niger** and **Tuvalu**) and attempts to promote PBCRGs and their integration with larger intergovernmental fiscal transfers.

In all cases, LoCAL ensures that assessments are robust and credible and supports strengthening of existing processes.

### Selecting an assessment option

The basic principles in annual performance assessment are to be **neutral** and **objective**. It is therefore crucial to ensure that the personnel and stakeholders involved have no conflicts of interest. For example, institutions responsible for capacity-building support may not be in an ideal position to conduct the assessments.

Depending on country context, assessments may be conducted by an interministerial team often with external support, or contracted out to specialized private agencies. Box 8.1 lists some possible assessment approaches and methods.

## LoCAL assessment methods and examples

- Assessments are performed by the **government's audit institution** with support from LoCAL.
- Assessments are performed by **government institutions** with support and quality assurance from LoCAL.
- Assessments are contracted out to **professional teams** specialized in these activities or trained in conducting them.
- **Preparatory self-assessments** are conducted by local governments in dialogue with citizens, combined with government institutions and external assessment to ensure quality and neutrality (third-party verification).

These various models can be combined.

- In **Benin**, LoCAL draws on government institution audits and complements them with an assessment undertaken by government institutions with LoCAL providing support and quality assurance.
- In **Bhutan**, assessments are performed by a team composed of various government institutions with LoCAL support.
- In **Cambodia**, LoCAL combines a self-assessment by local governments in dialogue with citizens, with government institutions and external assessment.
- In **Mali** and **Niger**, LoCAL draws on a team made up of government institutions, national and international consultants, and UNCDF staff.
- In **Mozambique**, strong involvement of the districts in reviewing their own performance precedes the actual external assessments by academia and LoCAL consultants.
- In **Tuvalu**, the first assessment was conducted by a team made up of government officials with a regional consultant from LoCAL and support and quality assurance from LoCAL international consultants. There are plans to support the establishment of a regional assessment team for use in several Pacific countries, thereby ensuring cross-country learning and neutrality in the assessments.

LoCAL mobilizes the needed support. In all cases, the assessment must undergo a sufficient level of verification and quality assurance, as it directly affects operation of the grants as well as allocations.

To avoid possible conflicts of interest and capacity issues, it is often best to contract out all or part of the assessments. The team's integrity should be ensured with appropriate checks and balances, along with strong quality assurance from the committee/programme in charge of the grant system, and with LoCAL verification.

These measures will ensure a very high level of credibility throughout the process.

Regardless of the model followed, proper preparation and planning are required, as are briefing and capacity building of the assessment team and prior notification to the local governments to be assessed. In Phase I, LoCAL generally organizes one or two prior support missions to help local governments understand and prepare for annual performance assessments; these often include the participation of key members of the assessment teams (Box 8.2).

## BOX 8.2

## Composition of LoCAL performance assessment teams in Bhutan and Mali

In **Bhutan**, a joint performance assessment team is composed of officials from the Department of Local Governance/Ministry of Home and Cultural Affairs (which serves as the team convener), the Gross National Happiness Commission, the National Environment Commission and the Ministry of Finance; it is supported by the *dzongkhag* planning officer, where appropriate. National consultants or resource persons from UNCDF/LoCAL are engaged at the discretion of the convening entity. Other interested development partners may participate as observers.

In **Mali**, the 2016 performance mission team included personnel from the Agency of Environment and Sustainable Development, the National Investment Agency for Local Authorities, the General Directorate for Local Authorities of the Ministry of Decentralization and State Reform, the Treasury, the inspection services from the ministry for decentralization and state reform in charge of territorial administration, a national consultant and UNCDF/LoCAL staff.

after the assessment – a final quality assurance and check from international LoCAL consultants and the LoCAL Secretariat.

Approaches to finalizing assessment results vary across countries and based on experiences with performance-based grant systems in general. In some countries, local governments may have a proscribed time period following the assessment (e.g. two weeks) in which to share their observations before finalization and validation of the assessment reports at the central level. Elsewhere, results will be finalized immediately to avoid manipulation. Many countries (e.g. **Bangladesh, Benin, Ghana, Nepal, Tanzania** and **Tuvalu**) have established steering committees or the equivalent to finalize and formally endorse assessment results. The establishment of such committees is formalized in the MoU with LoCAL – e.g. the Steering Committee of the Local Governance Sustainable Development Programme in **Bhutan** and LoCAL steering committees in **Benin, Mali, Mozambique, Niger** and **Tuvalu**.

After the assessments have been conducted and endorsed, their results ideally should be published and shared widely and with full transparency to ensure local government learning, positive competition and awareness raising.

It is especially important for LoCAL to combine central-level data collection with site visits to local governments. These visits allow review of the more qualitative aspects of performance, and provide an opportunity to meet with mayors, staff administrators and beneficiaries. They also offer the team the opportunity to see adaptation interventions in the field and to check the quality and reliability of reporting data.

Strong quality assurance systems are vital in conducting assessments. As carried out in **Benin, Mali, Niger** and **Tuvalu**, quality assurance has included reviews and baseline studies, strong advance preparation of local governments and –

## Defining subsequent allocations

Assessment results are factored into the PBCRG allocation for the subsequent year. The factor varies across countries to meet national circumstances and systems. The system for grant adjustment must be clearly understood and appreciated by central and local governments, and based on the specific country's legal framework, guidelines or grant system.

In most of the countries where LoCAL operates, the system weights performance to ensure that all improvements have an impact on allocations: each local government's performance is

compared with the average, and above average performance is rewarded. In most places, the system is balanced with the basic allocation parameters to ensure that all local governments – large or small, and with higher or lower poverty levels – have equal incentives in the system.

Performance measures, scoring and impacts on allocations are clearly described in relevant manuals. If such manuals already exist in a country, these are integrated or annexed into the PBCRG features. Box 8.3 provides a simulation example from LoCAL [Mozambique](#).

**BOX 8.3**

## Simulation of horizontal allocations using basic formula and performance in Mozambique

Use of clear objective formulas for funds allocation is a must for LoCAL. In Mozambique, where LoCAL is operating in four districts, the total grant of USD 400,000 represents an average top-up of 16 per cent on the average grant for investments.

The horizontal allocation is based on a clearly defined formula combining elements from the existing basic formula with performance elements. The PBCRG uses a basic formula component (50 per cent) and a performance component (50 per cent) (see table below). The basic formula is territory size = 20 per cent; population = 60 per cent; and equal share = 20 per cent. USD 200,000 is thus allocated on the basic formula component; the remainder is allocated based on the performance scores (on a scale of 0–100 points) at the end of the annual cycle of planning, budgeting and execution.

Data		Basic formula component						Performance component					Results	
District	Area (km <sup>2</sup> )	Population	Allocation area (20%)	Allocation population (60%)	Equal share (20%)	Total (100%)	Weight of basic formula component (50%)	Hypothetical performance score (0–100)	Relative score	Relative score weighted with basic formula	Relative score weighted with basic	Weight of performance component (50%)	Total allocation (USD)	Gain or loss due to performance (USD)
A	18,064.96	44,060	39,212	50,927	20,000	110,140	55,070	34	0.135	7,430	0.147	29,345	84,415	-25,725
B	4,187.42	91,392	9,089	105,638	20,000	134,727	67,363	87	0.345	23,256	0.459	91,851	159,215	24,488
C	8,922.10	37,829	19,367	43,726	20,000	83,092	41,546	56	0.222	9,232	0.182	36,464	78,010	-5,083
D	5,681.76	34,355	12,332	39,710	20,000	72,041	36,021	75	0.298	10,720	0.212	42,340	78,361	6,320
Total	36,855.76	207,635	80,000	240,000	80,000	400,000	200,000	252	1.000	50,639	1.000	200,000	400,000	0

In the simulation presented here, District A scored lowest on its performance, with a score of 34 out of 100; District B scored highest, achieving a score of 87. Performance scores for Districts C and D were, respectively, 56 and 75. The average score is 63.

Districts A and C, both of which performed below average, will therefore receive a relatively smaller allocation than they would have expected had they performed at the average level, given their size, population and equal share. Without the performance component, District A would have received another USD 55,070. Because of its relatively lower performance (34 points compared to the average of 63), the performance-related allocation will be USD 29,345 – a loss of USD 25,725, or 30.5 per cent.

Districts B and D, which performed above average, will receive a relatively higher allocation than they would have expected had they performed at the average level, considering their size, population and equal share. Without the performance component, District B would have received another USD 67,363. Given its relatively higher performance, it will receive USD 91,851 – a gain of USD 24,488, or 15.4 per cent.

Districts C and D, which performed close to average, have minor adjustments (i.e. they respectively lose and gain USD 5,083 and USD 6,320). If they had been at the average, they would have received the same amounts as if the assessments had not been conducted. Every point counts, and local governments have incentives for continuous improvements.

# 9



**MAKING LoCAL A  
NATIONWIDE MECHANISM**



Once piloted, the objective is for LoCAL to become a nationwide mechanism leading to full national roll-out of the PBCRG in the country. In this way, PBCRGs gradually reach all climate-vulnerable local governments of the appropriate tier.

### Promoting an incremental approach and progressive geographical expansion

Through its phased approach, LoCAL promotes steady but incremental expansion, with national scale-up building on results and lessons learned from earlier phases and gradual geographic extension, as illustrated in **Bhutan** and **Cambodia**,

the latter through its Local Governance and Climate Change (LGCC) project (Figure 9.1).

- In **Benin**, LoCAL Phase I began in three communes of the Atacora-Donga region. Under Phase II, LoCAL grants have been extended to an additional six communes in the Alibori and Atacora-Donga regions.
- In **Bhutan**, LoCAL was first initiated in two *gewogs* (block of villages) in two *dzongkhags* (districts, Wangduephodrang and Zhemgang). Under Phase II, LoCAL grants were extended from two to six *gewogs* in the same two *dzongkhags*. Under Phase III, 10 additional *gewogs* in four new *dzongkhags* have been identified for performance-based

FIGURE 9.1

### Phased LoCAL expansion in Bhutan and Cambodia

#### Bhutan



#### Cambodia



climate change adaptation grants for four years beginning in fiscal year 2016–2017.

- In **Cambodia**, LoCAL started in two districts and a municipality in one province (Takeo). Under Phase II, LoCAL grants were extended to an additional five districts in Battambang Province. Under Phase III, Cambodia will scale up LoCAL with the intent of reaching 50 per cent of the most vulnerable rural districts nationwide, based on a vulnerability index and meeting minimum conditions.
- In **Nepal**, LoCAL Phase I started in two districts, and LoCAL has been adopted by the government as the financing mechanism for climate change and environmental protection under the Environment Friendly Local Governance framework, which has been rolled out as a national programme.

### Leveraging the policy environment

In 2001, the Conference of the Parties of the United Nations Framework Convention on Climate Change initiated national adaptation programmes of action (NAPAs) to provide a process for LDCs to identify priority activities that respond to their ‘urgent and immediate needs’ with regard to adaptation to climate change. In 2010, the Conference of the Parties established a process to enable LDCs to formulate and implement national adaptation plans (NAPs) to plan and implement ‘medium- and long-term adaptation needs’, with a strong focus on climate change mainstreaming. The last 15 years have also seen an acceleration of efforts towards decentralization in many developing countries across the world.

LoCAL is positioned at the interface between these major global movements in the field of climate change adaptation and decentralization. In many countries, the prospects for scaling up are supported by similar trends and an increasingly enabling policy environment for both local

governance and climate change adaptation, as the following examples demonstrate.

- In **Bhutan**, the decentralization process initiated in 1981 received a major impetus with the transition to a constitutional monarchy for democratic governance in 2008. This shift catalysed vigorous initiatives to strengthen and empower local governments, including through fiscal decentralization and locally driven planning processes. Together with other cross-cutting issues, environment and climate change mainstreaming has become a key requirement in the development of

## LoCAL is positioned between major global movements in climate change adaptation and decentralization

sectoral and local plans. UNCDF supported the government in establishing a formula-based annual capital grants system in 2008 under the joint Local Governance Support Programme (LGSP); the 2011 introduction of LoCAL brought further refinements and elements to address climate change-related issues and performance improvements.

- In **Cambodia**, the decentralization and deconcentration reform initiated in 2002 has been bolstered with the adoption of a strategic framework in 2005 and enactment of the Organic Law in 2008. This resulted in the establishment of the National Committee for Sub-National Democratic Development and set the process for the national programme for sub-national democratic development through three-year implementation plans.
- In **Mali**, a law passed in 1993 defines the country’s local authorities (the district of Bamako, circles, urban communes and rural

communes); each of which is a legal entity with financial autonomy, freely administered by elected councils or assemblies which in turn elect an executive body. The 2016 framework document on national decentralization policy (2015–2024) recognizes the need to take preservation of natural resources and climate change into account in development of the territories. Similarly, the 2011 national climate change policy promotes integration of climate change in sectoral policies and strategies and in development planning at the national and local levels.

- In **Nepal** – where, for many years, local government elections were stalled due to conflict and political instability – the recent establishment of a federal state is lending urgency to improving local government capacity for good governance and service delivery, as well as the ability to address climate change impacts. The LoCAL financing mechanism is seen as a good practice for strengthening local government capacity – and especially for increasing communities’ climate resilience.

## Integrating LoCAL into national systems

In **Bhutan**, **Cambodia** and **Nepal**, LoCAL was introduced as a small project integrated into a larger programme or scheme, which later led to the integration of LoCAL in national plans and programmes. National scale-up indicates that LoCAL is fully embedded in the intergovernmental fiscal transfer systems and related monitoring systems (Box 9.1).

At the local authority level, a key LoCAL objective is ensuring the explicit inclusion of local climate change adaptation in the mandate of local authorities.

## Ensuring strong government engagement and coordination

LoCAL success depends on strong engagement with and coordination between line ministries and agencies responsible for planning and policymaking, finance, local governance, and environment and climate change adaptation, and between central government agencies and local governments.

- In **Bhutan**, LoCAL benefits from coordination mechanisms at the policy as well as the operational level of the Local Government Support Development Programme. The programme, managed by the Department of Local Governance, involves various relevant government agencies and development partners. The *dzongkhag* planning officers and *gewog* administrative officers serve as focal persons for LoCAL at their respective levels, and they coordinate with various technical sectors within their administrations.
- In **Benin**, the LoCAL MoU was signed by the Ministry of Living Environment and Sustainable Development, the Ministry of Decentralization and Local Governance and the Ministry of Economy and Finance. The steering committee additionally benefits from the active engagement of the National Association of the Communes of Benin, the National Commission for Local Finance, the National Fund for Environment and Climate, and the prefectures of the pilot regions, among others. At the local level, teams supporting the pilot communes were established with the involvement of all relevant technical deconcentrated services.
- In **Cambodia**, the LGCC project is managed by the Secretariat for the National Committee for Sub-National Democratic Development, which is chaired by the minister of Interior and has representation from 11 government ministries. In addition, the LGCC project was

## BOX 9.1

## Examples of LoCAL integration in national programmes and systems

- In **Bhutan**, LoCAL Phase I was integrated as a component of the Joint Support Programme for capacity development to mainstream environment, climate change and poverty concerns in policies, programmes and plans at the national and local levels. Upon the programme's conclusion, the LoCAL model was integrated into the Local Governance Sustainable Development Programme. These larger programmes, which are aligned with the strategic context of the government's five-year plans, provide a viable means to pursue and strengthen LoCAL as part of the national agenda for sustainable development.
- In **Ghana**, LoCAL was designed with the objective of linking it with the District Development Facility system and procedures in terms of allocations, assessments, reporting and monitoring and evaluation systems and management. LoCAL is working with other development partners in the context of the Functional and Organisation Assessment Tool reform to integrate climate change indicators in the system, with a view towards fully embedding the mechanism in the national system.
- In **Mozambique**, LoCAL was inscribed in e-SISTAFE, the State Financial Administration System that establishes and harmonizes rules and procedures for programming, expenditure, control and evaluation of public resources.
- In **Nepal**, LoCAL has been embedded within a multi-donor umbrella, the Local Governance and Community Development Project (LGCDP), thus falling under existing LGCDP steering and coordination mechanisms. This has allowed LoCAL to start up quickly and to receive broad recognition as a viable climate financing modality, providing resources to communities through local government systems.

able to create considerable visibility for LoCAL among its development partners. These partners – including the Japan International Cooperation Agency, the International Fund for Agricultural Development, and UNDP – engaged in efforts to replicate LoCAL in several additional districts and provinces.

- In **Tuvalu**, LoCAL supported re-establishment and strengthening of the interministerial and intergovernmental Kaupule Development Committee to coordinate all issues related to transfers to local authorities and outer island development. The committee has

great potential for strengthening overall coordination of funding flowing to the local level, well beyond LoCAL.

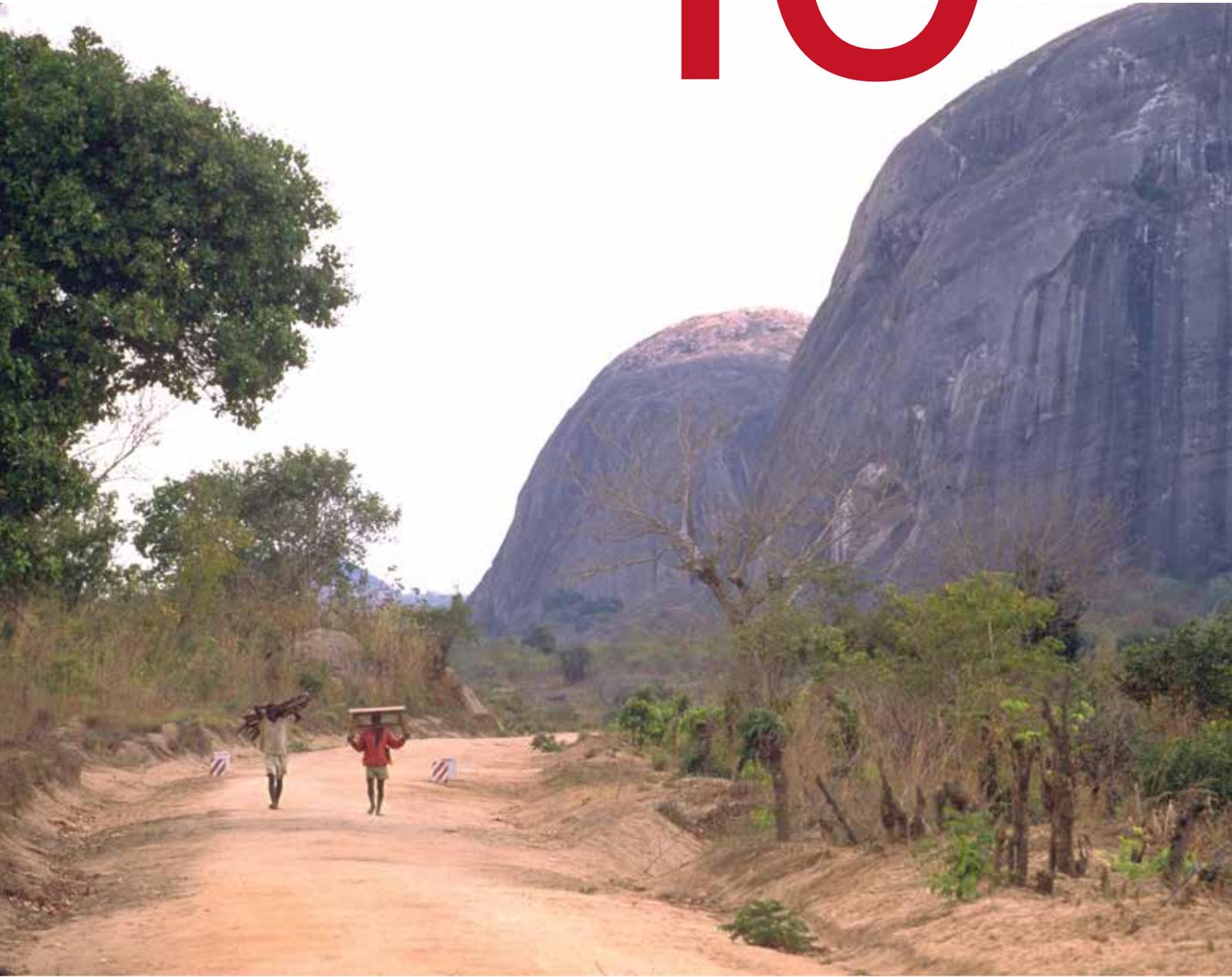
### Financing national roll-out

Phase III is expected to be financed mainly by each country's central government through a re-adjustment of its architecture of existing resources for local adaptation. Additional financing can also be provided through international organizations (e.g. through budget support), financing institutions and funds such as the GCF (see Box 9.2).

## Examples of options to finance national roll-out

- In **Benin**, in line with Fonds d'Appui au Développement des Communes modalities, LoCAL is being expanded to nine communes in the country's northern region, with **co-financing** from the National Environment and Climate Fund (Fonds National pour l'Environnement et le Climat – FNEC), which was nominated as the country's first national implementing entity for GCF accreditation.
- In **Bhutan**, LoCAL will be rolled out to 100 local governments as part of a national scale-up, with **budget support** from the European Union and through the Local Government Support Development Programme in partnership with the UNDP–UN Environment Poverty–Environment Initiative (PEI).
- In **Cambodia**, LoCAL was initiated in 2012, thanks to a grant from the Cambodia Climate Change Alliance. It is now working within 8 districts comprising 61 communes, with **bilateral support** from the Swedish International Development Agency (Sida). The government has nominated the Secretariat of the National Committee for Sub-National Democratic Development as its first national implementing entity to access GCF resources to scale up LoCAL in the country. The Secretariat of the National Committee for Democratic Development in Cambodia, like **Benin's** FNEC, is pursuing efforts towards GCF accreditation, with a view to LoCAL scale-up.
- In **Nepal**, the adoption of LoCAL as the climate change and environment financing mechanism to local governments, under the UK Aid-supported Environment Friendly Local Government (EFLG) framework, allows LoCAL to be rolled out nationwide with the government's own funding as well as targeted donor funding. The government sees the LoCAL/EFLG mechanism as a means to achieve future direct access to the GCF.

# 10



**KEY LESSONS AND  
THE WAY FORWARD**



## Take away

LoCAL's experiences show that performance-based climate resilience grants can be vital in building local government capacities to handle climate finance and manage climate change adaptation at the local level. Highlights of the features and lessons learned through LoCAL implementation thus far – the full richness of which are detailed in this guidebook – follow.

1. LoCAL is firmly aligned with, and supports the effective implementation of, national climate change and decentralization strategies.
2. The mechanism promotes the integration of climate change adaptation into local development planning and ensures the voices of the communities and of the poorest are captured in local development plans and investments, so climate finance reaches those who need it most.
3. LoCAL requires very few specialized systems and procedures, as it builds on those which already exist within a country.
4. Combined with technical and capacity-building support, PBCRGs provide financial top-ups and help build stronger and more transparent government financial systems.
5. The PBCRG system is based on a set of minimum conditions and performance measures that provide incentives for local governments to effectively tackle climate change adaptation.
6. The climate change adaptation measures financed by PBCRGs draw on a government-specified investment menu which can address various types of climate risks and vulnerabilities and can include both hard and soft measures.

7. LoCAL offers a proven mechanism for the international community to channel climate change finance to the most remote and vulnerable regions and populations of the world, ensuring traceability and performance monitoring and reporting.
8. LoCAL's phased approach promotes steady but incremental expansion, with full national scale-up building on results and lessons learned. In this way, PBCRGs gradually reach all climate-vulnerable local governments of the appropriate tier.

## What's next?

In 2016, the LoCAL Programme Board, made up of the LoCAL participating countries, set an ambitious goal: for LoCAL to become a standard and recognized country-based mechanism for LDCs. As such, LoCAL will support direct access to the GCF with the aim of transferring resources to local governments through national institutions and systems to build verifiable climate change adaptation and resilience.

The LoCAL Programme Board has also committed to further engage with the GCF Board and Secretariat – along with other climate finance institutions and development partners – to ensure a systematic and strategic approach to climate finance that recognizes the fundamental role of local governments in delivering on the Paris Agreement.

Full national LoCAL roll-out in the current participating countries would enable the international climate community to reach over 350 million people in these 12 countries alone.

The original LoCAL countries, **Bhutan** and **Cambodia**, are now preparing for full national

roll-out. **Benin, Mali** and **Tanzania** are looking to bring LoCAL up to scale in their respective country through accessing GCF resources. This process begins, as noted in [Box 9.2](#) for **Benin** and **Cambodia**, by nominating a relevant government authority – typically one in charge of decentralization or climate change finance – as a national implementing entity to be accredited by GCF. In **Mali**, the Local Authorities National Investment Agency (Agence Nationale d’Investissement des Collectivités Territoriales – ANICT) was nominated as the country’s national implementing entity. In **Tanzania**, the President’s Office Regional Administration and Local Government (PO-RALG) was so nominated. This office was selected in the context of the decentralization of climate finance initiative jointly supported by LoCAL and the International Institute for Environment and Development, described in [Box 2.1](#). In 2016, **Benin, Cambodia** and **Mali** initiated a joint effort and submitted proposals to the GCF featuring the LoCAL approach.

In 2017–2018, three more countries in Africa (**Lesotho** and **Uganda**) and the Pacific (**Vanuatu**) are expected to join the initiative and make use of the PBCRG mechanism, thereby enabling another 40 million poor people to benefit over the medium term from this new type of access to climate finance and the adaptation investments it facilitates.

## Toward a standard and internationally recognized country-based mechanism...

More LDCs have expressed interest in and are preparing to join LoCAL, as it offers a proven and scalable mechanism to channel climate finance effectively and transparently to the people most in need. With support from its partners, UNCDF stands ready to take on the challenge of scaling up LoCAL at the national level and to all LDCs.



# GLOSSARY

**Adaptation:** The process of adjustment to actual or expected climate and its effects. In human systems, adaptation seeks to moderate or avoid harm or exploit beneficial opportunities. In some natural systems, human intervention may facilitate adjustment to expected climate and its effects (IPCC, 2014a).

**Incremental adaptation:** Adaptation actions where the central aim is to maintain the essence and integrity of a system or process at a given scale (IPCC, 2014a).

**Transformational adaptation:** Adaptation that changes the fundamental attributes of a system in response to climate and its effects (IPCC, 2014a).

**Adaptation assessment:** The practice of identifying options to adapt to climate change and evaluating them in terms of criteria such as availability, benefits, costs, effectiveness, efficiency and feasibility (IPCC, 2014a).

**Adaptive capacity:** The ability of systems, institutions, humans, and other organisms to adjust to potential damage, to take advantage of opportunities or to respond to consequences (IPCC, 2014a).

**Climate change:** A change in the state of the climate that can be identified (e.g. by using statistical tests) by changes in the mean and/or the variability of its properties, and that persists for an extended period, typically decades or longer. Climate change may be due to natural internal processes or external forces such as modulations of the solar cycles, volcanic eruptions, and persistent anthropogenic changes in the composition of the atmosphere or in land use. The United Nations Framework Convention on Climate Change (UNFCCC), in its Article 1, defines climate change as: 'a change of climate

which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' The UNFCCC thus makes a distinction between climate change attributable to human activities altering the atmospheric composition, and climate variability attributable to natural causes (IPCC, 2014a).

**Decentralization:** Process that re-allocates resources from a higher, more central authority to a lower one. This might involve either devolution (the delegation of responsibilities to subordinates) or regionalization (the division of areas of government into smaller regions). Decentralization generally tries to bring power and authority closer to the citizens it affects in order to promote efficient and democratic politics (Bevir, 2008).

**Ecosystems:** A functional unit consisting of living organisms, their non-living environment, and the interactions within and between them. Ecosystems are nested within other ecosystems, and their scale can range from very small to the entire biosphere. In the current era, most ecosystems either contain people as key organisms, or are influenced by the effects of human activities in their environment (IPCC, 2014a; MEA, 2005).

**Ecosystem-based adaptation:** The use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people adapt to the adverse effects of climate change. Ecosystem-based adaptation uses a range of opportunities for the sustainable management, conservation and restoration of ecosystems to provide services which enable people to adapt to the impacts of climate change. It aims to

maintain and increase the resilience and reduce the vulnerability of ecosystems and people in the face of the adverse effects of climate change (CBD, 2009).

**Environmental degradation:** The deterioration of the environment through depletion of resources such as air, water and soil; the destruction of ecosystems; habitat destruction; the extinction of wildlife; and pollution. It is defined as any change or disturbance to the environment perceived to be deleterious or undesirable (Johnson et al., 1997).

**Exposure:** The presence of people, livelihoods, species or ecosystems, environmental functions, services, and resources, infrastructure, or economic, social, or cultural assets in places and settings that could be adversely affected (IPCC, 2014a).

**Hazard:** The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources (IPCC, 2014a).

**Intergovernmental fiscal transfer systems:** Intergovernmental transfers or grants can be broadly classified into two categories: general-purpose (unconditional) and specific-purpose (conditional or earmarked) transfers. General-purpose transfers are provided as general budget support, with no strings attached. These transfers are typically mandated by law, but occasionally they may be of an ad hoc or discretionary nature. Such transfers are intended to preserve local autonomy and enhance interjurisdictional equity. Specific-purpose, or conditional, transfers are intended to provide incentives for governments to undertake specific programmes or activities. These grants may be regular or mandatory in nature or discretionary or ad hoc (World Bank, 2007).

**Menu of eligible adaptation investments:** The set of areas of interventions or measures within local authorities' remit that can promote climate resilience. It is used to inform the planning process and act as safeguard.

**Minimum conditions:** The basic requirements with which local governments have to comply to access the grants. These are formulated to ensure that a minimum absorptive capacity is in place to handle the funds. The entire set of minimum conditions needs to be met before local authorities can access their grants. The minimum conditions are, generally speaking, concerned with good governance and public financial management; their number varies from 3 to 10. They act as on or off triggers and basic safeguards.

**Mitigation (of climate change):** A human intervention to reduce the sources or enhance the sinks of greenhouse gases (IPCC, 2014a).

**Performance measures:** The set of indicators against which local governments are assessed on an annual basis. They are more qualitative and variable measures of performance and go into more detail within each functional area, such as the quality of the planning, integration of climate change adaptation and execution of the adaptation measures. Overall performance against the set of measures is used to adjust the level of funds made available to local governments the following year as they have complied with the minimum conditions.

**Performance-based climate resilience grants (PBCRGs):** Performance-based grants that provide a financial top-up to cover the additional costs of making investments climate resilient. They complement regular allocations made by the central level to local governments through the intergovernmental fiscal transfer system. Their technical features include a set of minimum conditions, performance measures and a menu of eligible investments.

**Resilience:** The capacity of social, economic and environmental systems to cope with a hazardous event or trend or disturbance, responding or re-organizing in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation (IPCC, 2014a).

**Risk:** The potential for consequences where something of value is at stake and where the outcome is uncertain, recognizing the diversity of values. Risk is often represented as probability of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. Risk results from the interaction of vulnerability, exposure and hazard. Risk is here used to refer to the risks of climate change impacts (IPCC, 2014a).

**Risk assessment:** The qualitative and/or quantitative scientific estimation of risks (IPCC, 2014a).

**Sensitivity:** The degree to which a system or species is affected, either adversely or beneficially, by climate variability or change. The effect may be direct (e.g., a change in crop yield in response to a change in the mean, range or variability of temperature) or indirect (e.g., damages caused by an increase in the frequency of coastal flooding due to sea level rise) (IPCC, 2014a).

**Transformation:** A change in the fundamental attributes of natural and human systems (IPCC, 2014a).

**Vulnerability:** The propensity or predisposition to be adversely affected. Vulnerability encompasses a variety of concepts and elements including sensitivity or susceptibility to harm and lack of capacity to cope and adapt (IPCC, 2014a).

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UNCDF makes public and private finance work for the poor in the world's 47 least developed countries. With its capital mandate and instruments, UNCDF offers "last mile" finance models that unlock public and private resources, especially at the domestic level, to reduce poverty and support local economic development. UNCDF's financing models work through two channels: **financial inclusion** that expands the opportunities for individuals, households, and small businesses to participate in the local economy, providing them with the tools they need to climb out of poverty and manage their financial lives; and by showing how **localized investments** – through fiscal decentralization, innovative municipal finance, and structured project finance – can drive public and private funding that underpins local economic expansion and sustainable development. By strengthening how finance works for poor people at the household, small enterprise, and local infrastructure levels, UNCDF contributes to SDG 1 on eradicating poverty and SDG 17 on the means of implementation. By identifying those market segments where innovative financing models can have transformational impact in helping to reach the last mile and address exclusion and inequalities of access, UNCDF contributes to a number of different SDGs.

LoCAL provides a mechanism to integrate climate change adaptation into local governments' planning and budgeting systems, increase awareness and response to climate change at the local level, and increase the amount of finance available to local governments for climate change adaptation.



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