

# Mainstreaming the Ecosystem-based Adaptation approach into policy planning



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## KEY MESSAGES

### Why this policy brief?

This policy brief aims to provide structured guidance and accompanying case studies to policy makers in Central Asia on how to anchor the Ecosystem-based Adaptation (EbA) approach in policy planning, and, thus, streamline adaptation efforts and minimize economic losses.

Central Asian republics are vulnerable to climate change. Policy makers in the region have recognized this problem, but often lack information and resources for mainstreaming adaptation measures into policy planning.

EbA – the use of biodiversity and ecosystem services as part of an overall adaptation strategy – should be a center-piece of local, regional and national development and sectoral policies to increase countries' adaptive capacities.

### Policy makers can mainstream EbA in five steps:

1. Review policy frameworks and commitments to identify adaptation gaps & capacities
2. Identify the scope for your intervention
  - a. Assess climate risks and vulnerabilities of key sectors or regions
  - b. Identify relevant (ecosystem-based) adaptation measures matched to your identified scope
  - c. Identify funding sources and assign institutional responsibility
3. Embed (ecosystem-based) adaptation measures in national, regional, local policies
4. Implement (ecosystem-based) adaptation measures
5. Monitor, evaluate and report

## 1. Introduction

The United Nations Convention on Biological Diversity (CBD) defines EbA as 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. The approach, as a subset of the Nature-based Solutions concept that is specifically concerned with climate change adaptation via the use of nature, has gained international relevance. It is recognized to be cost-effective and able to generate social, economic, health and cultural co-benefits while contributing to the conservation of biodiversity. EbA is also a good approach to facilitate disaster risk reduction measures, as it involves climate risk management. Opportunities to fund EbA activities are on the rise, given also the increasing readiness of the private sector in various countries to invest in EbA.

Still, the approach is often neglected and not considered when formulating policies or planning development measures. Major barriers most developing and transition countries face is lack of information, low technical skills, or resource constraints. This policy brief seeks to provide feasible and clear guidance on how best countries can develop and integrate the EbA approach into their existing policy planning process, and thus develop long-term, efficient strategies in relation to climate change and development, while avoiding inflexible decisions that could 'lock-in' future climate risks in the long run.

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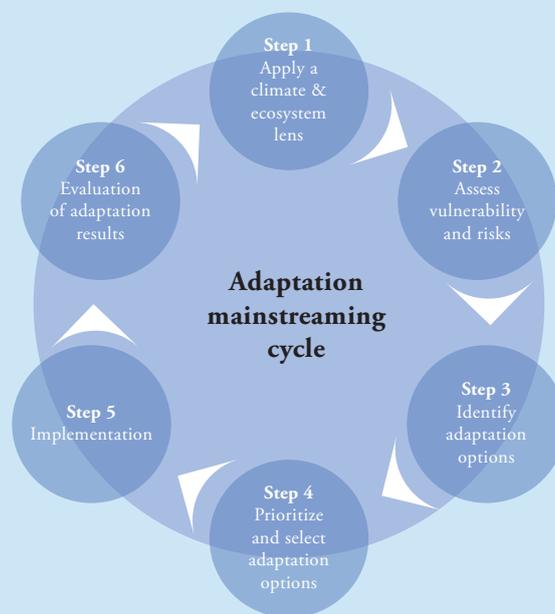


On behalf of:



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General mainstreaming cycle on how to ensure that adaptation, and EbA in particular, is considered in any development decision and policy planning process.



*Fig. 1: Adaptation mainstreaming cycle <sup>1</sup>*

First, mainstreaming requires policy makers to adopt a climate and ecosystem lens, that uses climate and natural resources as the entry point to policy planning, especially for sectors that are impacted by these factors. For the planning of the economy, this means acknowledging that potential damages and losses from climate change are so vast and implicate essentially all other sectors to the extent that climate change must be a consideration in all future economic planning as well. In addition, policy planning meetings and workshops should necessarily be an inter-departmental process, including representation and presentations from climate change and environmental committees.

Second, to the extent possible, policy makers must understand the vulnerabilities and risks facing the system, in order to know the state of ecosystems, as well as needs and priorities. This information can be found through a review of strategic documents, policies and studies, as well as stakeholder consultation at national, regional and local levels. Where such data or research not yet exists at the sub-national or sectoral level, it is recommended that policy makers conduct stakeholder consultations with local and sec-

tor authorities to accumulate such information. Advanced methodological approaches exist to identify risks and vulnerabilities (see policy brief on “Considering climate risk information in policy planning”).

This will ensure that information on vulnerabilities, which are measured at lower spatial levels, will be available to policy makers, and enable them to identify and prioritize adaptation measures and policies that specifically target these weaknesses, resulting in better investments in the long run (Steps 3 and 4). Step 5 involves implementing the adaptation plan or policy, and finally, in Step 6, it is recommended that the adaptation measures are measured and evaluated to generate lessons learned and allow for adjustments if required.

The GIZ implemented project on Ecosystem-based Adaptation to Climate Change in the High Mountainous Regions of Central Asia has taken this general mainstreaming cycle as a basis and adapted it to the regional specific context (see chapter 2 in this policy brief).

<sup>1</sup> Adaptation Community 2020. Adaptation/EbA Mainstreaming Cycle.

## 2. Guidance on EbA integration into planning: a 5-step process

EbA can be part of an overall climate change adaptation strategy, and can be integrated into policies at all levels, whether national, regional or local. Policy makers have to decide: which level is the most appropriate?

The following is a guide for anchoring EbA into the national, regional and sectoral policy processes, based on project experience in the region.



Fig. 2: Integrating EbA into the policy planning process

### Step 1: Review of national policy framework and commitments

First, integral, comprehensive knowledge of the institutional, biophysical and socio-economic situation in the target area is required. This includes stocktaking of the policy landscape, livelihoods and territory in the system. A thorough review of the national policy framework, including climate strategies, communications to the United Nations Framework Convention on Climate Change (UNFCCC) and other international conventions, regional development plans and sector plans will provide in-

sight into what is already occurring on the ground, what is planned, and where the gaps, needs and entry points for EbA are. At national level, strategic entry points may be the country's mid- and long-term adaptation strategies (e.g. National Adaptation Plan - NAP) or international agreements (e.g. communications to the UNFCCC), as well as the national resource allocation process. At sectoral level, sectoral strategies and plans, and at local level, local development plans are good entry points.

### Step 2: Identification of scope for intervention

#### Step 2.1: Identify climate risks, impacts, vulnerabilities and exposure

A thorough understanding of climate change trends and projections, as well as climate risks is needed to develop science-based EbA policies. Climate risks factors can be identified through stakeholder engagement or through a review of existing policy documents and analyses. A good guidance on how to do a tho-

rough climate risk and vulnerability assessment with a special focus on EbA can be found here (in Russian<sup>2</sup> and English<sup>3</sup>). Analyses can be done for specific geographic areas (e.g. at province or national level), or for specific sectors or sub-sectors (e.g. transport or forestry).

<sup>2</sup> GIZ and EURAC 2018. Оценка климатических рисков для адаптации на основе экосистем.

<sup>3</sup> GIZ and EURAC 2018. Climate Risk Assessment for Ecosystem-based Adaptation.

## The project

The GIZ EbA project is commissioned by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) through the International Climate Initiative. It is being implemented in Tajikistan (TJK), Kyrgyzstan (KGZ) and Kazakhstan (KAZ).

The target region is characterized by extremely diverse and fragile ecosystems, building the foundation for livelihoods of local communities. In addition to economic benefits, these ecosystems provide services such as water, pasture, forest products, protection against extreme weather events and impacts, and productive soils.

Adverse impacts of climate change, including glacier melt, changing river runoff, and weather anomalies (i.e. in temperature and precipitation), coupled with unwise land use practices in turn worsen the state of these ecosystems, and undermine local populations' livelihoods, as well as health and survival.

In order to allow natural resource dependent communities to adapt to such impacts, as well as to support disaster risk reduction (DRR) and cut losses and damages on a national level, it is recommended by GIZ and other practitioners that countries adopt the EbA approach and integrate it into their policies.

## The project's multi-level approach for anchoring EbA into planning processes at different levels.



Fig.3: GIZ's multi-level approach on EbA mainstreaming in Central Asia

In the case of Central Asia, EbA is being integrated into planning at different levels (Figure 3).

The following examples illustrate how the appropriate level of mainstreaming will differ from setting to setting:

- **At the community level:** since 2015, in cooperation with international and local partners the project has developed a method for planning, implementing and monitoring an EbA strategy in a participatory way with local communities based on the Conservation Standards.<sup>4</sup> At the same time, in Kyrgyzstan, aspects of this method are anchored in Guidelines from the Ministry of Economy for developing Village Development Plans.
- **At the sub-national level:** the project has supported the development of a Regional Adaptation plan, considering EbA, for the Eastern Kazakhstan Oblast which is providing inputs for the National Adaptation Planning (NAP) process<sup>5</sup>, Green Economy process and the revision of the Ecological Code.
- **At the national level:** several activities are being implemented in all project countries. In Kazakhstan, GIZ contributes to the discussion on how to integrate climate risk information and adaptation as an integral part of the political processes related to

Green Economy, NAP and the revision of the Nationally Determined Contributions (NDCs). In Kyrgyzstan, the project is supporting the integration of EbA into the Green Economy process, the NAP process and the NDC updating process. In Tajikistan, with support of the project, EbA has been integrated into the National Disaster Risk Reduction Strategy 2019-2030. Apart from this, the potential for EbA for NDCs has been analyzed for all target countries.

- **At the regional (interstate) level:** the project supported the development of the Regional Environmental Plan for Sustainable Development (REP4SD) under the Interstate Commission on Sustainable Development (ICSD). In cooperation with UN Environment and the Regional Mountain Center of Central Asia, the project developed a strategic guidance for climate change adaptation in the mountainous regions of Central Asia, which has been accepted in the annex of the REP4SD.

<sup>4</sup> GIZ and CMP 2020. Guidance for Applying Conservation Standards for EbA.

<sup>5</sup> Gov. of Kazakhstan 2019. Entry Points for Vertical Integration of Climate Action in Kazakhstan.

## Step 2.2: Identify (ecosystem-based) adaptation related measures and linking them to policies

Using the policy review and climate risk information as a basis, decision makers can identify which are the priority regions, sectors and critical threats to address; i.e. which threats have high scope, severity and irreversibility. Targeted and climate-robust (ecosystem-based) adaptation measures must then be identified, which have potential to abate these threats, mitigate ecosystem or economic stress, restore functionality and improve livelihoods and well-being. The process of selecting the right measures is generally extensive, requires stakeholder consultation and brainstorming sessions with key sectors and policy makers. It is recommended to develop (or accumulate from existing documents) possible indica-

tors to monitor and evaluate the success of these measures over time. Indicators may already be stated in the respective action plans. It is necessary to formulate a SMART indicator (Specific, Measurable, Attainable, Relevant and Time-bound) for the measure including baselines and units, keeping in mind that methods to measure them must be accurate, reliable, cost-effective, feasible and appropriate. Examples may include land cover maps, baseline studies and primary data collection through research institutes. Implementing this step will ensure that the identified EbA measures are in line with national and sectoral policies.

## Step 2.3: Identify funding sources and align them with the available state budget for EbA measures

Based on the overall climate change adaptation strategy agreed upon at the national level, a source of funding should be allocated for EbA measures through the national budget or international funds. One option is to include EbA criteria in the national budget allocation planning and to accordingly adjust criteria used to screen projects.

There are many different practical examples for public and private EbA financing measures. The following box visualizes three financing mechanisms for EbA, i.e. international public, domestic public, and private financing, followed by examples for each. Different mechanisms can be combined to develop a hybrid funding source as well.

## Step 2.4: Assign institutional responsibility

An appropriate institutional setting is essential to guarantee the success of mainstreaming efforts. It is not recommended to create a new institutional platform, but rather to gauge which existing body, working group or committee is best poised to take responsibility for overseeing and supporting the process. The institutional setting for the mainstreaming process must be formalized. This is a crucial step to build alignment between the various ministries and their individual policies. There are strong rationales for alignment at the national and global levels; these agendas and policies share the same objectives, that is, to strengthen resilience to climate change and disasters. Although there are strong linkages

between existing strategic documents such as the Paris Agreement, NAP, NDC, Sendai framework for DRR, Sustainable Development Goals (SDGs) and other international obligations agreed upon by the target countries, responsibility for each policy fall under different ministries. These policies – which should in theory be working towards the same strategic goals, are therefore often not aligned with one another. An appropriate institutional set-up that facilitates this country level alignment will ensure more coherence, effective and efficient investments, cut down transaction costs, advance climate resilient development, and finally, identify clearer entry points for EbA.

## Step 2.5: Monitor and report at identified sub-national and sectoral level (back to back with Step 5)

At agreed upon intervals, the (ecosystem-based) adaptation measures must be monitored and the results reported at the identified scope level (i.e. geographic location or (sub-) sector), to facilitate lessons learned and allow for adjustments to be made if

required. Monitoring is also essential for reporting at the national level (see Step 5). The monitoring system needs to be linked to existing indicators of the government at different levels (see also Step 2.2).

## Examples for financing EbA

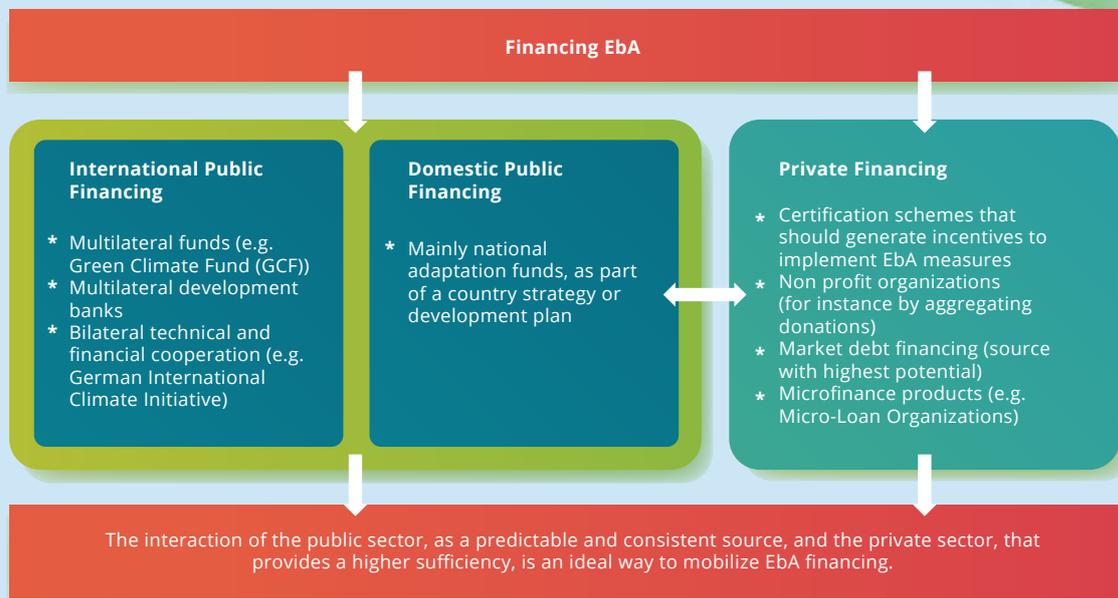


Fig. 4: Financing EbA activities: types of mechanisms<sup>6</sup>

In general, any government's process for budget allocation is central to ensure the financial resources needed for planning, implementing and monitoring EbA. The yearly elaboration of national budget is therefore an ideal opportunity for effective mainstreaming of EbA at different governance levels and across sectors, particularly through institutional and cross-sectoral dialogue.

**In the case of Peru**, inter-ministerial meetings between the Ministry of Economy and Finance, Ministry of Environment, National Service of Natural Protected Areas, and other national and international actors in Peru led to the elaboration of the "Policy Guidelines for Public Investment in Biodiversity and Ecosystem Services". These guidelines promote biodiversity and ecosystem conservation measures in formulating and implementing public investment projects at local, regional and national level. Additionally, the Ministry of Environment has approved a technical form for the formulation of standard investment projects in the restoration of Andean ecosystems, as well as accompanying instructions for its completion. The mandatory use of this official tool is expected to facilitate the planning and cross-sectoral budgeting of public investment projects for ecosystem restoration at regional and local levels.

**The High Atlas Foundation (HAF) is a US-Moroccan NGO that uses public and private funding** to develop adaptation strategies, including tree nurseries, in the Moroccan Atlas region. It receives donations from governmental institutions, foundations and individuals, as well as through crowdfunding campaigns and

a partnership with the search engine Ecosia. Moreover, it generates income through the sale of carbon credits on the certificates market. In every project stage, different sources of finance are applicable. For instance, large-scale donations from public institutions are used for non-profitable aspects in the initial project phase, while carbon credits can only be used after project implementation. HAF projects are community-based and inclusive with the objective to provide work and generate income and support communities in climate change adaptation and mitigation measures. In general, the HAF strategy supplements public funding by different private sources. This approach can be an inspiration for future projects.

**The use of Microfinance for EbA (MEbA) constitutes a paradigm shift towards a higher involvement of the private sector in adaptation measures.** The objective of MEbA is to increase the resilience of smallholder farmers towards climate change risks by investing in sustainable adaptation measures. Hereby, Microfinance Institutions (MFIs) will be trained to enhance capacity on EbA and can provide loans to population with limited financial resources. Currently, Germany's International Climate Initiative is implementing MEbA in Peru, Columbia and other Latin American and African countries. To successfully provide loans for EbA, a stronger collaboration between MFIs, governments and development banks is necessary. Ideally, public funds will be leveraged by international public funds. The use of Microfinance for EbA measures and other measures has been also successfully applied in the frame of the Central Asian Regional EbA project.

<sup>6</sup> Adapted from GIZ 2017. Learning Brief: Financing EbA.

### Step 3: Embed EbA explicit measures in national, regional, local policies and sector plans

Facilitated by a coordinating body, EbA can be embedded as a cross-cutting approach into national, regional and local policies, with relevant targets built into the country's:

- Nationally Determined Contributions (NDC)
- Green Economy
- National Adaptation Plan (NAP)
- Regional Adaptation Plans (RAP)

- Sectoral long and short term plans
- Local policies

For countries that have already developed these policies, EbA measures can be integrated during the updating process. Otherwise, it can be considered at the initial stage of policy formulation.

### Step 4: Implement EbA measures

Once the measures are planned and budgeted, they can be implemented at the appropriate level, whether at the regional and/or

local levels, in and/or across sectors. Implementation should be based on a detailed work plan and pre-defined budget.

### Step 5: Monitor and report at national level (back to back with Step 2.5)

Building a strong monitoring, adaptive management and learning component into the very design and implementation process of adaptation measures is part of the foundation of a successful EbA strategy. At agreed upon intervals the (ecosystem-based) adaptation measures must be monitored and the results reported at different levels to facilitate lessons learned and allow adjustments to be made if so required. Monitoring is also essential for reporting at the national and international levels. Various tools are available to facilitate this step, for instance, Miradi, which is an easy-to-use computer programme that allows EbA practitioners to define, manage, monitor and learn from their adaptation measure ([www.miradi.org](http://www.miradi.org)).

For each adaptation measures chosen, planners must develop an operational plan and monitoring system. Monitoring of the measure must follow the requirements of the institutional context in which the intervention is being implemented and be measured against indicators for goals and objectives (typically set for the long term, i.e. more than 10 years) set by the policy makers/practitioners. For more information, please refer to the Conservation Standards framework for planning and implementing EbA projects in the high mountainous regions of Central Asia.<sup>7</sup>

<sup>7</sup> GIZ and CMP 2020. Guidance for Applying Conservation Standards for EbA.

### 3. Case studies

#### Case study: The consideration of EbA in the National DRR Strategy in Tajikistan

According to several studies, for instance by the World Bank, Tajikistan is the most climate vulnerable country in Central Asia. Numbers presented by the Tajik Committee of Emergency Situations and Civil Defence (CoESCD) show the occurrence of approximately 150 natural disasters each year, between 1997 and 2017. The majority are disasters caused by hydrometeorological processes.

To face such problems, the Tajik National Platform for Disaster Risk Reduction was established in 2012 as part of the State Commission for Emergency Situations of the Government of Tajikistan. Actors that are part of this platform are government authorities, agencies and ministries (e.g. Ministries of Economic Development and Trade, Energy and Water Resources, and Finance), local and international non-governmental organizations, the private sector and the civil society. In 2015, Tajikistan launched the NAP process to reduce impacts and to drive forward the integration of climate change adaptation into national and sub-national planning processes, with a focus on DRR.<sup>8</sup>

##### Sendai Framework as guidance for the Tajik DRR Strategy

In 2016, the government of Tajikistan committed to implement a National Disaster Risk Reduction Plan that is based on the Sendai Framework of the United Nations Office for DRR.<sup>9,10</sup> In this framework, the importance of the implementation of ecosystem-based approaches is highlighted in the priorities for action in order to achieve a substantial reduction in disaster risks and mitigating consequences. It is crucial to ensure the participation and capacity building of all DRR stakeholders, including local authorities, women, youth and persons with disabilities to improve their preparedness and response mechanisms. Moreover, DRR has to be directly linked to the sustainable development goals.

##### Sendai Framework for DRR 2015-2030: four priorities for action

1. Understanding disaster risk
2. Strengthening disaster risk governance to manage disaster risk
3. Investing in disaster risk reduction for resilience
4. Enhancing disaster preparedness for effective response to “Build Back Better” in recovery, rehabilitation and reconstruction

##### Tajik National DRR Strategy 2019 -2030<sup>11</sup>

In 2019, the Tajik National Platform for DRR implemented the new strategy. On the UNDRR Global Platform 2019, the Deputy Prime Minister emphasized that adaptation to climate change, and the EbA approach in particular, is integrated as a crucial part into the new National Strategy on DRR. Currently, already several large international projects in the field of DRR, considering EbA measures, are implemented. Those projects mainly focus on ecological prevention and response to flood hazards.

The concrete actions, proposed in the National Strategy include a diverse set of complementary measures:

- strengthening technical capacity of National Preparedness and Response systems,
- establishment of a National Resource Training Centre and a Psychological Aid Centre,
- strengthening the cooperation between national platforms to contribute to the discussions at the global and regional levels,
- establishment of a single reserve fund of the Global Platform for financing DRR projects, and
- strengthening the resilience to negative environmental impacts of climate change and water related disasters.

#### Case study: EbA mainstreaming in Armenia

##### Climate change challenges

Armenia is a mountainous, rural and landlocked country with around 76.5% of its territory elevated between 1500m and 2500m and its highest elevations above 5000m. Due to the geographical conditions of the country, the climate zones reach from subtropical to frosty mountains and the landscape zones from semi-desert to snowy highlands. The diverse ecosystems face several difficulties and threats, including illegal operations and over-

exploiting of natural resources, a growing insecurity of ecosystem services and general degradation (e. g. desertification and erosion). Moreover, due to intense deforestation, only 10.4% of Armenia's territory is still forested. As consequences of climate change, high temperature increases and precipitation reduction are expected and therefore a tremendous shift of vertical zone boundaries and natural ecosystems. Nowadays, already 80% of agricultural land are affected by climate change.<sup>12</sup>

<sup>8</sup> Supporting NAP for DRR in Tajikistan

<sup>9</sup> Dushanbe Declaration on Disaster Risk Reduction for Resilience Building

<sup>10</sup> Tajikistan puts Sendai at heart of development

<sup>11</sup> KHF 2019. National Risk Reduction Strategy of Tajikistan for 2019-2030.

<sup>12</sup> UNDP 2013. Republic of Armenia: Project Document on sustainable management of pastures and forest for climate change mitigation and adaptation benefits.

### EbA approach in NDC

The Government of Armenia is aware of the necessity to address climate change mitigation and adaptation in order to ensure sustainable development. Hence, an EbA approach is included as one of the priorities in the NDC under the UNFCCC (2015). One underlying principle is that the application of an EbA approach tries to maximize the synergies between mitigation and adaptation measures. The NDC of Armenia further states that the approach will go in line with the national environmental policy and will support inter-sectoral coordination, as well as cross-border cooperation. The adaptation activities will mainly focus on the sectors that are most vulnerable to climate change, i.e. natural ecosystems, human health, water resource management, agriculture, energy, human settlements and tourism. The explicit mentioning of EbA in the NDC ensures its inclusion in the NAP process, which was initiated in 2016 and fosters the mainstreaming of an EbA approach into sectors, relevant strategies, plans and policies. The NDC suggest financing the approach by two components; a domestic climate revolving civil fund based on revenues generated from environmental fees and ecosystem service fees, and international financial mechanisms, such as Green Climate Fund, etc. However, there is no cost estimation for EbA measure provided.<sup>13,14</sup>

## Case Study: EbA Mainstreaming in Peru

### Climate change challenges

As a mountainous country, Peru is exposed to a wide range of extreme events and lacks the necessary adaptive capacity to hedge the severe resulting social, economic and environmental impacts. The country has faced severe flooding and landslides resulting from the “extraordinarily strong” El Niño occurrence, as well as significant water scarcity due to desertification.

### Targeted policy making incorporated into NDC and NAP

Peru has an overarching policy framework that strongly details the importance of ecosystems for human well-being and adaptation, and allows for the planning and implementation of EbA measures at all governance levels (i.e. national, regional and local). The National Climate Change Strategy includes an EbA approach and identifies critical ecosystem goods and services, from which sectoral

### Implementation of EbA measures in Armenia

The Climate East Programme, funded by the EU and UNDP, is active in seven former Soviet countries and supports the development of EbA approaches to climate change mitigation and adaptation. In Armenia, the programme implemented a pilot project on sustainable management of pastures and forest to demonstrate climate change mitigation and adaptation benefits and dividends for local communities between 2013 and 2017. The project worked towards the United Nations Development Assistance Framework (UNDAF) outcome to integrate environment and disaster risk reduction into national and local development frameworks. The implementing partner was the Ministry of Nature Protection of Armenia.

The final objective of the project was to adapt to impacts of climate change in mountain regions of Armenia by establishing sustainable natural resource management practices with the aim to also integrate social concerns into the management of upper watersheds.<sup>15</sup> To achieve this, the implemented activities concentrated on the protection and restoration of the most vulnerable and degraded mountain regions (pastures and meadows) and forest ecosystems. Local communities received trainings on climate change related risks and support to restore natural ecosystems by adoption of sustainable forest, rangeland and efficient farming management practices. The project established, for instance, new mixed forests that are resilient to climate change, retain biodiversity and build economic value through wild fruits. Moreover, regular monitoring examined and verified the activities and the collaboration with communities and partners was ensured to enhance local capacities.

or regional plans can select and prioritize locations and sectors in their planning. In 2015, the Peruvian government presented its NDC by incorporating the vision of the National Climate Change Strategy, which became the key guiding document for adaptation efforts nationally. The NDC adaptation component promotes strategies with direct reference to EbA under the priority sectors of water, agriculture, fisheries, forests and health, thus reinforcing EbA commitments while aligning the NDC with sectoral planning. A multi-sectoral working group was created from these efforts, and is composed of representatives from 13 ministries and the National Centre for Strategic Planning; it is responsible for creating technical instruments to support EbA implementation. Peru also promotes the integration of DRR into these documents through the National System on Disaster Risk Management and National Policy on DRR, which set guidelines to prevent, reduce and avoid risks and carry out adequate preparation, response and reconstruction in the event of disasters.

<sup>13</sup> Ministry of Nature Protection Armenia 2015. Intended Nationally Determined Contribution under UNFCCC.

<sup>14</sup> UNDP 2017. National Adaptation Plan: Lessons from Armenia.

<sup>15</sup> UNDP 2017. Climate East Pilot Project.

At present, the Ministry of Environment is designing the roadmap for the formulation of the NAP, which is tightly linked to the objectives of the NDC on adaptation and will become the instrument for compliance of the indicators. The EbA approach is integrated into the NAP across the four stages of its development.<sup>16</sup>

#### EbA integration across the NAP stages in Peru

1. Laying groundwork (including biodiversity and ecosystem services as a specific sector linked to livelihoods and well-being)
2. Assessing climate vulnerabilities and cataloguing adaptation options for sectors and eco-regions
3. Reviewing and prioritizing options with EbA relevant criteria
4. Reporting, monitoring and review with EbA indicators across different time-scales

Some other entry points for EbA mainstreaming in Peru have been to assign EbA measures as an integral part of Master Plans for land management, use of co-management agreements with local communities for EbA implementation in community areas, as well as the inclusion of ecosystem-based solutions as an integral component of investment projects and plans for DRR, recovery and construction.

#### Institutional set-up

Institutional leadership is a critical enabling factor for EbA mainstreaming in policy-making processes. Peru has gained experience in mainstreaming EbA into the national system for public investment projects by promoting green infrastructure for water resource management, which put in place the appropriate le-

gal frameworks and financial resources that support further EbA implementation across various scales and sectors. The Ministry of Environment and Ministry of Economy and Finance have both the mandate and capacity to lead these activities. Under the NDC, Peru has also made advances in engaging various sectors through a designated and active space for coordination. The EbA case is furthermore strengthened at basin and landscape (regional) levels through existing regional climate change planning processes, aligned with development planning. This is mandated through the Regional Strategies for Climate Change and Regional Development Plans. Their guidelines call for the consideration of sub-national land use planning and the management of protected areas in the articulation of the policies.

In terms of the budget allocation process, Peru has experience in successfully integrating natural infrastructure as a required component in public investment projects, and has thus created an enabling environment to mainstream EbA in budget development processes. Selecting a central governing entity such as the Ministry of Economy, which is well positioned to coordinate the activities of other ministries, as lead authority demonstrates political power to allocate financial resources for EbA through public investments, administer national and international funds, and coordinate cross-sectoral budgeting. There are two viable policy instruments in Peru that provide a budgetary enabling environment for EbA mainstreaming: the National System of Multiannual Programming and Management of Investments, and the Mechanism for Compensation of Ecosystem Services. Under the guidelines of the former, an opportunity to develop EbA projects for public financing at country-wide scale and with a cross-sectoral approach is presented.

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22, Erkindik Blvd.  
20040 Bishkek, Kyrgyz Republic  
T + 996 312 90 93 40  
F + 996 312 90 90 80  
E paul.schumacher@giz.de  
I www.giz.de

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**Authors:**  
Dr. Bunafsha Mislimgshoeva, Ms. Renuka Srinivasan, Dr. Jochen Statz

**Responsible:**  
Paul Schumacher, Bishkek

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Zhanyshbek Botoev

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<sup>16</sup> GIZ 2018. Entry points for mainstreaming EbA.