



ADAPTATION AND RESILIENCE IN PRACTICE **AN OPERATIONAL FRAMEWORK** FOR INTEGRATED, INCLUSIVE, AND COMMUNITY-LED ACTION

SUMMARY



About NAbSA

NAbSA — Nature-based Solutions for climate Adaptation: monitoring & impact evaluation — is a technical hub hosted by the International Union for Conservation of Nature (IUCN). Its programme of work is co-created with Global Affairs Canada's Partnering for Climate (P4C) community. NAbSA's mission is to accelerate climate resilience in Sub-Saharan Africa through inclusive, gender-responsive Nature-based Solutions (NbS) that safeguard biodiversity, empower communities and strengthen adaptation outcomes.

As a hub, NAbSA supports adaptation and resilience efforts across Sub-Saharan Africa by embedding high-integrity, gender-responsive and biodiversity-informed climate actions at the core of project design, implementation and monitoring. NAbSA also serves as a platform for capacity building, knowledge sharing and policy influence. It documents lessons and best practices, convenes dialogues, connects networks, and showcases innovations at national, regional, and international levels, reinforcing the role of nature in building resilience and reducing poverty in vulnerable communities.

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Introduction



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A recent study has shown that even if all fossil fuel use is ended immediately, there is still a 42% chance that temperatures will exceed 1.5°C by 2100 ([Dvorak et al., 2022](#)). The impacts of global warming and climate change are already being experienced, resulting in widespread losses and damage to both people and ecosystems all over the planet ([IPCC, 2022](#)). Adaptation¹ and resilience actions are therefore not optional; they are essential.

1 Climate change adaptation is defined as ‘the process of adjustment to actual or expected climate and its effects, in order to moderate harm or exploit beneficial opportunities’ ([IPCC, 2022](#)).

The crises of climate change, biodiversity loss and human development are deeply intertwined. However, they are often addressed in siloes. This fragmented approach can lead to unintended consequences, missed opportunities and short-term fixes. The Nature-based Solutions for climate adaptation: monitoring & impact evaluation ([NAbSA](#)) initiative seeks to address these interlinked and complex crises together. By supporting the conservation, restoration and sustainable management and use of ecosystems, practitioners can build up and reinforce human and biodiversity resilience in tandem while providing social and economic co-benefits.

This proposed Operational Framework provides a structured, inclusive and evidence-based approach to designing and implementing nature-climate actions for adaptation and resilience. It builds on and integrates existing tools and methods. By embedding co-creation, gender responsiveness, and social inclusion as core principles, the framework ensures equitably distribution of benefits and actively addresses power imbalances. It also intentionally and meaningfully incorporates the voices, knowledge and leadership of marginalized groups—including women, youth, persons with disabilities, and Indigenous Peoples—throughout the process.

This framework aligns with and supports delivery of the three Rio Conventions: the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention on Biological Diversity (CBD), and the United Nations Convention to Combat Desertification (UNCCD). It operationalizes ecosystem and nature-based approaches² as recognized in various resolutions and decisions.

Climate change adaptation, socio-economic benefits, biodiversity and ecosystem conservation are the pillars of this approach. The framework also emphasises rights-based, locally led, gender-equitable action as fundamental to effectiveness and fairness.

² CBD Decision 15/8 on Biodiversity and climate change encourages parties “to integrate and promote, where appropriate, nature-based and/or ecosystem-based approaches to climate change adaptation and mitigation and disaster risk reduction” ([CBD, 2023](#)).

The goal of this framework is to provide **step-by-step, practical guidance** on how to design and implement adaptation and resilience actions. It builds upon existing guidance, such as the Friends of Ecosystem-based Adaptation Criteria (EbA), and translates them into more granular, action-oriented perspective and concrete steps that practitioners can easily implement in diverse contexts.

This approach is rooted in the standard adaptation cycle (CBD, 2019; Adaptation Community, 2020; GIZ, EURAC & UNU-EHS, 2018), with an optional initial preparatory step as outlined in this summary. It is designed to serve as an iterative, cyclical process that centres feedback, ongoing adaptive management, and experiential learning. Under the framework, through the monitoring, learning, and evaluation (MEL) process developed in Step 5, communities and partners are encouraged to regularly review interventions, revisit previous

steps and adjust as needed if actions are found to fall short of expectations. Critically, this learning and adaptive process throughout each of the framework's steps is grounded in locally led and participatory approaches. This framework recognizes the experiences and knowledge of all community members, especially women, Indigenous Peoples, and other marginalized groups, as fundamental to successful actions for adaptation and resilience.

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This summary document provides a brief overview of the context of why nature-climate actions for adaptation and resilience are necessary. In addition, it presents the interconnected crises the actions aim to address, the steps of the operational framework, and some of the methodologies this framework recommends practitioners to utilize in each step. The full operational framework document provides more complete explanations and detail on the methodologies presented here, as well as other tools. One of

the goals of this framework is to enhance the **accessibility** of integrated nature-climate actions for adaptation to organizations and actors with different resource levels. The full framework document therefore details methodologies that can be implemented in high, medium, and low resource contexts.

This framework is intended to serve as one piece of a toolbox that includes this summary document, the full operational framework with detailed expert guidance on each step of the adaptation cycle, a training

curricula for practitioners and an **online platform** that will serve as a repository for case studies, data, technical support and documentation.

The framework and its supplementary resources are co-developed and co-designed in consultation with experts from within Global Affairs Canada, the International Union for Conservation of Nature (IUCN) and the [Partnering for Climate](#) community. A core group of about twelve people served as the primary reviewers.



**“ANYTHING AGAINST
NATURE WILL NOT
ABIDE FOR ANY
LENGTH OF TIME.”**

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(Kenya)

This framework is a **living document**. As lessons are derived from pilot implementation of the approach, the framework will evolve to reflect realities on the ground, developing best practice and feedback from the ongoing consultative process with practitioners.

The Context



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Conservation and Sustainable
Management of Coastal and
Marine Ecosystems

THE CLIMATE CRISIS

Global warming due to anthropogenic climate change is causing ubiquitous, extensive, and rapid changes on land, in the oceans, and in the atmosphere ([IPCC, 2023](#)). The impacts of this warming on both people and ecosystems are far more extensive and serious than previously predicted ([WRI, 2023](#)). Future risks are expected to increase in severity at an accelerating rate for each additional increment of warming.

THE BIODIVERSITY CRISIS

Biodiversity is the foundation on which all life exists on Earth (IPBES, 2019), providing humans with what we need to survive; regulating the climate by sequestering carbon and replenishing oxygen in the atmosphere; attenuating floods, degrading waste and pollinating flowers. The global rate of species extinction is many magnitudes higher than it has been during the past 10 million years and is still accelerating, with about one million species currently facing extinction (IPBES, 2019; Schickhoff et al., 2024). These declines are a result of the direct drivers of biodiversity loss and ecosystem service changes (see Figure 1).

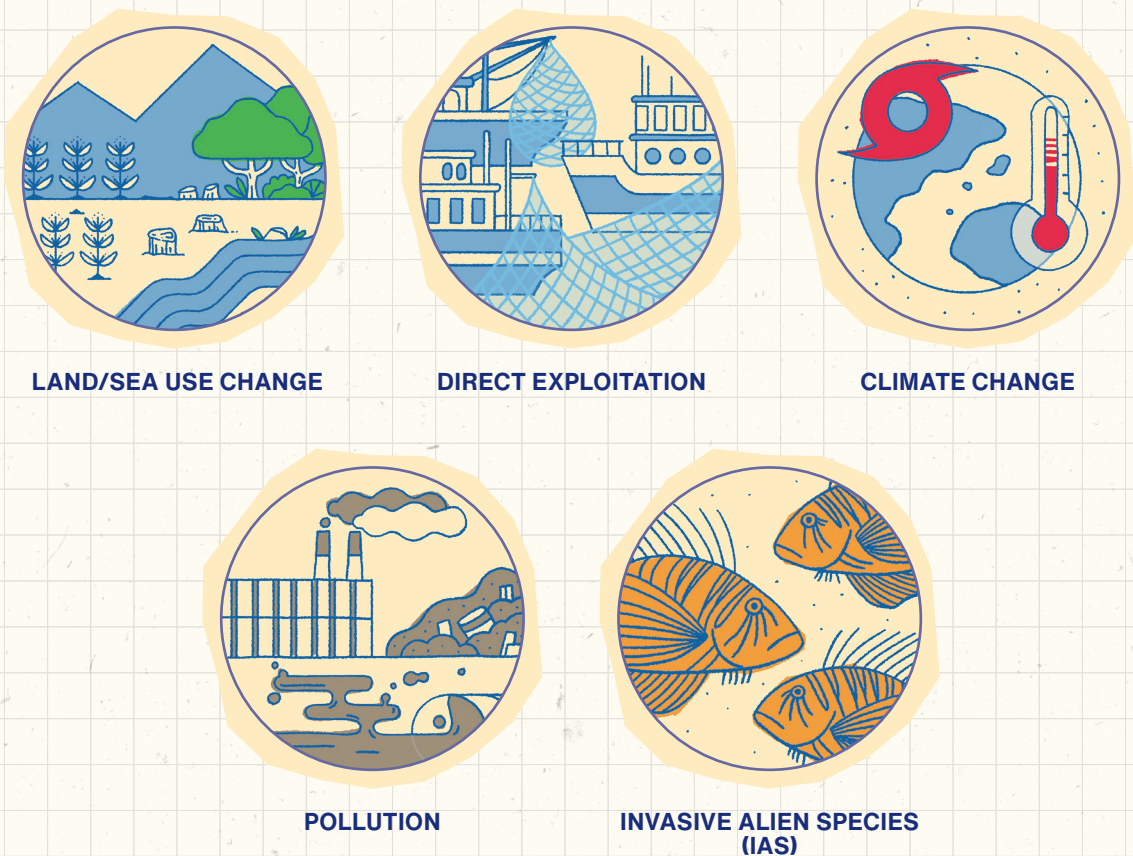


Figure 1 The direct drivers of biodiversity loss and ecosystem service changes
(Sources: IPBES, 2019; MEA, 2005)

As climate change impacts and anthropogenic activities accelerate the biodiversity crisis, the planet's ecosystems lose their capacity to serve as carbon sinks and in providing adaptation services, worsening the impacts and risks of global warming (Pörtner et al., 2023).

THE IMPACT ON PEOPLE

Just as human activities contribute to both the climate and biodiversity crises, these crises negatively interact with and reinforce each other to harm people and society. For instance, climate change-induced extreme weather events such as floods result in death, displacement and loss of shelter, loss of livelihood and assets, and corresponding increased risks of gender-based violence ([Castañeda et al., 2020](#)). Biodiversity loss to development and exploitation can worsen climate risks for people. For instance, converting wetland ecosystems into agricultural land can further compound exposure to climate effects, including flooding.

The impacts of the climate and biodiversity crises are not felt equally. Women, Indigenous Peoples, youth and other marginalized groups often face disproportionate climate risks due to existing inequalities in access to land, decision-making spaces and climate-resilient resources. Losses undermine the cultural, spiritual and economic roles that biodiversity plays in the lives of Indigenous Peoples and local communities. Women can be especially impacted, as they are often primary stewards of natural resources, yet their knowledge and leadership remain undervalued or invisible. The historical exclusion of marginalized groups also limits their ability to influence the very solutions that are designed to address the crises.

SUSTAINABLE DEVELOPMENT

Poverty and social inequalities are at least partly responsible for the global climate and biodiversity crises. Economic and social pressures can promote unsustainable practices such as overexploitation of natural resources and weak governance systems. Addressing these structural inequalities—by strengthening inclusive governance, valuing diverse knowledge systems and promoting equitable access to resources—is essential for sustainable adaptation. Sustainable development in tandem with adaptation and ecosystem conservation and restoration actions can help to address the underlying drivers of climate change and biodiversity loss.

NAbSA offers a framework for addressing these interconnected crises. These interventions can build resilience among both people and ecosystems, by linking social justice and environmental sustainability as mutually reinforcing goals ([IPCC, 2023](#); [World Resources Institute, 2025](#)).

The Six Core Principles of the Operational Framework

THIS FRAMEWORK



Is **INFORMED BY CO-CREATION** ensuring active participation, continual learning and feedback incorporation.



FOCUSES ON THE **NATURE-CLIMATE-PEOPLE NEXUS** embedding specific, actionable strategies that align with this triad into project design and implementation.



GUIDED BY ENVIRONMENTAL AND SOCIAL RISK ANALYSIS identifying potential risks and mitigation strategies, ensuring that interventions do not inadvertently harm the environment.



Is **RIGHTS-BASED AND GENDER-RESPONSIVE (OR TRANSFORMATIVE) AND SOCIALLY INCLUSIVE** ensuring intentional and meaningful participation and leadership of marginalised groups, particularly women, Indigenous Peoples, youth, persons of disability at all stages. This principle requires identifying and addressing structural barriers, valuing diverse knowledge systems, and integrating intersectional and power-aware analysis into project design, implementation, and governance.



Is **CLIMATE-PROOFED** ensuring that current and future climate risks to proposed project interventions are minimised from stages of design and planning to implementation, monitoring, evaluation and learning.



Is **ALIGNED WITH POLICY** ensuring coherence with and contributing to the delivery and achievement of established global goals and targets, particularly with the Rio Conventions.

Figure 2 The six core principles of the NAbSA operational framework



Co-creation ensures that actions are context-specific, inclusive and grounded in local knowledge. It fosters ownership, equity and long-term sustainability by engaging all actors from the design to implementation of any nature-climate action to ensure it addresses their needs and priorities.



The complex interconnections between biodiversity, climate change and people mean that adaptation and resilience actions must embed all three of these elements in the **nature-climate-people** nexus. Actions should simultaneously support ecological integrity, climate adaptation, and social and economic co-benefits; not treat these as separate goals.



Environmental and social risk analysis ensures actions do not create new vulnerabilities or reinforce existing inequalities through safeguards and screening processes.



This framework requires a **gender-responsive and socially inclusive** approach to interventions. When the knowledge, expertise and capacities of members of marginalized groups—including women, youth, persons with disabilities, and Indigenous Peoples—are fully recognized, valued and integrated, adaptation and resilience actions are stronger and more likely to succeed. In addition, gender-responsiveness and social inclusion ensures that already vulnerable groups are not further marginalized and can actively participate in and equitably benefit from actions.



Actions under this framework must be **climate-proofed**, meaning they are resilient or can be adapted in response to future climate impacts. To provide adaptation services in the long-term, ecosystems and the actions that restore and conserve them must themselves be protected from climate impacts.



Actions grounded in existing local, national, and global policy frameworks are easier to scale, finance, and sustain. **Aligning with policy** creates pathways for replication, institutional buy-in and long-term integration.

Optional Preparatory Step



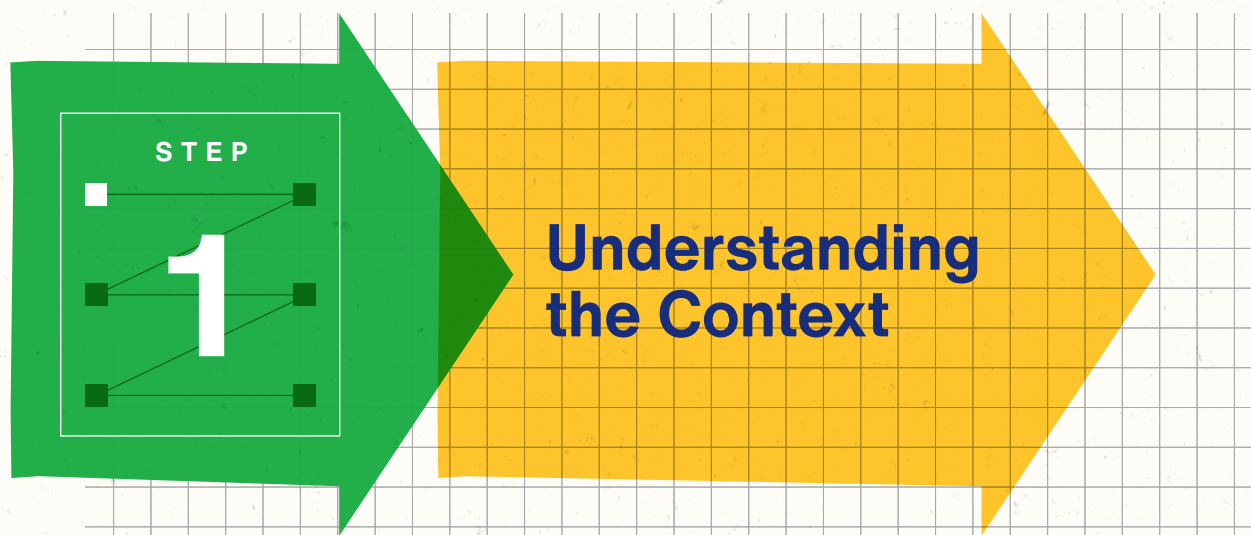
Pethie, Senegal © Sriyanie Miththapala

This optional preparatory step helps assess whether actions are viable at a given site. Even if a site is well-known, this framework strongly encourages practitioners to go through this initial step, as previous assessments may not have investigated all the enabling conditions particular to nature-climate actions.

KEY GUIDING QUESTIONS INCLUDE:

- Are current and future climate change risks and vulnerabilities observed at the site?
- Do the site and its surroundings currently deliver ecosystem services that help address these vulnerabilities and build resilience, or could they if restored?
- Are there existing plans and processes into which adaptation interventions can be mainstreamed or provide synergies?
- Is there social and political support at local and higher levels to engage in nature-climate adaptation actions?
- Is there the potential for adequate funding to support an intervention?

If some of these conditions are not met, a communities and partners may pause, adapt their approach, or explore other opportunities. If enough conditions are met, partners and communities can move on to Step 1.



The information collected during this first step of the framework serves as the foundation for all subsequent steps. Here, practitioners **create a catalogue of information** on the ecological and climatic characteristics of the site, as well as the social, political, and economic dynamics that shape vulnerability and resilience.

The first element of this step is to conduct thorough **stakeholder mapping and analysis**. This framework walks practitioners through the process of identifying and engaging a range of actors, whose involvement will be critical throughout all stages of this approach. For instance, engaging community leaders, university students, and others with knowledge of the relevant ecosystems, flora, and fauna of the area in the data collection later in this step can help facilitate access to ecological and demographic information.

Particular effort should be made at this stage to reach out to underrepresented groups, including women, youth, Indigenous Peoples and persons with disabilities, through culturally appropriate and gender-responsive facilitation methods. Their participation must not be limited to consultation alone but positioned as foundational expertise for understanding the interconnected ecological and social systems, particularly regarding differential vulnerabilities and adaptive capacities. It is therefore crucial that all such actors are identified and involved from the very beginning of the process, as the knowledge and expertise they contribute is necessary to inform every subsequent step of the adaptation cycle.

The data collected on the **ecological context should include:**

- The ecosystems and biodiversity in the site, including extent and species composition;
- The services these ecosystems provide or would contribute to climate resilience if restored;
- Existing drivers of biodiversity loss and ecosystem degradation, including development and climate change impacts.

The data collected on the **climate context should include:**

- Local knowledge, past experience of communities in addressing climate risks, and any current natural resource management and adaptation strategies employed;
- Current and projected climate risks (localized impacts will be assessed in greater depth in the next step).

The data collected on the **social, cultural, economic and political context should include:**

- The range of actors in the area, including women and youth groups within communities, civil society, governments, etc., and demographic information;
- How ecosystem services are accessed, used, and governed, including for spiritual or cultural purposes, with attention to how patterns of dependence, access and control reflect gendered or power-based inequalities;
- Traditional knowledge systems of Indigenous Peoples and local communities, including differentiated perceptions, experiences and coping strategies of people of all genders, youth, and marginalized groups in response to climate risks;
- The current institutional and policy context, including local, regional, and national climate policies, as well as gender equality and social inclusion-related policies and institutions.



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This framework provides clear instruction for practitioners on how the above data can be collected. Methods such as focus group discussions and semi-structured interviews can be used for socio-economic data, while rapid biodiversity assessments and literature reviews can be used to collect information on the ecological and policy contexts, respectively. Practitioners can then integrate key social, economic, and environmental data into a **detailed GIS map** to build a holistic understanding of the site. Map layers will reflect land use, past and current climate maps, locations of endemic and threatened flora and fauna, and population density and poverty, among other information, with careful consideration for socially- and gender-differentiated spatial patterns.

STEP

2

Assessing Climate Risks and Vulnerabilities

In this step, the data collected in Step 1 is analysed to understand **past, current and future climate risks**, and to determine **who and what is most vulnerable and why**. This includes developing an understanding of how local social dynamics – including those related to gender, age, disability and Indigeneity – shape differential exposure, sensitivity, and adaptive capacity.

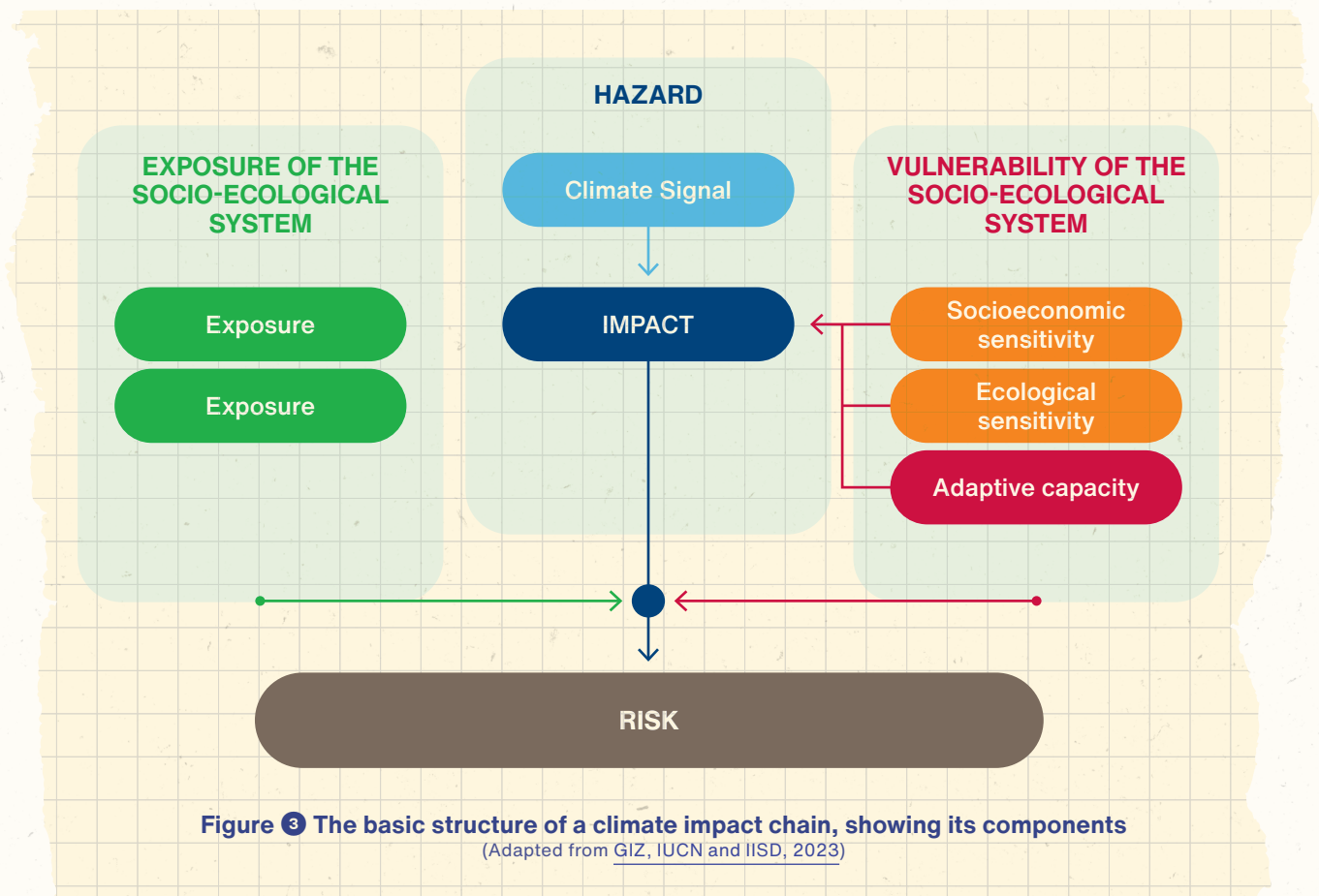
This framework guides practitioners in how to assess climate risks, based on sources of **vulnerability** and **exposure** in communities and ecosystems. Vulnerability is shaped by factors such as income and landownership, as well as by intersecting systems of inequality—including gender, age, disability, caste, ethnicity and legal status. Community and individual vulnerability analysis will also account for factors such as reliance on specific ecosystem services and access to information and decision-making power. Assessing exposure for different groups includes consideration for spatial dimensions of poverty, gender inequality, and customary land tenure and collective rights.

Critically, these assessments are conducted with the meaningful participation of the full range of actors to ensure inclusivity and a holistic picture of the site. The framework provides instructions for participatory methodologies, such as a participatory vulnerability and capacity assessment. Practitioners may need to review climate change, its impacts, and the components of risk, using accessible and non-technical terminology, with community members.

An important reminder is that groups with high vulnerability should **not be viewed only as victims** — they also hold valuable adaptation knowledge and leadership potential. The framework requires **active inclusion and recognition of their contributions** throughout the co-creation and implementation phases. This means ensuring that women, youth and other underrepresented groups are not only consulted but involved in setting criteria for prioritization, shaping evaluation frameworks and leading community dialogues on adaptation, among other contributions.



The next part of this step is to combine the identified information in a **climate change impact chain** (GIZ, UNEP-WCMC & FEBA, 2020; GIZ, EURAC & UNU-EHS, 2018).



A climate change impact chain is a visual or conceptual map showing the climate **hazard, who or what is exposed, why they are vulnerable, and what impacts (risks) are likely to occur.**

Once these elements of risk have been identified, this framework instructs practitioners in how to add contextualized **indicators** that reflect both material conditions and social dynamics. For instance, it may be necessary to collect data on the number of households, disaggregated by gender of household

head, in a particular flood-prone area, or number of fish species that depend on clear, un-sedimented water, as part of assessing exposure. The framework also encourages the use of indicators that capture **invisible burdens**, such as time spent collecting water after floods, or exposure to gender-based violence in temporary shelters, disaggregated by age and gender. In Step 4, the framework provides guidance on how the baseline data collected on these indicators can be used for a vulnerability assessment, to facilitate the selection of priority adaptation actions.

STEP

3

Identifying Nature-Climate ACTIONS

This step builds on the information gathered in the previous step to **design** specific actions to address the identified climate change impacts on the site's socio-ecological systems. The goal of this step is to brainstorm a long list or catalogue of potential actions, as these possibilities will be evaluated and some selected for implementation in Step 4.



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Even in this initial design stage, these potential interventions should be designed through **an inclusive, participatory, and power-aware process**. The interventions prioritised for implementation will come from this list. It is therefore critical that a variety stakeholders and actors are engaged, including women, Indigenous Peoples, and members of other marginalised communities, to ensure that their needs, vulnerabilities, and specialized knowledge and capabilities are considered and fully integrated. If they are not fully integrated, actions risk reinforcing existing inequalities and neglecting innovative opportunities. This step is an opportunity to design actions that are climate-resilient and gender-transformative in addressing underlying inequalities in access, power and agency.

The framework provides practitioners with strategies to validate diverse knowledge systems, including Indigenous ecological knowledge, oral storytelling, and gendered roles in early warning, food storage, or water sourcing—which are often overlooked but crucial to localized adaptation strategies.

Using the completed impact chain from Step 2, potential actions can be collaboratively designed according to the needs and context of the site. For instance, partners and community members may choose to emphasize capacity building for community forest management, or participatory reparation and vegetation of river embankments. Through a hypothetical case study, the full framework document provides examples on how to tailor adaptation interventions to the particular local context.



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Well-developed actions in this stage should include consideration for **policy alignment** and **mainstreaming** into sectoral areas of importance. Proposed interventions should align with established global and national frameworks, ensuring that local actions contribute directly to broader adaptation and biodiversity goals and targets. This includes coherence with gender equality and social inclusion policies or commitments, such as

national gender strategies, action plans, rights frameworks or regional declarations. Integrating nature-climate adaptation into sectors or cross-sectoral areas such as forestry, agriculture, fisheries, sustainable development, and health increases exposure to and education around these strategies. In that way, practitioners can foster an enabling environment for scaling up existing actions and implementing new interventions.

STEP

4

Prioritising and selecting Actions

Not all the identified actions from Step 3 will be equally feasible or impactful. The possible actions must be screened to **prioritise** particular sites, groups and intervention types according to various criteria. In this step, the selection and prioritization of actions should reflect the needs, aspirations and knowledge of diverse groups, especially those most affected by climate impacts and least represented in planning processes. In that sense, for truly participatory decision-making, differentiated power relations must be taken into account. This framework recommends conducting proactive outreach to women, Indigenous Peoples and other groups who may face barriers to participation and full engagement. How actions are prioritised can either reinforce existing inequalities, or serve as a lever for shifting power, strengthening the agency of marginalised groups by recognising their knowledge and needs.

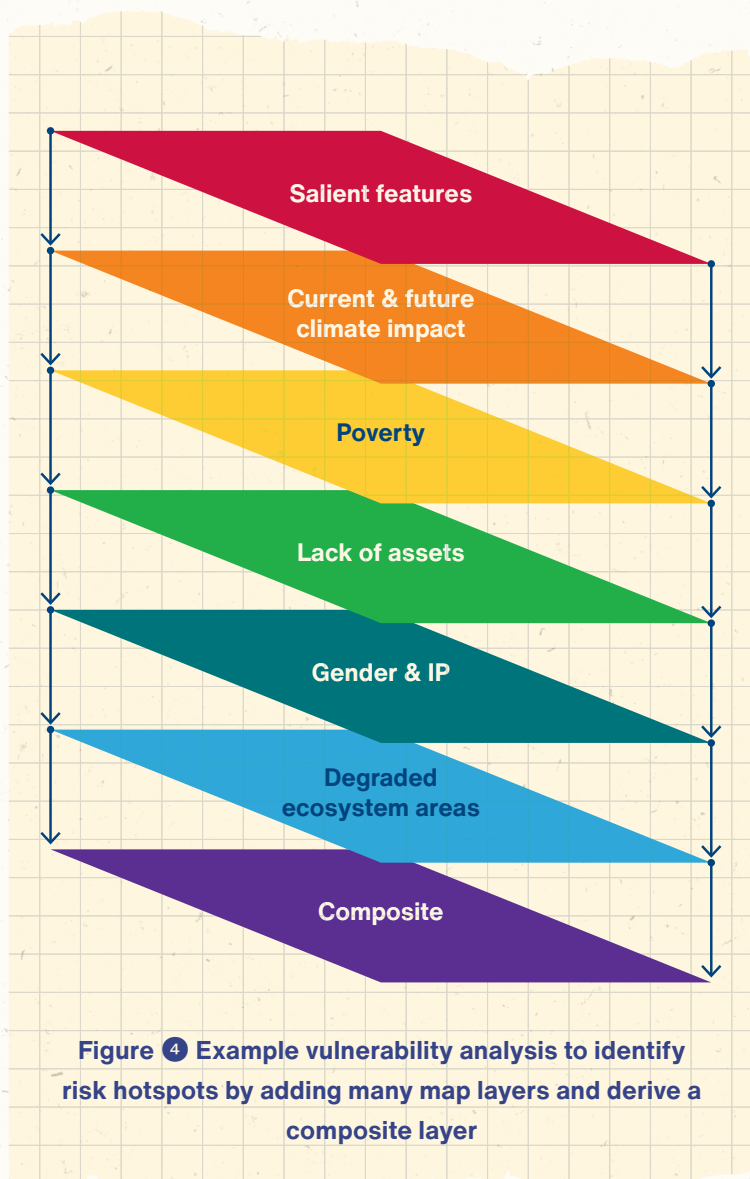
Some key criteria to consider include:

- How well do the proposed interventions adhere to the framework's six core principles?
- How well do they align with or provide synergies to existing local, regional, or national plans, policies or processes?
- How cost-effective are they?
- How well do the proposed interventions provide equitable, sustainable, climate-resilient livelihood benefits to local communities?
- How well do they reflect local priorities, considering gender-differentiated access to and use of resources, decision-making roles, and climate risks?
- How do the actions interact with traditional gender roles or time use? For instance, disproportionate increases to women's labour or care burdens may limit the uptake, implementation or sustainability of certain interventions.
- To what extent do the interventions challenge discriminatory norms or increase leadership and economic agency of marginalized groups?

Community buy-in is essential. Interventions that do not meet community needs or reflect local priorities; particularly those of women, Indigenous People and other marginalized groups are less likely to succeed or be sustained.

The framework offers several methods and tools for the prioritization process. For instance, performing a **vulnerability assessment** through spatial analysis (GIS mapping) can be a cost-effective tool to facilitate decision-making and prioritizing adaptation actions. Using specialized software such as ArcGIS or QGIS to layer different data sets on top of one another to visualize in a single map (e.g. see Figure 4) can help identify priority geographic areas in a given site and corresponding interventions.

This framework also provides guidance for practitioners on how they can most effectively utilize **non-quantitative evaluation methods** to understand diverse stakeholder valuations and priorities. For many groups, including women and Indigenous Peoples, the value of ecosystems and their services may not be easily translated into monetary terms. Approaches such as participatory mapping and valuation can help capture this importance. In addition, engaging community members to rank and score the potential actions based on their perceived co-benefits can help identify which actions are preferred by certain groups within the community. This helps to ensure that a range of priorities are represented and that the benefits of climate resilience are shared, owned and driven by those most affected.



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STEP

5

Monitoring, Evaluation and Learning (MEL)

In this step, progress is tracked from baseline to target to support informed adaptive management and promote transparency and accountability (GIZ, IUCN and IISD, 2023). This framework recommends a **theory of change** approach for monitoring. The theory of change progresses logically through a clear statement of the overarching goal, identification of barriers, defined interventions with their anticipated outputs and short- and long-term outcomes, overall impact, to the intended national influence and global contribution.

Intervention outcomes should align with the **Global Goal on Adaptation (GGA)**, as well as with commitments under frameworks such as the **Kunming-Montreal Global Biodiversity Framework** and its **Gender Action Plan** and the **ENACT Partnership**. This ensures coherence between local action, national reporting and global targets, demonstrating how community-level efforts contribute to shared global goals for resilience, equity and sustainability.

The theory of change is informed by the gender analysis conducted in Step 1. It should explicitly include gender equality and social inclusion as central dimensions of transformational change. This includes identifying not only technical barriers but also structural and normative barriers to

participation and leadership for women, youth, Indigenous Peoples, persons with disabilities, and other marginalized groups. These considerations should inform both outcome and impact pathways, including how agency, access, and decision-making power are expected to shift as a result of the interventions.

Based on the defined targets and outcomes, practitioners can select appropriate indicators to measure the changes resulting from a given intervention. Selecting which indicators are most relevant for a particular set of actions requires an inclusive and participatory process to ensure that diverse needs and priorities are considered. Different community members may also be able

to identify which indicators are most useful to collect, based on a deep knowledge of the local ecological context.

Data should be collected on **output, short- and long-term, and impact indicators**, using both qualitative and quantitative data as appropriate. In some cases, data can be collected directly, but in other cases, indirect indicators should be used, such as **proxy** and **modelled indicators**. This framework provides examples of and guidance on how to develop these indirect indicators to capture long-term change even within shorter implementation periods. Indirect and proxy indicators may be needed to measure certain gender equality and social inclusion outcomes, particularly when collecting data directly—such as on gender-based violence—could pose a risk to community members.

Monitoring should begin as soon as implementation starts, but the monitoring process must be designed during the planning phase. This process

should clearly define **roles** for **data collection** and analysis, frequency and procedures for **data collection, quality, storage, analysis and reporting**. As part of this plan, practitioners must also identify which social factors are relevant to **disaggregate** by, such as gender, age and ethnicity, to capture the differentiated roles, vulnerabilities and impacts.

The **evaluation** process uses monitoring data collected to assess outcomes and extract lessons learned ([GIZ, UNEP-WCMC and FEBA, 2020](#)). Most donor-driven actions may involve external evaluation, but **internal evaluation is equally critical**. It supports **adaptive management**, **validates** community-led decisions and **strengthens ownership and agency**, including for women and marginalised groups. The framework recommends establishing accessible and transparent **feedback and grievance mechanisms** to protect rights and improve accountability. Internal evaluation is also a key entry point for harnessing community knowledge and innovation.

At this stage, a **communication** plan clearly explains the action's objectives and anticipated co-benefits while ensuring regular updates to all actors. The plan should define key messages, target audiences, and communication channels, tailored to accessibility needs—for instance through community radio in local languages at women-friendly timeslots. The communication plan should be inclusive and adapted to the information needs, preferences and access limitations of different groups. For example, gendered differences in media access, literacy levels and language fluency should be considered. Communication is a means to share information with community members and can help challenge harmful stereotypes, for instance by highlighting leadership by women and marginalized actors. It is also an opportunity to **expands the evidence base** on integrated nature-climate actions by sharing lessons with the broader adaptation and resilience community.



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STEP

6

Implementing Nature-Climate Actions

Step 6 brings all previous steps into action.

The first stage of implementation is to **develop an action plan**. The plan should reflect the six core principles of the framework throughout, namely that actions designed with this framework are co-created, rights-based and climate-proofed.



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A good action plan will **clearly articulate the objectives, concrete actions and expected outputs, outcomes and impact of the given action**. The plan must include a timeline that details deadlines for the completion of these actions and outputs, as well as milestones for monitoring, evaluation and learning.

In addition, the action plan should **lay out the roles and responsibilities** of all actors. Crucially, defining these roles and responsibilities must be a **collaborative process** with all actors involved ensuring that that leadership, decision-making power, and livelihood benefits are equitably distributed, especially for women, Indigenous Peoples and marginalized groups. This includes equitable distribution of paid and unpaid roles, consideration for existing care burdens and measures to ensure that women

and marginalized groups are not overburdened with voluntary contributions without recognition or compensation. The plan should actively address gender gaps and barriers to participation—such as time, language, physical access, and norms—and provide capacity strengthening for community members to effectively carry out these responsibilities. Where relevant, male champions, traditional leaders and religious actors should also be intentionally engaged to help shift restrictive gender norms and enable women's participation in natural resource governance.

Once the action plan is put into practice, its progress must be monitored continuously. Any action that proves ineffective or falls short of expectations should be promptly adapted—in full collaboration with partners, stakeholders, and rightsholders, to ensure the action remains effective, inclusive and resilient. If local realities change, it may be necessary to return to earlier steps—including Step 2—to reassess emerging climate risks.



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Learning and adaptive management are at the core of this framework. Iterative evaluation and course correction are essential to climate-proofing; ensuring action remain relevant and beneficial over time. Insights from implementation should be actively shared with government actors and the wider community to strengthen collective learning, unlock funding, build partnerships and enable the scaling of successful actions regionally, nationally and globally.

References

Calvin, Katherine, Dipak Dasgupta, Gerhard Krinner, et al. 2023. *IPCC, 2023: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (Eds.)]. IPCC, Geneva, Switzerland*. First. With Hoesung Lee. Intergovernmental Panel on Climate Change (IPCC). <https://doi.org/10.59327/IPCC/AR6-9789291691647>.

Castañeda Carney, I., L. Sabater, C. Owren, and A. E. Boyer. 2020. *Gender-Based Violence and Environment Linkages*. IUCN. <https://portals.iucn.org/library/node/48969>.

'Climate Risk Assessment for Ecosystem-Based Adaptation: A Guidebook for Planners and Practitioners'. n.d. Accessed 20 October 2025. <https://climate-adapt.eea.europa.eu/en/metadata/guidances/climate-risk-assessment-for-ecosystem-based-adaptation-a-guidebook-for-planners-and-practitioners>.

Dvorak, M. T., K. C. Armour, D. M. W. Frierson, C. Proistosescu, M. B. Baker, and C. J. Smith. 2022. 'Estimating the Timing of Geophysical Commitment to 1.5 and 2.0 °C of Global Warming'. *Nature Climate Change* 12 (6): 547–52. <https://doi.org/10.1038/s41558-022-01372-y>.

EbA Mainstreaming Cycle - Adaptation Community. 2020. December 17. <https://www.adaptationcommunity.net/ecosystem-based-adaptation/eba-mainstreaming-cycle/>.

GIZ, EURAC & UNU-EHS (2018): Climate Risk Assessment for Ecosystem-based Adaptation – A guidebook for planners and practitioners. Bonn: GIZ. Available at: <https://www.adaptationcommunity.net/wp-content/uploads/2018/06/giz-eurac-unu-2018-en-guidebook-climate-risk-asessment-eba.pdf>

GIZ, IUCN and IISD (2023). Ecosystem-based Adaptation: Working with nature to adapt to a changing climate. [Online course] Available at: <https://www.edx.org/course/ecosystem-based-adaptation-working-with-nature-to-adapt-to-a-changing-climate>

GIZ, UNEP-WCMC and FEBA (2020) Guidebook for Monitoring and Evaluating Ecosystem-based Adaptation Interventions. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, Bonn, Germany. Available at https://www.adaptationcommunity.net/download/ME-Guidebook_EbA.pdf

IPCC, 2022: Summary for Policymakers [H.-O. Pörtner, D.C. Roberts, E.S. Poloczanska, K. Mintenbeck, M. Tignor, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem (eds.)]. In: *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 3–33, doi:10.1017/9781009325844.001.

IPBES. 2019. *Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Zenodo. <https://doi.org/10.5281/zenodo.6417333>.

Pörtner, H.-O., R. J. Scholes, A. Arneeth, et al. 2023. 'Overcoming the Coupled Climate and Biodiversity Crises and Their Societal Impacts'. *Science* 380 (6642): eabl4881. <https://doi.org/10.1126/science.abl4881>.

Schickhoff, Udo, Maria Bobrowski, Isis Offen, and Suraj Mal. 2024. *The Biodiversity Crisis in the Anthropocene*. 79–111.

Secretariat of the Convention on Biological Diversity (2019). Voluntary guidelines for the design and effective implementation of ecosystem-based approaches to climate change adaptation and disaster risk reduction and supplementary information. Technical Series No. 93. Montreal, 156 pages.

World Resources Institute (2023). *10 Big Findings from the 2023 IPCC Report on Climate Change*. March 20. <https://www.wri.org/insights/2023-ipcc-ar6-synthesis-report-climate-change-findings>.

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