

Policy Brief: Towards Sustainable Adaptation Pathways

A Concept for Integrative Actions to Achieve the 2030 Agenda, Paris Agreement and Sendai Framework

Summary

This policy brief is based on the report of the German Environment Agency (UBA) “Towards Sustainable Adaptation Pathways. A concept for integrative actions to achieve the 2030 Agenda, Paris Agreement and Sendai Framework”¹ prepared as part of the project “Joint implementation of the 2030 Agenda/SDGs and the Paris Agreement” (FKZ 3719 18 105 0). The report introduces and discusses the concept of “Sustainable Adaptation Pathways” (SAPs). The concept presents a framework for the synergetic implementation of the 2030 Agenda for Sustainable Development, the Paris Agreement and the Sendai Framework for Disaster Risk Reduction. This policy brief summarizes key findings relevant to the implementation of SAPs in practice. These include the following:

- ▶ An **in-depth assessment of vulnerabilities and the socio-ecological context** is a precondition for successful design and implementation of SAPs.
- ▶ **Flexible, multi-benefit approaches** can enhance sustainable adaptation in the light of uncertainties.
- ▶ Both **political leadership and stakeholder involvement** are crucial to establishing interlinkages across sectors and capturing benefits of increased coherence.
- ▶ **Existing policy instruments can be used as entry points** for enhanced integration of climate change adaptation, disaster risk reduction and sustainable development.
- ▶ SAPs require **robust monitoring and evaluation frameworks** open to learning processes and constant readjustment of measures, means of implementation and objectives.

The Challenge: Integrating Climate Change Adaptation, Disaster Risk Reduction and Sustainable Development

2015 was a watershed year for addressing global challenges. Under the umbrella of the United Nations, the 2030 Agenda, the Paris Agreement and the Sendai Framework were adopted. “Leave no one behind” is the central, transformative promise of the 2030 Agenda, embodied in its 17 Sustainable Development Goals (SDGs). The SDGs cover different objectives such as eliminating poverty, achieving sustainable economies, combating climate change and protecting livelihoods. The Paris Agreement commits countries to concrete measures for climate protection and adaptation to climate change. The Sendai Framework defines objectives and priorities for action to prevent and reduce hazard exposure and vulnerability to disasters.

¹ The report and an accompanying assessment of 20 case studies of Sustainable Adaptation Pathways (series “Climate Change” 48/2021) are available at <https://www.umweltbundesamt.de/en/publications>

Six years after their adoption, implementation of these post-2015 agendas lags behind in many aspects, raising the need for exploring pathways that enhance their effective implementation. One way forward is working towards identifying and using synergies between them. Climate change adaptation, disaster risk reduction and sustainable development are linked through a common emphasis on reducing vulnerabilities as well as on enhancing livelihoods and ecosystems. Operational vehicles and policy instruments are available to realize synergies at implementation level. Nevertheless, a lack of institutional capacities, policy-making in silos instead of cross-sectoral coordination and insufficient funding are just some of the barriers hindering coherent policymaking in practice.

The Concept of Sustainable Adaptation Pathways

The proposed concept of SAPs considers these challenges and introduces a framework to understand and strengthen coherence between climate change adaptation, sustainable development and disaster risk reduction. The concept builds on existing research on pathway approaches concerned with identifying overlaps between climate change adaptation, disaster risk reduction and sustainable development, as well as enabling factors to reap synergies between them. Despite the identified overlaps, complex interactions and trade-offs can occur when integrating climate change adaptation, disaster risk reduction and sustainable development in practice. The concept calls for considering these interactions when designing and implementing SAPs.

Definition of Sustainable Adaptation Pathways

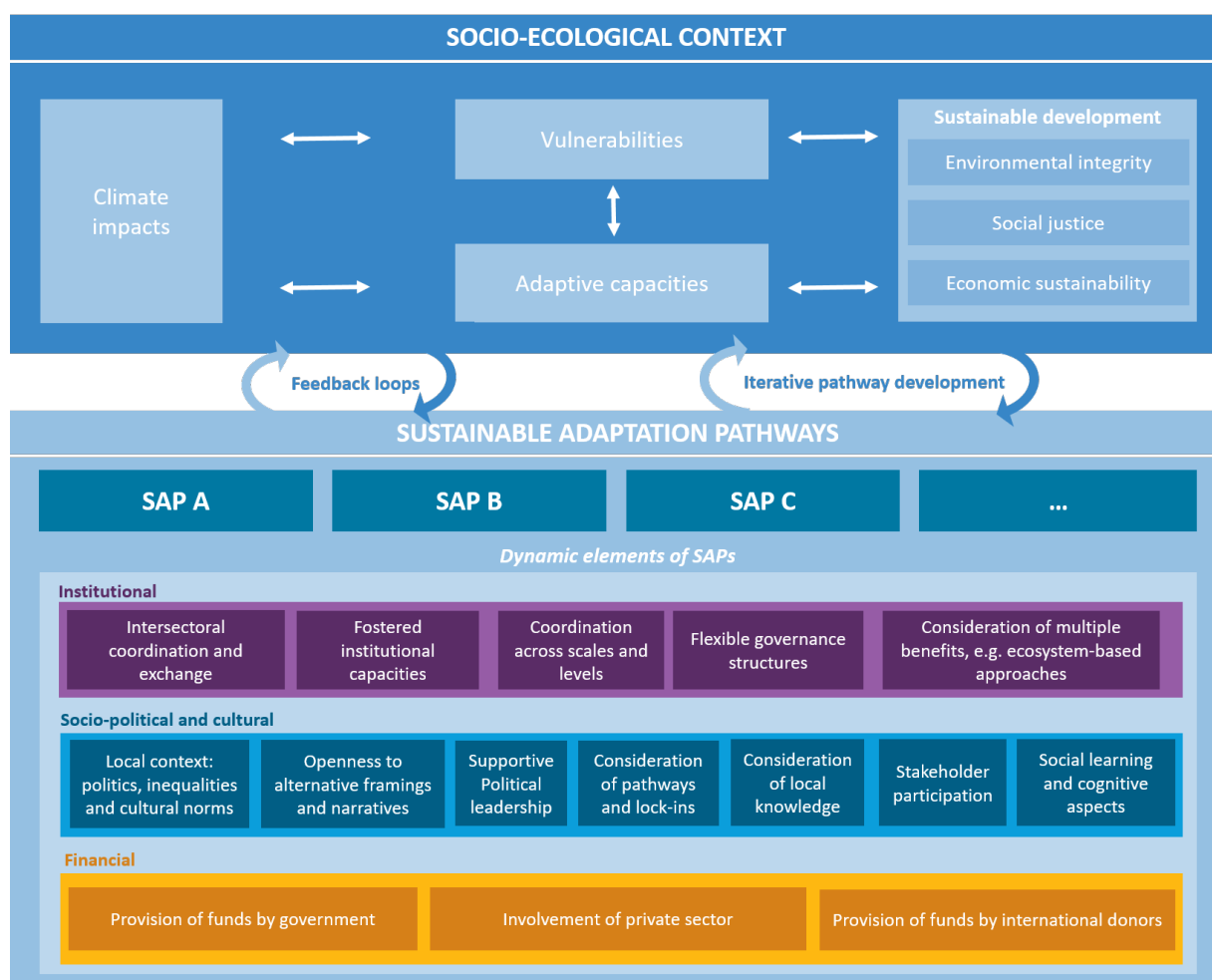
Sustainable Adaptation Pathways describe a **coherent set of alternative adaptation strategies and procedures** composed of measures and policies to **strengthen the capacities of populations, institutions and ecosystems** to adapt to climate-related risks over time while enhancing **social justice, environmental integrity and economic sustainability** of socio-ecological systems.

SAPs are always embedded in a specific socio-ecological context (see figure on p. 3). This context is characterized by vulnerabilities that differ across populations, institutions and ecosystems and affect their capacity to adapt to climate-related impacts. These vulnerabilities and adaptive capacities are shaped by the degree of environmental integrity², social justice and economic sustainability of the socio-ecological context. Trade-offs between these three dimensions of sustainability can be significant when implementing SAPs, which makes an evaluation of their overall sustainability challenging. At the same time, vulnerabilities and adaptive capacities affect environmental, social and economic conditions. SAPs can be implemented at different scales (local, regional, national, transnational). Feedback loops between these scales, however, always influence how SAPs become manifest in practice.

SAPs are characterized by specific dynamic enabling elements. These dynamic elements also depend on the particular socio-ecological context. Dynamic elements can be grouped into three categories: (1) institutional, (2) socio-political and cultural as well as (3) financial. Our case studies analysis shows that certain dynamic elements are often dominant, while others might be present only to a weaker extent, not observable or entirely absent. In every context, alternative SAPs exist (illustrated as 'SAP 1', 'SAP 2' etc. in figure on p. 3). Each SAP consists of a distinct set of measures and policies to achieve certain sustainable adaptation objectives. Exploring these alternative SAPs in an open and participatory way is an integral part of an inclusive SAP development.

² Environmental integrity describes the health of a natural system that supports processes essential for life on earth.

Figure: The Concept of Sustainable Adaptation Pathways



Source: Authors' own illustration

Implementing Sustainable Adaptation Pathways in Practice

Based on the developed SAP concept and an analysis of 20 case studies illustrating diverse aspects of SAPs in practice, we draw the following key conclusions for SAP implementation:

► In-Depth Assessment of Vulnerabilities and the Socio-Ecological Context

Undifferentiated one-size-fits-all solutions are not suitable to realize sustainable adaptation objectives and risk producing unintended outcomes. A **careful assessment of locally differentiated vulnerabilities of populations, institutions and ecosystems**, taking into account underlying inequalities and power relations, is key for initiating SAPs. This requires agreeing on a common understanding of vulnerability shared by all relevant stakeholders. Special emphasis needs to be placed on evaluating how an SAP potentially influences the **vulnerability and adaptive capacity of the most vulnerable groups, particularly women**. Being attentive to **path dependencies and lock-in effects** can help assess vulnerabilities and develop context-specific responses. **Sharing experiences of SAPs** is important in inspiring vulnerability assessments and the localization of approaches in the future.

► Flexible Multi-Benefit Approaches

Uncertainties about how climate impacts will interact with other challenges in complex socio-ecological systems over time discourage a linear and static planning of SAPs. Implementing

actors should favor **flexible yet structured approaches** allowing for **iterative pathway development** targeting a range of social, ecological and economic benefits. The SAP process needs to allow integrating local experiences and the results of learning processes over time. **Ecosystem-based approaches** can enable no-regret measures with multiple benefits for diverse socio-ecological challenges. Guidance or tools, e.g. an “SDG-proofing” methodology can help to explore potential co-benefits across sectors. Funding streams should take an integrative view and prioritize projects targeting multiple socio-ecological challenges. A stronger **alignment of different funding sources**, such as public and private funding, can foster cross-sectoral benefits.

► **Political Leadership and Stakeholder Involvement for Synergies Across Sectors and Scales**

Responsibilities for adaptation, disaster risk reduction and sustainable development are often split across sectoral institutions on different scales, leading to siloed approaches. Reaping cross-sectoral synergies, however, requires an **institutional framework flexible enough to support alignment across scales**. It also needs actors backed by **political support** that lead and support implementation of SAPs and coordinate different sectors and interests. Potential actors include multi-sector coordination units or lead agencies, but local stakeholder or civil society groups can also steer this process. At the same time, approaches developed purely top-down without involving relevant stakeholders are often characterized by low acceptance. Reasons for this include a lack of understanding of actors’ needs and available capacities as well as conflicting preferences about the aims of adaptation actions. A **participatory approach to pathway design and implementation**, open to **diverse forms of knowledge** as well as to **different narratives of sustainable adaptation**, can increase the buy-in of stakeholders from an early stage. It can also enhance the effectiveness of planned measures, address gender inequalities and ensure the consideration of vulnerable groups. Importantly, **political leadership and stakeholder involvement** should not be seen as opposing, but rather as **mutually reinforcing elements**, both crucial for effective SAPs.

► **Existing Instruments as Entry Points for Implementation**

Plans and strategies for sustainable development, adaptation and disaster risk management are often prepared separately by different actors and thus lack alignment and coherence. Entry points offering potential to unleash cross-sectoral synergies include **National Adaptation Plans (NAPs), Nationally Determined Contributions (NDCs), national and subnational development plans, disaster risk reduction strategies**, as well as **territorial planning instruments**. The design and implementation of SAPs need to consider the **existing institutional framework** to increase their efficiency and effectiveness.

► **Robust Monitoring and Evaluation Frameworks**

Constant changes of the socio-ecological context require a **robust framework for monitoring and evaluating SAP implementation** in order to identify needs for readjustments and improvements. The monitoring and evaluation framework needs to be attentive to **feedback loops** (see figure on p. 3), which can occur when complex policy processes spanning across several policy fields interact. The framework and related indicators of the different post-2015 agendas can be integrated through joint information systems. **Enhanced data sharing** between key actors can enable holistic vulnerability assessments, help to identify potential for stronger alignment and increase efficiency within relevant institutions.

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