Twin2Go

Best Practice Guidelines

Lessons learned for successful transfer and implementation in adaptive water governance



The project Twin2Go – Coordinating twinning partnerships towards more adaptive governance in river basins – was designed to review, consolidate, and synthesise research on adaptive and integrated water resources management in basins around the world. Together with experts and stakeholders from these basins, Twin2Go drew insights relevant to policy and research on issues around adaptive water governance in the context of climate change and studied to what extent they are transferable to other basins. The consolidated outcomes fed into best practice guidelines for the implementation of adaptive water governance. Twin2Go also promoted sharing of research results with practitioners and high-level decision makers through a series of dialogues.

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1.1. Goals and objectives

The failure of governance systems has been identified as one of the most important reasons for the increased vulnerability of populations to water related disasters (Rogers and Hall 2003). Malfunctions in governance and the policy environment exacerbate the impact of climate change, population growth, urbanisation, and economic development. In the context of climate change, a major challenge is to create governance structures that are flexible and robust in the face of uncertainties and inevitable surprises. Adaptive water governance is a relatively recent and complex field. In order to transfer ideas and practices that can be used in specific contexts, and in order to share experiences with others, domestic and international actors try to identify "best practices" (BPs) relevant to them on local, regional and international levels. However, transferring BPs or, more generally, innovative tools in water resources management from one basin to another and implementing them in different cultural and institutional settings often poses significant challenges and does not automatically lead to the desired improvements in water resources management. Twin2Go has used a number of workshops to discuss barriers and opportunities for the transfer and implementation of best practices and tools (BP&T) with river basin management experts and practitioners from South and Southeast Asia, Latin America, Africa, Europe, and Russia and the New Independent States. Recommendations for the successful transfer and implementation of BP&T in water resources management have thus been identified based on an analysis of these discussions and consultations with experts.

This brochure provides practitioners and decision makers in water resources management with a set of guidelines, recommendations, and lessons learned to promote successful transfer and implementation of new practices and innovative tools for adaptive water governance. As an introduction to the subject, a few relevant definitions and methodological aspects are explained. A subsequent discussion on challenges and barriers generally faced in the transfer and implementation of BPs then provides a basis for a set of commented guidelines regarding aspects of strategic planning, coordination, stakeholder engagement, and capacity development in adaptive water governance.

1.2. Definitions

Best Practices and Tools

Intuitively and generally speaking, a BP refers to a method applied in a specific sector that worked well for a certain purpose, in a certain context, and has been recognised as such. Within Twin2Go, the following definition of a BP has been used: "a best practice is a technique, management method, process, activity, incentive, or reward that is believed to be more effective at delivering a particular outcome than any other technique, method, etc. when applied to a particular condition or circumstance. Best practices can also be defined as the most efficient (least amount of effort) or effective (best results) way of accomplishing a task, based on repeatable procedures that have proven themselves over time for large numbers of people". The question is how to measure whether a specific method "worked well" in adaptive water management and can therefore be recognised as a "best practice". In the framework proposed by the European Environment Agency (EEA) for assessing adaptation measures (EEA 2009), the main criteria include determining the effectiveness of adaptation of a given "good practice", its side-effects, its efficiency with respect to costs and benefits, and the framework conditions needed to implement it. As many of the practices applied in adaptive water governance are still in their early stage, it is often too early to determine whether an innovative tool can actually be regarded as a BP. This brochure therefore uses the term best practices and tools for the range of approaches that have been applied with the aim of increasing the adaptiveness of river basin management.

Adaptive water governance and adaptation strategies

In order to regulate and balance the different and often competing interests of the various sectors, a governance structure for water resources management is required. Water governance refers to the range of political, social, economic and administrative systems that are in place to regulate the development and management of water resources and provision of water services at different levels of society (GWP 2004). In the context of climate change, a major challenge is to create governance structures that are flexible and robust in the face of uncertainties and inevitable surprises. Successful governance in river basin management is based on institutional adaptation (Pahl-Wostl 2002) characterised by adequate access and distribution of information, collaboration in terms of public participation and sectoral integration, flexibility, and openness for experimentation. Adaptive institutions should furthermore be accountable, transparent, responsive, equitable, and follow the rule of law.

Transfer and Implementation of BP&T

The transfer of a BP in the context of river basin management can be understood as moving from a pilot site or success story in one location to other sites in the same or a different country, or making use of pre-existing platforms for local engagement or research knowledge in order to im-

1. Background Twin2Go Best Practice Guidelines

plement good practices. Depending on the scale of transfer and types of donors and recipients involved, different types of transfers can be distinguished (see example box).

BP&T transfer types in water resources management

- Transfers across the river basin within the same country imply the wider dissemination and exchange of good practices on a domestic scale
- Transfer and coordination of BP&T across the targeted region replicates and introduces common practices in shared basins of the targeted region
- BP&Ts can also be imported from other countries and regions, and from different water governance systems
- The uptake of unified voluntary or obligatory international standards and practices results from globalisation and the unification of international practices in water management
- BP&Ts can also be applied as a result of compliance with international agreements

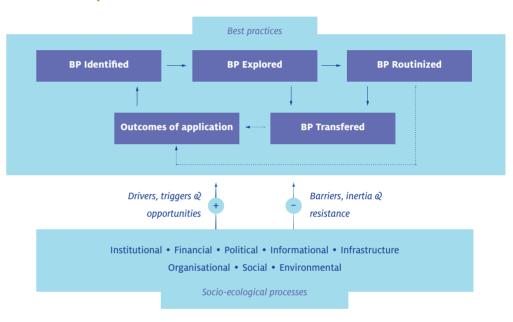
1.3. Methodology

The Twin2Go project has analysed 29 case studies of water governance systems in river basins around the world. In a next step, Twin2Go identified BPs and innovative tools applied in these basins and beyond. These BP&T fall into three categories according to their main aim:

a) Application of national water frameworks in river basins; b) Engagement and coordination among actors, forms of interaction/partnerships; and c) Enabling learning and building adaptive capacity in water governance. The BP&T identified in the case study basins have been discussed with experts and practitioners in a series of four regional best practice workshops, where participants were further asked to present their own experiences and practices. Challenges, opportunities, and constraints in the application of BPs for authorities, stakeholders, and end-users in the respective regions have been discussed. As a result of the workshops, an inventory including 48 examples of BP&T from 26 countries around the world was compiled. Each has been described together with an analysis of the socio-economic context in which they were applied and the main barriers and opportunities faced during implementation. The BP dataset was then analysed using qualitative coding techniques in the NVivo software.



2.1. Conceptual framework



Conceptual framework for best practice dynamics

The figure above illustrates the socio-ecological processes that influence BP dynamics. The existing institutional, political, social and organisational frameworks, as well as the financial, informational and environmental contexts in the regions or in the river basins affect the BP&T implementation process. These factors can influence how the need for new practices will be identified, how implementation will be explored, how a BP will be transferred, and what outcomes are produced by its application. Why is it not always possible to directly transfer good practices from other river basins and countries? How should BP&T be adapted to local contexts and situational specifics? What are the major barriers and constraints to their transfer and adaptation? This brochure suggests some answers to these questions by taking into account the several dimensions of BP dynamics.

2.2. Challenges and opportunities for the transfer of BP&T

Globalisation and international cooperation together are helping to increase the far-reaching dissemination and sharing of BP&T implemented in river basins. As a consequence, there is a trend towards international unification and standardisation of water governance instruments and adaptive water management tools, as well as towards borrowing and transferring water reforms and the structure of water governance institutions from abroad or other river basins. A feature of this process is the definition of international standards for water management and for addressing adaptation to climate change, such as the commitments suggested by the United Nations Framework Convention on Climate Change (UNFCCC), the relevant United Nations Economic Commission for Europe (UNECE) Conventions and Protocols, the Ramsar Convention on Wetlands, as well as the European Union (EU) water-related legislation and approach to water and climate change.

Caution about simplistic transfer of innovative BPQT is necessary However, caution is necessary with the simplistic transfer of innovative BP&T: the most effective and innovative practices in one system are not necessarily the most useful in another. These must be properly rooted into a different institutional, economic and socio-cultural context. This can be especially diffi-

cult since developing countries and transition economies typically borrow water governance institutions from developed countries in order to speed up their reforms in the water sector. In this case, there are significant differences in the socio- political frameworks of donors and recipients, which can result in an inefficient and controversial transfer process, or worse, in the implementation of institutions destructive to the recipient's social system.

The Twin2Go BP&T inventory includes examples of international BP&T transfer as well as between basins of the same country or between riparian states of the same river basin. Twin2Go has learned, unsurprisingly, that international BP&T transfer is a highly context-dependent process. The main precondition for the success of water governance reforms lies in the compatibility of institutional transplants with local settings, including the local governance system, social organisation, and domestic capacities.

Adaptation of imported BPQT to local context is essential

Adaptation of BP&T to the local context involves taking local institutions into account in implementation but also where possible adapting domestic institutions to the newly imported practice and developing domestic capacities for its effective application. For instance, it may be difficult to transfer institutions

from countries with long standing democracy systems into countries with a developing participatory democracy or emerging civil society culture. This may on the other hand provide

an opportunity to address socio-political elites with whom authority has rested until now, and to encourage a broader public participation for a successful implementation of the new practice.

An important lesson in this respect is to ensure a gradual implementation of new water governance institutions in order to reduce transformation costs and to avoid a "shock therapy". Transition periods are needed for new water governance systems to adapt. Opportunities exist in interim institutions that can be

Ensure gradualism to avoid 'shock therapy'

used to gradually develop local capacities towards the water governance objectives of the BP. Existing scientific and technical networks can act as drivers of change in this regards.

2.3. Common barriers in introducing new BP&T in water resources management

The core reason for failures in introducing new practices and tools is often rooted not in the design of the institution, tool, or strategic programme to be introduced, but in the implementation stage. For example, typical reasons include inadequate human and technical resources to implement a new practice;

Many water problems are rooted in failures to implement sound water governance

competition or mandate overlap between actors; or loopholes between legal frameworks, which may be caused by a new practice. In several Twin2Go case study examples, the barriers to implementation were actually vested interests of single powerful actors or authorities who were able to hinder implementation.

Another barrier often encountered stems from a mismatch between the new practices and tools and the existing institutional frameworks or cultural context. For instance, this may be the case when programmes try to introduce reuse of treated wastewater, which is sometimes believed to contradict with Islam. Other constraints include the culture and norms of water management. In Bolivia and Peru, for example, specific uses and habits in water management were found to be so strongly rooted that it was very difficult to introduce innovation and restructuring (see example box). In other basins it is often the water bureaucracies' technical, infrastructure oriented approach to solving water management problems that hinders a transition to more adaptive approaches.



Diagnostic analysis and participative planning, Titicaca Basin (Bolivia-Peru)

For the wider Titicaca hydrological system, a diagnostic analysis and participative planning process was conducted, coordinated by Bolivia and Peru. These measures were undertaken in order to tackle problems of poor management, pollution, a supply and demand mismatch, environmental degradation, and vulnerability due to climate change. The participatory diagnostic process served to evaluate the state of water resources and the environment, as well as to conduct a strategic planning that integrated the visions of both countries and included the strengthening of national and bi-national management institutions.

Transparency of the process as well as the used information and consultation mechanisms were cited as success factors. Through the awareness-building mechanisms stakeholders were able to prioritise projects and to select adaptation-oriented investments. On the other hand, adverse political incidents and resistance to change have been important barriers for achieving considerable results. Local resistance to change, for instance, is especially high when approaches are perceived as "top-down". This phenomenon is particularly important in a basin in which almost all population is indigenous, and for whom uses and habits in water management are very deeply rooted. This also points to the importance of local ownership and to an equilibrium between "bottom-up" and "top-down" components of future approaches.

Based on the insights provided on challenges and opportunities in the transfer and implementation of BPs, the following set of guidelines outlines the most important aspects and lessons learned. These recommendations can be grouped into four categories: 1. development of a strategy for BP&T transfer and implementation; 2. coordination of multiple interests; 3. stakeholder involvement; and 4. capacity development.

3.1. Develop a clear strategy for BP&T transfer and implementation

Develop detailed strategies and action plans for BP&T selection, transfer and uptake

The implementation of new BP&T is a gradual process. First, needs and objectives for adaptive water management must be defined by handling scientific knowledge and uncertainties about climate change and by assessing pressures and impacts on water bodies. The projections and scenarios that can be obtained from global climate models enable stakeholders to evaluate potential impacts and to define the sectors where new practices need to be developed or where existing practices need to be adapted. The right mix of instruments - the most cost-effective combination of measures under a plausible range of climate changes and water supply-demand scenarios – can be planned by comparing the results of the above analysis with examples of measures and strategies that have proved successful in other river basins or countries. An economic analysis of water use can also be useful in this regard. Before implementing however, the practices selected need to be adapted to the local context, which requires the creation of the right transplantation infrastructure and the development of adaptive capacity for managing climate risks. This includes increasing knowledge of potential climate risks for individual river basins, strengthening data collection and knowledge exchange amongst key stakeholders, cross-sectoral integration and partnership working, awareness raising, education, and training. Finally, the measures implemented need to be evaluated and "climate- checked" in order to determine whether they lead to a reduction of vulnerability in the respective water sectors where they have been carried out, as BP&T are always defined relative to a specific region, climate and context. This monitoring and followup can for instance be carried out by a sensitivity analysis of the proposed measure to evaluate long-term effectiveness and cost-efficiency under changing conditions.

New institutions need time to take root and mature Last but not least, the time scale of adaptation needs to be planned carefully, keeping in mind that no immediate results can be expected from the introduction of BP&T in adaptive water governance trough institutional reforms. The reason is that newly created institutions need time to take root into existing

local or regional frameworks, and maturity might require up to 50 years. An enabling environment and adequate administrative capacities are essential for this maturing process, but in many cases these will be built and adapted gradually from the existing context. An example of this long-term process comes from the Amu Darya River Basin in Uzbekistan (see example box).

Example from the field

Integrated river basin management, Amu Darya River Basin (Uzbekistan)

Since 2003 a transition from administrative-territorial to basin-wide management (in irrigation systems) is underway in Uzbekistan in order to separate water management from the administrative command governance of land and water resources. The number of administrative management units has been reduced from 237 to 73, and new management organisations have been established. The reforms – based on Integrated Water Resources Management (IWRM) principles – allow authorities to make decisions on water distribution and use based on sound engineering and hydrological knowledge. The new River Basin Management Authorities also de-centralised decision-making around water and irrigation issues. If these Authorities are provided with sufficient and proper resources, this will prove a structural change with potentially far-reaching implications.

However, the specific context significantly affects this transition to IWRM, including a state-centric, top-down governance approach, administrative barriers in combination with little public participation, and qualified workforce migration. Financial shortages and lacking long-term strategic planning result in low investment opportunities and add to the implementation difficulties of new practices. Although it is recognised that integrated river basin management needs to be implemented, a long transition period is required. Reforms in the domestic water sector, such as modern water legislation and enforcement, are needed, including increase in control, transparency and accountability over financial flows; modernisation of irrigation systems; and an increase in water conservation in arid zones. Other difficulties remain: the water allocation under the state quota system still makes the process very hierarchical and bureaucratic; direct participation of the stakeholders other than water professionals and administrative managers in the process of the water allocation is still limited; and newly created water organisations lack qualified and skilled personnel. While implementation results will continue to be monitored, it is clear from this example that new institutions need time to take root and mature.



Recommendations

- Undertake BP&T transfer according to clear and phased strategies and action plans
- Develop an implementation plan including mechanisms for coordination, stakeholder involvement, capacity building, knowledge sharing, and communication
- Promote monitoring and feed-back mechanisms about the realisation of transfer strategies and action plans
- Enact strategies for the dissemination of knowledge, know-how and lessons learned among stakeholders to engage them in discussions about challenges associated with the application of new practices
- Set up strict monitoring and control mechanisms for each step of the implementation in order to achieve objectives on time and avoid misuse of financial resources
- Allow sufficient time for new institutions to fully develop

Promote the adaptation of imported BP&T to local specifics of recipients – Institutional and cultural fit

Context-specific factors are crucial drivers for the successful implementation of innovative water governance practices. Taking into account existing institutional as well as social context is especially important in transition economies and developing countries, as an unstable institutional system or lacking

Context is crucial for BPQT performance

democratic or participatory mechanisms may lead to unexpected outcomes, like overlapping mandates or disruptive institutions. An assessment of stakeholder interests and their actual capacities to implement new practices is equally important for strategic planning. Promoting adaptation, however, may also involve interim institutions that help to embed transferred practices. Well-planned strategic promotion of adaptation measures helps to reduce the transformation costs and avoid possible institutional distortions and implementation gaps. For example, the capacity assessments and stakeholder mapping carried out in shared rivers in Africa (Limpopo River Basin, Orange-Senqu River Basin) enabled the countries involved to better understand each other's contexts and to establish a trustworthy and transparent basis for decision-making.



Recommendations

- Check the compatibility of the BP&T to be transferred with existing governance system and institutions
- Take into account the compatibility of environmental and sustainable development priorities between donors and recipients
- Verify that transferred BPs do not significantly contradict existing formal and informal local practices
- Undertake pilot runs to check how the BP fits the destination social and biophysical contexts
- Create interim institutions to support embedding of BP; provide economic incentives for gradual BP uptake and adaptation

Link the transfer and implementation of BP&T to on-going processes of water governance reform

On-going water governance reform can be an important window of opportunity for introducing new approaches to water resources management. Linking BP&T to broader reform processes and development goals can also play an important role in promoting the sustainability of newly introduced practices. Also, promoting national compliance with international norms has proven a successful strategy: in the German Dhuenn Basin for instance, the public water authority together with local and regional stakeholders designed a non-binding action plan to address major local river challenges. The plan would then be proposed as part of the EU Water Framework Directive (WFD) implementation to the regional authority, the Bezirksregierung Duesseldorf.

Recommendations

- Use windows of opportunity created by newly introduced water legislation, institutions, strategic plans and reforms in the water sector
- Promote the domestic uptake and application of international standards and norms (voluntary and obligatory), and develop road maps for the harmonisation of national legislation with existing international standards and norms (diversify tools for national compliance with international agreements and norms)

Encourage innovative financial solutions

A major challenge in the application of water management BP&T is the mobilisation and allocation of adequate funds. Misuse of funds is a significant barrier for the success of newly implemented BP&T, therefore strict control over resource flows, transparency, and accountability are essential principles to fol-

Innovative financial solutions secure effective BPQT implementation

low. Moreover, diversified sources of funding should be mobilised, both from government and non-state origins. New financial tools have been increasingly applied over the last few years and are showing success – especially in developing countries – in supporting BP&T implementation in river basins. For example, a microcredit scheme has been successfully applied in the Niger River Basin (see example box).

Example from the field

Microcredit scheme, Niger Basin (Mali)

The BP in this example is part of a Wetlands International demonstration project that works with local communities and authorities to improve natural resources management and restoration in the area. The project works with the "bio-rights approach", which uses microcredit to pay for environmental services. It aims to provide poor rural people with access to finance in order to improve their livelihoods, while promoting biodiversity conservation at the same time. In the Niger River Basin, the project involves local communities and municipalities, as well as three national microcredit institutions that handle the loan programme.

Microcredits were provided in exchange for work to protect and restore fish ponds by digging canals to connect fishponds to the River Niger. The BP&T catalysed the return of native species in the project area, and food security increased through the establishment of grain banks and reduced overuse of resources during low production seasons. The project further helped build capacity among local people, elected officials, government, and service providers, and advised them on sustainable approaches to development and conservation. It also changed policy at various levels: at the local level, agreements on how to manage ponds were reached; at the national level, the project contributed to implementing Mali's national wetlands policy; and at the international level, the project helped the Niger Basin Authority to consider the restoration of fishponds in its sustainable development action plan.

Up-scaling and broadening this new financial scheme in order to sustain funding in the region is conceivable. However, strong monitoring and feedback mechanisms are needed for a successful implementation. Further political support and strong national and local management frameworks are needed to implement national microcredit programmes.

3. Recommendations Twin2GoBest Practice Guidelines



Recommendations

- Improve financial BP&T efficiency, allocation, accountability, control, and transparency
- Diversify funding opportunities, including microfinance, insurance, lending, and credits in the water sector
- Mobilise and combine funding from multiple state and private sources to support the implementation of BPs and ensure their success beyond pilot sites

3.2. Ensure coordination in BP&T implementation

Ensure the coordination of multiple interests; diversify mechanisms and tools for interactions, coordination and partnership building among stakeholders

Horizontal and vertical coordination are essential for effective BPQT implementation

At the river basin level, various actors with multiple interests must be coordinated. Coordination of these multiple interests in a transboundary context is a particular challenge, but a useful solution is to define clear competencies for water authorities within a basin. Horizontal coordination appears to be particularly important within all scales of governance including local,

provincial and national levels. Often, horizontal coordination tends to be replaced by horizontal competition of government agencies or of water authorities. Instead, the focus should be on how to best distribute the new roles and tasks evolving from the implementation of new water governance practices.

Moreover, it is important to diversify mechanisms and tools for interactions and partnership building among stakeholders. Voluntary partnerships on a local level are in fact more viable for small river basins, as they are functional while establishing coordination between municipalities and other local authorities. A useful example for engagement and coordination among various actors comes from the Bang Pakong and Prachinburi river basins in Thailand, where water allocation is carried out through a participatory process that involves establishing water user groups, developing a decision support system, including negotiation and agreement, monitoring and reporting. The tool helped to reduce conflict among stakeholders, increased water use efficiency, and paved the way to climate change adaptation by addressing changes in river flow pattern, increasing salt intrusion, floods, and droughts.



Recommendations

- Adopt a transparent division of competencies and duties between government water agencies to avoid administrative competition for control over BP implementation
- Support inter-sectoral and inter-ministerial planning and coordination at all government levels
- Support interactions and partnership building among governmental actors and stakeholders to help coordinate multiple interests and build consensus about transferred practices
- Stimulate broader involvement of the science and technology community in sharing "good" water governance knowledge

3.3. Effectively involve stakeholders at the early stage of BP&T transfer and implementation

Ensure active stakeholder engagement and public participation

Stakeholder engagement and public participation are key to the coordination of various actors and interests at the river basin level; they also help the implementation of governance frameworks be more effective. Indeed, bottom-up approaches can help identify the major conflicts and problems on a local level. These may otherwise stop the successful implementation of a

Stakeholder participation is a powerful tool in good water governance

new BP in adaptive water governance, which is often provided in a top-down manner. Bottom-up approaches, for instance, use existing community organisations or social structures for public hearings, forums, networking and dialogue in regions with low public participation. Participatory approaches help increase public awareness of water resources conservation methods and contribute to establishing accountability of local authorities by involving water users in decision-making activities. An example of a successful bottom-up approach comes from Hungary, where numerous stakeholders participated in regional platforms to assemble knowledge about adaptive management options for the Tisza River Basin. Local discussions and field experiments generated new insights into alternative, more adaptive management practices. Stakeholder engagement was also the key to success in the adoption of a bi-national sustainable management plan in the Catamayo-Chira Basin in Ecuador and Peru (see example box).



Recommendations

- Undertake detailed stakeholder assessment, including interests, capacities and resources to participate
- Introduce mechanisms promoting early dialogue and partnerships between state and non-state actors in decision-making as a tool to increase transparency and ownership
- Provide motivation, incentives, and support for stakeholder engagement in the application of new BP&T
- Build communication infrastructure and networks to let stakeholders know about existing plans, BPs and lessons learned from BP&T application

Example from the field

Sustainable management plan, Catamayo-Chira Basin (Ecuador-Peru)

The Land Use Planning, Management and Development plan (POMD) for the Catamayo-Chira Basin was one of the main results of the bi-national Catamayo-Chira project. It addresses socio-economic and environmental poverty in the basin; gender inequity; limited water endowment due to poor water resource management and degraded ecosystems; the lack of integrated basin management; and the lack of knowledge about stakeholders in the basin and about existing participation and representation mechanisms.

The plan was developed in the context of bilateral development aid. A key to success was its participatory approach, involving the public and different levels of organisations and government agencies in both countries. This process also implied the collection of existing information, specific studies, information validation, technical discussions and consultations, as well as the approval of political authorities. Representatives of women organisations were identified and involved in the formulation of the POMD. Moreover, their capacities regarding IWRM, leadership, participation, and communication were strengthened through workshops, internships, meetings, and visits to the upper, medium and lower parts of the basin. These women leaders helped organise the Bi-national Platform of Women and participated in different activities and processes organised in the basin. Municipal mayors and technical teams were invited to participate in a capacity building process, as promoted by the binational Catamayo-Chira Project. The local media – which has major coverage and enjoys wide acceptance in the basin – was involved in a large awareness campaign providing information on the entire POMD process. This helped promote the POMD as a tool and opportunity for the basin and facilitated broad long-term acceptance of the plan among stakeholders.

3.4. Flank the transfer and implementation of BP&T with capacity development, information sharing, and communication

Build domestic capacities and follow-up support for the implementation of transferred BP&T

As mentioned above, implementing BP&Ts cannot be done in an efficient way without enabling domestic capacities. Existing administrative and human capacities as well as technical resources provide the organisational back-up and support on which to develop new practices. Transfers made at national or Domestic capacities are an important success condition

river basin level must be coordinated with local priorities not least because the consent and support from implementers at the local level is a crucial prerequisite for success. Building domestic capacities for adaptive water governance requires investment in local human, administrative, financial, legal, and institutional resources. Also a follow-up support is needed once the new framework of water management practices has been implemented, so that its results in terms of adaptive water management can be monitored and, if necessary, further measures can be adjusted.

Recommendations

- Make an assessment of both existing capacity (human capacity as well as physical resources) and the proposed management tools to define the focus needed in capacity building programmes
- Provide sufficient information and expertise as well as incentives so that an appropriate policy and legal framework, a financing system, an organisational framework or adequate management instruments can function effectively and efficiently
- Organisational capacity development involves ensuring that water management organisations and their managers are open to new ideas and are willing to accept public input and the need to co-operate with other stakeholders

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Empower local communities towards the implementation of BP&T in basin management

Community and local involvement is prerequisite for success

Aside from being involved in participatory processes at the river basin level, local communities and stakeholders should also be empowered towards the implementation of BP&T in basin management. This means that awareness of the local public should be raised towards engagement in decision-making and action. Knowledge on adaptive water governance issues must be dis-

seminated regularly, as well as information on the BP&T to be applied. Self-governance organs as well as procedures ensuring real representation and participation of stakeholders from various groups of water-users must be introduced, for instance through River Basin Organisations (RBOs). In the Tisza River Basin in Hungary, for example, an informal stakeholder initiative assembled knowledge about adaptive management practices, after which several members helped create a water management plan for the Hungarian Tisza; this meant the addition of adaptive and sustainable approaches to the original version of the "New Vásarhelyi Plan". Another example of empowering local communities towards the implementation of BP&T in basin management is the formulation of a river basin management plan in the Kosi River basin (see example box).

Recommendations

- Ensure public support for BP&T introduction and implementation
- Enhance local public awareness and engagement through regular dissemination of knowledge and information about BPs; organise local regular exchanges of lessons learned about BP&T implementation
- Make efforts to support local public action and participation; provide institutional and knowledge support for self-governance organs in implementing local water governance reforms
- Provide sufficient space for informal voluntary stakeholder projects and local initiatives; decoupling these from formal government management programmes can be helpful, however a feedback of the outcomes into the management cycle should be ensured

Example from the field

Formulating a River Basin Management Strategy, Kosi River Basin (Nepal)

This pilot programme, initiated through the National Water Plan, aims to improve people's livelihoods in a sustainable manner by ensuring rights over water and related resources, and promoting socio-economic development for the benefit of all people while maintaining the ecological balance in the Kosi River Basin.

The Kosi River management strategy is a pilot that will be extended to other river basins in Nepal. The project is driven by the Nepalese Government together with the World Wide Fund for Nature (WWF) Nepal. A series of meetings were held with the Water and Energy Commission Secretariat in Kathmandu to formalise the collaboration on river basin management. This resulted in a formal meeting with stakeholders, where commitments to the initiative were made. A national level stakeholder consultation workshop on the Kosi River Basin Management Strategy Plan took place to ensure the effective implementation of the plan; it was attended by representatives from government authorities, NGOs, UN agencies, think tanks, and academia.

The strategy plan includes awareness materials and trainings, which empower local communities by informing them on water conservation and multiple-use methods; prepare more than 3000 Eco Club students as young water leaders to raise awareness on river basin and environmental management; introduce non timber forest product / high value crop (NTFP/HVC) based livelihood alternatives; and promote market linkages in the Siku catchment area.

3. Recommendations Twin2Go Best Practice Guidelines



This brochure was compiled by Elsa Sterner, Annika Kramer, and Irina Comardicea, adelphi research, based on *Best Practices Guidelines and Tools for Knowledge Transfer and Implementation of Adaptive Water Governance*, prepared within the Twin2Go project by Elena Nikitina, Louis Lebel, Christian Knieper, Olga Smaragdova, Janos Feher, Palle Lindgaard-Jorgensen, and Elsa Sterner. Further information on the examples cited can be found in the inventories of Best Practices and Tools that are available at www.twin2go.uos.de/downloads/36-best-practice-guidelines.

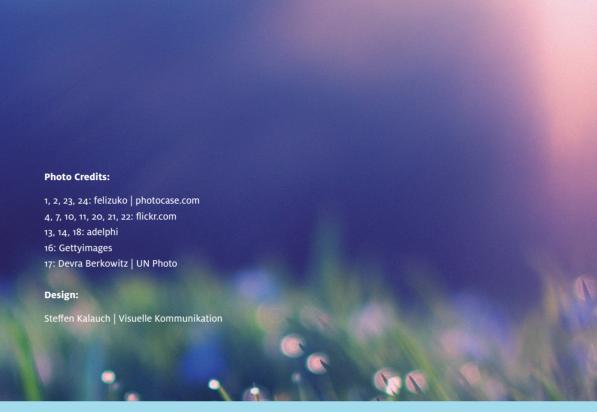
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List of Abbreviations:

BP Best Practices

BP&T Best Practices and Tools EC European Commission

EEA European Environment Agency

EU European Union

ISO International Organization for Standardization
IWRM Integrated Water Resources Management

NGO Non-Governmental Organisation

RBO River Basin Organisation

UNECE United Nations Economic Commission for Europe

UNFCCC United Nations Framework Convention on Climate Change

2 4. References

Governance and policy failures and weaknesses exacerbate the impact of climate change, population growth, urbanisation and economic development on water resources management. In the context of climate change especially, it is crucial to create governance structures that are flexible and robust in the face of uncertainties and inevitable surprises. Several tools and practices have been applied in river basin management to help improve performance and adaptive capacity, and it is becoming increasingly important to try and transfer best practices to other basins. However, the transfer of these practices and other innovative tools in water resources management from one basin to another is not easy, and implementing them in different cultural and institutional settings often poses significant challenges.

