



# Sharing the benefits from river basin management



From theory  
to practice



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# Sharing the benefits from river basin management

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## Abbreviations

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BOAT	Benefit Opportunities Assessment Tool
BRIDGE	Building River Dialogue and Governance
IUCN	International Union for Conservation of Nature
IUCN ELC	Environmental Law Centre
LAGO	Legal Assessment on Water Governance Opportunities
TIDE	Transboundary Instruments Development Tool
WANI	Water and Nature Initiative



Indigenous women wash laundry, Lake Atitlan, Guatemala. © Shutterstock/Lucy Brown

# Introduction

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As demand for freshwater increases and climate change affects the water cycle, there is increased pressure on our freshwater systems from competing needs for drinking water, food, energy and industrial production as well as to safeguard underpinning ecosystem services. Sustained modification of natural landscapes over time has compromised the services and benefits that humans derive from ecosystems – a by-product of population growth and economic development coupled with poor environmental stewardship. Nearly the entire world population uses freshwater that has been compromised by human activities, and 82% of the population is served by rivers that have been exposed to high levels of modification and other associated impacts upstream.

The modification of freshwater systems leaves less water available to sustain ecosystem services and the benefits they bring to both nature and people. The benefits at stake include the services provided by healthy agricultural systems, soil biodiversity, fisheries, energy and tourism; protection from water-related hazards; health of riverine populations; preservation of aquatic biodiversity; cross-border trade; and reduced risk of conflict. The impetus to manage shared water resources cooperatively, whether at the local, national or transboundary level has never been greater. Knowledge, innovative

approaches and social capital are vital to drive change in how we share benefits and co-benefits across river basins globally.

***“Fundamentally, the governance and management of water resources needs to be just as interconnected as the natural system itself, flowing from source to sea and integrating a rich diversity of landscapes, actors and processes.”***

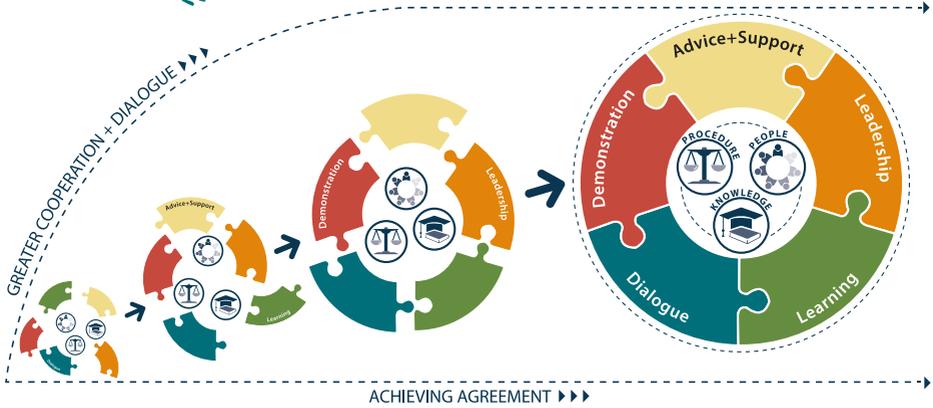
*Alejandro Iza, Director IUCN  
Environmental Law Centre*

Within this context, over the past two decades, IUCN’s [Global Water Programme](#), working closely with IUCN Regional Offices/Programmes and the [IUCN Environmental Law Centre](#) have spearheaded work on water cooperation and diplomacy, exploring the complexities of transboundary water governance systems, multi-sectoral and multi-level opportunities for collaboration and the sharing of benefits within and across borders to manage water resources sustainably. With transboundary basins providing water to nearly 3 billion people worldwide, cooperation between states for shared governance and management is an imperative. Our experience demonstrates that successful management of water resources at the transboundary level,



## BRIDGE - BUILDING RIVER DIALOGUE AND GOVERNANCE

Strategic process towards water cooperation in transboundary basins



**Figure 1:** BRIDGE - Strategic process towards water cooperation in transboundary basins

is rooted in multi-level governance systems that work across scales, stakeholder groups and sectors. Multi-level governance ensures inclusive stakeholder engagement and devolves decision-making to the level at which it is most pertinent to the social and ecological systems being governed.

Inherent to the work on benefit sharing has been the analysis of the associated trade-offs that come with managing multiple, and often competing, water needs and demands. IUCN demonstrates that through fostering stronger cross-sectoral collaboration and more transparent,

multi-stakeholder decision-making processes, potential win-win pathways can be identified that combine a common vision with mutually recognised shared benefits and a rational prioritisation of equitable, economically advantageous and sustainable basin development (see Figure 1). Fundamental to this is the notion that inclusion and equitable sharing of resources strengthen sustainability. Indeed, the power of a benefit sharing approach is especially apparent when taking the long view: upfront investment may be higher but long term gain is ensured through collaborative planning and management.

## Who is this publication for

This benefit sharing approach responds to a demand for practical and collaborative tools that lead to optimal sharing of water benefits. The conceptual framing follows a process of

stakeholder engagement, assessments and knowledge building, to enhance cooperation within countries and across state borders for sustainable river basin management. This introductory

document aims to provide water governance practitioners with an alternative way to promote negotiation and set up benefit sharing exercises, inviting all concerned parties and exploring the needs, basin intervention alternatives and benefit sharing opportunities within and across basins. An accompanying comprehensive training package (details on p.17) gives practitioners guidance to develop and facilitate processes that improve understanding of the challenges, trade-offs and benefits faced by different stakeholders, within a workshop context (details on p.17). This is especially aimed at those who find themselves working in complex basins where water is shared between various interests, stakeholders and runs over either county, state or national borders.

Globally, basins are all at different levels of development and institutional and political contexts with different needs, pressures and demands placed on resources and stakeholders. Effective water governance systems need to

combine the work of governments with communities' cooperation at the local level. At the transboundary level, water diplomacy has to happen under the authority of national governments but water agreements need the accord of water users. Taking these points into account, IUCN's benefit sharing approach demonstrates a flexibility that considers the range of political, environmental and socio-economic contexts that practitioners will be working in.

Critically, this benefit sharing process relies on informed dialogue that requires practitioners to have an understanding that is context specific, including of the basin dynamics, socio-environmental challenges, the institutional setting, potential areas of conflicts, interest groups, and so on. This understanding is necessary to ensure their ability to identify, issues that might arise in advance. Such an understanding will help to better determine the way to engage different stakeholders, to present reliable information and conduct the process in an optimal way.



Benefit sharing workshop in the Lake Chad region ©IUCN/Diego Jara



# Benefit Sharing in Water Governance and Management

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Despite the pressures river basins worldwide are under from increasing demands for water allocation from multiple users (including irrigation, energy, drinking water supply, industrial use, environment, etc.), they are often governed by contradictory rules and mechanisms shared between a range of institutions under different mandates. While some river basins have sound governance structures and legal frameworks to ensure the equitable and sustainable use of water resources, others are working towards tackling the diversity of stakeholder needs and (re)allocation of resources within a context of over-exploitation and environmental degradation.

It can therefore be hard to understand who gets what when water is allocated. This is a nexus challenge; trying to balance the different demands and trade-offs so that everyone benefits. It is important to explore these trade-offs, looking at how water is used and to identify both the positive and negative implications and associated benefits, and how these can be distributed under alternative development scenarios.

Benefit sharing represents an alternative and inclusive approach to the

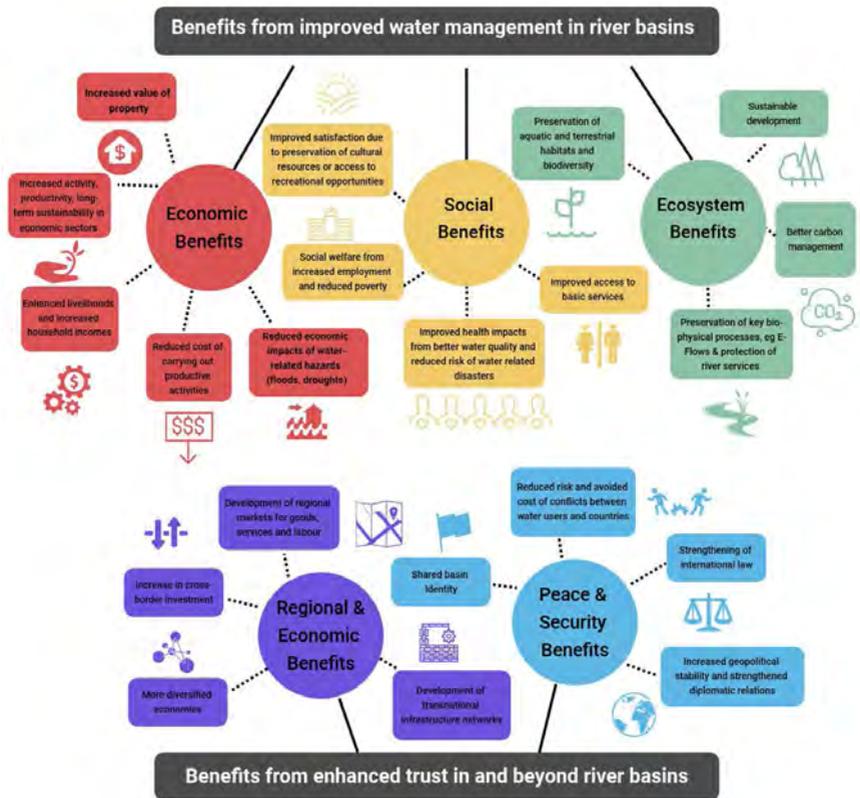
negotiation of shared waters and involves any action designed to change (optimise) the allocation of costs and benefits associated with cooperation (Sadoff & Grey, 2005). It can be defined as

***“a process where riparians cooperate in optimising and equitably dividing the goods, products and services connected directly, or indirectly, to the watercourse, or arising from the use of its water”***

*Hensengerth et al., 2012;  
Sadoff & Grey, 2002*

This enables countries and basins to focus on a flexible and potentially greater range of benefits from trade-offs, optimising partnerships in water use (Dombrowsky, 2009).

A focus on sharing benefits rather than water volumes can release countries from a zero-sum game over a single, finite resource. Furthermore, good ecosystem management can produce a range of co-benefits such as reduced risk of water-related disasters and resilience to climate change (see figure 2 below). Ecosystem services linked to a watercourse or its uses are critical



**Figure 2** Overview of benefits obtained from improved water management and enhanced trust in and beyond river basins (Source: Adapted by IUCN from UNECE, 2015)

components in the sustainability of a river basin, securing water in adequate quantity and quality for diverse purposes. At the transboundary level, cooperation in developing adaptation strategies can lead to mutual benefits in water management, for instance incentivising better communication between riparian States, and collaboration between stakeholders (Sanchez & Roberts, 2014).

Benefit sharing is a key instrument for good water governance as users will share water cooperatively when they believe it is their best option. Since benefit sharing looks at a variety of benefits, stakeholders at multiple levels, and local and national interests (Sadoff et. al., 2008) it enables a basin-wide planning perspective, which not only allows for better coordination of management and development but also provides a greater scope for optimising resource use, identifying ways to increase the

overall benefits. Benefit sharing can be applied at different levels and for different situations, it can be adapted to analyse a single water project (e.g. a multipurpose dam), or to catalyse agreements in a watershed within a country, or a transboundary basin under a participatory approach (Geneva Water Hub, 2016).

However, the management of (shared) river basins is complex – it must adapt and evolve to multiple levels of governance, often within changing political landscapes, socio-economic needs, development priorities, population growth and climatic conditions. Basins are dynamic, and so are benefits and costs from (mis-)using water in a given basin. Several conceptual frameworks, approaches or tools, with different foci and methodologies have been developed by researchers, donors, river basin organisations and regional economic commissions, to approach benefit sharing in the context of the management of shared waters (UNECE, 2015; Leb et.al. 2018; Nile Basin Initiative, 2016; USAID, 2009). In IUCN's experience, whilst such conceptual frameworks and methodologies which link to hydrological and economic modeling (Arjoon et.al. 2016), are extremely

useful to orient the thinking of practitioners and policy-makers, there is the need for practical tools that are easy to tailor to specific basin contexts to support stakeholders in their move from dialogue to decision-making. Practical tools are key for action.

In response to this demand, IUCN developed this outcome-driven approach to applying benefit sharing in water governance across and within river basins. It covers the practice of developing a benefit sharing agreement, starting from initial stakeholder and benefits mapping to discussing trade-offs and possible scenarios, as well as providing guidance on how to navigate negotiating benefit sharing in multi-stakeholder contexts. It does this by adding an inclusion lens to traditional water governance negotiations, examining the needs, interests and roles of different stakeholder groups, especially those that are most vulnerable such as women, youth and indigenous peoples. Importantly, the benefit sharing process can be adapted to all scales, dealing not only with transboundary issues (traditionally where most benefit sharing work has focused) but also issues at sub-national, basin, sub-basin and local levels.

# Key principles underpinning benefit sharing

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The following key principles are essential and integral to the benefit sharing approach, underpinning both theory and practice. These principles should be adhered to when working through the Six-Step benefit sharing process outlined in the next section.



## Creating an enabling environment for inclusive stakeholder engagement, participation and decision-making

The benefit sharing process upholds inclusive decision-making by engaging and paying attention to the voices of diverse groups (and forms of knowledge), that are socially and culturally appropriate, and taking into account power dynamics within and between groups. Rights-holders and stakeholders have access to information concerning the environment and natural resources and furthermore, have the capacities and support they need to participate in decision-making, including through appropriate representation. In particular,

the process proactively engages with groups at risk of marginalisation such as women, youth and indigenous populations. In turn, any decisions made take into account the views expressed through transparent and participatory consultation processes and where necessary, free, prior and informed consent is secured and maintained for decisions concerning indigenous peoples and other customary rights-holders, regarding their lands or their resources.



## Practising multi-level governance

By strengthening water governance capacity at multiple levels linkages and synergies can be maximised between high level agreements and local level ones, in a dynamic process. This enables decisions to be taken at the lowest possible level appropriate to the social and ecological systems being

governed, with particular attention to empowering the roles and authority of local communities in water governance. At the transboundary level, while cooperation operates under the ultimate authority of sovereign States, it is important that actors<sup>1</sup> involved in or affecting water governance at different

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<sup>1</sup> Including municipalities, provinces, civil society and private sector.

levels cooperate and coordinate to ensure coherent strategies and management practices using both formal and informal mechanisms. Multi-level governance should build on existing

institutions, enable consultative, jointly-owned decisions, and facilitate multi-stakeholder negotiations of benefit sharing agreements.



## Sustainable and Equitably Shared Resources

Stakeholders responsible for water resources management need to have the necessary resources to carry out sustainable management and governance activities, be it financial, both in terms of revenue or livelihoods, but also in terms of improved capacity and access to information and technology. The equitable sharing of the benefits generated from water resources provides incentives to protect and sustainably manage these resources. Where losses are incurred due to restrictions

imposed to safeguard the resource base appropriate measures should be taken to minimise and/or compensate the losses. This echoes the Convention on the Law of the Non-navigational Uses of International Watercourses Adopted by the General Assembly of the United Nations on 21 May 1997, which highlights the key concepts of equitable and reasonable utilisation, not inflicting harm, and achieving win-win outcomes for river basin management and governance systems.



BRIDGE Training Workshop in Quito, Ecuador © IUCN/Diego Jara



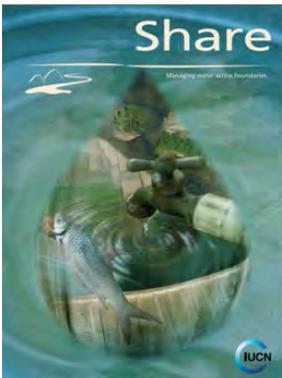
# From Theory to Practice: Operationalising Benefit Sharing in Six Steps

Building on experience and learning from the [Water and Nature Initiative \(WANI\)](#), the [toolkit publications SHARE](#), [RULE](#) and [NEGOTIATE](#) on transboundary benefit sharing, and the [Building River Dialogue and Governance \(BRIDGE\)](#) initiative, IUCN's Global Water Programme and Environmental Law Centre have developed a Six-Step Framework to operationalising benefit sharing. This has developed out of two decades of engagement across 20+ basins globally (including 14 transboundary basins) through facilitated workshops, stakeholder consultations and research.

The approach is currently being piloted through BRIDGE and will continue to be improved upon to ensure practitioners have access to a tried and tested approach. It functions as a roadmap of

sequential considerations, and associated practical steps that basins at different stages of development, cooperation and shared management can apply and follow. These steps, outlined below, can be applied in local, national and transboundary contexts, and are aimed at working at all scales.

This benefit sharing approach presents water governance practitioners (including local and national government, water authorities, municipalities, civil society organisations, NGOs, private sector and business etc.) with an alternative and inclusive way to promote dialogue and negotiation. The process enables a participatory and transparent dialogue, empowering all concerned parties, and exploring the needs and benefit sharing opportunities within and across basins,

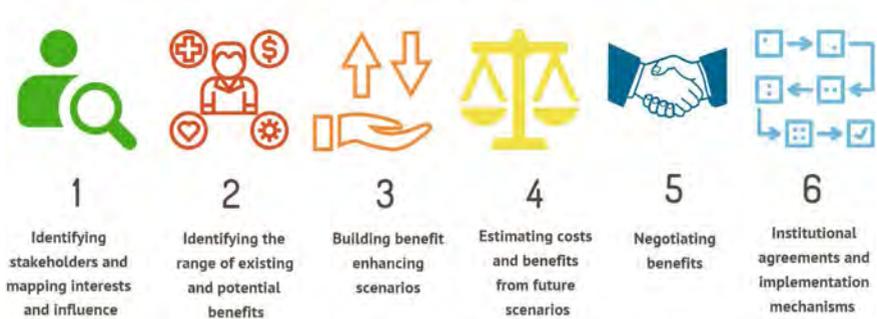


Publications available from [www.iucn.org/theme/water/resources/wani-toolkits](http://www.iucn.org/theme/water/resources/wani-toolkits)

while facilitating the understanding around the challenges and trade-offs faced by different stakeholders. This is especially helpful to those who find themselves working in complex basins, where

the water flows across counties, states or national borders and jurisdictions and is shared or contested, between various interests and stakeholders.

### Six steps to benefit-sharing in river basins



**Figure 3:** Six steps to benefit sharing in river basins



## STEP 1: Identifying stakeholders and mapping interests and influence

Engagement and effective participation of all relevant stakeholders in decision-making processes enables constructive dialogue, builds trust and creates the conditions for the adoption of sustainable solutions for water management e.g. a reduction in water consumption or more efficient agricultural systems. Stakeholder identification and corresponding mapping of interests/influence is a key part of building an equitable cooperation process.

If done well it ensures that all relevant stakeholders are included from the outset and able to participate. Reviewing stakeholder groups’ interests and influence is a good way to better understand the power dynamics in the basin and associated potential challenges and solutions to sharing benefits. A full overview of the basins stakeholders and their interests and influence is necessary to build into Step 3 ‘Building benefit enhancing scenarios’.



## STEP 2: Identifying the range of existing and potential benefits

River basins offer different types of benefits that can be shared. This goes much beyond the allocation of volumes of water to stakeholders and riparian parties. Instead, it relies on the full identification of specific economic, social, environmental, political, cultural, and other benefits that can be derived from good water cooperation in a particular basin. Identifying the full range of benefits provides a more flexible framework and can increase possibilities for collaboration across sectors as well as

visualising alternative solutions to challenges. To get to this, a range of relevant sectors and stakeholders should be represented in the process of identifying benefits – these include, among others, agriculture, environment, forestry, finance, planning, fisheries, tourism, local government, mining, hydropower and so on. Once these existing and potential benefits are mapped out, these can build into Step 3 'Building benefit enhancing scenarios'.



## STEP 3: Building benefit enhancing scenarios

Identifying benefit enhancing scenarios is an opportunity to continue working with the relevant stakeholders and sectors to produce a set of alternative pathways. The practical skills associated with this Step involve joint qualitative analysis of benefits and impacts from existing and/or proposed new uses of water in a basin. The aim of the exercise is to develop a more in-depth and shared understanding of the trade-offs involved in choosing

certain projects over others or certain combinations of projects, while using a cross-sectoral and multi-level cooperation perspective. In this Step, the use of a Benefit Opportunities Matrix allows for the facilitation of dialogue and joint qualitative analysis of options, to jointly arrive at a set of preferred opportunities, validated and negotiated by the stakeholders themselves.



## STEP 4: Estimating costs and benefits from future scenarios

With an agreed set of possible benefit-enhancing scenarios, based on Step 3 outcomes, a quantitative assessment of all identified benefits and costs can

be undertaken. Several methods to value and distribute benefits and costs exist, with different data needs. Many – but not all – benefits can undergo a

quantitative assessment depending on the ambition of the cooperation process and the available budget, existing data and expertise. Quantifying the costs enables relevant stakeholders to

hold the knowledge and tools, to better understand and discuss the links between economic considerations and water governance.



## STEP 5: Negotiating benefits

Fair, effective and sustainable management of shared benefits requires negotiation to ensure that the needs, priorities and interests of all relevant stakeholders are recognised, thoroughly discussed and met to the degree possible. In the previous steps, participants have identified the relevant stakeholders, the possible benefits and costs per stakeholder, various benefit enhancing scenarios as well as cost analysis of these. These steps are meant

to ensure that the stakeholders have all the information needed to take part in an informed negotiation, as consensus building can only be achieved with a proper understanding of the interests, challenges, needs and priorities of all relevant stakeholder groups. Through this participatory and inclusive negotiation the goal of this step is to arrive at an agreement which can then be put into practice in Step 6.



## STEP 6: Setting up institutional arrangements and implementation mechanisms

Successful implementation of benefit sharing agreements requires functional institutions and agreed implementation mechanisms. Once the negotiation of a benefit sharing agreement between stakeholders is completed, the development of an institutional arrangement

or implementation mechanism should begin. Final agreements should include provisions for public participation, compensation schemes, accountability, monitoring and enforcement mechanisms as well as financing frameworks.

## Practical tools and tips for implementation

The Six-Step framework on benefit sharing presents a practical process for basin stakeholders to engage with around shared water resources management.

IUCN has learned through its work on water diplomacy and sustainable basin management that one of the best ways for learning and ensuring uptake

of new concepts relating to the governance of shared waters is to engage stakeholders in practical role-play exercises through which they can detach from their real-life roles/positions. To this end, IUCN has developed a set of fictitious basins, including riparian countries and their geographical, economic, historical and political, hydrological characteristics (Iza, A., 2013). Based on these fictitious basins, IUCN's Six-Step framework on benefit sharing can be operationalised through using the accompanying training package complete with examples and scenarios for running stakeholder engagement and capacity building workshops.

Each Step in the training package consists of a facilitation guide that walks the practitioner through how to undertake the Step with basin stakeholders in a workshop setting. Practical exercises to carry out with stakeholders and support materials to run the training provide further guidance and support. At the beginning of each Step there is a checklist which highlight the prerequisite knowledge and preparations necessary for completing the Step based on each basin's entry point into this process, which will depend on several factors:

**Basin context:** where the basin is in terms of development - are there investment projects in the pipeline, will they impact different stakeholders, what are the benefits available to be shared for these plans?

**Political landscape:** are there political tensions between countries, stakeholders, or parties? How comfortable are the different stakeholders to come together to take about basin development? Are there sensitivities?

**Stakeholders:** what knowledge and capacities do the relevant stakeholders have? What are the desired outcomes of benefit sharing?

**Information availability:** the quality of information available will determine how far you can go with the assessment of basin interventions, construction of alternative scenarios and the economic quantification of costs and benefits.

These factors need to be taken into account when working through the Six-Step benefit sharing framework and training package to best determine where to begin the training 'journey' and what (if any) prior work is needed. As much as possible, this training package is designed to be flexible in its use, responding to the variety of basin contexts, needs and desired outcomes of both practitioners and stakeholders.





Victoria Falls on the Zambezi River, border between Zimbabwe and Zambia © Shutterstock/Eva Mont

# Training Package

A comprehensive practitioner's guide and powerpoint decks support the application of the 'Six Steps to Benefit Sharing' in workshops and training. Please visit: [www.iucn.org/theme/water/our-work/current-projects/bridge/benefit-sharing](http://www.iucn.org/theme/water/our-work/current-projects/bridge/benefit-sharing)

For a visual story feature on the global experience and learning of BRIDGE Benefit Sharing, please visit: [digital.iucn.org/water/sharing-the-benefits/](http://digital.iucn.org/water/sharing-the-benefits/)





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