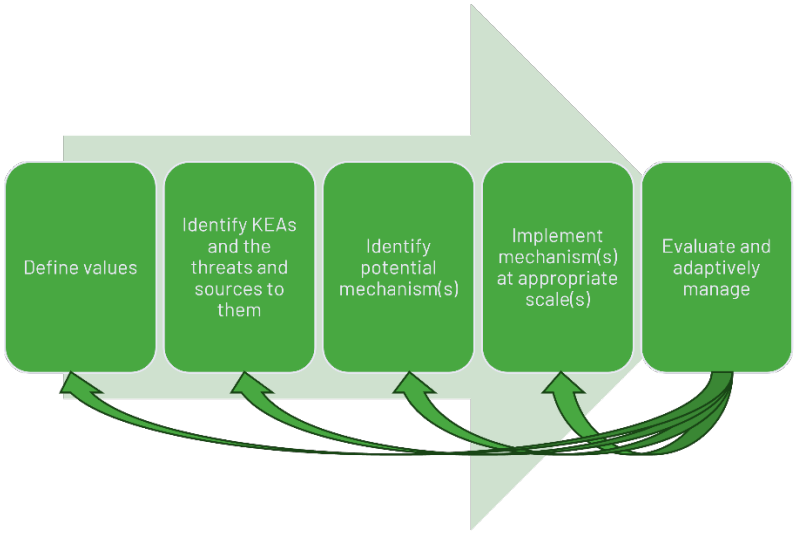
Durable Freshwater Protection guidance documents – A set of living resources

Updated: May 28, 2025

The Durable Freshwater Protection (DFP) team in Global Protect is pleased to provide colleagues with an initial set of resources – a compendium of guidance materials to help enrich, catalyze, and scale TNC's work on DFP around the world. Some of these materials are pre-existing, and others are new. Some have been developed principally for TNC audiences, and others are being developed for external use. We offer this collection as a first iteration of guidance that will be refined, packaged, and disseminated over time in response to feedback, requests, and learning. This is a living set of resources, and we look forward to TNC colleagues helping us to improve them. With that in mind, please reach out to the DFP team directly (information will be available on Connect).

Below are thumbnail summaries of the available guidance resources. These summaries provide links to the resources themselves, which are stored on Box. In the future, we may explore other ways to package and deliver the resources, especially if there is demand from outside TNC.

The resources that we have compiled are generally organized according to the Durable Freshwater Protection Framework (below), first described in Higgins et al. (2021). However, we have not developed separate guidance for each of the steps, and some guidance pieces (such as how to count freshwater protections, and case studies) sit outside the framework. Moreover, we are aware that this resource package is missing some key topics that will be addressed in the future; these include human rights aspects of DFP and financial sustainability.



Durable Freshwater Protection Framework (from Higgins et al. 2021)

What is DFP

We define Durable Freshwater Protection as *safeguarding freshwater ecological integrity and associated biodiversity and social values over the long-term through legal or other effective means, sustainable funding, and social support.* In this DFP overview document, we explore what this definition means in practice, we provide links to key foundational resources and guidance, and we address frequently asked questions raised by colleagues. We suggest starting with this document and then returning to some of the more specific guidance resources.

Freshwater Conservation Planning (Inclusive of identifying values, KEAs, and threats)

Conservation planning is TNC's DNA, and conservation planning frameworks like Conservation by Design (CbD) and Conservation Standards provide the basic building blocks to develop plans that conserve ecological integrity across biomes, benefit people and biodiversity, and drive adaptive management. In collaboration with the CbD module design team, we have developed CbD freshwater guidance based on core DFP principles that include freshwater ecological integrity and the five key ecological attributes, locally-held values, and durable freshwater protection mechanisms. Conservation planning is critical to attain durable freshwater protection outcomes and is also integral to Monitoring, Evaluation, and Learning (MEL) development and implementation. For DFP we recommend first engaging in conservation planning as a step towards MEL to inform gaging effectiveness for adaptive management, as well as progress towards 30x30 goals. In the coming months, we will field-test and refine this new CbD freshwater guidance and after testing and refining, we will make the resources available. In addition, we will explore opportunities to introduce DFP principles and practices to Conservation Standards.

Strategic conservation planning goes hand-in-hand with spatial conservation planning. Good conservation plans identify strategies and actions needed to maintain or restore ecological integrity (protection, policy, management, etc.) *and* the key locations that will be the focus of these strategies. Recommendations for durable freshwater protection spatial planning, analysis, and data are provided here, in particular for areas where data are scarce.

Identifying potential DFP mechanisms (Policy Assessments)

Understanding the policy mechanisms available for protecting freshwater ecosystems in a given place can be key to effectively designing and implementing a DFP project. We recommend undertaking a policy landscape assessment early in the process, especially for national or sub-national planning, to understand what mechanisms might be leveraged and whether there are any critical gaps that need to be filled (e.g. if there are no policies that can be used to protect a river as free-flowing). These assessments are ideally undertaken by someone from the country with a legal background. More information on these assessments, with links to example terms of reference and assessment reports, is available here.

Management Effectiveness (Input to evaluating and adaptively managing)

For area-based conservation to succeed, the quality of management at both systems and site levels is as important as quantity of protected and conserved areas. Effective management is based on the sufficiency and appropriateness of resources and processes to achieve desired ecological conditions and enable sustained long-term conservation outcomes, as well as concomitant social outcomes. Several

frameworks and tools have been developed to assess Protected and Conserved Area (PCA) management effectiveness, including the Protected Area Management Effectiveness (PAME) framework, Management effectiveness tracking tool (METT) and IUCN Green List of Protected and Conserved Areas Standard.

Please read Chapter 6 of the 2024 IUCN World Commission on Protected Areas (WCPA) technical report on *Designing and Managing Protected and Conserved Areas to Support Inland Water Ecosystems and Biodiversity* (hereafter IUCN WCPA inland waters report) for more information. A brief summary of the report is below and the report can be downloaded here: https://portals.iucn.org/library/node/51774).

This DFP resource package includes an appendix document to complement content in the 2024 IUCN WCPA inland waters report, and to provide additional context on terminologies and definitions (including what "management effectiveness" means, whether it is a synonym to "conservation effectiveness", existing frameworks, how does it link to conservation planning and/or MEL, etc.). This should only be used as a reference point to initiate discussion and planning around measuring management effectiveness. This appendix does not prescribe any tool or framework.

Monitoring, Evaluation, and Learning (Evaluate and adaptively manage)

Measuring and evaluating the results of DFP project efforts is essential for demonstrating evidence of impacts and supporting adaptive management. Besides existing guidance from Conservation by Design and Conservation Standards, we have developed guidance on key principles and core metrics for DFP monitoring. The Monitoring Framework for Durable Freshwater Protection is intended to inform development of the essential core components of MEL for DFP. These core components include monitoring outcomes related to *freshwater ecological integrity*, *human well-being*, and *DFP mechanism implementation*. The guidance also includes identification of specific categories and attributes within these core component areas, including examples of potential indicators.

Measuring and tracking progress

'What counts?' It's a frequent question, but what is it asking? What counts as durable freshwater protection? What counts toward TNC's 2030 freshwater protection goals? Or, what counts toward the Global Biodiversity Framework's 30x30 target (or the U.S.' America the Beautiful target)? We address what defines durable freshwater protection in our What is DFP document and underscore here that DFP is a process more than a black and white classification or measure. What counts toward TNC's 2030 goals is explained in Freshwater Metrics Advisory Group guidance. An overview of what counts toward 30x30, and how it can be measured and tracked, is provided here.

DFP Case Studies

Durable Freshwater Protection Case Studies (for internal use only at this time) were developed to highlight a variety of mechanisms and strategies that have been used across the globe in the pursuit of durable freshwater protection. Each of the ten case studies summarizes how the DFP mechanism was applied (the freshwater conservation success), why it happened (the catalyst and driver), how the case fits within the DFP framework, and finally, how the case aligns with the key components of a durable freshwater protection project. Ultimately, these case studies highlight that achieving DFP often requires employing multiple freshwater protection mechanisms, like the layering of a cake or putting a puzzle together. For example, in the Bita River, protection of a river's flow and physical habitat could safeguard

some aspects of river dolphin habitat, but user agreements with the fishing and agricultural communities were needed to improve prey availability (biotic composition) and water quality, respectively. Additional case studies are provided in the IUCN WCPA technical report described below.

Case studies include:

- Ngao River, Thailand, Fish Reserve
- Atrato River, Colombia, Rights of Rivers
- Bita River, Colombia, Ramsar + OECM
- Parnu River, Estonia, Migratory Swimways Legislation
- Futaleufu River, Chile, Flow Reserve
- Klamath River, U.S., Salmon and Tribal Rights, Legislation
- Musconetcong River, U.S., Wild & Scenic Legislation
- Cowichan Watershed, Canada, Co-governance
- Vjosa River, Albania, National Wild River Park Legislation
- Saraouqui River Basin, Costa Rica, National Legislation

2024 IUCN World Commission on Protected Areas Technical Report: Designing and managing protected and conserved areas to support inland water ecosystems and biodiversity

In 2022, TNC led a multi-organizational effort to ensure that freshwater ecosystems ('inland waters') were included in the Global Biodiversity Framework's '30x30' target (Target 3). Since that time, we have worked with partners to develop guidance for implementing that target in freshwater systems. In conjunction with the Convention on Biological Diversity's 16th Conference of the Parties in October 2024, IUCN's World Commission on Protected Areas published its first-ever guidance focused on freshwater systems: *Designing and managing protected and conserved areas to support inland water ecosystems and biodiversity*. The technical report was led by TNC in partnership with WWF, the IUCN Species Survival Commission, the IUCN World Commission on Protected Areas and Equilibrium Research, with contributions from dozens of experts from around the world.

This technical guidance serves as a reference for parties responsible for, and with a vested interest in, protected and conserved areas. This includes ministries, agencies and actors responsible for protected and conserved area management, monitoring and expansion; Indigenous peoples and local communities; and those responsible for conserving inland water ecosystems, their biodiversity, and linked services (e.g. inland fisheries).

Considering the intended audience, the guidance is structured to be practical and provide readily adoptable advice; synthesize scientific publications and practitioner guidance; provide clear checklists with hyperlinks to resources that can provide more in-depth information; and emphasize case studies to illustrate key points, with case studies threaded throughout the main document and summarized in an appendix.

Some of the content in the report overlaps with content in this DFP resource package. In general, the report is more detailed than the guidance provided here. On the other hand, the report is focused principally on protected areas and OECMs, whereas this guidance takes a broader view of DFP to include additional legal and non-legal mechanisms. A stand-alone executive summary is available, and translations of the full report into Spanish, French, and Portuguese will be available in late 2025.

Report Contents

Chapter 1. The need for a focus on inland water ecosystem conservation

Chapter 2. What makes inland waters unique when approaching PCA design, designation and management?

Chapter 3. Starting with human rights, equity and inclusion

Chapter 4. Expanding and strengthening the protected and conserved area network to support inland water biodiversity and ecosystems

Chapter 5. Designation and governance mechanisms

Chapter 6. Managing for inland water ecosystem integrity in protected and conserved areas

Appendix. Case study compendium

Additional resources

Papers

Abell, R., Allan, J.D., Lehner, B. (2007), Unlocking the potential of protected areas for freshwaters. Biological Conservation, Volume 134, Issue 1: 48-63. https://doi.org/10.1016/j.biocon.2006.08.017

Abell, R., Lehner, B., Thieme, M. and Linke, S. (2017) Looking Beyond the Fenceline: Assessing Protection Gaps for the World's Rivers. CONSERVATION LETTERS, 10: 384-394. https://doi.org/10.1111/conl.12312

Higgins, J.; Zablocki, J.; Newsock, A.; Krolopp, A.; Tabas, P.; Salama, M. (2021) Durable Freshwater Protection: A Framework for Establishing and Maintaining Long-Term Protection for Freshwater Ecosystems and the Values They Sustain. Sustainability, 13, 1950. https://www.mdpi.com/2071-1050/13/4/1950.

Flitcroft, R.L., Abell, R., Harrison, I. et al. (2023) Making global targets local for freshwater protection. Nat Sustain 6, 1499–1502. https://doi.org/10.1038/s41893-023-01193-7

Moberg, T., Abell, R., Dudley, N., Harrison, I., Kang, S., Rocha Loures, F., Shahbol, N., Thieme, M., & Timmins, H. (2024). Designing and managing protected and conserved areas to support inland water ecosystems and biodiversity. IUCN WCPA Technical Guidance Series, No. 8. IUCN. https://doi.org/10.2305/ZOKC6253

Websites

Inland Waters « 30×30 Solutions Toolkit (30x30.solutions) -- Online toolkit for the Global Biodiversity Framework's 30x30 Target (Target 3), with a subset of resources on inland waters. This toolkit will be updated over time as new resources become available.

Toolkit | United for Rivers -- Online toolkit for Southeast Europe's United for Rivers coalition, focused on establishing new protected areas centered around freshwater ecosystems and encouraging the engagement of local communities.

Datasets

Explore the World's Protected Areas (protectedplanet.net) -- Protected Planet is the most up to date and complete source of data on protected areas and other effective area-based conservation measures (OECMs), updated monthly with submissions from governments, non-governmental organizations, landowners and communities.

HydroSHEDS -- The HydroSHEDS database offers a suite of global digital data layers in support of hydro-ecological research and applications worldwide. Its various hydrographic data products include catchment boundaries, river networks, and lakes at multiple resolutions and scales. HydroSHEDS data are freely available in standard GIS formats and form the geospatial framework for a broad range of assessments including hydrological, environmental, conservation, socioeconomic, and human health applications.

Presentations

2025 Unlocking Success in Durable Freshwater Protection – New Guidance
Description of new guidance for DFP provided by DFP team. Presentation includes an overview of all of the sections included in the DFP resource package.

2025 Durable Freshwater Protection guidance conservation planning & MEL
Brief description of Conservation Planning (CBD) with a focus on a new module for freshwater protection. MEL is described as a critical component of conservation planning.

2025 IUCN Vital Sites webinar (session 1 and session 2) on IUCN WCPA report
Learn about key messages and findings from the IUCN WCPA report and hear case studies from around the world to illustrate what inland water area-based protections can look like in practice.

2024 Monitoring, Evaluation, and Learning @ TNC (focus on freshwater)
Includes an overview of MEL at TNC and a deep dive into MEL for DFP, MEL for fisheries, and MEL for Water Funds.

2024 Global Case Studies for Integrating DFP into Land Management Protection
Hear about cases from Europe and Latin America on the integration of freshwater objectives into the management of 'terrestrial' protected areas and their management plans, and discuss emerging lessons learned on improving collaboration with land managers.

2024 One Conservancy Protection Initiative learning series: Freshwater Protection
Presentations and discussion on Durable Freshwater Protection, Colorado River Jicarilla/Apache Nation water sharing project, and the Ecuador Nushiño-Curaray-Villano Fluvial Reserve

2023 Durable Freshwater Protection Case Studies July
Three case studies of DFP to show what DFP looks like in practice, generate lessons learned, make the case to partners/governments, and inspire confidence that freshwater protections are possible and work. The three case studies included are Nushiño-Curaray-Villano Community Fluvial Reserve: A free-flowing river protection framework; The Krupa River Conservation project – Western Balkans ; and Lake Tanganyika Freshwater Protection .

2023 Durable Freshwater Protection Overview
Brief overview of DFP concept, DFP team, and upcoming work given by Robin Abell. Followed by Q&A.

2023 One Conservancy Protection Initiative – Spotlight on Freshwater Projects
Presentation of two OCPI freshwater-focused projects: Ecuador's Water Protected Areas and Markets for Mississippi River Floodplain Reforestation.

Other resources

Durable Freshwater Protection fact sheet (external) -- describes TNC's DFP work for an external audience. https://tnc.box.com/s/kevizg5d62py4fb93by7dolustx6cznd

Durable Freshwater Protection four-pager *(internal*) -- describes DFP for an internal audience (OK to share with partners). https://tnc.box.com/s/5qanmd9zk13pcuzapks5nzm8p6blkbj6