

# Advancing Freshwater Community-Based Conservation Around the World

**F**resh water — it flows and drips, moves through rivers and underground aquifers, lakes and wetlands. It is vital to human survival and that of some 140,000 freshwater species. It connects us to nature, to each other and to our past. But what will its future be like?

Fresh water represents only 3 percent of the planet's water supply, and only 0.5 percent of that is readily accessible to humans. Scientists estimate that by 2025, at least two-thirds of the world's population will be living in water-stressed areas.

The Nature Conservancy (TNC) believes one of the best entry points to protect and restore these limited freshwater resources is to work with the local communities who steward them. TNC's freshwater community-based conservation approach aims to achieve both ecological and social outcomes by supporting the role of indigenous peoples and local communities in sustainable management of freshwater resources.

Like water itself, freshwater community-based conservation projects take many shapes and forms — from working with lakeshore communities in Tanzania on protection of fisheries and family health, to collaborating with tribal leaders on policy issues in the Colorado River Basin, a source of agricultural irrigation, drinking water for 40 million people, and cultural heritage for Native American tribes.

What these projects all share are explicit freshwater conservation objectives and substantial involvement with indigenous peoples and local communities as decision-makers, users and managers of freshwater resources and direct beneficiaries of freshwater conservation.

## By the Numbers

TNC is engaging ...



more than 147 different indigenous people and local community groups (more than 11,000 individuals)



from at least 14 countries and 5 continents

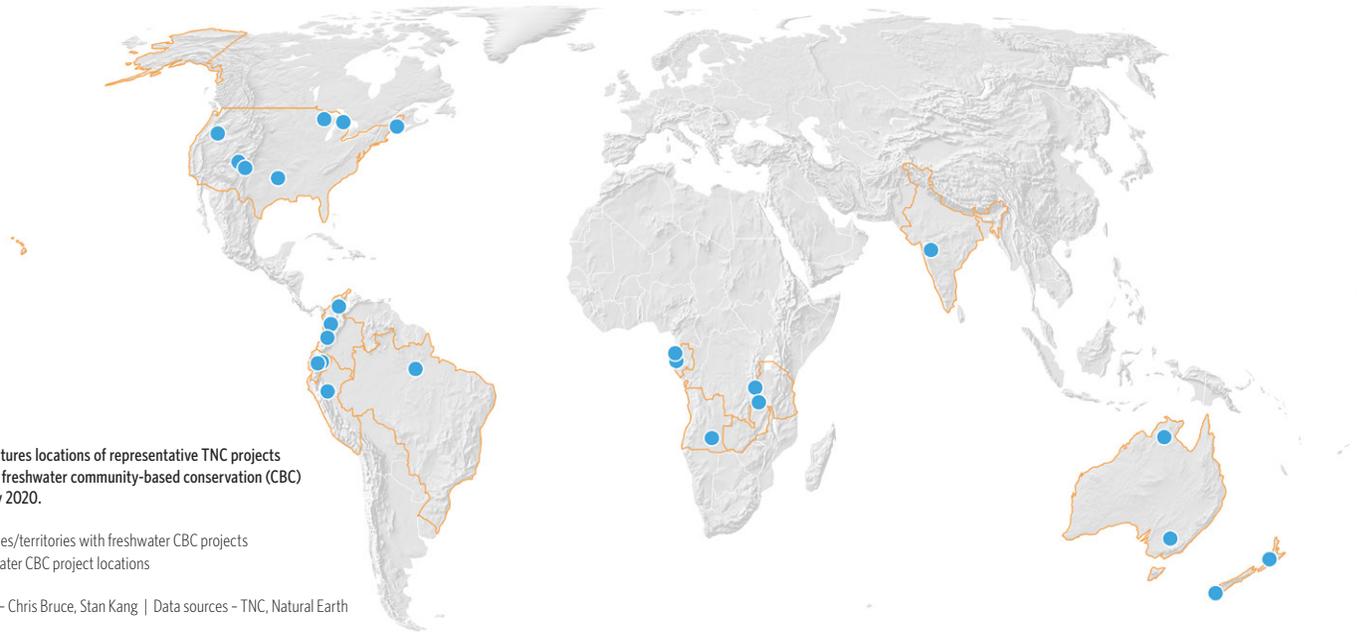


to implement 50+ freshwater community-based conservation projects



**We are working to create a new system where cultural, environmental, and traditional values are integrated into Colorado River planning as we address decreasing supply and growing demand in the years to come.**

**DARYL VIGIL**  
WATER ADMINISTRATOR FOR THE  
JICARILLA APACHE NATION IN THE U.S.



A recent survey of TNC’s freshwater community-based conservation projects (see Resources) provides insight into some of the unique benefits, opportunities and challenges of this work.

➤ Freshwater conservation goals are focused on the freshwater habitats — rivers, streams, lakes, wetlands, floodplains, springs, aquifers — that a range of species (fish, riparian and aquatic plants, invertebrates, etc.) depend on, and the services these resources provide, such as water purification, flood attenuation, cultural or spiritual water use. Some of the environmental benefits that have been monitored and evaluated at projects so far include healthier fish populations, decreased illegal fishing, increased biodiversity and improved water quality.

Communities on **Gabon’s Lake Oguemoué** have relied on freshwater fish as sustenance for generations. But overfishing and harmful fishing practices are causing fish stocks to plummet. To address this problem, local people developed an NGO that organized community fishing associations — with advice and training from TNC — to collect data, improve fishing practices and manage no-take zones to protect the fisheries.

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**The participation of TNC is very important — TNC is concerned with the fishermen, with the ribeirinho communities, with the quality of water here. This is very important because sometimes we think we are alone, but we are not. TNC came to the right place at the right time!**

**ZEZITA BATISTA**  
FISHERWOMAN AND COMMUNITY LEADER IN THE  
TAPAJÓS RIVER BASIN OF BRAZIL

➤ For indigenous peoples and local communities, these projects can help achieve critical human well-being objectives such as better security — both water and food security as well as access to other natural resources — and increased empowerment to self-organize and negotiate. Additional benefits such as income gains, local engagement, and an improved sense of a healthy river and connection to nature have also been observed.

In **Maine**, the **Penobscot Indian Nation** worked with TNC and other conservation partners on the removal of two dams and the creation of a fish bypass channel at a third dam along the Penobscot River, the largest river system in Maine. This successful restoration has improved river ecology and brought back the native sea-run fish species that the Penobscot Indian Nation have culturally relied on for centuries.

➤ Projects vary widely and feature a range of activities, including fisheries management, sustainable land use (agriculture, forestry, etc.), water supply management (domestic and agricultural), protected areas, water-based ecotourism, and more. Sometimes they are part of other conservation approaches, such as Water Funds. Key strategies focus on strengthening working relationships, establishing partnerships, building local institutions or governance, and providing technical training.

Across **Latin America**, TNC is engaged in at least **11 Water Funds** that work closely with indigenous peoples and local communities who live in the watersheds that supply drinking or agricultural water to urban areas downstream. These projects support sustainable land uses that conserve or protect riparian areas while fostering local economies and cultural practices.

➤ But the impact of the work goes far beyond either conservation or community benefits. By utilizing approaches that aim to understand, support and empower local

communities and their needs, these projects help to: build partnerships and alliances that advance shared goals; increase understanding and sensitivity of the history and culture of indigenous peoples and local communities; leverage local expertise, traditional knowledge, voice and commitment; open up more opportunities for collaboration in other areas; and create the conditions for longevity and sustainability of on-the-ground activities.

**India's Devnadi River Basin** supports an important agricultural region, but climate change is bringing devastating drought and water scarcity that impacts the livelihoods of millions of people, particularly farmers, every year. TNC is working in the state of Maharashtra with a local NGO partner to empower village-level stewardship of water resources and develop a comprehensive science-led drought resilience plan for the region that includes local knowledge and custom.

- The legacies of colonization, displacement and other power imbalances that still impact many indigenous peoples and local communities today make it essential to engage communities with care and respect. Establishing trust and investing the time required to foster healthy and sustainable relationships is perhaps the most crucial component of successful projects.

In **southeastern Australia**, the **Nari Nari people** have reclaimed 88,000 hectares of their traditional homeland — including important wetlands — in a transfer of ownership facilitated by TNC. The new conservation area hosts a range of threatened native Australian species along with huge nesting colonies of freshwater birds. The property now goes by a new name — Gayini, the Nari Nari word for water — and will be managed by the Nari Nari Tribal Council for restoration and protection of cultural heritage, nature conservation and sustainable economic development, with support from TNC and others.



Fisher communities from the wetlands on the Middle Magdalena Basin are amphibious people that rely on the biodiversity of Colombia's most economically important river. Not only does it constitute their diets, in some parts of the basin, 'bocachico' (*Prochilodus magdalenae*) can replace money as a way to measure and trade. In this picture: a fisher woman from Saloa, Cesar, separates a bocachico catch to prepare and sell to other parts of the region. TNC has worked with these communities to strengthen their capacities to adapt to climate change, doing sustainable fishing and domestic-scale agriculture, among other initiatives. © Elegua Producciones



**Maintaining the integrity of freshwater ecosystems — across sociopolitical and cultural topographies, connecting people and nature — requires multi-scalar and interdisciplinary approaches. The Freshwater programme at TNC-India is progressing community-based conservation using systems-thinking approaches, scaffolded by concerns of justice and equity, to bring about human well-being through freshwater security.**

**SUSHMITA MANDAL**  
FRESHWATER PROGRAMME LEAD, TNC-INDIA



## Strengthening Communities, Protecting Nature

Indigenous peoples and local communities have deep historical, cultural and spiritual connections to the lands and waters of their home, and a strong commitment to protecting these places for future generations. TNC joins in partnership, when invited, to support their stewardship of natural resources in order to improve people's lives and achieve conservation goals.

Whether terrestrial or water-focused, these community-based conservation initiatives have many advantages. By supporting the voice, choice and action of local communities, these projects are more likely to be culturally aligned, contributing to local engagement, ownership, acceptance and sustainability.

**LEFT:** Staff from New Mexico's Navajo Nation Department of Fish and Wildlife (NNDFW) tag/scan, weigh and measure young razorback suckers (*Xyrauchen texanus*) taken from a drained NAPI (Navajo Agricultural Products Industry) pond, New Mexico, U.S.A. These endangered freshwater fish will be released into tributaries of the Colorado River. © Erika Nortemann/TNC



Early morning fishing on Lake Oguemoué, Gabon. Gabon's "great lakes" are dangerously overfished and so to manage this pressure, people living around Lake Oguemoué have turned to The Nature Conservancy and its partners to help them form and expand community fishing associations. © Roshni Lodhia



**These projects lead to better management of water resources for both conservation and human well-being, resulting in more resilient communities who are able to be on their homelands.**

**LUKE PREECE**  
OUTBACK AUSTRALIA CONSERVATION OFFICER, TNC-AUSTRALIA



The freshwater community-based conservation logo represents our mission to support and empower local people around the world in caring for the diverse freshwater resources and species they depend on.



Protecting nature. Preserving life.

## CONTACT US

The Nature Conservancy is a global environmental nonprofit working to create a world where people and nature can thrive.

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Learn more at <https://www.conservationgateway.org/ConservationPractices/Freshwater/fcbc/>.

## RESOURCES

Kang, Simmons, and Aldous. (2020). *TNC Freshwater Community-Based Conservation Project Inventory: An Analysis of 32 Projects*. Arlington, VA: The Nature Conservancy.

Zhang, et al. (2020). *Community-Based Management of Freshwater Resources: A Practitioners' Guide to Applying TNC's Voice, Choice, and Action Framework*. Arlington, VA: The Nature Conservancy.