

## The Humboldt Current Project's Valdivia Seascape Project Reforming artisanal fisheries management in Chile

### BACKGROUND

Ranking eighth in the world in wild fish captures, **Chile is one of the world's leading fishing nations**. Much of Chile's production is harvested by the "artisanal sector," which is made up of 86,132 small-to-medium-scale fishermen. Chile is a pioneer with respect to fisheries reform. Its innovative policy, called **Territorial Use Rights in Fisheries (TURFs)**, was enacted in the 1990s, transforming the way near-shore shellfish and other invertebrate fisheries were managed. TURFs allocate the management of coastal marine areas to local fishing associations via community-based, catch-share agreements. With more than 700 TURFs, Chile has one of the most extensive TURF systems in the world. The Chilean TURF model is seen by many as the example to follow to move small-scale coastal fisheries from open access regimes to right-based management regimes.

While the Chilean TURF model has clearly improved the management of the country's near-shore marine resources, there remain several problems that limit their sustainability. These include: the lack of environmental considerations for design and management of the TURFs, which limits the recovery of key resources, (e.g. there are currently no reserves/no-take zones established between TURFs), insufficient data for many fisheries and, the absence of mechanisms for cooperation with neighboring owners of fishing rights and fishers targeting fin fish in and around TURFs. Weak governance, limited market access, and almost non-existent capacity for the production of value-added products are other impediments to sustainability. These obstacles to reform have led, in many instances, to overharvesting of stocks and destructive fishing practices, delivering damaging consequences for fisheries, fishermen, and nature.

### THE VALDIVIA SEASCAPE PROJECT

For the past four years, TNC's Humboldt Current Project has been working closely with fishing associations, fisheries government agencies, and academic institutions to improve and refine the Chilean TURF model and the overall management of artisanal fisheries in Chile. Our fisheries work in Chile —via our Valdivia Seascape Project in the Region of Los Rios, Southern Chile— represents a unique opportunity to learn from the notable Chilean TURF experience for wider application to coastal fisheries around the world. We are focusing in three main topics: 1) Understand the ecological implications of establishing No Take Zones (NTZ) within or between TURFs, 2) improve the design of TURFs to maximize their ecological and economic performance, 3) explore and test market strategies to improve the livelihoods of fishing communities.



As part of the Valdivia Seascape Project, the Humboldt Current Project is partnering with two local fishing associations (Chaihuin and Huiro) to set aside two neighboring TURFs as No Take Zones (NTZs). This is a first-of-its-kind agreement in Chile. This measure was proposed by fishers who suggested that such a measure could

recover the productivity of the NTZs while improving the productivity of neighboring TURFs, thus they were willing to test the idea working with us. To understand the impact of NTZs, TNC's Humboldt Current team and the Universidad Austral de Chile are conducting a **long-term monitoring program** to evaluate the ecological performance of the established NTZs in the region. This program will allow us to understand the ecological dynamics of the benthic ecosystem in the region, the impact of current fishing practices, and monitor the effects of the establishment of the NTZ. Fishers are part of this monitoring program and are constantly informed of the progress.



TNC — in collaboration with fisheries managers and Dr. Jeremy Prince — will train local fishers in the Region of Los Rios on how to implement a low-cost **data-poor stock assessment** method, enabling them to develop an understanding of the condition of the fish stocks they are harvesting, the impact sound management rules can have in recovering stocks, and potentially design and implement management measures according to local results.



Further, TNC is partnering with Shellcatch Co. and working hand in hand with the fishers to implement a **traceability system** aimed at helping the fishers to gain access to premium markets, optimize their value chain, and increase their revenue. We are pairing the traceability system with sustainability criteria, so that the consumers will be able to know the story of responsible fishing behind the products. In collaboration with CapLog Inc., we are organizing **Business Skills, Value Chain and Entrepreneurial** workshops to improve business capabilities and reinforce entrepreneurship among fishing associations.

In addition, TNC and experts from the University of California Santa Barbara (UCSB) are developing a **generic fisheries bio-economic model** to evaluate diverse management scenarios aimed at achieving conservation goals and improving the economic performance of the TURFs in the Region of Los Rios. Using local, updated and revised data, this model will allow us to test the potential impact of different management strategies, thus informing management decisions.

Further, TNC is exploring a new collaboration with UCSB to evaluate the potential economic and ecological impacts of establishing a **collective/collaborative management** of TURFs through both theoretical and practical experience.

We are exporting the lessons learned from our experience working in Chile to our work in Peru, and we would like to share our knowledge with and learn from other TNC programs working to improve small-scale fisheries management.

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