Discover TURFs

A global assessment of Territorial Use Rights in Fisheries to determine variability in success and design

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What are TURFs?

Exclusivity

Definition used in study:

A marine area in which individuals or communities are given some level of exclusive access to marine resources within a clearly defined boundary.

How are TURFs designed and what influences TURF success?

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Document key design features and characteristics themselves.

Where are TURFs located?

How can these findings be applied?

What is success?

TURF success can be measured in many different ways depending on management objectives. Some TURFs are designed to increase the number of fish caught, others may focus on increasing fishery revenue, conserving species, or distributing resources equally among communities. These objectives often overlap with one another. Our study aimed to understand and quantify these relationships. According to stated and self-ranked objectives. Using this definition of success, we then tested six common assumptions thought to be associated with TURF success.

Methods

We collected data at varying levels of resolution ranging from site-specific TURFs in general trends in TURF management at the country level. We first gathered data by creating and widely distributing a survey on an online platform. Second, we conducted in-person interviews with fisheries managers and government officials with first-person knowledge on specific TURFs.

We used available databases and the literature for examples of TURF characteristics for individual TURFs, we also recorded locations and areal extents where possible.

Using regression analyses, we explored relationships between TURF success and key design characteristics, as well as relationships between these design characteristics themselves.

Where are TURFs located?

No-take Zones

Government & Community Involvement

Size

Species Mobility

Tenure Length

Geographic Enclosure

No-take zones (NTZs) are marine areas where fishing is banned in an area where species are protected.

Co-management is where community and government involvement in TURF management are approximately equal.

TURF size varies considerably around the world.

TURF may be successful when targeting lower mobility species as it is easier to manage a species that stays within the TURF.

Some TURFs are enclosed within a geographic feature such as a bay or lagoon, while others are not, and buffer zones or offshores are not enclosed.

TURFs are not confined by land but may have less defined and defensible boundaries, making monitoring and enforcement more difficult.

Co-management allows fishermen to be involved in TURF management.

Co-managed TURFs have TURF success.

TURF success may improve success. However, when design features are selected in an inappropriate way, this may not happen.

TURFs are successfully, and unsuccessfully, applied under multiple management objectives. Our study examined key design features that are vital to consider when designing successful TURFs. There are also a number of additional design features identified (but not analyzed) that can contribute to a TURF’s ability to meet its stated objectives.

TURFs are successfully, and unsuccessfully, applied under a diverse set of conditions. There is no one-size-fits-all management solution, but when key design features are supplemented with additional design features that address local needs, TURFs are a flexible, site-specific solution to problems facing small-scale fisheries around the world.

The results of this project will be a significant contribution to Fish Forever - a collaboration between the University of California, Santa Barbara Sustainable Fisheries Group, Rare, and the Environmental Defense Fund. Fish Forever is working to implement TURFs globally to improve the sustainability of fisheries worldwide.

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Endnotes


