

# Rights-Based Management in Indonesia's Dampier Strait: Blending Customary Rights and MPAs to Create the World's Largest Comprehensive TURF+Reserve Network

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## Abstract

Currently, small-scale fishing communities are at a pivotal moment for sustainably managing their fisheries and safeguarding the food security and livelihoods of the local people who depend on them. After historically maintaining open access in fisheries, Indonesia, through the national government's Ministry of Marine Affairs and Fisheries (MMAF), moved in July of 2016 to grant communities in and around Marine Protected Areas (MPAs) the responsibility to co-manage their coastal resources and implement MPAs alongside government partners. In the Dampier Strait, a body of water that passes through Raja Ampat in the West Papua province, 19 local fishing communities on the islands of Batanta and Salawati will take on the responsibility of co-managing their coastal fishing grounds with the provincial government's Technical Operating Unit. In July of 2018, under the leadership of the Maya Tribe Adat Council, 58 customary, religious and village leaders from the communities formally agreed to organize local waters into a network of 21 Territorial Use Rights in Fisheries (TURF)+Reserves, housing the network within the Dampier Strait Conservation Area, a vast MPA declared in 2014 in the Dampier Strait. The resulting network, officially designated a TURF+Reserve network at the national level, encompasses 211 000 hectares, making it the largest comprehensive TURF+Reserve network in the world. The newly declared network is the result of a yearlong collaborative effort among the Maya Tribe communities in the Dampier Strait and the government's Technical Operating Unit, with support from conservation organization Rare, the USAID SEA project, and partners. Through the adoption of the network, the Dampier villages will be able to link their customary (adat) rights system to the protections of the strait's large protected area. The network's co-management strategy aims to enable sustainable community fisheries management with respect for historic customary rights and traditional fishing grounds, and through the networking of TURFs, aims to bring about large-scale reform by catalyzing change in fishing behaviours across an entire region. Looking forward, the government's Technical Implementing Unit in Raja Ampat will support enforcement of the TURF+Reserves, and Rare will support the office and Dampier villages in building management capacity, adherence to new regulations, and local support for the TURFs.

## 1. INTRODUCTION

### 1.1 Description of the fishery

Fishing takes place in a small-scale, demersal fishery within the Dampier Strait MPA in West Papua, Indonesia, in coastal waters zero to 12 nautical miles from shore (Figure 1). Among the most important species targeted by local fishers in the Dampier Strait are rabbitfish (*Siganus* sp), grouper (*Ephinephelus* sp), snapper (*Lutjanus* sp), emperor (*Lethrinus* sp), and lobster (*Nephropidae* sp), all of which are currently fully exploited. Fishers in the Dampier Strait are generally from the same country and local communities. There are fishers harvesting in the fishery from more than ten local villages. Fishers from other communities outside of the strait in Indonesia and from other countries also access the fishery. Fishers do

not usually go very far to fish, as confirmed by target species and boat sizes used.<sup>1</sup> Landing sites are scattered in the area and are informal. More than ten local communities receive landings in the fishery, in addition to several landing sites in other countries. There is one larger, commercial port that receives landings near Dampier villages, in the neighbouring township of Sorong. Though local subsistence is the primary purpose of fishing, in several villages catch has been traded to neighbouring village to fulfill needs of fish protein, and to Sorong for distribution.

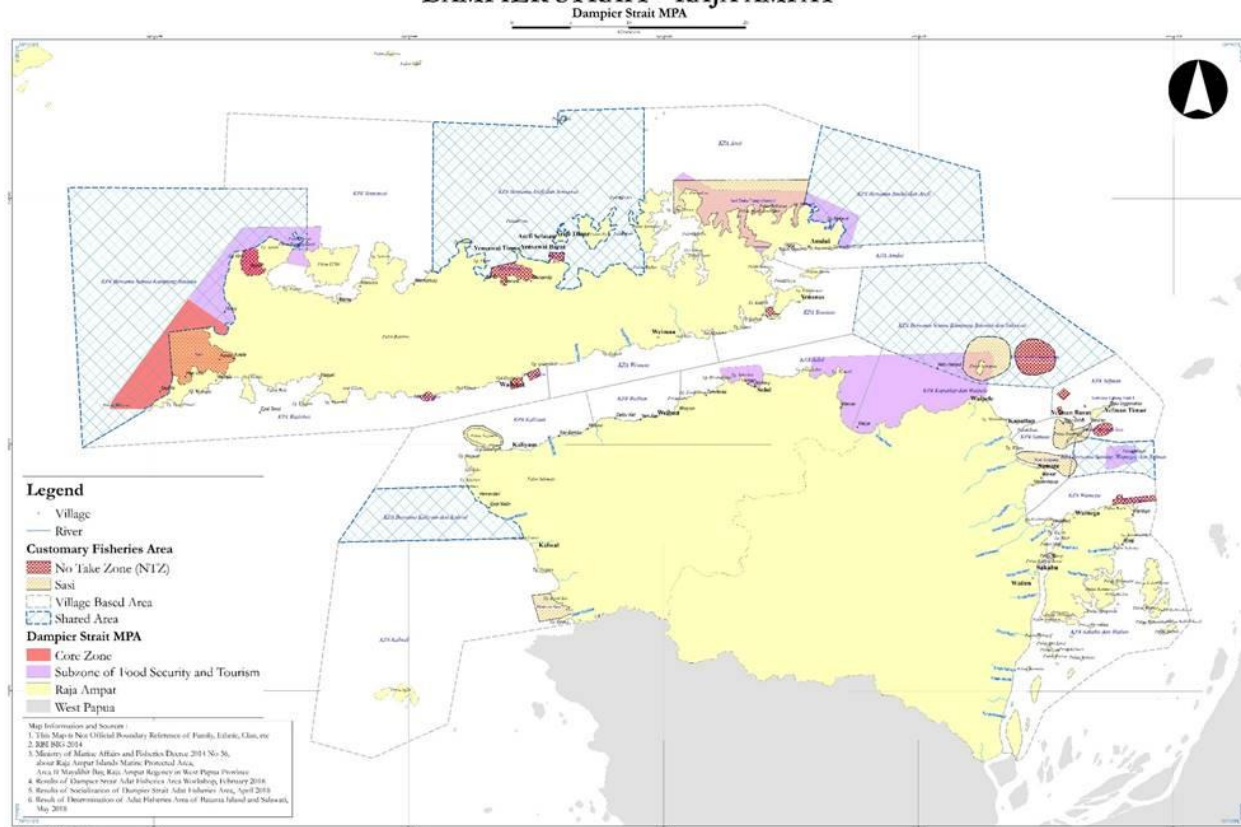
Fishers commonly use seine nets, traps, and hooks and lines to fish; no fish-aggregating devices are used in the fishery. Gleaning for sea cucumber and other invertebrates is also common. Small power winches or haulers powered by engine are used to deploy fishing gear in the fishery, as well as independently powered gear deployment and hauling methods. More than 100 fishing vessels that are used in the fishery make use of outboard and inboard motorization. On average, the vessels are less than 12 meters in length, with an average gross tonnage at less than ten gross tons. There is no cold storage for the catch on vessels. Vessel owners and operators are fishers that come from the local communities and are sometimes joined aboard vessels by family members. Women are allowed to own fishing gear and vessels.

Though fishery intrusion by outsiders has been a consistent issue for local communities in the Dampier Strait, no major conflicts have erupted over this or other issues between/ among the communities - both before and after the recent adoption of the TURF+Reserve network. Before its adoption, it was common for local people to describe seeing outsiders from other nearby districts and provinces. However, overfishing is not yet considered a rampant problem within the Dampier Strait. Fishers have perceived their local fisheries to be abundant, but they need to adopt sustainable practices to maintain this condition. The adoption of the TURF+Reserve network is seen more as a preventative measure against overfishing.

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<sup>1, 2, 3</sup> Jakub, R., Yapen, M., & Kushardanto, H., & Campbell, S.J. (2017d). Activity Report: Fishery Assessment of Dampier Strait, Raja Ampat, West Papua. USAID-SEA Project, 19 pp.

## CUSTOMARY FISHERIES AREA BATANTA AND SALAWATI ISLAND DAMPIER STRAIT - RAJA AMPAT



**Figure 1. Map of the fishery within the Dampier Strait Marine Protected Area (MPA).**

Source: KKP Raja Ampat, 2016; <http://kkpr4.net/en/index.php?page=page&id=13>.

### 1.2 Economic contribution and social implications of the fishing activity

Fisheries are a primary source of income and protein for all coastal villages of the Batanta and Salawati islands, complementing agricultural practices and production.<sup>2</sup> Among the local communities that make primary use of the fishery and its resources, the catch is utilized for direct human consumption. The catch is traded in markets for household consumption and/or bartering, local direct sale, and sale to domestic markets, for all of the key species caught (rabbitfish, grouper, snapper, etc.). Approximately 1 600 individual fishers within the Dampier Strait are involved in the fishery, with less than 25 percent being women. On average, fishers derive more than half of their income from their participation in the fishery.

Local fishers operate year-round but balance their fishing with seasonal farming activity. For several months of the year, they grow fruit and vegetables in individual gardens and focus extra effort on farming during periods in which the price for the gardens' products (like cassava and sweet potatoes) is higher.

<sup>2</sup> Jakub, R., Yapen, M., & Kushardanto, H., & Campbell, S.J. (2017d). Activity Report: Fishery Assessment of Dampier Strait, Raja Ampat, West Papua. USAID-SEA Project, 19 pp.

Fishers operating in the Dampier Strait are opportunistic, shifting their efforts based on market prices and income from their farming and fishing products.

## **2. MANAGEMENT OF THE FISHERY AND RIGHTS-BASED APPROACH**

### **2.1 Management of the fishery**

With the formal adoption of the TURF+Reserve network in July 2018, the fishery is co-managed by local Maya communities on Batanta and Salawati and the provincial government. 21 TURF (Territorial Use Right for Fishing) areas have been created within the Dampier Strait MPA (which composes the “Reserve” portion of the network’s TURF+Reserve formula). Rights to access and fish the TURF areas are held exclusively by local fishers from the villages, and rights allocation and management fall primarily under the control of the villages and their leaders. Ultimately, however, the provincial government must formally recognize the rights allocated by villages. The government also annually evaluates (starting in 2019) local compliance with regulations laid out in the TURF+Reserve network’s management plan. A specific office carries out these responsibilities.

In Indonesia, the provincial government (working on behalf of 34 provinces) manages waters from 0 to 12 nautical miles. The Raja Ampat district, through which the strait’s waters pass, is one of 11 coastal districts within the West Papua province. The provincial government in West Papua has an extension office in the Raja Ampat district: the Technical Operating Unit. This office formally recognizes rights to the TURF areas laid out for the newly adopted network, in addition to administering the regulations of the Dampier protected area. Because the villages control rights allocation, local fishers receive rights by proving they are from a Dampier village, using an ID card. Professional registration for fishers exists but does not dictate the ability of local fishers to access the villages’ designated TURFs.

Per the co-management strategy of the TURF+Reserve network and as seen in its adoption, individual fishers and management authority staff alike weigh in on and make the rules for the fishery’s management. NGOs like Rare have also been consulted for advice and opinions on management rules, particularly during the initial process of designing the network. In terms of enforcement of the rules, local government primarily holds responsibility. Despite this, the villages have agreed to carry out community-based surveillance. The provincial government plans to provide fuel to all 19 villages for surveillance (via patrol by boat) of the Dampier Strait.

The network’s additional fishing regulations, made with community consensus, chiefly maintain catch by controlling fishing inputs (gears and time spent fishing) and the outputs (size and sex of catch). Restrictions to fishing also come with the no-take reserves of the Dampier Strait’s protected area. The no-take areas surrounding the TURFs are meant to serve as “fish banks.” Protecting critical reef and other marine ecosystems, the “fish banks” save and accumulate fish populations, allowing them to recover and potentially spill over into the TURFs inside the protected area. While the strait’s protected area has existed since 2014, the new system outlines how fishers can work within it.

### **2.2 Brief history of the former rights-based approaches used in the fishery**

Previously, the Maya Tribe villages of the Dampier Strait (now part of the new TURF+Reserve network) had long exercised customary rights collectively for their fishers and observed traditional fishing grounds. However, they had no legal basis to ask fishers from outside Dampier Strait communities to stop fishing in their waters. Fishers from outside Raja Ampat, wider West Papua, and from outside Indonesia had open access to fish their coastal waters. Unfettered access made it difficult for Dampier communities to take

further steps in sustainably managing the use of their fishery or giving legal basis to the customary rights they had developed for local fishing.

The TURF+Reserve network was adopted to give local Maya communities the ability to manage access and prevent overfishing in their coastal waters. Now, access is prioritized for local villagers. Permission to make use of a local fisher's right to fish in the TURF areas of the Dampier Strait protected area must be requested by the fisher, and then granted through a temporary permit by the village and customary leaders. The concept of folding TURFs into the protected area also turns local fishers into conservation stewards, incentivizing fishers to enforce marine protections to see area fish stocks increase. This enables Dampier communities to help maximize the functions of the protected area as well as TURFs.

### **2.3 Rights-based approach: allocation and characteristics**

The 21 TURF areas created within the Dampier Strait protected area represent the division of much of the area's coastal waters into distinct fishing areas, to which each community's local fishers are granted access. To determine the boundaries of these areas, the village, customary and religious leaders of the 19 communities involved in the creation of the TURF+Reserve network participated in workshops with Rare and the provincial government. At these workshops, the communities drew up maps of the fishing grounds that they traditionally used - and which they considered theirs - based on historical information. The leaders then worked through the overlap of the mapped areas and conflicts over the boundaries to come up with a single, unified map of 21 access areas (effectively creating areas for each of the 19 villages, as well as several common fishing grounds to be shared by multiple villages). Under this system, each community's fishers have rights to clearly defined areas. Communities and their leaders manage rights allocation, as aforementioned, with formal recognition by the Technical Implementing Unit of the West Papua provincial government. The rights pertaining to fishing with traditional gear types and specifically for demersal and reef fish.

The customary rights on which the TURF+Reserve network is based were developed from historical information and with consensus among all communities. Maya fishers and non-fishers alike from the villages can hold rights, and rights are inclusive across community demographics, including ethnicity, gender, fisher generation/age, and economic status. The rights are valid indefinitely, pending users' compliance with the network management plan. People who hold rights can give outsiders from neighbouring villages or from within the district permission to fish in their TURF for a limited period, but the rights are not tradable. Those requesting permission can receive a temporary permit (and must request renewal if they seek to use it for longer) by filling out an application form, which must then be approved by village and customary leaders. Maya people outside of the Dampier Strait MPA who want to fish in the TURFs must also ask for permission from those with rights. Rights can be passed on to one's children, as they are part of a fisher's clan. If a fisher's children move and eventually return to the area desiring the rights, they must request permission from the village to get those rights back. Non-Maya fishers from outside the district are prohibited from fishing in the areas, and can only buy fish from local Maya fishers.

### **3. CONTRIBUTION OF THE RIGHTS-BASED APPROACH TO ACHIEVING SUSTAINABILITY**

The rights-based approach at the center of this case study was adopted in July 2018 and is in early stages of implementation. While new rules aim in part to change pre-existing fishing behaviour taking place within the fishery (e.g., who is fishing there; whether they follow the TURF requirements granting local fishers exclusive access), more time will be needed to observe the changes in resource use, as well as potential resultant changes in fish populations (growth in size, abundance, etc.), economic benefits, or social equity.

### 3.1 Sustainable use of the resources

There has been no noticeable change in the size of target species since the approach was adopted.

### 3.2 Economic viability of the fishery

Fishing effort characteristics like duration and distance of average fishing trips and use of fishing vessels have not changed. Other related changes have not yet been noted, again due to timing.

### 3.3 Social equity

The allocation of rights to members of the network's 19 Maya Tribe villages on the islands of Batanta and Salawati within the Dampier Strait MPA empowers the rights historically observed by these communities and, as aforementioned, applies to different genders, ethnicities, and more.

## 4. MAIN CHALLENGES AND WAY FORWARD

Before adopting the network, the primary challenge perceived by local fishers and their communities in the Dampier Strait was an intrusion into local fishing grounds by outsiders and migratory fishers, both small and large-scale. These fishers come from other communities, other areas of the country, and even other countries.<sup>3</sup> In the early stages of network implementation, intrusion into TURFs and violation of regulations (like gear, size and time restrictions) may present challenges.

Compliance with the fishery regulations presents another challenge. Changing behaviour from unsustainable fishing practices to sustainable ones will still need time to happen. Despite the fact that local fishers in Dampier have agreed to further control their catch size, fishing gears and season, they will need self-discipline and social pressure to lock in sustainable behaviour.

Raja Ampat's Technical Operating Unit and the 19 Dampier villages have expressed their commitment to the enforcement of the TURF+Reserves. Looking forward, conservation organization Rare will also support the office and Dampier villages in building management capacity, adherence to new regulations, and local support for the TURF+Reserves.

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### REFERENCES

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<sup>3</sup> Refer to section 2.2 for more information about outside intrusion and overcapacity, as well as about how the TURF+Reserve network addresses these challenges.