

# CATALYSING MANAGEMENT OF MARINE RESOURCES THROUGH A FISHERS'S ELECTRONIC REGISTRY AND LICENSING SYSTEM



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## Introduction

Up-to-date information on the amount and the distribution of fishers is a key component for successful management of marine resources. Nevertheless, the routine task of gathering and maintaining information on fisher numbers can be logistically challenging, particularly from remote communities and dispersed populations of fishers.

In Honduras, the need for data on fishers has been clearly acknowledged and has been a component of the fisheries law since the late 1950's. However, with the conventional registry system consisting of book based registries and paper licenses. As a result the authorities have not been able to efficiently collect or effectively keep records on fisher numbers. The majority of fishers that are accounted for in the official registry belong to the industrial sector that is obliged to report their crewmembers. Consequently, the artisanal sector has been habitually overlooked despite its critical socioeconomic importance for the livelihoods of many throughout the country.

## Objective

By employing a modern and dynamic system for digital registrations we aim to generate a data flow that will elevate previously overlooked fishing sectors into appropriate management decision-making and catalyze local and regional management of marine resources.

## Methods

In 2013 we started developing a electronic registry and licensing system called the Fisher's Registry System (RGP for its initials in Spanish). The system was developed for the Honduran Department of Fisheries and Aquaculture (DIGEPESCA). While the digital platform was developed as new, we built it based on the pre-existing legal framework that defined the license categories, their fees and their expiration policy. Complementary features were added to maximize the system's utility and to allow an effective transition from the old system, and for this, the following considerations were set as a starting point:

- ↳ Data to be collected needs to be directly linked to management objectives.
- ↳ Data interpretation needs to be opportune and relevant to fisheries managers at their respective spatial level.
- ↳ Technological tools and their interphases need to be intuitive for an easy transition.
- ↳ Equipment and supplies need to be accessible and according to the government's capacity to sustain a long-term operation.

## Results

The RGP is a web-based, low cost data handling system that is easy to use with a portable laptop and a commercial plastic card printer. It emits physical licenses and generates real-time reports with descriptive statistics such as registrations per regional office and per community.

By May 2016, the RGP has been implemented in 8 of the 13 regional offices country wide, with more than 2,600 artisanal fisheries officially registered.

While the system is web-based, it is complemented by an auxiliary off-line system that allows inputs while it waits for an internet connection to upload the data into the main server. The data from all regional offices of DIGEPESCA are centralized in a single database.

Through the development of this practical, affordable and intuitive tool the authorities in Honduras are now generating accurate information on the amount and the distribution of the once underestimated artisanal fishing effort.



The use of the RGP in Honduras is progressively extending beyond the artisanal sectors to include licenses for sports fishers, industrial fishers, and seafood retailers. As so, it is also an important tool for revealing the connections throughout a national fishing chain.



The central database links with other technology that has also been developed for fisheries management including a smartphone application used by fish buyers to record catches. This system scans the unique QR code on the back of each license to link catch to an individual fisher.



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