



FISHFOREVER



Technology in Small-scale Fisheries Management: Experience from the Philippines

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Agenda



- **Introduction: Rare**
- **Context: Small-scale Fisheries**
- **Approach: Fish Forever**
- **Application: PDS Pilot**
- **Implication: National interests**

Rare inspires change so people and nature thrive



Rare at-a-glance

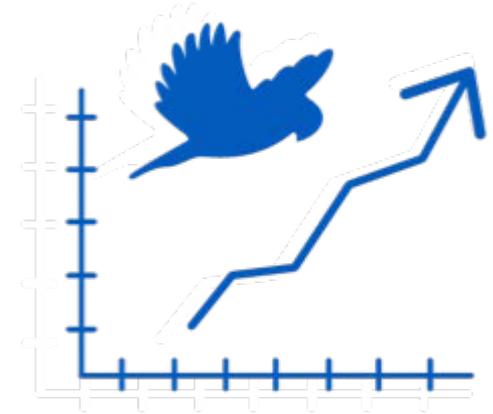
- Founded in 1973
- 160+ employees
- Offices in the United States, Brazil, Mexico, Philippines, Indonesia & China
- \$25.8 million budget
- Have worked in 55 countries
- Social marketing for positive change



pride

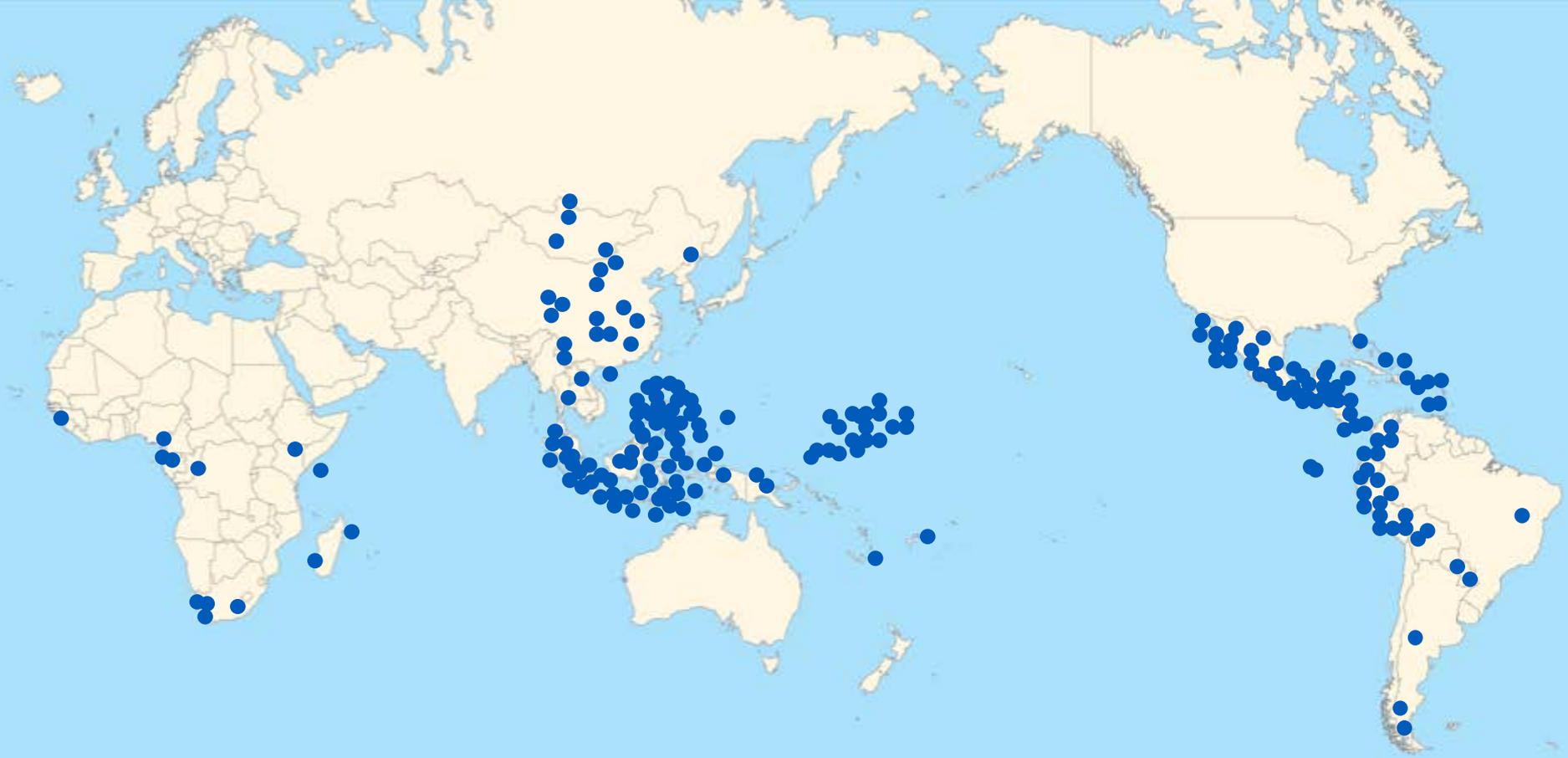


public support



change





301 Pride campaigns launched

55 countries • 273 local partners

Fish Forever—a global program

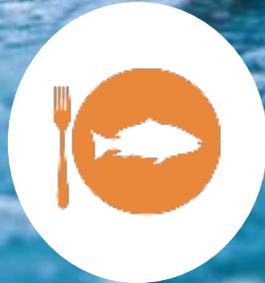


- 60+ communities in five countries are engaged in establishing our model.
- Partners include national fisheries, environment and planning agencies, as well as regional and local government units.
- Supported by Waitt Foundation, Packard Foundation, Nordic Development Fund, Bloomberg Philanthropies, BMUB, USAID, GEF, World Bank and others.
- Total global investment over \$50 million USD.

Small-scale fisheries are a big deal



livelihoods
90% fishing jobs



food security
2.9 billion people



habitat
Biodiversity hotspots

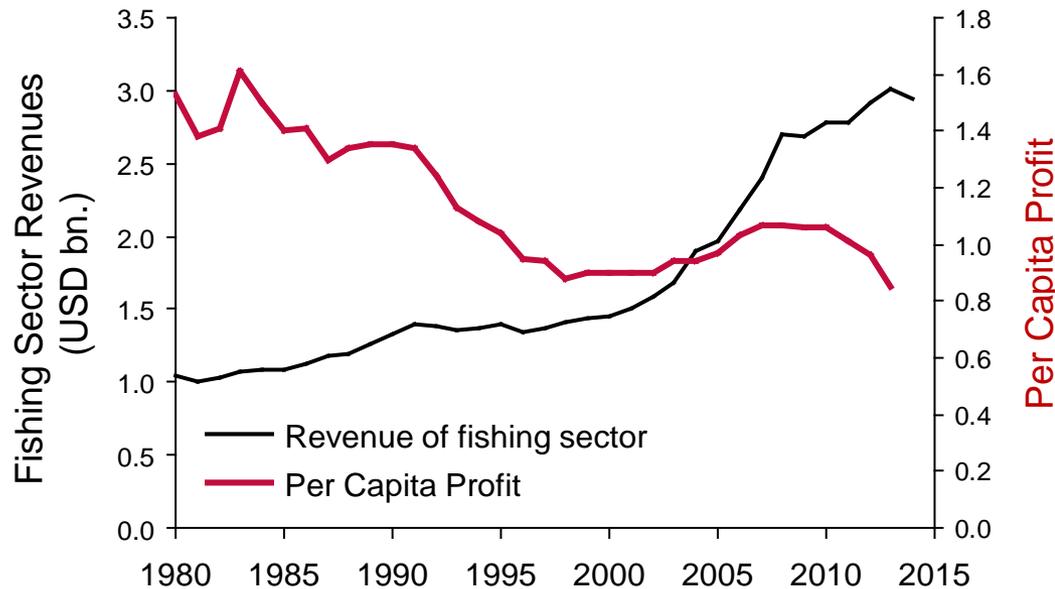


climate
Adaptation and
resiliency

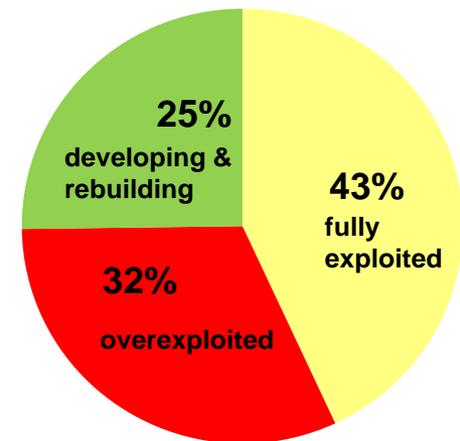
Fishing levels in the Philippines are unsustainable

75% of fish stocks are either fully or overexploited, and profits are declining.

Revenues and Profits of the fishing sector¹



Fisheries Stock Status (2010)²



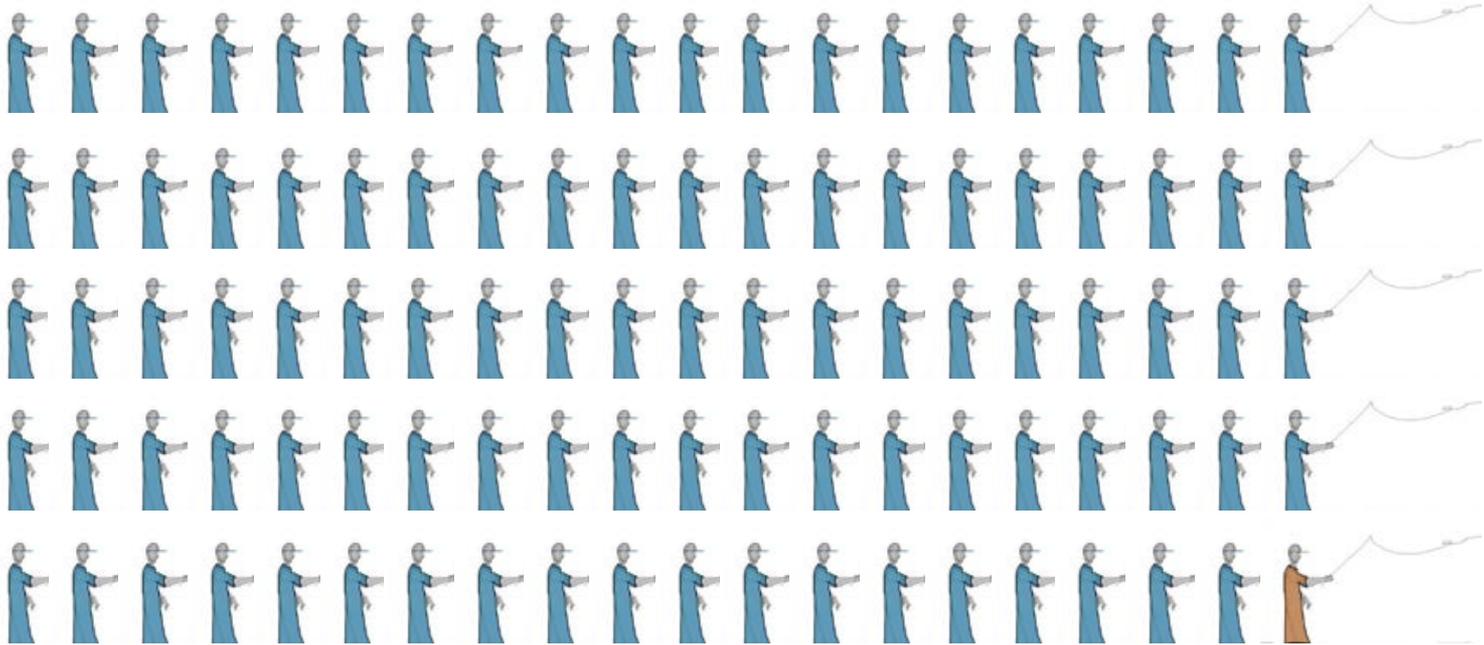
¹ Philippines Statistics Authority (catch data) and Sea NAPC calculation (no effort units provided);

Per Capita Profit is expressed in terms of Catch per Unit Effort

² Pie chart based on Searoundus.org

Overfishing threatens millions of local jobs

99% of Filipino fishers are local fishers, and they land 49% of total catch.

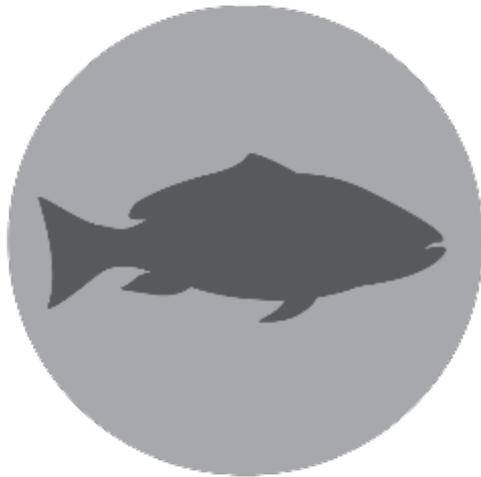


1.3 million small-scale fishers **vs** 16,500 commercial fishers

Overfishing jeopardizes food security

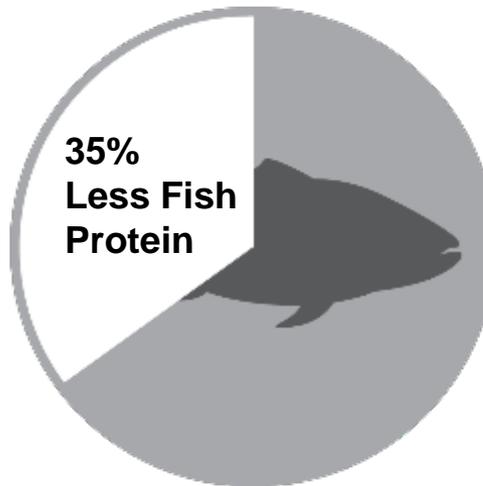
A growing population and declining supply may result in a 55% decrease in protein availability by 2030 as compared to the year 2000, when fish supply peaked.

Year 2000



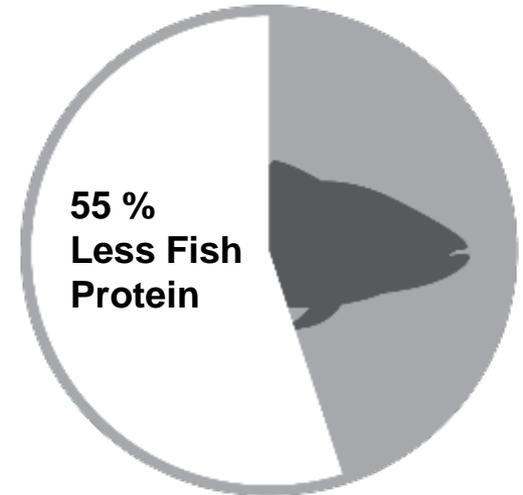
34 kg/person/year

Today



22 kg/person/year

Year 2030



15 kg/person/year

Fish Forever in the Philippines

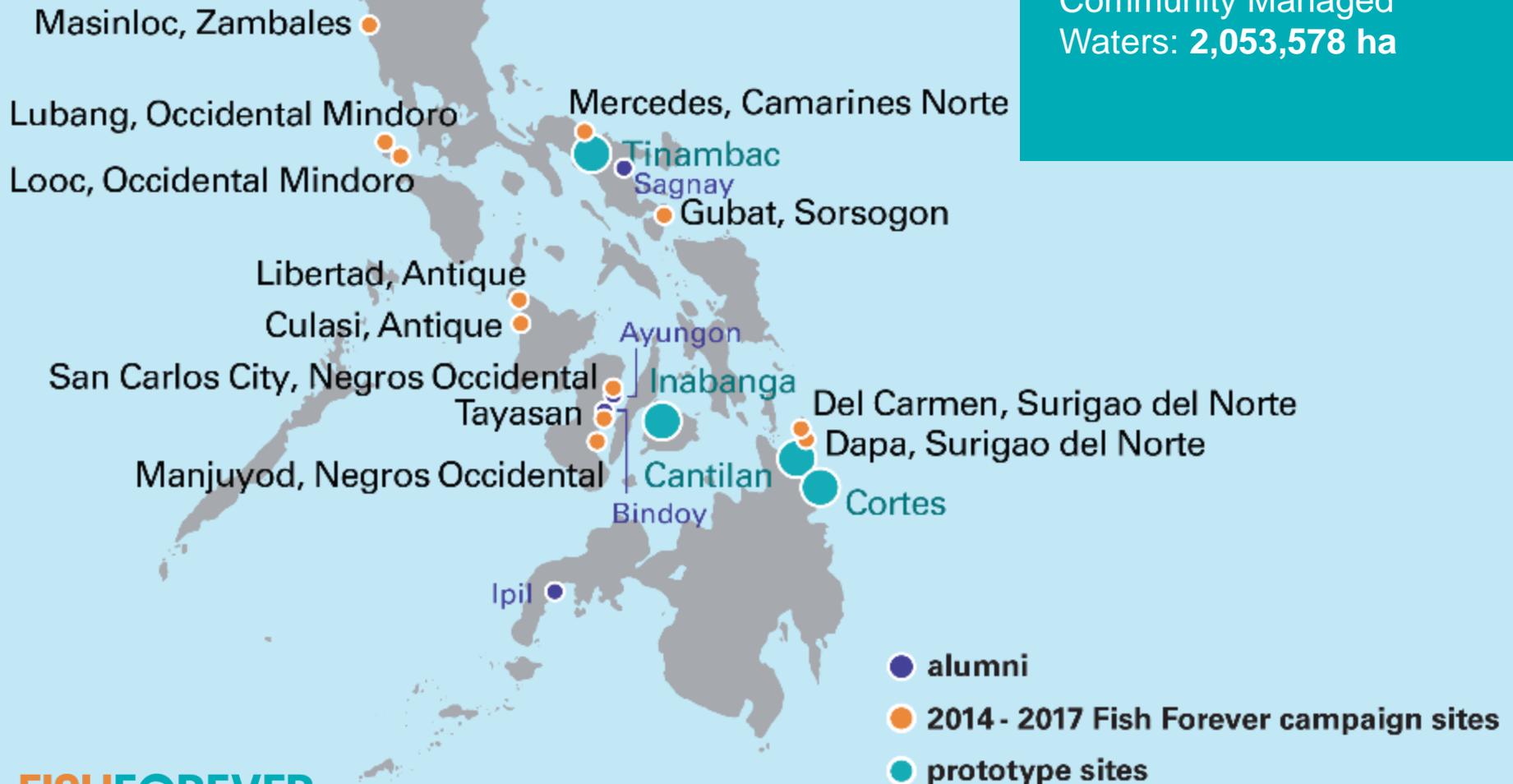
Current Sites: 20

Targeted Fishers: 44,360

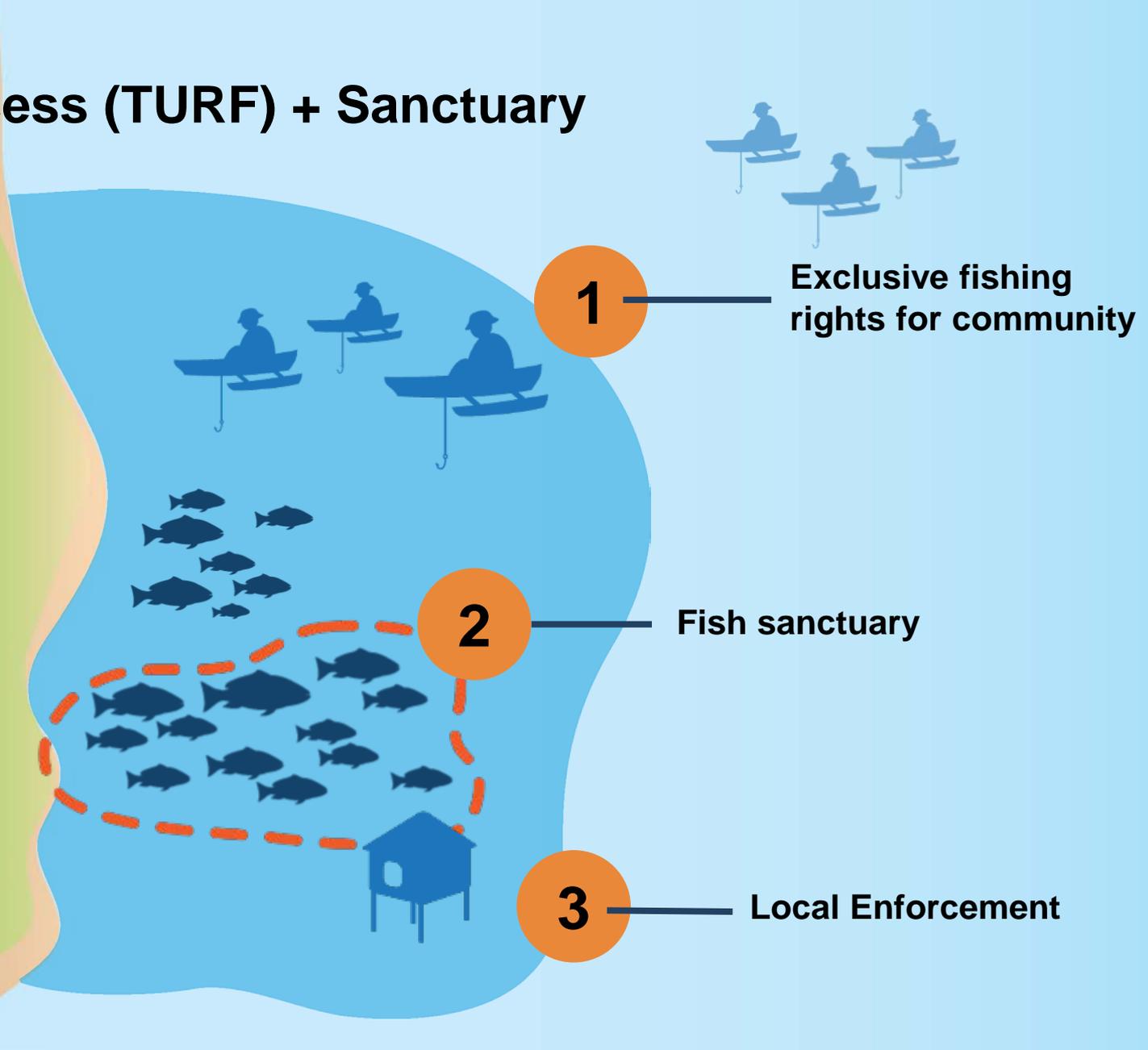
Proposed TURF Area:
40,842 ha

Reserve Area: 6,130 ha

Community Managed
Waters: 2,053,578 ha

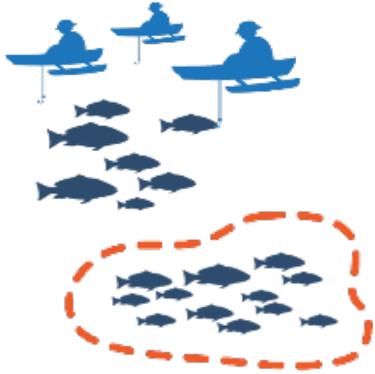


Managed Access (TURF) + Sanctuary



Fish Forever is on-track to demonstrate lasting results

Program Delivered

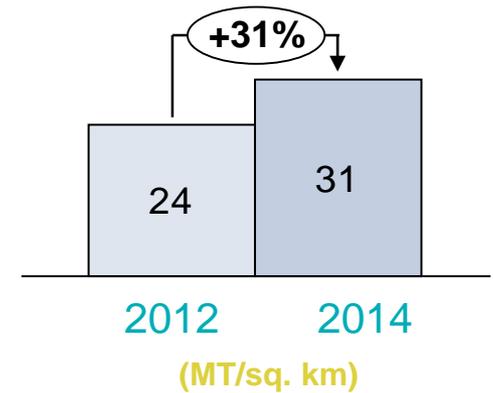


Behavior Changed

- 30% increase in hours spent guarding sanctuaries
- 77% decrease in illegal fishing in sanctuary



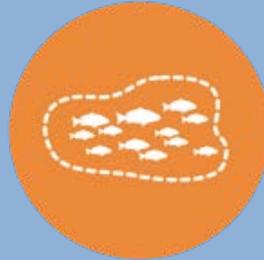
Fisheries Improved



Fish Forever's success relies on enforcement



Exclusive access
rights to community
fishers



Fish recovery
zones



Enforcement and
compliance at the
community level

Enforcement Chain

Education &
Outreach

Systematic
Training

Surveillance
and
Interdiction

Prosecution
& Sanction

Long-term
Financing

Fish Forever and PDS in the Philippines



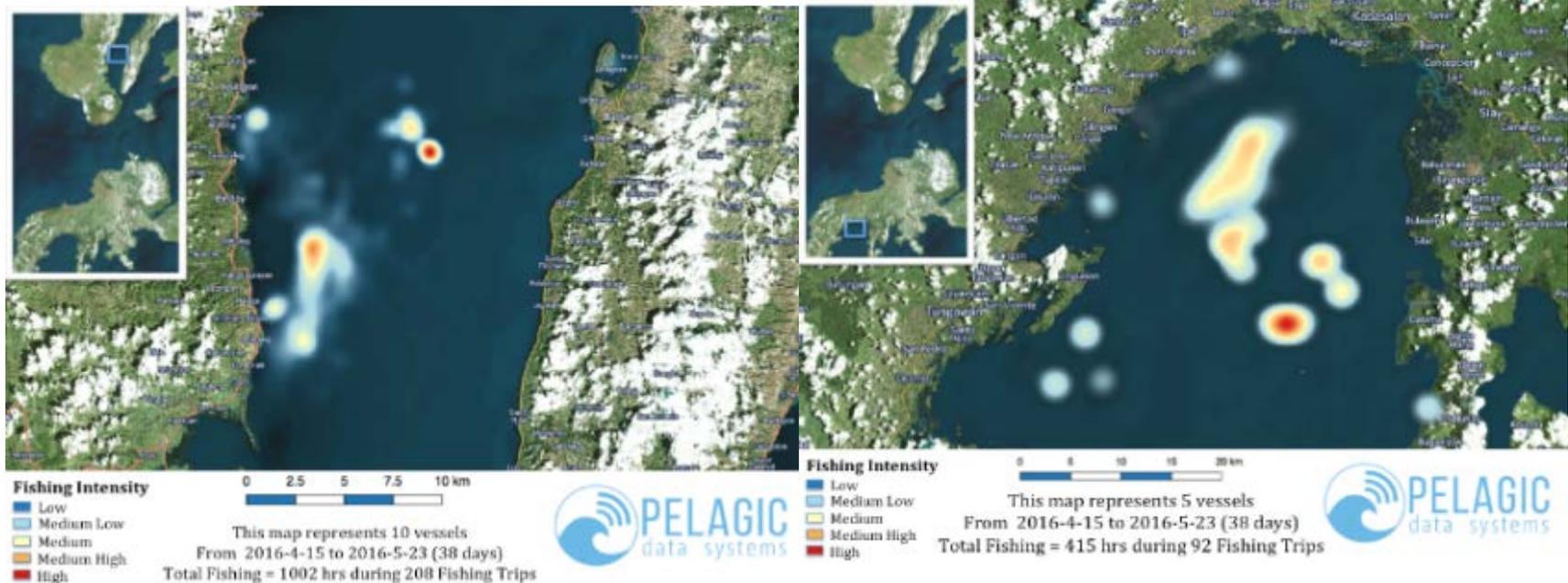
Fish Forever and PDS: Pilot goals and challenges

Pilot 1.0

- Data collection
- Intervention efficacy

Future pilots

- Expand coverage and link with certification scheme
- Challenges
 - Financing at scale
 - Incentivizing participation
 - Single link in enforcement chain



Strengthening Enforcement and Management with PDS



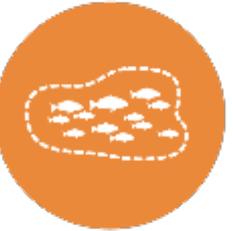
Measuring Effort

- Pairing trip information with catch surveys allows us to calculate catch per unit effort (CPUE)
- Result: Better management decisions and ability to evaluate the impact of intervention



Validating Participatory Management Design

- Mapping boat patterns will confirm more qualitative data about fishing patterns
- Result: TURF boundaries that respect the socioecological system



Rewarding Sustainability

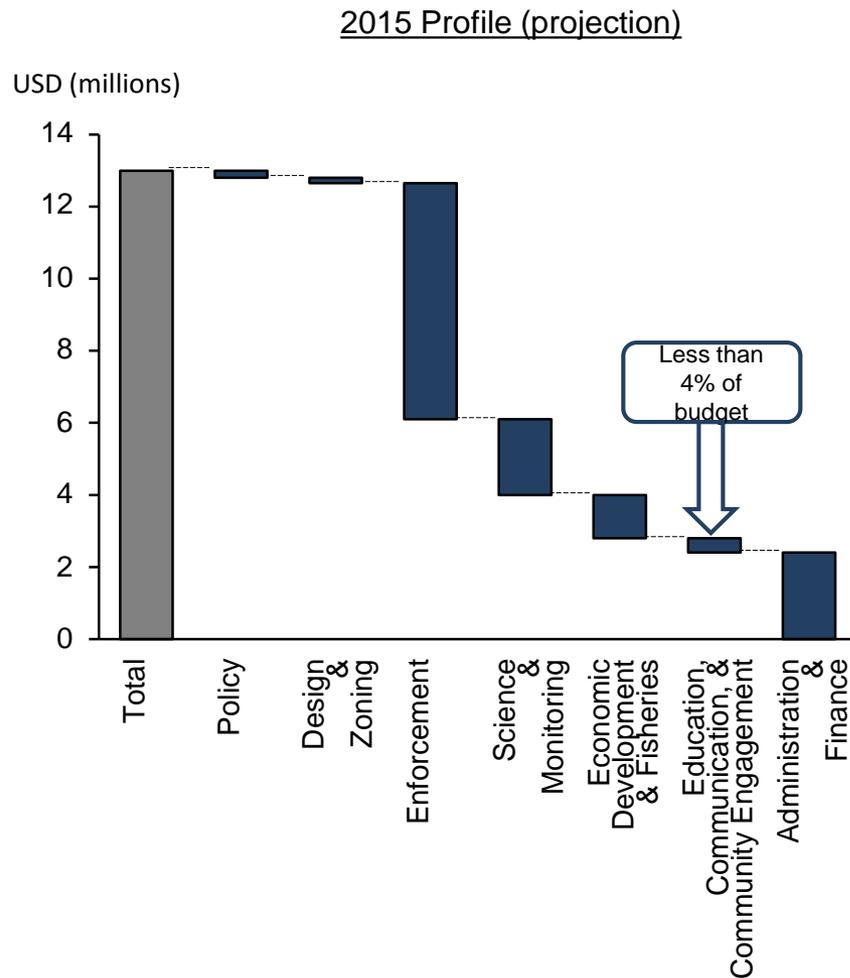
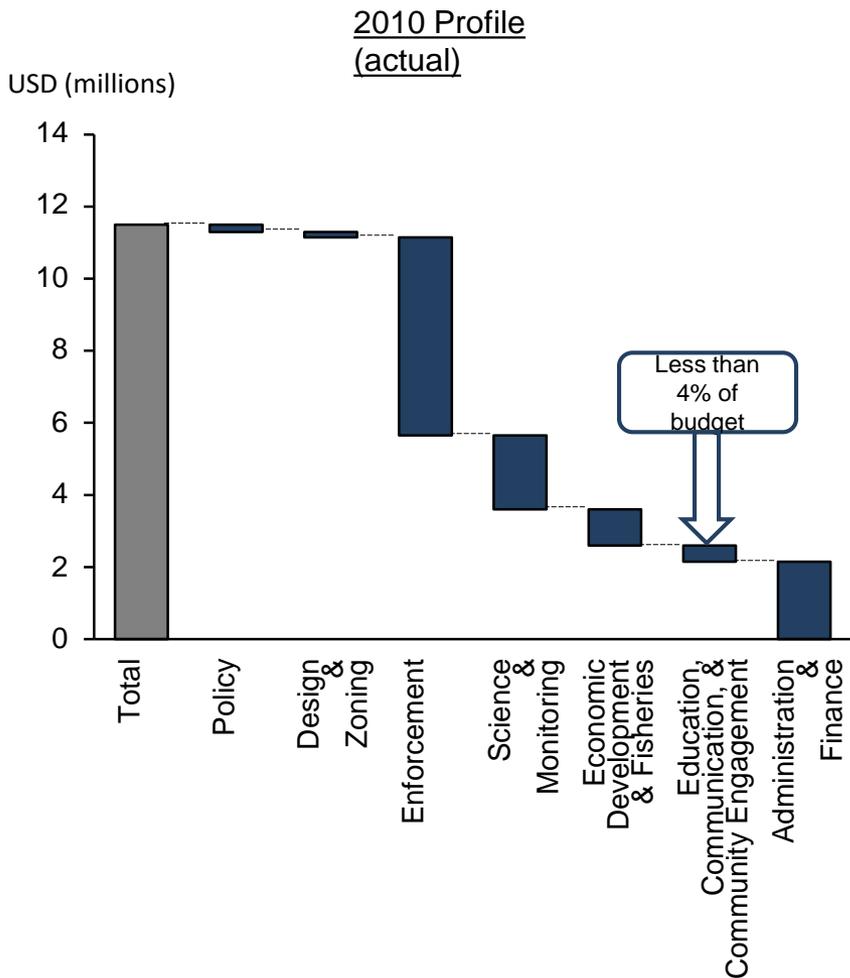
- Linking a boat's spatial movement to its catch is foundational to sustainable certification
- Result: Consumers trust the certification scheme



Real-time Enforcement

- Providing real-time information on boat movements allows local authorities to target limited resources
- Result: Fewer intra-community infractions, or inter-community if applied regionally

NGOs and governments often under-invest in community outreach in favor of enforcement, science and monitoring



Implications of Improved Small-scale Fisheries Management

Illegal, Unregulated and Unreported (IUU) Fishing

- Improving local enforcement can prevent international pirate fishing in the coastal zone.
- Regulated and reported domestic fisheries are necessary to sustain benefits of preventing international pirate fishing.
- Addressing unregulated and unreported domestic fisheries is equally important for ending overfishing globally.

Fulfilling International Commitments

- Sustainable Development Goals (United Nations)
- Global Food Security Act (H.R. 1567)





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