

# BESTTuna

Benefiting from Innovations in Sustainable and Equitable Management of Fisheries on Trans-boundary Tuna's in the Coral Triangle and Western Pacific

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# WWFs 'broken' tuna triangle ... ... with some help from Bailey and Sumaila

Top Consumers: Japan, US, EU, China, Thailand



PHILIPPINES

?

PACIFIC OCEAN

Tuna spawning areas

\$



Local Fishing Communities

INDONESIA

PAPUA  
NEW GUINEA

SOLOMON  
ISLANDS

VANUATU

FIJI  
ISLANDS

AUSTRALIA

NEW  
CALEDONIA

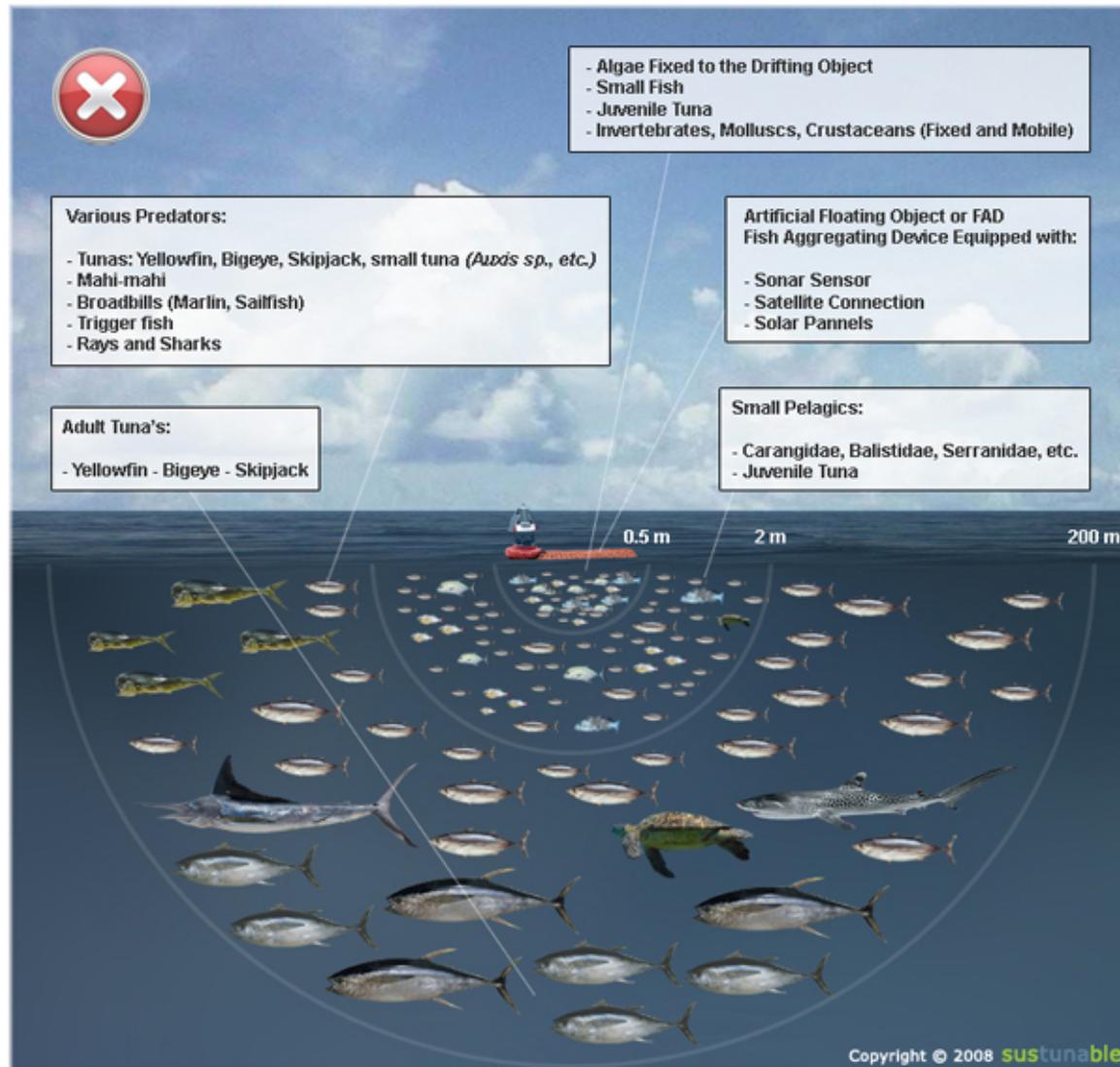


Fishing  
Fleets

# Tuna Think Tank

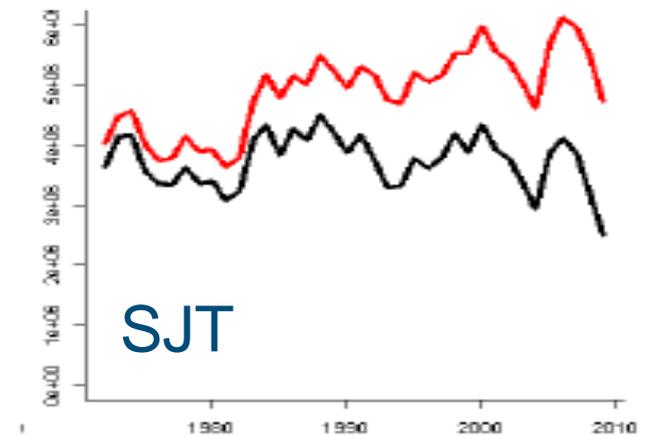
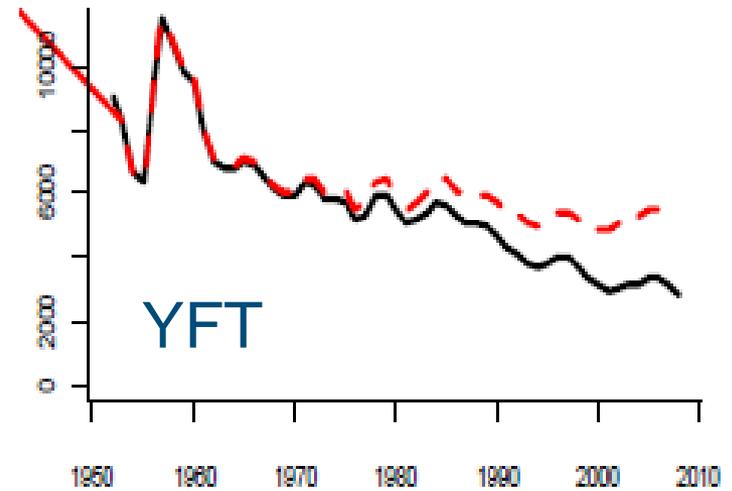


# Fish Attraction Devices (FADs)



# The juvenile question

- SJT vs. YFT and BET
  - YFT and BET overexploited while SJT remains underexploited
  - 3-4% juvenile catch in SJT fishery
  - But high volume of large and medium purse seiners means high effort



# The juvenile question

- Domestic vs. international fisheries
  - 80% of catch in sovereign waters – but 60% by foreign fleets
  - Important food security issue – especially in Indonesia
  - Domestication and expansion policies throughout region
  - Conserving juveniles in localities = benefits for region as a whole



# Global trade

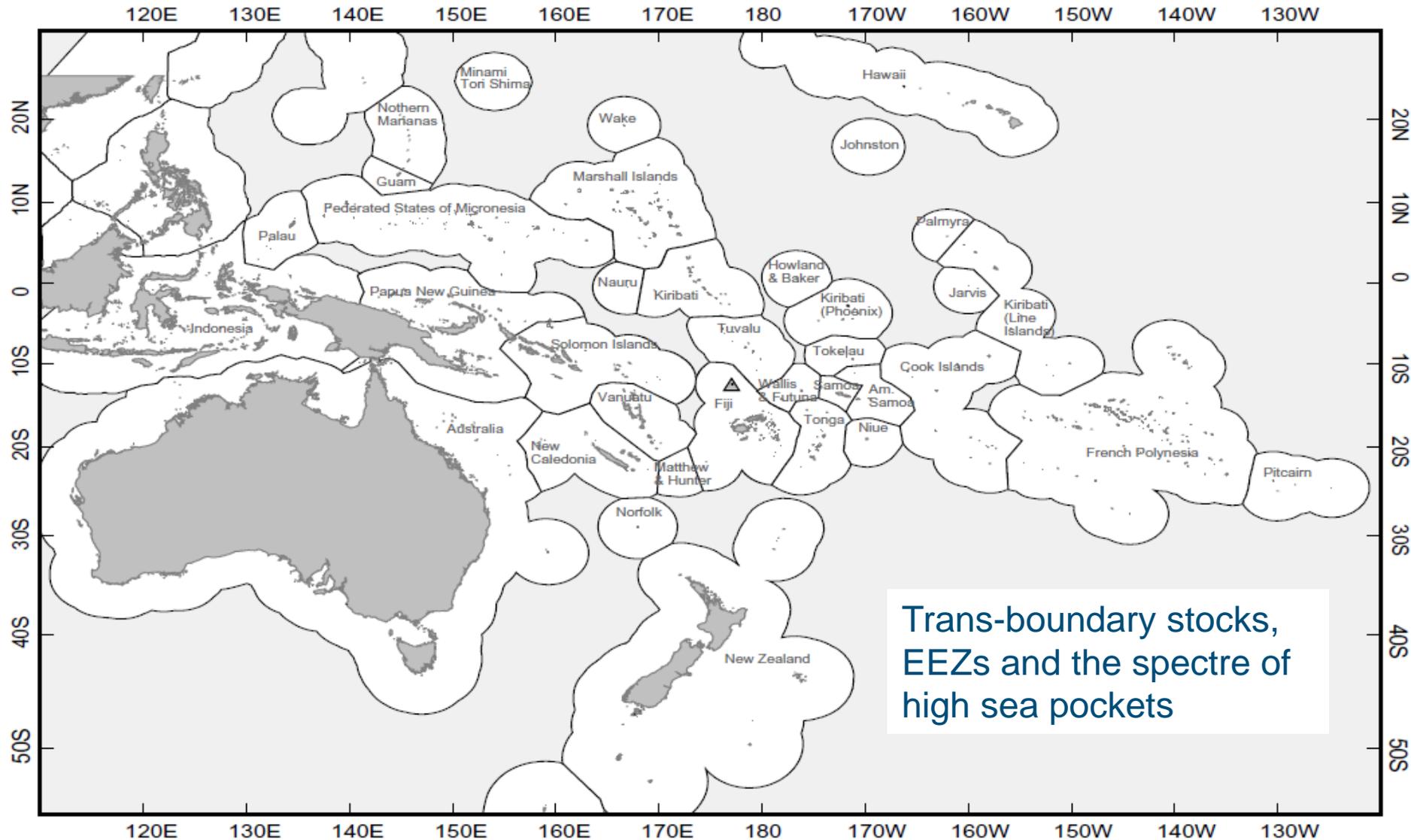


## Value chains

- Global value chains – sashimi and canned – 9% of world fish trade
- Western Pacific countries only 2-5% of total value of US\$3 billion
- Between 0.1% and 37% of GDP
- 75% of canning chain controlled by 5 companies (ISSF members)
- Tariffs and trade agreements

See Barclay 2007; Parris 2010

# State-based governance



# State-based governance

- RFMO ineffective?
  - Balance healthy SJT fishery with overexploited YFT and BET
  - Open ocean purse seiners (long liners) vs. domestic purse seiners
  - Sovereign control over EEZs and RFMO control over open ocean
  - Distant water fleets want equal regulation in and out of EEZs

See Langley et al 2009; Parris 2010; Barclay 2010



# Tuna governance

- Increasing domestic control and improving access agreements may increase wealth, but in terms of sustainability ...
  1. No guarantee that wealth from tuna will be reinvested in sustainable management
  2. No consideration of how states can utilize existing raft of market based approaches to incentivize a shift to sustainable fishing practices



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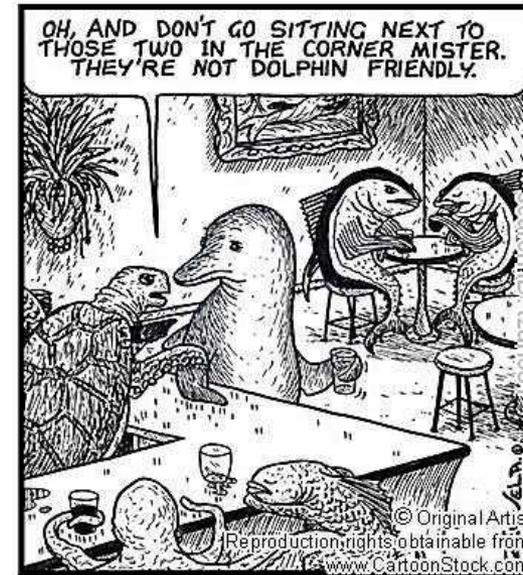
# Innovative governance arrangements

## ■ Brand strategies

- Fish4Ever, Sustunable, ISSF
- 'Dolphin Safe'

## ■ Retail strategies

- Latent sustainable purchasing for home brands (~30% of market)
- 'Pole and line'



The tuna retailers league table 2008



\*Click for more information

# Innovative governance arrangements

- Third party certification
  - PPP - PNA countries and Pacificall by MSC assessment
  - Waters hold 50% of skipjack stocks
  - ~15% of world tuna
  - State – market interplay



# 'Incentive-based' approaches?



- Different ideas on the drawing board ...
  - Fund to reward crews or vessels with least juvenile catch
  - Vessel days scheme in the PNA
  - Tax on juvenile catches
  - A Tuna Credit system?
  
- Range of scales, from fishing association, to countries and the region as a whole.

# A tuna credit system?



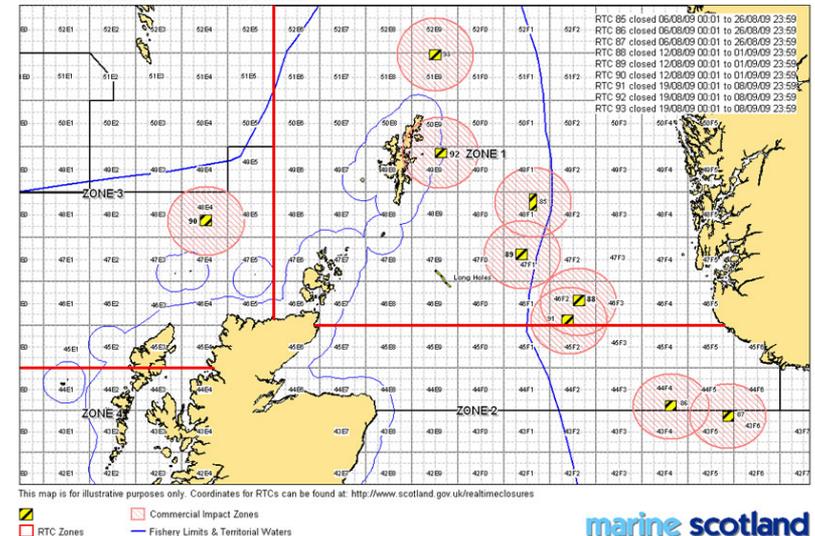
## Distinguishing characteristics:

1. Re-distribution mechanism - pricing mechanism for ES
2. Goal orientation – *not* catch allocation
3. Incentive – ‘payoff’ for predetermined behaviour

## Some cases to explore:

1. Japanese tuna association
2. West Coast US quota purchases
3. Scottish cod real time closures
4. Californian wetland compensation

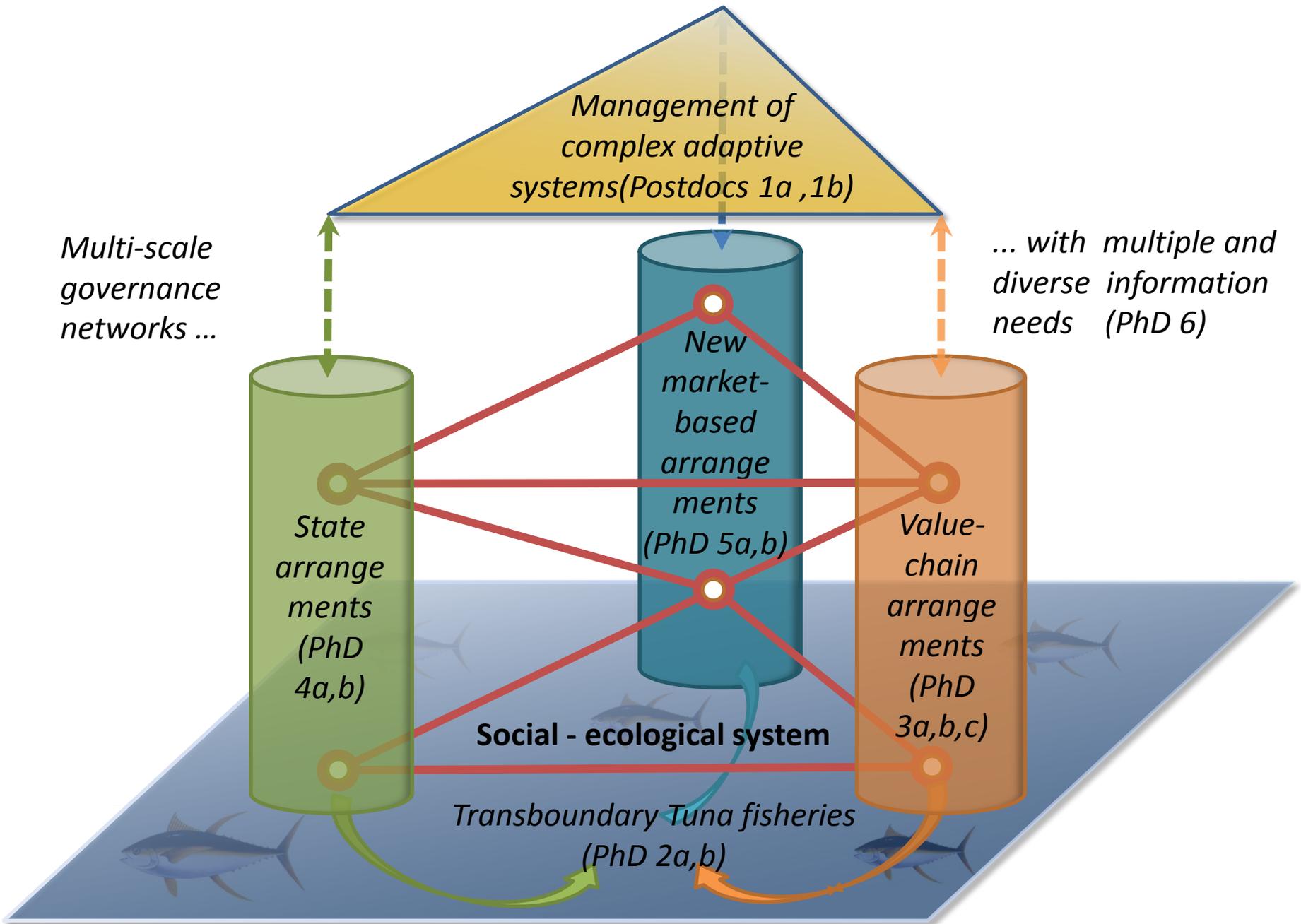
Current Real Time Closed Areas



# Programme objective

To understand the complex social-ecological interactions in tuna fisheries and a design of effective and equitable governance arrangements to achieve sustainable tuna management in the Coral Triangle and Western Pacific, and ...

... Develop an effective global long-term science-governance network for sustainable tuna fisheries in the Coral Triangle and Western Pacific, which generates, disseminates and uses knowledge on tuna ecology, tuna fisheries behavior, and tuna fisheries management and governance.



# Sub-objectives

*Sub –project 1 (2 Postdocs):* New theoretical insights and conceptualizations of governing complex adaptive social-ecological systems

*Sub-project 2 (2 PhDs – 6 MSc):* Juvenile tuna ecology and fisheries in relation to Fish Aggregating Devices

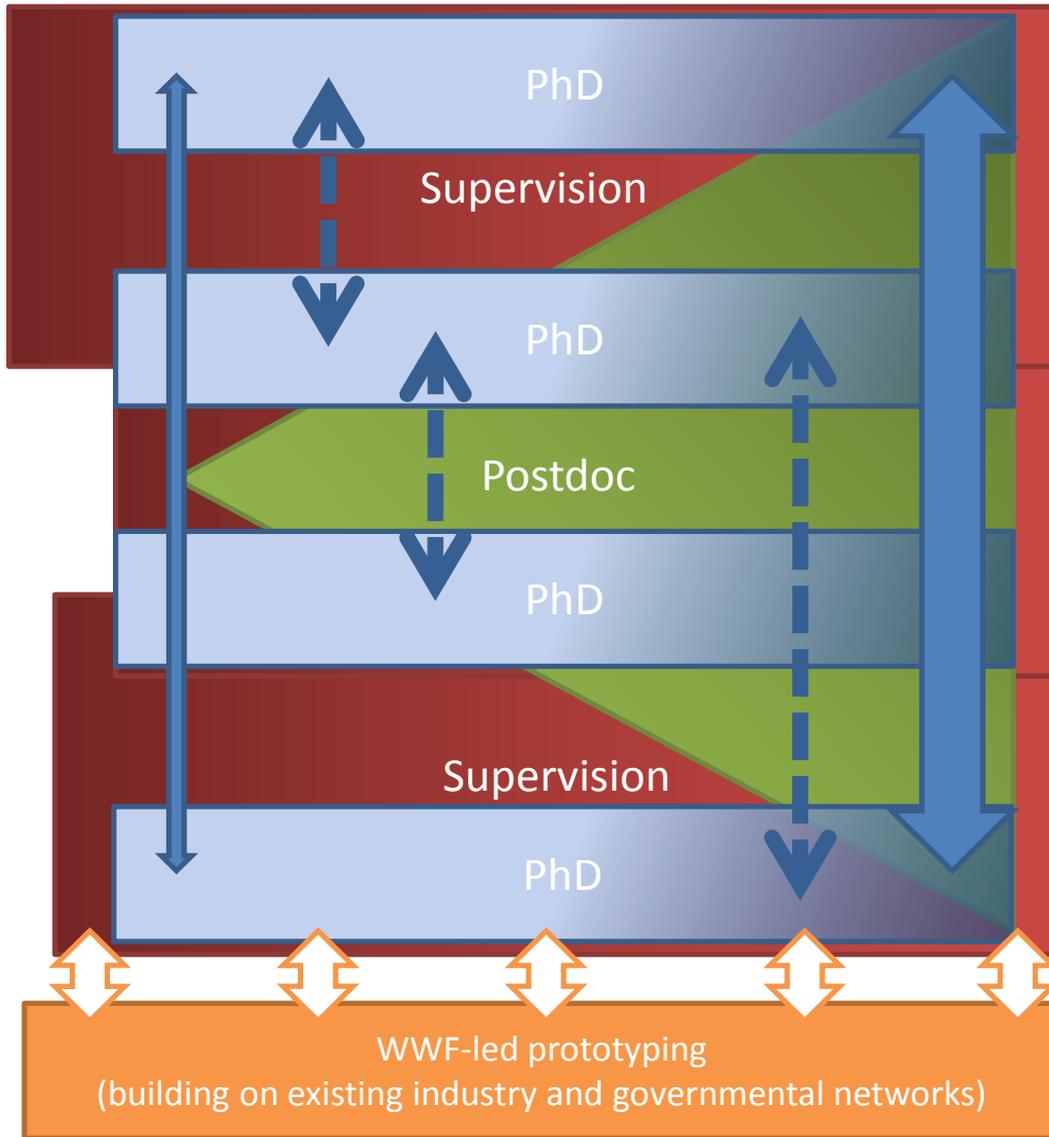
*Sub-project 3 (3 PhDs – 9 MSc):* Global market-based brand, retail strategies and third party certification

*Sub-project 4 (2 PhDs – 6 MSc):* Effectiveness and distributional consequences of multi-level state based tuna governance arrangements

*Sub-project 5 (2 PhD – 6 MSc):* Innovative market-based approaches for incentivizing sustainable tuna fishing practices

*Sub-project 6 (1 PhD – 3 MSc):* Information-based tools, methods, systems and strategies for sustainable tuna governance

# Integration model



## Role

*Supervision:*  
Integration and development of theory

*Postdoc:*  
Integration and development of theory

*PhD*  
Integration of methods and concepts

*Industry/WWF:*  
Facilitate science-policy interaction with industry and states

## Output

Review and position papers

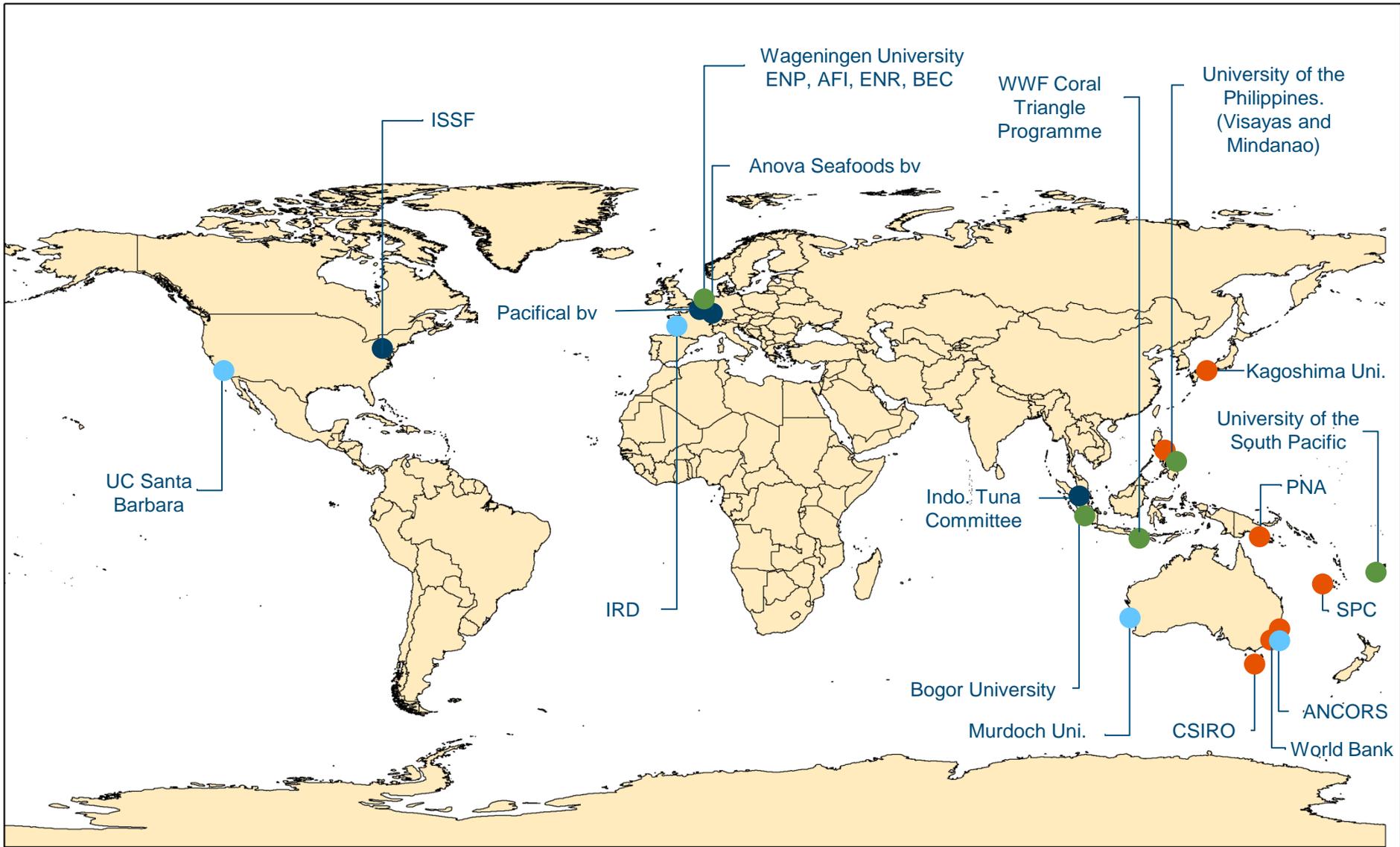
Theoretical discussion papers

Empirical/model case studies

Prototype development and advocacy

Year 1

Year 5



UC Santa Barbara

ISSF

Pacificall bv

IRD

Wageningen University  
ENP, AFI, ENR, BEC

Anova Seafoods bv

WWF Coral Triangle Programme

University of the Philippines.  
(Visayas and Mindanao)

Kagoshima Uni.

University of the South Pacific

Indo. Tuna Committee

Bogor University

Murdoch Uni.

PNA

SPC

CSIRO

ANCORS

World Bank

- Research consortium
- Extended research network
- Industry and policy partners
- International advisory board

# Expected results

- Long term output
  - Continued research-advocacy-practice network working for the sustainability of trans-boundary tunas in Western Pacific
- Short to medium term
  - Research programme – ~40 academic peer reviewed articles and 10 PhDs
  - Education development – MSc students and course materials for both WUR and consortium partners