

# Promoting community resource management in Small Island Developing States

Knowledge exchange and information in the  
Locally Managed Marine Area Network



**Hugh Govan**

**LMMA Network**



# However: Coastal fisheries – vital to the people and for national economies

Government revenue

Contribution to GDP

Contribution to nutrition

Relative importance of off-shore and coastal fisheries in terms of types of benefits in the Pacific Islands Region



# What is the problem?

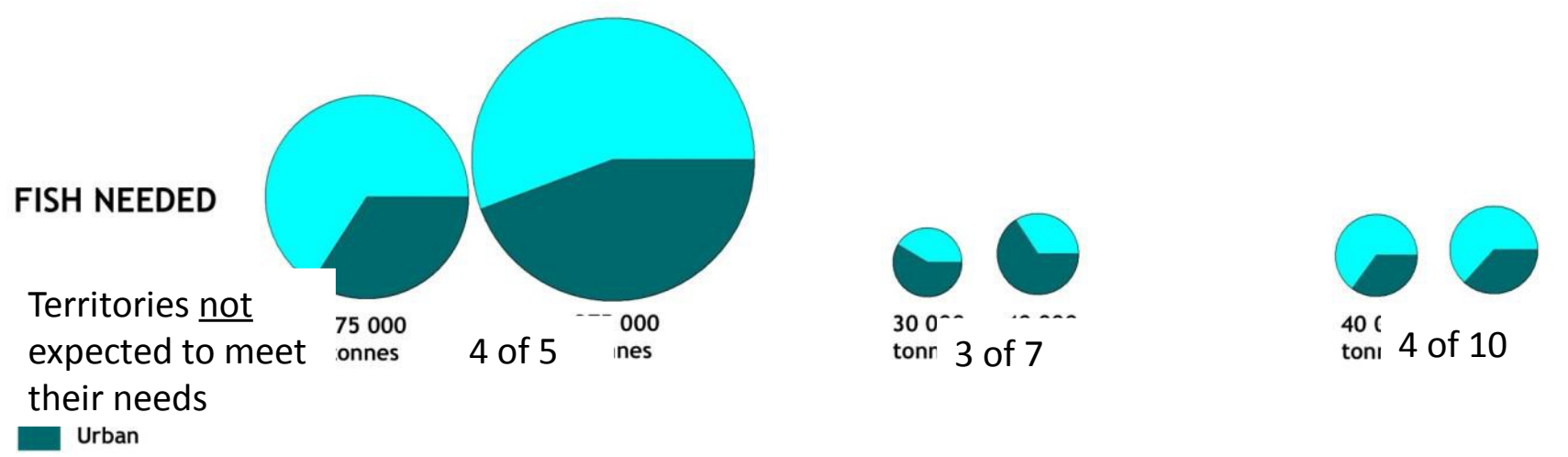
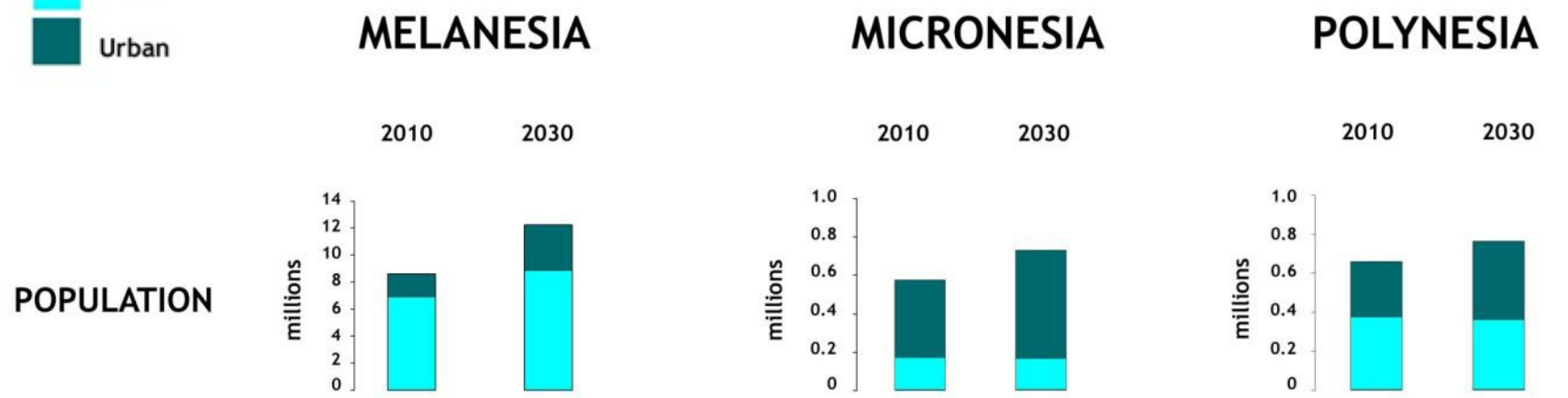


Maiana, Kiribati

# Causes for concern – particularly in Melanesia

- Most commercial invertebrate fisheries are over-exploited e.g. moratoria on sea cucumbers in most countries
- And:

# Causes for concern – particularly in Melanesia

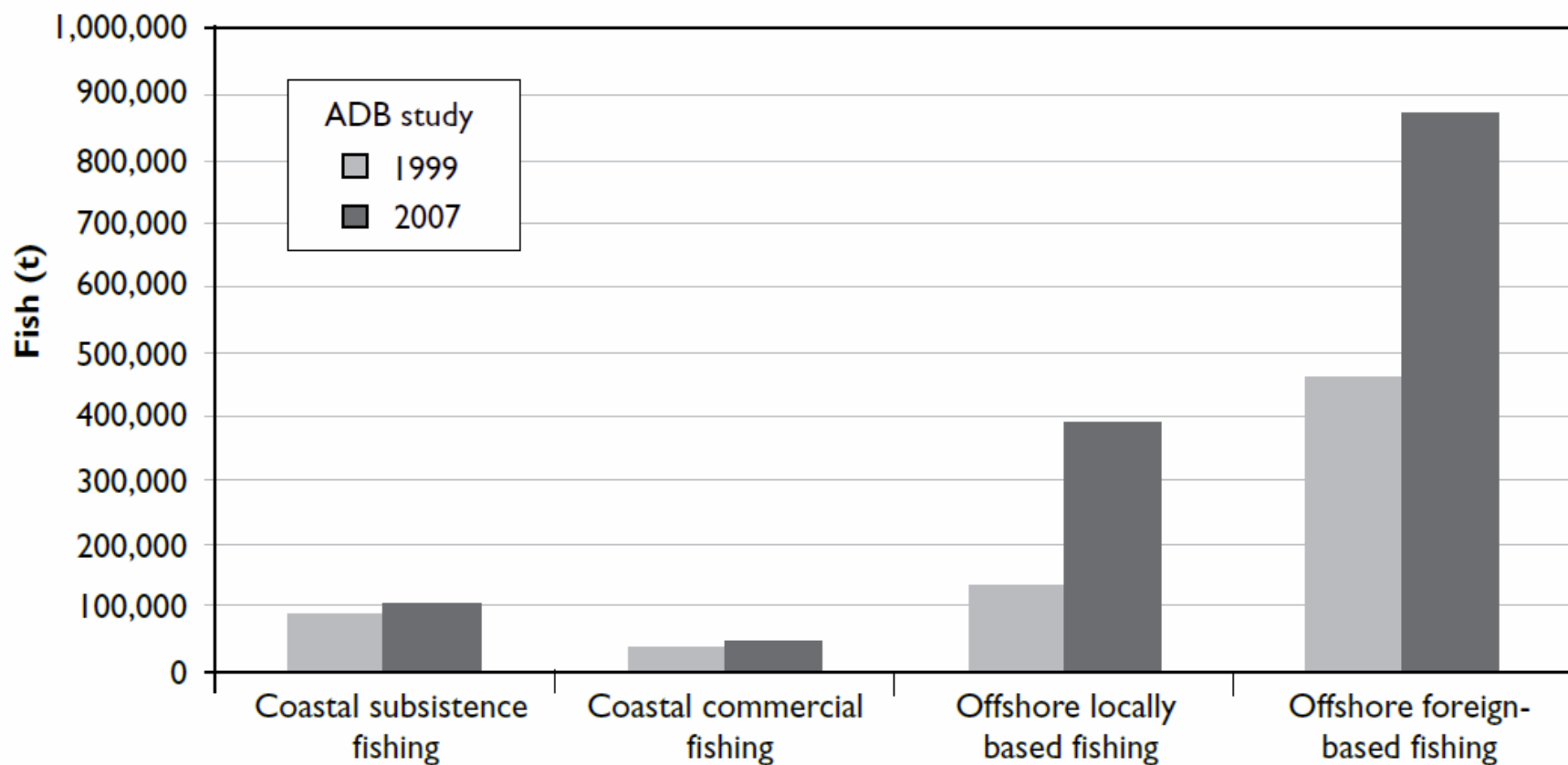






# Much investment in coastal and off-shore fisheries development

UNIT





# What was the proposed solution (in 2000)?

Set up a network to:

- Promote coastal resource management
- Learn what works and why
- Build capacity
- Develop and establish favourable policy



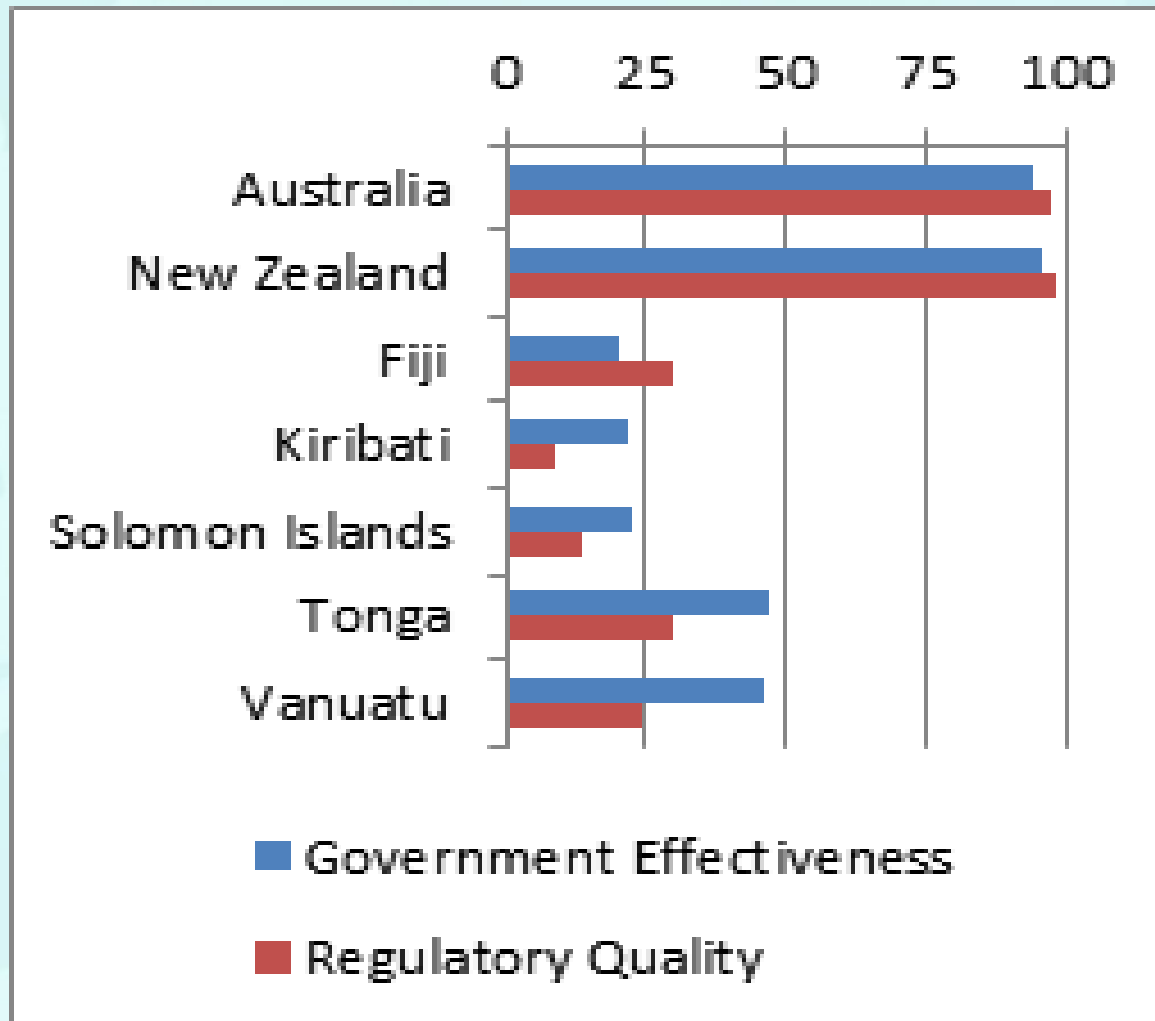
# But first... a key assessment

- Who are the decision-makers?
  - How are decisions made?
- } Governance assessment

then

- What type and form of information is needed?
- How to deliver this info?

# A challenge: Governments – poor regulatory quality and government effectiveness (and \$\$)

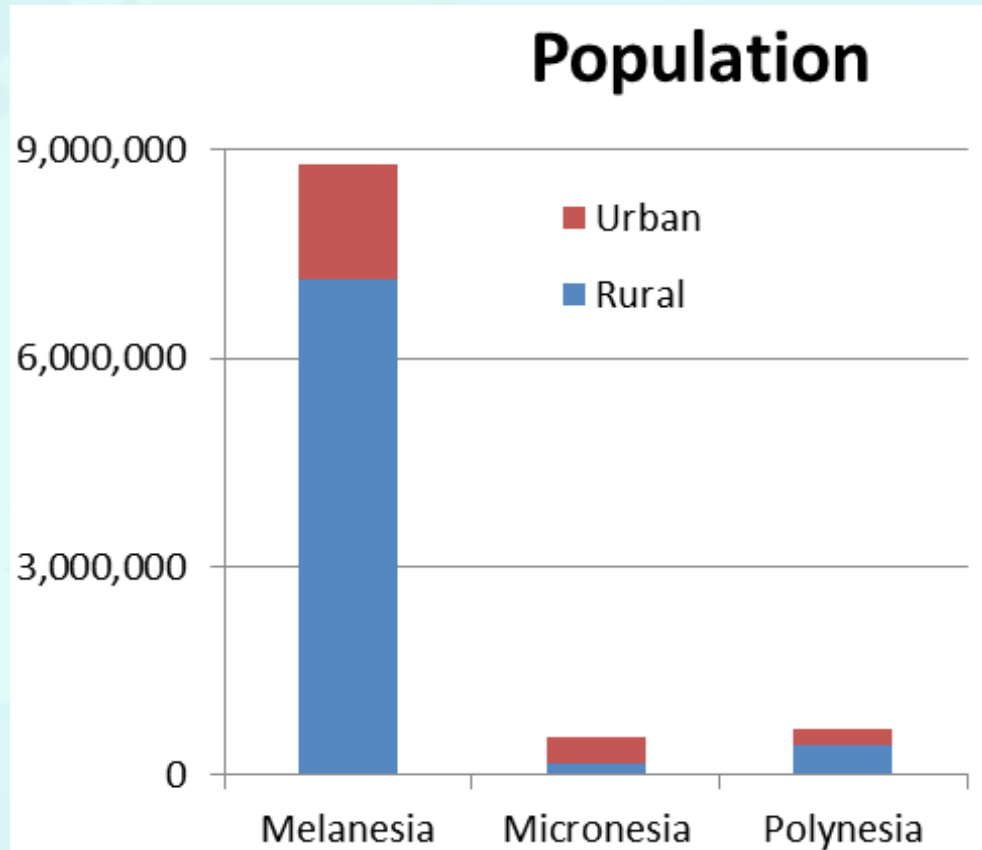


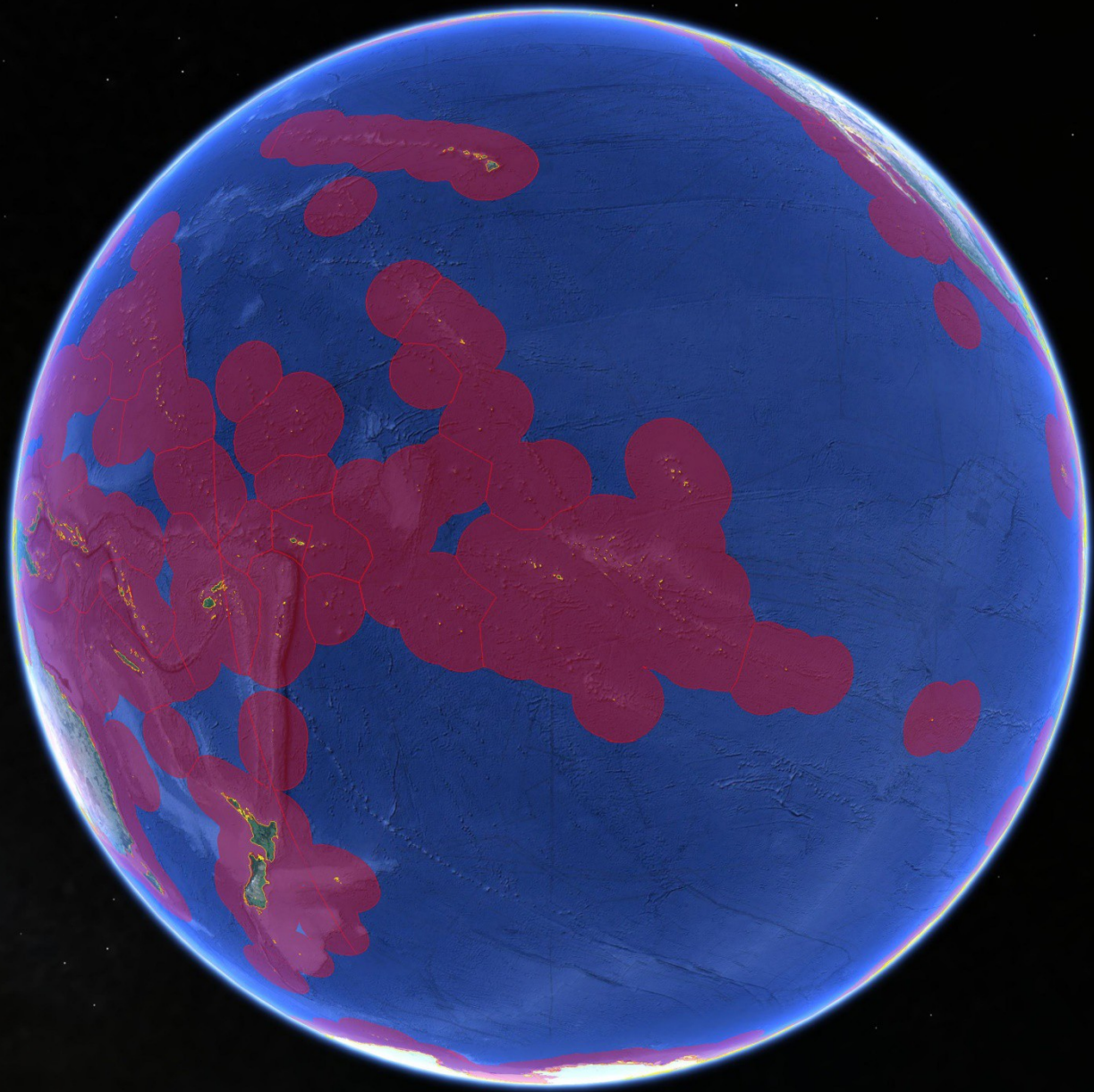
# Low government expenditure on coastal fisheries management

US\$ 200k

US\$ 90k

# Pacific Island population

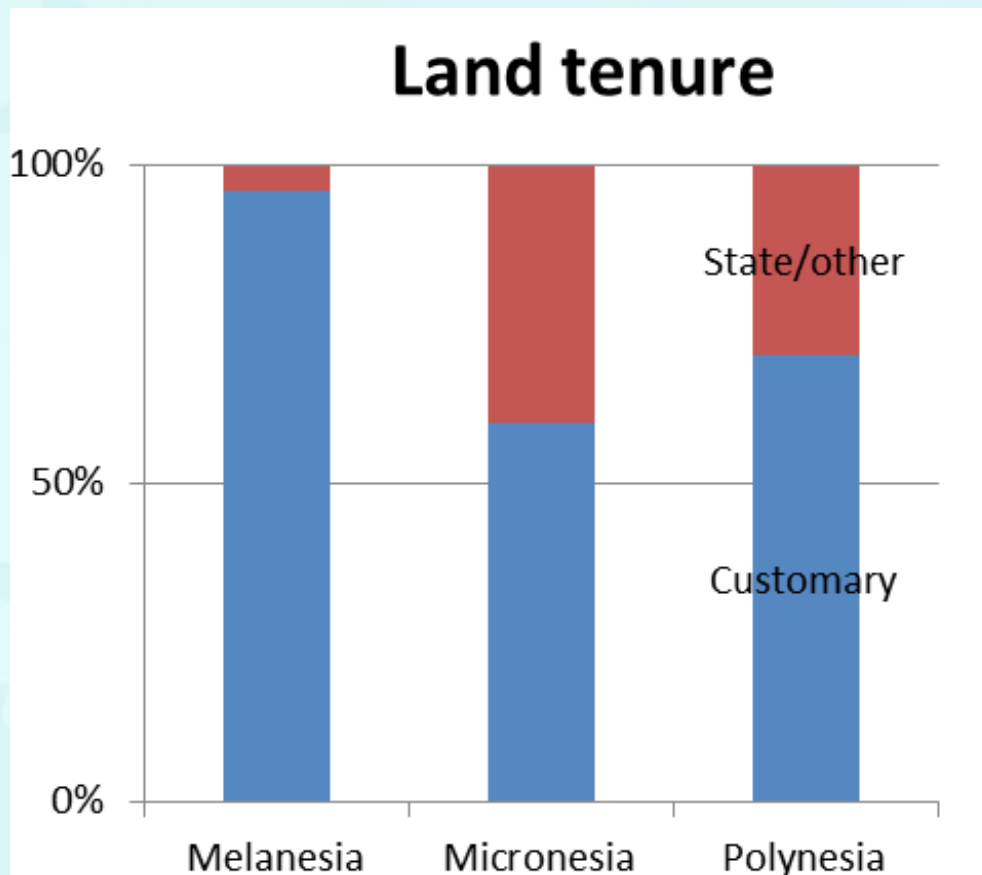






# Pacific Island land tenure

Marine tenure follows similar patterns





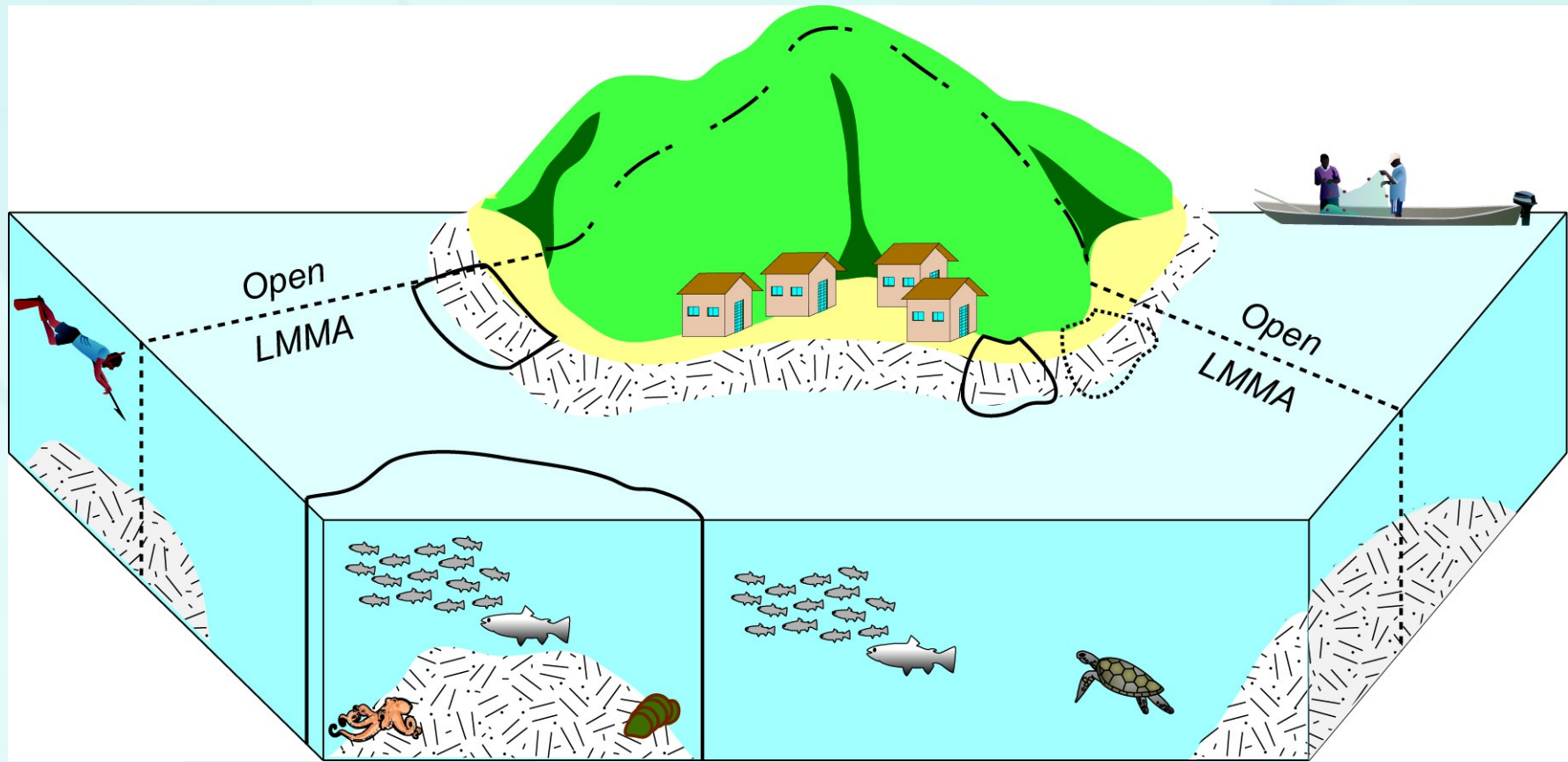
# So...

- Who are the decision-makers?
  - Communities and fishers – local management
- How are decisions made?
  - Locally more than by central government
- What type and form of information?
  - Problem/solutions for local priorities i.e. livelihoods, through local adaptive management



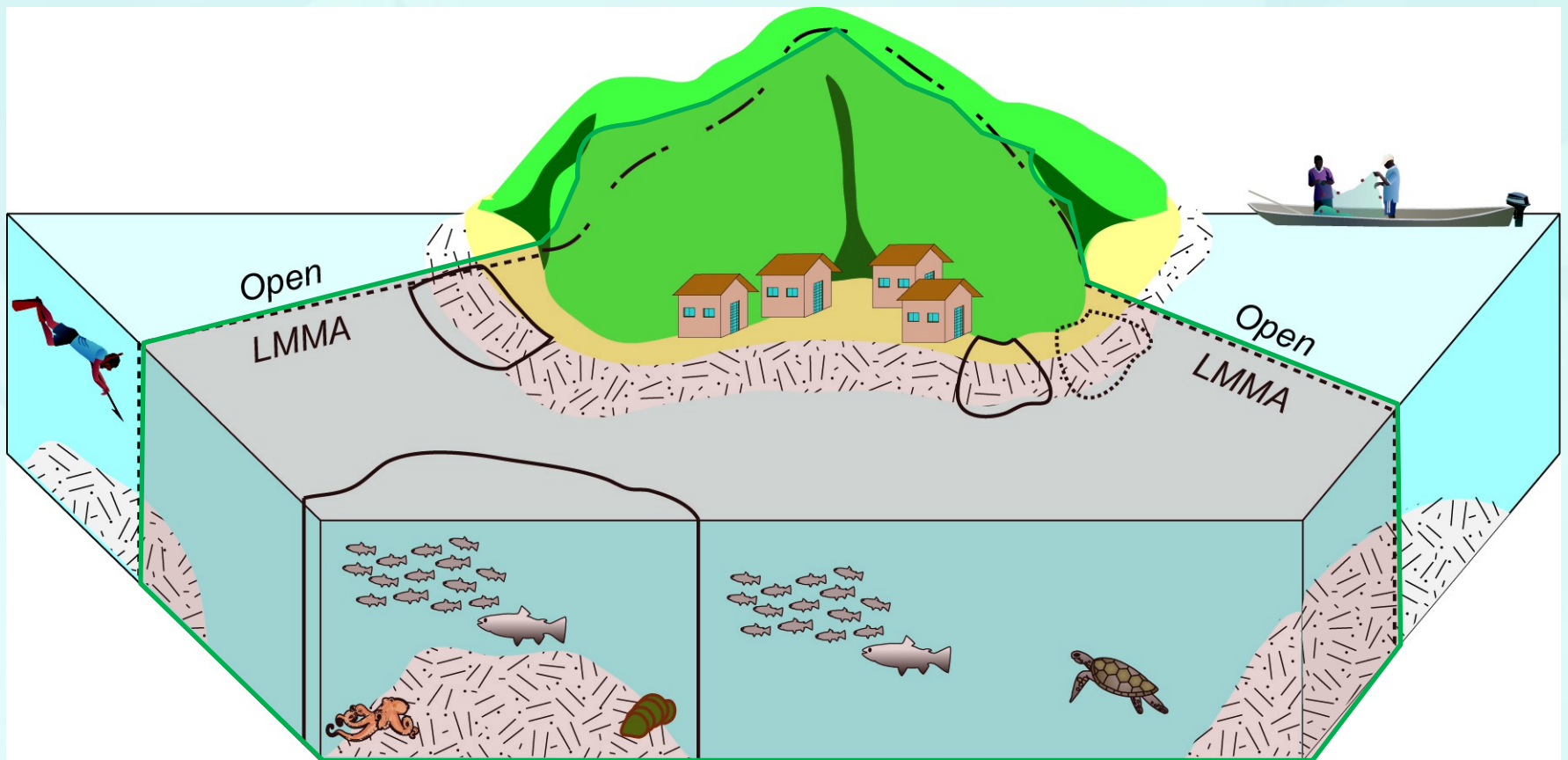
Tarawa, Kiribati

# Locally Managed Marine Areas - LMMAs



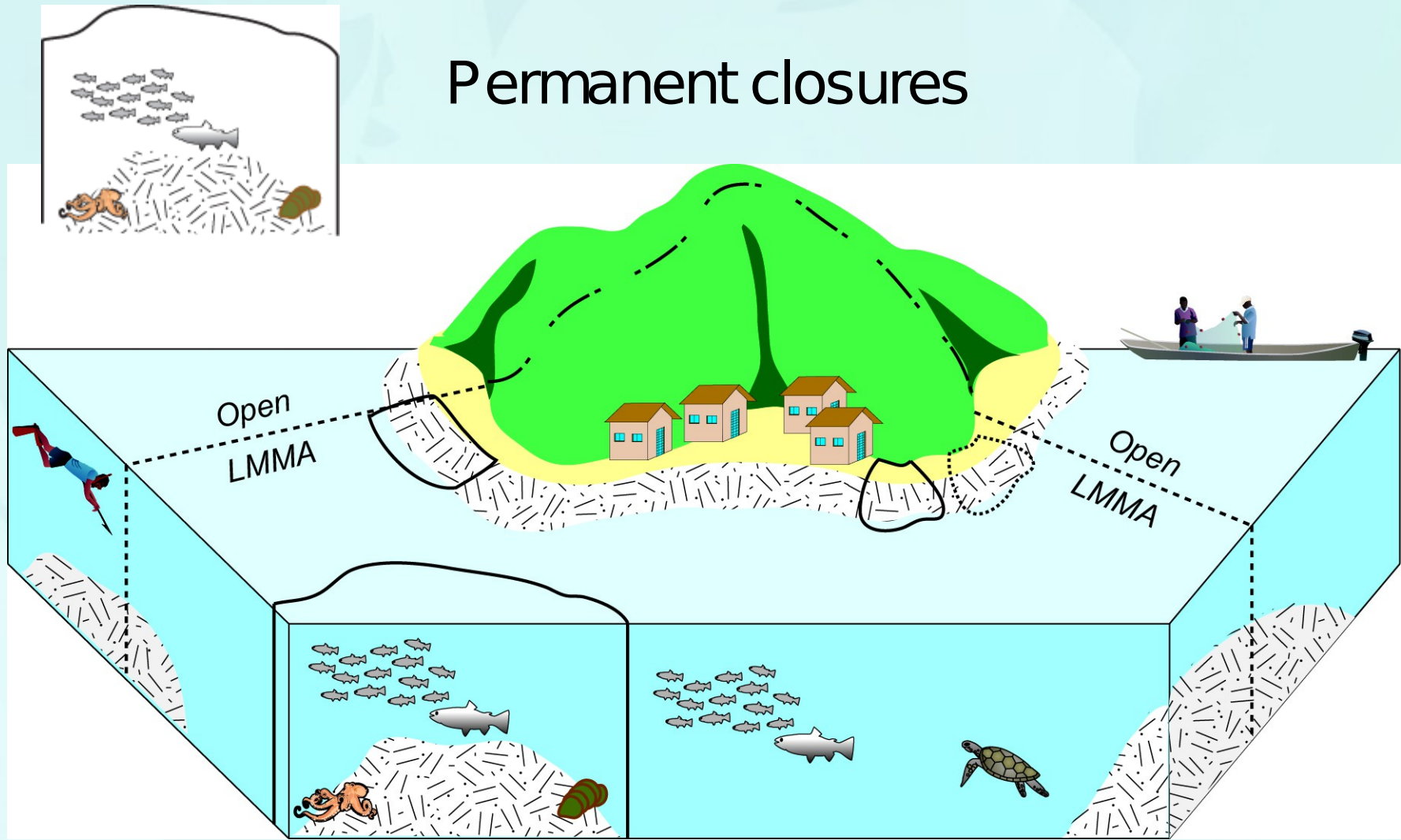
# LMMAs may include

Land, watershed, ridge to reef actions



# LMMAs may include

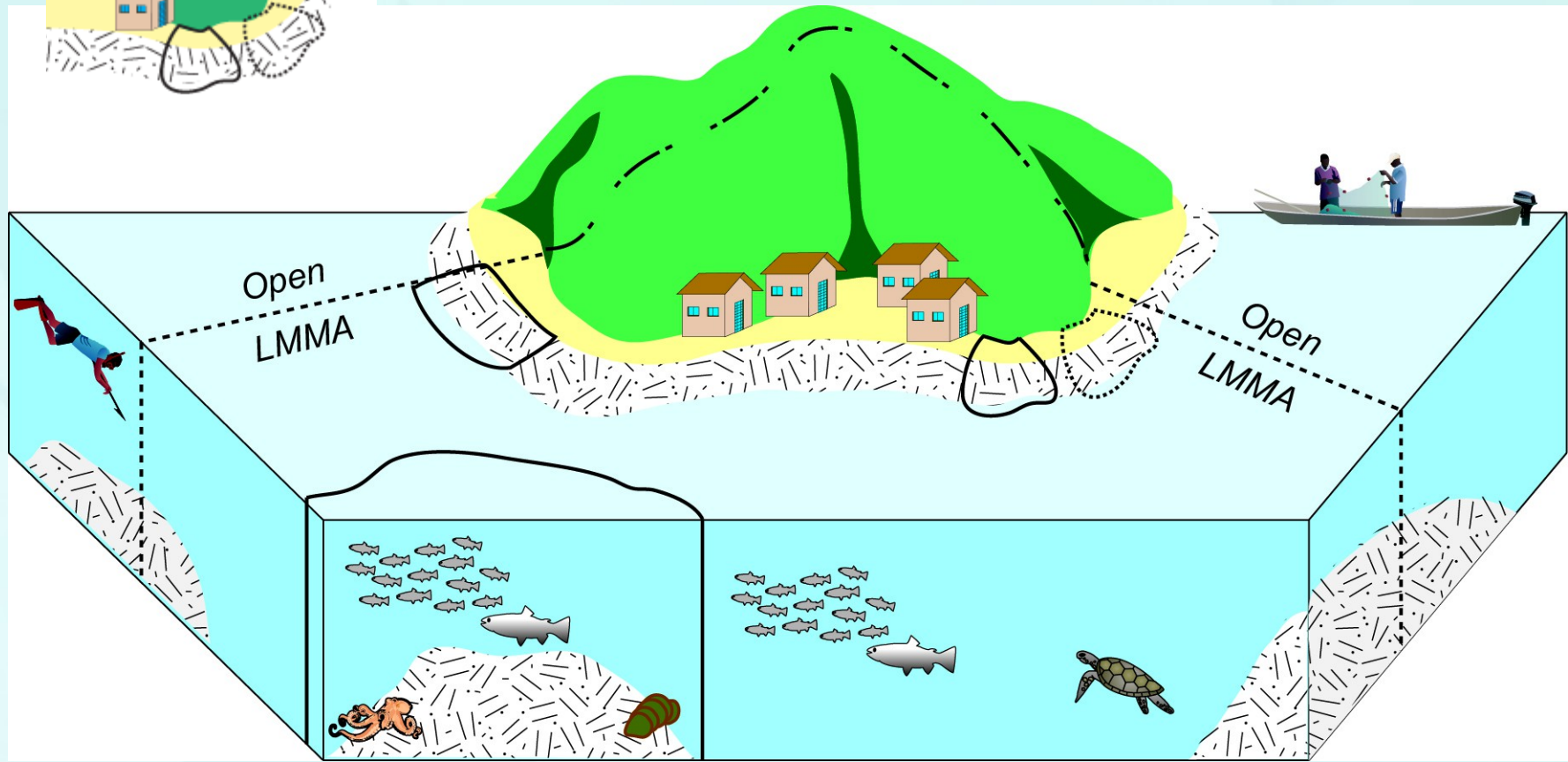
## Permanent closures



# LMMAs may include

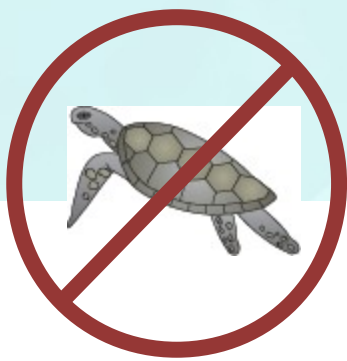


## Periodically-harvested closures

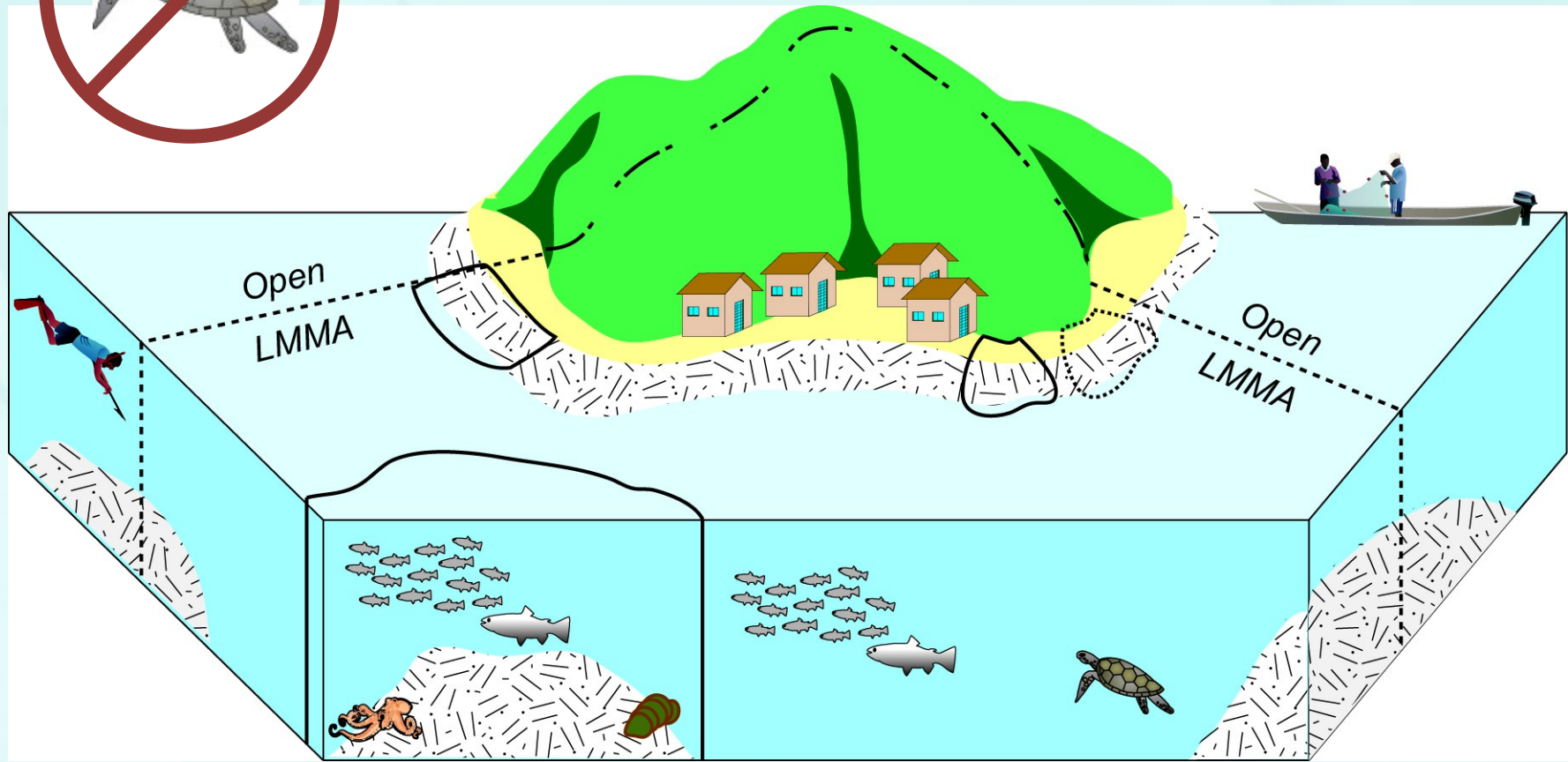




# LMMAs may include



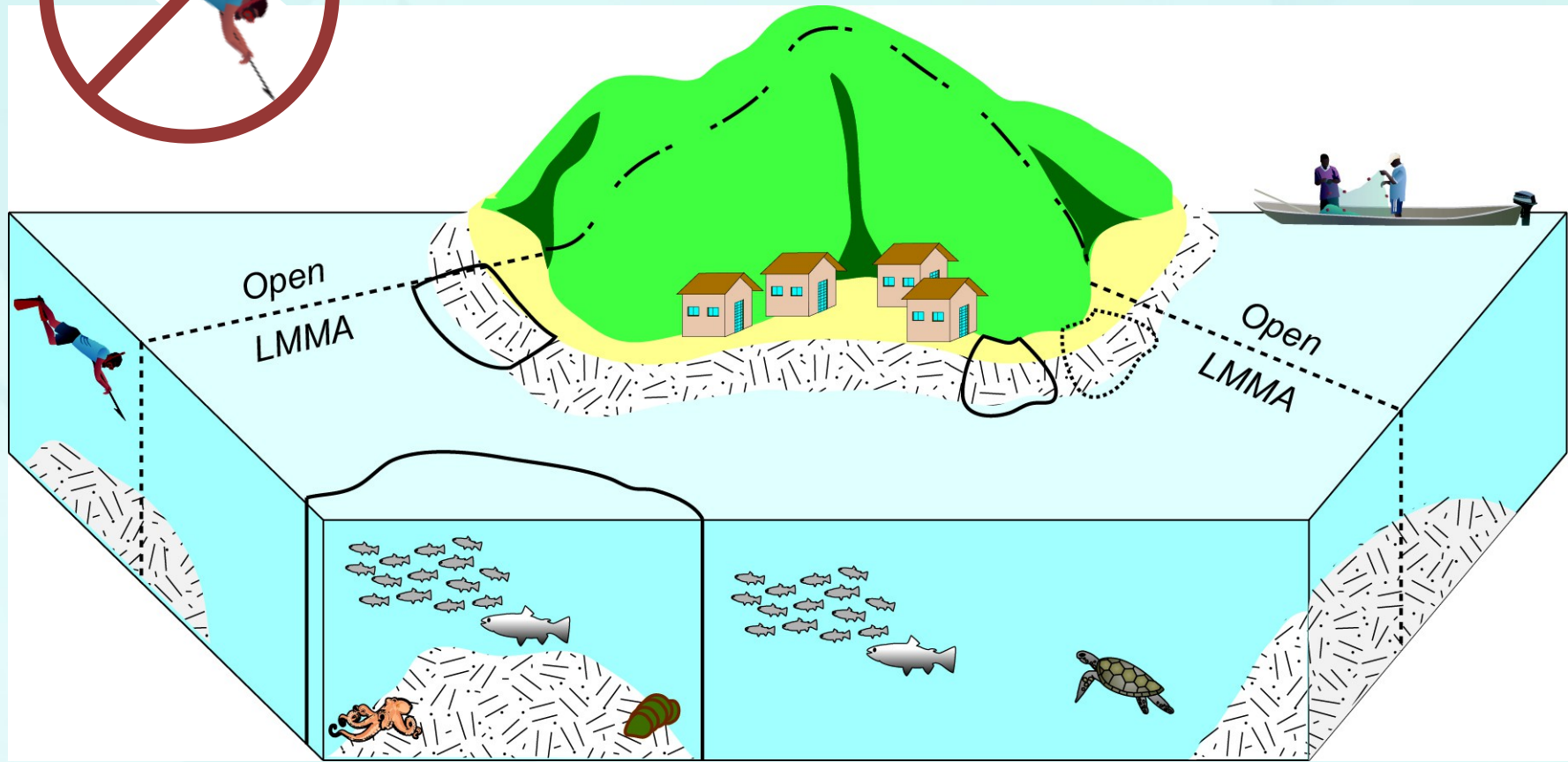
## Species restrictions



# LMMAs may include

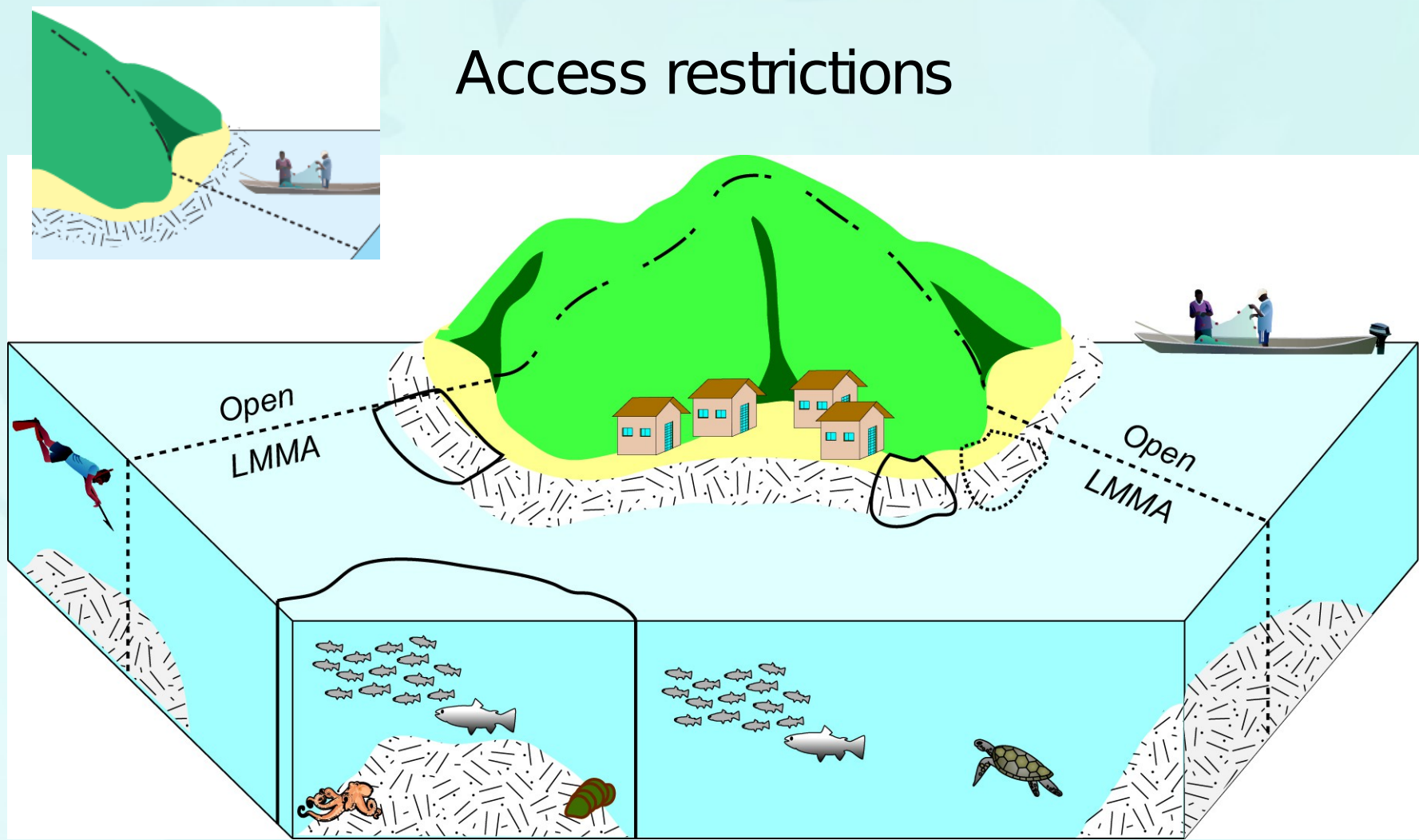


## Gear restrictions



# LMMAs may include

## Access restrictions



# FISHERIES, AQUACULTURE AND MARINE ECOSYSTEMS / PÊCHE, AQUACULTURE ET ÉCOSYSTÈMES MARINS

## Community “adaptive management”

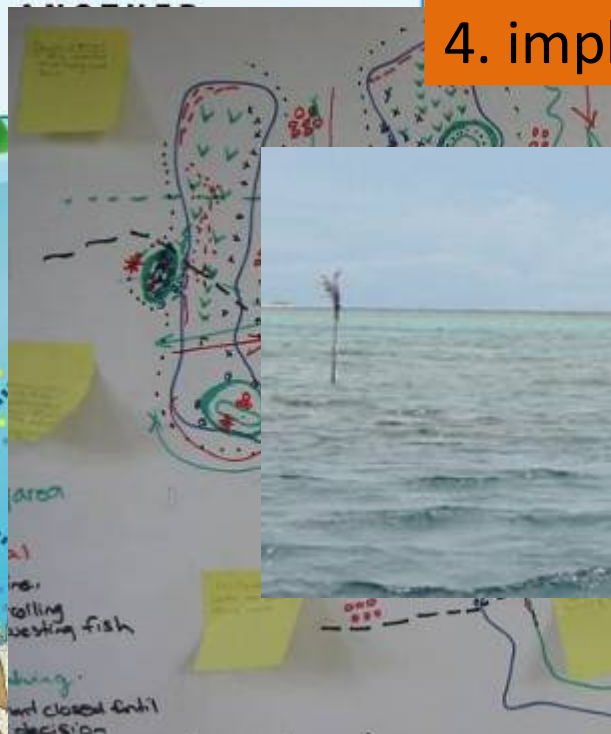
1. identify problems

2. Think about their options and priorities

3. Plan AND ALL agree actions / rules

4. implement actions / enforce

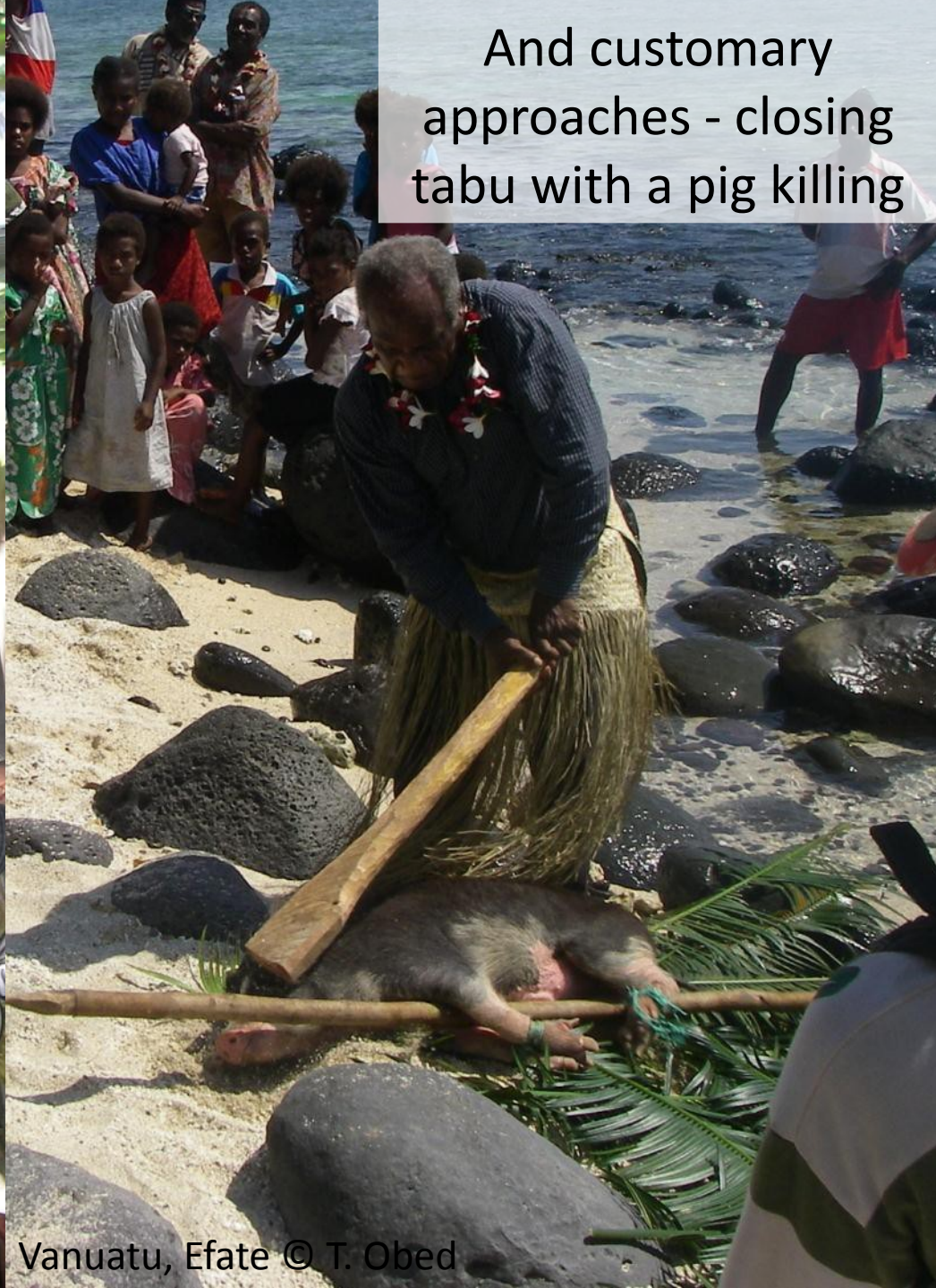
5. Is it working?



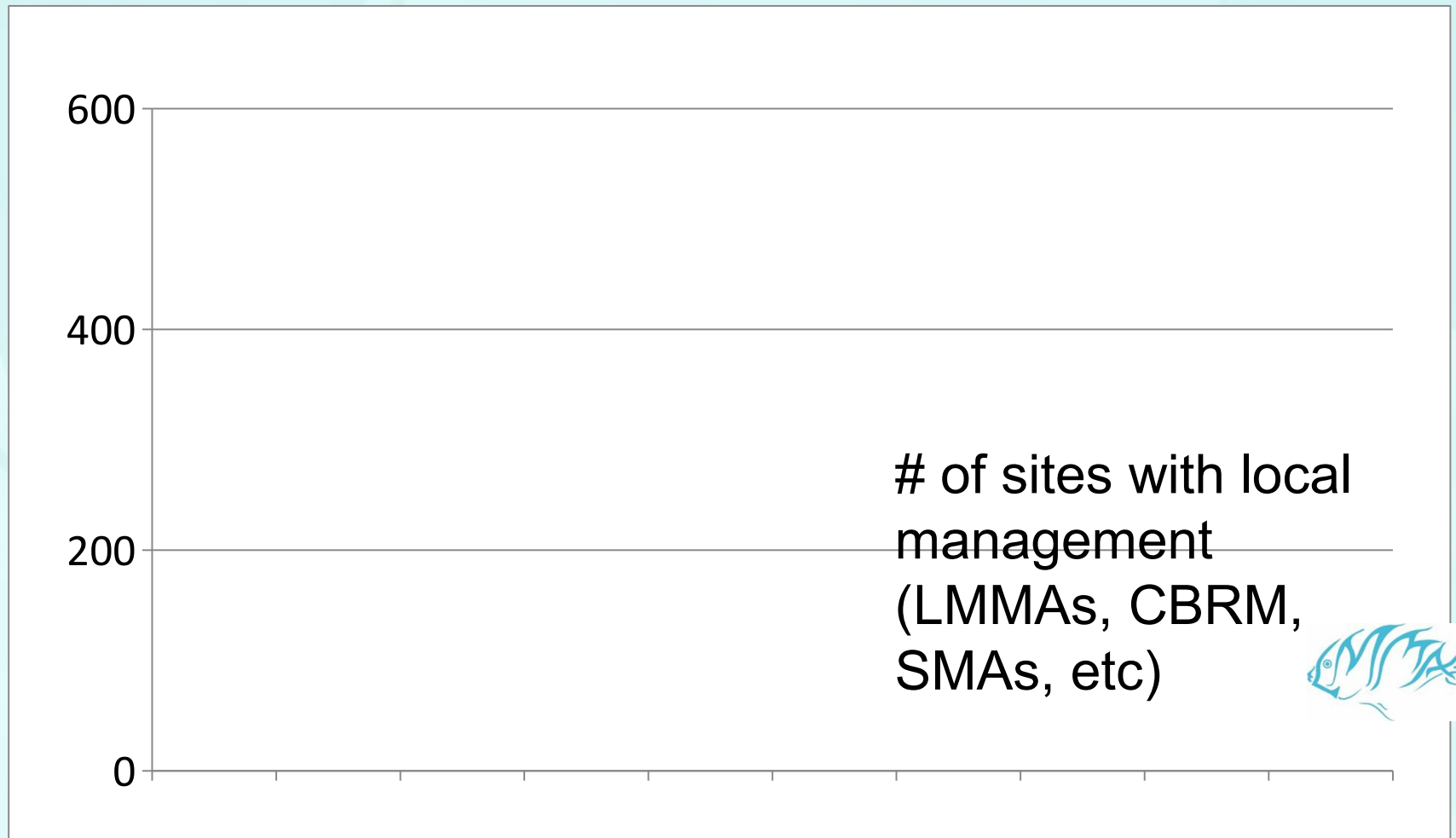
Modern approaches -  
Signing management  
plan



And customary  
approaches - closing  
tabu with a pig killing

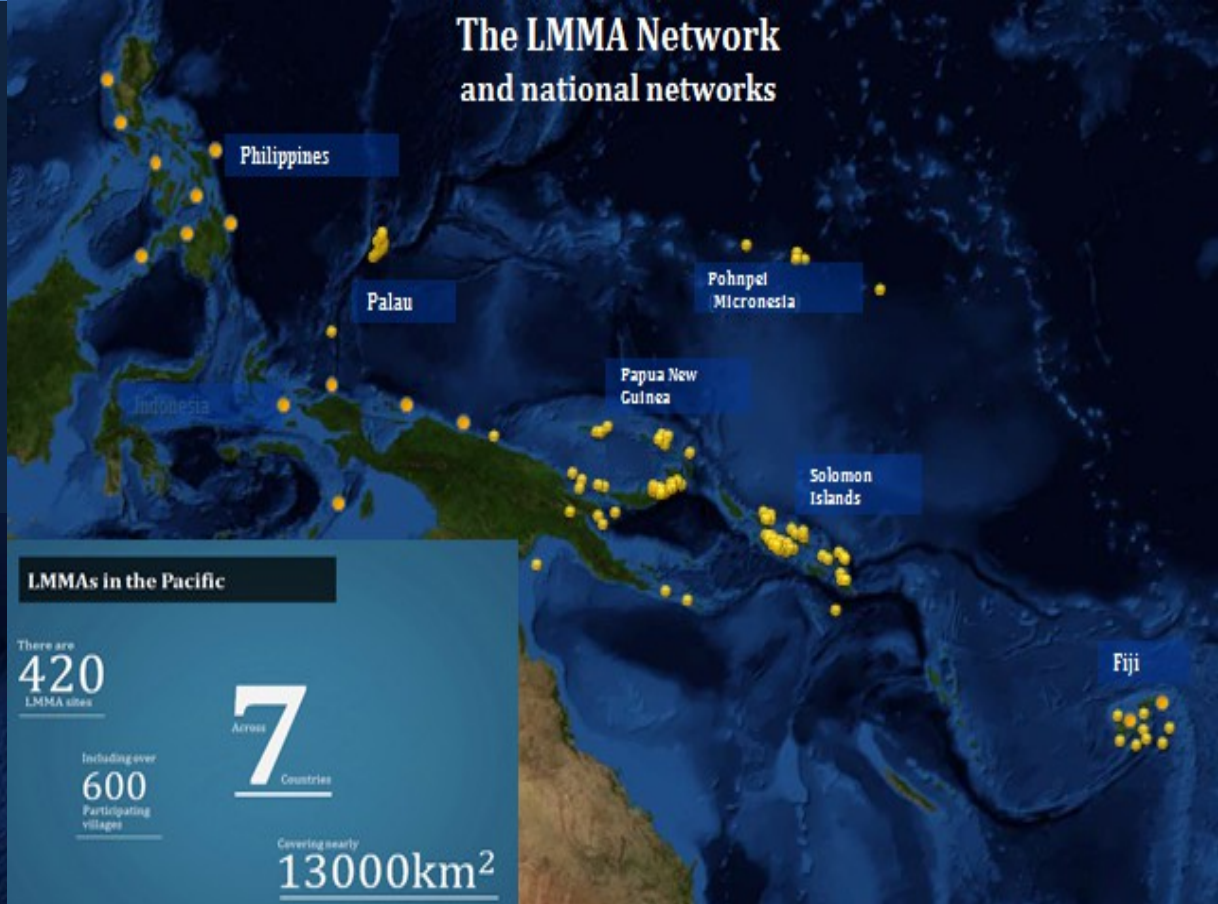


# Rapid growth in the South Pacific





## The LMMA Network and national networks



Blueventures and LMMAs of the Western Indian Ocean

**blue ventures**  
discovery through research

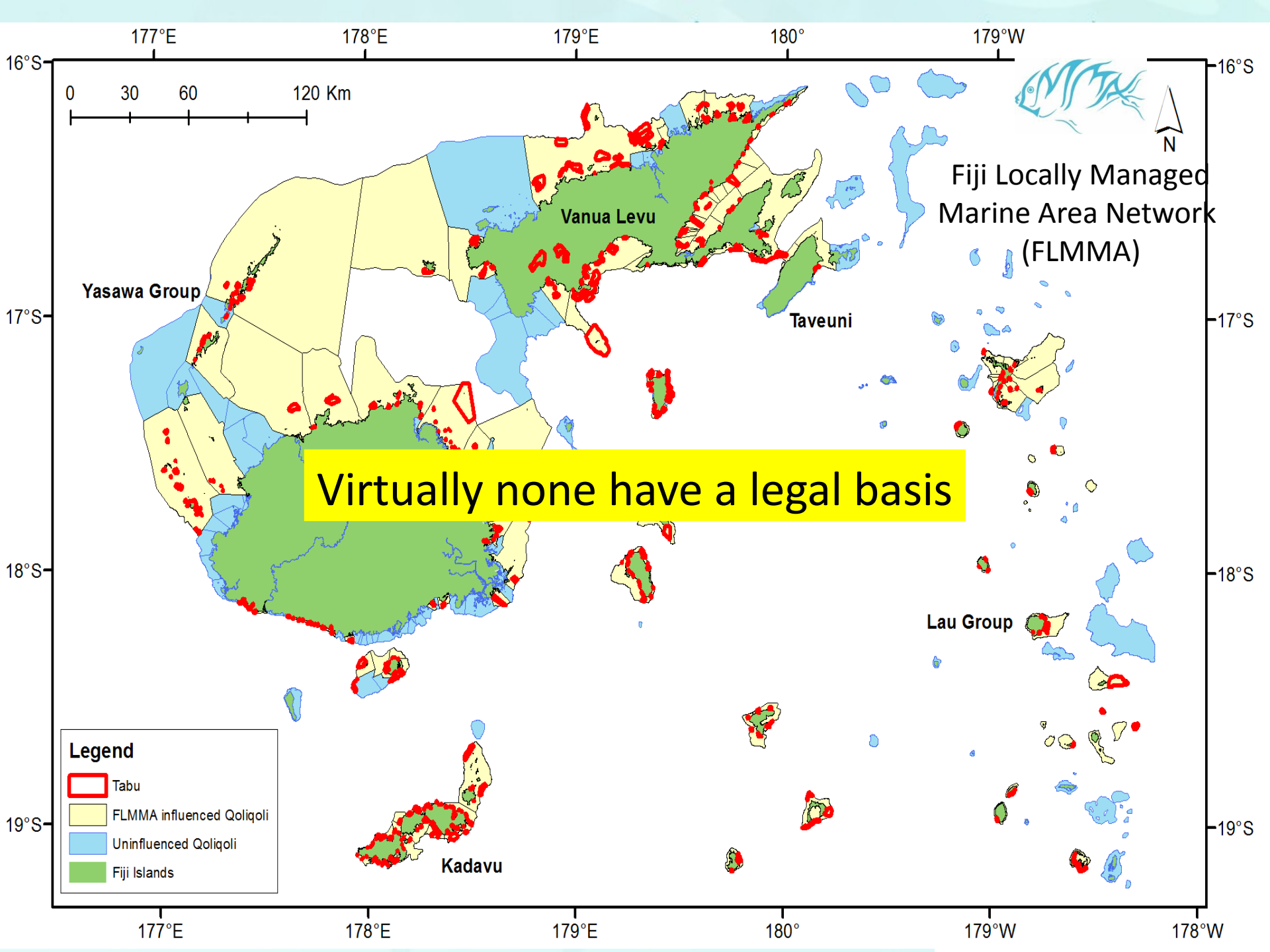
# Reasons for rapid uptake

- Supporting multiple community aspirations (e.g. livelihoods, securing tenure)
- In line with historical / traditional approach (tabus)
- Opportunistic use of initiatives and windows – science needs to be available at short notice
- **Use of social networks – traditional and new at district, provincial, national and regional scales**



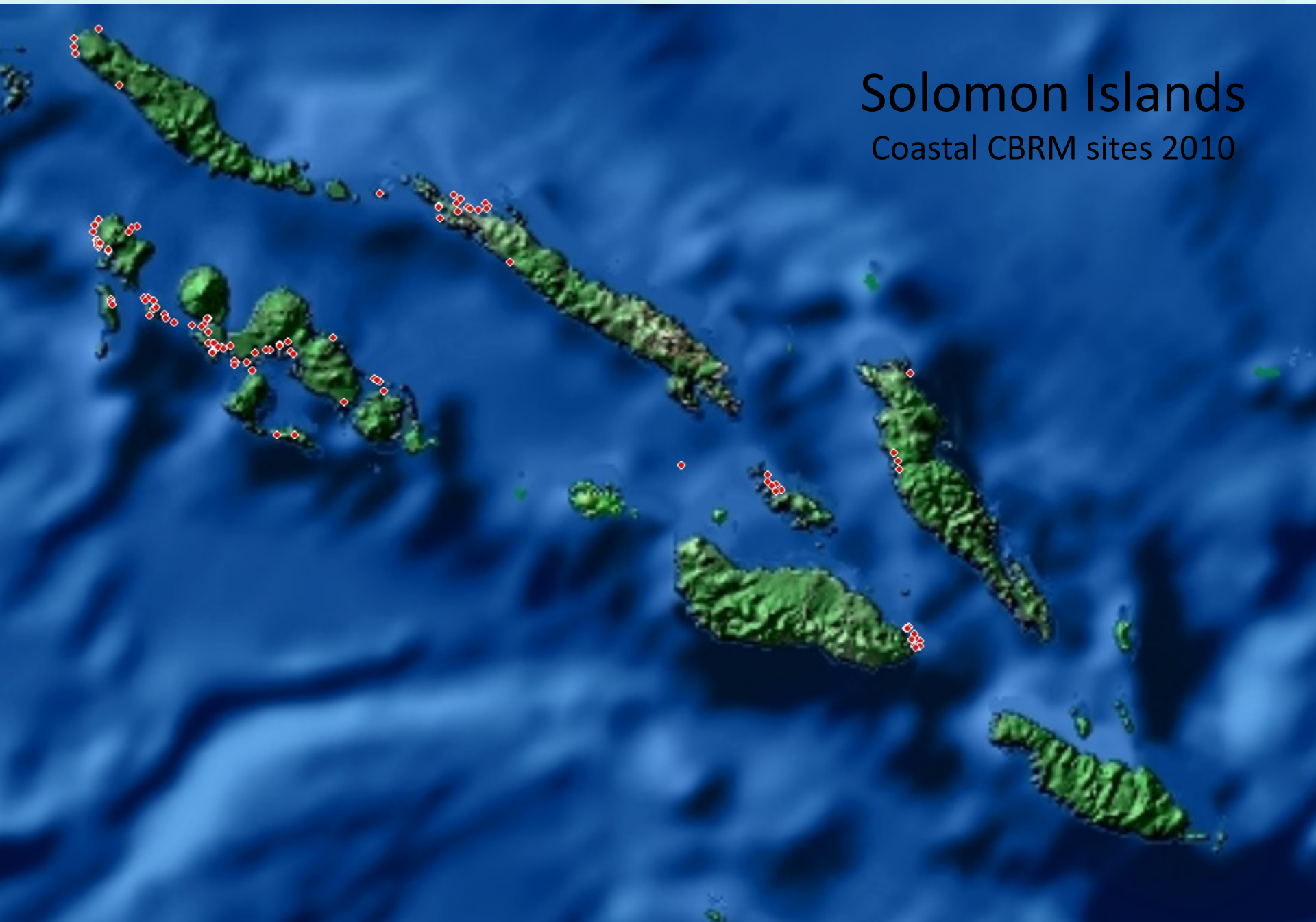


Management planning, Fiji



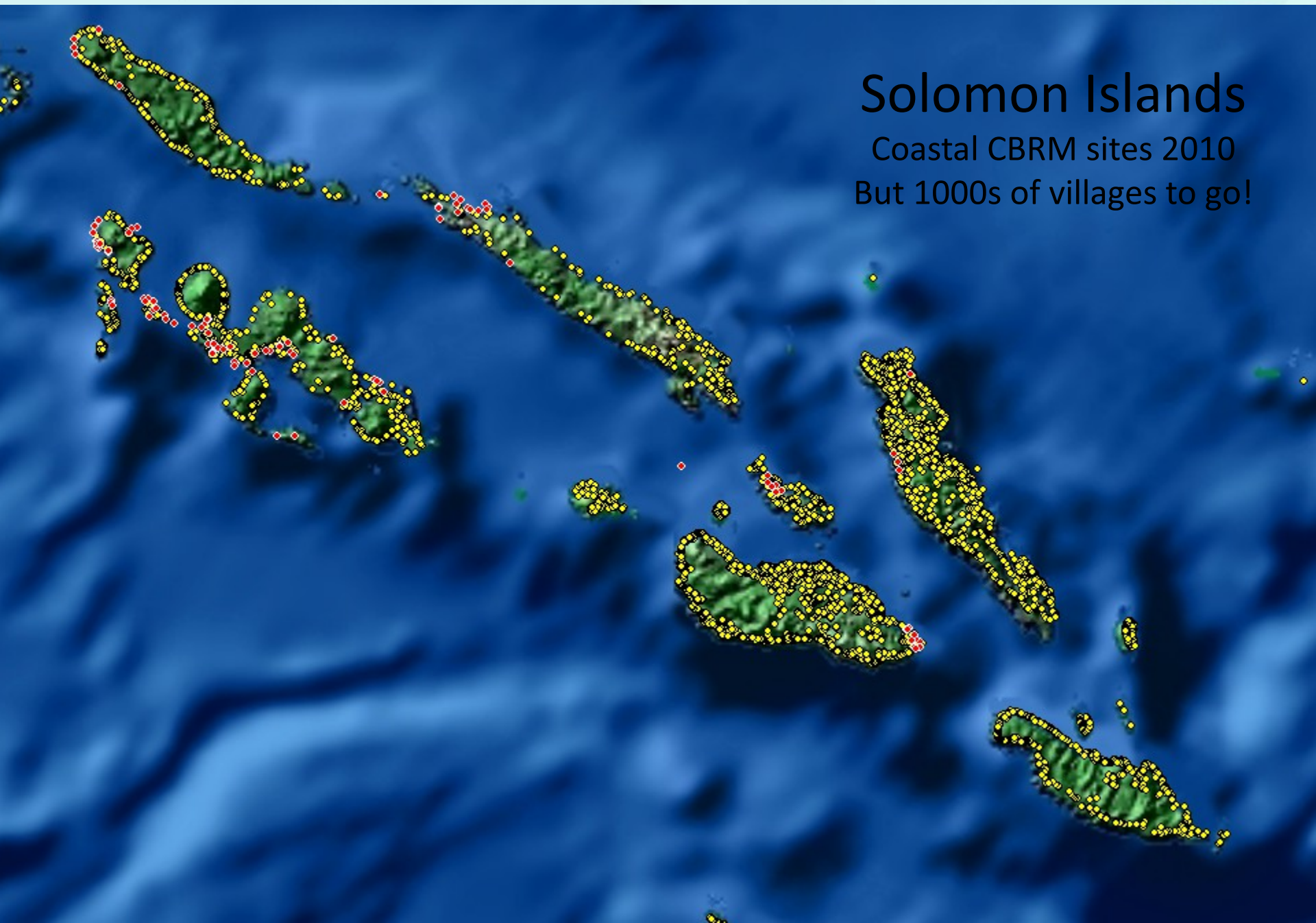
# Solomon Islands

Coastal CBRM sites 2010



# Solomon Islands

Coastal CBRM sites 2010  
But 1000s of villages to go!





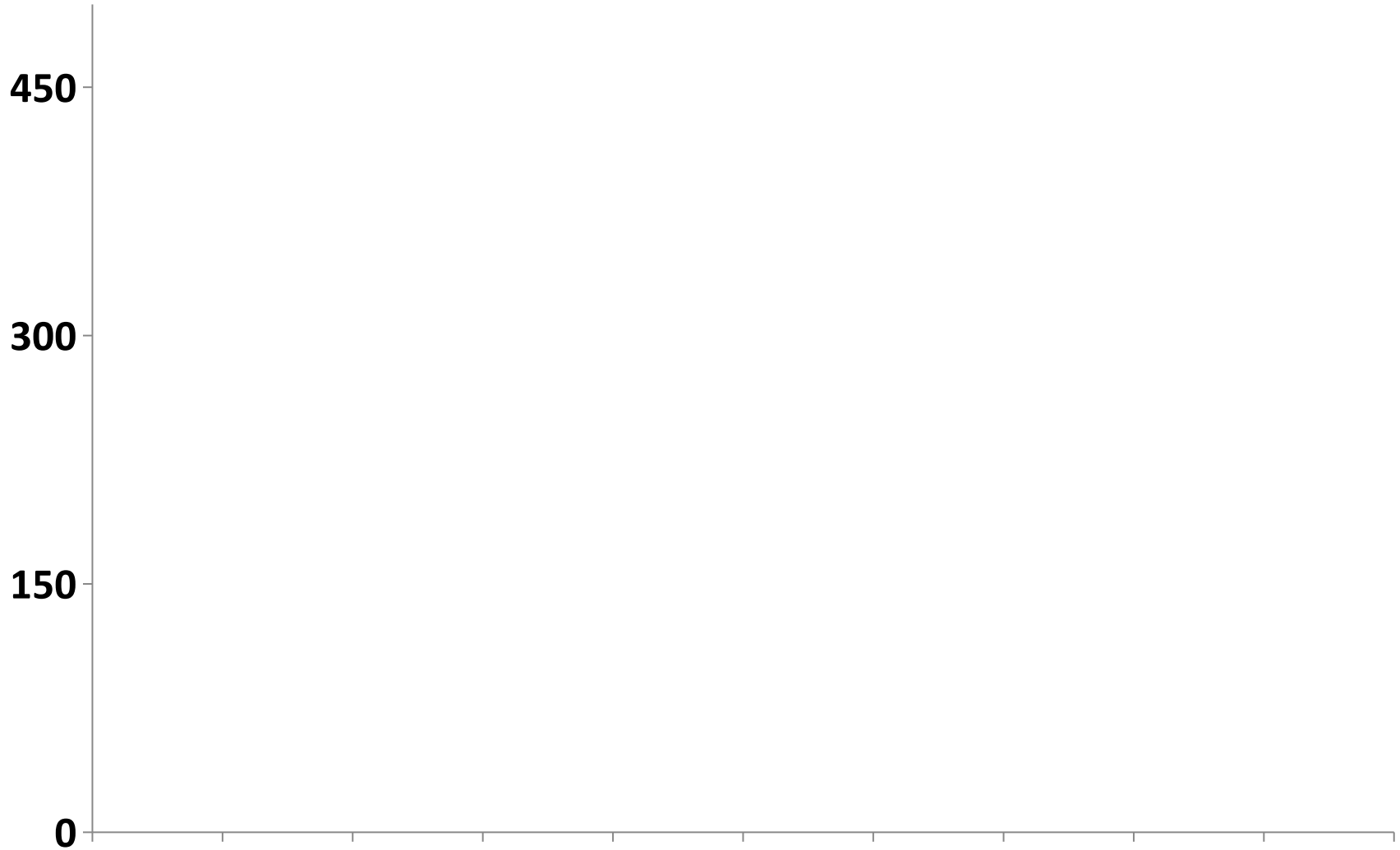
Lau, Malaita, Solomon Is

# The big challenges

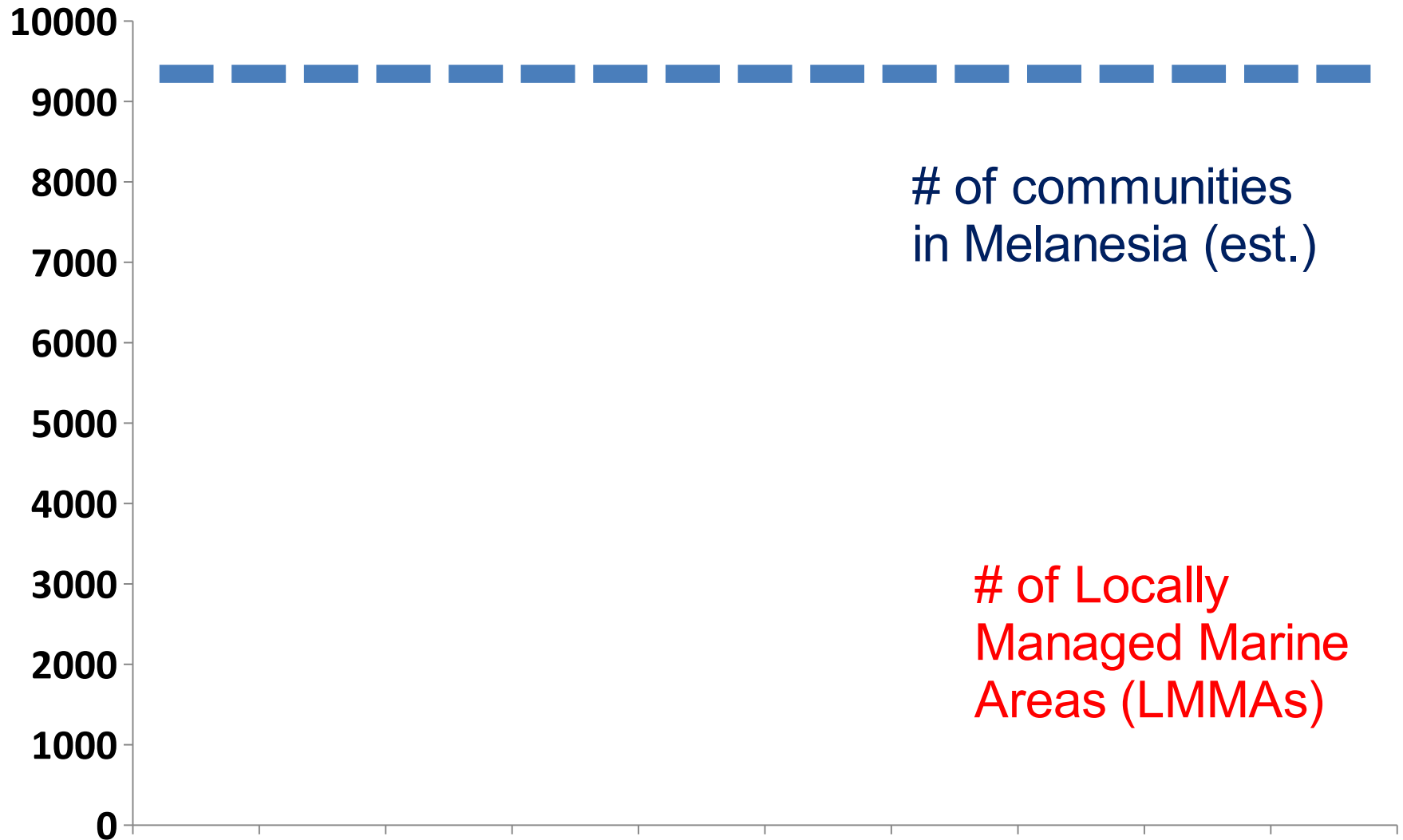


- Reaching all the communities that would benefit from sustainable resource management support
- Forming and sustaining nationally useful systems of resource management and resilience
- Interference from the MPA mindset i.e. achieving 10% coverage is success?

# Looks good.....?



# But... a long long way to go





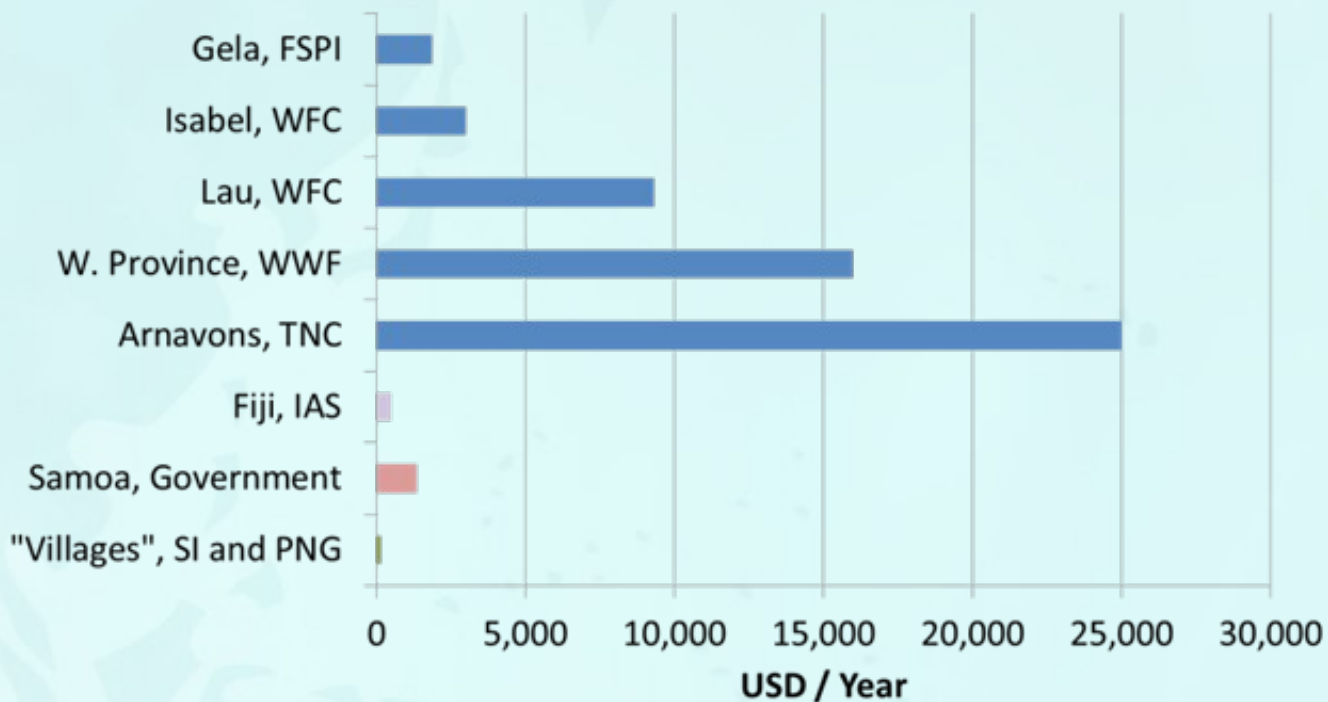


Lau Lagoon, Malaita, Solomon Is.

# Why? LMMA has promoted policy...

- Regional and national policies swung towards community-based and co-management approaches
- But... almost no fisheries departments' have changed structure or functions
- NGOs have (unwittingly) usurped the public service delivery roles of government...
- .... the models piloted are not usually appropriate for government adoption

# Why? Approaches are too expensive



Country	Number of coastal villages and settlements
Fiji	770 - 850
PNG	3,600 - 4,300
Solomon Islands	3 - 4,000
Vanuatu	550 - 1,400



Mbuke, Manus, PNG

# Example costs for a Solomon Islands LMMA

Main output: Information for community decision-makers (10-15%)

Main costs: travel and personnel / time (50%)



Planning, Coral Coast, Fiji

# Ways forward



- Improve quality and targeting of information
- Understand better the triggers of community management
- Develop more strategic approaches appropriate for govs including use of mass media
- Government service delivery to reflect decentralized and “extension” approaches



# Guide and information sheets for fishing communities

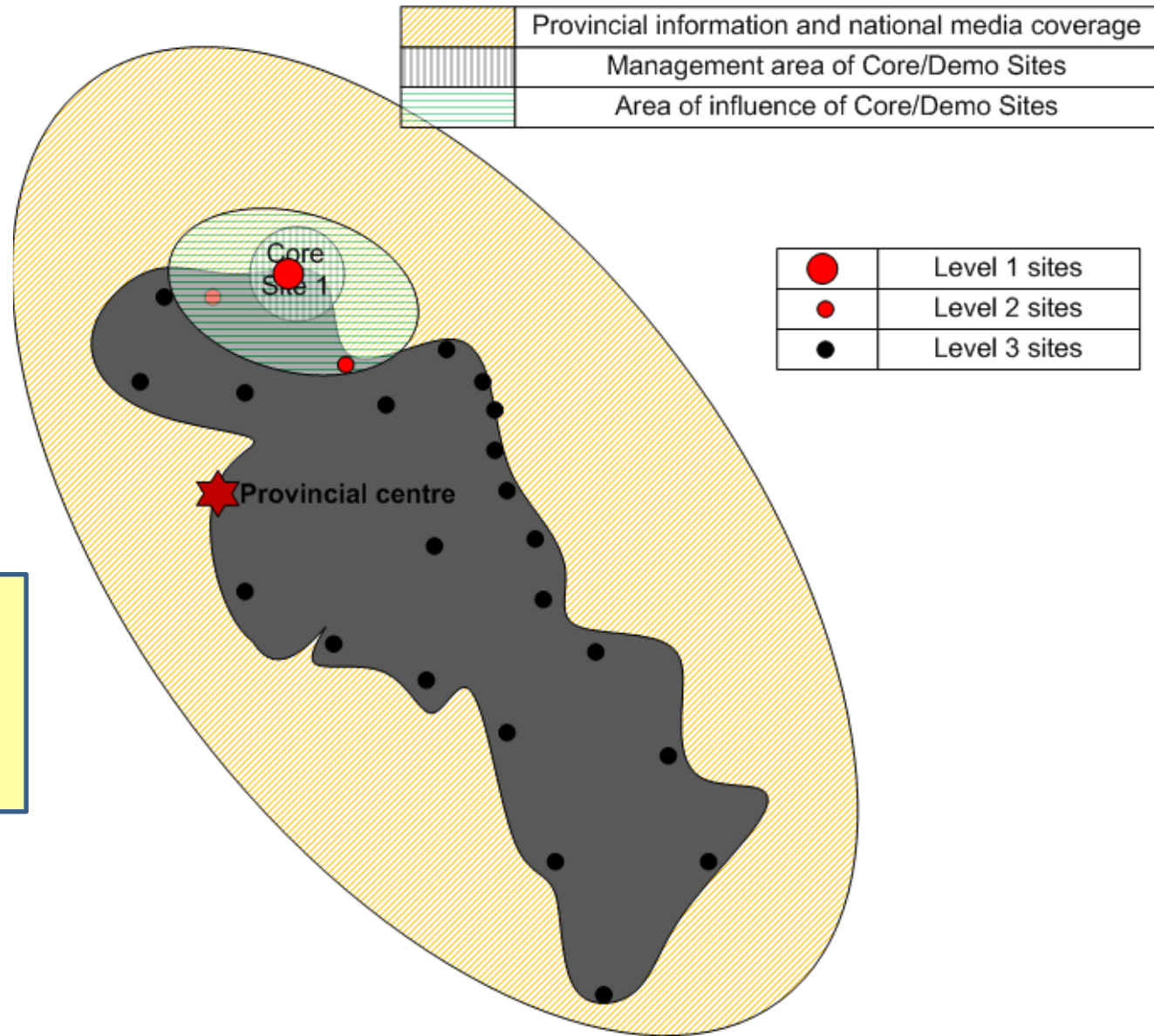
- Produced by the Secretariat of the Pacific Community in collaboration with the LMMA Network.
- Polled network members and associates on priority species for communities
- Reviewed draft sheets
- Distribution to communities and community partners





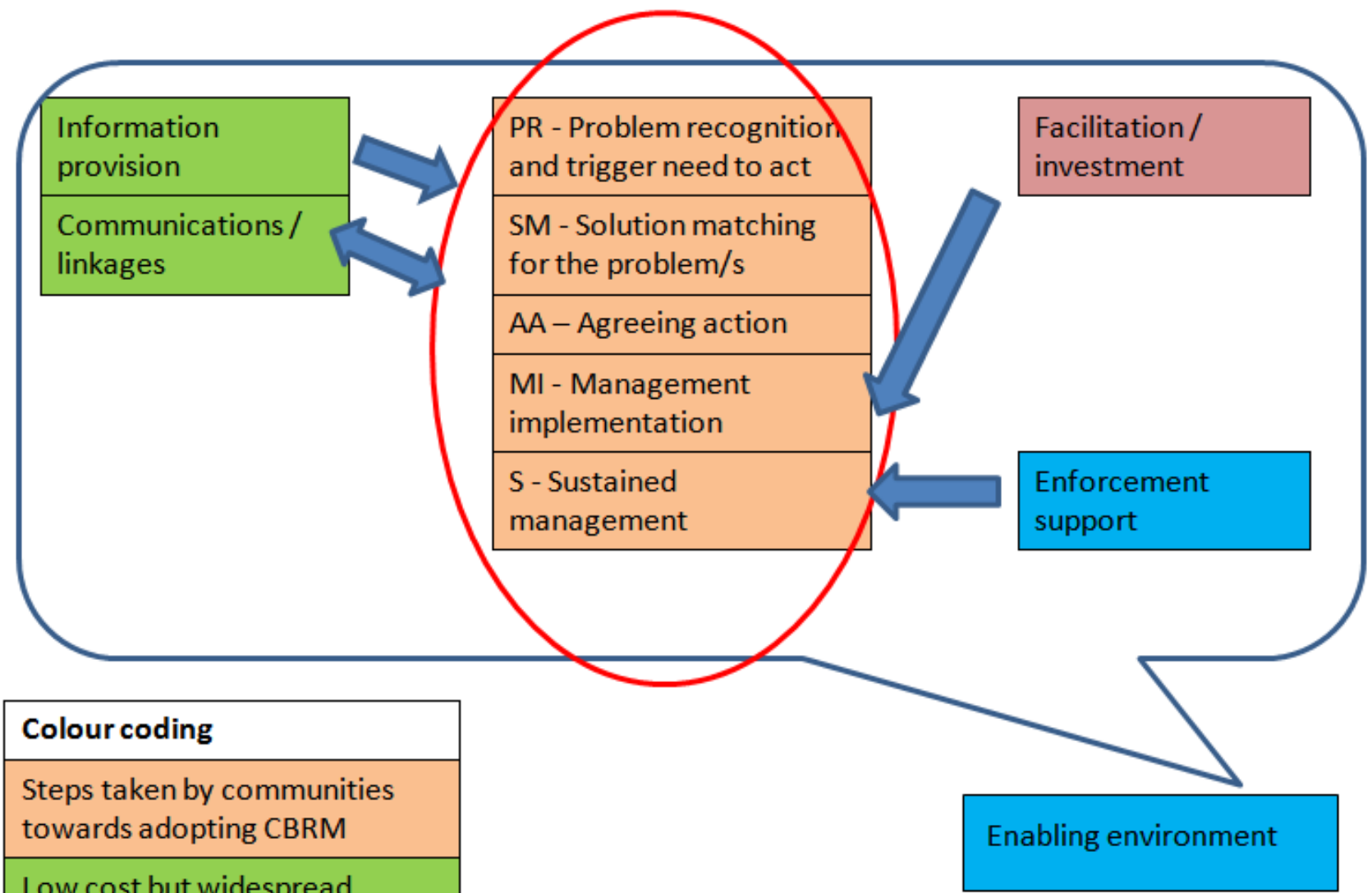
# Strategies

- Decentralized
- Concentrate on information provision and sharing
- Integration e.g. disaster, fisheries, agric.
- Strategize use of scarce fuel and personnel



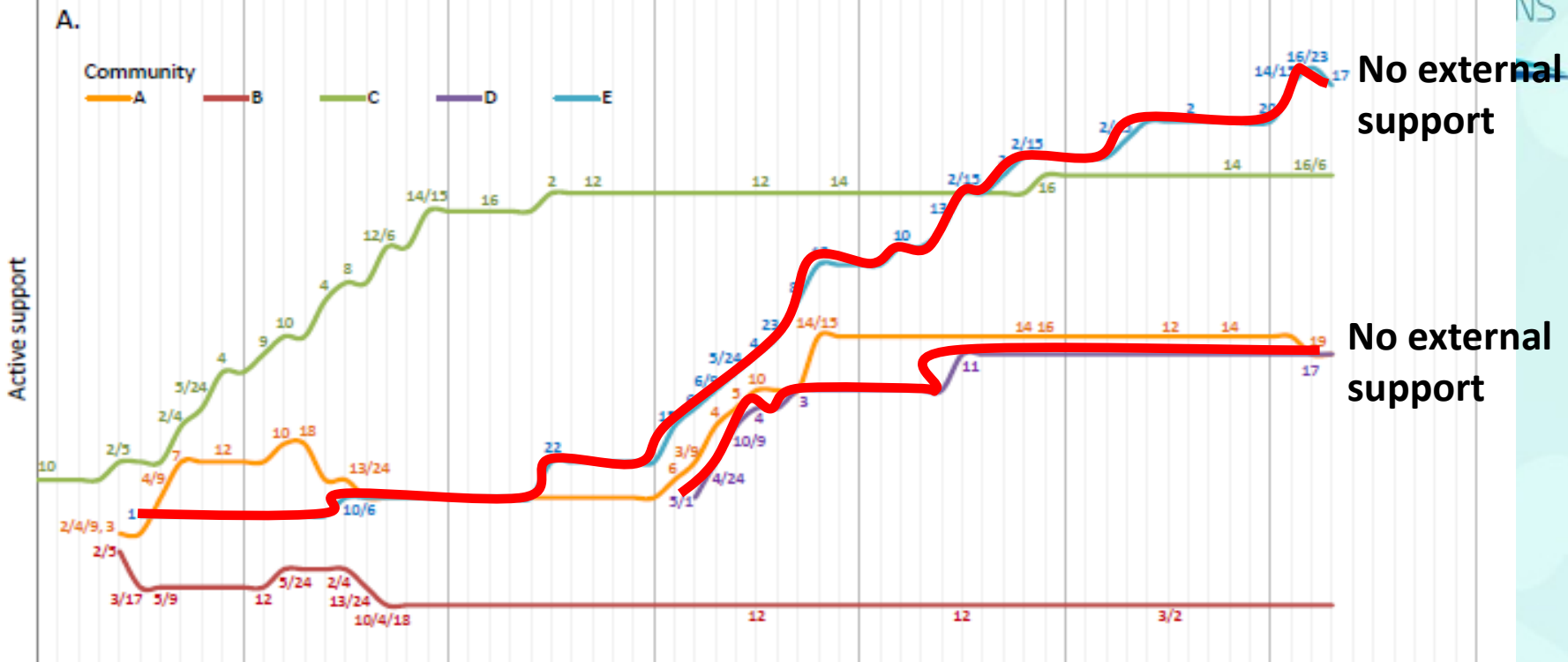
# Better understand the way communities undertake innovation

Rogers 1962	Abernethy et al. (2014)	Govan & Bennett 2014	Notes
Agenda setting	Problem and need to act recognized	Problem recognition (PR)	
Matching	Selecting a potential solution/s for the problem	Solution matching (SM)	
Redefining/ restructuring	The solution/s are developed and refined into agreed actions or rules	Agreeing action (AA)	Results in agreed course of action, maybe rules, but only sometimes a documented plan
Clarifying	Actions or rules are implemented and progress observed, modified or improved if necessary	Management implementation (MI)	Trying out the actions / management
Routinizing	A more or less stable ongoing adaptive management	Sustained management (S)	Adaptive management or sustained rules or modified behaviour

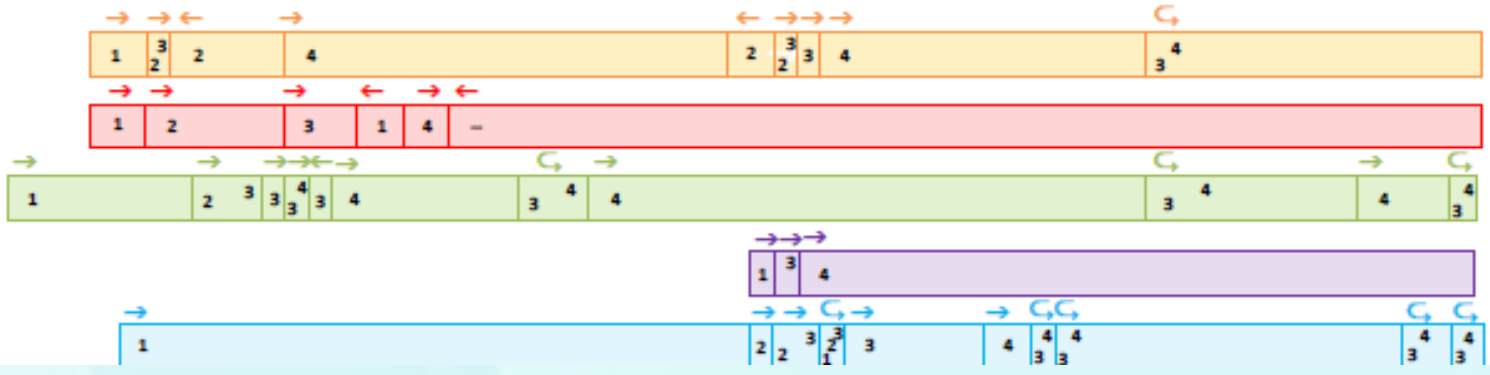


Colour coding
Steps taken by communities towards adopting CBRM
Low cost but widespread external support
High cost but targeted external support (optional)
Potentially high-cost but occasional external support

Figure 2: Diagram representing potential interventions that may promote and support innovation at community level based on the theory of innovation and possible interventions described in the text.



**B.**



- 1. Recognition of problem and need to act
- 2. Finding solutions
- 3. Agreeing action
- 4. Implementing
- 5. Sustaining management



Avana-Muri Lagoon Ra'ui, Rarotonga, Cook Islands (© Ewan Smith)

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