" When are you going to stop reinventing the wheel ? "

UNEP-CMS Dugong Questionnaire

Nicolas J Pilcher

MOS3, Abu Dhabi, 14 March 2017

Real, practical information needs for species conservation

- How many animals do I have and what is the trend?

- Where are they and do they move around?

- What are the threats and how do I solve them?
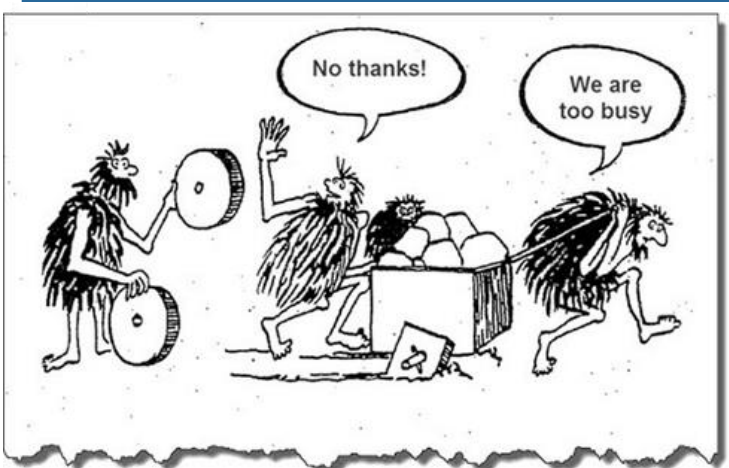
The UNEP-CMS Dugong Questionnaire

- Low cost

- Easy to implement

- Can cover large areas

- Provides 'immediate' knowledge

- Can point to dugong hotspots

- Sets the scene for secondary monitoring / assessment
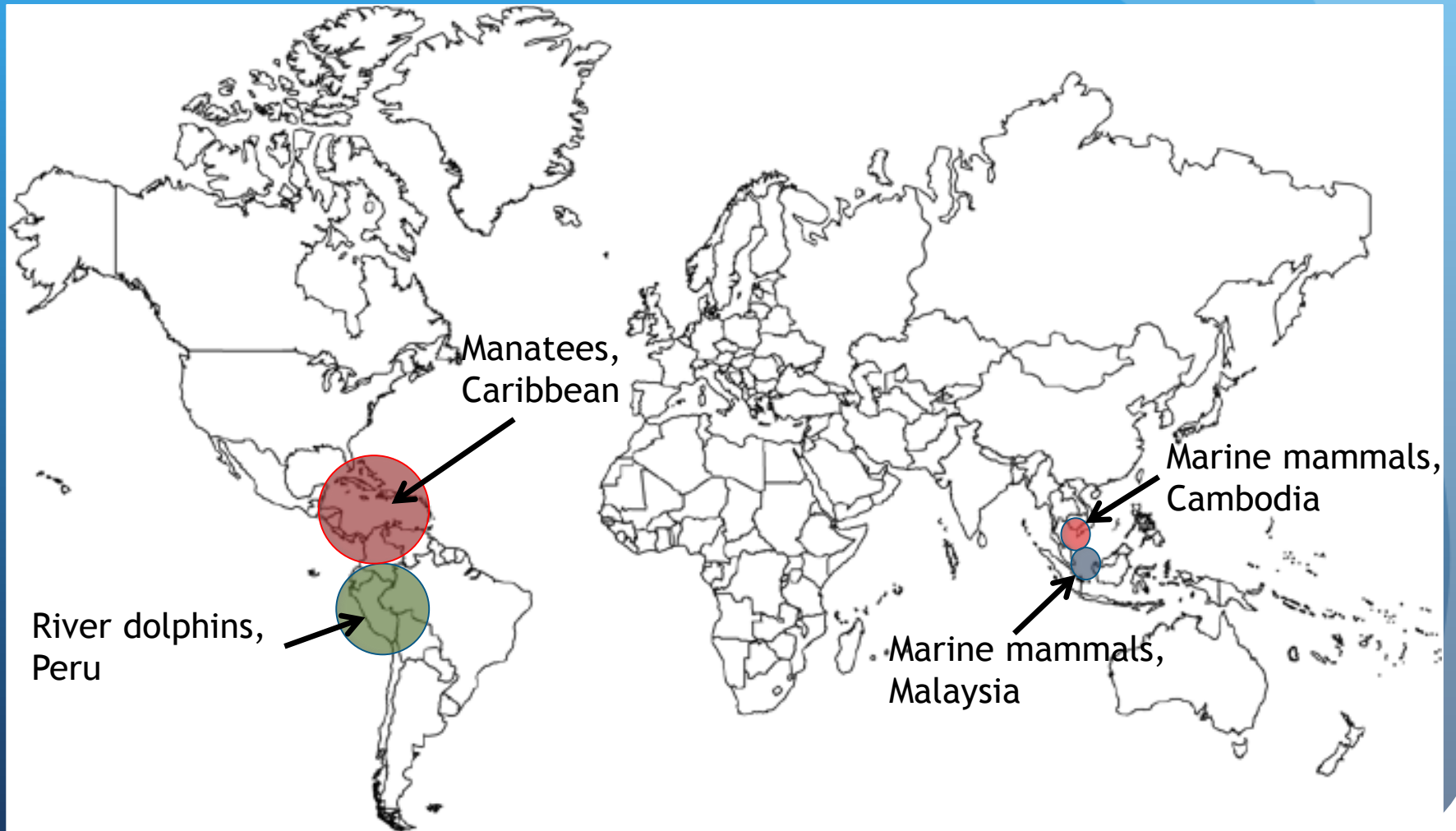
Questionnaire use to date

UNEP-CMS led initiative	
Country	**Questionnaires deployed**
Kenya	75
Madagascar	295
Mozambique	146
Tanzania	206
Sri Lanka	239
Bangladesh	68
India	2017
Cambodia	200
Thailand	622
Vietnam	400
Myanmar	151
Malaysia	580
Philippines	240
Palau	201
PNG	350
Solomon Islands	109
New Caledonia	254
Vanuatu	12
Total	**6165**

Post MoU Deployment		
Country	**Questionnaires deployed**	
Egypt	200	
Vanuatu	530	GEF
Madagascar	126	GEF
Mozambique	184	GEF
Indonesia	124	GEF
Total	**1164**	

Grand Total	**7329**

Also used on other species...

Manatees, Caribbean

Marine mammals, Cambodia

River dolphins, Peru

Marine mammals, Malaysia

Global findings

A — Number of Years Fishing

B — How do you encounter dugongs?
- While fishing 39%
- Travelling to fish 37%
- In the net 16%
- Stranded 8%
- Hunted 0%

C — Trend in Net Catures of Dugongs
- Increasing
- Decreasing
- Unchanged

D — Dugong Fate
- Sell 44%
- Eat 45%
- Discard dead 11%
- Use as bait 0%
- Release alive 0%
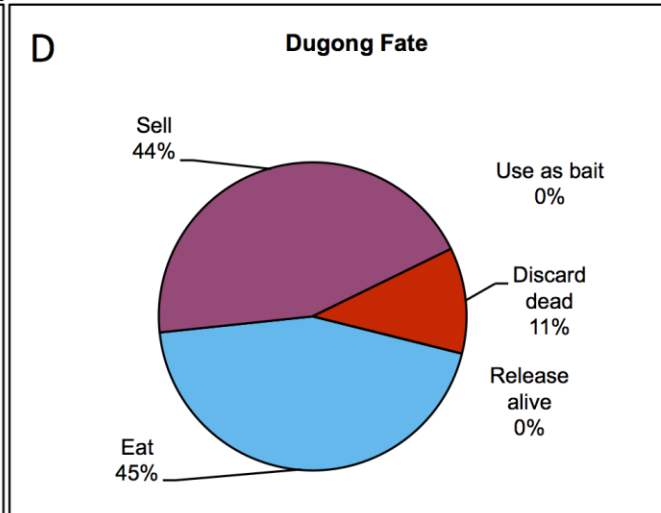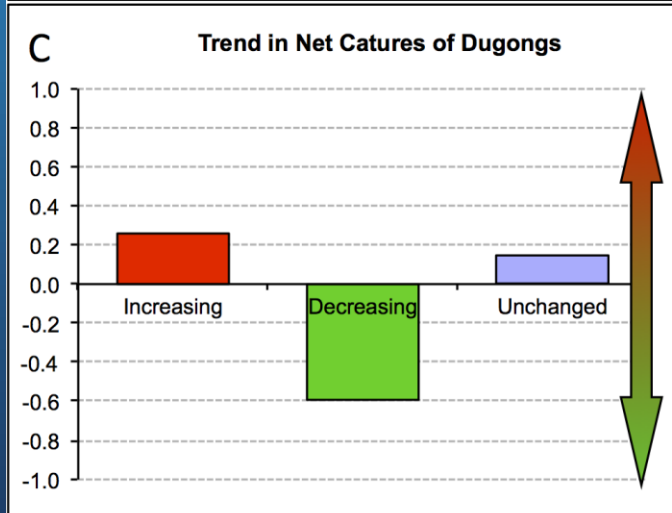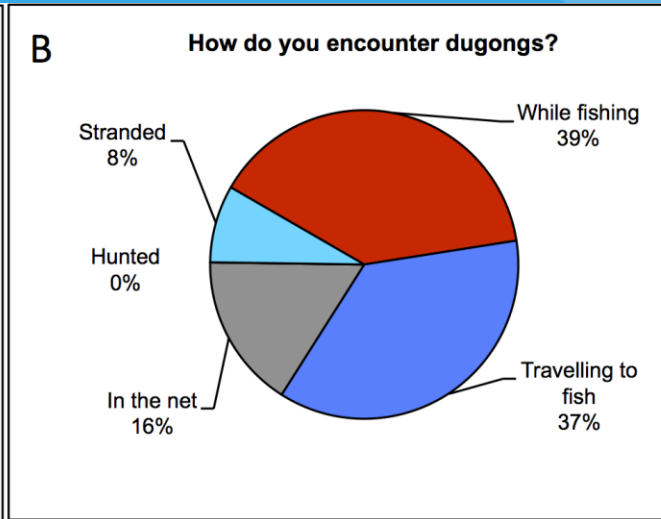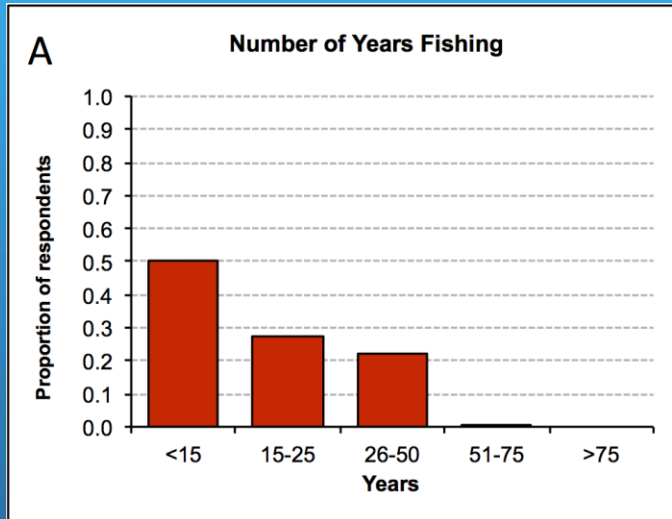
Thailand
Vietnam
Cambodia
Malaysia
Philippines
Solomon Islands
Vanuatu
Palau
Papua New Guinea
Sri Lanka
India
Kenya
Tanzania
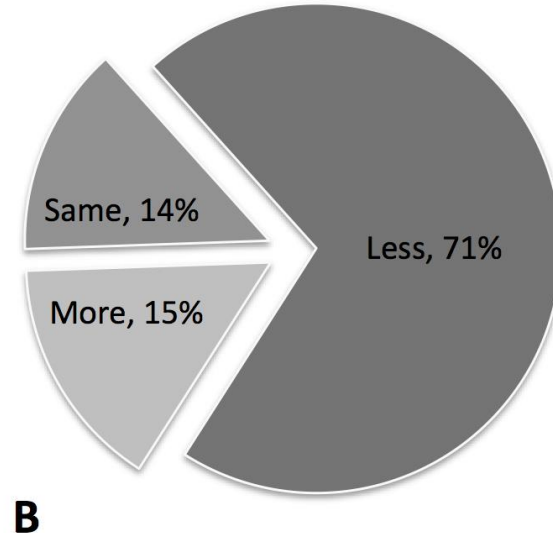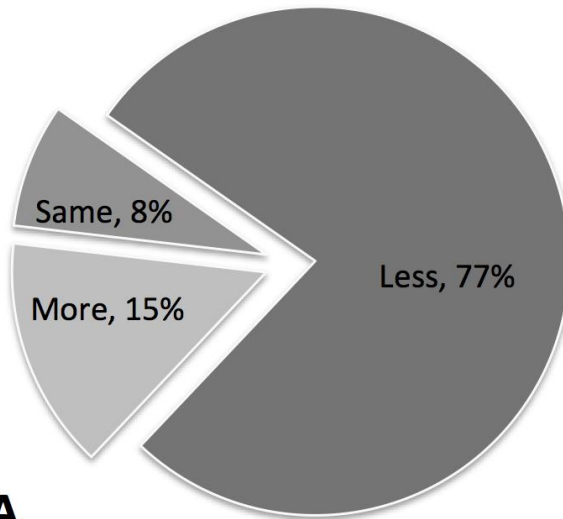Madagascar
Mozambique

Global findings

Dugong encounter types

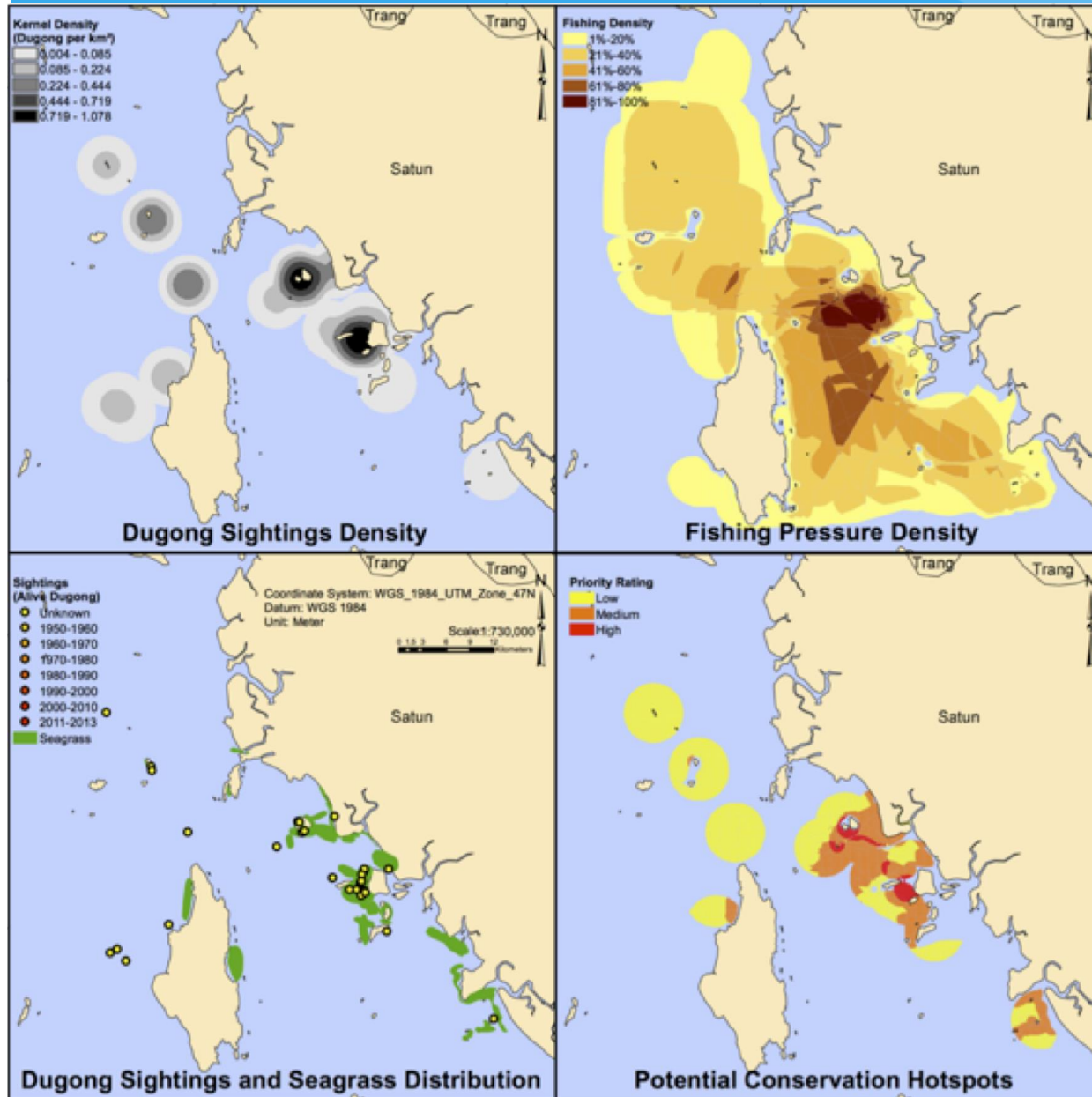Trend in actual catches — Perceived trend in dugong numbers

A — Same, 8%; More, 15%; Less, 77%

B — Same, 14%; More, 15%; Less, 71%

Global findings

Robustness
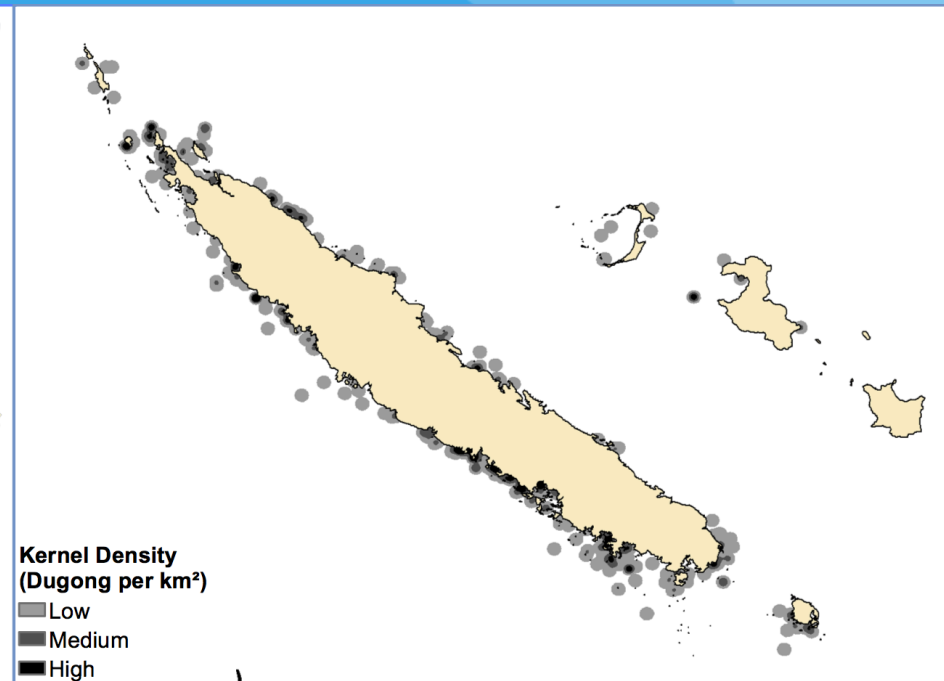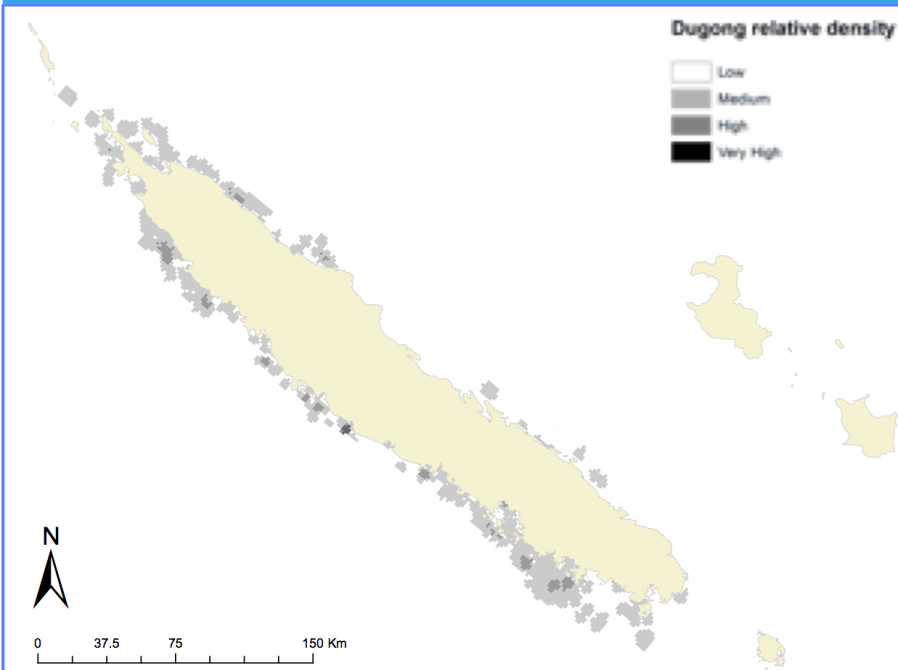
Cleguer et al. 2015

Pilcher et al. 2017

Global picture
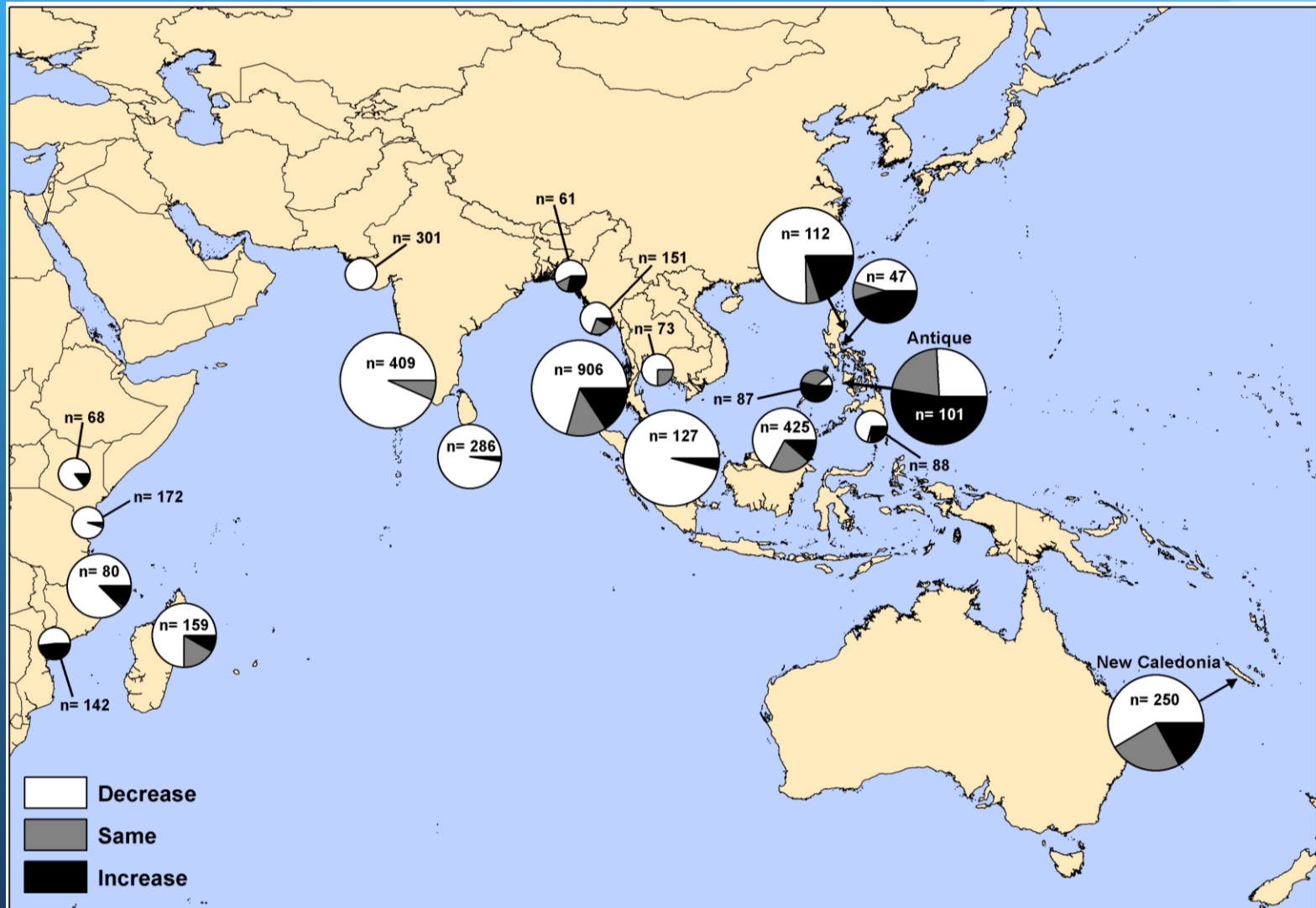
Pilcher NJ, Adulyanukosol K, Das H, Davis P, Hines E, Kwan D, Marsh H, Ponnampalam L & Reynolds J, 201X, A low-cost solution for documenting distribution and abundance of endangered marine fauna and impacts from fisheries. PLOS ONE, *in review*