



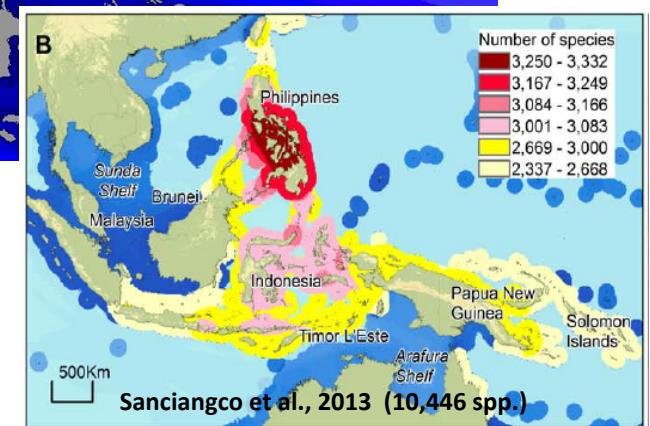
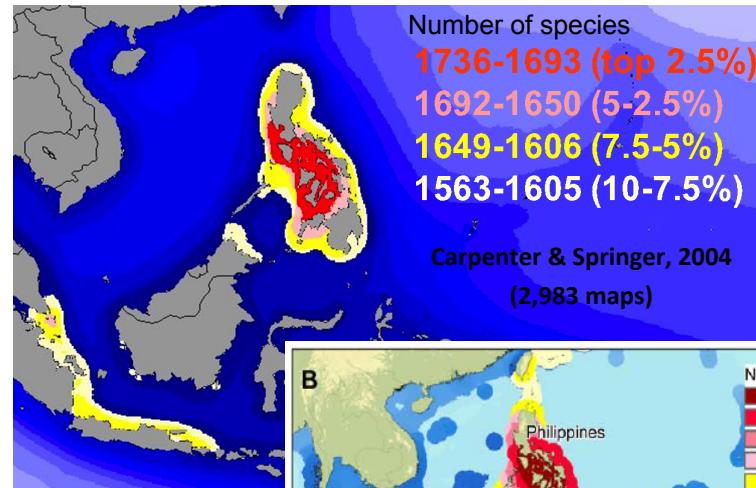
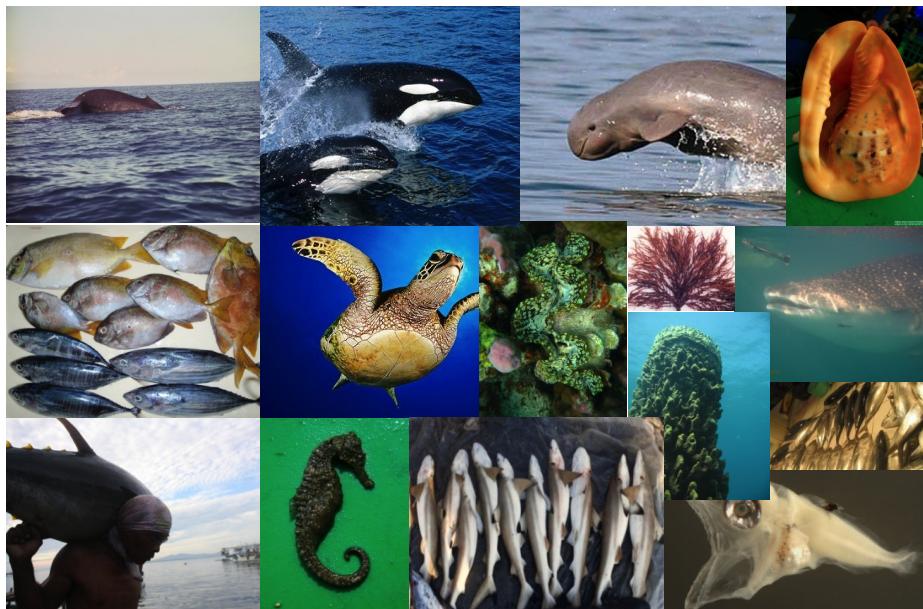
## A call to enhance fisheries data generation and acquisition to support sustainable fisheries

Problem statement presented to the Fishackathon (June 2014)



# The Philippine fisheries context

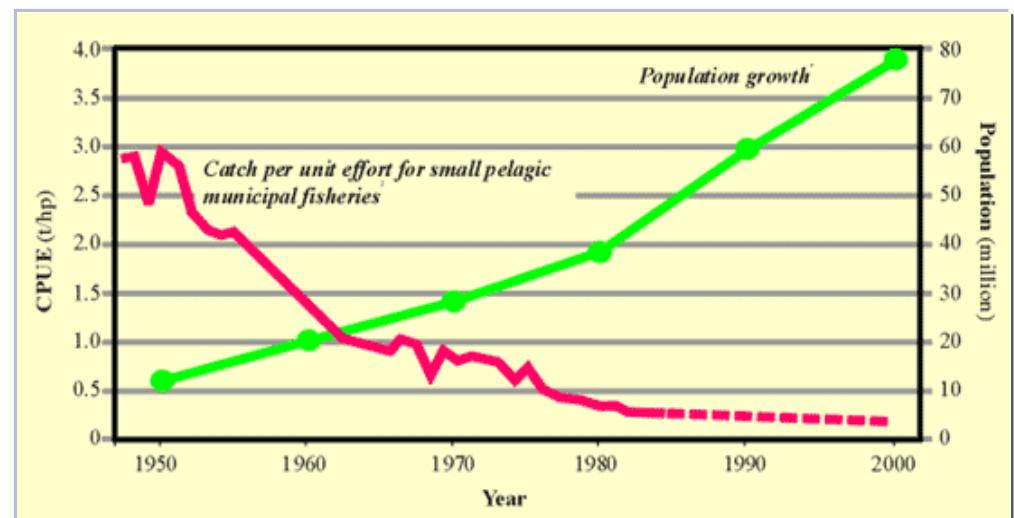
**Good news: Philippines the epicenter of marine biodiversity !**



# The Philippine fisheries context

But...

Too few fish, too many mouths to feed !!!



The FISH Project  
[www.oneocean.org](http://www.oneocean.org)

# The Philippine fisheries context

**Sadly...**

The younger generation of fishers don't seem to be aware that they are worse off.

**Young fisher:** 2 kilos of fish... That's normal these days...



**Future fisher:** Wow 2 kilos of fish! That's a lot!!!



**Elder fisher:** 2 kilos of fish??? That's a joke!!!

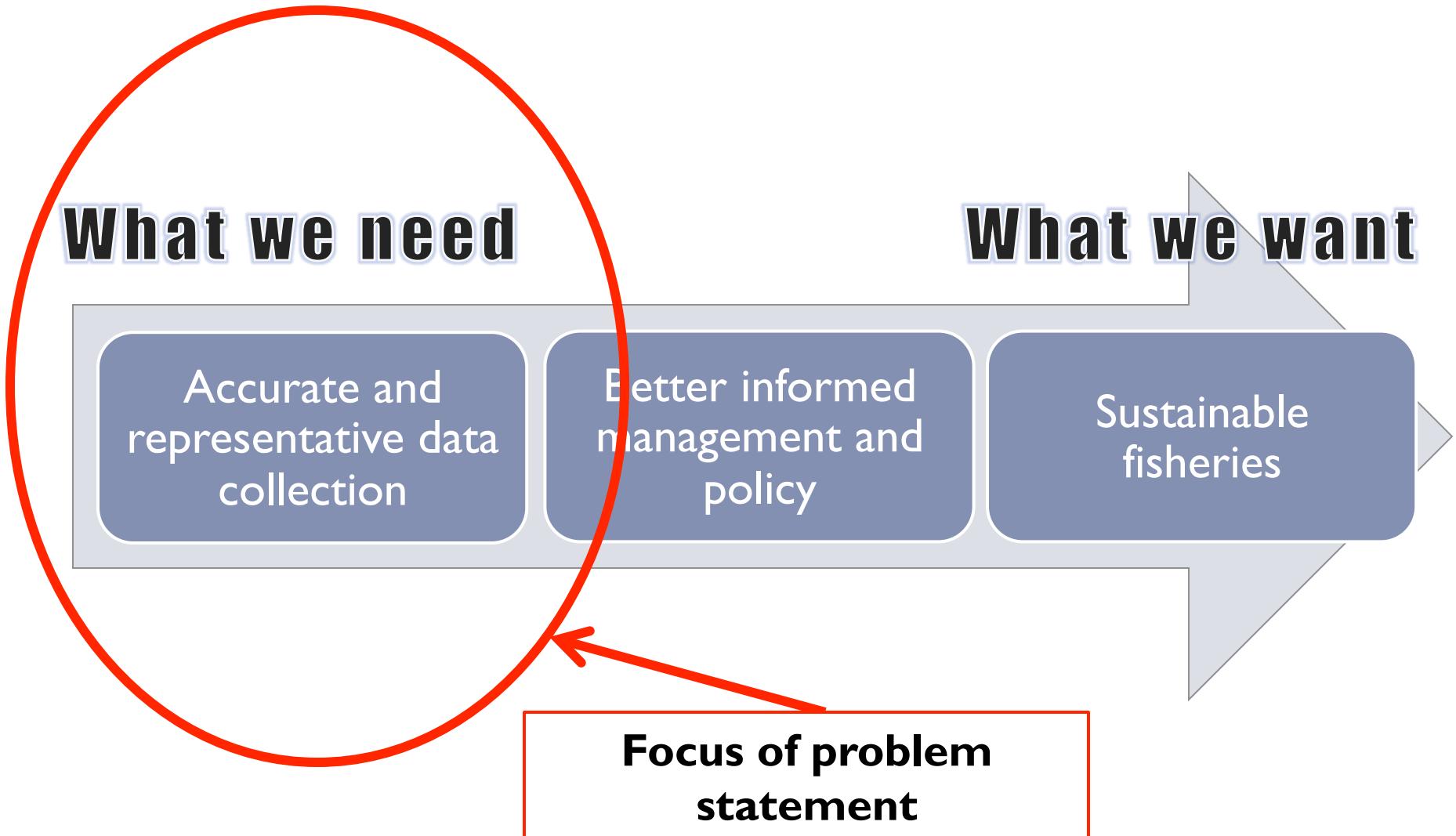


**“Shifting baseline syndrome”  
(Pauly 1995)**



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# The Philippine fisheries context



# The Philippine fisheries context

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## The 2 Key Players in Fisheries Data Collection:

### (1) National Stock Assessment Program (NSAP)

- Conducts standardized and continuous gathering of capture fisheries and fish stocks data
- Analyzes data to determine status stocks and fishing grounds; calculates sustainability indices
- Coverage: Nationwide

### (2) Local Government Units (LGUs)

- Must manage and regulate the use of municipal waters and the resources therein
- Collects basic fisheries information
- Coverage: Municipal waters under their respective jurisdictions

# **WHO** is affected?

**Meet the Fish Catch Enumerator  
who collects data  
answer the**

## **NSAP questions:**

- What are the types of gears operating in the various fishing grounds throughout the country?**
- What are the catch rates of these fishing gears relative to where they operate?**
- What fishery species do they catch and in what quantities?**
- What are the sizes of the species caught? Are these the right size (i.e.  $\geq$  size at maturity?)**
- What are the trends in catch rates, catch composition, etc...**

**that should follow:**



## **LGU questions:**

- What are the types of gears operating in my municipal waters?**
- What fishery species do they catch and in what quantities?**

# WHAT types of information are collected/needed?

## CATCH Data including:

- ✓ Weight of catch (kg)
- ✓ Species of fish and invertebrates caught  
*(Use of scientific name + corresponding local names)*
- ✓ Size-frequency (cm) of the commercially important species and other species of interest
- ✓ Maturity/gonad stages (specialized studies)



# **WHAT** types of information are collected/needed?

## **EFFORT Data including:**



Beach seine operations, photo taken during the FISH Project,  
Catch Monitoring Training – Surigao Sur (April 2009)

- ✓ Number of fishers involved per unit operation
- ✓ Duration of fishing operation (hours, days)
- ✓ Type of fishing gear and basic information on gear's technical specifications, e.g.
  - #hooks, size of hook;
  - #gillnet panels, net length, mesh size
  - #hauls, soaking time
- ✓ Vessel type by propulsion (Motorized, non-motorized), size/dimensions, Horsepower (for motorized vessels)
- ✓ Indicative area of fishing ground (using standard grid map)

# WHAT are the negative outcomes experienced?

Current problems encountered in field data collection



## HIGH SPECIES DIVERSITY IN THE CATCH

- The species mix (including fish & invertebrates) varies across regions owing to the nature of the fishing grounds and subsequently, the fishing gears that catch them.
- This requires a lot of time and is subject to mis-identification of species.

*The Philippines is home to nearly 3,000 marine shorefish species (Yey! This is good for biodiversity, but not so for fish data collectors!)*

# WHAT are the negative outcomes experienced?

Current problems encountered in field data collection

How can I do my work faster, monitor more landings, and still get accurate data?

Look there's another one coming!!!

I'm in a hurry!!! You better not destroy my catch!!!



## A LOT OF INFORMATION TO COLLECT

- Catch and effort data are fundamental to be able to assess the status of the fishery.
- But taking measurements and recording them can take a lot of time...

# **WHAT** are the negative outcomes experienced?

Current problems encountered in field data collection

*Please point on the map where you fished today...*

*Here!!!*

*I think...*

*Why should I tell you, anyway?*

**RELIES MUCH ON INFORMATION FROM INTERVIEWS**

- Spatial information facilitates area-based management: focuses management effort, time, & resources.
- At present, there is no way to ascertain the location of the fishing area.



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# **WHERE** is this happening?

**Catch Monitoring Surveys take place in various types of fish landing areas**



**Typical scenes in commercial fish landing sites & major fish ports**



# **WHERE** is this happening?

**Catch Monitoring Surveys take place in various types  
of fish landing areas**



**Typical scenes in municipal  
fish landing sites**



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# **WHERE** is this happening?

**Catch Monitoring Surveys take place in various types  
of fish landing areas**



**Small-scale fishers also land their catch right in front of  
their house! Catch monitoring takes place here too.**



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# **WHEN** is this happening?

## **Catch Monitoring Surveys take place**

... every two consecutive days with “rest days” in between to cover a total of 21-22 days per month of catch monitoring in selected landing sites

October 2010						
S	M	T	W	Th	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

Monitoring day
Rest day

**Surveys may take place during the day or night. Landing times are gear- and area-specific.**

*Note: for LGUs, the monitoring may be less frequent (e.g. 1-2 times a week) or done at random*

## In short:

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- The field enumerators need to be able to collect **more accurate data** in a **quicker** and **more efficient** manner to be able to monitor more gear landings and cover more ground.

# END

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