



Is Closing the Best Option?:

The case of Seasonal Closure for Sardine Fishery in the Visayan Sea, Philippines

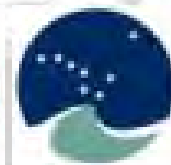
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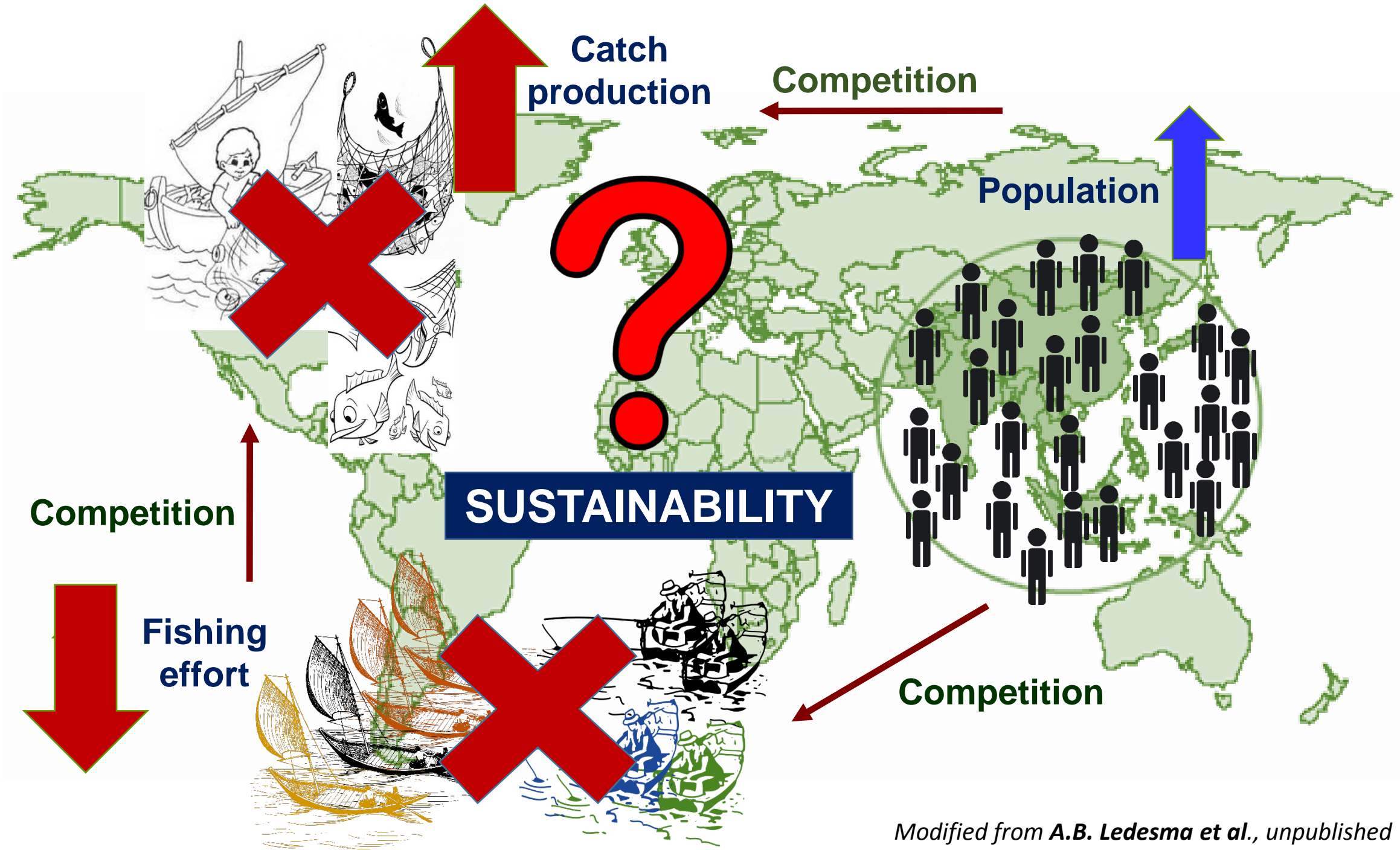
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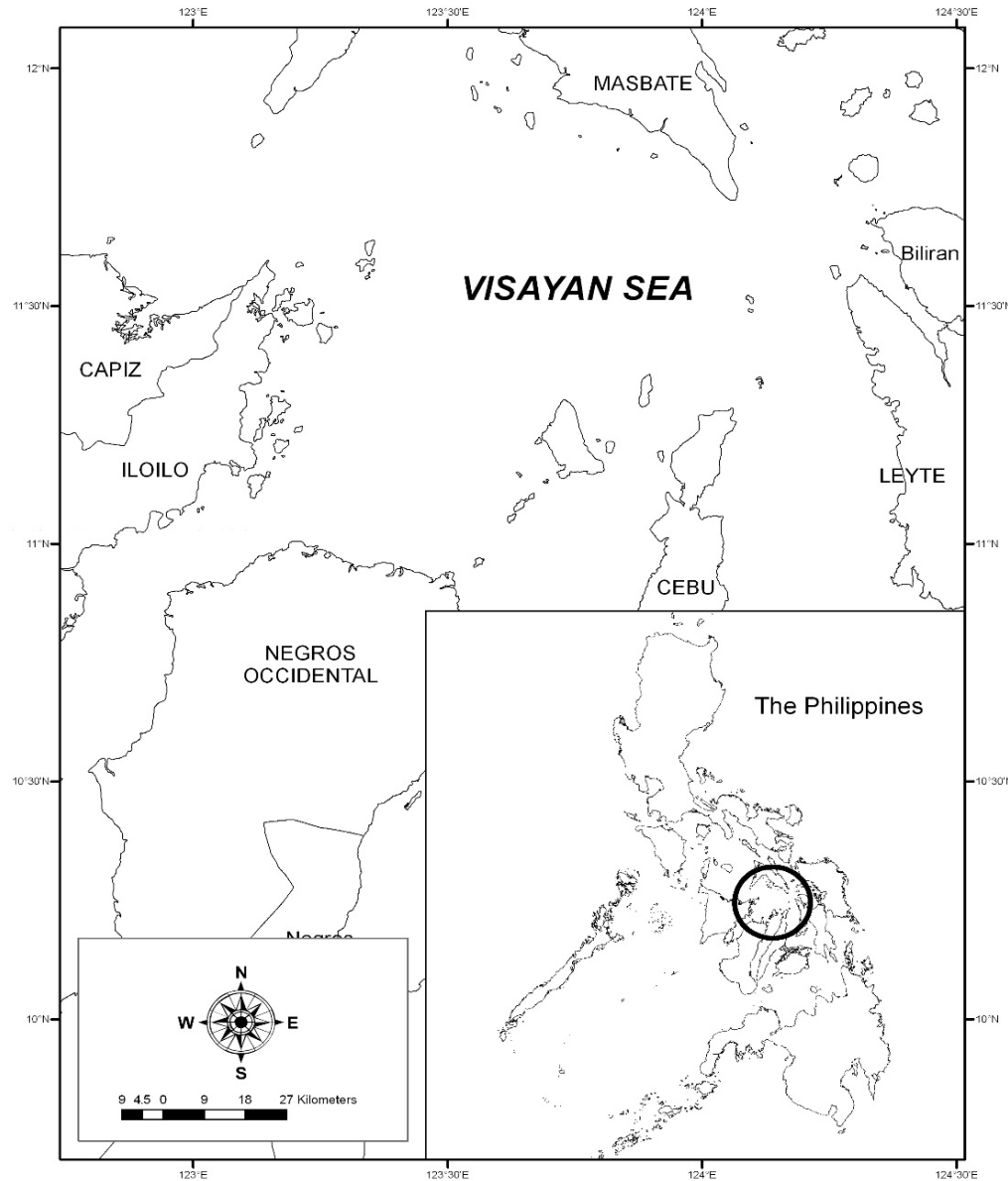
Miagao, Iloilo 5023 Philippines





Modified from A.B. Ledesma et al., unpublished

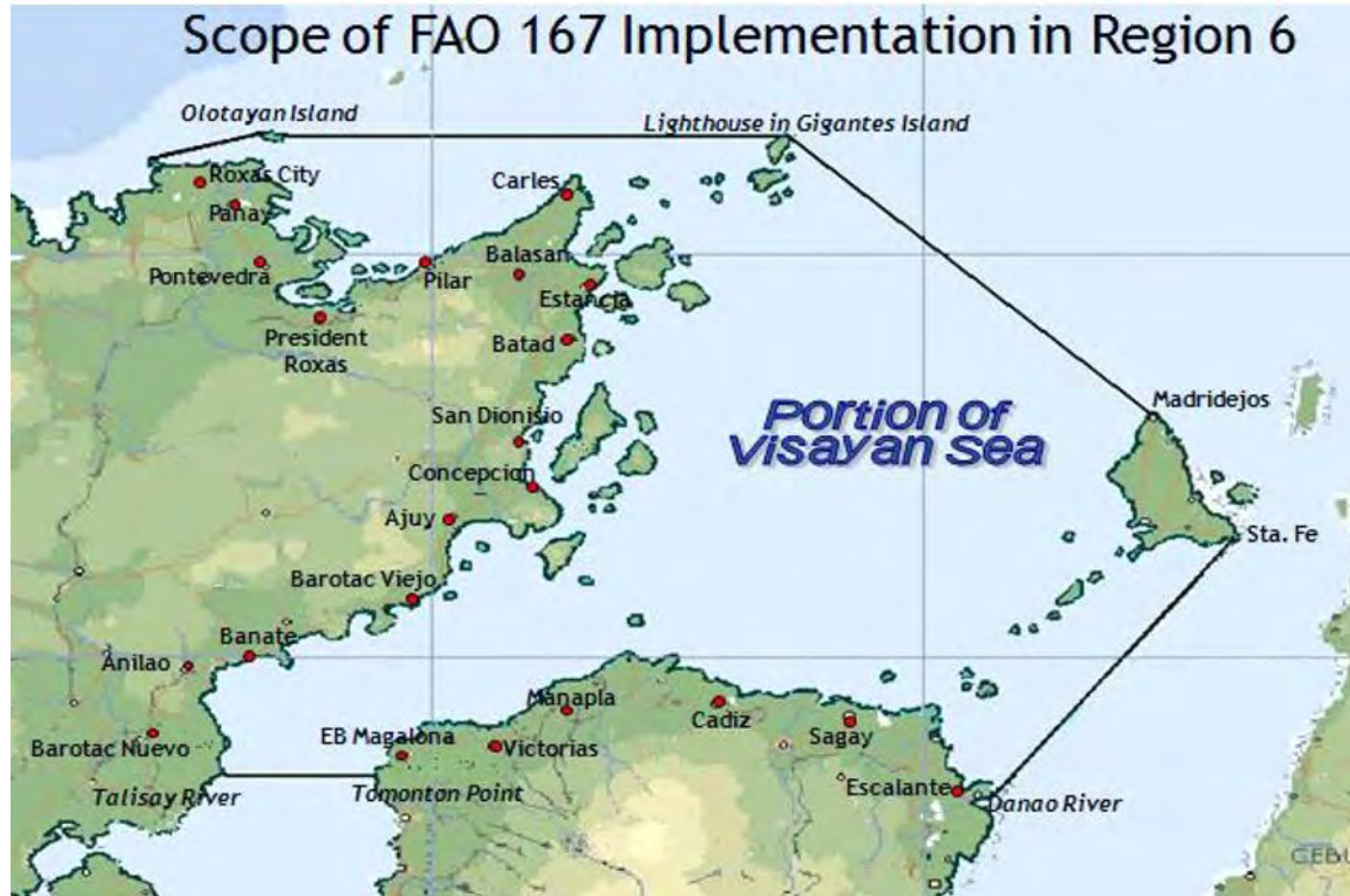
Visayan Sea



- One of the major fishing grounds in the Philippines
- Surrounded by three regions covering four provinces and shared by 22 municipalities
- It comprises 5% of the Philippine shelf
- Contributed 13.46% to the country's commercial fish harvest and 11.28% of municipal fish harvest
- One of the top producers of sardines, herrings and mackerels

Source: Ferrer, 2009

Seasonal Closure



Area covered by the close season. Lifted from BFAR 6 presentation during the stakeholders meeting in Iloilo City on March 5, 2014

- Fish and Game Administrative Order No. 13 (1939) – established close season for the conservation of sardines and herring
- Fisheries Administrative Order (FAO) 167 (1989) – seasonal closure for selected species of sardines, herring and mackerel from November 15 to March 15
- FAO 167-3 (2013) - seasonal closure from November 15 to February 15

Seasonal Closure



- Sardines and herrings under family Clupeidae
 - a. *Sardinella fimbriata*
 - b. *Sardinella longiceps* (*Sardinella lemuru*)
 - c. *Dussumieria acuta*
- Mackerels under family Scombridae
 - a. *Rastrilleger brachysoma*
 - b. *Rastrelliger chrysozonus*

Species covered by seasonal closure

Seasonal Closure



- ✓ Medium to large scale commercial fishing gears:
 - *Midwater trawl, purse seine, ring net, modified Danish Seine, bagnet*
- ✓ Small-scale commercial fishing gears:
 - *Encircling gill net*
- ✓ Municipal fishing gears:
 - *Encircling gill net, bottom-set gill net, drift gill net, lift net, fish corral, modified cast net, baby trawl, baby Danish seine, beach seine and scoop net*

Gears that targets sardines, herrings and mackerels

Objectives

General Objective:

To examine the effects of seasonal closure in regulating sardine, herring and mackerel fisheries in the Visayan sea

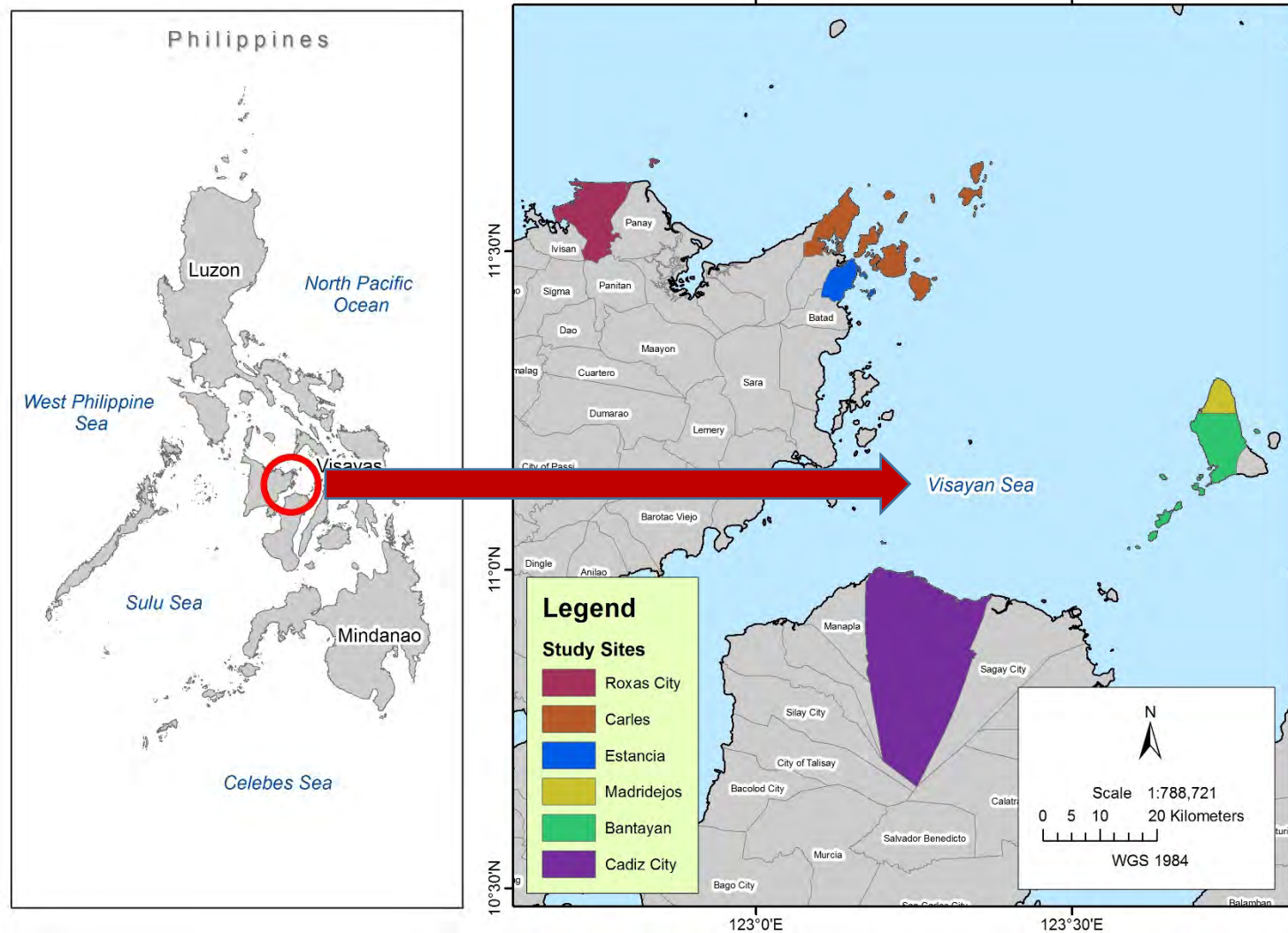
Specific Objectives:

To determine if the seasonal closure improved the sardines stock.

To determine the level of support of different stakeholders to the seasonal closure.



Methods



Study sites

- Survey questionnaires were administered to fishers, traders, and processors of sardines, herrings and mackerels
- Key informant interview (KII) with different sectors involved were conducted
- Secondary data collection

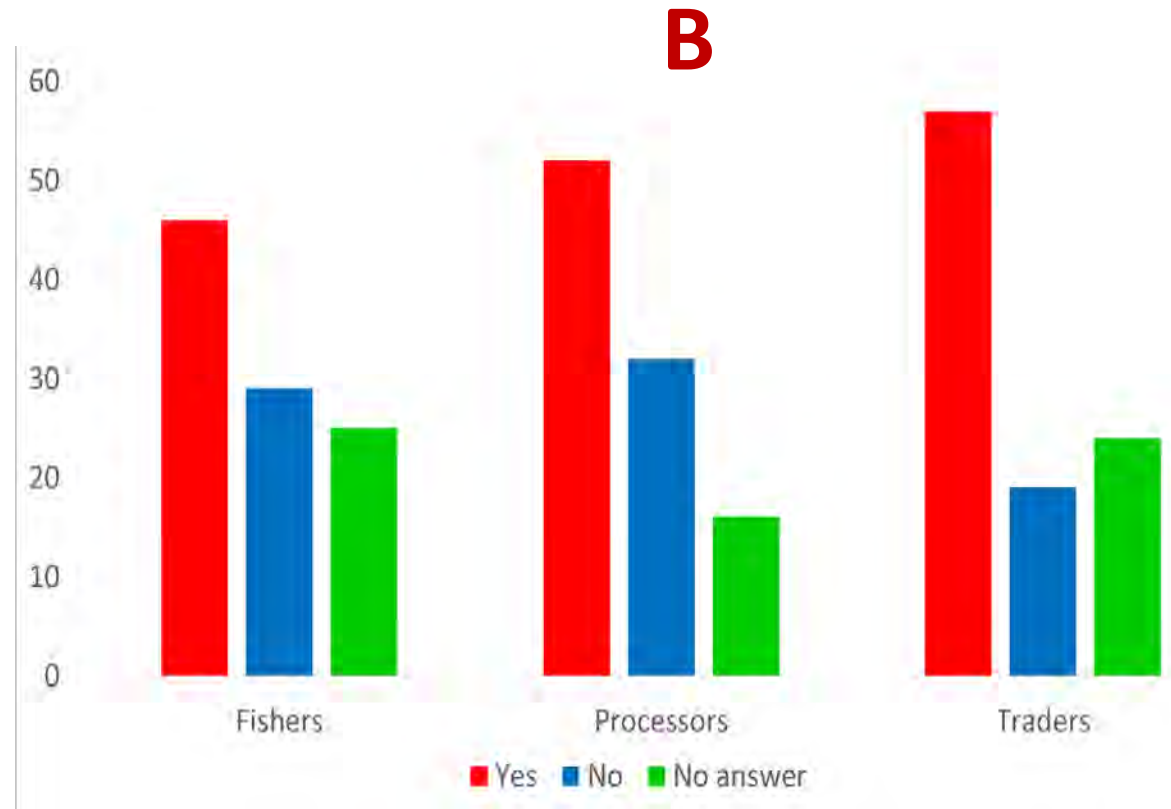
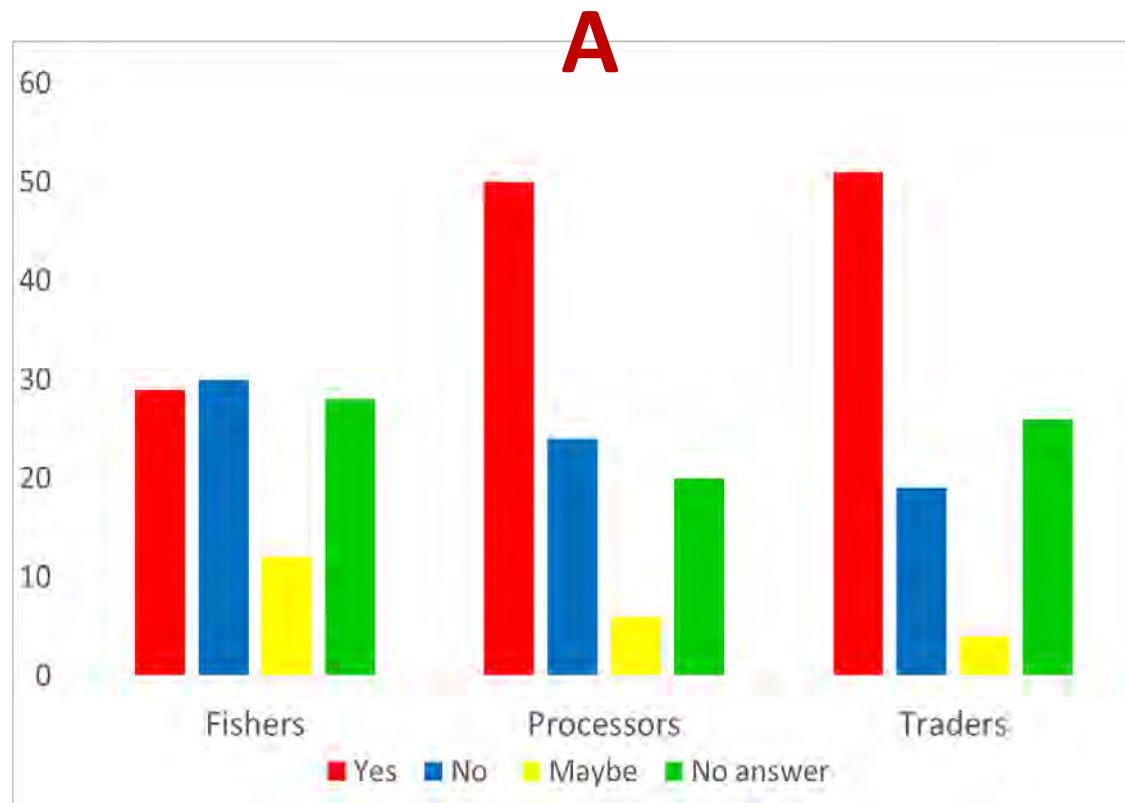
Results

Respondents

Province	Total Number of Respondents (Fishers)	Total Number of Respondents (Processors)	Total Number of Respondents (Buyers/Traders)
Capiz	25	9	16
Iloilo	20	20	27
Negros Occidental	30	8	6
Cebu	27	13	4
TOTAL	102	50	53

□ 12 Key Informant Interview were conducted

Results



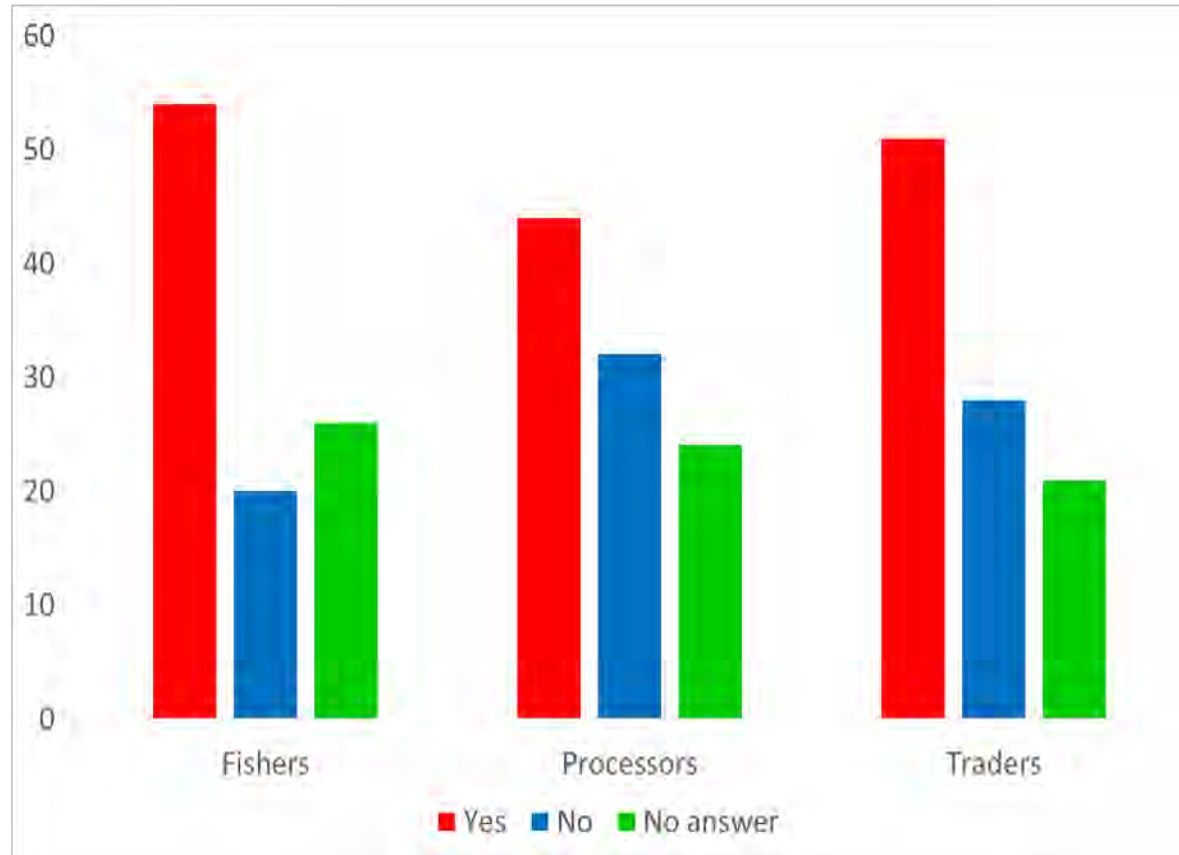
Perception of different stakeholders if seasonal closure has led to an increase in sardine, herring and mackerel production (in %)

Perception of different stakeholders if close season is beneficial (in %)

- ❑ Fishers' perception is significantly different from the perception of traders. (Tukey & Scheffe post hoc test)

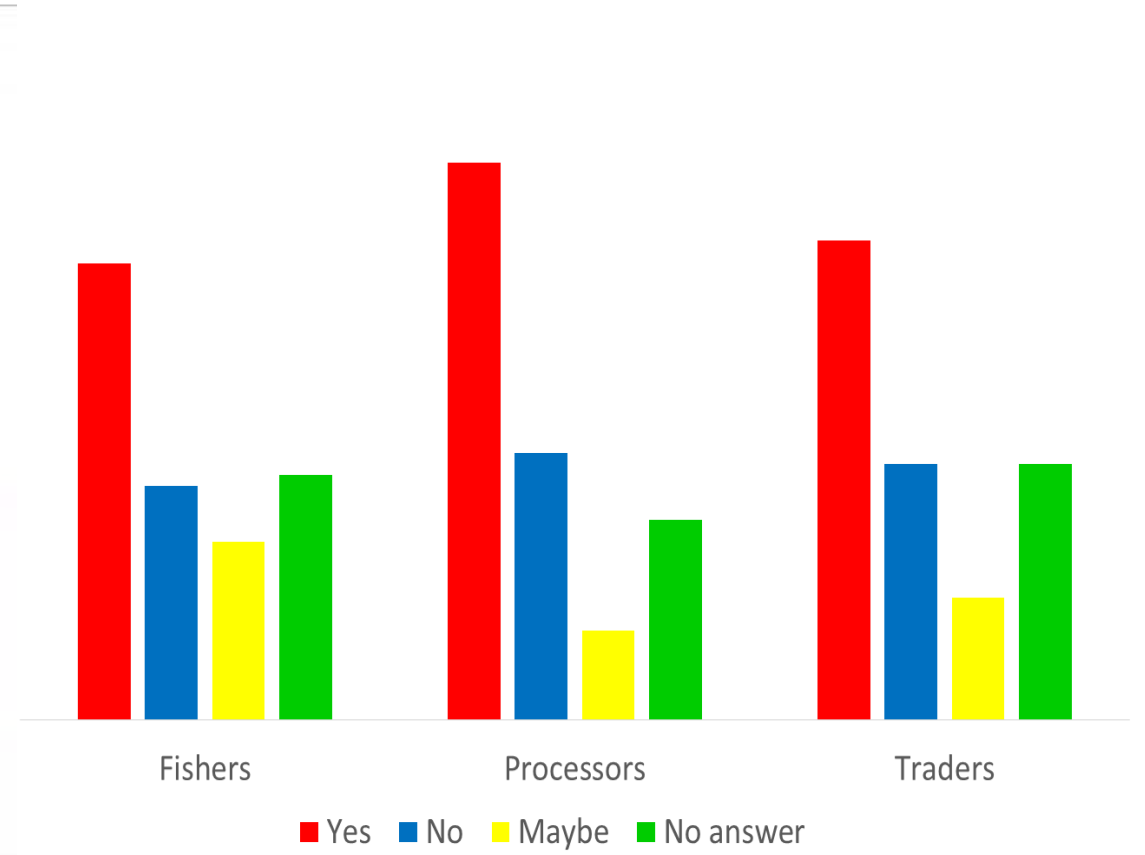
Results

A



Perception of different stakeholders if they will support the continuous implementation of the seasonal closure (in %)

B



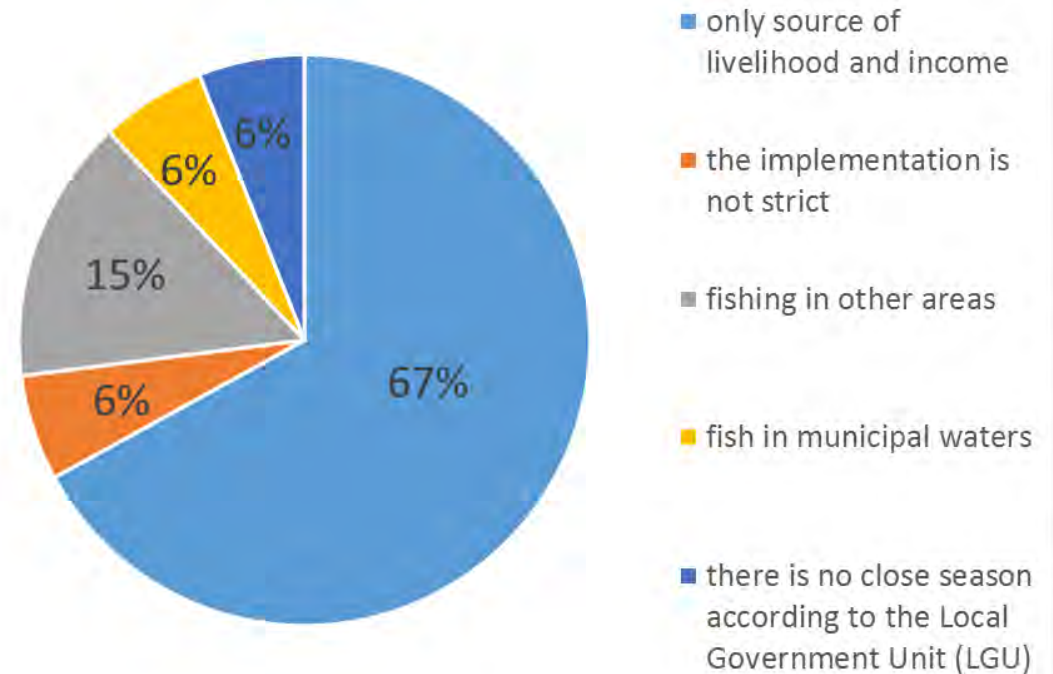
Perception of different stakeholders with regards to complying with the provisions of seasonal closure (in %)

Results

Fishers' activity during seasonal closure

Province	Continuously fishing (%)	Stopped fishing (%)	Refuse to answer (%)
Capiz	80	20	
Cebu	63	30	7
Iloilo	60	40	
Negros Occidental	73	20	7

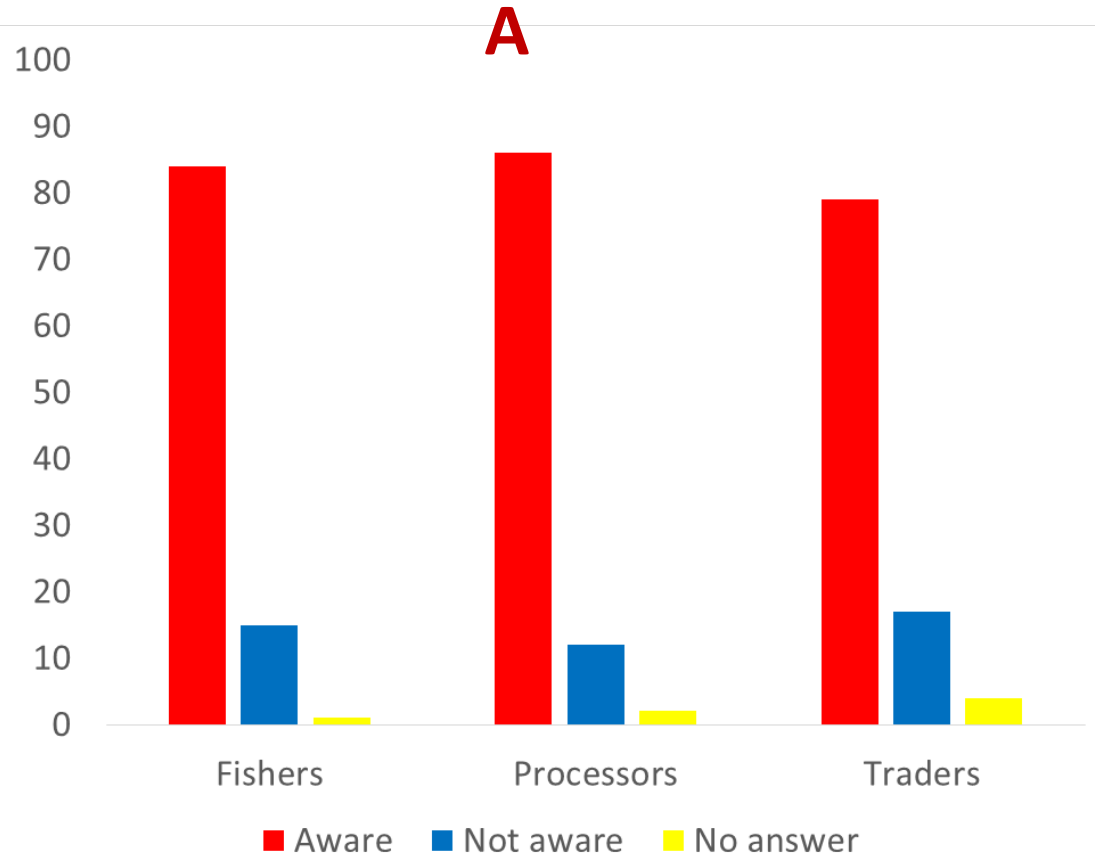
☐ An average of 69% of fishers are continuously fishing during close season



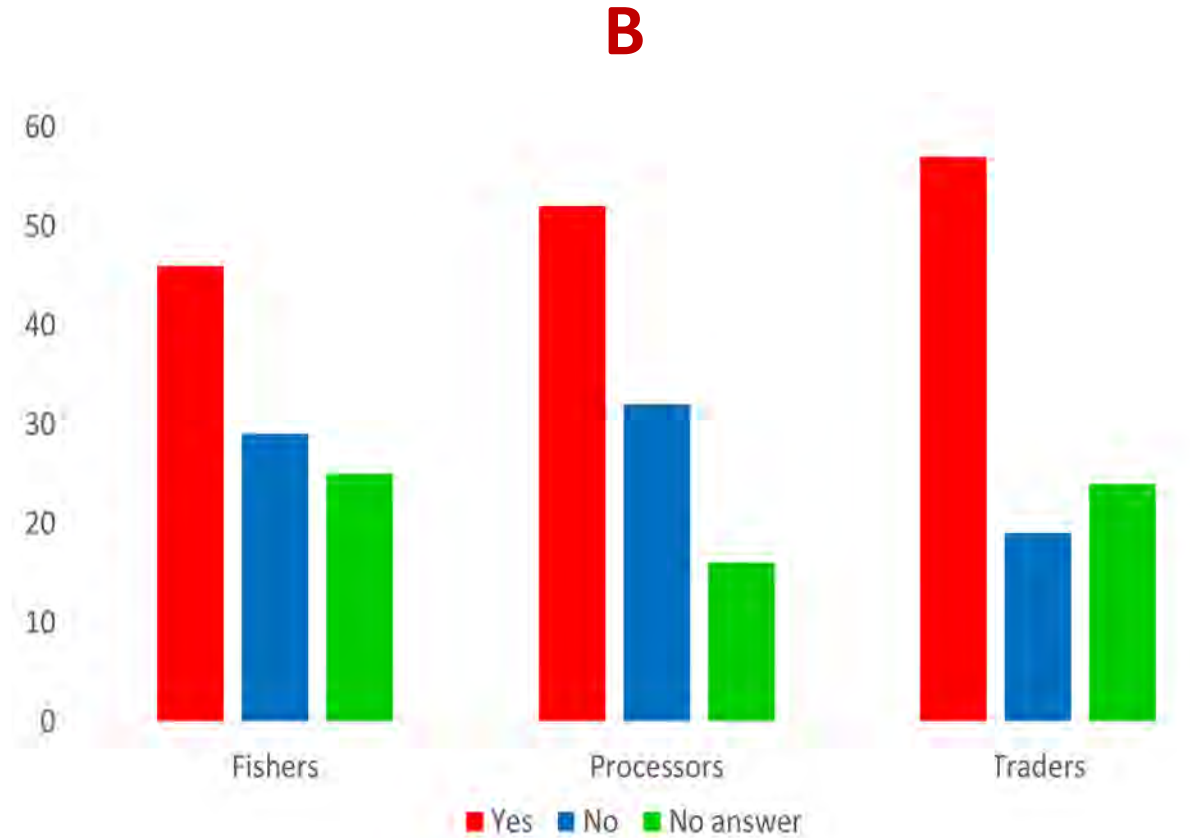
Reasons why fishers' are still fishing during seasonal closure

Policy options

A. Continue the implementation of the existing FAO 167-3



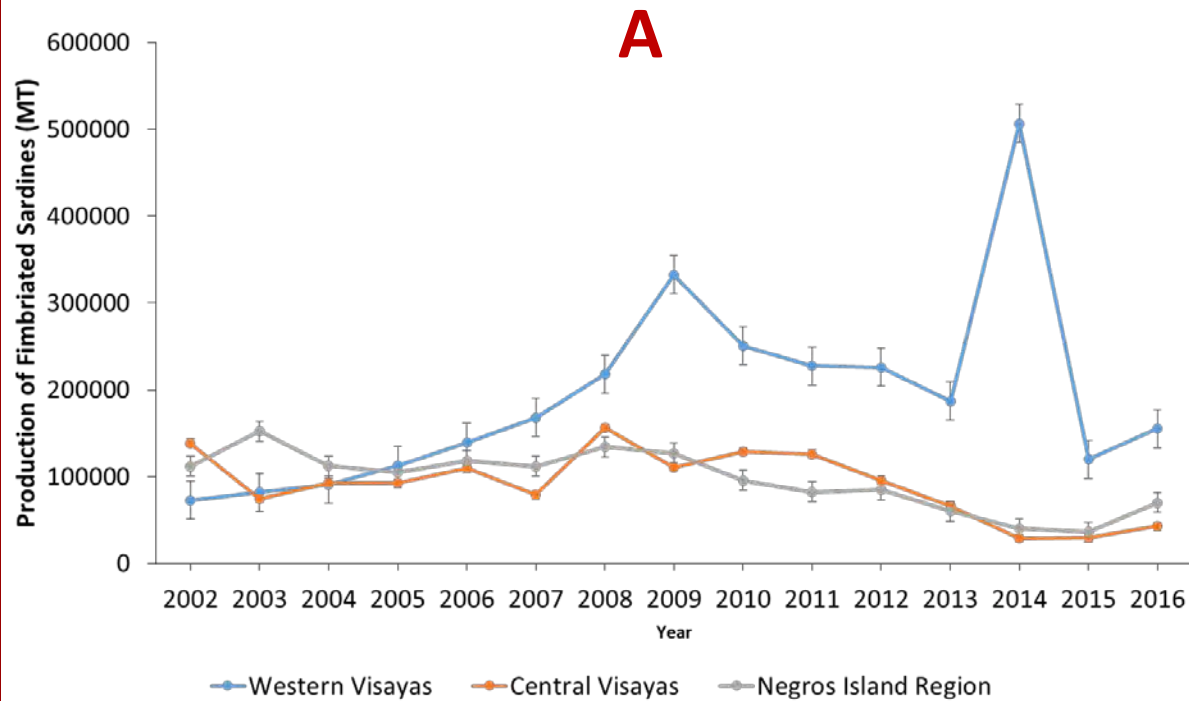
Level of awareness of different stakeholders on the implementation of seasonal closure



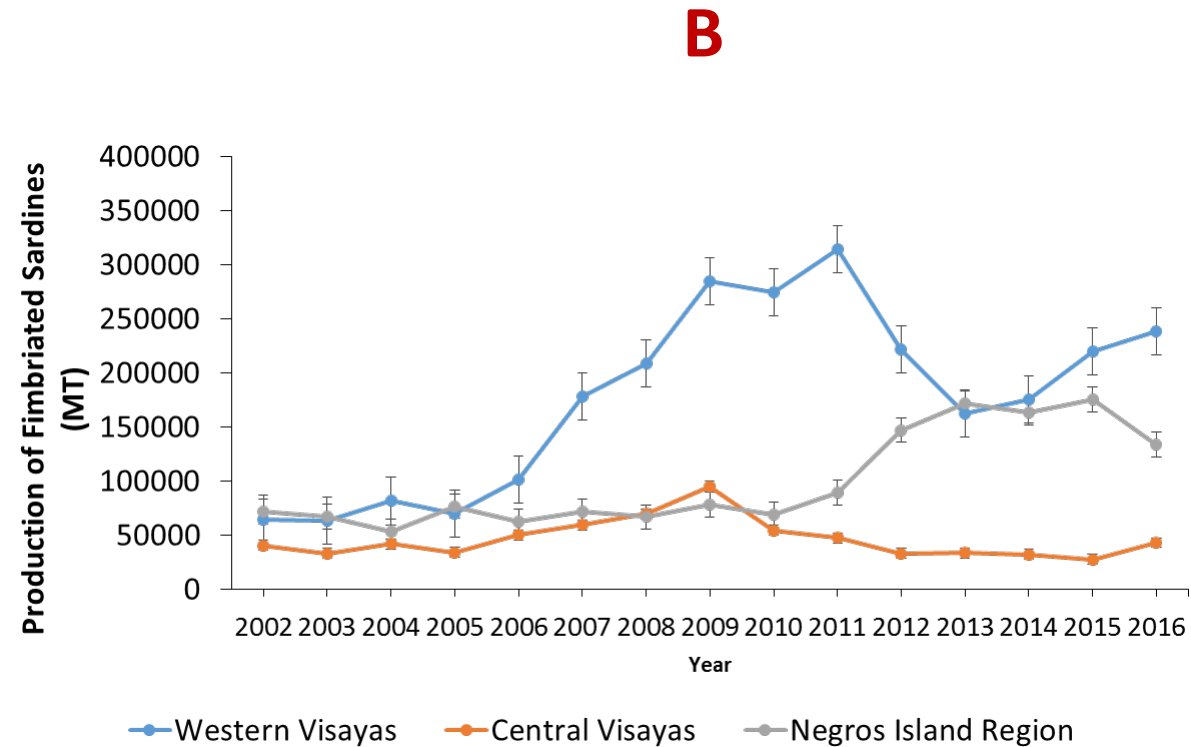
Perception of different stakeholders if close season is beneficial (in %)

Policy options

A. Continue the implementation of the existing FAO 167-3



Commercial Fisheries Production of Fimbriated Sardines in Visayan Sea



Municipal Fisheries Production of Fimbriated Sardines in Visayan Sea

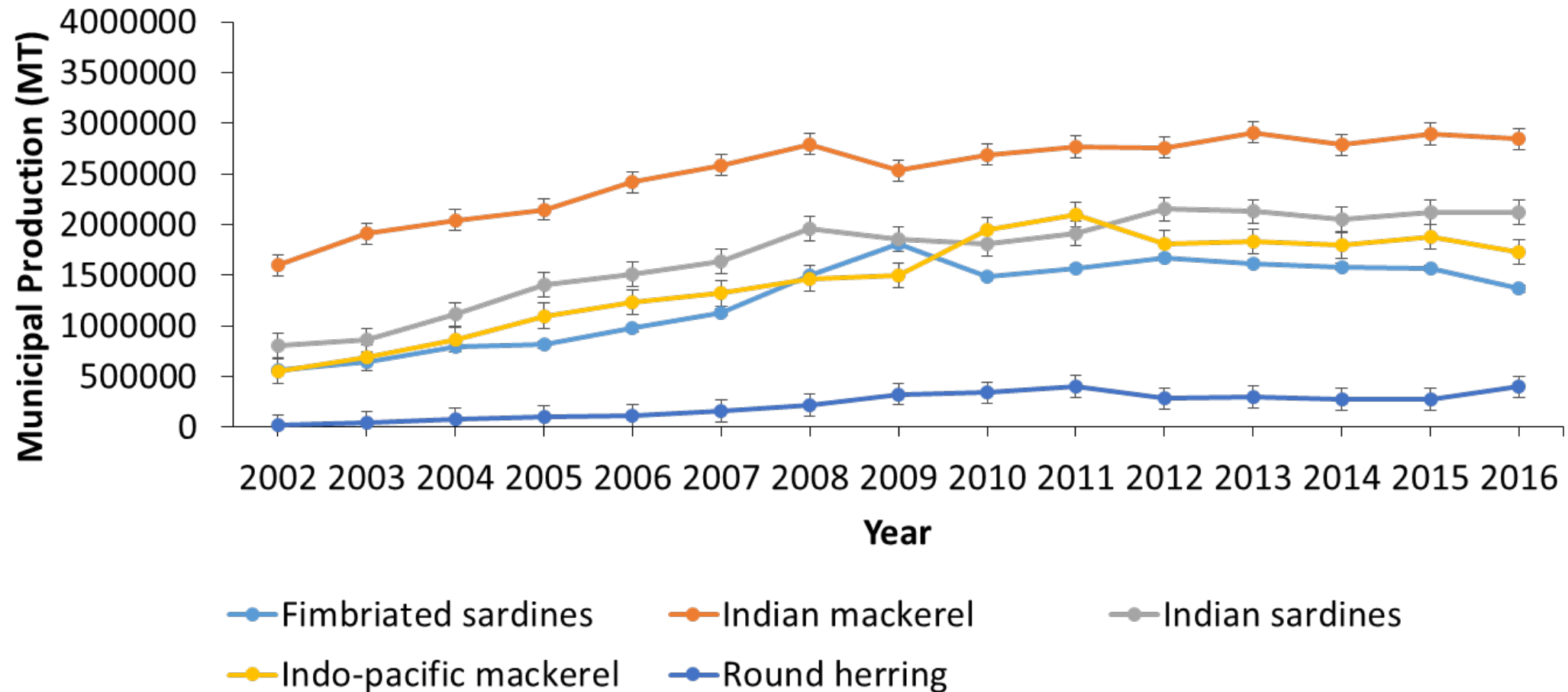
Policy options

B. Amend some provisions of the FAO 167-3

- ❑ The data from the Bureau of Fisheries and Aquatic Resources revealed that spawning season varies every year. The same was noted during the key informant interview which confirms the claim of the fishers. Thus, the seasonal closure period should be flexible.
- ❑ List of species should be corrected (e.g. *Sardinella lemuru* instead of *Sardinella longiceps*, *Dussumieria acuta* instead of *Dusumeiria acuta*)
- ❑ Should put a phrase “all fishers, both municipal and commercial”...

Policy options

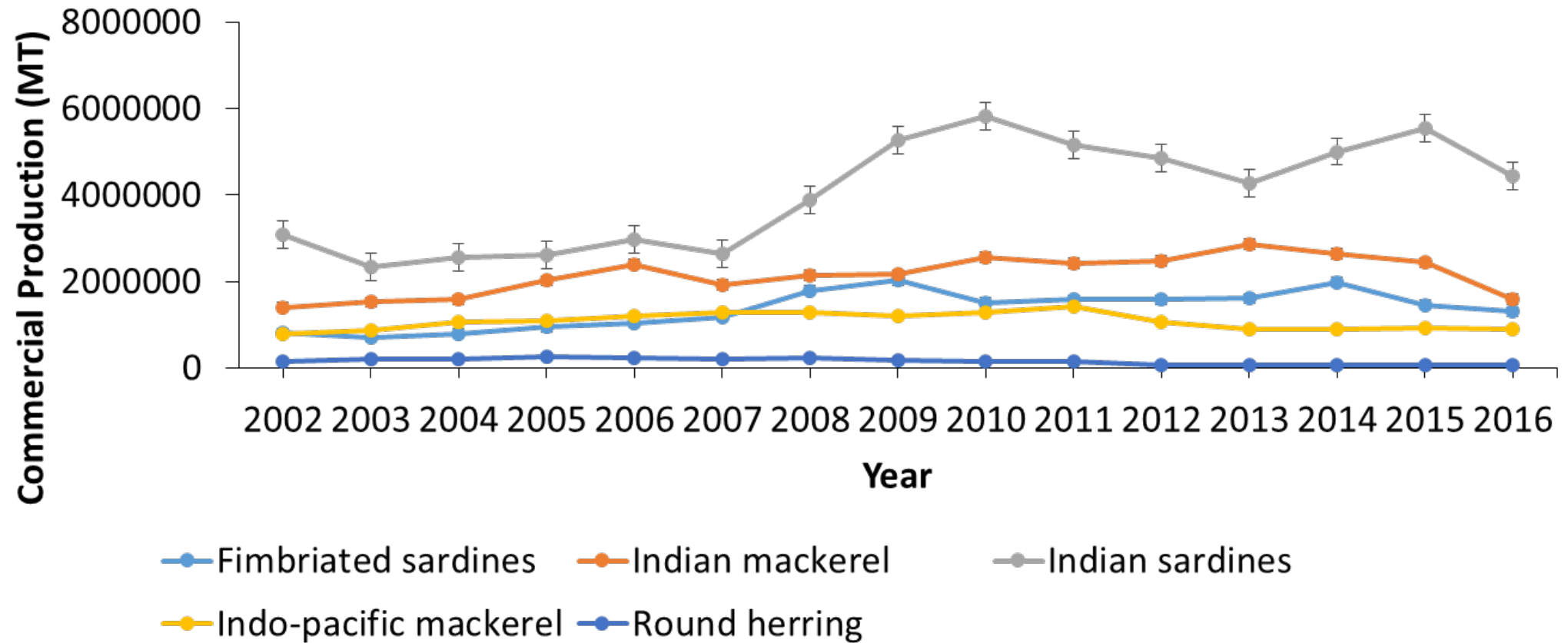
C. Stop the implementation of the FAO 167-3



National municipal fisheries production from 2002-2016

Policy options

C. Stop the implementation of the FAO 167-3



National commercial fisheries production from 2002-2016

The Way Forward

If we choose option A:

- ★ Government should provide an alternative and supplemental livelihood for the different stakeholders since most of them (65%) do not have other sources of income

If we choose option B:

- ★ Include a provision that allows adjustment of the close season period depending on the result of the reproductive biology studies and observations of fishers; should stipulate that FAO 167-3 covers both municipal and commercial fishing to avoid confusions; scientific names of species should be corrected (e.g. *Sardinella lemuru* instead of *Sardinella longiceps*, *Dussumieria acuta* instead of *Dusumeiria acuta*).

The Way Forward

If we choose option C:



Local government units should strengthen their fisheries registration and licensing system

Mesh size regulation be strictly enforced in order to avoid catching of juvenile sardines, herring and mackerel

The use of fine mesh nets should be regulated especially in beach seine and stationary gears (e.g. lift nets)

Generally



Post-harvest facilities and capacity on value addition should be in place to help the stakeholders especially the small-scale processors surrounding Visayan Sea wherein canning factory is not present

The Way Forward

Seasonal closure for sardines, herrings and mackerels may not be the best option



But it could be one of the options in managing the sardine, herring and mackerel fishery in Visayan Sea

Maraming salamat po!
Thank You!

