Is Closing the Best Option?:
The case of Seasonal Closure for Sardine Fishery in the Visayan Sea, Philippines

Ruby P. Napata, Liberty N. Espectato and Genna D. Serofia
Institute of Fisheries Policy and Development Studies
College of Fisheries and Ocean Sciences
University of the Philippines Visayas
Miagao, Iloilo 5023 Philippines
Population

Catch production

Competition

Fishing effort

SUSTAINABILITY

Competition

Modified from A.B. Ledesma et al., unpublished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

- 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

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

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

Species covered by seasonal closure
Seasonal Closure

Gears that targets sardines, herrings and mackerels

✓ 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
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

- 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

Study sites
## Results

### Respondents

<table>
<thead>
<tr>
<th>Province</th>
<th>Total Number of Respondents (Fishers)</th>
<th>Total Number of Respondents (Processors)</th>
<th>Total Number of Respondents (Buyers/Traders)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capiz</td>
<td>25</td>
<td>9</td>
<td>16</td>
</tr>
<tr>
<td>Iloilo</td>
<td>20</td>
<td>20</td>
<td>27</td>
</tr>
<tr>
<td>Negros Occidental</td>
<td>30</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Cebu</td>
<td>27</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>TOTAL</td>
<td>102</td>
<td>50</td>
<td>53</td>
</tr>
</tbody>
</table>

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 %)

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

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

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

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

### Fishers’ activity during seasonal closure

<table>
<thead>
<tr>
<th>Province</th>
<th>Continuously fishing (%)</th>
<th>Stopped fishing (%)</th>
<th>Refuse to answer (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capiz</td>
<td>80</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Cebu</td>
<td>63</td>
<td>30</td>
<td>7</td>
</tr>
<tr>
<td>Iloilo</td>
<td>60</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>Negros Occidental</td>
<td>73</td>
<td>20</td>
<td>7</td>
</tr>
</tbody>
</table>

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

### Reasons why fishers’ are still fishing during seasonal closure

- only source of livelihood and income (67%)
- the implementation is not strict (15%)
- fishing in other areas (6%)
- fish in municipal waters (6%)
- there is no close season according to the Local Government Unit (LGU) (6%)

*Reasons why fishers’ are still fishing during seasonal closure*
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!