Sustainable Fisheries Management in the Eastern Pacific Ocean (EPO)
Guillermo Compean
Tropical Tunas: Yellowfin, Skipjack, Bigeye
EPO Retained Catch – all gears

2019: 686 000 mt (preliminary)
EPO Purse-seine fishing

Purse-seine sets are made on tunas associated with dolphins and floating objects, and on unassociated tuna schools.
Distribution of purse seine sets, by type

<table>
<thead>
<tr>
<th></th>
<th>Sets</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2018</td>
<td>2019</td>
<td>DEL</td>
<td>NOA</td>
</tr>
<tr>
<td></td>
<td>9,774</td>
<td>9,680</td>
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<tr>
<td>NOA</td>
<td>5,943</td>
<td>8,002</td>
<td>5,943</td>
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<tr>
<td>OBJ</td>
<td>16,806</td>
<td>15,443</td>
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<td>15,443</td>
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<td></td>
<td>30,523</td>
<td>33,125</td>
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</tbody>
</table>

% by set type

<table>
<thead>
<tr>
<th>Year</th>
<th>DEL</th>
<th>NOA</th>
<th>OBJ</th>
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</thead>
<tbody>
<tr>
<td>2016</td>
<td>33.8</td>
<td>22.3</td>
<td>43.9</td>
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<td>2017</td>
<td>28.1</td>
<td>22.1</td>
<td>49.8</td>
</tr>
<tr>
<td>2018</td>
<td>30.1</td>
<td>18.3</td>
<td>51.7</td>
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<td>2019</td>
<td>29.2</td>
<td>24.2</td>
<td>46.6</td>
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Measures to control mortality have been increasingly restrictive

- **2004-2007** 42-day PS closure in one of two periods.
- **2008** No agreement, most members adopted voluntary measures.
- **2009-2013** 62-day PS closure in one of two periods.
- **2014-2016** 62-day PS closure in one of two periods.
- **2017** (Amended) 72-day PS closure in one of two periods.
- **2018-2020** 72-day PS closure in one of two periods.

Closed from **9 October to 8 November** of each year.

The system of measures adopted must be considered as an overall allocation based in days of fishing estimated from the $F_{MSY}$. 
All PS vessels must stop fishing in the EPO for a period of 72 days, choosing to apply one of the two closure periods specified for each year:

- 29 July to 8 October, or
- 9 November to 19 January of the following year
Each PS vessel is limited the following number of active FADs, by vessel class:

Class 6 (1,200 m³ and greater): 450 FADs
Class 6 (< 1,200 m³): 300 FADs
Class 4-5 (213 - 425 m³): 120 FADs
Class 1-3 (< 213 m³): 70 FADs
The main reason for increasing these measures has been the constant increase in fishing capacity.

The excess capacity in the PS fleet and the actual levels of catch, threaten that tuna fisheries in the region are conducted at a sustainable level.
Stock status indicators (SSI)

- Most SSIs based on the floating-object fishery suggest that the fishing mortality of all three species has increased
- Mainly due to the increase in the number of floating-objects sets
Capacity Management in the EPO

Limit entry Scheme adopted in 2002

• The agreed scheme limits PS fleet capacity.

• The control of the size of the fleet and its capacity is essentially made through the IATTC Regional Vessel Register (RVR).

• It should be noted that, while the system agreed does limit the capacity of vessels, it does not limit catches.

• Therefore, the capacity limits must be considered as complementary to other conservation and management measures that restrict catches.
In June 2005, the Commission adopted a Plan for Regional Management of Fishing Capacity.

The principal objective of the Plan is to establish a comprehensive program for managing the capacity of all PS fishing fleets operating in the EPO, to ensure the long-term sustainability of the fisheries covered by the IATTC.
By-Catch at the IATTC

Antigua Convention

-Enters into force on August 27, 2010 replace the 1949 Tuna Convention.

-Provides clear legal authority to work extensively on bycatch issues, as stated in Article paragraph (f):

The Commission shall...“adopt, as necessary, conservation and management measures and recommendations for species belonging to the same ecosystem and that are affected by fishing for, or dependent on or associated with, the fish stocks covered by this Convention, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;
IATTC - Actions on Bycatch

- Tuna Dolphin Program
- IATTC Working Group on Bycatch established in 1997
- Resolutions on Bycatch, Sea turtles, Sharks, and Sea birds
- Research to develop fishing gear for Bycatch reduction
- FAD Research Program
Features of the Agreement on the International Dolphin Conservation Program (AIDCP)

Requirements for vessels participating in the Tuna Fishery Associated with Dolphins (Since 2002)

- Observers present on every trip
- Assignment of an individual dolphin mortality limit
- Fine mesh panel in net to reduce entanglement of dolphins
- Performance of back down maneuver
- Captain trained and certified
- Rescue equipment and actions required
- Night sets prohibited
The sustainability of the tuna resources and associated species are related with:

- The best functioning of the Commission
- The full Participation of all Parties involved in the fishery
- Equilibrium between productivity of the stocks and the exploitation of the resources
- Adoption of conservation measures
- A real benefit for the participants in the fishery, including the coastal states and the underdeveloped countries and
- The commitment by consensus among the participating in the fishery
EPO Challenges in Conservation Measures

- **Capacity**: restricted. However, the Plan for regional management of fishing capacity establish a target of 158,000 m³ well below of the 265,000 m³ of 2019.

- **Days fished**: restricted. However, the current resolution (C-17-02) expires at the end of 2020.

- **FADs**: restricted. However, daily active FAD limits per vessel exceed the historical average deployed by vessel.

- **Number of sets**: not restricted. The scientific staff recommend, for 2021-2023 a limit on the total number of floating-object sets.
Recommendations

- Establish a triennial management cycle for the tropical tuna fishery in the EPO (2021-2023).

- Maintain the provisions of the current resolution: 72-days PS closure in one of two periods.

- Establish an annual limit for all purse-seine vessels on the total number of floating object sets, combined with individual-vessel active FAD limits.
Reaching consensus and common compromises to obtain the sustainability of the fishery.

The management recommendations only have value if those are applied. Each time that agreements are not reached, sustainability is at risks.
Equilibrium between productivity of the stocks and the exploitation of the resources

The fishing availability of the tuna has been incremented for new fishery zones and the development of new techniques for the captures.

The fishing capacity represents, in the near future a real challenge for the sustainability of the fishery.

Since 2002 we had an agreement for the limitation of the PS fleet. It is necessary to improve it.

The Commission must work in the development of fishing techniques and methods that are more selective.

The ecosystem management should be a priority.
Additional managing measures should be considered to address the increase in floating objects sets.

- Establish measures to avoid, reduce and minimize the by-catch.
- Develop means of effectively monitor the number of active buoys.
- Collect and provide data that will allow evaluate the impacts of FADs.
- Develop and adopt guidelines for the construction of biodegradable and non-entangling FADs.
- Take measures to recover all FADs deployed.
Questions?