



**Asia-Pacific
Economic Cooperation**

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Fighting Illegal, Unreported and Unregulated Fishing As an Alternative Strategy to Combat Overfishing

Submitted by: University of California Santa Barbara



**Experts' Workshop on Illegal, Unreported
and Unregulated Fishing
Singapore
27 April 2018**



Fighting IUU fishing as an alternative strategy to combat overfishing

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27 April 2018
APEC Meeting, Singapore

SUSTAINABLE FISHERIES GROUP
UC SANTA BARBARA

Bren School
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msi
Marine Science Institute

Outline

- Importance of fisheries and their status
- Challenges to fisheries sustainability (e.g. overfishing, IUUF)
- Benefits of addressing IUUF

Marine Capture Fisheries

- Sources of food, livelihood, income, and recreation

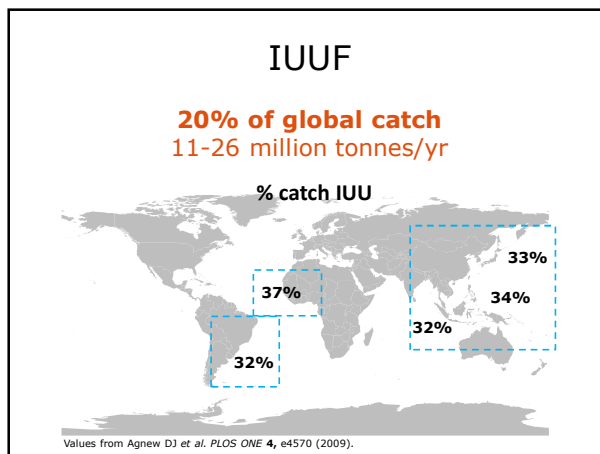
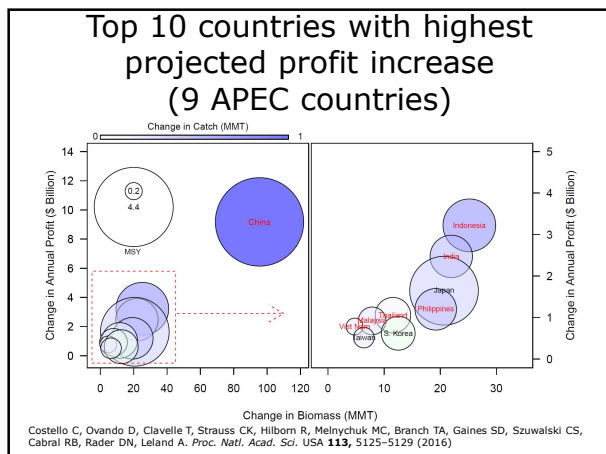
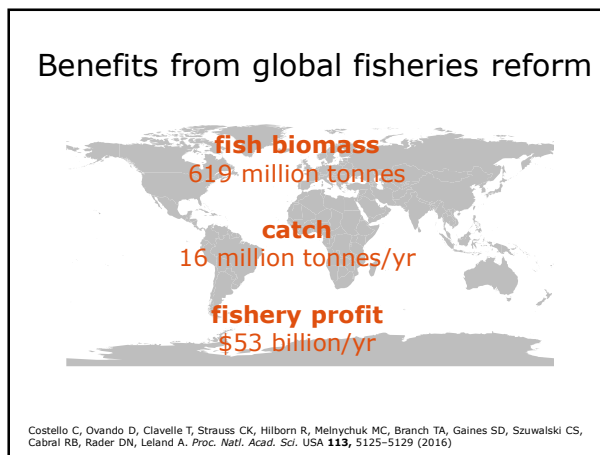
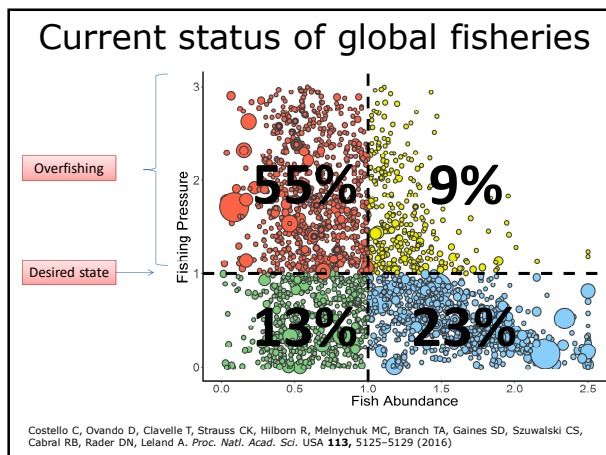
81.5 million tonnes – global production (FAO 2016)

56.6 million people –involve in the primary sector of capture fisheries, mostly (>80%) in Asia (FAO 2016)

FAO 2016. The State of World Fisheries and Aquaculture 2016. Contributing to food security and nutrition for all. Rome. 200 pp.

Fisheries challenges

- Overcapacity/overfishing
- Lack of profitable fisheries/ opportunities outside fisheries
- Fisheries management challenges (in monitoring, control, surveillance, and enforcement; lack of data)
- Habitat loss and degradation
- IUUF – undermines fisheries management efforts, loss economic opportunities, and reduced food security



Benefits of addressing IUUF

- More fish catch and profit for legal fishers (food & livelihood security)
- More fish in the sea (conservation)
- Quality seafood
- Improved working conditions for crew and eliminate human rights abuses

Indonesia

Loses US\$4 billion a year to IUU fishing

Anti-IUUF policies



Photo credit: Environmental Justice Foundation <http://www.ecmp.com/> Photo credit: Fivien Octaviani
 Palma MAE et al. Promoting Sustainable Fisheries: The International Legal and Policy Framework to Combat Illegal, Unreported and Unregulated Fishing. (BRILL, 2010).

Government's data

27% reduction in boat numbers

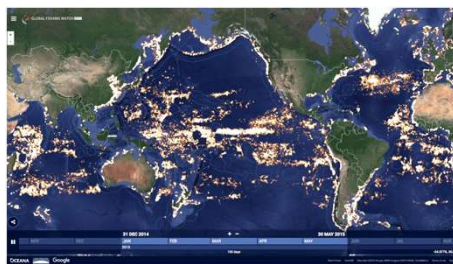
Before	4286 boats (MMAF 2015)
After	3114 boats (MMAF 2016)

40% reduction by vessel tonnage

Boat size (GT)	Reduction in total weights
30-50	-23%
50-100	-10%
100-200	-37%
>200	-92%

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 MMAF. Capture Fisheries Statistic of Indonesia, 2014. (2015).
 MMAF. The Fisheries Licenses (SPU/SKPP) Development of Indonesian Fishing Vessels - Period of March 17th 2016 (in Bahasa). (2016).

Global Fishing Watch



Automatic Identification System (AIS)



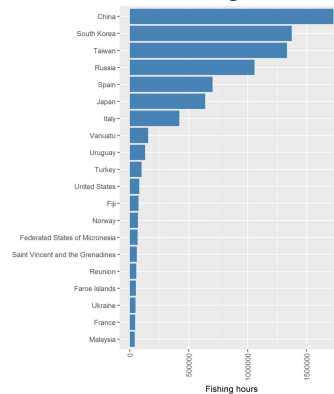
Source: Global Fishing Watch (<http://globalfishingwatch.org/map/>)
<http://blog.boattreader.com/2014/02/ais-for-boaters-part-1.html>

Distant-water fishing (2013-2016)



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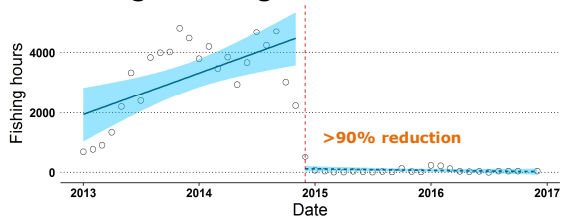
Top distant-water fishing nations (2013-2016)



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Automatic Identification System (AIS) data

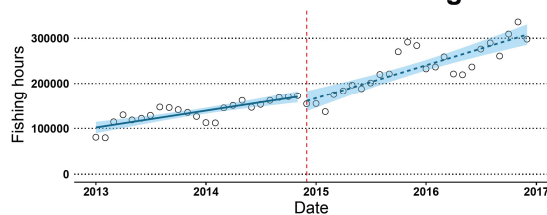
Foreign Fishing in Indonesia



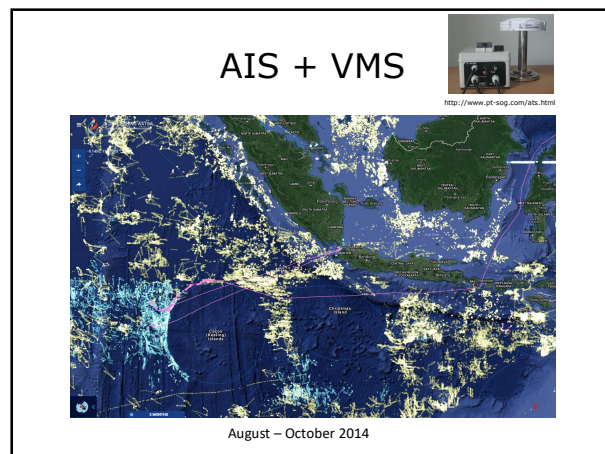
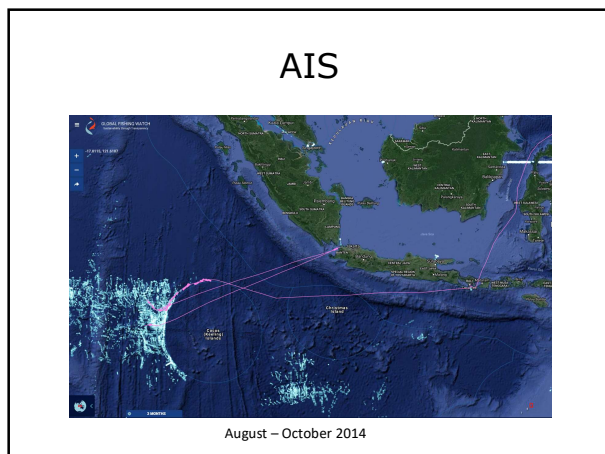
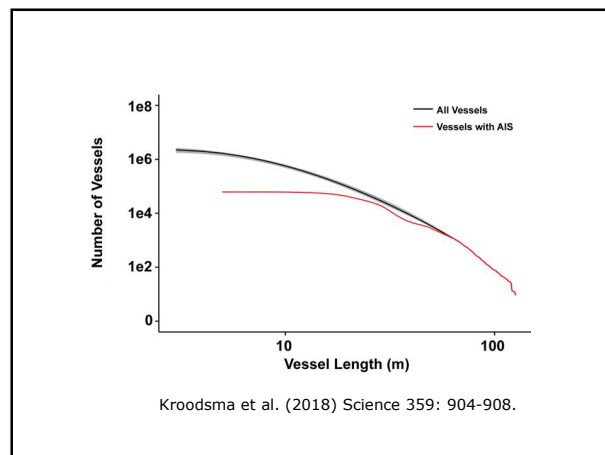
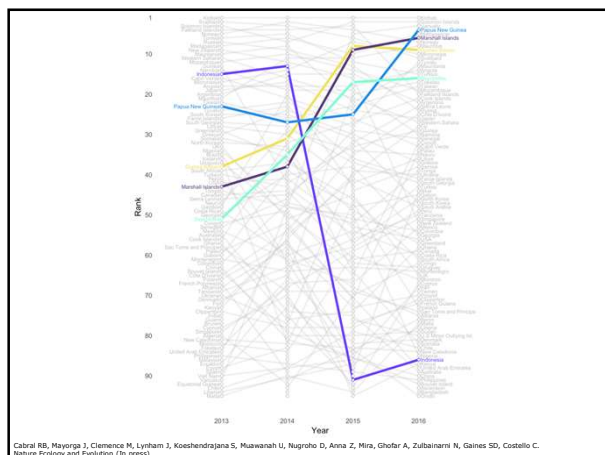
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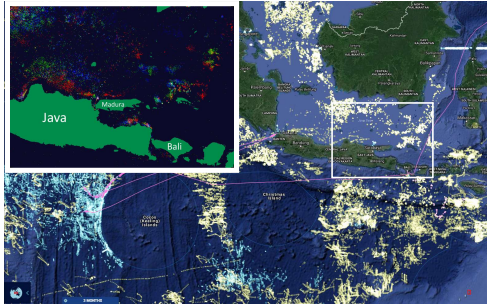
Global Distant-Water Fishing



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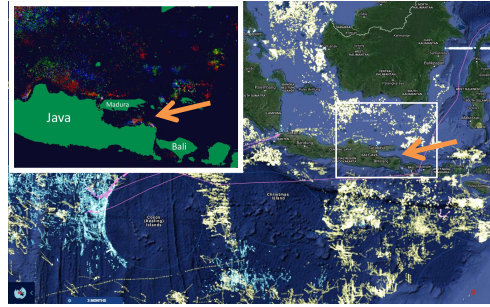
AIS + VMS + Nightlight



August – October 2014

Nightlight image: Elvidge CD, Zhizhin M, Baugh K, Hsu FC (2015). Remote Sensing 7: 3020-3036.

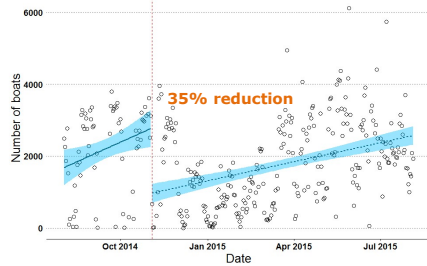
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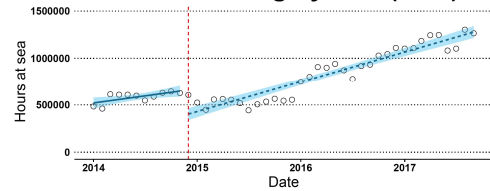
Nightlight Satellite Images



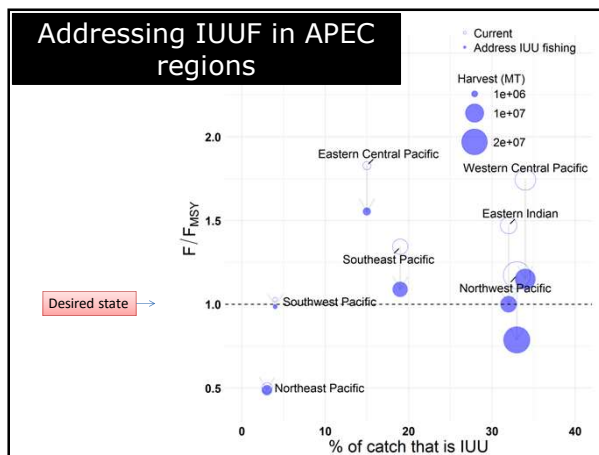
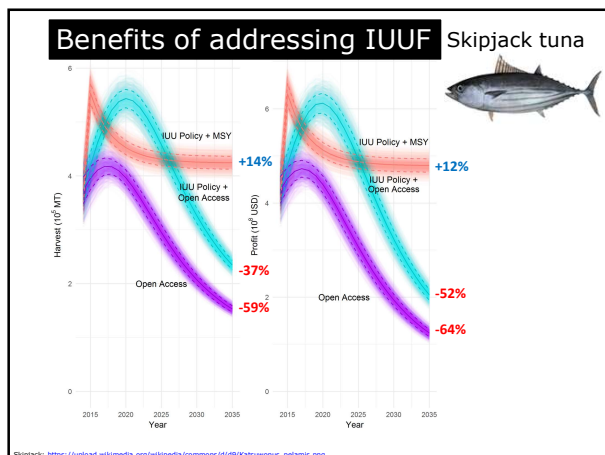
Reduction of 20-50%

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Vessel Monitoring System (VMS)



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- ### Key message
- Addressing IUUF in APEC regions can narrow the gap to fishery sustainability -- fisheries reform would become much more feasible
 - National and regional strategies are needed to address IUUF and recover fisheries
 - New technologies are available to support strategies against IUUF

Thank You

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