

# Globalization of fisheries: the prevalence, actors, ecological impact and regulation of illegal fishing



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The world fisheries catch has been stagnating since the late 1980s, despite a strong increase in fishing effort (FAO 2011). This decline triggered an expansion of industrial fisheries, manifested in the development of dedicated distant-water fleets and fisheries, first by European countries and the USA, later joined by the former Soviet Union, Japan, South Korea and finally China. Distant-water fisheries sometimes operate with specialized 'catcher' vessels (various types) linked to mother ships delivering their catch to strategically located freezing and processing facilities. Some countries supply local infrastructure including wharves and port facilities, and nowadays, distant-water fisheries have become globally important economic actors (Pauly *et al.* 2014).

The overall health of an area's fish stocks is often assessed by working out how many of a fish species there would be in that area if there were no fishing at all (unfished biomass), and then estimating how far short of this level stocks are. In an active fishery, the optimal shortfall is often seen as the maximum sustainable yield. This is then the peak crop that can be taken from a fishery, year after year. It is known that in many regions, fish stocks have dwindled to below this sustainable yield. This may in part be due to illegal, unreported and unregulated (IUU) fishing, in many cases as a symptom of weak governance in source countries. In addition, fleets have recently been reported to target and market "bycatch", including protected species including seabirds, marine mammals, and sea turtles. Relatedly, worries are increasing about the ecological consequences of such high fishing pressure on other trophic levels and on complex ecosystems (Pauly *et al.* 1998). Species interactions across trophic levels, no matter how significant these multi-species interactions are in healthy ecosystems, are rarely considered in the fisheries management debate (Boyd *et al.* 2006 and references therein).

African countries are one example where all these issues are manifest (Virdin 2012). While fisheries management has been in place with variable success in some areas, there are considerable uncertainties regarding fleet composition, fishing effort, fishing techniques, target species, and marketing strategies within the area at large. Foreign fleets as well as artisanal fisheries have interests in waters that are of immense ecological importance, but while national interests usually focus on the sustainability of fisheries themselves (and the income generated by countries from these fisheries), the impact on ecosystems remains understudied.

Difficulties to provide solid evidence of illegal, unreported and unregulated practices in these international fleets are great. The problems to regulate or even stop IUU fishing may be larger, but recent trends in the globalization of fisheries coupled with the strong suspicions that coastal ecosystems are destroyed or at least seriously effected in this process, call for further attention, research and perhaps action.

To address these issues, the **Netherlands Institute for the Study of Crime and Law Enforcement (NSCR)**<sup>1</sup> and the **Royal Netherlands Institute for Sea Research (NIOZ)**<sup>2</sup> are organizing a two day international conference '**Globalization of fisheries: the prevalence, actors, ecological impact and regulation of illegal fishing**' to discuss current issues regarding the globalization of fishing fleets and

<sup>1</sup> The NSCR conducts fundamental research on the drivers of criminality and effectiveness of interventions by the criminal justice system. The Wildlife Crime Cluster has partnered with many governmental and non-governmental organizations in Africa in Asia to better understand crimes against the environment and how law enforcement agencies can better detect and deter these offenses

<sup>2</sup> NIOZ has been active in NW African waters for nearly two decades, with research that concentrates on ecological interactions of the charismatic megafauna (seabirds, marine mammals, large predatory fish) in relation to fish stocks and offshore habitat requirements.

their impact on rich ecosystems. We aim at attracting senior scientists from around the world to share their experience, knowledge, but also their concerns regarding effective fisheries regulations and conservation of marine biodiversity.

One area of attention is Africa, where a variety of fishing fleets is operating, ranging from artisanal fisheries to (Asian) distant fleets and offshore pelagic fisheries. In this area, and others around the world, there are strong suspicions of illegal or unregulated activities, some of which are based on strong evidence (data, observations), but others based on off the record hear-say (from informed spokesmen) or circumstantial evidence. The data is so weak, or so difficult to get a hold of, that major organizations do not take action, despite increasing concern. To overcome this, we aim to bring the best possible information together, identify current gaps in knowledge, discuss opportunities to improve knowledge, and discuss the ecological and economic impact of illegal fishing. This would be a starting point for focused research and research proposals as a first step towards better management and conservation.

We aim to publish the results of this conference in a special issue of the ICES Journal of Marine Science. Conference topics include:

- Historical overview of fisheries and legislation
- Prevalence of illegal fishing and the actors involved
- Ecological and economic impacts
- Regulation, enforcement and response

### Invited speakers

Invited key note speakers will include Professor **Daniel Pauly** (Sea Around Us; Institute for the Oceans and Fisheries & Department of Zoology, Vancouver, British Columbia), Professor **Wim Huisman** (chair of Free University School of Criminology, Amsterdam, The Netherlands), several other prominent scientists and representatives from the EU Long Distance Advisory Council (LDAC).

### Submissions

We invite those interested in presenting a poster or plenary presentation to submit a title and abstract (150 words) to [alemieux@nscr.nl](mailto:alemieux@nscr.nl) before 1 Dec 2016. Submissions will be reviewed before 15 Dec 2016.

### Proceedings

Proceedings will be published as a special issue or a special section in the **ICES Journal of Marine Science** and we encourage contributors to submit their papers (subject to a peer review) straight after the conference.

### Registration

The conference is open for registration from 1 Nov 2016 for all presenters as well as those who wish to attend the sessions. The registration fee is 150 EUR including lunch and dinner each day.

### Additional Information

For additional information about travel to/from Texel, accommodation and the programme please visit:

[www.nioz.nl/illegalfishing](http://www.nioz.nl/illegalfishing)

(currently under construction, but launched late November 2016)

### References

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