

# Adaptive fishing in Peru

Peru has the world's most productive sea area for fish...  
but also the most fickle. This variability required a  
unique adaptation of the fisheries management system.  
Should this example be emulated?



Oceanographic campaign, Peru.

Off the coast of Chile and Peru, the Humboldt current causes the upwelling of cold water, very rich in nutrients responsible for tremendous fish productivity. The Peruvians have monitored these stocks since the 1960s, notably through express assessment campaigns conducted simultaneously by fifteen vessels equipped with acoustic sounders.

This is due to the economic importance of fisheries in Peru, but also to the extreme variability of this area, where the yield can decrease sharply during El Niño events, e.g. in 1972-1973 or 1982-1983, when the anchovy population collapsed, durably affecting the ecosystem and society. Hence the idea suggested by the Instituto del Mar del Perú of changing the approach and managing fish stocks in real time, taking into account the wide variety of ecosystem parameters.

When IRD started working there in 2001, Peru was already doing a better job of managing the consequences of the El Niño event of 1997-1998, but scientific know-how was somehow lacking to process the vast amount of data collected. To this end, IRD helped set up multidisciplinary teams and embarked on cooperation which contributed to training one hundred or so Peruvian scientists in fifteen years. Knowledge was updated, thereby basing conceptual or numerical models on validated processes.

Tools were also developed to improve predictions of El Niño events, view the location of water bodies, track ship and bird movements by GPS or detect the formation of ocean eddies by satellite. With these tools, Peru's fisheries management system is now the most responsive in the world: quotas are reviewed every six months and, in the event of anomalies, fishing operations can be halted within hours. This responsiveness is unrivalled.

## PARTNERS

Instituto del Mar del Perú (IMARPE)



... IRD is helping to implement adaptive fishery management techniques in Peru ...



Peruvian seiners, artisan fishing method.

# BIODIVERSITY IN THE GLOBAL SOUTH

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for a sustainable world

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**IRD Éditions**

INSTITUT DE RECHERCHE POUR LE DÉVELOPPEMENT  
FRENCH RESEARCH INSTITUTE FOR SUSTAINABLE DEVELOPMENT

Marseille, 2020

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The photos in this publication come from the Indigo image bank (IRD), unless otherwise specified

**Cover photo**

*Swim At The Lake* - Henri Robert Brésil

By courtesy of [www.naderhaitianart.com](http://www.naderhaitianart.com)

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ISBN print : 978-2-7099-2874-8

ISBN PDF : 978-2-7099-2875-5

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