

# Smartphone application to collect coastal fisheries and environmental information for adaptation to changes in the marine environment (FishGIS)

Production

Demonstration

Item: Fisheries

Resource management

## Outline

Local fishers can quickly share information on changes in the marine environment and catches due to climate change among stakeholders through reporting of images such as catches and ocean colours, and the location where they were taken, using their smartphones.

## Background/effect/note

The marine environment has considerably changed worldwide in recent years, and the species composition of catches is also changing. To adapt to changes in the marine environment and achieve sustainable fisheries, it is important to detect changes in the marine ecosystem and immediately share this information with stakeholders. Therefore, as part of the PICES/MAFF project "Building Local Warning Networks for the Detection and Human Dimension of Ciguatera Fish Poisoning in Indonesian Communities", funded by the Ministry of Agriculture, Forestry and Fisheries (MAFF) of Japan through the Fisheries Agency of Japan (JFA) from the Official Development Assistance (ODA) Fund, a research team consisting of researchers from the Japan Fisheries Research and Education Agency (Japan), Canada, China, South Korea, Russia and the USA developed a smartphone application for collecting coastal fisheries and environmental information (Fig. 1). With this application, local fishers can collect fish size distribution data from catch images (Fig. 1, left) and water quality parameters from ocean colour images (Fig. 1, right), as well as share the reported results with local stakeholders (e.g., fishers' groups, government officials). Thus, this application is a useful tool to facilitate fisheries resource assessment and management in Southeast Asia.



Fig.1. Examples of coastal fisheries and environmental information collected by FishGIS

Technical details:



<https://meetings.pices.int/projects/FishGIS>  
<https://meetings.pices.int/projects/Ciguatera>  
<https://apps.apple.com/jp/app/fishgis/id1550904014>  
<https://play.google.com/store/apps/details?id=com.gfken.fishgis>

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Education Agency



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Science Organization

