OceanEyes Co., Ltd.

Surface fishery digitalization in Indonesia

Object of the project

This project focused on the Indonesian sea surface fisheries industry, aiming to promote DX in the marine fisheries industry and improve the management efficiency of fishermen by providing digital information on sea conditions such as sea water temperature distribution and potential fishing grounds (PFG), together with a system and know-how on its use.
OceanEyes has been developing Fishers Navi in Japan and judged that the feasibility of commercializing the service by improving it for Indonesia was high.

Cooperation with local companies/governments

PT Kopernik has experience in working with the Japanese Government. In this project, they played a role in conducting field surveys, acting as the local contact and coordinating various aspects of business trips. The bulk of the field research was carried out by them.
Ongoing collaborative negotiations were conducted with the local government. On the initiative of the Office of the President, plenary meeting was also held with the Ministry of Marine and Fisheries and other government agencies, fisheries organizations and research institutions.

Targeted economic/social issues

Indonesia is the world's second largest fishing nation, but productivity is low, with per capita production of only 3.5 tones/person. One reason is that the rational use of sea condition data has not penetrated the fishing industry. In Japan, it is common practice to use sea water temperature and current data to determine fishing grounds, but Indonesian fishermen have little such know-how. Indonesian government provides sea condition data, but it is not widespread enough. Another reason is the lack of an internet communication environment for fishing vessels.
Weather information for the fishing industry is provided as a public service in many countries, and satellite observation data has been increasingly provided in recent years. However, satellites cannot observe below sea level and cannot predict future conditions, so numerical modelling methods have been developed.
Potential fishing ground (PFG) prediction techniques have been developed using machine learning methods, which have developed rapidly in recent years. Some companies, including OceanEyes, are gradually emerging to provide these technologies as a service.

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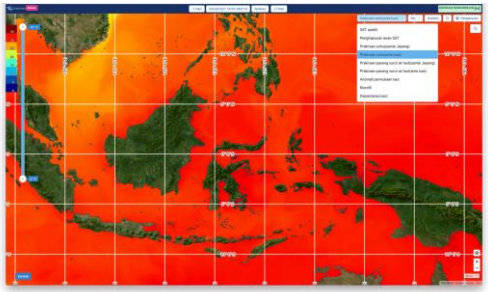
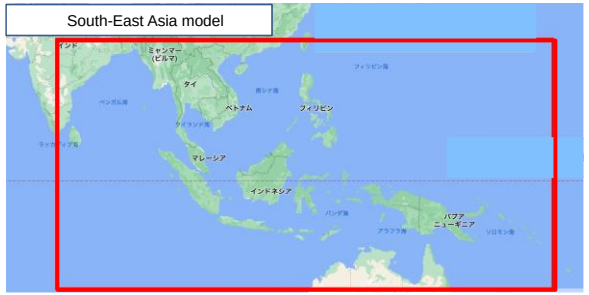
Details of demonstration

(1) Survey on data usage by local users:
Using the Japanese version of Fishery Navi, the data utilization status and communication environment of local fishermen were surveyed, and basic information for designing a POC concept for the development of services for Indonesia was obtained.
(2) Service development for Indonesia:
Based on the PoC hypothesis obtained above, the PFG function and oceanographic numerical model were developed, local language support was provided, and the 'Fishery Navi' was modified to local specifications. The PFG accuracy achieved 54-60% in actual measurements by the operators and was evaluated.
(3) Implementation of measures to expand use:.
Sales prices were set, sales channels were explored, local agents were developed and sales promotion materials were prepared.

Localized FishersNavi



Cover area of numerical model



Project outcome / Future plans

Outcome:
An overview of the market for data services was obtained through field research.
Technical development and implementation of the service was carried out in a way that it was adapted to the actual mode of operation, and the service was generally improved and implemented to the users' satisfaction.
Meetings were held with industry, government and academia on the use of data as a foothold for future public-private cooperation.
Discussions:
Local fisheries management differs considerably from that in Japan. In particular, (1) there are many medium- to large-scale fleets, (2) the internet environment is underdeveloped, and (3) managers make purchasing decisions. Due to these differences, there is a high demand for management services in Indonesia. Therefore, FishersNavi was improved to meet actual demand. As for the PFG forecasting, OceanEyes achieved an accuracy that is appreciated by fishermen. Further improvements can be expected in the future through improvements to the model.
Future plans:
Establishing a sales structure in Indonesia, we aim to gain market share. To this end, we will establish a local office or local subsidiary and acquire local partners. For expansion beyond Indonesia, OceanEyes has already started market research using the JETRO Global Acceleration Program.