SPECIAL REPORT

Gathering Catch Statistics and Related Data on Inland Fisheries

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In 2017, IFRDMD learned and shared the experiences of Indonesia and the Philippines on gathering data and statistics of inland fisheries. Inland fishery statistics, data and information in many countries in the Southeast Asian region have been reported to be either inadequate or far from complete and not timely, which could be one of the reasons for the minimal attention given by many policy makers to inland fisheries development. Being responsible for the development of guidelines for basic data collection for routine monitoring activities of the different types of freshwater fish habitats, IFRDMD therefore launched the activity on improvement in the collection of data on inland fisheries.

Importance of Collecting Data, Information and Statistics

Statistics on catch and related information on fisheries are among the fundamental data used to determine the present situation of fisheries as well as the status of the fishery resources, and could help the decision makers in developing fisheries management policies and measures for the sustainable development and management of fisheries. In order to understand the relevance of compiling catch statistics, especially on inland capture fishes, IFRDMD studied the features of the national strategies on gathering information on inland capture fisheries that had been established in the Philippines and Indonesia.

Overview of Data and Information Gathering Systems

While the National Stock Assessment Program (NSAP) of the Philippine Bureau of Fisheries and Aquatic Resources (BFAR) is responsible for collecting national data and statistics on capture fisheries, Indonesia's One Data Policy (ODP) of the Center for Data, Statistics and Information of the Ministry of Marine Affairs and Fisheries (MMAF) of Indonesia handles such task for Indonesia. NSAP makes use of a standardized method of data collection to come up with science-based policy recommendations for the conservation and management of the fishery resources in the Philippines. For example, enforcement of the closure or banning of fishing activites of certain species in specific areas, such as the closed season for sardines fishery in Zamboanga and Visayan Seas, was based on scientific evidence compiled by NSAP. For freshwater fisheries such as in Taal Lake in Batangas Province southeast of Metro Manila, NSAP data were used as basis for the enforcement of the closed season for the freshwater sardine, Sardinella tawilis as part of the management plan of Taal Lake. NSAP also makes sure that enumerators are trained on the collection method of catch and effort data, and fish identification, among others. The methods used by NSAP to conduct surveys at landing sites start with the enumerators taking samples from at least 10% of the landed boats by gear. The data are then inputted into the NSAP Database System (NSAP DB), designed to establish efficient means of storing, managing and retrieving data for analytical purposes. The analyzed are used as primary basis for BFAR in developing fisheries policies or regulations and management strategies towards sustainable fisheries.

For Indonesia, the One Data Policy (ODP) established by the President, considers that its Highly Integrated Data is key to the integration of development, equitable welfare and inclusive sustainable economic development. The ODP is also used for the formulation of national policies, implementation policies, technical policies, regulations, planning, and in decision making. The MMAF uses data processor (or enumerators) assigned to visit the respondents, record and input the data collected. MMAF makes use of 16 templates of questionnaires each consisting of 7 lists of questionnaires and 9 transactions and/or production questionnaires for producing the ODP. In order to support the implementation of data collection, the importance of various types of fishery information and application of various information collection techniques to
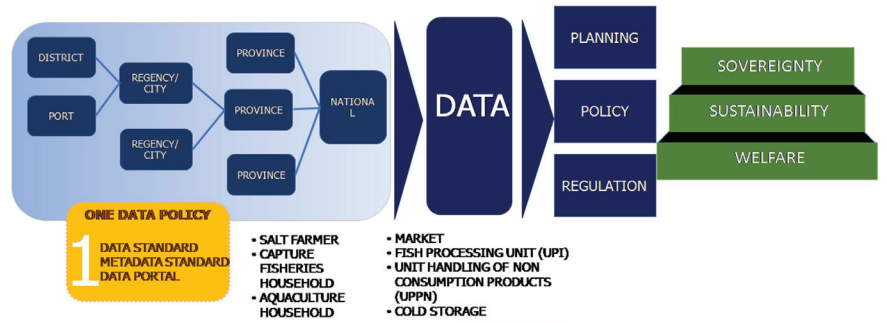
specific situations in inland fisheries are needed. The systems used by Indonesia and the Philippines are compared as shown in **Box 1**.

Participation of Stakeholders in Gathering Data on Inland Fisheries

Inland capture fisheries are extremely important to the livelihoods of the Philippine and Indonesian people, and most of the households are located in the low-production groups, and utilize their production mainly for household consumption. In the Philippines and Indonesia, the participation of the households is sought to obtain the data and information on fishing households. The data from the various sources are then combined and analyzed to determine the total inland fisheries production. Databases had been developed in the Philippines and Indonesia, where the merged data sets necessary for assessing the status of inland capture fisheries are inputted.

IMPORTANT OF DATA

Validated data will be used for the formulation of national policies, implementation policies, technical policies, regulations, planning and decision making.
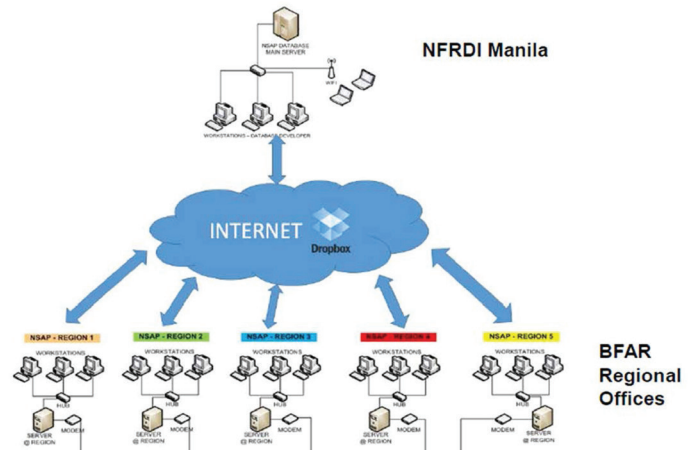

The data sets include information on inland water bodies with geographic and time reference, and are stored together and shared with the same spatial references, hence, detailed information on production status and trends of inland capture fisheries could be more accurately presented and estimated, making these more beneficial for fishery resources management and policy formulations.

Recommendations for Improvement of Fishery Statistics

In order to improve data collection on catch statistics and related information on inland capture fisheries, some recommendations are provided as shown in **Box 2.**

Box 1. Comparison of the systems used by the Philippines and Indonesia in collecting data from inland fisheries

Philippines	Indonesia
Enumerator collects data through direct interview of the fishers or fishing operators and takes notes of • Total landed catch • Fishing method/fishing gear used • Fishing effort 1) Record the actual catch sampling, and determine the total weight of catch 2) Sort by species and determine total weight per species 3) Take sub-samples per species and measure length and weight 4) Record the data that contain all the important information needed	Enumerator collects the data by visiting the respondents to obtain primary data according to location and specific period Enumerators input the data into the application every three days The annually recorded data will show the number of boats per type and size, number of fishing gears, and number of fishers, collected by monthly sampling
The data are validated by data managers and analysts	The data are validated by central government in five days for checking the relationship with completeness of data; accuracy of data and logic of data
Only designated NSAP Coordinator per region and National NSAP Coordinator can access the data, but the result of NSAP is published and presented during the scientific review	Dissemination of data on marine and fisheries can be easily accessed by online (*www.sidatik.kkp.go.id*)

Box 2. Recommendations for improving collection of catch statistics on inland capture fisheries

- In monitoring the present situation of fish stock through CPUE, data to be collected should not only be on the catch but also on fishing effort;
- Different species should be handled separately, *e.g.* rice-paddy eel and anguillid eel;
- Activities in inland fisheries that are highly seasonal, with the highest peak during flood receding periods or at the end of the rainy season, should be considered when collecting and analyzing the catch statistics on inlan capture fisheries; and
- Lectures should be regularly organized for fishers to understand the importance of compiling data on catch and coming up with the catch statistics.