METHODOLOGY OF FISHERIES AND AQUACULTURE SURVEY IN VIETNAM

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Objective

The survey aims to collect information (i) aquaculture area; (ii) the number of fishing boats and vessels; (iii) production of aquaculture and fishing; On that basis, calculate statistical indicators of the fishery sector in the national statistical indicators system of Vietnam.

Survey units and coverage

1. Survey units

− Commune with aquaculture area

− Fishery households with aquaculture area

− Fishing in sea boats and vessels

2. Survey coverage

The fishery survey is conducted in all provinces of Vietnam

Survey frequency

- Aquaculture survey: is conducted twice in a year

- Fishing in sea survey: is conducted every month in a year

- Basic information survey regarding aquaculture area and number of fishing boat and vessels is conducted twice in a year

Note: fishing in land is not carried the survey, because its production accounts for a small percentage of fisheries production. The total of its production is extracted from the database of the Household living standard survey.

Survey design

1. Aquaculture survey:

1.1 **Sample size**: the number of samples is decided by General Statistics Office

1.1 **Sampling method**: by two step

-Step 1: Apply the PPS method to select the primary sampling units (commune). Every province will select from 7 to 20 communes with aquaculture based on the size of aqualcuture area.

Survey design (cont)

- Step 2: Apply the systematically sampling method to select sample households with aquaculture.

Sample frame representative for some of main fisheries such as: catfish, sugpo prawn, other fisheries; water type: brackish, salt, fresh water; for fresh water, it also representative for water surface type: pond, lake, and paddy field; aquaculture yield such as: intensive culture and extensive culture.

Survey design (cont)

2. Fishing in sea survey:

The sampling including 2 levels: primary sampling units are fishing port; secondary sampling units are fishing boats or vessels

2.1 Sample size:
Each fishing fleet (representing the fishing industry and capacity groups) selected 32 samples to enumerate fisheries output. If the total number of vessels of a fishing fleet are less than 32 vessels, the number of samples will be determined by by the Department of Statistics but not too small.
Note: In some cases there are fishing industries with the similar activities characteristics can be grouped into one group.

Survey design (cont)

2.2 Sampling method

- **Select the primary sampling units:** sample fishing port
List total fishing ports by the order of fishing boats size of a province.
And then, apply the systematically sampling method to select from 5 to 7
fishing ports of a province

-Select the secondary sampling units: sample fishing boats or vessels
List all fishing boats and vessels of sample fishing ports by fishing
industry and capacity group. Apply the systematically sampling method
to select sample fishing boats from the list.

Data estimation

1. Fishing survey

The general formula for the estimated fishing production as follows:

$$SL = \overline{Q} \times N$$

In which:

SL: fishing production of one respective fishing industry

$\overline{Q}$: fisheries output per day of a boat (by industry). Unit: kg / boat / day

N: the total days of fleet activity (by industry) in a month

Data estimation (cont)

And the fomular to determine N is

$N = A * f * T$

In which:

A: is the number of days fishing vessels can go to sea in a month

f: the activity coefficient of the ship, the expression for the probability of a fishing boat can sail any day in month.

T: total number of fishing vessels by province (by fishing industry and capacity groups)

Data estimation (cont)

2. Aquaculture survey

2.1 estimation of average yeild

$$\overline{Q} = Q_{th} / DT_{th}$$

in which:

$\overline{Q}$: is aquaculture yeild

Q_{th} : is the total aquaculture production of sample households

DT_{th} : is total aquaculture area of sample households

Data estimation (cont)

2.2 estimation of total aquaculture production

$SL = DT * \overline{Q}$

In which:
SL: total aquaculture production of province
DT: is total aquaculture area of province

2.3 Estimation of aquaculture production by fisheries type
after getting the results of estimated total aquaculture production, we will estimate the amount of each type of fisheries
$SL_i = SL * f_i$
In which:
SL_i : is production of fishery type i
f: is the percentage of fishery type i in total aquaculture production

THANK YOU !