**Global fishing gear loss analysis: Amounts, causes and management options**

**Gear Type: Purse Seine Nets**

**1. Background information**

1.1 Respondent’s number: *(randomly generated for each survey)*

1.2 Date of interview (dd/mm/yyyy): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.3 Location where fishing occurs (general): \_\_\_\_­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.4 Researcher name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.5 Respondent’s name\*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.6 Respondent’s email\*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.7 Respondent’s phone number\*: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*\*Reminder: All information collected is treated anonymously, with respondent contact information only collected for follow-up purposes to clarify any responses, if required.*

1.8 Length of current vessel (meters): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.9 Tonnage of current vessel (tonnes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.10 Holding capacity of fish for current vessel (tonnes): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.11 Engine power of current vessel (kW or HP): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.12 Typical number of crew members on current vessel, including skipper: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.13 Position on vessel, *please circle all that apply*

Skipper Captain First mate Crew member Owner Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1.14 How many years have you been working in your fishery? Please circle

0-4 5-9 10-14 15-19 20-24 25-29 30+

1.15 Do you belong to a fisher-based organization such as a fisher’s cooperative or association? Please circle

Yes No

**2. Primary target species and days fished**

2.1 *In the table below, please identify 1) the usual target species that you fish, 2) the usual number of days that you fish in a season and 3) whether licenses or permits are required.*

|  |  |  |
| --- | --- | --- |
| **Primary target species** | **Days fished per season** | **License (Y/N)** |
| **Spring** | **Summer** | **Fall (Autumn)** | **Winter** |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

2.2 *How much money would your vessel’s catch be worth from a typically good fishing trip? I.e. total payment received for the catch for the vessel. Please estimate.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2.3 *How much money would your vessel’s catch be worth from a typically bad fishing trip? I.e. total payment received for the catch for the vessel. Please estimate.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**3. Effort**

3.1 *On a typical trip, how many days does or hours your vessel usually stay at sea?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.2 *On a typical trip, how much time is usually spent fishing (hours and/or days) and how much time is usually spent steaming/searching (hours and/or days)?* *Please indicate whether your estimations are in hours or days in the spaces below*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/days spent **fishing**; \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ hours/days spent **steaming/searching**

3.3 *Does your vessel do night sets, day sets or both? Please circle*

 Daytime only Night only Both day and night

3.4 *How long does a set usually last (time between letting go of the net end and completion of drying up)?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3.5 *How many sets does your vessel usually make in a day (24-hour period)?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**4. Gear characteristics**

4.1 *What is the length of the purse seine fishing net (meters)?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.2 *What is the depth of the purse seine fishing net (meters)?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**5. Amount of gear damaged and/or lost**

5.1 *Please indicate the usual number of purse seine nets that are damaged for a corresponding number of trips.*

*\_\_\_\_\_\_\_* purse seine net(s) is/are usually damaged every *\_\_\_\_\_\_\_* trip(s)

5.2 *When purse seine nets are damaged, what proportion/amount of the nets are typically damaged? Please circle*

Less than 25% of the net Between 25-50% of the net Between 50-75% of the net

Between 75%-100% of the net Full net

5.3 *Please indicate the usual number of purse seine nets lost for a corresponding number of trips.*

*\_\_\_\_\_\_\_* purse seine net(s) is/are usually lost every *\_\_\_\_\_\_\_* trip(s)

5.4 *When purse seine nets are lost, what proportion/amount of nets are typically lost? Please circle*

Less than 25% of the net Between 25-50% of the net Between 50-75% of the net

Between 75%-100% of the net Full net

5.5 *Does the vessel report when fishing gear is lost? Please circle*

 Yes No I do not know

5.5.1 *If Yes to 5.5, how or to whom does the vessel report lost gear? Please circle all that apply or fill in additional comments in the space provided if none apply.*

Logbook Management agency Other fishers in area (e.g. to avoid gear fouling)

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ I do not know

5.5.2 *If No to 5.5, why do you think the vessel does not report lost gear?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.6 *Who is responsible for reporting lost gear? Please circle all that apply or fill in additional comments in the space provided if none apply*.

Skipper/captain First mate Crew member I do not know

Lost gear reporting is not required in my fishery Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

5.7 *If fishing gear is lost or damaged, who pays to replace or repair the gear? Please circle (if these categories are the same, please circle both e.g. vessel owner is also skipper/captain):*

Skipper/Captain Vessel owner Corporation/company that owns the vessel as part of a fleet

Fishing cooperative/association Fisher responsible for gear loss or damage

Entire fishing vessel crew I do not know Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**6. Lost gear Retrieval**

6.1 *Does the vessel have retrieval tools such as grapnels onboard to retrieve lost gear? Please circle and, if yes, specify the types of tool(s)*

 Yes: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ No I do not know

**7. Causes of fishing gear loss**

7.1 *When the vessel loses nets, what are the main causes of the net loss? Please circle how often the following usually occur and result in net loss*

Faulty and/or damaged gear Never Rarely Sometimes Often Always

Bad weather Never Rarely Sometimes Often Always

Damage by wildlife Never Rarely Sometimes Often Always

Operator error Never Rarely Sometimes Often Always

Gear not properly stored on-board Never Rarely Sometimes Often Always

Gear discarded overboard, e.g. damaged gear Never Rarely Sometimes Often Always

Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Never Rarely Sometimes Often Always

7.2 *What practices does your vessel employ to minimise or prevent net loss? Please circle how often your vessel usually engages in the following practices to minimise or prevent net loss*

Gear marking/tracking technologies Never Rarely Sometimes Often Always

Maintain and/or replace old and/or damaged gear Never Rarely Sometimes Often Always

Train crew members in gear management Never Rarely Sometimes Often Always

Avoid fishing in overcrowded areas Never Rarely Sometimes Often Always

Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Never Rarely Sometimes Often Always

**8. Net repairs**

8.1 *How often are purse seine nets typically repaired for your vessel?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.2 *How long do purse seine nets typically last before they need to be replaced?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.3 *Does your vessel repair its nets at sea?*

 Yes No

 8.3.1 *If yes to 8.3, on a typical trip, how many times are nets repaired?*

 *\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_*

8.3.2 *If yes to 8.3, what is the usual length and width of damaged netting/net repair fragments leftover after repairs? Please estimate length and width.*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8.3.3 *If yes to 8.3, what does your vessel usually do with damaged netting or net repair fragments? Please circle how often this behaviour occurs*

Store them on-board for later shore disposal Never Rarely Sometimes Often Always

Save repair fragments for future net repairs Never Rarely Sometimes Often Always

 Discard them overboard Never Rarely Sometimes Often Always

Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Never Rarely Sometimes Often Always

**9. Fisheries management plans, observer programs, infrastructure**

9.1 *Are you aware of any fisheries management plans, regulations or similar that specifically mention lost or discarded fishing gear? Please circle*

Yes No

9.2 *Do fisheries observers in your fishery report lost or discarded fishing gear? Please circle*

 Yes No I do not know There are no fisheries observers for my fishery

9.3 *Do requirements exist for reporting lost fishing gear in fishing vessel logbooks? Please circle*

 Yes No I do not know

9.4 *Are there any places to deposit old or no longer usable fishing gear at the ports where you work from?*

Yes No I do not know

9.5 *How is fishing gear stored on-board your vessel when not in use? Please circle all that apply.*

Tied down on deck Stored in specific compartments/chambers on-board

No gear storage protocols exist on-board Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

9.6 *Does your vessel have places to store old/damaged fishing gear no longer available for use? Please circle*

 Yes No I do not know

**10. Perceptions**

10.1 *Are you concerned about lost or discarded fishing gear? Please circle*

Not at all concerned Somewhat concerned Concerned Very concerned

10.2 *How important to you are the following issues that result from lost or discarded fishing gear in your fishery? Please circle*

Hazards to navigation Not important Somewhat important Important Very important

Economic losses Not important Somewhat important Important Very important

Impact on fish stocks Not important Somewhat important Important Very important

Damage to fishing gear Not important Somewhat important Important Very important

Harm to the environment Not important Somewhat important Important Very important

Entanglement of wildlife Not important Somewhat important Important Very important

Negative public perception of fishery Not impt Somewhat important Important Very important

Negative impacts on tourism Not important Somewhat important Important Very important

Costs of clean-up activities Not important Somewhat important Important Very important

Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Not important Somewhat important Important Very important

**11. Gear marking**

11.1 *Do requirements exist for the marking of fishing gear in your fishery, in addition to the marking of FADs? Please circle*

 Yes No I do not know

11.2 *Does your vessel mark its fishing gear, in addition to marking its FADs? Please circle*

 Yes No

 11.2.1 *If Yes to 11.2, please specify how the fishing gear is marked in the space below*

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**12. General comments**

Please provide any additional information, feedback, or general comments you would like to share related to this survey. We also welcome links or recommendations to any relevant reports, shared here or by email to Kelsey.Richardson@csiro.au . Please write in blank space below.