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

**Gear Type: Longlines**

**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 of experience do you have 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, gear type(s) used and days fished**

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

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

*\*LLS=Set longlines, D=Demersal, SP=Semi-pelagic, P=Pelagic, LLD=Drifting, AL=Automatic*

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 or hours does your vessel 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 fish usually during the day, at night, or both day and night? Please circle*

 Daytime only Night only Both day and night

3.4 *How long does your vessel’s gear usually soak per set (hours and/or days)?*

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

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

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

3.6 *How many hooks are usually used per set?*

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

3.7 *What is the usual depth range where your vessel fishes (meters)?*

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

**4. Gear characteristics**

4.1 *What is the usual length of the mainline (kilometres or nautical miles)?*

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

4.2 *What material is your vessel’s mainline primarily composed of (e.g. monofilament)?*

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

4.3 *What is the usual length of a branchline (snood) (meters)?*

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

4.4 *What material(s) is/are your branchlines primarily composed of (e.g. monofilament, wire)?*

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

4.5 *What sizes and types of hooks does your vessel usually use?* *Please circle and write in*

EZ baiter J Wide gap Circle Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Size(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

4.6 *How long does the vessel’s mainline typically last before it is replaced (days or years)?*

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

4.7 *How frequently is the vessel’s mainline typically repaired?*

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

4.8 *What is the typical number and distance of indicating beacons (e.g. radio and/or satellite) along the mainline?*

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ indicating beacon(s) (number) every \_\_\_\_\_\_\_\_\_\_\_\_\_ (*kilometres* or *nautical miles*)

AND/OR

\_\_\_\_\_\_\_\_\_\_\_\_\_\_ indicating beacon(s) (number) every \_\_\_\_\_\_\_\_\_\_\_\_\_ (number of *hooks*)

**5. Amount of gear lost**

5.1 *How many trips per year does the vessel typically lose a mainline?*

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

5.2 *How much mainline is usually lost by the vessel in a year (kilometres or nautical miles)?*

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

5.3 *On a typical trip, how much branchline does the vessel usually lose (meters or kilometres)?*

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

5.4 *On a typical trip, how many hooks does the vessel usually lose (bitten off)?*

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

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: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 *When fishing gear is lost, does the vessel usually attempt to retrieve it? Please circle*

 Yes No I do not know

6.1.1 *If Yes to 6.1, how often is the vessel usually able to successfully retrieve lost gear? Please circle*

Never Rarely Sometimes Frequently Always I do not know

6.1.2 *If Yes to 6.1, does the vessel use on-board technologies such as navigation systems to return to where the gear was lost?*

 Yes No I do not know

6.2 *Does the vessel have retrieval tools 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 gear loss**

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

Bite-offs Never Rarely Sometimes Often Always

Loss of marker buoy Never Rarely Sometimes Often Always

Operator error Never Rarely Sometimes Often Always

Snagging/entangling of mainline around drum Never Rarely Sometimes Often Always

Gear drifts into restricted fishing area (abandoned) Never Rarely Sometimes Often Always

Line breaks between indicating beacons Never Rarely Sometimes Often Always

Too much fish sinks gear Never Rarely Sometimes Often Always

Conflict with other vessels, e.g. dragging gear Never Rarely Sometimes Often Always

Bad weather Never Rarely Sometimes Often Always

Damage by wildlife Never Rarely Sometimes Often Always

Faulty or damaged gear Never Rarely Sometimes Often Always

Gear snagged on bottom obstruction 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 fishing gear loss? Please circle how often your vessel usually engages in the following practices to minimise or prevent gear loss*

Communicate with other vessels (e.g. gear locations) Never Rarely Sometimes Often Always

Avoid areas of high vessel traffic Never Rarely Sometimes Often Always

Avoid fishing in overcrowded areas Never Rarely Sometimes Often Always

Avoid fishing in bad weather Never Rarely Sometimes Often Always

Avoid fishing in areas where gear can be snagged Never Rarely Sometimes Often Always

Gear marking/tracking technologies Never Rarely Sometimes Often Always

Train crew members in gear management Never Rarely Sometimes Often Always

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

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

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

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

Yes No

8.2 *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

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

 Yes No I do not know

8.4 *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

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

 Yes No I do not know

**9. Perceptions:**

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

Not at all concerned Somewhat concerned Concerned Very concerned

9.2 *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

**10. Gear marking**

10.1 *Do requirements exist for the marking of fishing gear in your fishery, in addition to basic surface markers? Please circle*

 Yes No I do not know

10.2 *Does your vessel mark its fishing gear, in addition to basic surface markers? Please circle*

 Yes No I do not know

 10.2.1 If Yes to 10.2, *please specify how the fishing gear is marked in the space below* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

10.3 *For surface markers, does the vessel use radio or satellite buoys? Please circle*

 Radio buoys Satellite buoys Neither

**11. 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.