

Use as many Form LL-2/3s per set and haul as necessary (usually one). N.B. (VERY IMPORTANT) - if there is a species target change part way through setting (e.g. completely different branchlines or very different setting depths are used) even if still using the same mainline, then start a new Form LL-2/3 for the different section of the set. (For clear + major changes only !)

Observer Name and Vessel Name: Always print each of these names out in full (e.g. an observer name "John Masa", and a vessel name "Hai Hsiang No. 959")

Observer Trip ID Number: Number issued by the authority you are working for. (e.g. John H. Masa, on his 3rd trip in 1996 may get Trip ID No.: "JHM 96-03").

Set No.: (for observer use only) - start at "Set No. 1", "Set No. 2", etc., all through a trip.

Page of: Number Form LL-2's through trip as Page 1, Page 2, Page 3, etc. At end of trip, check all pages are there (again). Put the last page number on every page (e.g. if 36 pages then the first page will be "Page 1 of 36", the fourth page, "Page 4 of 36" and the last page will be "Page 36 of 36").

No. of hooks per basket: See the basket diagram in bottom right for example

Total No. of Baskets, Total No. of Hooks: These are the totals for the entire set. $\langle \text{Total No. of Hooks} \rangle = \langle \text{Total No. of Baskets} \rangle \times \langle \text{No. of Hooks per Basket} \rangle$

Length of Floatlines (m), Length of Branchlines (m): See diagram in wxbook.

Vessel Speed (kts): Watch the GPS or speed log over several seconds to estimate average speed of vessel. Record to one decimal point (e.g. "9.7" knots).

Vessel Speed (kts): Watch the GPS or speed log over several seconds to estimate average speed of vessel. Record to one decimal point (e.g. "9.7" knots).

Line Setting Speed - m/s kts (circle one): Record only if the vessel has a line shooter - must **circle** correct "m/s" or "kts". N.B.: (m/sec = kts/2) and (length = sec \times m/sec)

Branchline Set Interval (s): Recorded only from vessels with branchline timers.

Between branchlines (m): Distance *between branchlines* may be hand measured (in metres) or calculated by the observer using the formula: $\text{Line Setting Speed} \times \text{Branchline Set Interval}$, or if not available, ask fishing master etc for the distance *between branchlines*)

Shark lines on floats (Hook No.99s): If vessel has special lines tied directly to the floats to catch extra sharks, count the total Number used in the set. What is their usual Length (m)? N.B. Do not count a shark line on a float as one of the "hooks per basket"

Were TDRs deployed ? Y/N: Circle Y (yes) if one or more temperature depth recorders are deployed at any time during the set

Target Species - Cross the box/es next to the main species the vessel is targeting during set. It is usually just one species but it could be more than one. N.B. to target a species gear must be set especially to catch that species. Retained bycatch was targeted. NEW Observer can now record an 'Other -please specify' for the target species. Specify the other target species in the comments area.

Start of Set, Ship's date, Ships time, UTC date, UTC time: At the start of each set you must record the time and date that the ship's clock (and your watch) are set to, and the UTC time and date as read from the GPS. At all other times use only Ship's time. Remember UTC date can be different from the Ship's date.

Start and End of Set and Haul: Complete for every single set even if not fully monitored. The observer should read the GPS directly and must explain in "Comments" if they have not. The remaining lines in the Haul Log must be filled at approximately every hour.

Start and End of Set and Haul: Complete for every single set even if not fully monitored. The observer should read the GPS directly and must **explain** in "Comments" if they have not. The remaining lines in the *Haul Log* must be filled at approximately every hour.

Latitude, Longitude, N, S, E, W: Record GPS positions in degrees, minutes and decimals, to three decimal places. Do not forget to enter north or south and east or west correctly

Bait Used - Species, Kg: Record species and weight (in kg) of each bait used. Bait Used - Hook Nos:

Usually, if a boat uses more than one bait species it will put the same bait on the same hook numbers (see diagram) in each basket (e.g.: squid might go on hooks 3 and 4 while sardines go on hooks 1, 2, 5 and 6). Record the hooks for each bait type "hook nos". Blue dyed bait - if bait used has been dyed blue circle "Y" for yes.

Otherwise circle "N" for no. **NEW LIGHT STICK** - Record the hook numbers any light stick were attached to, also record the total number of light sticks used in the set.

Comments: Note significant conditions that affect set strategy or cause problems - unusual wind/sea state; SSI contacts; accidents; any unexpected event. Include events from Soak Time, even if asleep but found out from crew later. Record reasons that observer monitoring stopped for 30 minutes or more. If suitable record ship's time in column next to comments.

Total Baskets Observed and Events on FORM GEN-3 - These fields must be completed.

MITIGATION: TORI POLES: High vertical pole placed at the stern, has trailing line with plastic streamers attached. Record the total number of tori lines (attached to tori poles) used during setting. BIRD CURTAIN: Horizontal pole with vertical streamers positioned on side (+ stern side of the setting station). WEIGHTED LINES: Approx. 60 to 100g of weight placed on branchline 1-3 meters away from hook. SETTING CHUTE: Equipment that ensures the line is set below the waterline. FISH OFFAL DISCHARGE: Indicate if any fish waste (including bait) was thrown overboard at anytime during setting or hauling. If fish offal was disposed of during setting or hauling circle Y- yes if it was disposed from the opposite side of the vessel to the mainline's location during setting or hauling.

NEW HOOK CHANGES THIS SET - If the hooks are *deliberately* changed before the set to a *bigger size of hook, or a different type of hook* record yes. add some notes on the change to the data field below. 'Unusual Set Details:' The information recorded in the "Longline Set Specifications" fields represents the most common or average data during setting. If the setting specifications are deliberately or intentionally changed at some point during the setting, then note these changes in the "Unusual Set Details" area. For instance, if the number of hooks between baskets is always 30, and then the Captain deliberately reduces the number to 15 (to get a shallower line), then record 30 in the standard 'no. of hooks per basket' data field and write "Captain reduced no. of hooks per basket to 15 for the last 10 baskets" in the unusual set details area. Do not write general comments about setting in this area.