

Quadrant II – Transcript and Related Materials

Programme: Bachelor of Science (Third Year)

Subject: Zoology

Paper Code: ZOD 103

Paper Title: Fish and Fisheries

Unit: 03 fisheries

Module Name: Fishing Gears VI

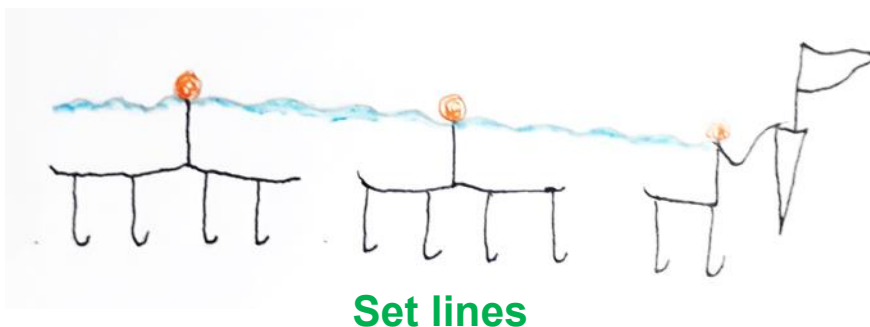
Module No: 33

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Notes

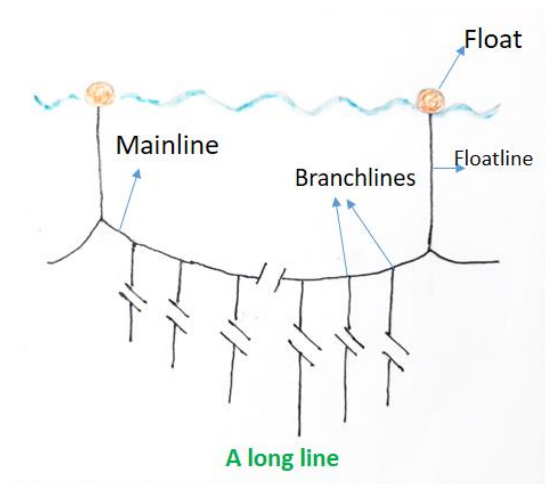
➤ SET LINES

Set lines are a type of a passive gears. The use of set lines can increase the number of lines set up without requiring the constant presence of the fisherman. Such lines must be checked regularly. In shallow waters or on the beach, fishing rods can also be set untended. In the oceans these lines may be suspended from the surface

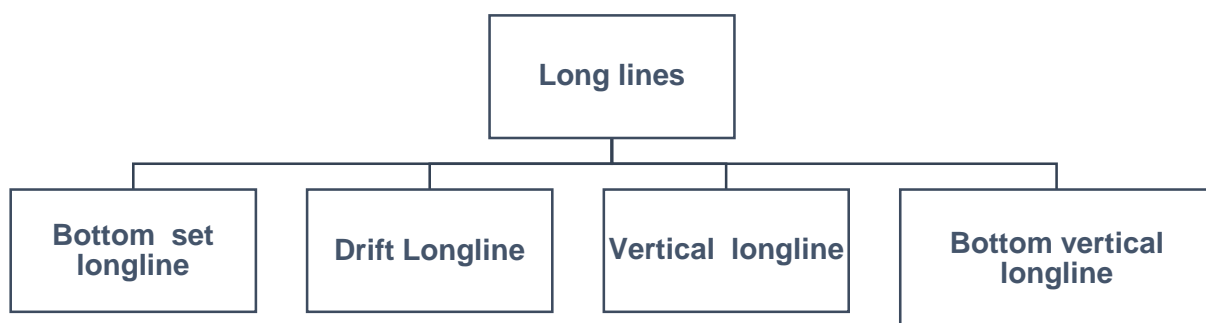


➤ LONG LINES

Longline is a fishing gear that comprises of a main line, with secondary lines attached and hooks placed at the end of them. Long line fishing, or long lining, is a commercial fishing method that uses hundreds, or even thousands, of baited hooks hanging from a single line which may be 50-100 km long.

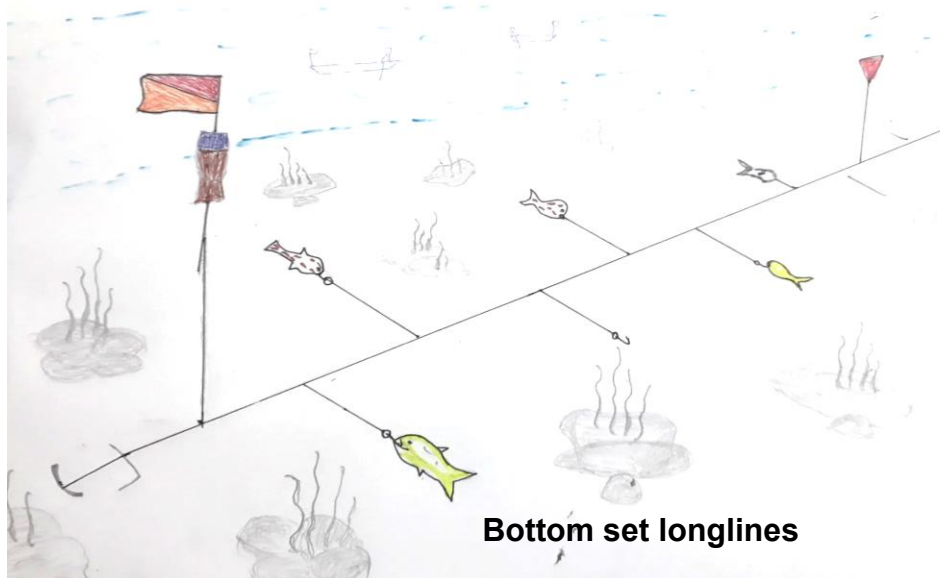


These lines can also be set by means of an anchor, or left to drift. Hundreds or even thousands of baited hooks can hang from a single line. Longlines are usually set and hauled once daily. Longlines are set, either by hand or mechanically, while the boat steams away from the line. These lines are usually hauled mechanically while the boat steams toward the line. The species targeted are tunas and some billfish. These lines are classified mainly by where they are placed in the water column. These lines can either be placed near the surface or at the bottom of the sea. They are classified as follows:



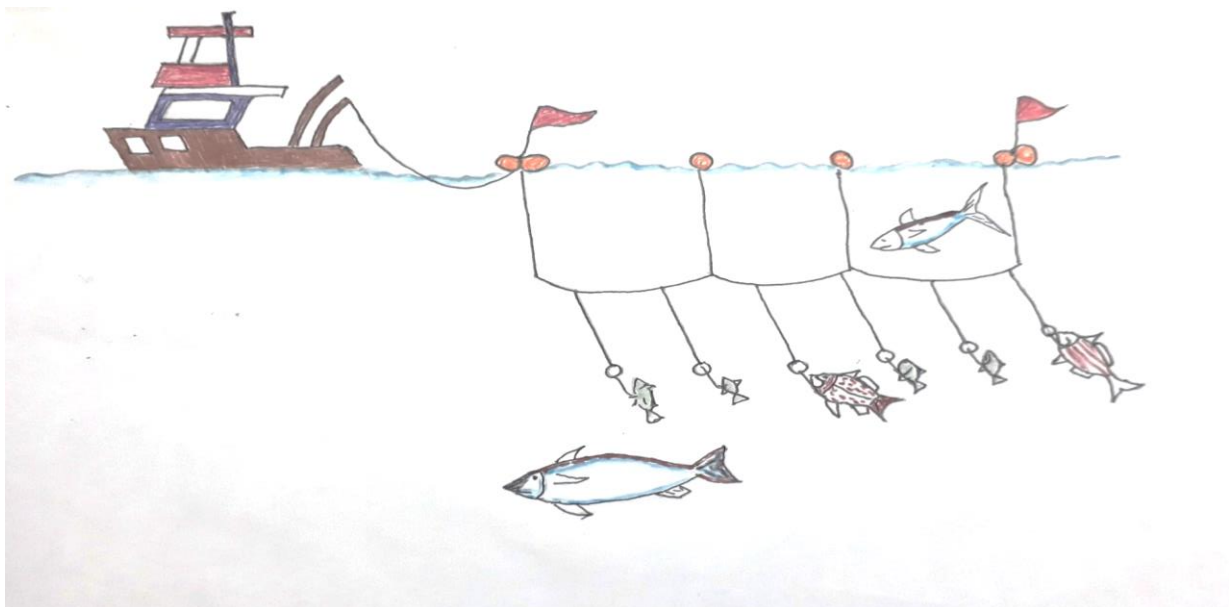
➤ **BOTTOM SET LONGLINES**

These longlines operate close to the sea bottom for demersal species such as Snapper, Sharks, Sea bass, Flat fish etc. These gears are easily damaged by obstacles at the bottom. The ground must be fairly regular since rocks or corals present at the bottom of the sea may entangle the lines and break them. The selection of optimum branch lines is the main concern. The branch lines set at wider spacing catch fish better. Less number of baits for the same area are required.



➤ **DRIFT LONGLINE**

These longlines are operated close to the surface in middle water layers for pelagic fishes such as Mackerel, Tuna, Shark, Marlin, Billfish, etc. The fishing method is similar to the Bottom set longline. Long line is called the Main Line. Branch lines are called snoods. A snood is a short length of line, attached to the main line using a clip or swivel, with the hook at the other end. Baited hooks are attached to branch lines. Drifting longlines may be of considerable length.

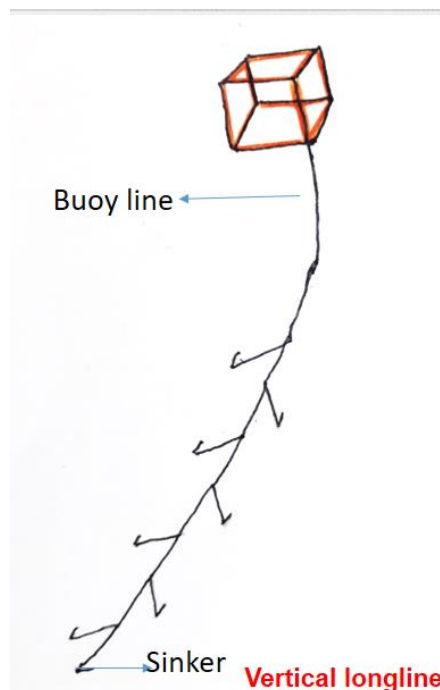


While deploying the longlines the marker buoys with flags, radio buoys and light buoys are thrown in and the mainline is released. Hooks are baited when the mainline is released. After arranging the longline the vessel stays for six hours near it and then the line is hauled.

In case of **Traditional drift longlines**, the mainline carrying the branch lines is coiled and kept in a basket whereas in **Modern large-scale drift longline**, the mainline is continuously pulled and kept on a power reel or rack with branch lines

➤ **VERTICAL LONGLINE**

Vertical longline is used to catch fish with a wide vertical distribution. This type of long line is used in deep waters up to 1,200 m. it is also used in shallow areas having rough bottom conditions. The Gear construction has a little difference to drift longline. It consists of a single line with a float at one end and a weight at the other. Branch lines are attached to the mainline through three way swivels, at intervals of around 2 m. The mainline is set vertically with the upper end joined to a large float and flagpoles, and the lower end is provided with a sinker.



➤ **BOTTOM VERTICAL LONGLINE**

Bottom vertical longlines combines the properties of both the bottom set longline and vertical longline. Many hooks are attached at suitable intervals less than 2 m. Branch lines are designed to be directed vertically during operation by adding floats at the top and sinkers at

the bottom end. The mainline is positioned at an appropriate height from the bottom by adjusting the buoyancy. When the mainline does not touch the ground the gear is particularly suitable for rough grounds.

➤ **HORIZONTAL LONGLINES**

Horizontal longline fishing uses a long mainline made of tarred rope or nylon monofilament to which are attached hundreds or thousands of branch lines, each with a single baited hook. The line is suspended in the water by floatlines attached to floats.