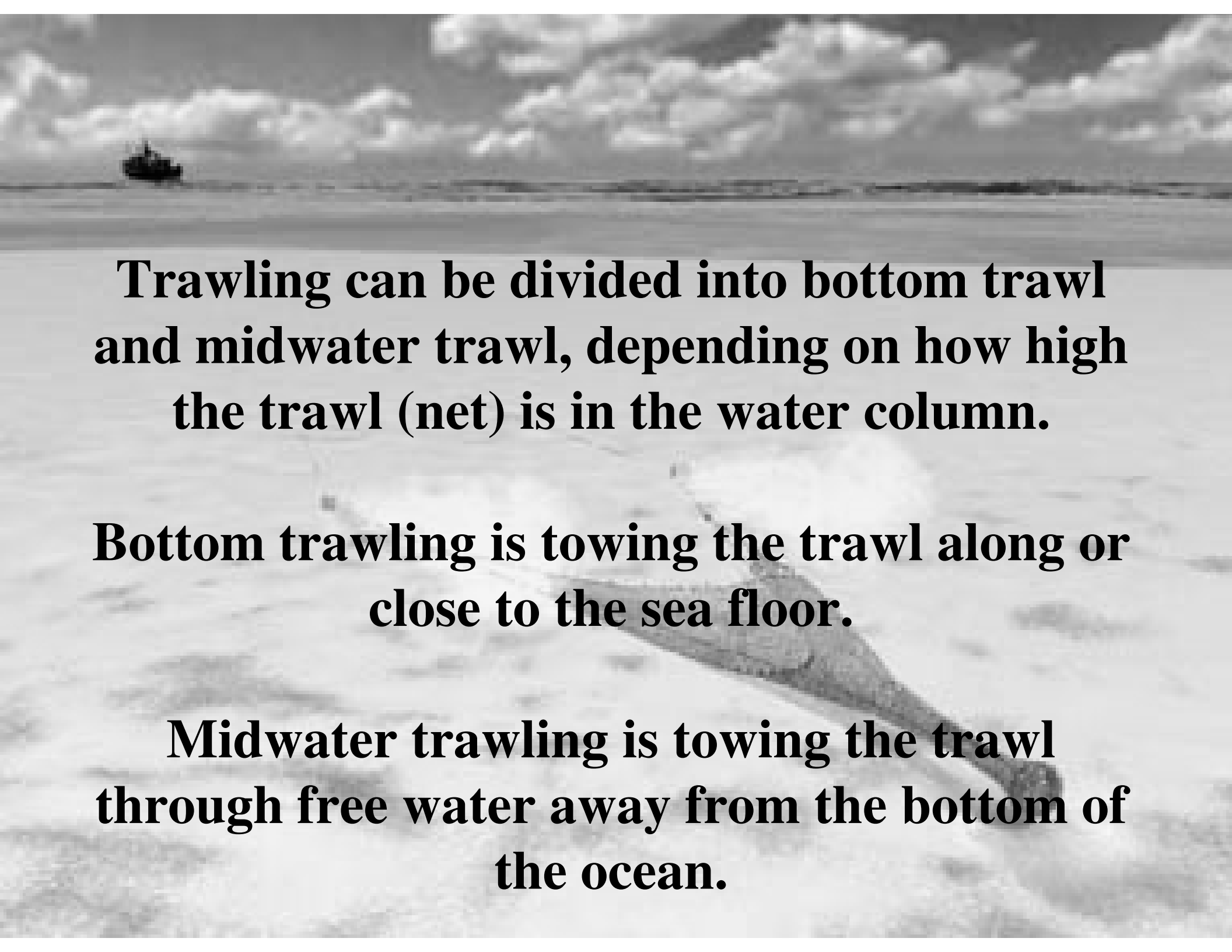


DECREASING METHODS OF JELLYFISH BYCATCH ON THE TRAWL FISHERY

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A black and white photograph of a large fishing vessel on the ocean under a cloudy sky. The vessel is positioned on the left side of the horizon. The sky is filled with large, textured clouds. The water is calm and reflects the light from the sky.

Trawling can be divided into bottom trawl and midwater trawl, depending on how high the trawl (net) is in the water column.

Bottom trawling is towing the trawl along or close to the sea floor.

Midwater trawling is towing the trawl through free water away from the bottom of the ocean.

Bottom trawling is towing the trawl along or close to the sea floor.

Bottom trawling targets both bottom living fish (*groundfish*) and semi-pelagic fish such as cod, squid, halibut, red mullet, turbot, whiting and rockfish.

In midwater trawling, a cone-shaped net can be towed behind a single boat and spread by trawl doors, or it can be towed behind two boats (pair trawling) which act as the spreading device.

Midwater trawling catches pelagic fish such as anchovies, sprat, horse mackerel, ringa, mackerel, bluefish.

Fishery by-catch and discards are old issues in fishing history but have become one of the most significant problems currently encountered by many fisheries.



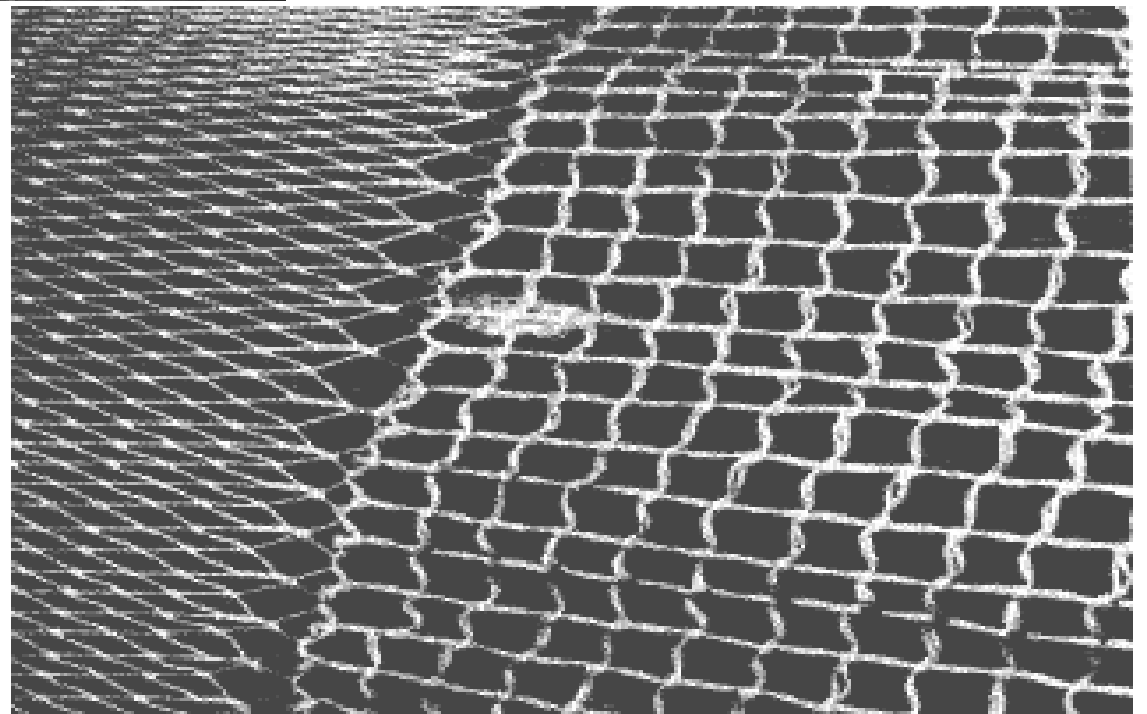
- **The devices varied depending on the need of the particular fisherman.**
- **Some fishermen developed grids to exclude turtles, rays, sponges and jellyfish, because these animals were caught frequently or because the value of their target catch could be increased markedly.**

- **Square mesh panel and sorting grids used in many fishing gear mainly trawls for improving size and species selectivity are called special selective devices.**



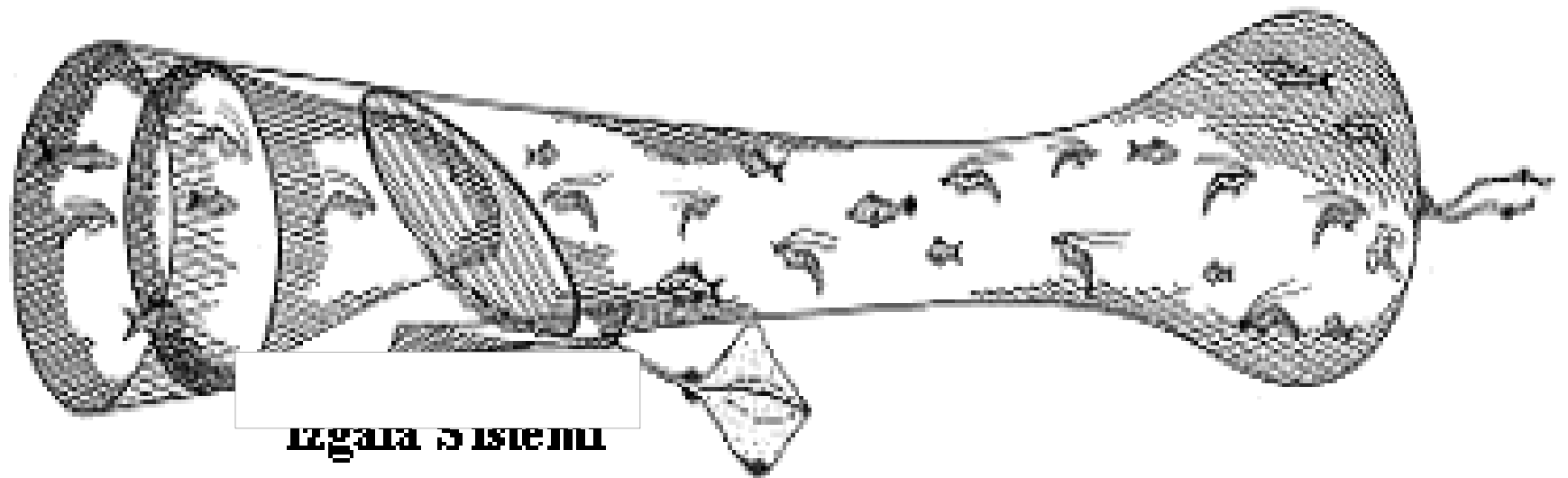
Grid System

Square Mesh Panel



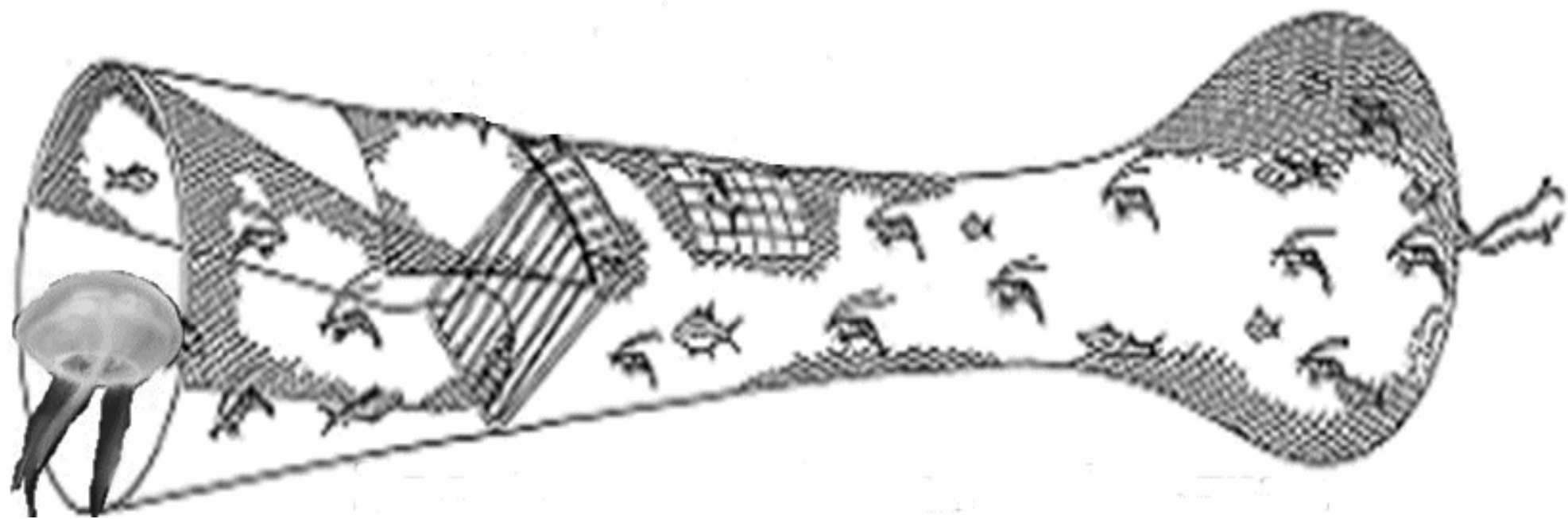
- **Large quantities of jellyfish are discarded in the anchovy, horse mackerel, bluefish and bonito fisheries in Turkish waters.**
- **Several fishermen took an interest in developing devices to reduce fishery by-catch in Black Sea.**

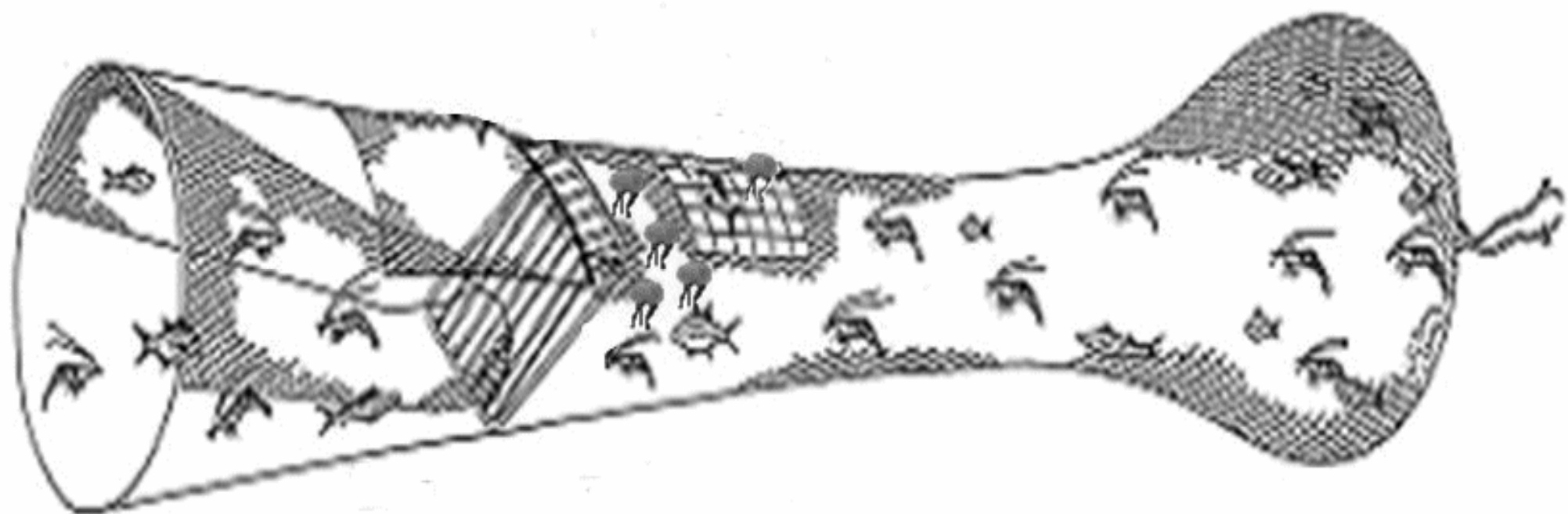
- **Grids are used to expel sea turtles and jellyfish.**
- **Grid practice could be preventing to catch of jellyfish, on trawl fisheries in Black Sea.**
- **Additional, it is possible more quality of target species and selectivity by grid systems in trawl net.**



Legala Sistem







- **We recommend investigation of grid selectivity to reduce capture of these by-catch species in the Black Sea.**
- **Grid practice could be preventing to catch of these species, on trawl fisheries in Black Sea.**
- **Additional we are consider getting more quality of target species and selectivity by grid systems in trawl net.**

- **Grid system fishery may not be adversely affected to the Black Sea trawling.**
- **However there are a lot of examples and studies that the different modifications of the grid system are achieved.**