fishery were *Penaeus monodon, P. semisulcatus and Fenneropenaeus indicus*.

FS OR 10

Experiments with T45 mesh windows at the throat and in upper-lower belly of coastal set bagnet

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Experiments with T45 mesh windows at the throat and in upper-lower belly of coastal set bagnet were carried out as a possible means to reduce discards and to release the juveniles of finfishes and shellfishes in the coastal set bagnet fishery of West Bengal. Coastal set bagnet was used with a 22 mm bar T45 mesh windows inserted in the throat and 45 mm bar T45 mesh window in the forward part of upper-lower belly with the same mesh size of nominal T0 meshes at the throat and upper-lower belly. A total of 48 hauls were made in 12 days of fishing trials. The soaking period was fixed to six (6) hours for every day of the experiment including the time of setting and hauling. The results of this investigation showed that the average catch of experimental net was 24.48 kg/haul and that of reference net was 31.96 kg/haul. The average rate of discard was 3.17 kg/haul in experimental net, while the corresponding catch from reference net was 4.52 kg/haul. There was no significant difference between the average catch obtained from the reference and experimental net during the period of sampling at 5% level. T45 mesh windows at throat and in upper-lower belly in coastal set bagnet may be a tool for decreasing the discards and releasing juveniles of finfishes and shellfishes in the coastal set bagnet fishery of West Bengal.

FS OR 11

Effect of speed and warp length on mouth opening of bottom trawl

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Bottom trawling is one of the most important fishing methods across the world. In India about 35,230 trawlers of various sizes are in operation. In the case of trawling, probability of getting catch is directly proportional to swept area and thus to the mouth opening of the trawl. In the present study, we tried to investigate the effect of speed and warp length on the mouth opening of 27 m bottom trawl, operated onboard research vessel Matsyakumari-II, off Cochin. Trials conducted with six acoustic sensors (Make NOTUS, Canada) two each attached to otterboard and wings, and one each to the head rope and foot rope. Horizontal and vertical mouth opening were recorded for three different warp lengths (60, 70 and 80 m) at three different towing speeds viz., 2.9, 3.3 and 3.7 kn. At warp length, 70 m, the mouth opening decreased from 60.66 m^2 to 44.26 m^2 with increase in speed from 2.9 to 3.3 kn and then increased to 59.26 m^2 at 3.7 kn speed. Similar trend was observed for 80 m warp length, where values were 48.13, 36.55 and 51.11 m^2 at speed 2.9, 3.3 and 3.7 kn respectively. In the case of 60 m warp length, the mouth opening were 44.23 and 45.55 m^2 at 2.9 and 3.3 kn respectively, whereas it further decreased to 31.96 m^2 at 3.7 kn towing speed. At 3.7 kn towing speed

with 70 and 80 m warp length the opening was maximum.

FS OR 12

Oceanographic determinants of suitable habitat for yellowfin tuna along Indian coast

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The protection and conservation of fishery habitat is a vital part of ecosystem approach to fisheries management. It recognizes that fish populations should not be considered independently of their environment. In this context, the present study was carried out to understand the spatial and temporal distribution of yellowfin tuna (*Thunnus albacares*) and its relationships with environmental variables. The presence-absence data was collected from hook and line operation carried out by Fishery Survey of India (FSI) fishing vessels during 2005 to 2012 along Indian coast including Andaman sea. Satellite parameters were extracted for respective latitude-longitude position were Chlorophyll (mg/m³), Sea Surface Temperature (SST) in ^{0}C, Sea Surface Height anomaly (SSHa) in cm and Eddy Kinetic Energy (EKE). A Generalised additive modelling (GAM) using the binomial distribution and logistic link function was used to relate yellowfin tuna presence-absence data and the explanatory variables. This makes the presence or absence of fish the nominal response variable explained using a range of available satellite parameters as explanatory variables. The classification tree indicates that SSHa is the most important explanatory variable. A high probability of finding Yellowfin tuna is obtained for samples with SSHa smaller than 4.48 cm and EKE larger than 0.055. The study supports earlier findings of the Indian National Center for Ocean Information Services.

FS OR 13

Responsible fishing with lines and gillnets- case studies from Kombudurai and Tharuvaikulam fishing villages of Thoothukudi coast, Tamilnadu

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The Code of Conduct for Responsible fishing was introduced by FAO with a view to ensure conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity. This paper deals with the fishing practices of Kombudurai and Tharuvaikulam of Thoothukudi district in accordance with Code of Conduct of Responsible Fishing practices of FAO. In Kombudurai, one of the promising coastal fishing villages, only fishing lines meant for high value fishes are operated, *viz*., three types of long lines and four types of hand lines. Seer fish long lines, carangid long lines and grouper long lines are operated during summer months from February to May. Long lines with hook size ranging from 4 to 7 are being used to capture large fishes. Hand lines are mainly targeting seer fish, carangids, bait fishes and cuttle fish. In Tharuvaikulam fishing village, fishers mainly operate drift gillnets such as large