(7.06%), and *Alepes kleinii* (6.45%). The implications of the results and the recommendations for optimum mesh size to be used in the panels are discussed.

FS PO 09

Performance of J-hook and circle hook in longline fishing off Cochin, India

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J-hooks are widely used in longline fishery around the world. Circle hooks were introduced with a view to avoid turtle bycatch and deep hooking in fishes. Comparative longline fishing trials using J-hook and circle hook were carried out off Cochin in 2016. The main objective of the study was to compare the fishing performance of J-hook and circle hook and the effect of different hook shapes on species caught. Fishing trials were conducted off Cochin onboard F.V. Sagar Harita. A total of 750 hooks were deployed during the study. Indian mackerel (*Rastrelliger kanagurta*) of identical size was used as bait. *Coryphaena hippurus* and *Pterotrygon violaceae* were the major species caught. Results show that the percentage of hooking (individual/100 hooks) for J and circle hooks was almost same (1.47% and 1.33% respectively). In the case of J-hook, 27% each of the fishes were hooked at throat, jaw and gut while 18% fishes were foul hooked. In circle hooks 80% of the fishes were hooked at jaw and 20% at throat while there was no foul hooking. Percentage of escapement after hooking was 23.8% in J-hook and no escapement from circle hooks.

FS PO 10

Trawl geometry studies using two off-bottom trawl systems (OBTS) along the coastal waters off Cochin

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Trawling is an important commercial fishing method along the Indian coast, contributing nearly 51% (1.7 Mt) of total marine fish landings of India. Catch efficiency of trawl is determined mainly by the mouth opening of the net, which in turn affects the catchability. Trawl geometry has been shown to vary with factors such as towing speed, operational depth, warp/depth ratio, trawl door type and direction of current. Field experiments were conducted on-board MFB Matsyakumari-II to assess the trawl mouth opening of off-bottom trawl systems (OBTS) using acoustic sensors (Trawlmaster-NOTUS) with reference to towing speed, operational depth, warp/depth ratio and direction of current during trawling. A 24.7 m ultrahigh molecular weight polyethylene (UHMWPE) and a 27 m high density polyethylene (HDPE) off-bottom trawl using 85 kg suberkrub otter boards were used for trials along the coastal waters off-Cochin. Trawls were operated at different speed (2.7, 3.0, 3.3 and 3.8 knot), warp/depth ratios (6:1, 7:1 and 8:1) and depths (10 and 20 m). Effect of direction of tow in relation to current was also investigated. For HDPE trawl, the maximum total area of opening (96.58 m^2) was recorded at 6:1 warp/depth ratio with the towing speed of 3.8 knots. Similarly, for UHMWPE trawl, the maximum opening (107.68 m^2) was recorded at the towing speed of 3.8 knots at a warp/depth ratio of