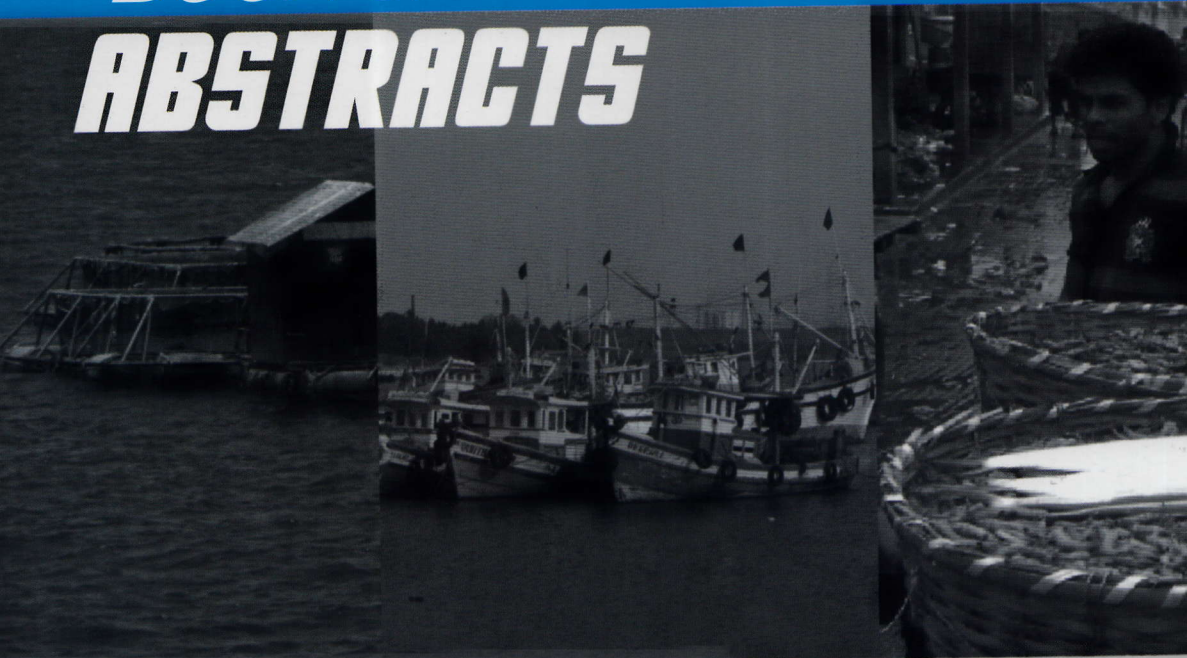




**Indian Fisheries and
AquaCulture Forum**

11TH INDIAN FISHERIES AND AQUACULTURE FORUM
**Fostering Innovations
in Fisheries and Aquaculture**
Focus on Sustainability and Safety

BOOK OF
ABSTRACTS



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Relating minimum legal size with optimum exploitation pattern in *Uroteuthis (Photololigo) duvaucelii* along eastern Arabian sea

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Cephalopods comprising of squids, cuttlefishes and octopus account for nearly 6% of marine fish landings in India. Squids with annual yields fluctuating between 77,241 and 1,00,014 t (2010-15) are mainly caught by trawlers along the eastern Arabian sea, bordering the west coast of India. The Indian squid, *Uroteuthis (Photololigo) duvaucelii* distributed in the shelf waters support the largest squid fishery in the country. Juvenile Indian squid predominantly under the minimum legal size (MLS) of 8 cm are landed in trawl seasonally. The length-cohort analysis was carried out in this study to assess the stock and mortality rates of *U. (P.) duvaucelii* population along west coast of India. The effects from changing the fishing efforts under two scenarios were further explored with the predictive length-based Thompson–Bell model. Predictions were made at (1) the current state of the fishery when squid juveniles are subjected to high fishing mortality and (2) when the squids are exploited only above the MLS. The estimates on maximum sustainable yields (MSY),



maximum economic yield (MEY) and the optimum effort levels indicated that the current yield of *U. (P.) duvaucelii* is closer to the MSY estimates, while the maximum economic yield was obtained when the current fishing effort was reduced by 30% (f-factor 0.7). The simulation suggests that the reduction of fishing mortality of squids under MLS would further maximise the economic yield by 12%. The projected MEY was estimated at 80% of the current fishing effort.

FR OR 56

discontinuous Percoll gradients, labelled with PKH-26 dye and transplanted into the senile gonads through urogenital papilla. Three months after the therapy, males were abdominally stripped to generate spermatozoa and observed under the microscope. It was found all the stem cell therapy males have produced spermatozoa that was characterized by retention of fluorescent dye. The males were crossed with young females through artificial insemination and natural spawning, to produce viable progenies. These observations suggests commercially and/or