

# APPLICATION OF FISHING DATA AND SPATIAL STATISTICAL MODELS TO DETECT SEASONAL TREND FOR MULTI-DAY RING NET FISHERY IN SRI LANKA

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The study was carried out from December 2012 to February 2014 in Southern coast of Sri Lanka to monitor catch composition and fishing locations of offshore ring net fishery which comprised all features of purse seine (Kandan course). Ring net fishery is associated with floating objects with that of drift gillnet/long line catches. Hence the main objective of this research project is to develop a methodology for finding the seasonal geographical trend of Ring Net (Kandan Cose) and Drift Net Fishery throughout the year 2013. The data were collected from the fishery harbors of Beruwala, Galle, Dondra and Tangalle. The collected data were analyzed by R statistical software and Arc GIS 9.3 *Decapterus macarellus*, *Elagatis bipinnulata*, *Coryphaena hippurus* and *Abalistes stellatus* contributed significantly to catches in R and RGL boats, which is contrast were insignificant in the catches of GL boats, in ring nets, juvenile *Katsuwonus pelamis* and *Thunnus albacares* were also observed. The fish aggregated floating objects were existed in North-East offshore region than in the South-West offshore region in season 1 (January to February, 2013), while higher production of RN can be observed in South-West offshore region than in the North-East offshore region in season 3 (May to December, 2013) due to oceanographic factors.