

RESEARCH ARTICLE

## Design characteristics of mackerel drift gill nets of Ratnagiri (Maharashtra)

T.G. KAZI, A.S. MOHITE AND R.R. JADHAV

Author for Correspondence -

A.S. MOHITE

Department of Fisheries  
Engineering, College of Fisheries,  
(Dr. B.S. Konkan Krishi  
Vidyapeeth), Shirgaon,  
RATNAGIRI (M.S.) INDIA  
Email: ashishmohite@yahoo.com

See end of the article for Coopted  
authors'

**ABSTRACT** - A study on design characteristics of mackerel drift gill nets of Ratnagiri, Maharashtra showed that, main webbing of the nets were fabricated with polyamide (PA) monofilament of diameter 0.20 to 0.23 mm, the mesh size ranged between 52 to 56 mm and the hanging coefficient varied from 0.41 to 0.54. It was observed that hung length and hung depth varied from 60.35 to 84.67 m and 4.50 to 5.69 m, respectively. The total fleet length ranged from 320 to 618 m. The depth of operation for drift mackerel gill net ranged from 10 to 18 m.

**KEY WORDS** - Design, Polyamide, Mackerel, Drift, Gill net

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### INTRODUCTION.....

Maharashtra state is one of the major marine fish landing states in India. It has 720 km coast line spread over the maritime districts, viz., Thane, Mumbai, Raigad, Ratnagiri and Sindhudurg. The fish potential of state is estimated at 6.3 lakhs tonne. The productions during the year 2006-07 was 4.64 lakh tonnes and its percentage to the state potential was 74 per cent. The fishing fleet operating along the Maharashtra coast during the year 2006-07 comprised of 11,798 mechanized boats and 10,895 non-mechanized boats. In Ratnagiri, a total of 588 number of gill netters were in operation (Anonymous, 2007).

Design characteristics of marine gill nets of Kerala have been discussed by Thomas and Hridayanathan (2006) and Vijayan *et al.* (1993), gill nets of Gujarat by Pravin *et al.* (1998), of Andhra Pradesh by Ramarao *et al.* (2002). Various aspects of mackerel gill nets of India were studied by Satyanarayana and Sadanandan (1962), Mathai *et al.* (1993), Thomas *et al.* (2005) and Thoma (2009). Detailed information on the gear systems is essential for their improvement in terms of efficiency, cost-effectiveness and management of fisheries. Many changes have taken place in the gillnets with respect to the material used, net dimensions, mesh size and mode of operation (Vijayan *et al.*, 1993). In Ratnagiri, one of the major fish landing centres of Maharashtra, 588 number of gill netters

were in operation (Anonymous, 2007). A study was undertaken with the objective of documenting the design and technical specifications of the mackerel drift gill nets operated from Ratnagiri.

### RESEARCH METHODS.....

Ten fish landing centres of Ratnagiri were selected for the present study. Mirkarwada is a major fish landing and distribution centre and Sakhartar, Kasarveli, Mirya Bandar, Bhagwati Bandar, Bhatkarwada, Rajiwada, Karla, Bhatye and Phansop are minor fish landing centres. Structured schedules were prepared which comprised of two major sections. The first section dealt with the particulars of gill net owner and the fishing vessel used for the gill net operation. The second section dealt with design characteristics, rigging and mode of operation of the mackerel drift gill nets used by the fisherman of Ratnagiri. The information included in the first section was recorded according to Sreekrishna and Shenoy (2001) and the information in the second section was recorded according to Thomas and Hridayanathan (2006). The net designs of the mackerel drift gill nets were presented according to Nedelec (1975).

### RESEARCH FINDINGS AND ANALYSIS.....

In Ratnagiri, mackerel drift gill nets were made up of