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## Design and technical specifications of pomfret gill nets of Ratnagiri, Maharashtra

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### ABSTRACT

The present investigation deals with the design and general characteristics of pomfret gill nets operated from Ratnagiri, Maharashtra. Webbing of the nets were found to be fabricated with polyamide (PA) monofilament of diameter 0.23 to 0.32 mm and the mesh size ranged between 100 to 130 mm with the hanging coefficient of 0.41 to 0.56. Nets were used with the hung length and hung depth of 47.25 to 108.57 m and 4.41 to 11.92 m, respectively. Pomfret gill nets in Ratnagiri had a total fleet length of 182 to 915 m and depth of operation varied between 10 to 55 m. Head rope and foot rope of polypropylene (PP) of 3 to 4 mm diameter was used without mounting rope. Five to twenty numbers of units were joined end to end to form a netting fleet. The pomfret gillnets are locally known as *Papletchi jali*.

**Key words :** Design, Technical specifications, Pomfret, Monofilament, Polyamide, Gill net

### INTRODUCTION

Maharashtra state, having a coast line of about 720 km spread over the maritime districts viz., Thane, Mumbai, Raigad, Ratnagiri and Sindhudurg. 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 gill netters are 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 related to the pomfret gill nets of India were studied by Banerjee and Chakrabarthy (1972), Panicker *et al.* (1978), Sitarama Rao *et al.* (1980), Kunjipalu *et al.* (1984), Mohan Rajan and Mathai (1988), Thomas *et al.* (2005) and Meenakumari *et al.* (2009).

Detailed information on fishing gear system is essential for their improvement in terms of efficiency, cost-effectiveness and for efficient management of any fishery. Many changes have taken place in the gill nets with respect to the material used, net dimensions, mesh size, mode of operation (Vijayan *et al.*, 1993). The present day gill nets are mostly resource specific. The present study was undertaken with the objective of documenting the design and technical specifications of the pomfret gill nets operated

from Ratnagiri.

### MATERIALS AND METHODS

The present investigation was undertaken during the period August, 2009 to May, 2010 to study the design and technical specifications of pomfret gill nets operated from Ratnagiri, Maharashtra. Ten important fish landing centres were selected for the present study comprising of Mirkarwada, Sakhartar, Kasarveli, Mirya Bandar, Bhagwati Bandar, Bhatkarwada, Rajiwada, Karla, Bhatye and Phansop. Structured data collection schedule formulated for the present study comprised of two major sections. The first section dealt with the particulars of gill net owner and the fishing vessel used for the pomfret gill net operation. The second section dealt with the technical specifications, design aspects, rigging and the mode of operation of the pomfret gill nets used by the fisherman of Ratnagiri. The information included in the first section was recorded according to Sreekrishna and Shenoy (2001) whereas, the information in the second section was physically collected and recorded according to Thomas and Hridayanathan (2006). The net designs of the pomfret gill nets were presented according to Nedelec (1975).

### RESULTS AND ANALYSIS

Technical specification and design of the typical

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