

## Trawl Nets presently used in the Coastal Waters of Sri Lanka

*By*

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### **Introduction**

IT is generally believed that the origin of coastal trawling in Negombo, Chilaw and Mutwal areas date back to about 100 years. Initially the nets used by local fishermen were simple square or triangular shaped bags (Sinhala terms : Lensudela, Kathumaram dela). Until recently natural fibres of local origin (cotton, hemp etc.) were employed in the construction of these nets. In early 1950s local fishermen in Mutwal (Colombo) and Negombo had modified their simple bag net to the existing type of net with lighter nylon webbing discarding the heavy and less durable webbing of natural fibre. When the scheme for mechanization of crafts was first introduced there were objections from traditional fishermen to the use of these boats. After considerable persuasion few fishermen started trawling with mechanized boats inspite of all these difficulties. Fishermen in most areas took up to mechanized boats fishery as objection to the use of mechanized crafts gradually subsided. Although in most areas mechanized crafts are used for trawling there are still few areas where the use of mechanized crafts for trawling is not permitted.

During 1963-65 attempts were made by the Department of Fisheries, with the assistance of F.A.O. to explore new grounds for coastal trawling (specially for prawns) and detection of a good stretch at Karukkapone (6.4 north of Chilaw) was recorded (Weekaroon 1964). The net used had a 16.7 m foot rope, 25 mm mesh at Cod end and the otter boards were  $1.82 \times 1.06$  m and 91 kg each in weight. This ground is being mainly exploited by local fishermen at present.

Although trials were carried out in few more new areas only Mullaithivu registered good results. But these grounds were never exploited commercially by trawling as a result of objection from local fishermen of the area.

Commercially based coastal trawling in Pesalai-Talaimannar area started around the latter part of last decade. Since Ceylon Fisheries Corporation pioneered this scheme, remarkable improvement of craft and gear could be observed. The latest area in which commercially based coastal trawling operations are carried out is Jaffna, where Cey-Nor Foundation has initiated a project to produce gear of better efficiencies and better crafts.

This paper is an attempt to record various types of trawl nets presently used in above-mentioned areas.

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Type C

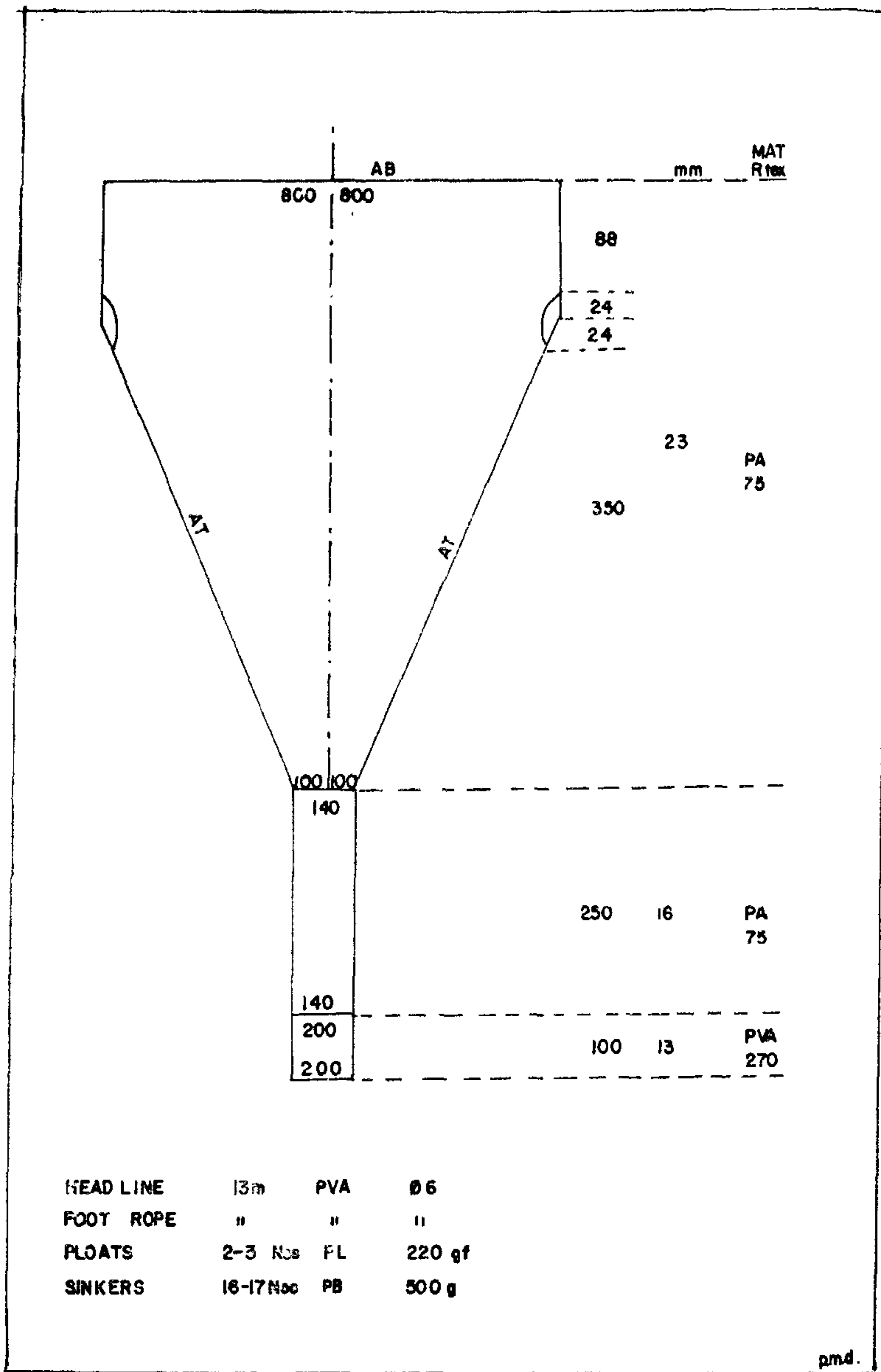


Fig. 1.

This particular net is used in Chilaw area. The craft used is 3½ ton wooden boat (Loa 8.5m, beam 2.4m draft 0.8m) with 24-30 HP engine. Instead of otter doors two concrete slabs (40 cm × 30 cm × 5 cm) of rectangular shape (approximate weight 40 kg) is used. In this operation spread of the net is obtained by tying the towing warps to ends of outrigger booms made of bamboo (Fig 2.) about 70 such boats are fishing in the area. Catch consists of Prawns, and mixed fish varieties like small cat fish, soles, etc.

## Type D

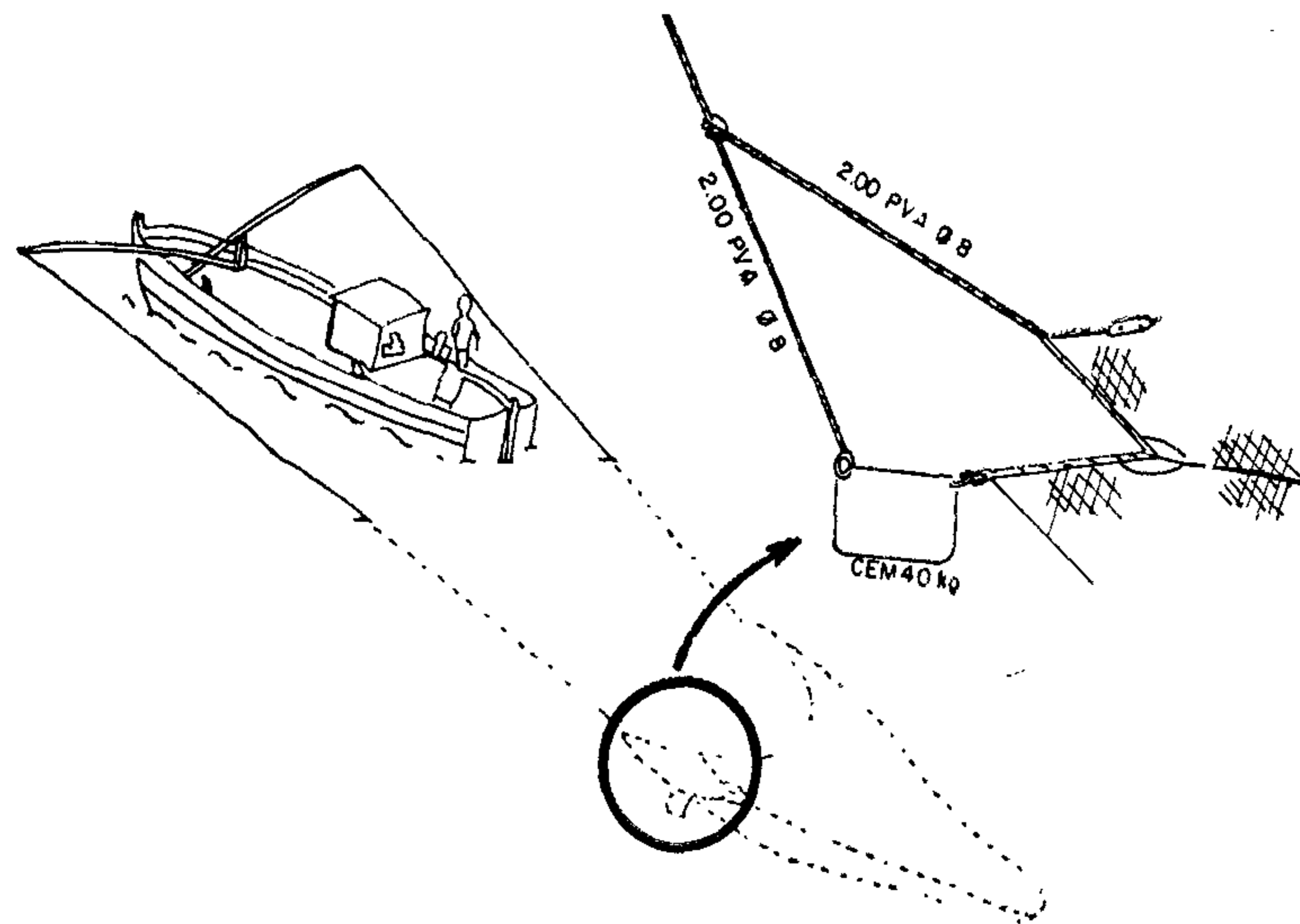


Fig. 2.

The trawling ground starts from Mattakoluwa (8 km south of Chilaw) and extends up to Udappuwa (about 10 km north of Chilaw) and is about 18 km in length, about 2 km wide, 4–8 m deep. The prevailing peak for prawns is from October to December although majority of fishermen carry out trawling operation almost through out the year. During the height of the fishing season each boat gets an average of 100 kg of prawns, which is about 40% of the total catch. These fishermen trawl for about 6 hours from dawn till about noon. Crew of these boats comprises of 4–5 fishermen. Despite its simple design and its expensiveness this has proved to be an efficient gear.

Type A

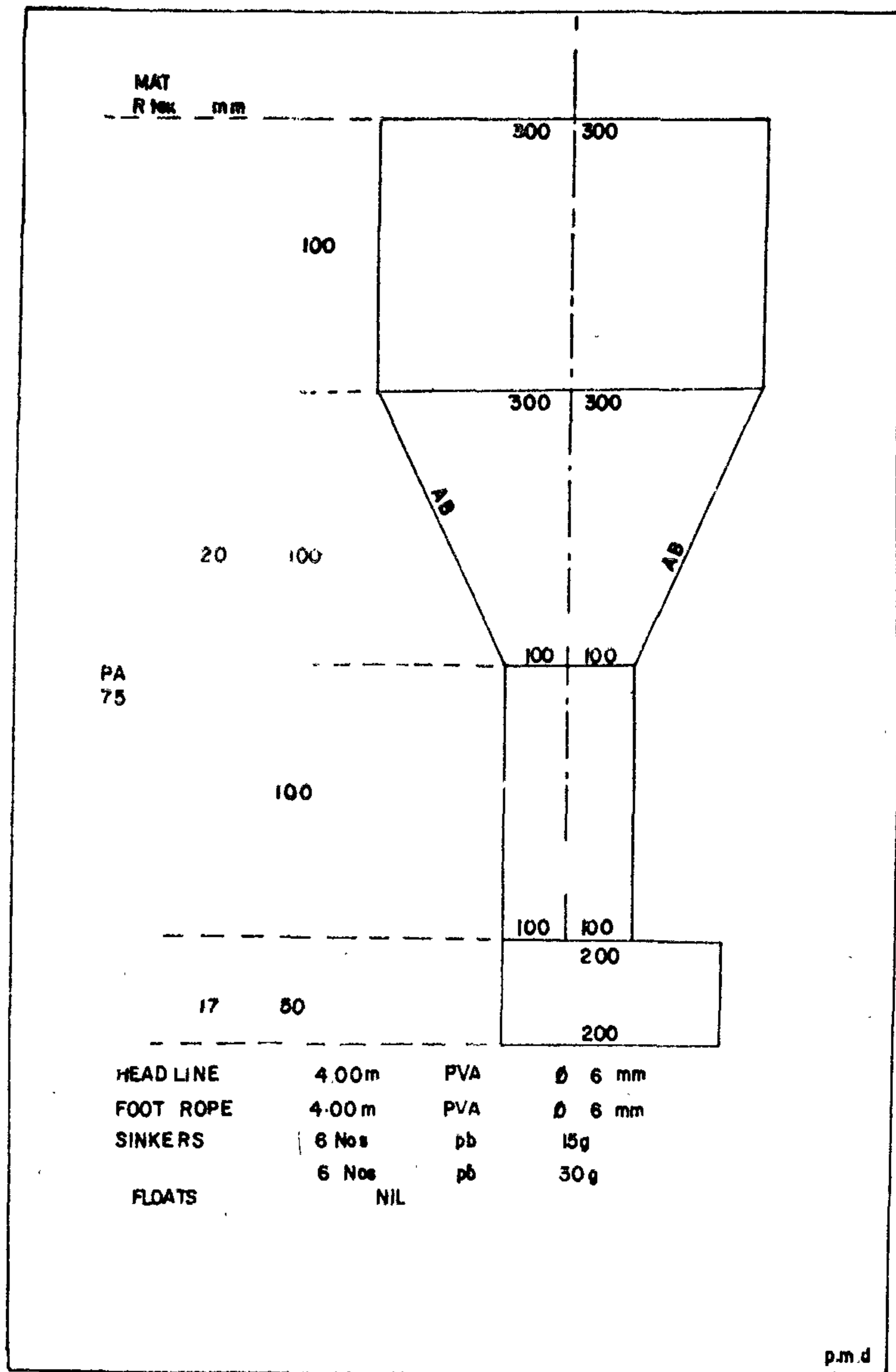


Fig. 3.

Although this is very similar to type A, it could be observed that this is relatively smaller in dimensions as this type is operated off non-mechanized crafts in Negombo area. 70-80 wooden outrigger canoes with sail (Loa 5-7m, draft 0.5m, beam 0.3 m) are engaged in trawling with this type of net.

The area of trawling is about 14 km<sup>2</sup>, 7 km in length and 2 km width, starting from Lewis place up to Kochchikade. The depth in this area ranges from 4-6 m. These fishermen use concrete blocks similar to the ones in use in Chilaw area but are lighter in weight (about 30kg. each). Here the spread of the net is obtained by tying one towing warp to stern of the craft and other to the end of an extension of the outrigger boom (Fig. 4). Other than during period of height of monsoon, when it becomes difficult to manoeuvre their sailing boats, the trawling is carried out through out the year. The best

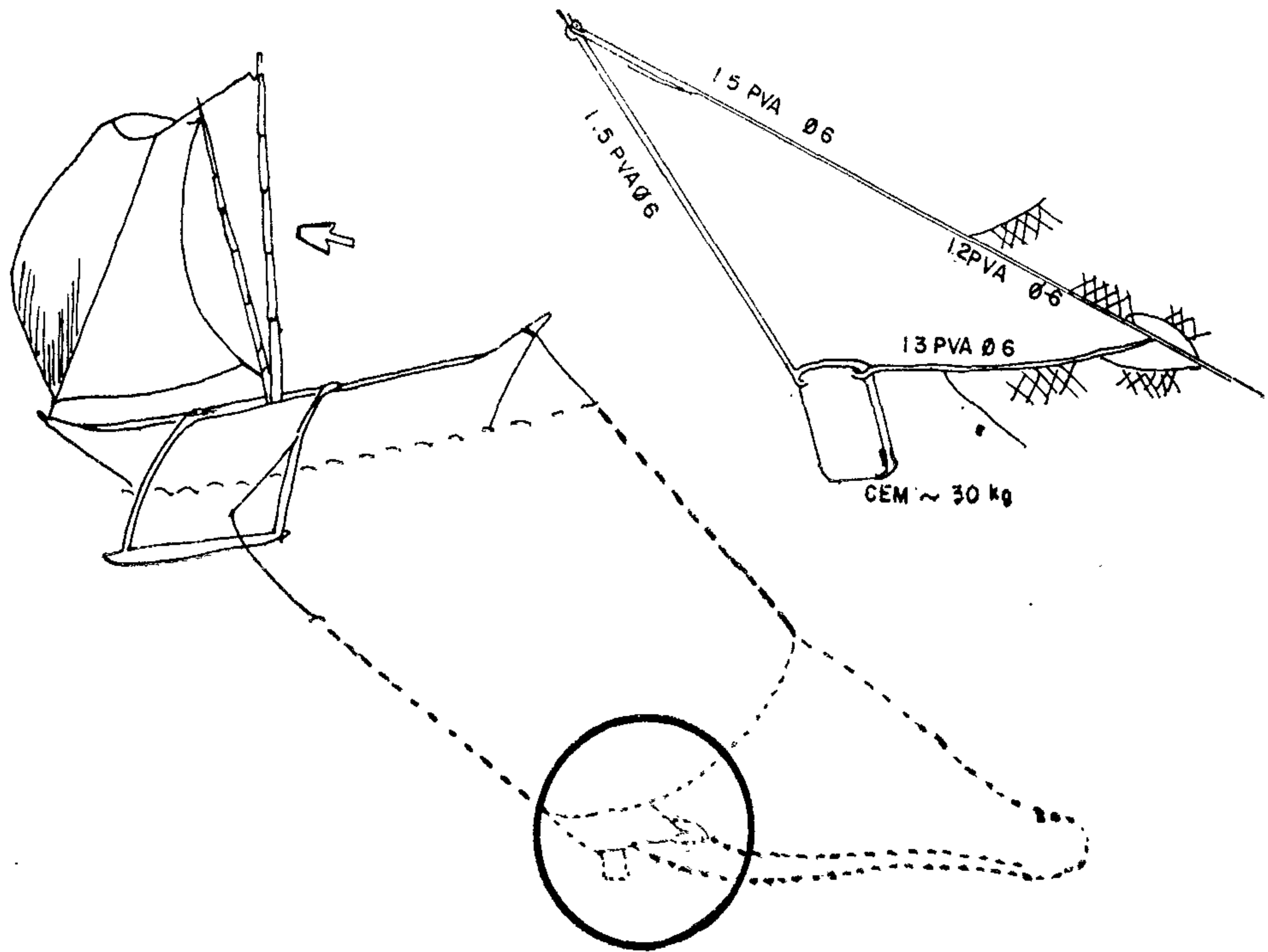


Fig. 4.

catches are obtained in the period September–November and average catch per boat is about 100 kg. A net of similar design is in use in the area from Colombo harbour to Hendala with 3½ ton type boats. The best catches are obtained in the beginning and tail end of SW monsoon. When prawn catches drop too low they use the prawns caught as bait for hand line fishery. These prawns are kept alive by keeping them in a cane basket tied to the side of the boat. Fishermen from Mutwal, Uswettakeyyawa and Hendala are engaged in trawling in this area. These boats manned by 3–4 fishermen carry out trawling from early morning till noon.



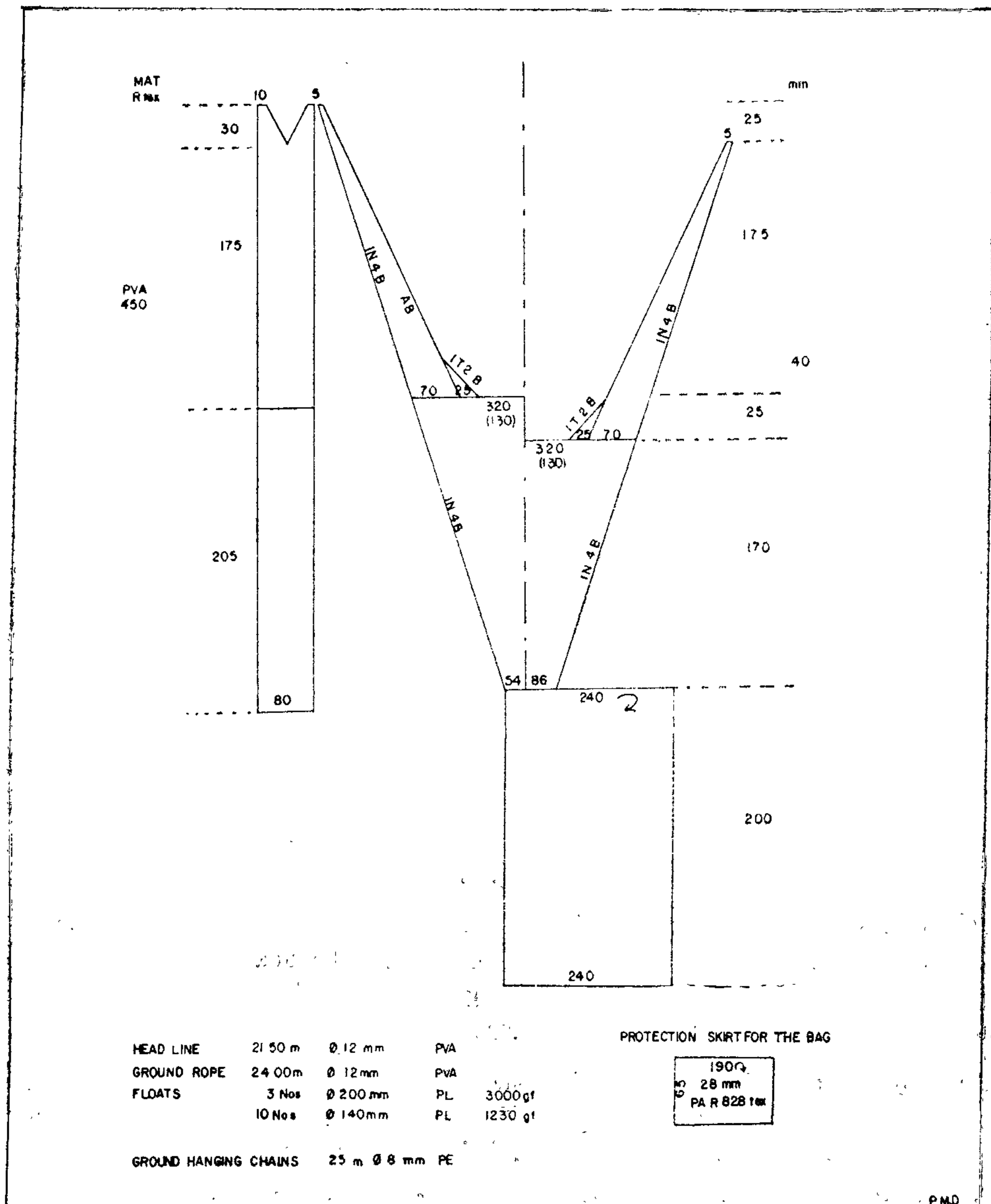


Trawling in Silavaturai yields mostly bigger bottom species such as groupers and mullets.

Usually operations for prawns in northern side of Mannar are carried out in the night from about 6 p.m. to 6 a.m. These boats are manned with a crew of 3-4 persons, whereas operations in the southern side of Mannar are carried out in the day time from about 6 a.m. to about 3 p.m. Operations in the southern side of Mannar yields an average of 15 kg of prawns, 50 kg of mixed edible fish and 100 kg. or more of inferior varieties per boat per day of operation.

In the northern region it is observed that prawn catches improve from about 15 kg to about 35 kg per boat per day of operation in the period April to October

Type B





This design is a popular Norwegian design and is being constructed by Cey-Nor Development Foundation under the supervision of two Norwegians. Initially these nets were made of Kuralon webbing of mesh sizes 40 mm and 28 mm. But they intend switching over to nylon twine. The net made of 40 mm webbing is designed for vessels of 50 hp class, while 28 mm net is suited for 30 hp class vessels. At the moment one Ferrocement vessel (Loa 9.75) of 48 hp is operating in the Delft area with Kayts as base and is said to be successfully operating this net. The accessories for 28 mm mesh net is as follows :—

Head line	13.2 mts.	12 mm	PVA
Group rope	15 mts.	12 mm	PVA
Floats	13 nos.	140 mm	1230 gf PL.
Ground hanging chains	12 mtss	2/16"	Fe

#### ACKNOWLEDGMENT

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#### References

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