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Since 1980 kerosene was the fuel used in outboard engines (OBE) fitted in various types of country crafts. Gradually, the size of the crafts as well as the gear were altered. On par with these changes, the capacity of the outboard engine was also enhanced to 8, 9.9, 15, 25 and 40 HP. Various innovations took place in developing the materials used in the construction of craft also. Introduction of carrier craft for mother boat (Ring netters or Ring seiners), Mini Trawl-net and Mini pair trawl-net (double net or pothen vala) were some of the additional innovations.

In the initial stage, kerosene quota provided to concerned units was almost sufficient to meet their needs. Depending upon the season and availability of

the catches, extra fuel required for the purpose was compensated from other sources. Year after year with the introduction of outboard engines of various capacities the supply of kerosene became insufficient. Along the zone K-8B, (Kozhikode district) particularly around Quilandy large number of vanchies (Mother unit of ringnet or ringseine) are installed with 3 numbers of OBE having a capacity of 40 HP each. The plank built mother units with an average length of 16 metres have undergone vast development transforming into marine plywood coated with fibre glass and finally to fibre glass body.

The operational cost of the mother unit increased following the hike in the kerosene price supplied

through government agencies such as Matsyafed. From the initial price of Rs. 3/- per litre it reached to Rs. 9/-. Private agencies are selling white kerosene at the rate of Rs. 15/- per litre and the price varies depending on demand.

During the year 1999 to 2001, the capital investment in the modification of ringnet (ringseine) units became so high and daily operational cost also became high owing to shortage of kerosene. In order to cut short the exorbitant expenses, fishermen started replacing kerosene by LPG in few selected units. But the attempt was discarded as it was not economical. By this time, nearly 35 mother units (RN) body were fully converted to fibreglass. Instead of 3 OBE each with 40 HP capacity. They were replaced by Leyland (inboard engine) having a capacity of 95 HP. This single engine is capable of movement of the craft, rotation of winch and illumination. In addition to this an outboard engine (OBE) with a capacity of 40 HP is always kept in the mother unit to meet emergency in case of engine failure.

#### Cost of the modified unit and its capacity

No.	Items	Size/ Capacity	Approximate Cost
1.	Fibre glass mother boat (vanchi)	Average 16-17 m length	7,50,000
2.	Leyland inboard engine including winch	95 HP	3,25,000
3.	Propeller shaft & gear	-	1,50,000
4.	Diesel tank	200-250 litre capacity	5,000

5.	Outboard engine	40 HP	72,000
6.	Ringnet (Ringseine)	375-400 MAR (675 m-720 m)	5,00,000
7.	Illumination components	-	6,000
8.	2 carrier crafts	8 m length (Marine plywood coated with fibre glass)	1,40,000
9.	2 OBE (fitted in carrier crafts)	25 HP each	74,000
10.	Mobile communication device	2 Nos.	12,000
11.	Other Equipment including cooking stove etc.	-	1,500
Total			20,35,500

The average cost of operation per day for a ringnet unit using OBE run by kerosene was between Rs. 5,000/- and Rs. 6,000/-. After the introduction of the diselled Leyland unit, the average operating cost came down to Rs. 2,000/-. In view of this, more and more active fishermen were attracted towards the introduction of inboard engines. At fish landing centres like Payyoli, Badagara, Kuriyadi, Chombala and Mahe few crafts have already been converted to the new system and it is likely to be covered in other places also.

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