

## **Establishment of Bio-toilets in mechanized fishing vessels**

West Bengal the state having coast line of 158 Kms, have a marine production of 1.66 lakh tons in the year 2020-21. There are 6671 nos of mechanized fishing boat, which used to set off for operation in sea in the coast of the state from 6 nos of fishing harbours and 55 nos of fish landing centers. Maintenance of personal hygiene of fishers, cleanliness of marine environment and maintain proper sanitation in fishing harbours is essential for ocean ecology as well as for hygiene of the harvested products. In the view of 'Nirmal Bangla Avijan' or 'Sacch Bharat Avijan', it's a call of time to maintain our sea clean.

Bio toilet is a decomposition mechanized toilet system which decomposes human excretory waste in the digester tank using specific high graded bacteria (aerobic or anaerobic) further converting it into methane gas and water. Bio toilet is a different toilet as compare to the traditional restrooms. It saves a lot of water and helps in keeping the station clean. Bio-toilet is a decomposition mechanized toilet system which decomposes human excretory waste in the digester tank using specific high graded bacteria (aerobic or anaerobic) further converting it into methane gas, Carbon dioxide gas and water. Bio toilet is completely different toilet as compare to the traditional restrooms. It saves a lot of water and helps in keeping the environment clean. Bio-digester technology treats human waste at the source. A collection of anaerobic bacteria that has been adapted to work at temperatures as low as  $-5^{\circ}\text{C}$  and as high as  $50^{\circ}\text{C}$  act as inocula (seed material) to the bio-digesters and convert the organic human waste into water, methane, and carbon-dioxide gases. The anaerobic process inactivates the pathogens responsible for water-borne diseases and treats the shit without the use of an external energy source.

Under the bio-toilet concept of the DRDO, the bio-digester tank in every toilet is filled with inoculums containing four types of bacteria. The water trap system in the toilet prevents air from getting into the tank, the human waste is processed by anaerobic bacteria in seven chambers in the tank and the methane gas is allowed to escape into the air. After the completion of this process, only methane, carbon dioxide gases and water remains. These gases are left in the environment whereas water can be recycled and used in toilets again.



*\* Picture is indicative only*

**Name of Scheme:**

"Establishment of Bio-Toilets in Mechanised Fishing Vessels" under the section 'Development of Deep Sea Fishing' under sponsored components of the Government

**Objectives:**

- To maintain hygiene and cleanliness among the fisher who set off for deep sea fishing
- To maintain the sea clean

**Name of the Component:**

Bio-toilets (European closet with flush tank, hand shower and wash basin plus a 500-litre bio-digester. All this is enclosed within a 4 ft x 3ft cabin)

**Project Location**

Different districts in the State of WB.

**Expenditure on the scheme:**

The estimated project cost of one unit of Establishment of Bio-Toilets in Mechanised Fishing Vessels has been worked out as 0.50 lakh as per the Governmental guidelines.

**Benefits from Implementation of Plan:**

- The sea will remain clean
- The fisher can work in a hygienic environment.

**Eligible Beneficiary**

All Fishers, Fish farmers, Fish workers and Fish vendors, Fisheries Development corporations, Self Help Groups (SHGs)/Joint Liability Groups (JLGs) in fisheries sector,



**Scheme for "Establishment of Bio-Toilets in Mechanised Fishing Vessels"**

<b>Details break up of Scheme:</b>				
<b>A) Cost</b>				
<b>Sl No</b>	<b>Items of Expenditure</b>	<b>Quantity</b>	<b>Rate (in Rs)</b>	<b>Amount (Rs)</b>
<b>1</b>	Establishment of Bio-toilets (European closet with flush tank, hand shower and wash basin plus a 500-litre bio-digester. All this is enclosed within a 4 ft x 3ft cabin)	<b>1</b>	50000.00	50000.00
<b>Total</b>				<b>50000.00</b>
<b>B) Funding pattern</b>				
	<b>Type of Beneficiary (Group Activity)</b>	<b>Unit Cost (Rs.)</b>	<b>Govt. Assistance (both Central &amp; State Govt.) (Rs.)</b>	<b>Beneficiary Contribution (Rs.)</b>
	General Category	50000.00	20000.00	30000.00
	SC/ ST/ Women	50000.00	30000.00	20000.00

**Note: The prices of the above-mentioned items are indicative only. The actual prices of the items may vary as per the local marketing conditions. The govt. subsidy will be given to a beneficiary with or without institutional finance. However, for subsidy calculation purposes the amount will be restricted as**