

**Tour Report of Shri Sujoy Mojumdar, Director, NBA, Ministry of Drinking Water and Sanitation to Lakshadweep (14-16 April, 2014) and Kerala (16-18 April, 2014).**

**A) Lakshadweep (14-16<sup>th</sup> April, 2014)**

1. The undersigned visited Lakshadweep between 14-16<sup>th</sup> April, 2014 to attend the meeting, on 15<sup>th</sup> April, 2014 at Kavaratti, of the Monitoring Committee for the Installation of Bio-Toilets, set up by the MHA/Lakshwadeep administration chaired by the Chief Administrator, Lakshadweep Island. The meeting was also attend by the officials of DRDO.
2. The Agenda points for the meeting on 15<sup>th</sup> April, 2014 is at Flag- A. The Minutes of the earlier meeting on the same issue that was held on 6<sup>th</sup> September, 2013 is at Flag-B. A presentation given by Implementing Agency is placed at Flag-C.
3. The summary of the matter is as below:
  - a) Disposal of solid waste is a serious environmental problem in Lakshadweep Island, where the soil being porous, discharge from the soak pits and septic tanks contaminate the ground water. The islands being of small size and undulating in nature, conventional systems of sewage disposal is not practical. The Planning Commission in the year 2010 took a notice of this problem and directed officials of DRDE, Gwalior to visit Lakshadweep Island after which 21 Bio digesters were installed in the Islands on a Pilot basis. After the success of these initial trials by DRDE Gwalior, the Lakshadweep Island Administrator decided to install 12000 Bio digesters in 10 different Islands of Lakshadweep. This is the single largest Bio Digester contract work in the Country.
  - b) This technology is that Bio digester is connected to existing toilets. The bio digester has two components (i) Multi Chambered Tank and (ii) Microbial consortium. The human waste enters the bio digesters through toilet inlet and flows through 4 chambers gradually getting degraded due to microbial consortium present in the Chamber.
4. During the meeting it was informed that the toilets are running satisfactorily. My interaction with the consumers also reflected a satisfaction with the bio digesters. However, the speed of implementation of the project is slow. Out of 12000 bio toilets that have to be installed, the contractor M/s Mohan Rail Components, Kapurthala, who is a ToT holder of DRDE, has so far installed only 1528 bio digester toilets. Issues regarding the slow progress were discussed in detail. The Chief Administrator directed the Agency to present a Work plan for completion of

the project in time. The Agency did the same and it was decided that entire project has to be completed by July, 2015. The Lakshadweep Island Administrator directed that in case the Agency was unable to complete the task, action as per agreement will be taken against them.

5. The undersigned visited many household where bio-toilets have been installed. The main advantage is that there is no contaminated effluent from the tank. Further, the inoculum has to be filled only once in its life time. During discussions with DRDE Officials it was learnt that the focus is on bringing down the cost of these bio toilets to about 50% the price of Septic tank. Currently the cost for a household Biodigester toilets (substructure) being installed by DRDE is Rs. 35,000/-, this includes transport cost also.
6. It is also placed on record that this Ministry had in 2012, entered into a MoU with DRDO, for the large scale grounding of these toilets in the country. However this activity could not be pursued with mainly due to the comparatively high costs, and also the absence of budget in the appropriate heads.

It is suggested that this Ministry again engage DRDO to examine the possibility to `move forward with the MoU that this Ministry has signed with DRDO for up calling the household biotoilets especially in high water table areas and for institutions.



## **B) Kerala Visit (16-18 April, 2014)**

### **(i) Nedumbaseni GP in Ernakulam district, on 16<sup>th</sup> April, 2014**

The undersigned visited Nedumbaseni GP in Ernakulam district, on 16<sup>th</sup> April, 2014. During the visit the undersigned participated in the GP meeting of Nedumbaseni GP. The meeting was attended by the GP President and about 18 ward members. The undersigned given a detailed description of Nirmal Bharat Abhiyan. This GP was awarded the NGP in 2006 and is fully ODF. It was clear that each household has a latrine. Usage is universal.

It was also found that GP is well aware of the problem of Solid Liquid Waste Management. The NBA programme along with the State Sanitation Programme is being implemented through the Kerala State Suchitwa Mission. Under SLWM, the State is now concentrating on decentralized management of Bio-degradable waste. This is basically focusing on setting up of Biogas plant or Pipe composting systems at the household level. The Biogas plant cost between Rs. 8500 (0.5 Cu. Mt) – Rs. 13500/- (2 Cu. Mt) of which 25% is paid by beneficiary, 50% contributed from NBA while balance 25% is provided from other State Funds.

The beneficiaries were found to be generally satisfied with the performance of these units. With respect to the Bio Gas plants it was informed that for a family of 4 to 6 member the LPG consumption has decreased by 40%. Thus the amount paid by the beneficiary is recovered in a period between 18-24 months.



Household BioGas Plant - Kerala

Pipe Composting - Kerala



**(ii) Visit of Aleppey District (17/4/2014 )**

***Kanjipuram Govt. School Charamanglam GP***

The undersigned visited Kanjipuram Govt. School Charamanglam GP in Aleppey District. It was found that Parent Teacher Association (PTA) of the school has been provided funds under NBA/State funds for the construction of latrines. Good quality modern latrines has been constructed in the school which has won many awards for the school as shown in photographs. The school has setup a series of biogas plant using nearby waste as well as waste created during Mid-day-Meal in school. The School has also set up incinerator as a part of menstrual hygiene.

The GP has also set up waste collection centres across the GP in which the waste collected by the Women Self Help Groups called “**Kutumbsree**”. The role of the Kutumbsree was found to be significant in the area. The GP has also created a WATSAN Park in the GP to promote Decentralized Management of Solid Waste.





**(iii) Thrissur District 18.4.2014**

The undersigned visited the Organic Waste Converter in set up near the vegetable market in Thrissur. (Pamphlet placed below). This is a decentralized Organic waste Treatment system, which rapidly processes organic waste such as Kitchen waste, Garden and vegetable waste and Food Processing waste into rich compost, thus reducing the organic waste going to the landfill. The model set up at the site converts 200 kg of vegetable waste, a byproduct of the vegetable Mandi, into compost. The Plant is being operated by a Private operator on Contract. The Municipal officials were happy with the performance of the product.

I then visited GP Adat and saw a waste collection, and management unit operated by the Kutumbaree of the area. A very effective and practical system with local participation, this concept is being multiplied across the District.



Organic Waste Converter



Organic Waste dried and powdered and segregated



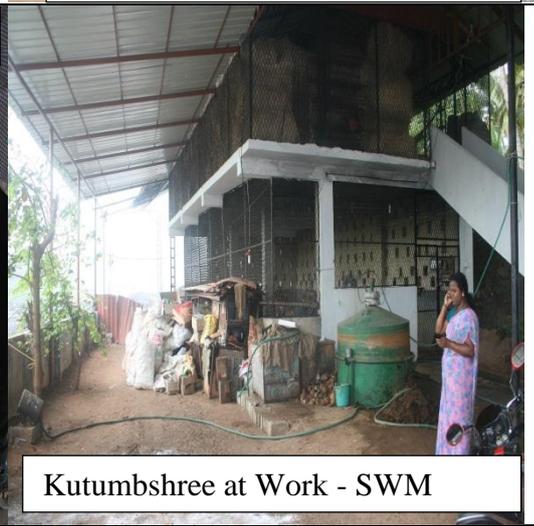
Solid Waste Collection Kiosk



Segregation Shed



Segregated Non Organic Waste



Kutumbshree at Work - SWM