

**EMPOWERING RURAL POOR WOMEN BY ENHANCING
INCOME THROUGH BIOGAS PLANT BY INSEDA &
WAFD IN VILLAGES OF BHARATPUR DISTRICT ,
RAJASTHAN, INDIA**



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INSEDA (Integrated Sustainable Energy and Ecological Development Association) in partnership with WAFD (Women's Action For Development) is implementing a new household biogas design (christened as Grameen Bandhu Plant) to empower women in the villages of the Bharatpur district, Rajasthan state since 2002.

WAFD had been implementing various activities to empower the rural women, adolescent girls and children in the villages of Bharatpur district since mid 1990.

It realized the wide potential for biogas plants as an environmentally sound renewable source of sustainable energy.

Most of the villages had cattle but the dung was being used mostly for burning as fuel or for making organic manure in traditional and inefficient manner, by just allowing the dung to gather in a heap till required.

WAFD's biogas construction team with the technical guidance and assistance of the present Secretary General (SG) of INSEDA, who is one of the designers of the Deenbandhu biogas plants (DBP), has constructed over 300 DBPs plants under the aegis of the NPBD of MNES, first through the state nodal agency, NPBD funds routed through the district authority; and subsequently, through a national level NGO nodal agency (AIWC).



WAFD and INSEDA realized that the real benefit of biogas, as an important tool for development and empowerment could only become a reality if the women in the WAFD target villages could somehow take the role of financial decision makers as well as actively participate in the implementation of biogas plants along with the men.

Based on the participatory assessment of the local situation, WAFD and INSEDA also recognized that in order to involve rural women in an effective manner, there had to be any activity which would broadly address the issue of sustainable livelihood.

Therefore the most appropriate biogas model would be that, which apart from addressing other issues mentioned above, would also provide income to them, either through employment or self-employment in their own villages as well as provide additional income either during off-season or in their spare time as per their convenient would be more acceptable to them and their families.



The participation of women in the fabrication/weaving of bamboo structures one of the considerations, so that they could also earn wages by weaving bamboo structures with in their own villages, for the construction of this biogas model. In fact WAFD and INSEDA also recognized this while designing the GB model, to ensure effective involvement of women in building it.

Thus the dialogue of WAFD with INSEDA led to the designing of the present Grameen Bandhu Plant (GBP) in mid 1990's.

The Grameen Bandhu Plant (GBP) is a bamboo reinforced cement mortar (BRCM) model and uses bamboo as the main building materials. The environmentally-benign and ecologically sound bamboo grows very fast, which is either available in villages or suitable species can be prorogated in the local area or can be purchased form the nearby areas. Thus we were able to completely eliminate the ecologically damaging & environmentally polluting bricks, with bamboo as main building material for plant construction.



Different stages of construction of Grameen Bandhu biogas plant



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Different stages of construction of Grameen Bandhu biogas plant



Twenty women from Nagla Banjara have been trained and re-trained to weave the bamboo baskets while one man (REEVOCs) from the same village has learnt how to guide them in measuring when they start the weaving in the underground moulds (pits).

The women of Nagla Banjara now weave the bamboo baskets and other woven bamboo structures to be used as reinforcement for the and every year they are able to get at least 2-3 months of work and earn a small amount of Rs.1000/-per woman.

From Nagla Banjara the bamboo baskets and other woven bamboo structures are transported to the site of the construction of the Grameen Bandhu plant (GBP).

The bamboo having a long life and flexible material for construction ensures that the final biogas structure has a long life if basic and routine care is taken.



While WAFD and INSEDA trained these landless women from Nagla Banjara initially for building Grameen Bandhu plants, but one of the spin-offs was when we decided to build our training-cum-demonstration, roof-top harvesting system- the same women were utilized for building BRCM storage tank, earning wages.

Thus, we have demonstrated that women can play an effective role and also perform the jobs requiring technical-skill and also earn their livelihood through the renewable energy implementation activities, only if we have to keep women in the focus while designing any new technology.



Thank You

