

CHAPTER - VI

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SOCIAL IMPACT OF BIO-GAS PLANTS

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SOCIAL IMPACT OF BIOGAS PLANTS.

6.1 Introduction :

Biogas plant is one of the tools of rural development. It increases the standard of living of rural masses. Biogas plants have changed the social life of women as well as men.

6.2 Impact on Women's life style :

All the women in the plant owning households were found to be conspicuously proud in showing of their newfound asset, the plant, just as they would like to do with any newly acquired modern machanical gadget. The women would not be inconvenienced with traditional method of cooking in open chulla with firewood and dung cakes. The most happy people in Arag village were women folk in the biogas plant owning households. One Woman in the plant owning households said, " Because of the biogas plant, we could offer you tea so quickly. Before installation of biogas plant, it was impossible. Now we can ungrudgingly comply the request at any point of time." It means the physical convenience and readiness of the woman in using biogas for cooking. The relief due to and the reverence for biogas

plant among the plant owning families are fully revealed in their own narrations of the harrowing experiences of traditional method of cooking.

The most common traditional instrument for cooking in Arag village has been and still largely is the open mud chulla using firewood, dung cakes and occasionally kerosene as fuel. These open chullas give low efficiency energy due to undirected waving flame, inadequate aeration and excessive feeding of fuel. Cooking food on open chullas is the time consuming exercise under unhealthy and difficult situations. This is the commonest complaint about the open chullas by the women folk.

All the smoke from this inefficient open chullas affects the eyes of the women folk. The throat and lungs, are also affected during preparation of food in kitchen. The smoke makes eyes burn and water all the time. It is possible that the woman may be patients of recurrentcough, respiratory infections and chronic bronchitis in summer season **due** to high density of smoke in the house. It is unbearable. The heat evolved during the combustion of firewood or cowdung cakes is also unbearable, more intense and stiffling.

The pipe that is used to blow air into the fire is also another botheration. As they blew into the fire, the smoke and ash would shoot back into their eyes and mouth. Since the fire needed to be monitored all the time during cooking in order to ensure the correct amount of fuel to maintain the desired flame, the woman had to sit close beside the chulla during the whole process. In fact, many women in Arag village cited the traditional chulla as a serious fire hazard.

The women in Arag village complained about the blackening of the walls and utensils claiming more of their time for cleaning. Biogas plants seem to have changed the situation dramatically and drastically for women of the 57 plant owning households in Arag village. Firstly, it brought the women indoor for cooking, which seemed to be preferred by all, even by the one's that did all their cooking outdoor previously.

Secondly, there is no blackening of walls and utensils saving the arduous job of cleaning. Thirdly because of the ready made fuel like biogas they have freedom of simply turning on the gas and lighting a match whenever they need the fire. If they use pressure cookers with biogas stove which will save almost 75 % of their cooking time. But none of them use pressure cookers.

Fourthly, both men and women seem to be equally happy about having banished the traditional chulla which improved the women's health and saved medical expenses.

Lastly the time saved for cooking due to biogas plant. The efficiency of biogas stove is more than the fire from the chulla. There are three major activities directly related to cooking in which adoption of biogas plants leads to considerable saving of time.

- 1) The activity in which biogas saved time was in the collection and preparation of wood and dung cakes. Preparation of dung cakes is the women's job. For all of these women in the plant owning households the job of making dung cakes vanished with the introduction of biogas. All the dung in these households were fed to the digester.
- 2) The plant owning housewives save their time in cooking of meals. As compared to open mud chullas biogas stove saves time in cooking meals. The women said that they require 50 % less time than before installation of plant.
- 3) Cleaning the utensils was the difficult task for women before using the biogas. With the introduction of biogas, the women in plant owning households are found to be saving an

average 1 to 2 hours daily. As against the time saved, the women in the plant owning households were required to spend only about 1/2 to 1 hour per day in loading the digester with dung.

It, therefore is evident that the use of biogas has direct impact on women's life style in Arag village.

6.3 Impact on Men :

The household decision making as far as investment or any matter related to income and expenditure is still dominated by the men, particularly in villages. Having made the decision to invest for biogas plant, the heads of the plant owning households in Arag village seemed to be conspicuously happy and satisfied. Apart from confirming all the benefits their women reported, all the men in the plant owning households perceived several direct and indirect beneficial effects of biogas plants. Concerned as they are about household income and expenditure, the men could translate the benefits into monetary terms. They have saved medical expenses on treatment for ailments of eyes, coughs and lungs diseases of family members, particularly, women responsible for cooking. They have saved the

amount on fuel cost for cooking and water heating. Being the cultivators they, could easily see the saving in the cost of fertilizers and organic manure by using biogas manure. This biogas manure increases the crop yield i.e. income of these people. The standard of living rises due to increase in income and acquire the high position in the community or society. Actually this what is happening in village Arag. The farmers who have set up biogas plant are considered as the progressive farmers.