

040 Energy Crisis in a Bangladesh Village
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b) Executive summary

1. The main objective of the study was to identify the fuel problems in rural areas and its impact on different social classes. A lowlying floodprone village near Mymensingh town was chosen as the main study area. Another lowlying floodprone village in a remote area has also been selected for comparison. The latter village is fully irrigated while the main village has practically no irrigation.
2. The households were classified mainly into four categories, namely: big farmers, owner-cultivators, share-croppers and landless labourers. The landless groups are further subdivided into two; those with homesteads and those without homesteads, maleheaded and femaleheaded since they constitute a majority of the total population.
3. Since big farmers and owner-cultivators have large homesteads and crop land area, fuelwood and jute sticks are the main types of fuel used by them. Share-croppers and landless groups usually use dung and leaves as fuel which is collected mainly from others' land and cattle. Paddy straw is mainly used by the share-croppers. Adult females and children are the main collectors of fuel in both main and remote villages. Use of jute sticks is nil and use of dung is very negligible in the remote village (Banpara). Paddy straw is largely used by the owner-cultivators and big farmers in Banpara compared to the main village (Char Iswardi). On an average, the use of dung and leaves in the main village has increased by 26% and 20% respectively in comparison to previous years but a decrease in the use of fuel wood and jute sticks by 23% to 12% respectively has been noted.

4. Frequency of cooking in different households and the changes in frequency of cooking are similar in both villages in case of owner-cultivator and landless. The traditional stoves, mobile and fixed are used by the households in both cases.
5. Overall fuel use has shifted from fuel wood and jute sticks to dung and leaves. Population pressure causes deforestation and reduces the supply of fuel wood day by day in both the villages. Market penetration is one of the important factors which cause the scarcity of fuel. Demand for fuel wood by brick fields outside the main village and also by restaurants and tea stalls is increasing. As a result, the rate of cutting trees is faster than the rate of tree planting. Due to changes in cropping patterns the type of fuel use has shifted from jute sticks to paddy straw in Banpara.
6. Interventions should be initiated through various approaches such as supply of bio-mass, improvement in fuelwood conversion efficiency, fuel substitution programmes and income-generation activities. It is desirable and feasible to undertake a fuelwood tree plantation project. This project would complement the current ADB funded Community Forestry Project in the North-Western region of the country. The programme may further be taken up in collaboration with the Forest and Agricultural Extension Department. But the people of the locality should be involved and be made aware of its importance in order to ensure the success of the project. For this purpose the Forest Department can initiate motivational and forestry extension programmes in the concerned localities.
 - 6.1. By changing the cropping patterns, it can also be possible to increase fuel supply. The introduction of high-yielding varieties (HYV) will increase grain yield, grain husk and straw as well and thereby help in reducing the fuel shortage. Another crop like 'Dhaincha' can be grown and used as fuel. The Agricultural Extension Department specially should provide the major role in the promotion of this programme.
 - 6.2. Although bio-gas plant is not feasible to all the classes of households due to shortage of cattle, it can only be adopted or introduced among big farmers and owner cultivators. It can also be applicable to those who have 4-5 cattles. In order to ensure the success of the programme necessary training on the operation and maintenance of bio-gas plants should be given to the concerned households.
7. The improvement of stoves is another way of reducing fuel shortage.

8. The supply of electricity and natural gas is another effective way of solving fuel shortage. However, it is not feasible since the government can not meet even the urban requirement. Further more, the villagers in the study area expressed a negative attitude towards its acceptance and practicality due to economic constraints. Supply of coal and natural gas to the brick fields and supply of natural gas to commercial enterprises like rice mills, restaurant and tea stalls can be recommended as a possible indirect method of solutions.
9. Income generating activities should be introduced through supervised credit which will raise the economic status of the poor and thereby can indirectly help alleviate their fuel requirement.

