

A CASE STUDY OF FUELWOOD CONSUMPTION IN RURAL HOUSEHOLDS OF DISTRICT ATTOCK (PAKISTAN)

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Abstract

Fuelwood consumption and supply pattern in the rural area of district Attock was studied by sample survey of randomly selected villages. Data from sample households were collected with the help of structured and pretested questionnaire. In all 90 respondents were randomly selected and interviewed. Analysis revealed that fuelwood was the major source of household energy in the area. About 83% of the household use fuelwood as well as other cheaper fuels. Only 17% were found using efficient commercial fuels (LPG, Kerosine etc.) to meet their energy needs. The data show that the average household size in the study area is nearly 6 persons. The increase in household size results in increasing total fuel consumption.

Introduction

Wood is one of the primitive material used by the mankind. It helped early man to widen the sphere of the activities, tame the environments, develop societies and advance towards civilization. The end uses of wood were and are still the versatile and important than other raw materials. In spite of advancement in technology and science, the substitution of wood fuel with modern fuels could not take place in the rural economies of developing countries such as Pakistan. Economic reasons coupled with lack of access to modern fuels, small land holdings, unjust tenure system and low literacy level were the factors that may resist the substitution of traditional fuel demanded by the community. Many studies of the past also indicate that the households of low income level with subsistence living depending heavily on biofuels both in rural and urban areas. These fuels also receiving attention of even industrialized countries because of fixed and non-renewable nature of commercial fuel reserves. The environmental and economic standards imposed for generation and usage of nuclear energy had changed thinking of producers to revert back to environmental friendly energy producing biological processes.

The energy needs in developing countries are expanding at a faster rate because of increasing living standards, developing transport systems and

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commercializing communication linkages. Currently world wide annual production of fuel wood is estimated at 1820 million m (Bartwal, 1987). About 85% of this quantity is produced and consumed in developing countries. Biomass still contributes about 14% of the total world energy requirement in developed world. But 38% of the energy needs in developing countries is being met by using biomass. It includes fuelwood, crop residues and dung. Biofuels have advantages of availability, range, local production, low procurement cost, ease in storage and environmental acceptability (Maikhuri, 1991).

It is common belief that the wood as a fuel will be steadily replaced by the efficient and convenient commercial energy fuels the way happened in the developed countries over the period of last 100 years. However, increase in oil prices and realization for conservative use of non-renewable sources of energy, wood in the near future will start receiving more attention at all costs to resolve energy problem.

In Pakistan wood is a commodity produced by the state owned forests, private farmlands and wastelands (common and state). A survey of the Household Energy Strategy (HES) conducted by the Government of Pakistan has confirmed a high level of fuelwood consumption in the country. Traditional fuels account for 52% of the total 38.2 million tones of oil equivalent (MTOE) energy consumed in Pakistan. Major portion (86%) of the household energy consumed is generated by biomass fuels. The study also observed that as little as 10% of the country's woodfuel supplies come from state forests. It further noted that more than 75% of the country's households use fuelwood. The figures for rural and urban areas are 91% and 52.2% respectively (Hafiz, 1997).

The review of literature strongly reveals that Pakistan, like other underdeveloped countries is facing serious energy shortages. This is primarily due to poor energy resource base of both traditional and commercial nature. The gap between supply and demand is increasing because of growing population and expansion in various sectors of the economy. The use of wood as a fuel, therefore, warrants a critical study on all its technical and economic aspects. The idea for conducting this survey was developed to judge whether majority population of the rural areas in district Attock depend for its energy requirements on fuelwood or not. The forest resources of the area are also under depletion at a very fast rate resulting in ecological imbalances. Whether this retrogressive trend has created serious shortages in the area or not. These the study attempts to find out the following information.

- Determining the present household consumption of fuelwood