

## Household energy and its utilization – An analytical study in Jorhat district of Assam

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### ABSTRACT

In this paper, an endeavor has been made to analyze consumption of both non-commercial and commercial fuels in household tasks. Data were collected through a survey covering 120 households from six villages categorized as semi urban, rural and interior, characterized by different socio-economic conditions, fuels and devices used, cooking practices, etc. The results revealed that majority of the households were having medium sized family type and belonged to marginal farmers. A substantial proportion of the families (53.33 per cent) were earning monthly income between Rs. 1000-3000 and about 26 per cent of the respondents had education up to High School level. Firewood was the only fuel used by all income groups. Other traditional fuels such as branches, crop residues, etc. and commercial fuels like L.P.G., kerosene and electricity were used with varying degrees of dominance in different income groups and regions for cooking, grain processing and lighting. Per capita consumption of biomass fuels especially firewood were maximum in interior areas due to its abundant availability at free of cost. However, the usage of non-biomass fuels was more in high income group as compared to middle and low income groups which depends heavily on biomass fuels. Regarding extent of conservation practices, more than half of the respondents had good level of conservation practices followed by poor (35 per cent). It was enlightened from the investigation that energy conservation practices were highly influenced by education level of the respondents.

**KEY WORDS :** Household, Analytical energy, Conservation practice

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### INTRODUCTION

Energy has been recognized as sine-qua-non and basic requirement in every aspect of human welfare. It is a fundamental tool for subsistence in the form of cooking, heating and lighting and at the same time it is a necessary input in productive processes such as agriculture, transportation and industry. The household sector is one of the major energy consuming units accounting for half the country's energy demand. Adequate supply of energy at a reasonable cost is a key factor in the economic development of a country. Rural energy occupies centre-stage in rural development issues (Laxmi *et al.*, 2003). Accessibility and availability of fuels for domestic purposes are becoming more difficult day by day for poor people, many of whom are outside the modern energy system. In rural areas, domestic sector dominates the energy situation. More than 90 per cent of the total energy consumed in the rural households is spent on cooking and women are

in the forefront of the management of domestic energy. The major portion of the total energy consumption in rural areas was met by biomass fuels such as firewood, branches, twigs, crop residues and dung cake. Firewood is the most traditional and predominant fuel for rural cooking. The dependence on firewood to a greater extent has resulted in deforestation, loss of biodiversity, soil depletion and erosion. The biomass resources are being rapidly exhausted. The fast dwindling forest wealth has aggravated the problems of rural development. The growing scarcity of traditional fuels and escalating prices of fossil fuels in addition to inadequate availability in rural areas have made life more miserable for rural community.

Apart from these, the cooking process in traditional devices is characterized by low thermal efficiency having only 10 per cent being actually utilized out of the total fuel energy input. This led to long cooking hours and loss of valuable energy. The growing scarcity of fuel wood and

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