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Development of LPG and Household Woodfuel Consumption: Case Study of two Rural Areas in Gezira State, Sudan

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Abstract

Sudan depends mainly on the forestry sector to supply its energy need. However, Woodfuel (WF) are one of the main causes of deforestation. The new petroleum discoveries in the end of this century and LPG availability allow following new policy to alleviate the pressure on forest. Trying to understand the effect of this new energy development, this study was designed to investigate the level of and patterns of WF consumption, WF share in energy budget and household WF dependency as well as main determinant of household energy demand (*i.e* the price of WF, price of alternatives, income and family size). Based on survey, group discussion and official interview (during the period between 1998 and 2007) from two rural areas in Gezira state the study was conducted. The level of house WF consumption before and after these energy developments was investigated in the two selected areas with different access to woodfuel and LPG resource. The collected data were analysed and discussed using SPSS program. Descriptive, regression and elasticity's of demand analysis were performed.

The results suggested that the level of household WF consumption significantly decreased in the two areas compared with the national reported level. Among the variable tested WF consumption was found to be affected mainly by price of LPG and to less extend by its own price. There was variation between the two study areas concerning the effect of income, main energy source and WF dependency. The result reveals significant reduction in share of WF in household energy expenditure in the two periods associated with increase in LPG expenditure. In the light of the results and the discussion a numbers of valuable policy recommendations were suggested. The study support the presumption that LPG price reduction policy and charcoal price policy, have succeeded in reducing WF consumption but in the long run other policy option might be necessary specifically under the expected increase in price of LPG in future.

Keywords: LPG, woodfuel, woodfuel demand, woodfuel consumption