Household energy use factors in mountain communities of tajikistan

Murodbek Laldjebaev, University of Central Asia, (992) 93 514 2564, murodbek.laljebaev@ucentralasia.org

Overview

Many factors influence the decisions of energy use at the household scale. Understanding the factors that affect household decisions is important because it can inform ways of improving access to energy by encouraging the factors that have a positive influence and hindering the ones that have a negative influence. This paper will present results of a survey of household energy utilization in Tajikistan. Even energy related data has been collected and report in other studies, they were a small part of the data that was aimed for another purpose (e.g. Demographic and Health Surveys). This is the first time data is collected specifically about energy use in Tajikistan. The findings from this study are hoped to be useful for energy policy makers as they craft policies to address energy shortage in the country.

Methods

A representative survey of 380 households was conducted along with individual and small group interviews with people residing in mountain areas of Khatlon Region, Tajikistan. The questions targeted energy sources and uses along with socio-economic variables, such as household size, gender, income, etc.

Results

This study found economic, technological, ecological, cultural and institutional factors as most influential, whereas educational and demographic factors least influential in determining energy use patterns. This study shows that household consumption of energy, particularly wood and dung, is insufficient to meet their needs. This is evident in the way households increase their use of biomass when their incomes increase and even when energy costs rise. The same is true of households connected to the electricity grid, owning larger houses (more rooms), and engaging in income earning jobs. Therefore, households seem to be filling a gap in their energy consumption when they are more capable to do so. There may be some threshold that has not been reached yet to allow people to reduce their reliance on biomass. Future research is needed to further investigate the existence of such a threshold as well as the gap-filling strategy. Reliability, abundance and affordability of biomass lead to its greater use as opposed to electricity use. There is competition between food and fuel for household budget as well as for cultivation of land (e.g. dung as fuel or fertilizer). Food taste and methods of preparation along with social expectations of women's responsibility for cooking (which is partly motivated by their unemployment) further encourage reliance on biomass. There are mutually reinforcing relations between food and energy in farming communities.

Conclusions

Ultimately, the agro-pastoral system determines how energy is used at the household scale in rural areas. More importantly, the institutions of state, market and civil society are currently underperforming in their respective roles to improve access to energy for rural households. Efforts to eliminate energy poverty, therefore, would need to take the mentioned factors into account in addition to efficiency, cost-effectiveness, health and environmental considerations. Local people should be involved in all stages of programs and projects aimed at improving access to energy because it is crucial to improving their livelihoods.

References