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## Environmental and health impacts of micro-hydro in a rural area of Nepal: A case study of a Nepalese village

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Nepal is one of the developing country having lowest per capita income in the world has only 15% of rural people access to electricity. Rural people satisfy their energy needs by burning biomass, damaging both environment and human health. Connecting to national power grid is quite expensive which seems to beyond the current government capacity. Rural electrification through Micro hydro has proved to be a very successful form. Community participation MH seems to be greater intervention in energy sector in rural Nepal in order to satisfy energy needs. The Alternative energy promotion center (AEPC) and District development committee has used a holistic approach to launch an alternative energy initiative in rural Nepal. "Wami-taxar" is one of the Village developments Committee in Gulmi district where people will have to wait a several years for access to electricity through national grid. So, Micro hydro has become a credible option for alternative source to electrify this area. More than 3000 HH has been electrified through 200 KW power generated from 3 Micro hydro Plants. The promotion of Micro hydro in this VDC is not only used for rural electrification but also used for improving the quality of life. Micro hydro (MH) system has energized sustainable development by creating jobs, protecting the environment and change in gendered division of labor and socio-economic status. Both male and female they work together in milling, Schools, Nursing home etc. People as well as students of this area have access to modern communication era and telemedicine. Similarly MH canal is used for irrigation purpose. With the global pressure to reduce GHG emissions, MH in this area is gaining popularity. The MH of this area have significant potentiality of carbon mitigation which potentially reduce GHG emission through replacement of Kerosene or and diesel. Finally, MH electricity is much welcomed by local people of this area. Establishing the Co-operative of MH user, it has changed their economic as well as social status. MH plants of this area have helped the people to be socialized, active participation in decision making and gender equity. So MH power system is an alternate Solution for the growing energy demand in this area.

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