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***Source of Drinking Water and Energy  
in Afghan Households***

***Under chapter 1, article 15 of constitution of the Islamic republic of Afghanistan “the state is obliged to adopt necessary measures for safeguarding forests and the environment “***

***Afghanistan’s environment and natural resource is under tremendous pressure. The decades of conflict, on-going instability, socio economic insecurity and overall poverty, the lack of infrastructure, susceptibility to natural hazards, population growth, and weak institutional capacity and most importantly over the decades, a lack of policies or regulations resulted in a degraded environment of the country.***

***Chemical or organic pollution of drinking water is chronic and serious problem throughout the rural as well as urban areas of the country.***

***Bacteriological contamination for rural or urban areas is caused by lack of infrastructure or if it exists is in very poor condition. Sources of contamination are leakage of pipes, pollution from sewage pipes,***

***proximity of open sewage systems to artisan wells and intermittent water supply.***

***A second source of pollution of drinking water is ground water contamination from chemical sources. These can be attributed to***

***industrial effluents, pesticides, nitrogenous fertilizers, arsenic and other chemical.***

***Knowing the importance of data on safe drinking water Central Statistics Organization (CSO) is collecting data on source drinking water through National Risk and Vulnerability Assessment (NRVA) (Afghanistan Living Condition Survey) and other household surveys.***

***Basic hygiene provided by safe drinking water and adequate sanitation are the most effective strategies to improve the health status of the population. There is evidence that globally provision of adequate sanitation services, safe water supply, and hygiene education represents an effective health intervention that reduces the mortality caused by diarrheal disease***

***Provision of safe, convenient and sustainable water and sanitation services will not only result in reduced morbidity and mortality (particularly under five mortality), but also reduce health costs and increase worker productivity, school attendance and overall well-being of .***

***The NRVA 2011-12 inventory of community preferences for development among male and female village councils emphasized the importance of water supply, as they assigned it top priority***

***The NRVA 2011-12(Afghanistan Living Condition Survey) recorded that access to improved drinking water sources is available to 46 percent of the population of Afghanistan. Compared to the results of the NRVA 2007-08 round this indicates a sharp increase of the share of the population with safe drinking water from 27 to 46 percent.***

***The situation especially improved in rural areas, where the share of the population using improved sources almost doubled between 2007-08 and 2011-12 from 20 to 39 percent.***

***Large differences are observed in the share with access between the urban population on the one hand (71 percent) and the rural and nomadic populations on the other (39 and 21 percent, respectively).***

***Similar differences exist between the provinces, with access ranging from 7 and 9 percent in Urozgan and Zabul provinces to 67 and 78 percent in Balkh and Kabul provinces).***

***Close to half the population (49 percent) relies on surface Water for their main source of water and 28 percent on hand pumps (an improved drinking water source).***

***The reliance on piped water (improved source) is 9 percent overall, but with 26 percent it is the most important source in urban areas.***

**Similarly in this survey data was collected on source of energy for lightening and cooking and heating from the sample households.**

**The result of NRVA 2011-12(Afghanistan Living Condition Survey) on source of energy for lighting shows that *the number of households having access to electricity has grown very rapidly since 2005. For that year, NRVA reported 23 percent of households having access to any source of electrical power. The corresponding figures reported by NRVA 2007-08 and 2011-12 increased to, , 42 and 69 percent, respectively a three-fold increase in six years time. Around 64 percent of rural households and 95 percent of urban households have access to any source of electricity.***

***The main sources for which use have increased are the electric grid (from 15 in 2005 to 26 percent in 2011-12) and renewable solar and wind power (mainly solar; from virtually nothing to 22 percent). The electric grid is primarily an urban source of electrical power (44 percent in 2007-08 and 85 percent in 2011-12, compared to the rural figures of, respectively 5 and 9 percent), while solar power is concentrated in rural areas (3 percent in 2007-08 and 29 percent in2011-12, compared to the urban figures of, respectively 0 and 4 percent).***

***Rest of the households (31 percent) is using other sources for lighting such as: kerosene lamp, gas lamp, candle etc.***

***The use of solid fuels for heating and cooking in homes usually results in incomplete combustion and hence in the emission of hundreds of compounds, some of which may induce cancer and other health problems. It also produces Greenhouse gases that contribute to global climate change.***

***The nature of the exposure to indoor air pollution and its consequences for health depends on the interactions between the source of pollution (fuel and stove type), its dispersion (housing structure and ventilation) and when household members are in the home.***

***Based on NRVA 2011-12 results on source of energy for cooking and heating during in the winter time, almost all households use solid fuel for cooking and heating, except urban households who primarily use gas for cooking.***

***For rural households, bushes, firewood and animal dung are the most important cooking fuels, whereas firewood is the preferred fuel for heating, followed by bushes and animal dung. For urban households, next to firewood as the primary source for heating, charcoal is a second important fuel. For Nomadic households animal dung is the most important source for both cooking and heating.***

***NRVA 2011-12 data shows that 79.9 percent of population using solid fuel for cooking. Corresponding figures for urban, rural and nomadic population are 32.5, 93.4 and 99.8 percent respectively.***

***So far no data on other uses of energy such as source of energy for industry, road traffic, etc is not available, but a couple of case studies have been carried out by National Environment Protection Agency which is limited to Kabul city.***