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## Climate change impacts and adaptation measures at buffer zone area of Shuklaphanta wildlife reserve, Kanchanpur, Nepal

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Tepal is among the most vulnerable countries with regard to climate change. The study includes climate N change phenomenon, its effect on crop production, perception of local respondents and measures of the adaptation. Bhimdattnagar Municipality of Kanchanpur district in Far-Western Nepal was selected for the study because it is directly linked to the reserve and also lies in the vicinity of Mahakali River. It is a more productive area and people living in the area are mainly dependent on agriculture and livestock to fulfill the basic need. This study showed that current illiteracy rate of respondents was only 42.42% and 81.10% respondents engaged in agriculture. The major crops grown in the area were maize, wheat and paddy. Paddy production was found fluctuated with erratic rainfall pattern, but according to 65.20% of respondents, maize yield has decreased over the last 5 years. 71% households were dependent on agriculture products as a source of fodder because the entry of local people inside the park was restricted to collect fodder. Majority of the respondents (60%) accepted that temperature was the most rapidly changing climatic factor followed by 23% respondents with rainfall due to climate change. Hydrometeorological data (from year 1980-2011) were analyzed by using XLSTAT software and tested by Man-Kendall test. The maximum temperature in Kanchanpur district was found annually decreasing by 0.0159 °C but minimum temperature was annually increased by 0.0519 °C, statistically annual mean rainfall trend of Kanchanpur district was decreased by 2.1489 mm and monsoon rainfall was decreased by 6.414 mm.

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