Climatic variability and livelihood strategies around dried lake Haramaya, Ethiopia

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Climate change and variability is one of the most challenging environmental stresses affecting set of activities. CCV have compounded the problem of food security and continued to emerge as a serious challenge to poverty reduction and development of many developing countries of the world. The impacts of CCV are severe in LDCs like Ethiopia, where rain-fed agriculture of production is predominant and population growth rate is over 2.8% to double itself within 25 years. The erratic and declining pattern in mean annual rainfall and steady rise in mean air temperature in the region adversely affected crop production. The Hararge highlands are one of those where the incidence of crop failure is repeatedly reported. In the study sub-catchment, there were 5 dry and 7 wet years from 1952 to 2012. Regarding the distribution of decadal mean rainfall, the recent decade (1997-2006) received about 800 mm of decadal mean rainfall, while those from 1977 to 1986 had the lowest amount of decadal mean (756 mm). The common dry seasons are spring and winter, while summer and parts of autumn were the wettest seasons. The cooling of December is 8.9°C (which is much less than 12°C reported a decade ago). There is perception among the local community that the cooling increased after the loss of the Lake water from the sub-catchment. Smallholding farmers along the dried lake sub-catchment designed livelihood diversification. About 94.4% and 90.8% of them have diversified (with SI > 0.61). Furthermore, adaptive, coping and accumulative livelihood strategies are devised by local community. The participation of respondents in off-farm activities accounts only for 14.3% and 18.5% while those of non-farm activities are 25.4% and 24.6% of sample respondents from in Damota and Tuji Gabisa PAs, respectively due to numerous physical, socio-economic and political factors. Therefore, holistic, systematic and multidisciplinary initiatives and devises by all stakeholders together with active participation of local community are demanding for sustainable livelihood development. Furthermore, critical and participatory studies are recommended for merits of the community and its abode, without which irreversible lake degradation would migrate to the neighboring sub-catchment at fast rate than ever.

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