The use of Indigenous Knowledge for Disaster Risk Reduction in Dodoma and Simiyu Regions,Tanzania

Tanzania is vulnerable to hazards such as droughts, floods, strong winds, heavy rainfall, volcanic eruption, cyclones, hailstorm, landslide, earthquake and pests. Yet rural communities in Tanzania have managed to survive the disastrous events over the years using their indigenous knowledge. This dissertation assessed the use of indigenous knowledge (IK) in disaster risk reduction. The study also documented the existing IK indicators and strategies and also assessed communities' perceptions on the reliability of IK in disaster risk reduction (DRR) and presented improvement needs. Dodoma and Simiyu regions were selected for this study due to their vulnerability to drought, floods, pests, wild animals, earthquakes, landslides, fire, epidemics and strong winds. Four districts were included, ad a total of four villages were visited for primary data collection while date from other districts were gathered from secondary sources. Qualitative and quantitative data collection techniques were used, and the methods used were questionnaire survey, focus group discussion, and literature review. The Statistical Package for Social Science (SPSS) and Microsoft Excel were used to analyze quantitative data while qualitative information was analyzed by content analysis technique. It was found that the communities use plants, birds, insects, wind direction and the solar related signs as early warning indicators for DRR. Other IK indicators used are period of onset of rains, cold period, temperatures, fog, earthquakes, lightning and thunder, burning mountain sign and rains in a sunny day. They broadly use IK to predict hazards occurrence, interpret weather patterns, for medicinal purposes, for food security and as mechanism to cope with their surroundings. Most of the respondents perceived in IK is reliable and useful since it helps them to take appropriate measures for reducing or preventing disaster risks. It was also found that some of plants and birds species IK indicators are disappearing with time due to environmental degradation, urbanization and climate change hence a need for effective implementation of environmental management policies. IK for DRR should be preserved and transmitted to the younger generation for sustainability. The use of indigenous knowledge should be promoted in all DRR practices and hence the need for a further research on the integration of indigenous knowledge and scientific measures.