Using Open Data and Citizen Science in Understanding Disaster Risk: Experience from Western parts of Nepal

Puja Shakya and Binod Prasad Parajuli
Practical Action Consulting South Asia (puja.shakya@practicalaction.org.np)

Nepal is highly vulnerable to multiple disasters due to its topography and geographic conditions. It also suffers with data deficiency in better understanding the impacts of disasters and existing capacities to cope with such disasters. This information scarcity severely hinders understanding the disasters and their associated risks in the areas. This also hampers local and regional risk reduction, preparedness and response, limiting rigorous and robust disaster risk modelling and assessment. For regions facing recurrent disaster, there is a strong need of more integrated and proactive perspective into the management of disaster risks and innovations. Recent advances on digital and spatial technologies, citizen science and open data are introducing opportunities through prompt data collection, analysis and visualization of locally relevant spatial data. These data could be used as evidence in local development planning as well as linking in different services of the areas. This will be helpful for sustained investment in disaster risk management and resilience building. In current federal structure of Nepal, there is an acute data deficiency at the local level (municipalities and wards) in terms of data about situation analysis, demographics, and statistics, disaster impacts (hazard, exposure and vulnerability) etc. This has caused hindrances to all the relevant stakeholders including government, non-government and donors in diagnosing the available resources, capacities for effective planning and managing disaster risks. In this context, we are piloting an approach to fulfil existing data gaps by mobilizing citizen science through the use of open data sources in Western Nepal. We have already tested it through trainings to the local authorities and the communities in using open data for data collection. Likewise, in one of our upcoming project on data innovations, we shall create a repository of available open data sources; develop analytical tools for risk assessment which will be able to provide climate related services. Later, upon testing the tools, these can be implemented at the local level for informed decision making.