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Challenges for developing strategies for natural hazard data collection in a poorly developed region with very low capacity: case study of the Kivu region in DR Congo

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The first priority addressed by the Sendai framework (UNISDR, 2015) is the understanding of the causal factors of disasters, which implies a strong focus on the assessment of natural hazards. To achieve this objective at national, regional and local levels, it is important to promote the collection and analysis of relevant data on hazard characteristics. The general objective of this research is to investigate strategies for natural hazard data collection in a poorly-developed region with very low capacity. The pilot study area is the Kivu region in the eastern DR Congo, covering more than 30,000 km2, along the rift flanks, west of Lake Kivu and Ruzizi River. This mountain region is susceptible to numerous natural hazards. It is also one of the most populated region of Central Africa; the population being highly exposed to the hazards. We focus on data collection on geophysical (earthquake, volcanic eruption, landslide), hydrological (flood), biophysical (wildfire) and atmospheric (thunderstorm) hazards. We test several data acquisition approaches: online questionnaires, tailored smartphone application, stakeholders (local, regional and national levels) data sharing, website archive research, Google Earth imagery. We discuss here the pros and cons of the different approaches together with the new data on natural hazards collected for this region. Despite the need expressed by local stakeholders to improve data collection capacity, crowdsourcing and data sharing remain challenging tasks to implement.