Collaborative Methods for Disaggregating and Understanding Urban Risk in Africa

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This paper presents two methods and some preliminary results from capacity building activities developed to better understand urban risk in Africa undertaken as part of the urban Africa risk knowledge project. We first reflect on some of the challenges of understanding urban risk in Africa against a backdrop of high levels of informality, limited data and limited capacity (e.g., internet speeds and computing power). We then outline two training programmes we have developed in collaboration with local partners to (a) create a richer basis of evidence for understanding the occurrence of natural hazards and (b) explore scenarios of hazard impact upon infrastructure at the city-wide scale. The first capacity building activity was training to develop DesInventar databases of hazard occurrence. This involves searching local archive material (e.g., administrative reports, newspapers etc.) for records of past hazard events and their disaggregated impacts. This is being undertaken in Niamey (Niger) and Nairobi (Kenya) through Skype based training materials and a collaborative online working environment. In Nairobi, this has been particularly successful in generating an archive of >1,000 hazard events occurring between 2002 – 2017, creating a richer record of the spatial and temporal occurrence of hazards within the city, particularly for low-magnitude events. In Niger, results have been mixed due to difficulties in obtaining archive materials. The second capacity building activity is a series of YouTube training videos to develop a classification of the city into different infrastructure typologies which each may be affected differently by different hazards. This activity is being undertaken in Niamey (Niger) and Mzuzu (Malawi). A successful classification has been developed for Niamey which is now being confronted against observed data and the classification is in process for Mzuzu. This PICO will reflect on some of the challenges of doing digital capacity building, and emphasize the elements we have found to work well through experimentation. Overall, these activates have demonstrated the potential for web-based training using free and/or open source software to (a) equip local partners with advanced database and GIS skills and (b) better understand the occurrence and potential scenario impacts of natural hazards at a disaggregated scale within an urban area.