METEOR: Modelling Exposure through Earth Observation Routines

METEOR is a UK Space Agency International Partnership Project addressing the poor understanding, in some ODA countries, of population exposure to multiple natural hazards. With that in mind, METEOR is co-developing satellite-based Earth Observation routines to deliver robust information on population exposure and its vulnerability to multi-hazards including earthquakes, flooding, landslides and volcanoes. This project is led by the British Geological Survey in partnership with the National Society for Earthquake Technology-Nepal (NSET), the Disaster Management Department of the Prime Minister's Office of Tanzania (DMD), the Global Earthquake Model Foundation (GEM), ImageCat, FATHOM, Humanitarian OpenStreetMap Team (HOT) and Oxford Policy Management (OPM). To date we have delivered: classification schemes for building exposure and population, loss data fragility models, national hazard footprints for Nepal (seismic, flood, landslide) and Tanzania (seismic, flood, volcanic) and a methodology for integrating multi-hazards with exposure data.

Frequent meetings of the consortium have improved the outputs of the METEOR project, and encourage knowledge exchange and co-development. A recent meeting of project partners in Nepal also included two stakeholder events – one aimed at policy makers and another for technical users. In these sessions we discussed the methods employed to collect the exposure data from EO techniques and to aggregate these with ground based surveys (led by Ramani Huria for the Humanitarian OpenStreetMap Team in Tanzania and Kathmandu Living Labs in Nepal). We also discussed the national hazard footprints and received valuable feedback on their usability.

In the coming months METEOR will deliver: national exposure data for both Nepal and Tanzania, as well as exposure data for all of the remaining LDC ODA countries (at a lower resolution). We will also provide multi-hazard assessments for both Tanzania and Nepal using the framework developed in this project, as well as developing training materials for the various METEOR outputs. The METEOR data and methods are being made openly available through online portals. More information about METEOR can be found at https://meteor-project.org/

Policy stakeholder workshop in Kathmandu, November 2019.