

The Research Group

Physical Geography

has the honor to invite you to the public defense of the PhD thesis of

## Bosco Bwambale

to obtain the degree of Doctor of Sciences

Title of the PhD thesis:

**Theory and praxis of integrating indigenous knowledge and science for Disaster Risk Reduction: A socio-epistemic case study of floods in the Rwenzori (Uganda)**

Promotors:

**Prof. dr. Matthieu Kervyn**

**Dr. Martine Nyeko**

**Prof. dr. Moses Muhumuza**

The defense will take place, at Vrije Universiteit Brussel, in room D2.01 on **Thursday, December 9, 2021 at 15h00**

To follow live stream, please click [here](#). To attend physically, register [here](#). Contact [Bosco.Bwambale@vub.be](mailto:Bosco.Bwambale@vub.be) for more info

### Members of the jury

Prof. dr. Bas Van Heur (VUB, chair)

Dr. Kewan Mertens (VUB, secretary)

Dr. Bieke Abelshausen (VUB)

Dr. Medard Twinamatsiko (Mbarara University of Science and Technology, Uganda)

Prof. dr. Julie Hermesse (UCLouvain)

### Curriculum vitae

Bosco Bwambale is a graduate of Natural Resources Management with an interdisciplinary background in philosophy. With these, he has a firm grounding in environmental studies / environmental social sciences. From 2018 to 2021, he was a PhD researcher at Department of Geography (Vrije Universiteit Brussel). Prior to and during his PhD, he worked with Mountains of the Moon University, giving him experience of >6 years in university research, teaching and curriculum development. His research and teaching broadly cover the nexus between Indigenous Knowledge, Environment, and Development.

### Abstract of the PhD research

Debates on disaster risk reduction have widely highlighted the interest in integrating indigenous knowledge with science to produce hybrid context-specific knowledge to suitably tackle disaster risk. Yet an epistemological framework to enable hybridization remains a challenge. Focused on the case of floods, this dissertation investigated the (socio-)epistemic nature of indigenous knowledge and developed a framework to guide the best way to integrate it with science. Starting with questioning scientific literature, the lack of an epistemological framework for knowledge integration is evidenced. The *hylomorphic* framework is proposed as a suited theoretical framework for integrative science in understanding and tackling disaster risk. This framework is standpoint in nature; it stresses the primacy of two intrinsic elements: the indigenous lived experience of a specific hazard-prone context (i.e., the *hyle*) and the context-specific risk science (i.e., the *morphe*). Based on this theoretical framework, three empirical studies were conducted based on ethnographic methods. They aimed to structure the processes through which indigenous knowledge on understanding and tackling disasters is produced. The first empirical study, exemplifying the empiricist constructive approach to understanding natural hazards, shows that locality and weaving into culture hardly stand in the way of indigenous systematization and/or objectivity. The other two add evidence that indigenous knowledge can be trans-local and adapting while being based on lived experiences and open sociocultural deliberations. Then the praxis of incorporating indigenous knowledge was evaluated from the viewpoint of the dominant discourse that inform interventions on disasters. It evidenced that the discourse followed by key stakeholders (e.g., policymakers and scientists) determines whether indigenous knowledge is incorporated. This was further evidenced in the field testing of the *hylomorphic* framework. Specifically, skewing the evaluation criteria to the vantage point of communities-at-risk enabled the production of attributes at the center of the epistemic process of integrating indigenous knowledge with science to produce hybrid epistemology of disaster risk reduction. These attributes include coalescing epistemologies, ontologies, values, and re-politicization.