

# GIB Lecture Series: Geospatial Big Data and Societal Transformations

Tuesday 17.05.2022 | 16:15 - 17:45 | INF/ AI, H33

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## Deriving information from space for urban environmental risk management

The ongoing practice of applying Earth Observation (EO) technology shows great potential of mapping every aspect of urbanization, hence understanding the interactions, resilience and risks at the human-environment interface. However, deriving information regarding the two basic components of risk assessment, exposure and vulnerability, is subject to uncertainty and limited scientific validity. In this presentation, I will show, first of all, how environmental variables are mapped in general and how information can be uncertain due to problems of sampling and scale of the target geographic patterns, which are not discussed sufficiently these days. I will then continue with presenting the evolution of techniques used to map the other component, vulnerability, by using EO based datasets. I will especially focus on the experience in mapping urban poverty to the Global South to showcase how the remote sensing community has been trying to derive knowledge about socioeconomic status, where I argue that the ongoing practice of mapping socioeconomic status may lead to problems of reduced interpretability and limited scientific validity. This argument is then followed by suggested alternatives to avoid these problems as well as inform practical actions for risk management.

### **Further information:**

[www.geographie.uni-bayreuth.de/de/Veranstaltungen/GIB-Lecture-Series/index.html](http://www.geographie.uni-bayreuth.de/de/Veranstaltungen/GIB-Lecture-Series/index.html)

