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MAPPING THE USE OF SPACE DATA IN DEVELOPMENT RESEARCH

Abstract

The relevance of space data for tackling sustainable development challenges is well recognized. Its potential for attaining the UN Sustainable Development Goals (SDG) needs to be fully exploited thus marking a strong guideline in the UNCOPUOS Space2030 Agenda. The present paper argues that using space data in development research bears idle potential to further capitalize on space for the benefit of society and the environment. A significant branch of development research seeks to identify the causal impact of policy interventions on development outcomes. Understanding the causal effect of a policy is imperative for decision-makers as such research provides evidence-based and actionable information on *what works and what does not* in development cooperation. Already, space has proven a valuable data source to measure policy impacts on development outcomes such as deforestation, economic growth, or air pollution. In addition, space provides readily available, granular, periodical, and reliable data whose use significantly improves the cost-effectiveness of otherwise resource-intensive policy evaluations. What is lacking to date is a thorough understanding of how widespread the use of space data in development research is and which development outcomes are being measured with what type of data and from which sources. The present paper aims to address this research gap by mapping the use of space data in development research. The analysis consists of a systematic review of causal impact studies published on the 3ie Development Evidence Portal, an online repository of rigorous evidence in development run by the International Initiative for Impact Evaluation (3ie). The review includes impact evaluations in the fields of *Urban and Rural Development* and *Environmental and Natural Resources* that were first published between 2010 and 2021. Initial results show that a moderate yet growing number of studies draws on space-based data which is most widely applied to identify policy effects on forest cover change but underused in other areas. The paper's contribution to delivering the potential of space for sustainable development is threefold. First, it adds a new angle of where and how space can be of added value for decision-makers in development cooperation. Second, it identifies gaps where space data measures exist but are not yet applied in development research. Third, it draws attention to a non-space community with the tools to turn (space) data into information that could be targeted by efforts to expand the reach of space to non-traditional user.