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Title: Consultative assessment and Geographical Information Systems techniques to develop a regional spatial decision support model of instability

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Abstract

A quantitative analysis of security is a challenging exercise combining different scales, dimensions and many actors. Combining geographic information systems, multi-criteria decision theory and statistical techniques, a geographical instability simulation tool can support decision makers to better understand, analyse and manage instability and insecurity. The JRC Caucasus Instability project aims to provide a holistic view of instability at sub-national level in the Caucasus Region. This report describes the overall process of developing a geographic model of instability in the region. Various studies, techniques and methods are integrated and combined to create an overall picture representing the various potential drivers of instability. The study makes reference to a large body of literature on territorial drivers of insecurity (Section 5). The understanding is grounded in an expert consultation assessing the relevance of identified drivers (Section 6). The analysis uses a large dataset combining geomodelling techniques to represent instability drivers (section 7). The report describes the two tools developed and applied in this study: a statistical model assessing the explanatory power of insecurity drivers (section 8) and an interactive multi-criteria GIS modelling tool integrating the expert knowledge and spatial data (section 9). This report also discusses a potential integration of news event data in the spatial representation of instability (Section 10).

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