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Area: territorio, piattaforme e nuove tecnologie

From Crisis to Adaptation: Harnessing Emerging Technologies for Government Response to Environmental Challenges

Introduction

Effective and efficient crisis management is a crucial government task. However, recent crises (pandemic, financial, migratory, and environmental) have obliged worldwide governments to face severe challenges in providing rapid responses and policies (Yildiz & Uzun, 2020). Emerging technologies (ETs) are reshaping the structure and functions of institutions, as well as governments' readiness to monitor and manage critical situations. Today such technologies are used to improve the quality of public services and the effectiveness and efficiency of governments in deploying these provisions in several fields (Gomes de Sousa, et al., 2019; Ojo, et al., 2019). According to various scholars, the outbreak of the recent crises has accelerated the process of innovation in the public sector and renewed the urgency of re-establishing a role for governments in these critical situations (OECD, 2023).

Against this backdrop, effective crisis management by the government directly affects lands and places. Climate crises are strictly related to the territorial environment (i.e. territories at risk of floods, landslides, fires, droughts, earthquakes...).

Therefore, the work aims to investigate the role of ETs in the public sector and their capacity to improve government resilience and responsiveness in tackling environmental crises in terms of natural disasters and climate change risk exposure, which have a direct impact on places and societies.

Scientific area

The work presents a PhD Political Science research project, which strongly relates to the "territory, platforms and new technologies" panel proposed for the conference.

Methodology

I intend to review and evaluate the literature through a Systematic Literature Review (SLR) method which is a process for gathering, identifying, and critically analysing accessible research studies (e.g., books, dissertations, conference proceedings, articles) about a specific topic.

The SLR is going to be conducted to answer a threefold research question:

1. Which ETs are mostly used by the public sector to react to environmental crises?
2. What natural resources does the public sector consider protecting and monitoring through ETs to address environmental crises?
3. In which (type of) places do governments use ETs to tackle environmental crises?

Therefore, from the SLR I will be able to extract relevant data for my research and select policies and case studies.

The expectations (or interpretative hypotheses) to these research questions are:

E1: Due to the increasing frequency and intensity of environmental crises, it is expected that the public sector uses a heterogeneity of ETs to respond appropriately.

E2: It is expected that the public sector uses ETs to prioritize natural resources that are exposed to significant crises or have high ecological importance (i.e. water, air, agricultural lands, forests…).

E3: Governments are expected to prioritise the use of ET in areas experiencing acute environmental crises or at high risk of future crises. These include regions prone to extreme weather events, coastal areas vulnerable to sea level rise and storm surges, and communities facing pollution or environmental degradation.

Innovation

The innovation of the project is to investigate ETs from a perspective that places the public sector at the centre of the analysis and to explore a topic considered highly technical (risk and crisis management) from a political science point of view, by bringing governments and political context back in.

Essential bibliography

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