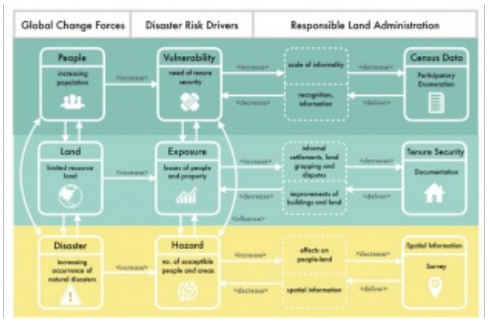
COVID-19, the Land Administration Sector and Spatial Information



By now, most readers are likely to have been impacted by the COVID-19 pandemic – perhaps directly through their own health or the health of those they know, or more indirectly through loss of work or income… and almost certainly through the changes in social norms and freedoms brought about by various lockdowns. This article explores the relevance of the land administration sector, disaster risk management and spatial information in the context of the coronavirus outbreak.

It has been a busy few weeks due to the coronavirus outbreak. But, in the quieter moments (if we're privileged enough to get them), we can reflect on what is happening now, what has happened and, probably most acutely, what might come next – in our personal lives, in our communities, in our daily work, and more globally.

On the surface, against the immediacy of rising death tolls, the shortages of ventilators and medical supplies, the nationwide lockdowns and the panic-buying of food, the land sector may seem very distant and perhaps even irrelevant. Digging a little deeper though, recent work on the relationship between land administration and disaster risk management actually seems pretty relevant to the situation.

One recent study by the University of Twente **[1]** explored the relationship between land administration (LA) systems and disaster risk management (DRM). A key contribution was developing a shared language and conceptual model to help communication across those domains (Figure 1, **[2]**). Even though it was developed with natural disasters in mind, in the context of COVID-19, the different components and relationships start to light up. From the land sector perspective, we can make sense of why certain things happened, the current situation and perhaps what lies ahead.

Figure 1: Conceptual framework on the need for responsible land administration in disaster risk management.

Raising the Alarm

Let's begin at the bottom of Figure 1, with the relationship 'Disaster > Hazard > Spatial Information'. Apparently a chopping board, the mixed blood of a few exotic critters and a wet market in Wuhan, China, in December 2019 mark the ignition point of this biological disaster. In the space of a few days the hazard became provincial, if not country-wide, and shortly afterwards global. Following the chain, spatial information quickly became a resource of high importance in the effort to monitor and contain the virus. Similar to John Snow's early paper-based spatial analysis of cholera cases in Soho, London, in 1854, maps plotting cases were quickly assembled and published, with daily updates – initially with coarse granularity at national levels (e.g. Johns Hopkins Institute) and then, as local responses became more coordinated, state and community breakdowns became available. The spatial visualizations and related graphs (i.e. curve flattening) made powerful impressions, and ultimately – although not immediately – helped to change the narrative of the virus spread. Rather than being just a side interest, this was an issue of central and immediate concern to all.

Read the full story here.