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Mapping media representation of the Seine river flood to assess the impact of communication on Paris resilience

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By the 2000s increasing attention among academics, as well as practitioners, has been devoted to the implementation of resilience. Putting the concept of social-ecological resilience (Holling, 1973) into practice involves relevant changes in policy and decision-making. Indeed, the social-ecological resilience approach emphasizes the need to apply the principle of subsidiarity, i.e. to decentralize risk management, to encourage citizen participation and share responsibilities (Tanguy, 2015). The concept of social-ecological resilience draws attention to the the impact of social construction of the reality– and therefore of the influence of media and other cultural contents, individual and groups knowledge, perceptions, emotions – on urban development. In this framework, communication between municipalities and citizens, especially a two-ways dialogue (i.e. participatory communication), has become a keystone of resilience strategies since it facilitates mutual understanding, shared goals identification and cooperation.

Going beyond theory and implementing resilience requires resilience metrics: such indexes allow decision makers to compare the costs of resilience enhancement actions with the economic, environmental, social, and sanitary costs of non-action. However important gaps persists between theories and applied metrics of resilience. For instance, operational resilience metrics are usually defined with the help of semi-quantitative indicators that are applied to variables aggregated up to the outer scale of the system, not across the various spatial scales of the system.

This research exploits recent computer aided text mining techniques to explore web communications and map press and social media representation of flood resilience, as well as identify the main opinion makers in the city of Paris. This approach allows a quantitative analysis of communication impacts, in terms of frequency and quality, and it is meant to be a basis to define new resilience communication indicators that take into account the interplay among different resilience drivers and between multiple spatial and temporal scales.

This research is being undertaken in partnership with Veolia.