



Quality and impact assessment in new geoscience communication : future perspectives through digital communication and Big Data exploration techniques

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Since 1990s up to now, climate and environmental science communication has gradually become a priority of policy programmes, a consolidated subject of training and education, a developed and greatly expanded field of professional practices. However, in contrast to this very fast evolution there is presumably a deficit in terms of research and reflection on objective tools to assess the quality and impact of communication activities.

The quality of communication in the field of science has become more and more challenging due to the fact that the role of traditional mediators (e.g. well reputed newspapers or broadcasters, science museums), that used to be considered quality guarantors, has now become marginal. Today, a new generation of communication professionals tend to be employed by research institutes to respond to a stronger request to develop accountable research projects, to increase transparency and trust and to disseminate and implementation of research findings.

This research aims to understand how communication strategies, addressed to the general public, can optimise the impact of research findings in hydrology for resilient cities. The research will greatly benefit from the development of automated analysis of unstructured Big Data that allows the exploration of huge amounts of digital communication data: blogs, social networks postings, public speeches, press releases, publications, articles... Furthermore, these techniques facilitate the crossing of socio-economic and physical-environmental data and possibly lead to the identification of existing correlations.

Case studies correspond to those of several research projects under the umbrella of the Chair "Hydrology for resilient cities" aimed to develop and test new solutions in urban hydrology that will contribute to the resilience of our cities to extreme weather. This research was initiated in the framework of the Interreg IVB project RAINGAIN and pursued in the project Blue Green Dream of the EU KIC Climate and in worldwide collaborations (e.g. TOMACS). These projects involve awareness raising and capacity building activities aimed to stimulate cooperation between scientists, professionals (e.g. water managers, urban planners) and beneficiaries (e.g. concerned citizens, policy makers). They give credence to the fact that the key question is not if geoscientists can act communicators, but how to develop synergies with various actors of geoscience communication with the help of an enlargement of their scientific practices, rather than a detrimental reduction of them.