



Tailoring infographics on water resources using an iterative and user-centred co-design approach

Wouter Buytaert (1), Sam Grainger (2), Boris F Ochoa Tocachi (1), Javier Antiporta (3), and Art Dewulf (4)

(1) Imperial College London, Civil and Environmental Engineering, London, United Kingdom, (2) University of Leeds, School of Earth and Environment, Leeds, United Kingdom, (3) Consortium for the Sustainable Development of the Andean Ecoregion (CONDESAN), Lima, Peru, (4) Wageningen University, Public Administration and Policy Group, Wageningen, the Netherlands

Informed water resources management relies on effective communication and knowledge exchange between the different stakeholders (e.g., scientists, decision-makers, civil society and the general public). Visual information such as graphics can be powerful tools to establish such exchange and to engage diverse user groups. But despite this potential, the design of visual information in practice often occurs with limited to no user participation or even explicitly considering end-users' knowledge, requirements and context. This may lead to end-products that are difficult for users to understand and to contextualize. Although collaborative design and tailoring of visualisations are increasingly promoted to alleviate this issue, little empirical evidence is available in the literature to design specific protocols and methods.

Here we show the results of an experiment to design a methodology for iterative, user-centred and collaborative co-design and tailoring of infographic-style posters, using a Peruvian case study. We co-designed three posters, each of which are tailored to a different audience (local communities, professionals, and the general audience), and test whether the co-design process improves the effectiveness of knowledge transfer.

We find statistically robust evidence that the co-design process generates infographics that are more interesting, clearer, and more useful compared to a version that was developed by the information providers only. We conclude that user groups with a large homogeneity of characteristics and needs may benefit most from this approach. The study can therefore contribute to a much-needed empirical evidence base for the development of effective user-centred design methods within the context of water resources management.