



Environmental decision-making: a serious game!

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In his manifesto opening the book *The gameful world* [i], Eric Zimmerman, researcher and game designer, claims that we have entered the “ludic century”. Gamification and serious games are increasingly part of our daily life. They are said to be “powerful tools”, but research questions remain. In Geoscience, serious games and gamification are often used to engage more the knowledge receiver in science communication activities (outreach, teaching, etc.). They are also sometimes used to promote citizens participation in shared resource management planning [ii].

In the talk, I will present the results of a review of 43 serious games on water issues, covering the broad diversity of existing tools. After summarizing the characteristics of serious games and gamification, I will discuss the benefits and drawbacks of their use in environmental decision analysis. Many behavioural consequences are expected, some positive and others challenging. Whether or not it is useful to adopt them on a regular basis for environmental decision support needs to be discussed. Last, scientific evaluation of serious games and gamification should be more systematic.

[i] Walz, Steffen P., and Sebastian Deterding, eds. *The Gameful World: Approaches, Issues, Applications*. MIT Press, 2014. <http://www.jstor.org/stable/j.ctt1287hcd>.

[ii] Voinov, A. et al. Modelling with stakeholders – Next generation. *Environmental Modelling & Software* 77, 196-220, 2016. <http://dx.doi.org/10.1016/j.envsoft.2015.11.016>.