SUMMARY GAMA DAYS

“Enhancing participation in the sustainable development in the Bắc Hưng Hải irrigation system (Vietnam)”

The dynamics of participatory processes in sustainable development has increased since the beginning of the XXth century. Systematic reviews show an increasing corpus of scientific literature on the subject of public participation (Charnoz, 2009). These new scientific approaches to sustainable development rely on the general framework of Arnstein’s Ladder (Arnstein, 1969), although its logics are constantly revisited (Davidson, 1998). We define public participation as follows: the process of involving local parties external to political and scientific processes of decision in order to use this broadened involvement to foster sustainable decisions (Laslaz, 2010).

Public participation is built through numerous and various methodologies. Participatory modelling is one of them (Etienne, 2010). Its goal is to use models as temporary tools to foster participation. Models can be used in various ways in participatory modelling, the main aspect of this approach being the sharing of its building. The ACROSS laboratory, an interdisciplinary and international structure, lead a study to assess the potentiality of using models in Vietnamese irrigation systems. The first case study we present, Bắc Hưng Hải irrigation system, was led by both social and computer sciences. After an interview campaign with local stakeholders, we organized participatory workshops about the improvement of the waste management system. The participatory workshops are structured around a serious game we built, in which the model provides visual support to spatialize the players’ actions. The model was therefore built with realistic data considering Vietnamese waste production, pedogenesis and water flow. However, these data have been slightly modified to match the effects of the game’s actions calibration. Considering that the players were not necessarily acquainted with computers and computer sciences technologies, we decided to make them interact with the model through their action cards, thanks to QR codes. At the end of each round, the players would move forward to a webcam to scan the actions of their choice, therefore implementing the effects of these actions in the model. Thanks to the model, the players could be able to witness the results of their action and use it as a starting point to discuss among them and coordinate their actions in the future rounds.

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