



Phylou : a first experiment of co-design model with local stakeholders of water management

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The risk of superficial and subterranean waters contamination by pesticide is an increasing problem, at the interface between agriculture and water resources. That issue fits in with different scales and implicates actors within several organisation levels. In order to make information exchanges easier, we propose to make a model for weed-killer transfers in vineyards cases. That model should be a qualitative one for sharing knowledge and should answer to two main aims: (i) to conceptualise weed-killer transfers from the parcel to the active hydrological network, by being focused on the analyse of the landscape structure which is the explicative factor of transfers and on experts knowledge ; (ii) to be a sufficiently flexible modelling able to evolve quickly and to make exchanges easier. The aim of this study is to present a participatory modelling experiment giving an integrated vision between hydrological modellers and sociologists. First of all, we present modelling process it-self : the conditions of realization, the issues, and the impacts/constraints on the technical aspects. Secondly, we present the model it-self focusing on the landscape representation and biophysical processes that we conceptualised and implemented. During the 6-month modelling process, three versions of Phylou model were realized taking account stakeholder expectations, notably, on scale issues. The last scale of modelling is a group of parcels, which permits to integrate transfer processes, interactions between actors and which is understood by the wine growers. Phylou model is ready to simulate landscaped patchwork. Such disposable and simple model still questions technical and social evaluations.