



## **Which benefits in the use of a modeling platform : The VSoil example.**

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In the environmental community the need for coupling the models and the associated knowledges emerged recently. The development of a coupling tool or of a modeling platform is mainly driven by the necessity to create models accounting for multiple processes and to take into account the feed back between these processes. Models focusing on a restricted number of processes exist and thus the coupling of these numerical tools appeared as an efficient and rapid mean to fill up the identified gaps. Several tools have been proposed : OMS3 (David et al. 2013) ; CSDMS framework (Peckham et al. 2013) ; the Open MI project developed within the frame of European Community (Open MI, 2011). However, what we should expect from a modeling platform could be more ambitious than only coupling existing numerical codes. We believe that we need to share easily not only our numerical representations but also the attached knowledges. We need to rapidly and easily develop complex models to have tools to bring responses to current issues on soil functioning and soil evolution within the frame of global change. We also need to share in a common frame our visions of soil functioning at various scales, one the one hand to strengthen our collaborations, and, on the other hand, to make them visible by the other communities working on environmental issues. The presentation will briefly present the VSoil platform. The platform is able to manipulate concepts and numerical representations of these processes. The tool helps in assembling modules to create a model and automatically generates an executable code and a GUI. Potentialities of the tool will be illustrated on few selected cases.