

Practice abstract 06

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The use of System Dynamics in PoliRural

System Dynamics is a modelling technique that helps to understand the dynamic behavior of complex systems. PoliRural faces the challenge to test and demonstrate the potential usefulness of System Dynamics modelling and facilitate its access to rural communities and policy makers.

During the first year of PoliRural project, a template model of System Dynamics has been built, as well as some sample models to understand the usefulness of modelling exercise. The template model deals with Rural Attractiveness, a central issue in PoliRural, defined by different factors (e.g., natural capital, social capital, employment, quality of life). Each of these factors has a weight in the decision to move to or stay in a rural area, and it can be regulated in the interface. The template model is being adapted and calibrated for every pilot area.

Some lessons learned during the creation of these models are the following:

- Due to the inherent complexity of a model, it is challenging to make it useful and relevant. In particular, it is not easy to reflect local dynamics and keep the model simple and understandable by non-experts;
- Moreover, it has proven to be difficult to combine the complexity of the model and a user-friendly interface in any SDM software environment.

Over the next few months, PoliRural will try to address these issues, with a view to creating a System Dynamics solution that has a strong explanatory and sustainability potential.

