Call for 1 MSc research project

Modelling socio-environmental vulnerability in Spain: a practical case towards a decision support tool

Requisite: Student of the *Master in Interdisciplinary Studies in Environmental, Economic and Social Sustainability* (ICTA-UAB) or of the Master's degree in *Modelling for Science and Engineering* (UAB-CRM). She/he must be fluent in Catalan/Spanish or English. She/he must be eager to use quantitative data analysis techniques and potentially also do fieldwork.

Research context: Rural areas in Spain are experiencing unprecedented environmental and social changes. Climate change and biodiversity loss are occurring alongside depopulation and the abandonment and intensification of rural landscapes. Understanding inter-connections of environmental and social stressors, and their impact on rural development is paramount to devise policy that can enhance the wellbeing of rural populations whilst promoting sustainable land uses.

Description & Objectives: The Master's thesis will be part of SUSTAIN, a project financed by the Ministry of Science and Education, aiming at developing new measurements of socio-Environmental vulnerability in rural Spain and use them to explore policies that can reduce said vulnerability. The project has so far created an index of rural vulnerability and calculated it assembling so climatic, census, land-use and rural development data into a unique socio-environmental database.

Now we want to validate the index via a series of quantitative data analysis exercises. This may include, among other topics, identify and characterize archetypical cases of rural vulnerability, unveil unique/rare cases of rural vulnerability, and simulate socio-environmental impacts of different policies.

Technical details: The analysis can start as soon as December and not later than January. The thesis should ideally be defended in June. Fieldwork expenses will be paid by the project. The Master could be combined with an internship. The master student will be required to use statistical analysis and/or modelling techniques.

If you are interested on writing your MSc thesis on this topic, please contact
Sergio.villamayor@uab.cat (Master ICTA) and ppuig@mat.uab.cat or dromero@crm.cat (Master CRM).