

Solving the climate change vulnerabilities jigsaw

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Credit: Massimiliano Franceschini

A new tool to assess the interdependency between climate change and socio-economic factors is now available, mainly for professionals in these fields.

Climate change and socio-[economic factors](#) are interdependent. If agriculture intensifies in a particular region, that would have an impact on [water sector](#), resulting from the irrigation use. This means that less water will be available for domestic, industrial or environmental needs. For example, by setting variables such as temperature, [rainfall](#) or [irrigation](#)'s efficiency, it is possible to predict how [maize yields](#) will be

affected by these changes.

To understand how changes in one sector directly affects other sectors, the research team of EU funded project [CLIMSAVE](#) created an integrated assessment [platform](#). It has been made available this year to environmental agencies, policy-makers and higher education students as a teaching instrument. Stakeholders can now perform rapid simulations of cross-sectoral impacts. It also allows them to explore adaptation strategies for reducing climate change vulnerability. What is more, it can provide an [early warning](#) about the types of [crop yields](#) likely to be in difficulty and assess the most profitable crops across Europe.

This tool can be applied to sectors such as agriculture, forestry, biodiversity assessment, coastal surveillance, water resources management and [urban development](#). The tool features climate, social, technological, economic and policy drivers, which can be changed over a period of time stretching to 2020 and up to 2050. The results are displayed in different screens, each covering the impact, adaptation, vulnerability and [cost-effectiveness](#) of these changes. According to its designers, the tool is a quick and easy instrument and can be used without a lot of training.

The main advantage of this tool is that it shows the co-sectoral effects in much greater detail than previous studies. It also allows the identification of the areas of Europe most vulnerable to [climate change](#) and least able to adapt to it. For example, "the cost effectiveness screen will list all the specific measures that could be implemented and will rank them in the order of cost-effectiveness," Paula Harrison tells [youris.com](#). She is the project coordinator and a senior research scientist at the Oxford University Centre for the Environment, UK.

Scientists in the field agree with the idea that the level of details provided by the model is quite a novelty. "In comparison to other tools

that try to perform similar functions, it does offer more possibilities, more fine degree analysis," says Anne Hammill, program leader on Adaptation and Risk Reduction at the Geneva office of the International Institute for Sustainable Development, a public policy research insitute based in Canada. She believes that there is a lot of potential in the model, by providing such a large amount of information.

But she does not believe it is that user-friendly, for someone not very familiar with the topic. She thinks the tool needs an adjustable guidance to go along with. "To expect people to just come to the website and play with it, and use it, and understand it at short order is probably a too big assumption", she tells youris.com.

Another expert, Elena Mateescu, executive director at the National Meteorological Administration in Bucharest, Romania, sees the tool as an "opening" in this field, given its complexity. In her opinion, the model is useful for the specialists, as it allows them to go easily to a specific area of expertise. "It is a professional tool for the specialists who know how to apply a model, how to validate the input data, and especially the output data and who are aware of the international regulations in the field, as well" she concludes.

Provided by Youris.com

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