Geophysical Research Abstracts
Vol. 19, EGU2017-19093, 2017
EGU General Assembly 2017


# A web-tool to find spatially explicit climate-smart solutions for the sector agriculture

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Europe faces the challenge to produce more food and more biomass for the bio-economy, to adapt its agricultural sector to negative consequences of climate change, and to reduce greenhouse gas emissions from agriculture. Climate-smart agriculture (CSA) solutions and technologies improve agriculture's productivity and provide economic growth and stability, increase resilience, and help to reduce GHG emissions from agricultural activities. The Climate Smart Agriculture Booster (CSAb) (http://csabooster.climate-kic.org/) is a Flagship Program under Climate-KIC, aiming to facilitate the adoption of CSA solutions and technologies in the European agro-food sector.

This adoption requires spatially explicit, contextual information on farming activities and risks and opportunities related to climate change in regions across Europe. Other spatial information supporting adoption includes Information on where successful implementations were already done, on where CSA would profit from enabling policy conditions, and where markets or business opportunities for selling or purchasing technology and knowledge are located or emerging.

The Spatial Solution Finder is a web-based spatial tool aiming to help agri-food companies (supply and processing), authorities or agricultural organisations find CSA solutions and technologies that fit local farmers and regions, and to demonstrate examples of successful implementations as well as expected impact at the farm and regional level. The tool is based on state of the art (geo)datasets of environmental and socio-economic conditions (partly open access, partly derived from previous research) and open source web-technology.

The philosophy of the tool is that combining existing datasets with contextual information on the region of interest with personalized information entered by the user provides a suitable basis for offering a basket of options for CSA solutions and technologies. Solutions and technologies are recommended to the user based on similarity matrices assigning scores based on criteria relating to the technology (applicability, benefits, costs) and set by the user.

The tool is being developed as part of the CSA Booster Flagship Programme in 2017. The design enables embedding the tool in the Open Innovation Platform of the CSAb and in other European platforms, communities and market places on the Internet related to natural capital and innovations. Continuous updating with new functionality and additional datasets during its lifetime is possible and secures that the tool remains up to date.