

EU-level modelling tools for policy analysis supporting the design of CAP Strategic Plans

OBJECTIVES AND CHALLENGES

There is long experience in conducting analyses of the CAP at the EU level. Several different models have been set up by the Joint Research Centre or by Universities and research institutes to analyse different aspects of EU agriculture, which can **cover one or multiple countries**, and the global agricultural and trade system. These models, which can be used in an integrated way, can provide valuable evidence to **assess different policy impacts**. Besides the Joint Research Centre, a broad network of experts is available in Europe to set up, maintain and implement these models. While technically complex to set up in-house, Member States have the possibility to complement their own analyses with those provided by these experts.

MAIN TOOLS ADOPTED: STRENGTHS AND WEAKNESSES



The tool is a global agro-economic modelling system designed for **assessing economic and environmental impacts** on agriculture at the regional level. It relies on data from EUROSTAT, FAOSTAT and FADN, offering projections for medium and long-run perspectives. CAPRI has been widely implemented for the **analysis of the CAP**.



It can allow to establish linkages on environmental issues within the CAP and other trade policies.



It cannot completely account for the micro-level heterogeneities within the analysed regions. Its use requires specialised expertise.



The tool is a multi-country, multi-market model that covers all Members States, some non-EU countries and a stylised version of the rest of the world. The model provides **annual projections for markets of the main agricultural commodities** at national and aggregated EU levels and analyses the impacts of agricultural policies. It relies on EUROSTAT, FAOSTAT, ITC statistics, and other national statistics.



It can assess agricultural policy impacts in each Member State and illustrate the differing impacts of policy changes across the EU.



It may not fully capture long-term policy or market shifts. Calibration is complex and requires experts.



The tool is a **static optimisation individual farm-level model assessing CAP economic and environmental impacts on farms**. It simulates farms' behaviour based on FADN data and can be applied to all EU. It originates from the increasing demand for a micro-simulation tool modelling farm-level impacts and capturing the heterogeneity across EU farms.



It captures farm heterogeneity and relies on FADN data which are available in all EU-27. It considers both economic and environmental outcomes.



It relies on strong assumptions, whereas farm exit/entry decisions are not modeled, and interactions between agricultural holdings are ignored.



The tool is a global economic model for both agriculture and forestry. It relies on major statistical databases (FAOSTAT, EUROSTAT, FADN) and **high spatial resolution bio-physical databases**, which make it particularly suitable for assessment of economic, environmental and climate impacts of policy (including carbon emissions and sinks, biodiversity, and water). It has been widely used in **policy impact assessments** by the European Commission, and other non-EU countries.



It ensures a consistent and detailed coverage of both agricultural and forestry sectors. A holistic approach to land use-related questions.



EU agriculture representation is undergoing a major overhaul following agricultural policies reforms.

