

MODELLING INDIVIDUAL DECISIONS TO SUPPORT THE EUROPEAN POLICIES **RELATED TO AGRICULTURE**

WHY?

Agricultural policies like the EU CAP are widening the scope to contribute to the Paris climate agreement and the Sustainability Development Goals. From the Commission's legislative proposals (June 2018) it is expected that the European Union (EU) Common Agricultural Policy (CAP) will be redesigned in line with this. Consequences are among others a move of the CAP to farm specific measures and an improved link to

WHAT MIND STEP IS ABOUT?

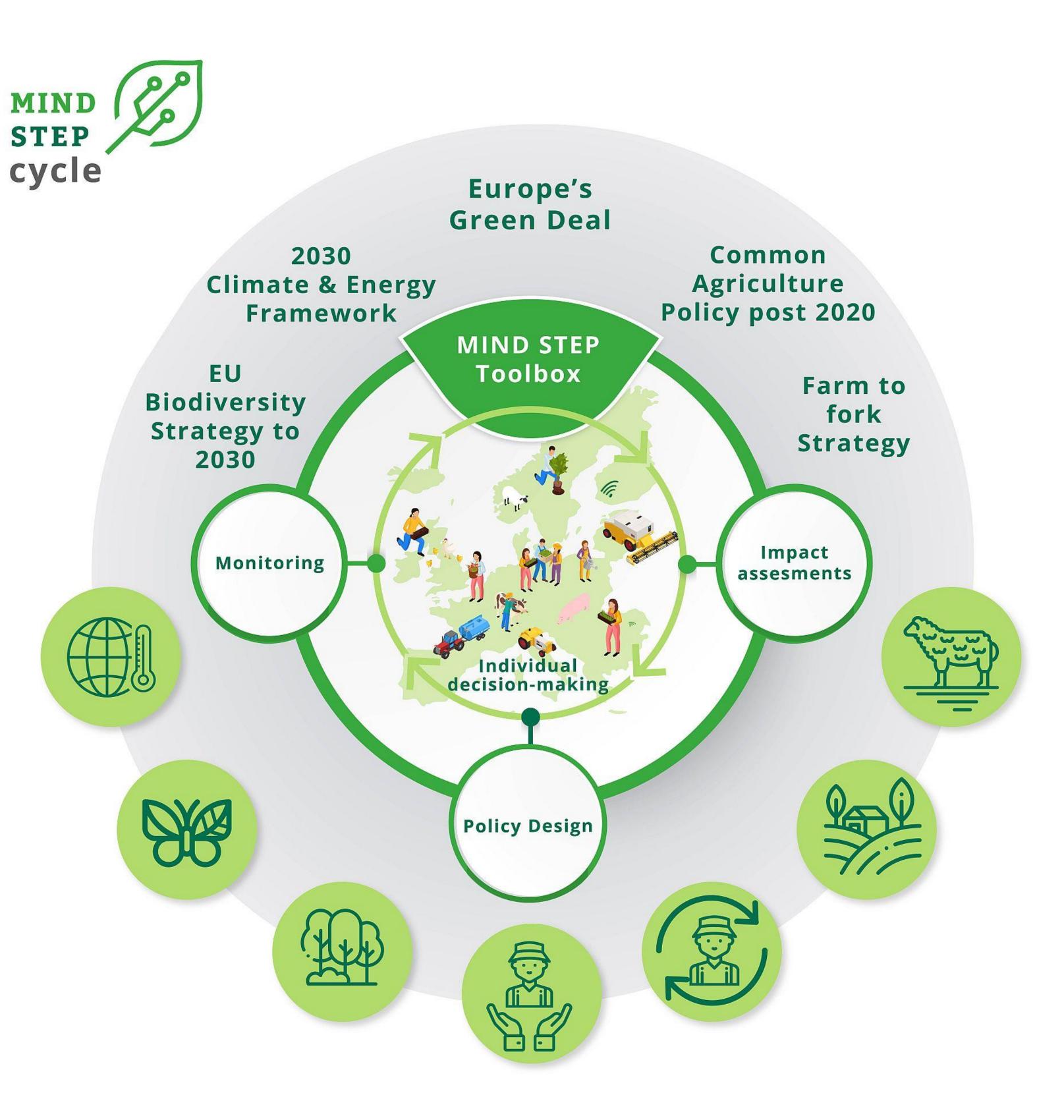
MIND STEP is a European research project aiming to improve exploitation of available agricultural and biophysical data and will include the individual decision making (IDM) unit in policy models.

The overall ambition of MIND STEP is to support public decision making in agricultural, rural, environmental and climate policies, taking into account the behaviour of individual decision-making units in agriculture and the rural society.

environment, climate change and ecosystem services. It is proposed that Member States and regions develop their own CAP strategic plan with more attention to the regional implementation of the CAP. This wider scope and measures with a focus on individual farmers ask for a new generation of impact assessment tools. Current state-ofthe-art agricultural models are not able to deliver individual farm and local effects as they are specified at higher levels of aggregation.

WHAT ARE THE OBJECTIVES?

- to develop a highly modular and customisable (X) suite of Individual Decision Making (IDM) models focussing on behaviour of individual agents in the agricultural sector to better analyse impacts of policies,
- to develop linkages between the new IDM models and current models used at the European Commission to improve the consistency and to broaden the scope of the analysis of policies,
- to develop an integrated data framework to support analysis and monitoring of policies related to agriculture,



- to apply the MIND STEP model toolbox to analyse regional and national policies and selected EU CAP reform options and global events affecting the IDM farming unit, working together with policymakers, farmers and other stakeholders,
- safeguard the governance and future to exploitation of the MIND STEP model toolbox.

WHAT IMPACTS ARE EXPECTED?

- improvement of the capacity to model policies (%) dealing with agriculture and related natural resources, food and international trade
- improvement of policy design, impact assessments and monitoring



strengthened transdisciplinary research and integrated scientific support for relevant EU policies and priorities.

HOW PROJECT OBJECTIVES WILL BE ACHIEVED?

Based on a common data framework MIND STEP will develop IDM models, including agentbased models, focussing on different topics in an integrated manner in different regional case studies. The IDM models will be estimated and calibrated using agricultural statistics and big datasets, drawing on established econometric and evolving machine learning techniques and using both traditional models of optimising behaviour and theories from behavioural economics.

MIND STEP closely cooperates with a range of stakeholders to co-create and apply the MIND STEP model toolbox to selected regional, national and EU wide policy cases.

MIND STEP cooperates with other consortia funded under the same topic to share ideas and innovations. The Agrimodels Cluster brings together research projects which operate in countries across Europe to increase the modelling capabilities in the agriculture sector.



COORDINATED BY

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MIND STEP addresses the Work Programme Topic RUR-04-2018-2019, contributing to Rural Renaissance by further developing analytical tools and models to support policies related to agriculture and food. A. [2018] Developing new models supporting policies related to agriculture.

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