

# TSARA

## TARGETS FOR SUSTAINABLE AND RESILIENT AGRICULTURE

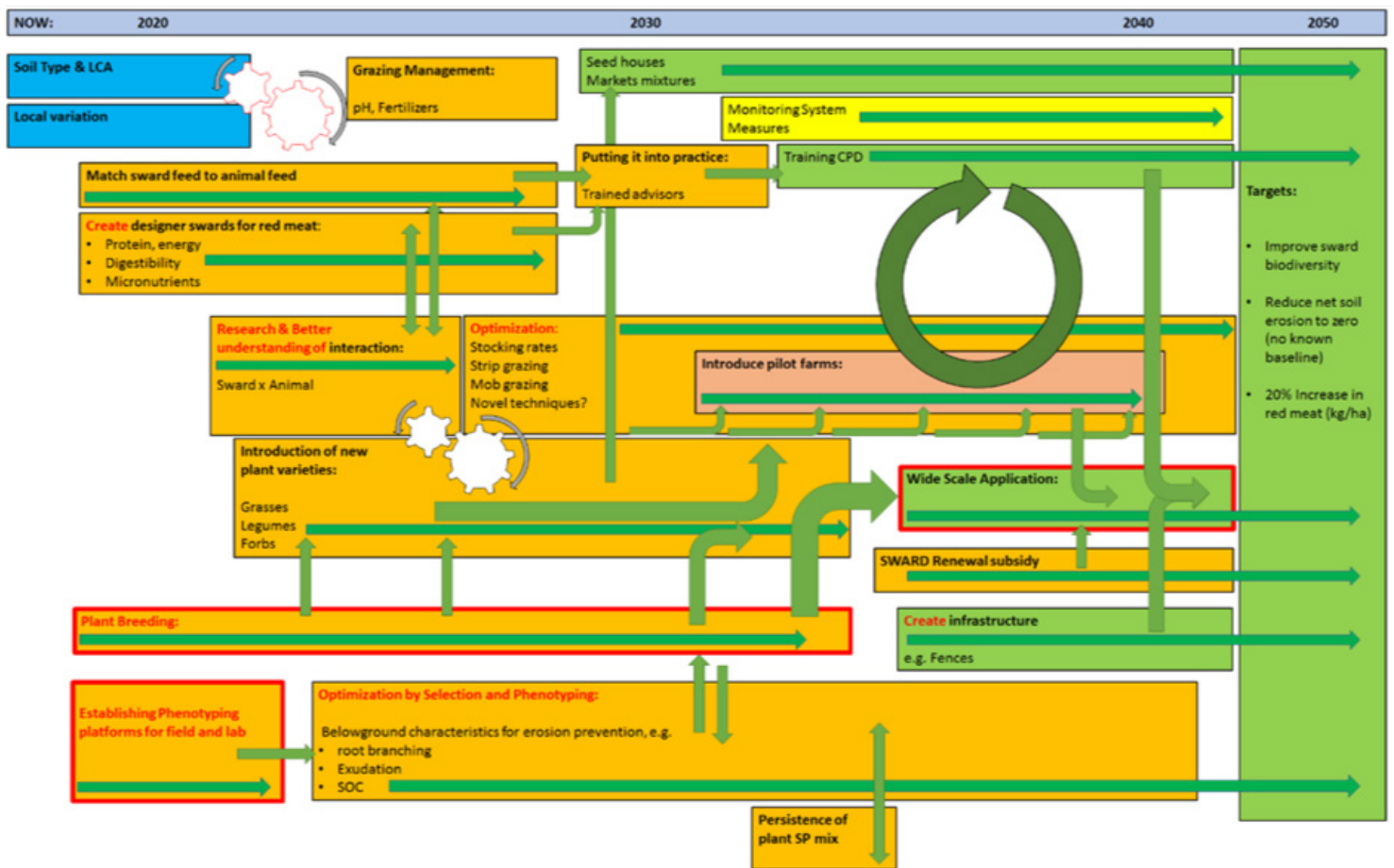


Figure showing a pathway to the adoption of a Natural Capital approach within agriculture elicited from experts during a workshop held at Rothamsted

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## BACKGROUND

Achieving significant progress towards the UN Sustainable Development Goals by 2030 risks tradeoffs. However, the Deep Decarbonisation Pathways Project demonstrated that international co-design of pathways and co-operation towards shared goals could achieve more than nations simply working alone. TSARA aims to see how far these ideas can be brought into agriculture.

## OBJECTIVE

The research project TSARA investigates means to support the development of pathways to delivering to the UN Sustainable Development Goals (SDG, especially SDG2) and targets.

# SUSTAINABLE DEVELOPMENT GOALS



## RESULTS AND KEY FINDINGS

By means of a series of workshops, we derived views from major stakeholders in the UK, the Netherlands and France of the future of agriculture. We obtained desirable goals and targets, pathways to these targets as well as views about possible groups of pathways in the form of scenarios.

A series of tables, known as dashboards, have been set up that record changes in agricultural practice for the last 10 to 20 years and that identify current trends. With the pathway data we can see how far these trends are in line with desired targets for SDGs in 2030. Where this is not the case we have adopted an approach known as 'backcasting' which consists of setting out the expected or desired state of agriculture at some point in the future and then taking backward steps to see what conditions would have to be like at intermediate dates in order to achieve targets. A range of alternative pathways are now being devised to explore trade-offs between the delivery of improved food production, better environmental quality and social welfare in the EU and NZ bioeconomies, as well as the social and political impediments along the way to achieving these.

### KEY PUBLICATIONS

- Dias Bernardes Gil, J., Reidsma, P., Giller, K.E., Todman, L.C., Whitmore, A.P., Van Ittersum, M. (in press) Sustainable Development Goal 2: improved targets and indicators for agriculture and food security *Ambio*
- Todman, L.C., Coleman, K., Milne, A.E., Gil, J.D.B., Reidsma, P., Schwoob, M-H., Treyer, S., van Ittersum, M., Whitmore, A.P. (in preparation) Multi-objective optimisation as a tool to envision future agricultural landscapes. *Agricultural Systems*.