

Choice Experiments and Agent-based Modelling: Evaluating Preferences for Diverse Agricultural Landscapes

Convenors:

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Do you like this landscape?
Please press "yes" for only one of the three landscapes

show-landscape 1
show-landscape 2
show-landscape 3

YES No

Number who agree? 0 Number who disagree? 0

Landscape element analysis

Level 4
0

Steps 0 100

Legend:
Point
Line
Crop diversity
Livestock

The aesthetics of agricultural landscapes contribute to human well-being, the rural economy and tourism. It is the appearance of the agricultural landscape with its elements (e.g. hedgerows, stone walls), its structure and composition that defines these aesthetics. However, the perception of landscapes differs across people and conflicts can arise around: 1) what makes an agri-landscape attractive and 2) competing demands from different stakeholder groups (recreation vs. food production vs. nature conservation etc.). Balancing the different points of view and reducing trade-offs can be difficult, as there is only one landscape to be planned.

In this masterclass, we would like to introduce two complementary methodologies that would be promising in achieving a consensus in shaping the aesthetics of agricultural landscapes: discrete choice experiment and agent-based modelling. With these tools we can analyse preferences for diverse landscape views based on choices made in an experimental setting. Additionally, we can simulate the interaction between the choices of different actors and how they adapt their decision in response to other factors. We will illustrate the theory behind both approaches and how to develop such experimental model in an open-access agent-based modelling software (Netlogo 6.1.1). Moreover we will run a live experiment with the participants of the masterclass to design an agreed virtual landscape.

Session format:

The masterclass will be conducted in two sub-sessions each 1.5 hrs. In the first one, the instructors present theoretical background about both approaches and their applications in research. In the second session, the instructors show the participant the programming of

Landscape 2021 – Masterclass 2

Landscape management systems



such simple model, then everyone can take part in a practical digital choice experiment to analyse the evolution of their decision behaviour.

We invite everyone to this masterclass interested in decision-making tools. Also those with no-prior modelling experience are welcome to participate.

Maximum number of participants: 20