



Ecosystem service research in grasslands at 31 experimental farms, networks, and demonstration platforms across Europe

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Main finding and conclusions

Our survey shows that:

- a diverse range of ecosystem services (ES) is being studied at European research stations, but
- only in a small fraction of the experiments, more than two grassland ES were being evaluated simultaneously, and cultural services were seldom assessed.

Our work suggests that to understand multifunctional benefits of grassland management practices and related trade-offs, simultaneous monitoring of a wider array of ES should be considered. Thus, we suggest to strengthen multidisciplinary research on grassland ES multifunctionality.

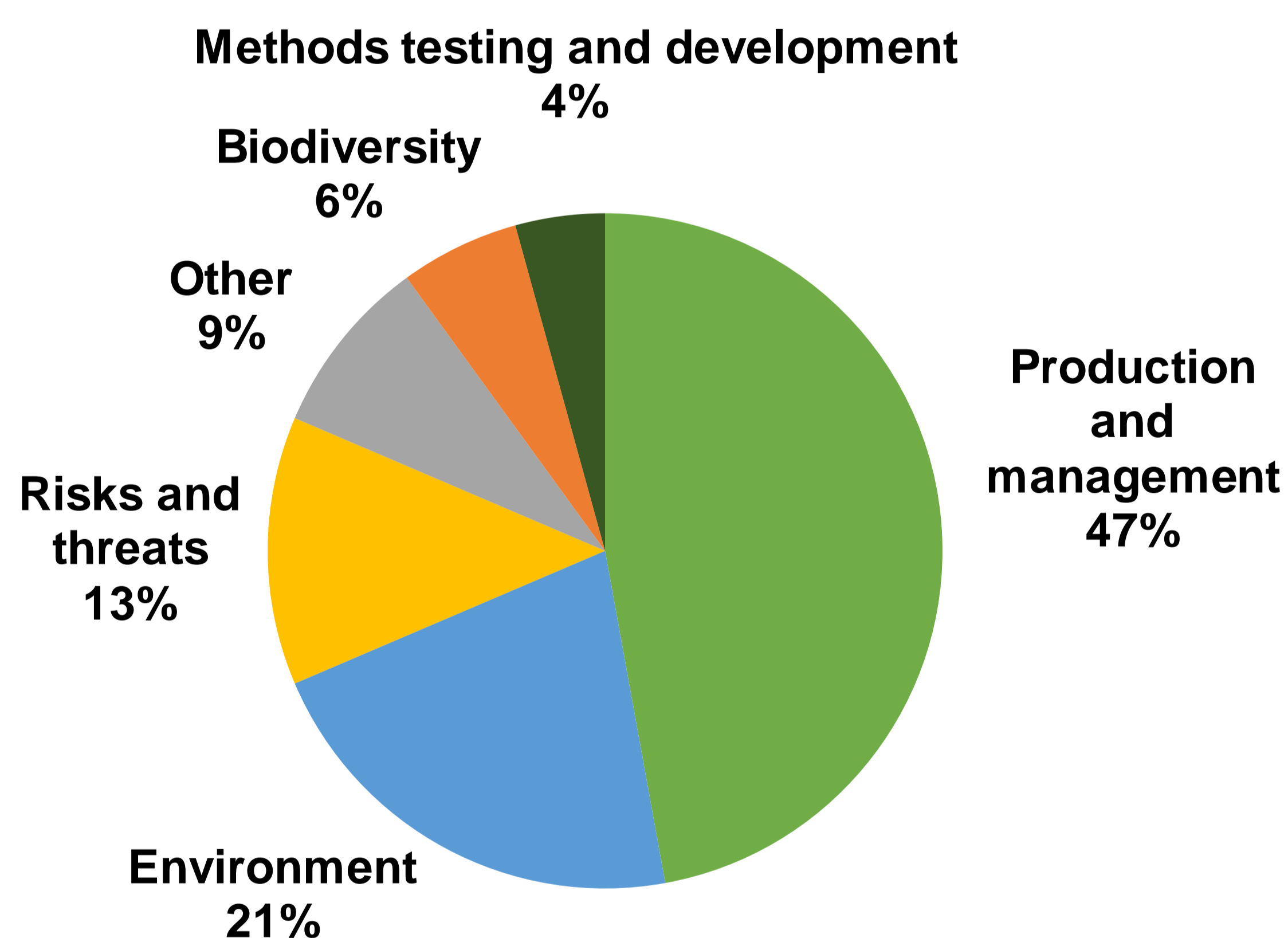


Figure 1. Main aims of 70 experiments at 31 grassland research stations in Europe.

Rationale and results - Research stations and experimental farms are essential for applied grassland science and related outreach activities. This survey encompasses 70 experiments (Fig. 1 and 2) in five biogeographic zones in Europe. Twenty-nine percent of the experiments focused on one single ES, while 34% assessed two ES. Either three or four ES were measured in 23% and 10% of the experiments, respectively. The maximum of five ES was studied in only one experiment.

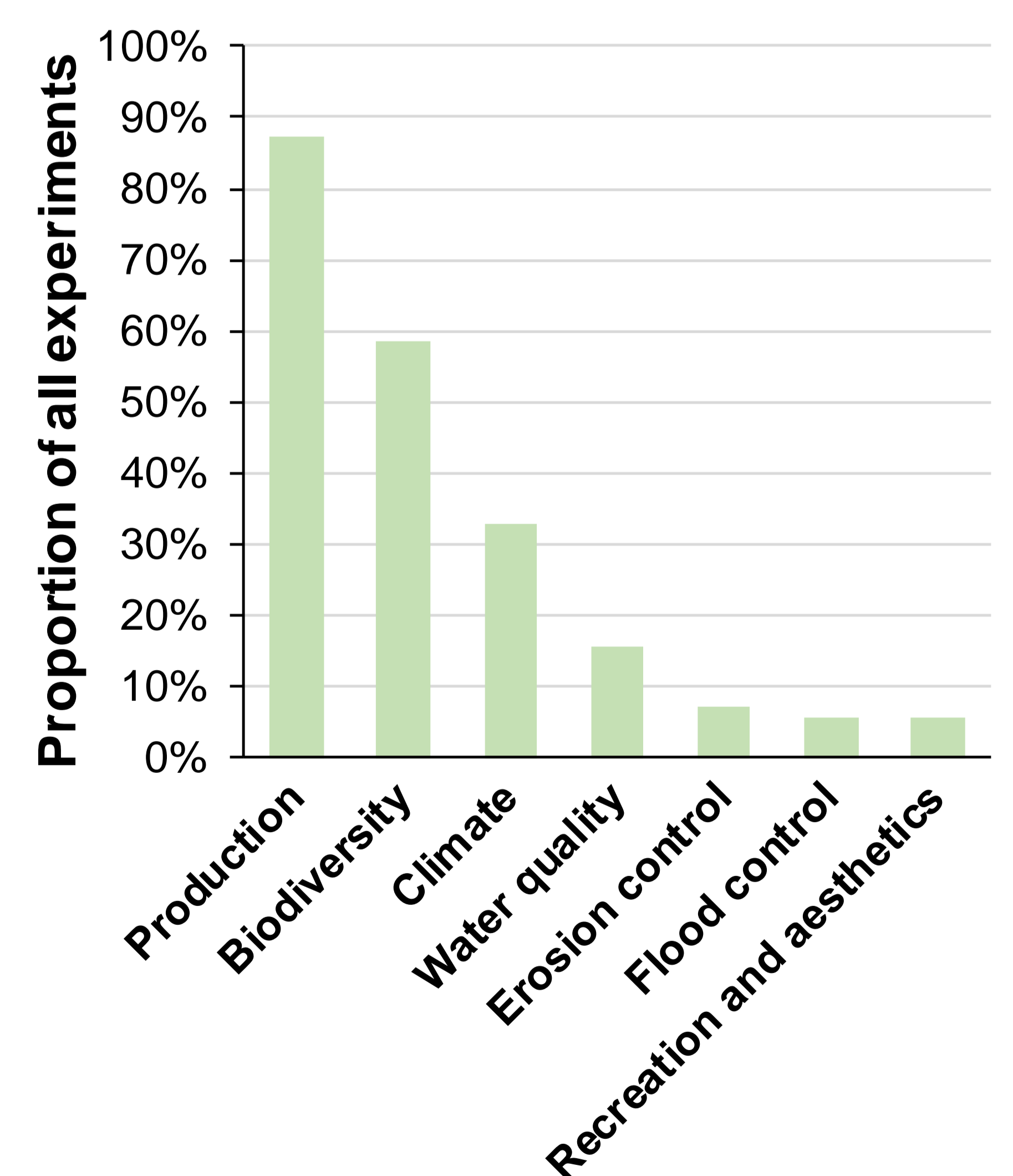
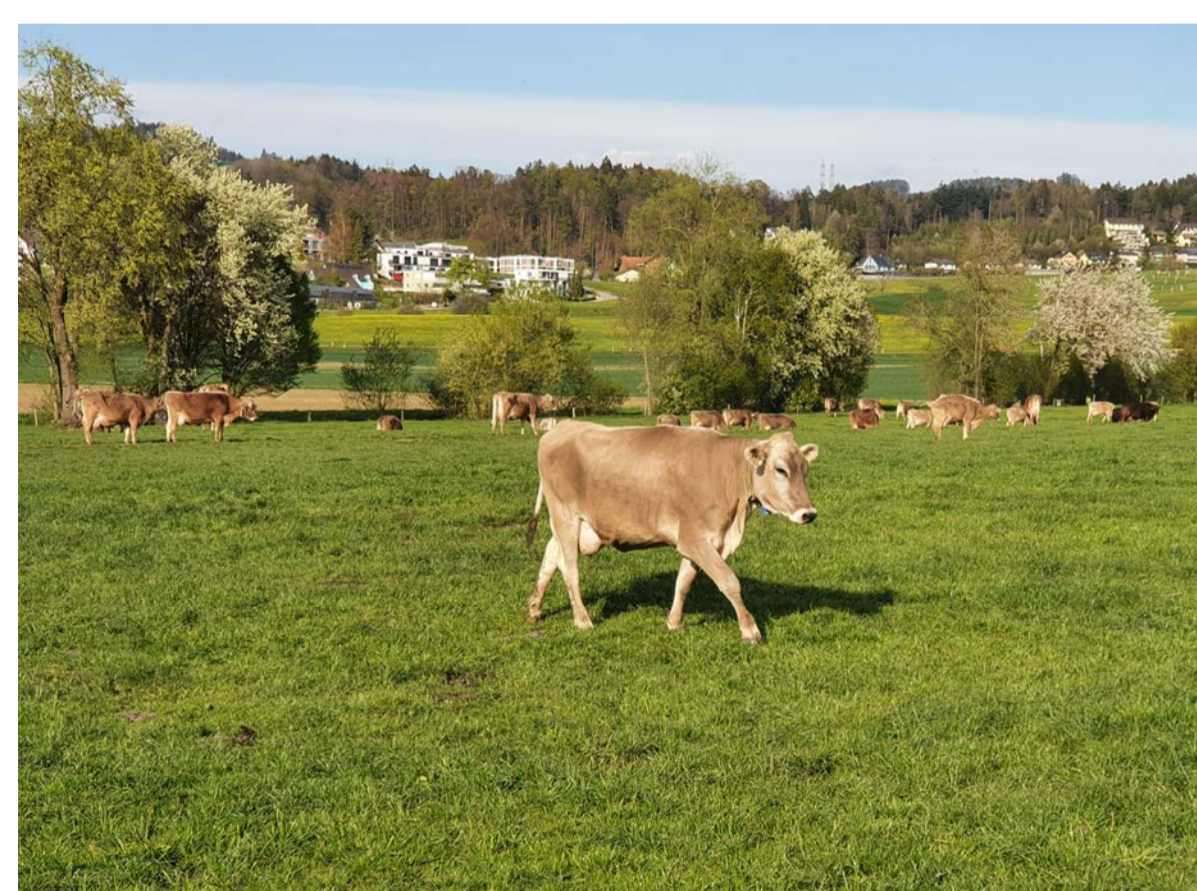


Figure 2. Frequency of grassland ecosystem services measured in 70 experiments at the research stations.

Methods in a Nutshell - We assessed the grassland-focused experiments recently conducted, completed (since 2011), and planned at 31 experimental farms, networks, and demonstration platforms in twelve European countries (CH, CZ, DE, ES, FR, HU, IT, ME, NL, PL, SL, UK). Survey partners were recruited from the H2020 project SUPER-G. For each experiment one out of six main aims was chosen (see Figure 1) and the measurements done in these experiments were translated into seven distinct ES categories (see Figure 2).