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Funded projects final conference, 12-13 November 2019, Brussels

BiodivERsA COFUND Call (2015-2016)

« Understanding and managing biodiversity dynamics to improve ecosystem functioning and delivery of ecosystem services in a global change context: the cases of soils and sediments, and land-river and sea-scapes »



CONSORTIUM DESCRIPTION



Partner 1: adelphi research, Germany, German Federal Ministry of Education and Research (BMBF) through DLR project management agency

Partner 1a (subcontracted): Institute for Agroecology and Biodiversity (IFAB), Germany, BMBF / DLR-PT)

Partner 2: National Museum of Natural Sciences, CSIC, Spain, Spanish Ministry of Economy and Competitiveness

Partner 3: University of Extremadura (UNEX), Spain, Spanish Ministry of Economy and Competitiveness

Partner 4: University of National and World Economy (UNWE), Bulgaria, Bulgarian National Science Fund











Changes to the Common Agricultural Policy (CAP) (esp. greening) introduced in 2014 reform

Impact on Green and Blue Infrastructure (GBI) in the agricultural landscape Impact of GBI on agricultural biodiversity in a range of agricultural settings



PROJECT **DESCRIPTION - means**





Implementation in CS regions :

- Biodiversity and GBI monitoring (birds, plants, GBI features in plots)
- Modelling impacts GBI on biodiversity •
- Historical comparison from photos
- Policy implementation (interviews and workshops)

WP 3 and 4 (2,3,4 all)

Outputs:

Policy and scientific recommendations

GBI

indicators

Tools for farmers and advisors

WP 5 and 6 (4, 1, all)

Process of discussion and feedback with stakeholders WP 1 (1, 4, all)

Policy aims :

Analysis of EU and national agricultural and environmental policy through literature review, interviews and workshops

WP 2 (partner 1,4)



PROJECT DESCRIPTION - GBI



GBI defined in the project as:

A range of physical features which provide habitat and can be linked, to allow movement of species, contributing to preserving biodiversity and providing ecosystem services.

GBI features:

- Small-scale landscape elements, e.g. trees and ponds
- In-field elements, e.g. grasslands, agroforestry, nitrogen (N)-fixing crops or fallow
- Natural / semi-natural elements e.g. wetlands and shrub land
- Connectivity features e.g. field margins, hedges, stone walls or and ditches
- (Configurational features e.g. mean field size and richness of herbaceous crops.)

Also use of indicators from previous projects e.g. BIOBIO and collaborations to expand to include other elements of biodiversity and ecosystem services (e.g. pollinators and food production)



PROJECT DESCRIPTION





Castilla-La Mancha

Dry cereal croplands, extensive

> Extremadura Iberian Dehesas: extensive wood pasture

Plovdiv-Pazardjik Arable, pasture, permanent crops, forests

> Western Stara Planina Extensive pasture, forests, small patches arable



SCIENTIFIC OUTPUTS



Biological field studies and modelling results: Assessment of GBI across a range of different farming systems, impacts of GBI on biodiversity and changes over time of GBI

- GBI features generally benefit biodiversity but the relationships varied considerably between regions, systems and organisms' groups.
- Natural or semi-natural small-landscape elements and connectivity features were important for overall biodiversity.
- In-field habitats (especially grassland and fallow land) relevant for more specialist farmland species.
- Small field size (preventing field size enlargement) benefitted, overall and farmland-specialist diversity.
- Permanent and cover crops, agroforestry and crop diversification showed few benefits.
- Over the last 6-8 years, little change in connective features, mainly changes to in-field elements.







Concepción et al. under review



GER_Arable





BUL_Mixed



Pardo et al. In draft



SCIENTIFIC OUTPUTS



Policy analysis and field work results: perception of changes to GBI caused by the CAP, farmers' and stakeholders' understanding of GBI and farmers' reactions to incentives provided by CAP greening

- While the term GBI was not well understood, farmers recognised GBI features on their farms.
- Relative frequencies of mapped GBI features and the occurrence of features identified by farmers and stakeholders were very different. Farmers' perception of GBI features seems to be influenced by their need to take active land management decisions rather than by biodiversity concerns.
- Farmers mainly informed about schemes by state agricultural offices
- Farmers' main motivations for choosing particular EFA options were measures closest to their farming practice and measures they could easily understand. Environmental impacts ranked last.
- Stakeholders had a good understanding of farmers practice but overestimated the importance of controls.





Farmers' motivations for choosing EFA options [self-assessment, N=60]

{ 5 - strongly agree; 3- neutral; 1 - strongly disagree}



Kazakova et al. In draft





Stakeholders' opinion on farmers' motivations for choosing EFA options, N=43

(5: strongly agree; 3 neutral; 1 strongly disagree)



Kazakova et al. In draft





Long-term changes in farm management

as a result of Greening [farmers' self-assessment, N=86]

Long-term changes in farm management as a result of Greening [Stakeholders' assessment, N=56]



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SOCIETAL / POLICY OUTPUTS



Policy recommendations on the EU level

Main recommendations to be presented at parliamentary event 11 December

Policy recommendations and recommendations for implementation in each CS country

Recommendations based on the specific issues and needs in each CS produced and discussed with stakeholders at a workshop

Briefings

Briefings produced relating currently ongoing policy discussions relating them to GBI

Tools for farmers and advisors

Overview of currently existing tools in the three Biogea countries Overview of where farmers go for advice in the CS areas Tools targeted at needs in the CS areas

General awareness

Project website, including relevant events and publications (also outside project) Newsletter





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More information: <u>www.biogea-project.eu</u> biogea@adelphi.de



Federal Ministry of Education and Research



