**Titolo dell’assegno di ricerca:**

**Analysis of policy tools to incentivize the uptake of agricultural practices able to support farmland biodiversity and ecosystem services.**

**Analisi di strumenti di policy per incentivare l’adozione di pratiche agricole capaci di promuovere la biodiversità agraria e i servizi ecosistemici.**

**Progetto di ricerca**

L’assegno ha l’obiettivo di studiare l’accettabilità e l’efficienza di diversi tipi di incentivi agroambientali volti a favorire la biodiversità agraria in Europa.

Lo studio si svolgerà nell’ambito delle attività del progetto di ricerca H2020 SHOWCASE: SHOWCASing synergies between agriculture, biodiversity and Ecosystem services to help farmers capitalising on native biodiversity, H2020, (G.A. 862480) <https://showcase-project.eu/>.

L’attività avrà in particolare come oggetto il task 2.8 del progetto: “Simulating acceptance and efficiency of incentives for on-farm biodiversity management”

This task will focus on understanding the interconnection between instrument design, acceptance and effectiveness and efficiency of incentives, based on simulation and optimal design models. Attention will focus primarily on result-based incentives provided both by policy (e.g. agri-environmental-climate contracts) and private initiatives (e.g. value chain contracts with biodiversity-related incentives). This will be complemented by the analysis of collective solutions, considering that they are particularly relevant for biodiversity actions and are often combined with result-based instruments. There will be two main layers of activity: a) simulation of participation and efficiency under different design of incentives systems taken by observed policies and initiatives; b) search for optimal instrument design based at least on effectiveness (impact on biodiversity); in addition to effectiveness, also maximising efficiency (total social welfare), will be considered if sufficient estimates of the economic value of biodiversity are available. The simulations will be performed under different market and technology scenarios, in order to assess the robustness of the proposed instruments under different exogenous conditions. The exercise will use bio-economic simulation models for point a) and principal-agent models for point b). Possibly the latter will be developed as a simplified version of the former. The analysis will be applied: a) to a pilot case in Italy based on secondary data and for the main purpose of model design in an area well-known to the performing team; the starting point will be ongoing modelling activities in the CONSOLE project in order to build on state-of-the-art models; b) in selected cases among those developed in the project, based on local policy interest and data availability. Candidate case study are the Netherlands for collective, UK and Romania for result-based, and Estonia for both. The selection of case studies will account for different institutional settings, as well as longer or shorter familiarity with the instruments. In particular, models will build on survey results from other tasks (task 2.4 about preferences and task 2.5 about economic data).

L’attività riguarderà anche

* la valutazione di indicatori di biodiversità con particolare riferimento all’uso e validità di indicatori costruiti su tecniche di remote sensing e approcci citizen-science
* la stima dei costi a scala aziendale di diverse pratiche volte al miglioramento della biodiversità agraria riferibili a regolamenti e incentivi pubblici
* organizzazione di eventi e coinvolgimento di stakeholders

All’assegnista potrà inoltre essere richiesto di collaborare ad altri progetti e attività del gruppo di ricerca del prof. Viaggi.

**Piano di attività**

L’assegnista collaborerà con il team UNIBO coinvolto nel progetto SHOWCASE sotto la supervisione del Prof. Davide Viaggi.

L’assegno prevede un piano di lavoro incentrato sulle seguenti attività:

* partecipazione ai meeting di progetto;
* review della letteratura sulle politiche (nazionali e UE) rilevanti e le tipologie di contratto agroambientali;
* review della letteratura sui metodi di indagine scientifica pertinenti al progetto;
* partecipazione alla scrittura dei report di progetto;
* partecipazione e presentazione di eventuali lavori scientifici in convegni;
* partecipazione alla scrittura di eventuali pubblicazioni scientifiche.

**Research project**

The objective of the post-doc is the analysis of acceptability and efficiency of agro-environmental incentives aimed at supporting farmland biodiversity in Europe.

The activity will be carried-out in the context of the Project SHOWCASE SHOWCASing synergies between agriculture, biodiversity and Ecosystem services to help farmers capitalising on native biodiversity, H2020, (G.A. 862480) <https://showcase-project.eu/>.

The activity will focus in particular on task 2.8 “Simulating acceptance and efficiency of incentives for on-farm biodiversity management”

This task will focus on understanding the interconnection between instrument design, acceptance and effectiveness and efficiency of incentives, based on simulation and optimal design models. Attention will focus primarily on result-based incentives provided both by policy (e.g. agri-environmental-climate contracts) and private initiatives (e.g. value chain contracts with biodiversity-related incentives). This will be complemented by the analysis of collective solutions, considering that they are particularly relevant for biodiversity actions and are often combined with result-based instruments. There will be two main layers of activity: a) simulation of participation and efficiency under different design of incentives systems taken by observed policies and initiatives; b) search for optimal instrument design based at least on effectiveness (impact on biodiversity); in addition to effectiveness, also maximising efficiency (total social welfare), will be considered if sufficient estimates of the economic value of biodiversity are available. The simulations will be performed under different market and technology scenarios, in order to assess the robustness of the proposed instruments under different exogenous conditions. The exercise will use bio-economic simulation models for point a) and principal-agent models for point b). Possibly the latter will be developed as a simplified version of the former. The analysis will be applied: a) to a pilot case in Italy based on secondary data and for the main purpose of model design in an area well-known to the performing team; the starting point will be ongoing modelling activities in the CONSOLE project in order to build on state-of-the-art models; b) in selected cases among those developed in the project, based on local policy interest and data availability. Candidate case study are the Netherlands for collective, UK and Romania for result-based, and Estonia for both. The selection of case studies will account for different institutional settings, as well as longer or shorter familiarity with the instruments. In particular, models will build on survey results from other tasks (task 2.4 about preferences and task 2.5 about economic data).

The research will also concern:

* evaluation of biodiversity indicators, in particular efficiency of indicators basedon rempte sensing techniques and citizen-science approaches;
* farm-scale cost valuation of biodiversity-friendly practices in relation of regulations and incentives
* stakeholder meeting organization and engagement

the post-doc could also be involeved in other projects and activities of the research team

**Planning of the post-doc activity**

The post-doc will collaborate with the UNIBO team involved in the SHOWCASE Project under the supervision of prof. Davide Viaggi.

The planned post-doc activities are:

* participation to project activities;
* literature review on national and EU policies related to the topic and on agri-environment contracts;
* literature review on scientific methods relevant for the project;
* contribution to project reporting;
* participation to scientific conferences;
* contribution to writing of scientific papers.