

**EIBURS: EIB University Research Sponsorship Programme**  
***Line of research: Financial and Economic Valuation of Environmental Impacts***

**Program description**

**'Impacts of Climate Change and Biodiversity Effects'**  
**Department of Economics, University Ca'Foscari of Venice, Italy**

The project focuses on two major research areas: (1) the macro-economic implications of climate change impacts, and (2) the use of micro-econometric valuation tools to assess the economic costs of climate related biodiversity losses. The first research area aims to assess the economic dimension of several impacts of climate change, including sea level rise, extreme events, new diseases, etc. It will also provide a detailed analysis of impacts in climate sensitive sectors (e.g. tourism and energy) and of major protection interventions. The focus will be both on local, sector specific and systemic impacts. The second area aims to examine the potential of micro-econometric valuation tools, including market and non-market methodologies, to assess the economic value of biodiversity and its role in the design of an effective and broadly accepted biodiversity management policy.

Within the first research area, this new project will use a Computable General Equilibrium model to assess the macro-economic implications of climate change impacts on EU and non EU national economies. In particular, the following activities will be carried out:

- Quantification of the direct physical impacts of climate change and their economic assessment;
- Evaluation of the international and sectoral transmissions of the main direct impacts of climate change;
- Economic assessment of the equilibrium costs of climate change in different regions and sectors.

Within the second research area, the project will offer a review of the valuation literature, including key economic concepts that are essential in the economical analysis and monetization of biodiversity. And it will provide some methodological advances. In particular, the following activities will be carried out:

- Definition of the links between climate change and biodiversity;
- Definition of the links between biodiversity and human well-being;
- Provision of a general economic valuation methodology and critical assessment of past valuation studies;
- Economic valuation of biodiversity benefits, and potential extension of the CGE analysis to incorporate welfare changes induced by impacts of climate change on biodiversity.

This project, based at the Department of Economic of University Ca' Foscari of Venice, is led by Professor Carlo Carraro, and envisages the organization of an intermediate workshop and a final conference, which will be used to disseminate the results of the research among world scholars.

The Department of Economics of the University Ca' Foscari of Venice has a long tradition of excellence in Environmental Economics. In particular, its Centre for Environmental Economics and Management, which develops research activities in fields such as Climate Change Economics, Economic Valuation on Environmental Goods, Biodiversity Economics, Governance and Integrated Water Management, is characterized by a consolidated experience and an established international reputation.