

ADAPTER - Adapting EU Energy, Agriculture, Forestry and Water Sectors to Climate Change – Integrated assessment of vulnerabilities and cost-effective adaptation measures using a common platform

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Partners

#	Participant organisation name	Short name	Country
1	GEIE ERCIM	ERCIM	France
2	FUNDAÇÃO DA FACULDADE DE CIÊNCIAS E TECNOLOGIA DA UNIVERSIDADE NOVA DE LISBOA	FFCT	Portugal
3	ASATREM SRL – APPLIED SYSTEMS ANALYSES, TECHNOLOGY AND RESEARCH, ENERGY MODELS	ASATREM	Italy
4	INSTITUT FUER KLIMAFOLGENFORSCHUNG	PIK	Germany
5	ASSOCIATION POUR LA RECHERCHE ET DEVELOPPEMENT DES METHODES ET PROCESSUS INDUSTRIELLES	ARMINES	France
6	INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE	IIASA	Austria
7	RESEARCH CENTRE FOR AGRICULTURAL AND FOREST ENVIRONMENT, POLISH ACADEMY OF SCIENCES	PAS	Poland
8	VALTION TEKNILLINEN TUTKIMUSKESKUS	VTT	Finland
9	CENTRE FOR RENEWABLE ENERGY SOURCES	CRES	Greece
10	COMMISSION OF THE EUROPEAN COMMUNITIES, JOINT RESEARCH CENTRE, INSTITUTE FOR PROSPECTIVE TECHNOLOGICAL STUDIES	IPTS	Belgium

Objectives

Develop an **integrated methodology** to assess impacts and vulnerabilities from changes in global climate in European key sectors of energy, agriculture & forestry and water use, and to decide on **cross-sector cost-effective adaptation measures**.

Methodology implemented within a **common platform** by connecting global and EU models on climate (CLIMBER models), energy (TIAM global model and Pan-European TIMES), agriculture (Basic Linked System) and forestry, considering water, by:

- use of common climate, economic and policy assumptions,
- common natural resources as pools shared by the different sectors,
- exchange of data between models, by including simplified agriculture and forestry representations into energy models,
- impacts of climate change on energy demand, via demand elasticities to climate, and on renewable resources harmonized approach to characterize (efficiency and costs) sector-specific adaptation measures.



Innovation

The common platform will consider the **dynamic feedback effects between climate change, impacts, and adaptation**, which are crucial to reduce uncertainty in the assessment of vulnerability. This includes:

- appropriate consideration of the **impacts of the World mitigation strategies on the different impacts and adaptation needs in EU**;
- impacts of **extreme weather events** on costs and necessities for adaptation,
- comparison of vulnerabilities by **quantifying costs of adaptation** necessary to ensure fulfilment of services demand in different climate scenarios.

Outputs

- detailed **impact scenarios at national level** for selected climate and policy scenarios, with **analysis of costs implications**.
- scenarios of **cost-effective adaptation measures** at national level for selected climate and policy scenarios
- comparison of **severity of impacts and vulnerabilities across sectors**



