CC-TAME

www.cctame.eu

CLIMATE CHANGE: TERRESTRIAL ADAPTATION & MITIGATION IN EUROPE

Working with Stakeholders to provide

- Timely
- Relevant
- User-friendly
- State-of-the-art

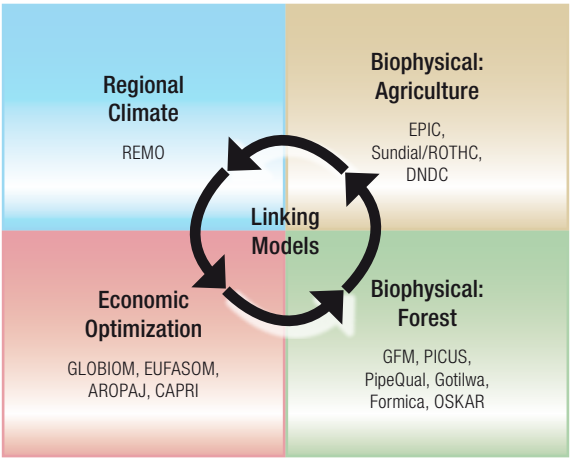
Analysis & Decision Support.

IIASA

JOANNEUM RESEARCH

Working with stakeholders to define areas of analysis. CC-TAME is an initiative now underway. Seventeen research institutions led by the International Institute for Applied Systems Analysis (IIASA) are working together to provide analysis and policy-decision support.

Linking climate, biophysical, and socio-economic models. CC-TAME will link state-of-the art, data rich, spatially explicit climate; agricultural soil and yield; forest dynamics; and socio-economic models. By providing modeling in the land use sector at the same level of sophistication as energy modeling, consistent policy analysis across all sectors will be possible for the first time.



Policy Coordination: European policies can be coordinated to address climate change efficiently. CC-TAME will search for the most effective designs for a coordinated climate change mitigation and adaptation strategy across the EU land-use and energy sectors.

CHANGE: TERRESTRIAL ADAPTATION &

For European domestic policy support, CC-TAME can provide, e.g.:

- Maps of resource potential
- Trade-off analysis:
  - maintain or increase carbon stocks,
  - use biomass for biofuels and other products.
- Impact analysis:
  - Land use offsets allowed in the EU trading Scheme
- Mitigation analysis
  - Hydrologic response to management change

For International Negotiations:

- Sources and GHG implications of biomass for bioenergy
- Cost/supply curves for adaptation and mitigation options

MITIGATION IN EUROPE

Enabling efficiency and effectiveness of policies. Costs and greenhouse gas (GHG) impacts of policies such as the Common Agricultural Policy, Forest Strategy, and Biofuel Action Plans will be analyzed. CC-TAME's primary focus is domestic European policy. Support for international negotiations will be provided through, e.g., assessment of net-net accounting, land-based accounting, biofuel policies, etc.

Resolution: CC-TAME will link plot and stand-level data from agricultural and forest growth models to state-of-the-art regional climate models enabling high-resolution (down to 1 x 1 kilometer), geographically explicit outputs at a range of scales. Biofuel plants can be specifically located, forest growth information can be provided at the province level, and socio-economic assessments will be at regional scales.

A few specifics: CC-TAME will provide analysis for both mitigation and adapatation policies. It will model **agricultural and forest practice options, e.g.:**

- fertilization rate and timing
- conservation tillage and crop rotations
- forest pest and disease management
- forest fire management
- land use changes
- biomass for energy options

Projections of population, GDP, energy use and technological change will be used to assess impacts on land and commodity prices.

BACKGROUND AND RATIONALE

The land use sector will be seriously impacted by climate changes, and is itself a source of those changes. However, in addition to contributing to greenhous gas (GHG) emissions, the land use sector is unique because the terrestrial biosphere can also remove carbon dioxide (CO_2) from the atmosphere. Thus, land use policies that reduce emissions, policies that increase removals, and policies that assist in adaptation to climate change must be considered.

While the percent of total emissions stemming from land use and land use change (LULUCF) is decreasing, LULUCF is still the second largest source of human-induced GHG emissions. The agricultural sector alone accounts for 9 percent of total EU-27 GHG emissions. Worldwide, deforestation is estimated to contribute approximately 20 percent of human-induced GHG emissions.

Many of the options that enable the land use sector to contribute to climate change mitigation and adaptation strategies have ancillary benefits. Recreation, habitat, soil quality, and the hydrological cycle can all benefit from good land-use practices.

For all of these reasons, it is critical that sound decisions on land use policies be undertaken. Each policy has pros and cons. **CC-TAME will enable policy makers and other stakeholders to evaluate the impacts, efficiency, and effectiveness of a range of land use options, thereby improving policy selection.**

CONSORTIUM PARTNERS

See **www.cctame.eu** for current CC-TAME project information.

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