CLEWs-EU

(Climate, Land, Energy, and Water systems)

MODEL OVERVIEW

CLEWs-EU is a fully open-source model featuring two geographical layers—an aggregated EU-wide version and a nationally disaggregated model—allowing both exploratory high-level analysis and detailed country-specific assessment. The CLEWs-EU model builds on the OSeMOSYS (Open- Source Energy Systems Model) modelling framework with several enhancements implemented. Greenhouse gas (GHG) emissions are tracked across the modules. In addition, the suite of technologies has been expanded to include a broader range of decarbonisation options. In the land module, the available land resources for crop production, livestock grazing, and other uses are being defined at the EU level and for each country individually, assessing the impact of policies and climate on water and energy.

ACCESS

CLEWs-EU:
https://eu-clews.readthedocs.io/en/latest/index.html

GitHub
https://github.com/CLIMATE-DIAMOND/EU-CLEWS

Zenodo:
https://doi.org/10.5281/zenodo.16537821

LICENSE

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OTHER INFORMATION

Time Horizon: 2021 - 2050

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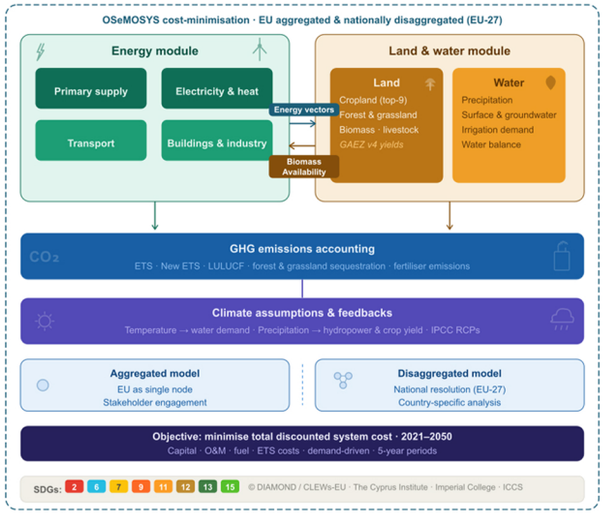
Funded by the European Union



Simplified representation of CLEWs-EU structure and sectoral coverage.

SUPPORTED ANALYSES

- Analysis of EU and member state-specific mitigation strategies and actions.
- Evaluation of national or regional policies and measures.
- Assessment of broader decarbonisation options and technological interventions.
- Development of decarbonisation pathways and analysis of associated trade-offs and synergies across sectors.

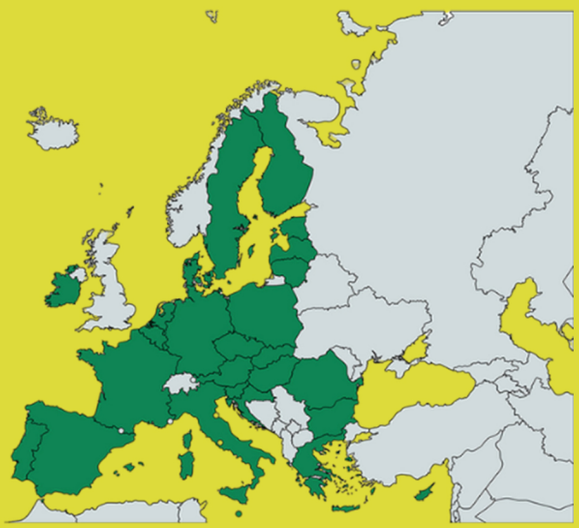
WHAT'S NEW

- Development of two versions: i.) an aggregated model (single EU node); ii) a nationally disaggregated model.
- Larger set of technologies used to represent primary energy supply, electricity generation, transport, buildings and industry (i.e., hydrogen).
- Explicit representation of water demand and supply.

SDG COVERAGE

REGION MAP

EU-27 as a single node and member-state disaggregation



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