

GEMMES

General Monetary & Multisectoral Macrodynamics for Ecological Shift

GEMMES is a macroeconomic modelling tool that takes into account climate dynamics (mitigation and adaptation) and the scarcity of natural resources in its assessment of macroeconomic, social and financial risks.

GEMMES makes it possible to test transition policies.



Objectives:

Provide a quantitative representation of the macroeconomic impacts of ecological transitions in order to inform decision makers.

Analyze public policies and financial risks that may emerge in the context of a transition and their effects on economic activities.

Feed and strengthen public policy dialogue on ecological transitions, at national and international levels.

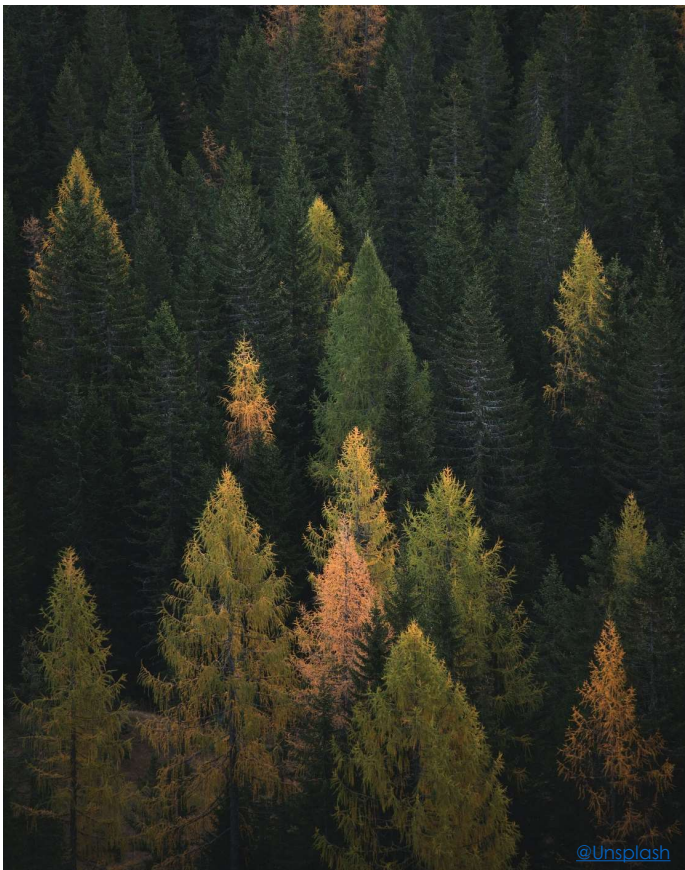


Beneficiaries

Governments (ministries of finance, development and/or environment, central banks)

GEMMES versions developed by AFD:

- **Colombia** (fiscal and financial impacts of a global transition)
- **Côte d'Ivoire** (macroeconomic and socio-economic impacts of energy transition policies)
- **Vietnam** (socio-economic impacts of adaptation policies)
- **Tunisia and Morocco** (macroeconomic and/or socio-economic impacts of adaptation policies in the agriculture sector)
- **Mexico** (climate financial risk analysis)
- **India** (socio-economic impacts of energy transition policies)





Characteristics

Type of instrument: Grant

Budget: €500 K – €1 M

Targeted projects: Economic modelling

Operation: GEMMES is an instrument of public policy dialogue with partner countries. It allows a common language to emerge between different sectoral ministries (water, agriculture, energy) and at a cross-sectoral level (finance, planning, central banks). It establishes a bridge between academic and political spheres (researchers and decision-makers) and between different disciplines (such as economists, ecologists, agronomists and engineers)

Each GEMMES model is developed based on the specific characteristics of the country with the help of local academic and ministerial partners



Examples

Colombia: In collaboration with the Department of Planning and the University of Bogota, the research project evaluates the macroeconomic impacts of investments regarding its Nationally Determined Contributions (NDCs), particularly in the finance and tax sectors:

- Design of different scenarios for fossil fuel exports and analysis of the impacts that the country could face in the event of a rapid decline in these exports
- Study of the macroeconomic impact of policy responses (industrial policies aimed at diversifying the export base) that can help mitigate the country's vulnerabilities

