

### Mission

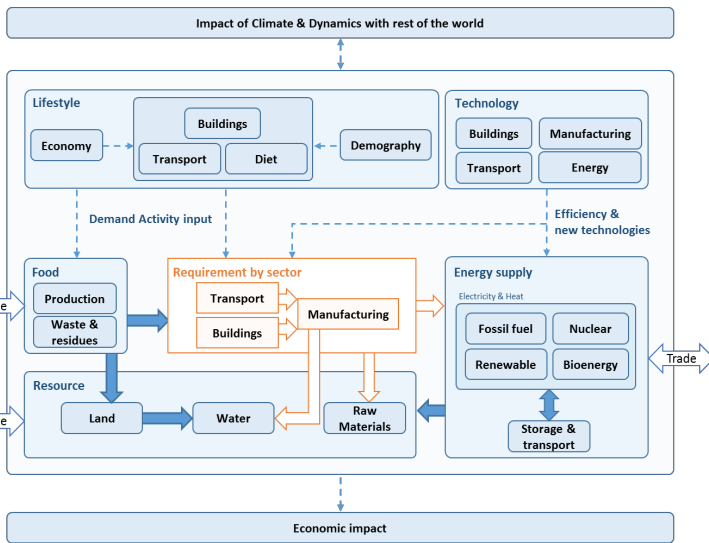
The purpose of the project is to implement an energy-society model allowing users to autonomously calculate and visualize Europe's and Member State's greenhouse gas emissions according to sector specific pathway decisions.

The approach will enhance the trust in energy modeling through a strong co-creation and consultation process bringing together academia, public and business sectors.

### Impact

The project supports the European 2050 Road Map towards low carbon economies by delivering an integrated and interactive approach. It promotes an informed debate around the European competitive low-carbon economy in 2050 and a resilient Energy Union with a forward-looking climate change policy.

It considers user needs (most prominent one mentioned during co-creation workshops: health, safety, employment, education; less important: food provision, land-use, gender aspects) and allow them to create own "policies" and the consequences therein.



Overall structure of EU calculator model

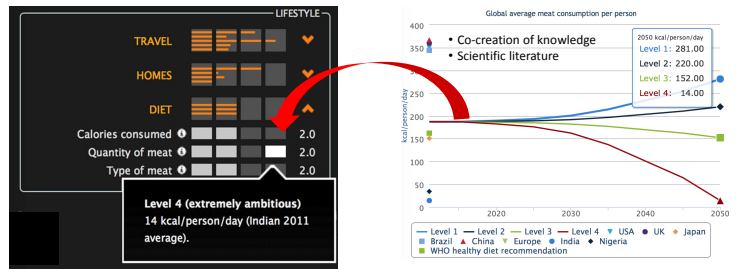
### The Team



### Scientific approach

Developments of a model of intermediate complexity that facilitates the evaluation of trade-offs and synergies arising from interventions at (different) sectoral (buildings, transport, agriculture, etc.) or country levels.

As the public and policy should have the opportunity to readjust strategies, the approach is based on a transparent definition of ambition levels representing desirable futures for different sectors.



Starting point of the European Calculator Model was the Global Calculator Approach ([www.globalcalculator.org](http://www.globalcalculator.org)). In particular the 4 ambition levels for future sector scenarios were kept, i.e. L1: minimal abatement, L2: ambitious, L3: very ambitious, L4: extremely ambitious, but for many more sectors and on European Member State level plus Switzerland.

### The European Calculator

The screenshot shows the EUCALC DO THE MATH! interface. Key features highlighted with red boxes include: 'Incompatibility warnings for selected pathways, e.g. Climate, water, health, land use, etc.', 'Carbon budgets emitted and compatible with policy targets' (showing 137.5 Gt CO2e), 'Choice of desired sector impacts' (allowing selection of emissions by source or sector), 'different ambition levels for member states' (showing a transition pathway for Europe to Poland), and 'Long term development' (showing a graph of European GHG emissions from 1990 to 2100).

The new European Calculator approach. It considers much more sectors and allows distinctions in policy making for different policy targets. Assessments how this will interfere with general European targets or whether other have to do more will be possible.

### Contact

**Project coordinator:** Prof. Dr. Jürgen Kropp  
**Email:** [nsp@pik-potsdam.de](mailto:nsp@pik-potsdam.de)  
**Website:** [www.european-calculator.eu](http://www.european-calculator.eu)