ClimTrans2050:

Expert Workshop, April 24th, 2015

Protocol

Umweltbundesamt

ClimTrans2050: Open source model for analysing Austria’s transition to a low carbon society by 2050 – A research plan

Project team

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# Agenda

**10:30-10:45 Welcome and presentation of the project**

**10:45-11:50 Presentation of the work packages (10-15"   
 each)**

**11:50-12:00 Presentation of the web-based knowledge   
 platform**

**12:00-12:30 Lunch break**

**12:30-13:30 Table discussions (4 groups)**

**13:30-14:10 Presentation of result of table discussions**

**14:10-15:00 Discussion in plenum**

**15:00 End of workshop**

**Objecitve of the Workshop**

* **Presentation of the project framework**
* **Involvement of experts with respect to** 
  + - experience on modeling long-term transformation processes
    - Necessary elements and content of a research plan for an open source model
* **Exchange platform on modeling expertise – presentation of web-based knowledge platform**

# Participants

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+ Project team

**Questions for Table Discussions**

* What is your experience on modeling long term transformation processes?
* Based on your working experience on long-term transformation what are necessary elements and content of a research plan for an open source model?

**Synthesis of Table discussions**

Table 1

* Environmental models should have a geographic representation 🡪 heterogeneous impacts
* Systems dynamic models could be useful, but difficult to organize exchange of data
* Look at SEAMLESS-IF Project
* Are drivers of models suited for describing long-term transition
* Least suited for long-term modelling 🡪 economic models
* Maybe need for bottom-up models
* But that increases uncertainties
* Disaggregate ghg emissions into functionalities, mean value approach otherwise we are lost 🡪 black-box again?
* Find optimal trade-off
* Linkt top-down and bottom-up
* Be more precise about our language
* What is a functionality, what is a structure?
* Current system dynamic modelling tools are well suited to model changes in transport systems
* Cause and loop diagrams are very helpful to discuss mental models with peers
* Qualitative analyses sometimes more insightful than quantitative analyses

Table 2

* Certain shocks not illustratable
  + No prediction possible
  + Maybe simulate
* Calculate scenarios
* Policy framework constant image
* Better indicators for economy
  + Social components
  + Distribution effects
* Data: not enough knowledge about central properties
* Usage:
  + Who should be able to use it
* Stochastic elements
  + How more resilient
* Transparent models
  + Open up other researchers

Table 3

* Who should be addressed with the research plan, who would use an open source-model?
  + Difference if it is used by scientific community or by stakeholders
* maybe it could serve as a databank with a consistent framework
* Model should be detailed on an exemplary basis but cannot cover all functionalities and sectors
* Sub-modules should be hierarchical and integrated into a more general module
* Important is how you handle feed-backs between sub-modules
* Systemic interdependencies are missing
* Interaction between modules should be laid out
* Radical change – technological and behavioural
* Interaction between technologies and other determining factors
* Rebound effects on a social level as response to changing framework
* Models are not robust to transformation processes
* concentrate on key functionalities, its not possible to cover everything
* cost based criteria are difficult to handle, because you don’t know how they develop, also they are not the only criteria for a decision – interesting is a policy instrument mix
* which technologies are already common in 2050 and the impact of a measure depends on the framework in 2050
* What will happen anyway, what needs to be triggered my policy instruments