



CONSULTATION ON EC4MACS MODELLING METHODOLOGY

Please fill in one questionnaire for each model, and provide your comments in the respective boxes.

Please return the questionnaire to the EC4MACS coordinator Hans Benzinger (benzing@iiasa.ac.at) before June 15, 2009.

<i>Name</i>	Andrew Kelly
<i>Institution</i>	AP EnvEcon
<i>Country</i>	Ireland
<i>Phone</i>	0035317163782
E-mail	Andrew.Kelly@APEnvEcon.com

<i>Model</i>	TREMOVE (Road transport only)
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1 Assessment of model design

To what extent does the structure of each model provide a scientifically credible representation of the reality?

The structure and components of the overall model incorporate the elements necessary to create a credible modelled representation of reality for the transport sector. The main drivers are accounted for in some way such as fuel, stock, vkm, technologies, costs, relative values and so on

What are the limitations of the model structure and the implied system boundaries and to what extent may these restrict the validity of the conclusions and policy

The model lacks flexibility for the end-user in some key parameter areas and has suffered in the past from the lack of any user interface. Accessibility and flexibility are essential to any model that wishes to operate as a focal point of international policy as without this there will be little or no support for the model outcomes. Additionally, without a more developed user base the burden on the modelling team behind the development of the model is excessive in terms of dissemination, support and calibration.

Obviously the model does not incorporate a network of roads as a component but this is a different level of detail and not necessary for the current uses. There are also some questions over how the model handles certain price change nuances and policy incentives, but these could likely be overcome with additional flexibility for the end-user.



2 Representation of reality in the modules

To what extent does the structure of each model provide a scientifically credible representation of reality?

As a sectoral model TREMOVE can be setup to provide a scientifically credible representation of reality.

3 Treatment of uncertainties

Have the most policy-relevant uncertainties (related to variability of the system inexactness of input data and lack of knowledge) been adequately addressed?

Difficult to say. The model may work for certain tasks when carefully setup, however, the ability of the model to address more complex policy assessment tasks is hard to comment upon until we have worked more regularly with the model.

Is there an alternative formulation conceivable that could provide better policy-relevant insights into uncertainties?

A fresh attempt to explain the model and improve accessibility is necessary. The GUI TREMOVE is a step in the right direction, but the core system still lacks the flexibility it needs. With a more open approach and a greater number of users, the model would benefit from increased knowledge transfer for calibration and further improvement. Improved data is the best short-term approach.

Do available model results represent uncertainties accurately? Are there other ways conceivable for attaining more robust conclusions?

There are few results on which to base a response. The model has been used to good effect in the past for specific studies but there are no 'non-development' teams in Europe working with the model regularly to assess outputs and uncertainties.

Is there a risk that the model gives policy advice that systematically underestimates or overestimates the need for policy measures to protect the environment? What are the major reasons for a bias, if any?

Not particularly relevant to TREMOVE

4 Communication with stakeholders, policy-makers and public

How do the modelling teams verify the quality of input data that are used in model? Is the quality of the input data obtained from national sources and from other models sufficiently guaranteed? In what way do teams give feedback to providers of input to maximise the robustness of model results?

There has been some feedback in the past from national contact points, with other data then obtained through channels such as Eurostat. Some parameters in the model were then derived from research projects such as SCENES. Previously there was no real follow-up in terms of how data provided was used and the associated results. Generally such processes will be iterative and so follow-up is necessary. This can be challenging but as mentioned previously, increased national engagement can remove part of this burden from the development team.

In recent months we have had excellent support and engagement with the team in Greece in terms of development and support. There are also meetings planned in June with the Commission. Hopefully there will be a sustained interaction between all stakeholders (JRC, Leuven, other potential users) to see what further progress can be made.

In what way are users and stakeholders involved in the modelling process, and is this sufficient to ensure transparency and acceptability of the results for policy advice?

There have been national contact point meetings and efforts have been made in the past to engage users, however the key constraint was the model itself which was not designed with end-users in mind. The model would need to be adapted (redeveloped) to allow for greater flexibility in analysis and have an improved interface completed. Following this the system should be promoted again to engage more national support.

Are the presentations of the results clear? If not, can the communication and dissemination of the results be improved?

Result presentation via pivots is quite clear and a useful approach for the end-user. A small change may be to allow for adjusting units to be consistent with other model outputs formats.

Is the model structure transparent? (e.g., are the assumptions clearly exposed and motivated, and is their influence on the model-results explained?)

The overall structure is quite clear, however, the details of the interactions and dependencies are not.



5 Other comments

The model has good potential, but requires a (broader) user base and renewed effort to engage these users to judge, test and improve the model calibration. Without strong national interactions no model is likely to win support for use in international policy. Whilst the concepts of TREMOVE can be relatively easily understood, the operation and interactions are not. Additionally the model lacks some key flexibilities (e.g. ability to change the base demand) for users that reduce the likelihood of engagement.

Thank you for providing this feedback to the EC4MACS team!

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You will receive information on the EC4MACS review workshop that is planned for October 2009.