



the Response Measures Forum's and its KCI 6-year workplan activity number 3:

Facilitating development, enhancement, customization and use of tools and methodologies for modelling and assessing the impacts of implementation of response measures

Outline of a Technical Paper

I. Background

1. Tools and methodologies for modelling and assessing impacts can broadly be categorised under qualitative and quantitative methods. Both methodological approaches are useful and complement each other when performing assessment and analysis of impacts of implementation of response measures.

2. Each of them has advantages and disadvantages. Qualitative and quantitative methods are commonly used for and complement each other in understanding social and economic impacts including effects on labour. The method or a combination of those has to be chosen based on its adequacy to the objective of the assessment and what aspect is under investigation. Possible aspects to consider include:

- (a) What is being investigated?
- (b) What results are expected from the study?
- (c) What policy questions need to be answered (determines whether simple or complex tools are appropriate)?
- (d) What is data availability and how they correspond with the data requirements of particular models?
- (e) Whether to develop a new model/method or licence/customise/enhance/use an existing model or employ consultants; based on availability, openness, support structure, skills requirements etc.:

- a. Availability: existing models/methods and their openness for usage and customisation,
- b. Cost effectiveness: assessment of costs of development versus customization/use available open models,
- c. Skills requirement: availability of skills, including locally, for the development or customisation or use of methods/models,
- d. Support mechanism: what is the support mechanism available for existing models e.g. trainings or support for customisation/use or post customisation trouble shooting.

3. Information related to a-c is briefly covered in the paper "Guidance to assist developing country Parties to assess the impact of the implementation of response measures, including guidance on modelling tools"¹ prepared by the forum. Choosing a method for assessment and analysis is also proposed to be included in technical paper on the Response Measures Forum's and its KCI 6-year workplan activity number 4: Enhance the capacity and understanding of Parties, through collaboration and input from stakeholders, on the assessment and analysis of the impacts of the implementation of response measures to facilitate the undertaking of economic diversification and transformation and just transition.

¹ <https://cop23.unfccc.int/sites/default/files/resource/docs/2016/tp/04.pdf>

II. Objective and Scope

4. Considering this background, the objective of this paper is to provide information that enables policy makers to select appropriate methods for the assessment and analysis of impacts of the implementation of response measures.

5. The paper will be designed to provide information to governments and other stakeholders, with the view to assisting them in the selection of methods, including identifying useful training and modelling advice for national experts, necessary for the assessment and analyses of response measures both globally and for individual regions and countries.

6. The paper will build on (and not replicate) the previous papers and database by the forum and will be developed based on information which is publicly available, and information collected through a survey.

III. Introduction to the assessment methods

7. This section will provide a short overview of the tools and methods. This will serve to ensure common understanding of terminology and different aspects of models.

8. This section will also cover how uncertainty and dynamic aspects are dealt with in these tools and methods, and a simple comparison of tools which are widely used in country, regional and global level analyses.

9. This section will build on the information gathered in the technical paper on the Response Measures Forum's and its KCI 6-year workplan activity number 4: Enhance the capacity and understanding of Parties, through collaboration and input from stakeholders, on the assessment and analysis of the impacts of the implementation of response measures to facilitate the undertaking of economic diversification and transformation and just transition.

IV. Data Requirements

10. This section will review the data requirements for models, including global, regional, and single country models, and other methods. This includes identification of national and international data, energy data, greenhouse gas inventory data, and environmental economic data.

V. Criteria for selection of models and methods

11. This section will cover development, enhancement, customization and use by focusing on the criteria for the selection of models and methods including, inter alia, the analytical and technical skills required; the provision of information to assist the selection of methods, and the associated capacity building needs and training opportunities for experts.

VI. Cost effectiveness analysis

12. This section reviews the cost effectiveness of development, enhancement, customization of tools and methods and of use of these tools and methods for obtaining policy insights, and, if possible and if applicable, the costs associated with data, and training.

VII. Database

13. In this section, the information for global and regional models will be presented as a database of models, methods, and training programmes for training in methods. The database includes organizations who can provide models, methods and/or training and information, .

The existing database² will be updated using this information and options for further updates will be considered. Database of models (including training and modelling support available)

- a) Global and regional
- b) Single Country

VIII. Concluding Comments and Recommendations

14. This section will provide *inter alia* a way forward by proposing some options, guidance and/or recommendations to facilitate the customisation and use of modelling tools, and methodologies for assessments and analyses of response measures.

² <https://unfccc.int/topics/mitigation/workstreams/response-measures/modelling-tools-to-assess-the-impact-of-the-implementation-of-response-measures#eq-1>