

Request for Long-Term, Integrated Scenarios in Support of the IPCC's 5th Assessment Report, Working Group III

Request updated: November 21, 2012



As part of the IPCC's upcoming 5th Assessment Report (AR5), a group of lead authors from Chapter 6 in Working Group III ("Assessing Transformation Pathways") are conducting a review of long-term scenarios from formal energy-economic and integrated assessment models. The collection and management of scenario data for this call is being coordinated by the Integrated Assessment Modeling Consortium (IAMC).

Scenarios such as these are extraordinarily valuable for understanding and assessing transformation pathways for climate change mitigation and can serve as an integrating element across the Working Group III (WGIII) report. Although a robust scenarios literature currently exists (Hanaoka et al., 2006; Nakicenovic et al., 2006; Krey and Clarke, 2011), a new review of scenarios will be valuable to build on previous scenarios by obtaining the most recent analyses and to collect data at a greater level of detail in a number of important variables of interest. Scenarios of particular interest for this review include, for example, second-best policy scenarios such as scenarios based on delayed participation by particular regions in mitigation, scenarios that span a range of different long-term concentration goals, and scenarios that include varying assumptions regarding the cost and performance of technologies associated with greenhouse gas mitigation. Both regional and global scenarios are of interest.

This letter is a formal request for submission of scenarios to this database. More information on the data submittal, including a model registration form and scenario data template, can be found on the IAMC website at <http://www.globalchange.umd.edu/iamc/scientific-working-groups/data-protocols-and-management/>. As the intention is to cover the peer-reviewed scenario literature as broadly as possible, please distribute this note to all parties you are aware of that may be interested in submitting scenarios to the upcoming request.

It is important to note that this scenarios database in no way constitutes the only source of scenarios for consideration in the WGIII report. This database is intended to provide one of many perspectives on scenarios and mitigation in the WGIII report. It will be used to explore the breadth of long-term, integrated scenarios from energy-economic and integrated assessment models and will therefore be most important for the development of Chapter 6, although the database will be used more broadly than in Chapter 6. A wide range of scenarios not included in this database can and will be used extensively throughout the report. Similarly, it is important to note that, as with any literature that is available to be assessed in the IPCC reports, submission to this database does not guarantee that a particular scenario will be reviewed in the WGIII report.

Timeline. To be considered in the final draft of the WGIII report, data and associated journal papers must be submitted by January 31, 2013 and accepted by October 3, 2013. However, it will be particularly beneficial to receive scenarios well before this date so that they can inform the figures and messages communicated in the preliminary drafts of the WGIII report and Chapter 6 in specific. There is a current need to obtain scenarios for consideration in the second-order draft (SOD) of the WGIII report. To be assured consideration in the SOD, data must be submitted by December 15, 2012.

Criteria for Submission. There are several important criteria for inclusion of scenarios in the database. First, IPCC protocol requires that only scenarios from the peer-reviewed literature be considered in this review. This means that the associated publication for the submitted scenarios

must be submitted by no later than January 31, 2013 and accepted for publication by October 3, 2013¹. Second, a minimum set of mandatory variables and mandatory model and scenario documentation information (see below) will be required for inclusion in the dataset. Third, the scenarios must be developed from formal energy-economic or integrated assessment models. Only scenarios from models that include at full representations of the energy system will be considered; models that focus on only one sector of the energy system will not be covered by this call, but will, instead, be covered in specific sectoral chapters of the WGIII report. Fourth, data must be provided up through 2030 at a minimum, and scenarios that extend to 2050 and 2100 are encouraged.

Access to Data. Until final publication of the WGIII report, the full database will be available only to the lead authors of Chapter 6, contributing authors working on Chapter 6, contributing authors working as liaisons to other chapters, and lead authors acting as liaisons from other chapters to Chapter 6. However, snapshots of particular variables from the database may be provided to authors and assessed throughout the WGIII report. In addition, at the time of publication of the WGIII report, all data reviewed in the report will be made publicly available in a single database.

Submitting Preliminary Data. Given that many important scenario studies are underway, researchers are encouraged to submit preliminary data from ongoing research with the expectation that this data will be updated when the studies are complete and the associated journal articles have been submitted. Again, data submitted by December 15 will be considered for assessment in the SOD of the WGIII report. The data submission process calls for all data to be marked as either “preliminary” or “published”. By submitting preliminary data to this database, researchers are giving their explicit approval to use this data in preliminary drafts of the WGIII report, all of which will be subject to outside peer review. By marking the data as preliminary when submitting it, researchers are also explicitly asserting that the preliminary data will be updated or replaced with final data when the studies are complete. Given that even preliminary data will be reviewed in the SOD and later drafts of the WGIII report, researchers are encouraged to refrain from submitting data if they believe there will be substantial changes to this data in the future that would fundamentally alter the nature of the results.

Variables and Meta-Data. The data template for this call includes several categories of variables: those that are mandatory (Tier 0), those that are strongly encouraged (Tier 1), and those that are considered optional (Tier 2). Submissions will only be considered if all or the majority of mandatory variables are included. The variables are explained in more detail with the reporting materials on the IAMC website. Beyond the mandatory variables, researchers are encouraged to carefully consider which variables they choose to submit, because any material in the database could end up being assessed in the WGIII report. In addition, the data template includes a set of mandatory “meta-data” that describes the models used to generate the scenarios along with important characteristics of the scenarios themselves.

Thank you for your consideration of this data request. The lead authors in AR5, and Chapter 6 in particular, are looking forward to the assessment of this new dataset.

From the Steering Committee of the Integrated Assessment Modeling Consortium.

¹ Submission and acceptance deadlines have been determined by the IPCC and are only reported here for convenience (see <http://www.ipcc-wg3.de/assessment-reports/fifth-assessment-report/more-about-ar5> for details).