



IAMC – Integrated Assessment Modeling Consortium

SWG on National Scenarios

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IAMC 2024 Webinar [International]

Date: 30th January 2024

IAMC and SWGs Background



IAMC – Integrated Assessment Modeling Consortium

Mission:

- ✓ Facilitate and foster the development of integrated assessment models (IAMs), and the conduct of research employing IAMs, including model diagnosis, inter-comparison, and coordinated studies.
- ✓ Facilitate and coordinate IAM research with research conducted in both the Climate Modeling (CM) and the Impact, Adaptation, and Vulnerability (IAV) research communities.
- ✓ Provide a point of contact with other institutions and organizations interacting with the IAM community

- 74 members
- 30 countries
- 4 continents

www.iamconsortium.org
iamc@iamconsortium.org



IAMC Scientific Working Groups (SWGs)

- SWGs bring together a subset of members of the IAMC, and possibly external participants, to carry out activities of the IAMC.
- We have **5 active SWGs**
 - Scenarios
 - Data Protocols and Management
 - Evaluation and Diagnostics
 - Climate Finance, and
 - National Scenarios (our newest SWG)
- Our 5 SWG's meet during the annual meeting to review activities during the year and to plan for the next year's work.



**Working Group on
Data Protocol and
Management**



**Working Group on
Evaluation and
Diagnostics**



**Working Group on
Scenarios**



**Working Group on
Scenarios for Climate-
related Financial Analysis**



**Working Group on
National Scenarios**

IAMC Annual Meetings



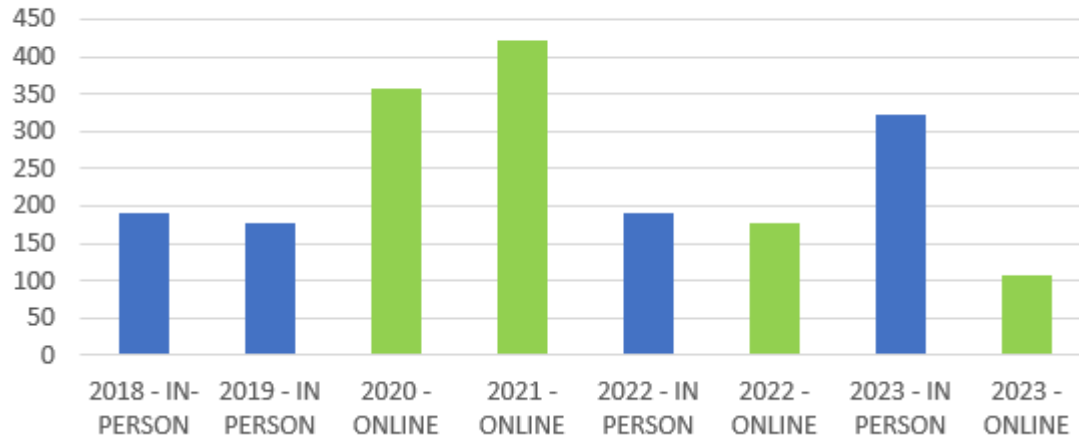
Integrated Assessment Modeling Consortium
Founded 2007

IAMC 2023

Venice, 14-16 November 2023

- **Submissions:** 412
- **Participants:** 433 (324 in person, 109 online)
- **Countries Represented:** 34
- **Content Highlights:** 176 oral presentations, 131 poster presentations (82 online, 49 in person)

IAMC Annual Meetings - Participants



IAMC Annual Meeting recordings available on the [IAMC YouTube channel](#).

STAY TUNED!

**IAMC 2024 South Korea:
more information soon!**

SWG on national scenarios Background

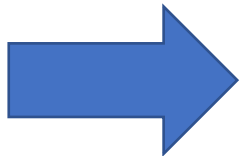
Background of **national** IAM scenarios



- Promote **standardization** among national scenario development activities to increase comparability and use in assessment of international climate policy
 - Includes linkages to common reporting databases
- Inter-linking national activities to global activities
 - Assessment of global and national/regional emissions, and climate consequences
- Provide a platform for sharing best practices to build capacity through the exchange of information. This includes (but is not restricted to) national scenario development, model inter-comparison and assistance with common reporting databases.
- **Facilitate and support dialogue** between IAMC community (global, regional, national) and national scenario users through outreach and communication activities.
- Coordinate on **archiving, documentation and communication** of national scenario data and publications

Background of **national** IAM scenarios

- No communities or organizations
 - have centrally collected the information on national scenarios
- Comparability of scenarios are expected but ...
- How should we map with global picture consistently from **national perspective**?
- Need to tackle with uncertainties
 - Climate policies are revised and launched frequently
 - National circumstances can change drastically
 - Global scenarios are also revised based on WG3 and WG1 state-of-the-art knowledge



IAMC SWG can provide the required platform to explore national climate actions

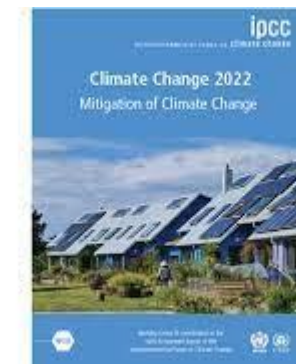
- There is broad literature on global mitigation pathways and **decent literature on country level pathways** published in the last decade.
- **Different methods and models** exist to analyze the implications of current policies and NDCs on county-level emissions.
- The country level studies differ across **different dimensions**. These include:
 - (i) sectoral coverage (single, multiple),
 - (ii) the emission coverage (only CO₂, CO₂, and non-CO₂),
 - (iii) the type of scenarios (current policy, business as usual, based on SSPs),
 - (iv) policy coverage (representation of policies differ based on the model archetype).



National Scenarios Research Study

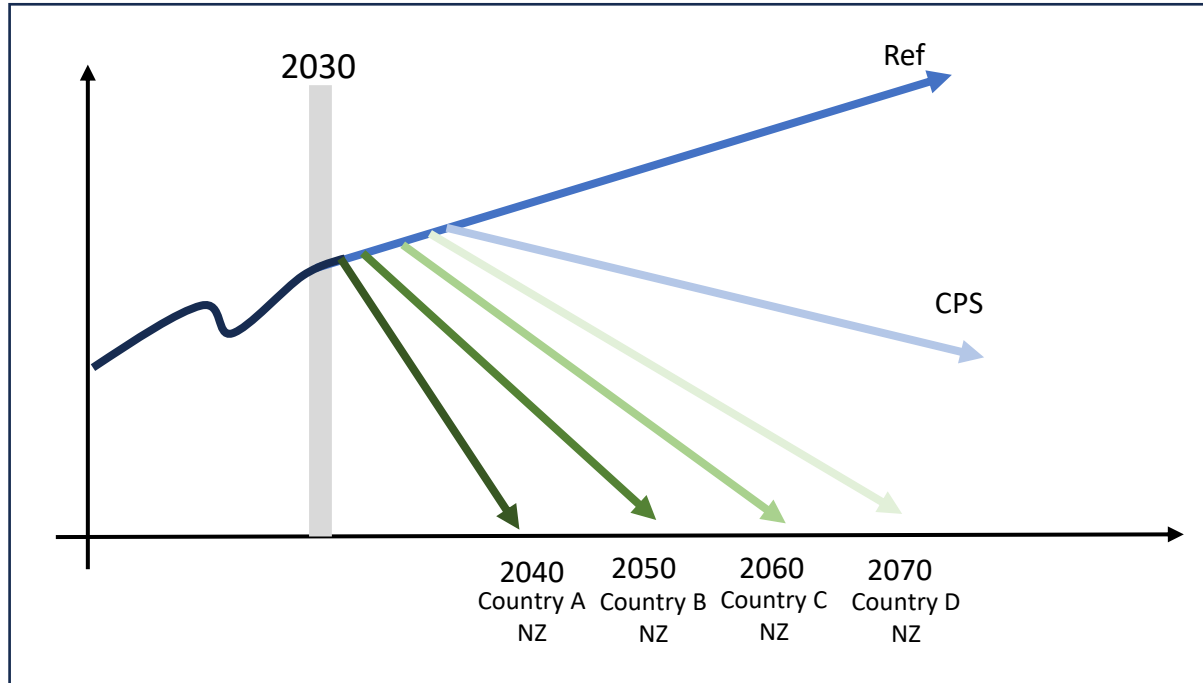
Background

- **National (mitigation) pathways** and scenarios have gained major significance since
 - Paris Agreement (COP21)
 - Glasgow Pact (COP26)
- Architecture of the Paris Agreement combines bottom-up, country driven processes based on **individual Nationally Determined Contribution (NDC)**, with top-down **global stocktake (GST)**.
- **IPCC WGIII AR6** for the first time focused specifically on the quantification of *short- and medium-term goals to assist policymakers to operationalize climate actions* in accordance with the Paris Agreement and the Glasgow Climate Pact



Purpose of the Study

- Build on the work compiled in IPCC WGIII AR6 Chapter 4 (mitigation and development pathways in the near and medium term).
- Plan to evaluate the gap between the current policies being implemented and the measures required to reach the Net Zero targets at national level.
- The **main objectives** of the first exercise are to:
 1. **Consolidate** modelling exercises taking place across international and national projects, activities explored under national and regional climate and energy modelling forums,
 2. **Facilitate** discussion of the national scenarios, and coordinate the scenario intercomparisons within and across countries or region,
 3. **Align** the Long-Term Strategies (LTS) and Net Zero (NZ) targets with short term policy measures (updated NDCs and implemented current policies).



Illustrative Pathways
(Authos, WIP)

Reference: Also known as baseline/business as usual scenario. This scenario assumes policies or measures implemented before 2015. Baseline scenarios are not intended to be predictions of the future, but rather counterfactual constructions that can serve to highlight the level of emissions that would occur without further policy effort .

Current policies Scenario (CPS): includes currently implemented policies adopted by governments (through legislation) or non-binding targets backed by effective policy instruments and planned policies in the pipeline to be adopted.

Net Zero scenario (NZS): The NZ scenario could capture the planned policies³ (including updated NDC), ratcheted implemented policies in addition to policies mentioned in each country's Long-Term Strategies (LTS) and/or Net Zero plans. Ambitions and pledges are considered in this scenario.

- There will be **an initial set of scenario variables** shared with national modelling teams. The scenario data collection and vetting process ensure that the data collected is transparent, consistent, complete, and comparable.
- The **compilation** of national models and scenarios data will be hosted on a Scenario Explorer by the *International Institute for Applied Systems Analysis (IIASA)* as a part of cooperation agreement with IAMC SWG on national scenarios.
 - We will share the scenario database excel along with final scenario protocol shared with country teams.
 - **NOTE:** For those who cannot transform the currently available scenario data into so-called IAMC template, please contact us. We will assist you with data processing.
- The **vetting** of scenario process constitutes of verification and validation of model results in this study. This will include (not limited to) historical data validation (hindcasting), unit checks and clarification on issues in model results.

Timeline

| | Tasks | Deadline |
|----|---|-------------------------|
| 1 | Feedback on national scenario protocol version 0 | December 15, 2023 |
| 2 | Call for national scenarios based on finalized national scenario protocol | January 15, 2023 |
| 3 | International webinar: IAMC SWG on national scenarios | January 30, 2023 |
| 4 | Initial deadline of national scenarios | April 01, 2024 |
| 5 | Feedback and discussion with country modelling teams | April - May 2024 |
| 6 | Final deadline of national scenarios | June 30, 2024 |
| 7 | First draft of the paper/s shared with co-authors for review and feedback | September 30, 2024 |
| 8 | Submission of feedback by co-authors | October 15, 2024 |
| 9 | Initial presentation of results at IAMC 2024 | November 2024 |
| 10 | Final draft/s submitted to journal (tentative) | January 31, 2025 |

Google Form on model/scenario generation tool

- **Step 1** contributors, stakeholders, subscription
 - Google Form or Scan bar code
 - Country
 - Institute Name
 - Model Name
 - Model Type: national IAM, ESM, CGE
 - Geographical coverage: National, subnational
 - Project: International, National
 - Country EMF
 - *Latest developed scenarios (NDC, CPS, NZ, other)*
 - *Model documentation*
 - *Relevant literature (4-5 articles if possible)*
 - Contact person
 - *Main developer of the model*
 - Used IAMC template



Also available on IAMC SWG website

Contact

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Questions

