

**FIFTY-SEVENTH SESSION OF THE IPCC**  
**Geneva, Switzerland, 27 – 30 September 2022**

IPCC-LVII/INF. 5, Rev.1<sup>1</sup>  
(13.IX.2022)  
Agenda Item: 7.5  
ENGLISH ONLY

## **PROGRESS REPORTS**

### **Task Force on National Greenhouse Gas Inventories**

(Prepared by the Co-Chairs of the Task Force on National Greenhouse Gas Inventories)

(Submitted by the Secretary of the IPCC)

---

<sup>1</sup> This revised version is being submitted to reflect the addition of a paragraph under Section 2 “IPCC Inventory Software” and Annex II has been corrected.

# PROGRESS REPORT

## Task Force on National Greenhouse Gas Inventories

This report describes the progress in the work of the Task Force on National Greenhouse Gas Inventories (TFI) since the last update presented during the 54<sup>th</sup> (bis) Session of the IPCC (IPCC-54bis) in December 2021:

- Methodological work on short-lived climate forcers (SLCFs);
- The development and maintenance of the IPCC Inventory Software;
- The data population and maintenance of the IPCC Emission Factor Database;
- Others.

### 1. Methodological Work on Short-lived Climate Forcers (SLCF)

The preparatory work for the Methodology Report on Short-lived Climate Forcers (SLCFs) has been conducted since 2019 in accordance with the Decision IPCC-XLIX-7. As was reported at IPCC-54bis, technical analysis work had been done by the TFI Technical Support Unit (TFI TSU) together with other experts in 2020 and 2021, and the Joint 1<sup>st</sup> and 2<sup>nd</sup> Expert Meeting on SLCFs had been virtually held from 11 to 22 October 2021. The report of this expert meeting was published at the TFI website<sup>2</sup> in March 2022, which contains a list of all significant source categories of SLCFs and issues for further consideration for each inventory sector, Energy, Industrial Processes and Product Use (IPPU), Agriculture, Forestry and Other Land Use (AFOLU), Waste.

The TFI held the 3<sup>rd</sup> Expert Meeting on SLCFs from 11 to 15 April 2022 in a virtual format. Experts discussed various cross-sectoral issues, such as definitions of SLCF species and their relevance for a climate-related inventory, as well as the applicability of general inventory guidance provided in Volume 1 of the 2006 IPCC Guidelines and its 2019 Refinement to the inventories of SLCFs, including, but not limited to, key category analysis, uncertainty analysis, verification. Also, the meeting took into account the contribution of Working Groups I and III to the IPCC Sixth Assessment Report (AR6). The report of this expert meeting will be published in due course in the TFI website. The expert meeting produced a list of SLCF species with their definitions and information on their relevance for an emission inventory, a compilation of general inventory issues relevant for an SLCF emission inventory, a list of SLCF categories and a list of information gaps for an SLCF emission inventory.

By publication of the report of 3<sup>rd</sup> Expert Meeting, the preparatory work during the IPCC sixth assessment cycle (AR6 cycle) required by Decision IPCC-XLIX-7 will be completed. The TFI extends its appreciation to the Government of Norway for the financial contribution to support the preparatory work. All the outcomes of the preparatory work will serve as the basis for discussion at the Scoping Meeting for the Methodology Report that will be held during the IPCC seventh assessment cycle (AR7 cycle) in accordance with the agreement by the Panel at its 53<sup>rd</sup> (bis) Session.

### 2. IPCC Inventory Software

The TFI keeps improving the IPCC Inventory Software<sup>3</sup> and supporting its users. A new beta version is currently under testing. This new beta version is with enhanced capacity for all methodological tiers for all inventory sectors (Energy, IPPU, AFOLU, Waste) and all approaches for the land representation in the AFOLU sector.

Although the COVID-19 pandemic has dramatically reduced the opportunities to reach out to inventory compilers, the TFI TSU has been making efforts to help inventory compilers better understand and use the IPCC Inventory Software by participating in outreach events organized by other organizations. Recent examples of such outreach events are the Remote Training on the IPCC Inventory Software for the African region and for the Asian-Pacific and Eastern Europe regions, organized by the United

---

<sup>2</sup> [https://www.ipcc-nggip.iges.or.jp/public/mtdocs/2110\\_SLCF.html](https://www.ipcc-nggip.iges.or.jp/public/mtdocs/2110_SLCF.html)

<sup>3</sup> <https://www.ipcc-nggip.iges.or.jp/software/index.html>

Nations Framework Convention on Climate Change (UNFCCC) Secretariat in April and May 2022, as well as the 19<sup>th</sup> Workshop on Greenhouse Gas Inventories in Asia (WGIA19) organized by the Ministry of the Environment of Japan and the National Institute for Environmental Studies in July 2022.

Further, the TFI has organized an expert meeting to collect Software and EFDB users' feedback. The meeting was hosted by the Food and Agriculture Organization of the United Nations (FAO) in Rome, from 26 to 28 July 2022. The focus of the meeting was, among others, the testing of Energy and AFOLU sectors of the beta version of the IPCC Inventory Software. Outcomes of this expert meeting will be used to upgrade/improve the software. The next version of the IPCC Inventory Software is expected to be released at UNFCCC 27<sup>th</sup> session of the Conference of the Parties (COP27) in November this year. The TFI extends its appreciation to FAO for hosting the meeting as well as for the cooperation in producing add-ons to the IPCC Inventory Software about land representation for the AFOLU sector. The TFI also extends its appreciation to the UNFCCC Secretariat for the financial contribution to support upgrade/improvement of the IPCC Inventory Software.

Noting the importance attached to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and the IPCC Inventory Software by the UNFCCC Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA), the TFI TSU has initiated the work, under the guidance of Bureau of TFI (TFB), to help the UNFCCC Secretariat in mapping the categories in the 2006 IPCC Guidelines for National Greenhouse Gas Inventories and those in the Common Reporting Tables agreed at CMA3 in November 2021<sup>4</sup>. This work will help the UNFCCC Secretariat facilitate interoperability between the reporting tools that will be used under the Paris Agreement and the IPCC Inventory Software<sup>5</sup>.

The TFB noted that the UNFCCC CMA3 had invited the IPCC to organize a technical training workshop in the second half of 2024 on its inventory software and the linkages of the software with the reporting tool for the electronic reporting of common reporting tables that will be used under the Paris Agreement<sup>6</sup>. The current TFB is not in a position to make a firm proposal to the Panel on how to respond to this invitation, because this training workshop is expected to take place in 2024 during the AR7 cycle. However, the current TFB wishes to express its concern about this invitation, because of the following reasons.

- TFI support to users consist of gathering feedback on software functionalities that need correction or improvement; Training or capacity building is not included in the role of IPCC defined in the Principles Governing IPCC Work.
- It will need to be an extraordinarily large-scale workshop with invitees from each developing country Party to the UNFCCC/Paris Agreement. It will entail significant budgetary requirements.
- In the light of the aim of this training workshop, the UNFCCC secretariat and the UNFCCC national focal points would be in a better position than the IPCC TFB to identify and select invitees.

While fully recognizing the importance of IPCC TFI's cooperation to this training workshop, the current TFB is concerned about suitability of the IPCC to organize it.

### **3. Emission Factor Database (EFDB)**

The TFI has continued its work to maintain, improve and promote the Emission Factor Database (EFDB)<sup>7</sup>.

According to the letter from the IPCC Secretary sent on 3 December 2021 (5238-21/IPCC/TFI) member governments and observer organizations were invited to nominate candidates of experts to serve on the EFDB Editorial Board to fill the positions becoming vacant at the end of 2021 and 2022. Based on the submissions received by 24 January 2022, the TFB selected new members taking balance of geographical representation and gender into consideration, which was endorsed by the IPCC Chair. The members of EFDB Editorial Board including those selected this time are listed in the Annex III to this progress report.

---

<sup>4</sup> Paragraph 29 of Decision 5/CMA.3 (<https://unfccc.int/documents/460951>)

<sup>5</sup> Paragraphs 19 and 20 of Decision 5/CMA.3 (<https://unfccc.int/documents/460951>)

<sup>6</sup> Paragraph 21 of Decision 5/CMA.3 (<https://unfccc.int/documents/460951>)

<sup>7</sup> <https://www.ipcc-nggip.iges.or.jp/EFDB/main.php>

The TFI held the 20<sup>th</sup> meeting of the EFDB Editorial Board (EB20) and the Joint 19<sup>th</sup> and 20<sup>th</sup> Data meeting (JDM19&20) from June 28 to July 1, 2022 in Bilbao, Spain, in a hybrid format (in-person meeting with virtual participation).

The Editorial Board considered data proposals including those submitted by experts/participants to the JDM19&20 and a total of 639 data were accepted for inclusion into the EFDB, additional 8 data have been accepted for publication in the “Extra page” at the EFDB website.

The Editorial Board also discussed about enhancement and possible future development of the EFDB including on the population procedures, improvement of user interface and consistency in the application of data evaluation criteria.

The TFI extends its appreciation to the Basque Center for Climate Change for hosting the EB20 as well as the JDM19&20, and to the government of Spain as well as the Basque country government for their support.

#### **4. Others**

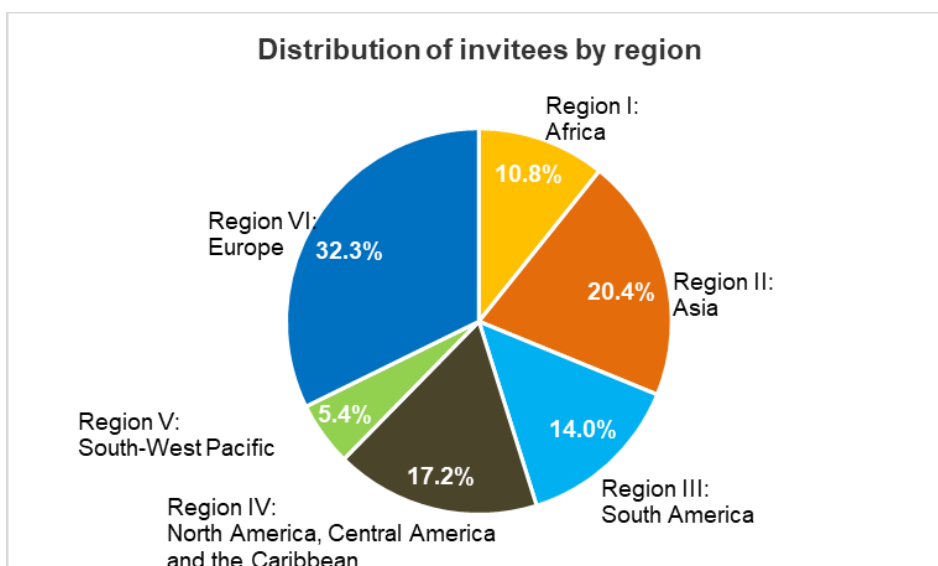
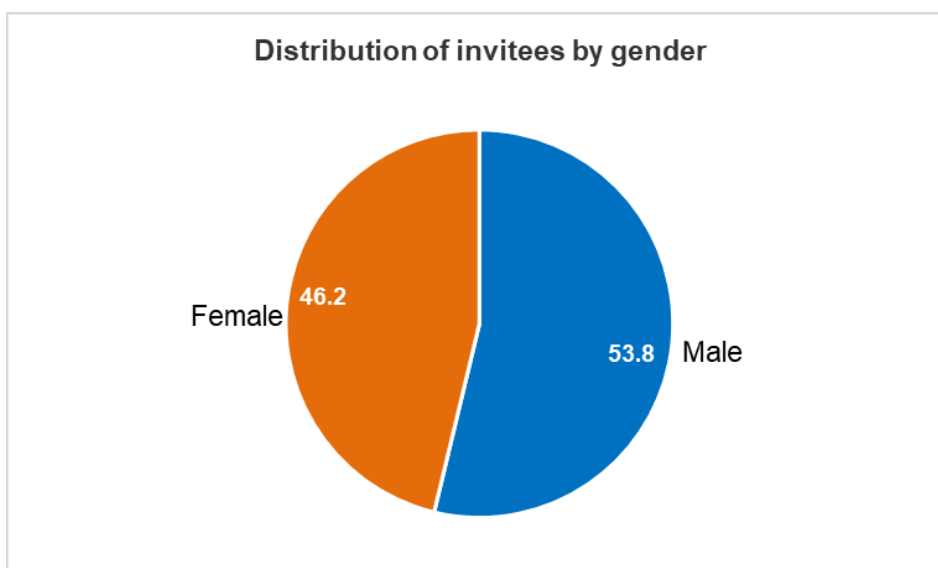
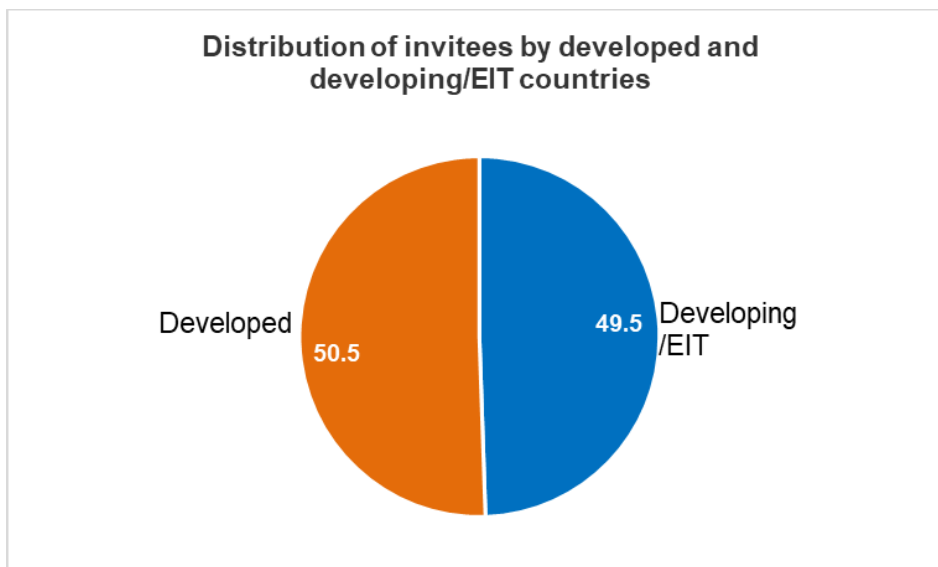
An Expert Meeting on Use of Atmospheric Observation Data in Emission Inventories was held in a hybrid format at the WMO Headquarters in Geneva, Switzerland, from 5 to 7 September 2022. Outcomes of this expert meeting will inform future TFI work. The report of this expert meeting will be published in due course in the IPCC TFI website.

The 34<sup>th</sup> meeting of TFB was held in a hybrid format at the WMO Headquarters, in Geneva, Switzerland, from 8 to 9 September 2022.

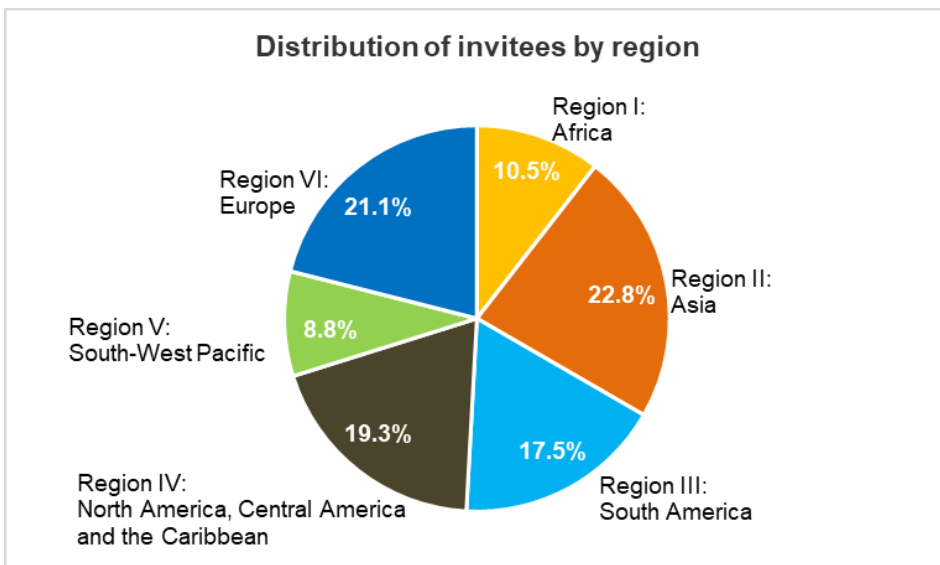
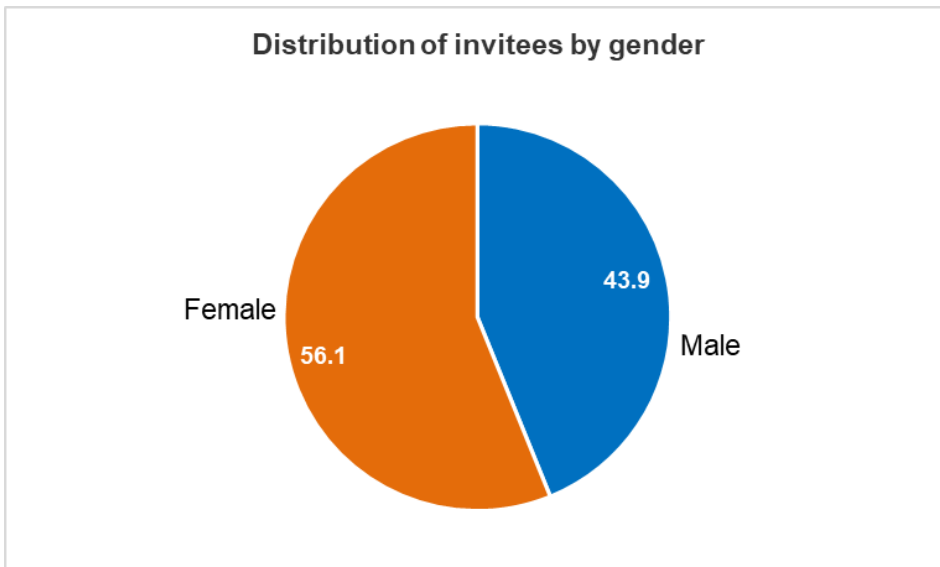
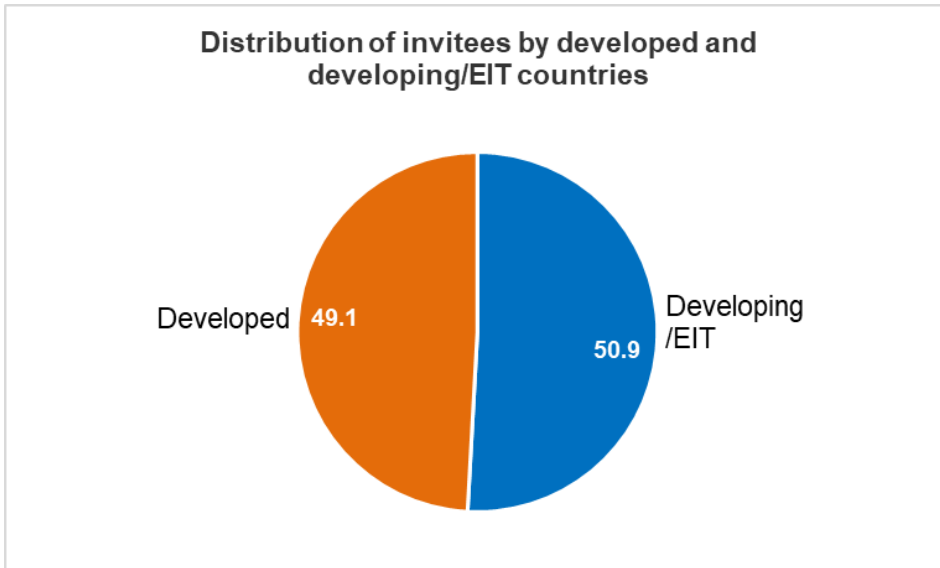
The TFI extends its appreciation to WMO for hosting the meetings.

## Annex I: Statistics

### 3<sup>rd</sup> Expert Meeting on Short-lived Climate Forcers 11 – 15 April 2022

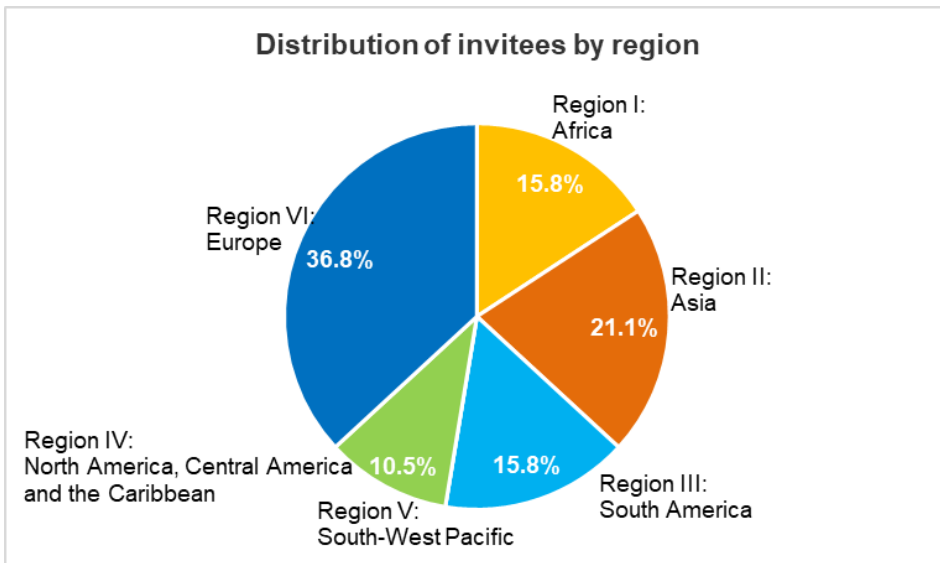
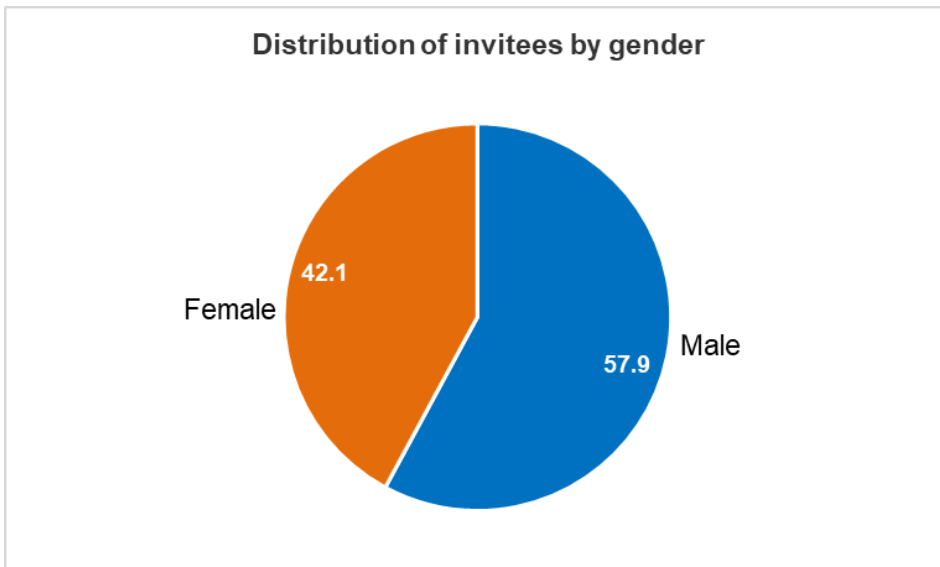
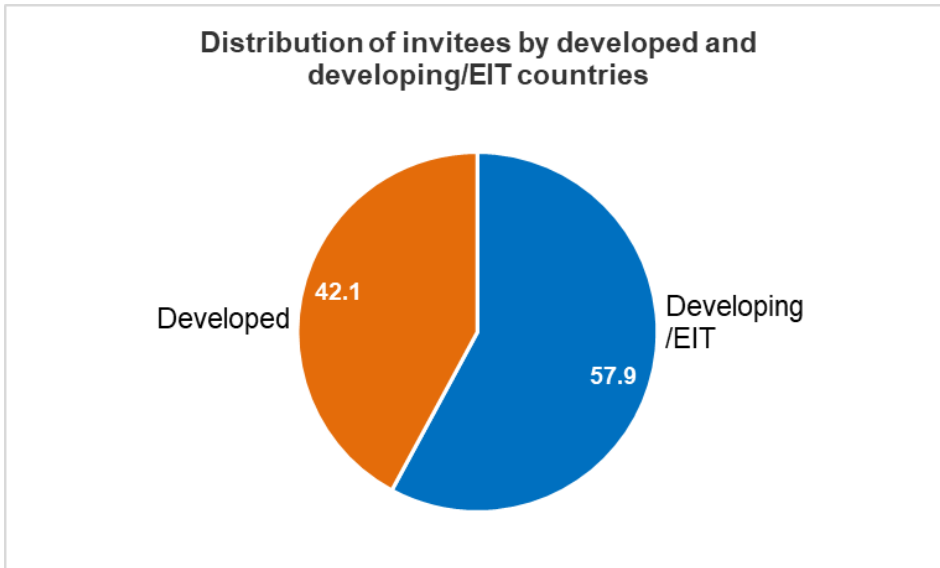


**EFDB Editorial Board (EB20) and the Joint 19<sup>th</sup> and 20<sup>th</sup> Data meeting (JDM19&20)  
June 28 - July 1, 2022**



**Please note that UN staff participants are not included in these statistics**

**Expert Meeting to collect Software and EFDB users' feedback  
26 - 28 July 2022**



**Please note that UN staff participants are not included in these statistics**

## Annex II: List of Participants

### *3<sup>rd</sup> Expert Meeting on Short-lived Climate Forcers 11 – 15 April 2022*

**Alaa Al Khourdajie**  
IPCC WGIII TSU  
UK

**Komi Akpé Agbossou**  
Université de Lomé  
Togo

**Gossi Awad Ahmed Babiker**  
University of Khartoum  
Sudan

**Hiroko Akiyama**  
National Agriculture and Food Research  
Organization  
Japan

**Maria de Fatima Andrade**  
University of São Paulo  
Brazil

**Anouk Aimée Bass**  
Federal Office for the Environment  
Switzerland

**Martial Bernoux**  
Food and Agriculture Organization of the United  
Nations  
Italy

**Kendal Blanco Salas**  
National Meteorological Institute  
Costa Rica

**Tami Bond**  
Colorado State University  
United States

**Nathan Borgford-Parnel**  
Climate and Clean Air Coalition  
Switzerland

**Bofeng Cai**  
Chinese Academy for Environmental Planning  
China

**Vincent Camobreco**  
Environmental Protection Agency  
USA

**Paula Soledad Castesana**  
National Scientific and Technical Research  
Council (CONICET)  
Argentina

**Richard Claxton**  
Aether Ltd  
United Kingdom

**William Drew Collins**  
University of Reading  
UK

**Sarah Connors**  
Université Paris Saclay  
France

**Monica Crippa**  
Joint Research Centre, European Commission  
Italy

**Laura Elena Dawidowski**  
National Atomic Energy Commission  
Argentina

**Stefano Decesari**  
National Research Council  
Italy

**Premakumara Jagath Dickella Gamaralalage**  
Institute for Global Environmental Strategies  
Japan

**Julia Drewer**  
UK Centre for Ecology & Hydrology  
United Kingdom

**Jan S. Fuglestad**  
CICERO  
Norway

**Qingxian Gao**  
Chinese Research Academy of Environmental  
Sciences  
China

**Amit Garg**  
Indian Institute of Management Ahmedabad  
India



**Savitri Garivait**

The Joint Graduate School of Energy and Environment (JGSEE)  
Thailand

**Rebecca M. Garland**

Council for Scientific and Industrial Research  
South Africa

**Sophie Générmont**

National Research Institute for Agriculture, Food and Environment  
France

**Veronika Ginzburg**

Yu.A.Izrael Institute of Global Climate and Ecology  
Russian Federation

**Céline Gueguen**

Transparency for Life  
France

**Patience Gwaze**

Department of Forestry, Fisheries and the Environment  
South Africa

**Chia Ha**

Environment and Climate Change Canada  
Canada

**Kevin Hausmann**

German Environment Agency  
Germany

**Kentaro Hayashi**

National Agriculture and Food Research Organization  
Japan

**Detlev Helmig**

Boulder A.I.R. LLC  
USA

**Amara Holder**

Environmental Protection Agency  
United States

**Julien Jabot**

Norwegian Environment Agency  
Norway

**Gill-Ran Jeong**

NOAA ARL - George Mason University  
USA

**Sergey Kakareka**

National Academy of Sciences  
Belarus

**Yugo Kanaya**

Japan Agency for Marine-Earth Science and Technology (JAMSTEC)  
Japan

**Zammath Khaleel**

Ministry of Environment and Energy  
Maldives

**Zbigniew Klimont**

International Institute for Applied Systems Analysis  
Austria

**Patricia Krecl Abad**

Federal University of Technology  
Brazil

**Hanna-Lii Kupri**

Estonian Environmental Research Centre  
Estonia

**Camila Labarca**

Ministry of Environment  
Chile

**Mohd Talib Latif**

Universiti Kebangsaan  
Malaysia

**Puji Lestari**

Bandung Institute of Technology  
Indonesia

**James Douglas MacDonald**

Environment and Climate Change  
Canada

**Guadalupe Alejandra Martinez Nuñez**

Climate Change Division  
Uruguay

**Aminata Mbow Diokhane**

Centre de Gestion de la Qualité de l'Air  
Senegal

**Jessica L. McCarty**

Miami University  
USA

**Erin McDuffie**

AAAS Science and Technology Policy Fellow  
USA

**Meimalin Moreno**

Venezuelan Institute for Scientific Research  
Venezuela

**Vaishali Naik**

Geophysical Fluid Dynamics Lab (GFDL),  
Princeton University, Forrestal Campus  
USA

**Ole-Kenneth Nielsen**

Aarhus University  
Denmark

**Leonidas Ntziachristos**

Aristotle University Thessaloniki  
Greece

**Josè Abraham Ortinez-Alvarez**

Instituto Nacional de Ecología y Cambio  
Climático  
Mexico

**Naga Oshima**

Meteorological Research Institute,  
Japan Meteorological Agency  
Japan

**Cecilia Elena Penengo**

Ministry of Environment  
Uruguay

**Didin Agustian Permadi**

National Institute of Technology  
Indonesia

**Robert W. Pinder**

Environmental Protection Agency  
USA

**Polina Polumieva**

Yu.A. Izrael Institute of Global Climate and  
Ecology  
Russian Federation

**S. Enrique Puliafito**

Universidad Tecnológica Nacional  
Argentina

**Xavier Querol**

Institute of Environmental Assessment and  
Water Research, IDAEA-CSIC  
Spain

**Luis Gerardo Ruiz Suárez**

National Institute for Ecology and Climate  
Change  
Mexico

**Maheswar Rupakheti**

Institute for Advanced Sustainability Studies  
Germany

**Kristina Saarinen**

Finnish Environment Institute  
Finland

**Francisco Salazar Sperberg**

Instituto de Investigaciones Agropecuarias  
Chile

**Ute Maria Skiba**

UK Centre for Ecology & Hydrology  
United Kingdom

**Steven J. Smith**

Joint Global Change Research Institute  
USA

**Sophie Szopa**

Laboratory for Sciences of Climate and  
Environment (LSCE – CEA / CNRS / Université  
Versailles – Saint-Quentin-en-Yvelines) at the  
Saclay campus  
France

**Toshihiko Takemura**

Kyushu University  
Japan

**Nguyen Thi Kim Oanh**

Asian Institute of Technology  
Thailand

**Aimable Uwizeye**

Food and Agriculture Organization of the United  
Nations  
Italy

**Vigdis Vestreng**

Norwegian Environment Agency  
Norway

**Jongikhaya Witi**

Department of Forestry, Fisheries and the Environment  
South Africa

**Noureddine Yassaa**

Centre de Développement des Energies Renouvelables  
Algeria

**Damian Zasina**

Institute of Environmental Protection – National Research Institute, The National Centre for Emissions Management  
Poland

**Xunhua Zheng**

Institute of Atmospheric Physics, Chinese Academy of Sciences  
China

**Songli Zhu**

Energy Research Institute, National Development and Reform Commission  
China

**IPCC TFI Bureau****Eduardo Calvo Buendia** (TFI Co-chair)

Universidad Nacional Mayor de San Marcos (UNMSM)  
Peru

**Kiyoto Tanabe** (TFI Co-chair)

Institute for Global Environmental Strategies (IGES)  
Japan

**Fahmuddin Agus**

Indonesian Agency for Agricultural Research and Development  
Indonesia

**Dominique Blain**

Environment and Climate Change  
Canada

**Fatma Betül Demirok**

Turkish Statistical Institute  
Turkey

**Dario Gomez**

National Atomic Energy Commission  
Argentina

**Riitta Pipatti**

Statistics Finland  
Finland

**Yasna Rojas**

Instituto Forestal de Chile  
Chile

**Rob Sturgiss**

Department of Industry, Science, Energy and Resources  
Australia

**Tom Wirth**

Environmental Protection Agency  
United States

**Irina Yesserkepova**

Joint Stock Company (JSC) "Zhasyl Damu"  
Kazakhstan

**IPCC TFI TSU**

% Institute for Global Environmental  
Strategies (IGES)  
Japan

Sandro Federici (Head)

Baasansuren Jamsranjav

Eduard Karapoghosyan

Pavel Shermanau

Valentyna Slivinska

Toru Matsumoto

Eriko Nakamura

Takeshi Enoki (Consultant)

**EFDB Editorial Board (EB20) and the Joint 19<sup>th</sup> and 20<sup>th</sup> Data meeting (JDM19&20)  
June 28 - July 1, 2022**

**EFDB Editorial Board**

**Amit Garg** (EB Co-chair)  
Indian Institute of Management Ahmedabad  
India

**Kristina Saarinen** (EB Co-chair)  
SYKE - Finnish Environment Institute  
Finland

**Gossi Awad Ahmed Babiker**  
University of Khartoum Sudan

**Martial Bernoux**  
FAO - Food and Agriculture Organization of the  
United Nations

**Roberta Zecchini Cantinho**  
The Nature Conservancy  
Brazil

**Hongmin Dong**  
Institute of Environment and Sustainable  
Development in Agriculture, Chinese Academy  
of Agricultural Sciences  
China

**Laura Elena Dawidowski**  
National Atomic Energy Commission Argentina

**Javier Marcelo Hanna Figueroa**  
Secretariat of the United Nations Framework  
Convention on Climate Change - UNFCCC

**Irina Govor**  
Yu. A. Izrael Institute of Global Climate and  
Ecology  
Russian Federation

**Anke Herold**  
Oeko-Institut e.V.  
Germany

**Yasumasa Hirata**  
Forestry and Forest Products Research  
Institute  
Japan

**Tomonori Ishigaki**  
National Institute for Environmental Studies  
(NIES)  
Japan

**Niveta Jain**  
ICAR - Indian Agricultural Research Institute  
Centre for Environment Science and Climate  
Resilient Agriculture  
India

**Rae Hyun Kim**  
National Institute of Forest Science  
Republic of Korea

**Zbigniew Klimont**  
IIASA - International Institute for Applied  
Systems Analysis  
Poland

**Haruni Krisnawati**  
Forestry and Environment Research,  
Development and Innovation Agency - Ministry  
of Environment and Forestry  
Indonesia

**Zhanyun Ma**  
Chinese Research Academy of Environmental  
Sciences (CRAES)  
China

**Guadalupe Martínez**  
Ministry of Environment  
Uruguay

**Dalia A. Nakhla**  
Egyptian Pollution Abatement Project  
Egypt

**Ole-Kenneth Nielsen**  
Aarhus University  
Denmark

**Elizabeth Adobi Okwuosa**  
Kenya Agricultural and Livestock Research  
Organization  
Kenya

**Andrea H. Pickering**

Global Research Alliance on Agricultural  
Greenhouse Gases Research Centre  
New Zealand

**Cynthia A. Randles**

IPIECA - International Petroleum Industry  
Environmental Conservation Association /  
ExxonMobil Research and Engineering  
United States

**Sébastien M. Raoux**

Transcarbon International  
United States

**Estela Mercedes Santalla**

UNICEN, College of Engineering. Universidad  
Nacional del Centro de la Provincia de Buenos  
Aires  
Argentina

**Maria José Sanz Sánchez**

BC3 - Basque Centre for Climate Change  
Spain

**Ioannis Sempos**

National Technical University of Athens  
Greece

**Sergii Shmarin**

PJSC National Power Company "Ukrenergo"  
Ukraine

**Geeta Devi Somaroo**

University of Mauritius  
Mauritius

**Kristína Tonhauzer**

Slovak Hydrometeorological Institute  
Slovakia

**Songli Zhu**

Energy Research Institute, National  
Development and Reform Commission  
China

**Data Providers****Deborah M. Bartram**

Eastern Research Group (ERG) Inc.  
United States

**Bofeng Cai**

Chinese Academy of Environmental Planning  
China

**Carlos Eduardo Pellegrino Cerri**

ESALQ/USP, Departamento de Ciência do  
Solo  
Brazil

**Mykola Chernyavskiy**

Head of Laboratory of Fuel problems in power  
generation -Thermal Energy Technology  
Institute (TETI)  
Ukraine

**Chart Chiemchaisri**

Faculty of Engineering, Kasetsart University  
Thailand

**Susan Cook-Patton**

World Resource Institute  
United States

**Sabina Dore**

BioFiltro Inc  
United States

**Rumbidzai Damita Mhunduru**

Department of Environment, Forestry and  
Fisheries  
South Africa

**Maya Fukuda**

Mitsubishi UFJ Research and Consulting Co  
Japan

**David Gibs**

World Resource Institute  
United States

**Yasuhiro Hirai**

Kyoto University  
Japan

**Aanchal Kohli**

Air Resources Board, California Environmental  
Protection Agency  
United States

**Jonathan Lee**

Environment and Climate Change Canada  
Canada

**Chang Liang**

Environment and Climate Change Canada  
Canada

**Kristine Lister**

World Resource Institute  
United States

**Sewela Francinah Malaka**

Department of Environment, Forestry and  
Fisheries  
South Africa

**Radin Diana bt. Radin Ahmad**

TNB Research  
Malaysia

**Daniela Romano**

Italian Environment Protection Agency  
Italy

**Taiki Senga**

Mitsubishi UFJ Research and Consulting Co  
Japan

**Takuji Terakawa**

Mitsubishi UFJ Research and Consulting Co  
Japan

**Tony J. van der Weerden**

AgResearch Ltd  
New Zealand

**Sazalina Zakaria**

TNB Research  
Malaysia

**You Zhang**

Nanjing University  
China

**IPCC TFI Bureau****Eduardo Calvo Buendia** (TFI Co-chair)

Universidad Nacional Mayor de  
San Marcos (UNMSM)  
Peru

**Kiyoto Tanabe** (TFI Co-chair)

Institute for Global Environmental Strategies  
(IGES)  
Japan

**IPCC TFI TSU**

% Institute for Global Environmental  
Strategies (IGES)  
Japan

Sandro Federici (Head)

Baasansuren Jamsranjav

Eduard Karapoghosyan

Pavel Shermanau

Valentyna Slivinska

Toru Matsumoto

Eriko Nakamura

Takeshi Enoki (IGES Fellow/TSU scientific  
advisor)

**Expert Meeting to collect Software and EFDB users' feedback  
26 - 28 July 2022**

**Tomo Aizawa**

Secretariat of the United Nations Framework  
Convention on Climate Change - UNFCCC

**Tegshjargal Bumtsend**

Climate Change Research and Cooperation  
Center (CCRCC) under the Ministry of  
Environment and Tourism (MoET)  
Mongolia

**Amnat Chidthaisong**

Joint Graduate School of Energy and  
Environment, King Mongkut's University of  
Technology Thonburi  
Thailand

**Eleonora Di Cristofaro**

Institute for Environmental Protection and  
Research (ISPRA)  
Italy

**Alessandro Francesco Ferrara**

Food and Agriculture Organization of the United  
Nations (FAO)

**Carley Green**

EAS  
New Zealand

**Peter Gregus**

SPIRIT- informacne systemy, a.s.  
Slovakia

**Eloïse Guidi**

Coalition for Rainforest Nations  
Switzerland

**Lisa Hanle**

Food and Agriculture Organization of the United  
Nations (FAO)

**Danilo Mollicone**

Food and Agriculture Organization of the United  
Nations (FAO)

**Giorgi Mukhigulishvili**

Georgian Think Tank - World Experience for  
Georgia

**Mabel María Noguera Herebia**

Ministry of the Environment and Sustainable  
Development / National Directorate of Climate  
Change  
Paraguay

**Jason Paniu**

Climate Change and Development Authority  
(CCDA)  
Papua New Guinea

**Alfonso Sanchez Paus Diaz**

Food and Agriculture Organization of the United  
Nations (FAO)

**Guido Pellis**

Institute for Environmental Protection and  
Research (ISPRA)  
Italy

**Paolo Prosperi**

Food and Agriculture Organization of the United  
Nations (FAO)

**Dominique Revet**

Secretariat of the United Nations Framework  
Convention on Climate Change – UNFCCC

**Anna Romanovskaya**

Yu. A. Izrael Institute of Global Climate and  
Ecology  
Russian Federation

**Mirella Salvatore**

Food and Agriculture Organization of the United  
Nations (FAO)

**Atsushi Sato**

Mitsubishi UFJ Research and Consulting,  
Co.,Ltd.  
Japan

**Renata Patricia Soares Grisoli**

MCTI  
Brazil

**Walter Svinurai**

Marondera University of Agricultural Sciences &  
Technology  
Zimbabwe



**Iordanis Tzamtzis**

Food and Agriculture Organization of the United Nations (FAO)

**Marina Vitullo**

Institute for Environmental Protection and Research (ISPRA)  
Italy

**IPCC TFI Bureau**

**Eduardo Calvo Buendia** (TFI Co-chair)

Universidad Nacional Mayor de San Marcos (UNMSM)  
Peru

**Kiyoto Tanabe** (TFI Co-chair)

Institute for Global Environmental Strategies (IGES)  
Japan

**IPCC TFI TSU**

% Institute for Global Environmental Strategies (IGES)  
Japan

Sandro Federici (Head)

Baasansuren Jamsranjav

Pavel Shermanau

Toru Matsumoto

Eriko Nakamura

## Annex III: EFDB Editorial Board Membership

Year 2022

<i>Energy</i>	<i>Industrial Processes and Product Use (IPPU)</i>	<i>Agriculture</i>	<i>Land Use, Land-Use Change and Forestry (LULUCF)</i>	<i>Waste</i>
<b>Songli Zhu</b> (China)	Laura Elena Dawidowski (Argentina)	<b><u>Marta A. Alfaro</u></b> (Chile)	Gabriel G. Vazquez Amabile (Argentina)	Estela Mercedes Santalla (Argentina)
Ole-Kenneth Nielsen (Denmark)	Qing Tong (China)	Hongmin Dong (China)	Roberta Zecchini Cantinho (Brazil)	Zhanyun Ma (China)
<b><u>Amit Garg</u></b> (India)	<b>Dalia A. Nakhla</b> (Egypt)	Andrea H. Pickering (Global Research Alliance)	<b>Anke Herold</b> (Germany)	Tomonori Ishigaki (Japan)
Zbigniew Klimont (IIASA)	<b><u>Kristina Saarinen</u></b> (Finland)	<b><u>Niveta Jain</u></b> (India)	Haruni Krisnawati (Indonesia)	<b>Geeta Devi Somaroo</b> (Mauritius)
Cynthia A. Randles (IPIECA)	Kerstin Martens (Germany)	<b>Elizabeth Adobi Okwuosa</b> (Kenya)	Yasumasa Hirata (Japan)	Irina Govor (Russian Federation)
Gossi Awad Ahmed Babiker (Sudan)	<b>Ioannis Sempos</b> (Greece)	<b>Kristína Tonhauzer</b> (Slovakia)	<b>Raehyun Kim</b> (Republic of Korea)	Sergii Shmarin (Ukraine)
<b><u>Javier Marcelo Hanna Figueroa</u></b> (UNFCCC)	Sébastien M. Raoux (USA)	Stephen J. Del Grosso (USA)	María José Sanz Sánchez (Spain)	<b>Guadalupe Martínez</b> (Uruguay)
		<b><u>Martial Bernoux</u></b> (FAO)		

Members who are newly selected: highlighted in bold

Members who are re-selected: highlighted in bold with underline

**Year 2023**

<i>Energy</i>	<i>Industrial Processes and Product Use (IPPU)</i>	<i>Agriculture</i>	<i>Land Use, Land-Use Change and Forestry (LULUCF)</i>	<i>Waste</i>
Songli Zhu (China)	<b><u>Laura Elena Dawidowski</u></b> (Argentina)	Marta A. Alfaro (Chile)	Gabriel G. Vazquez Amabile (Argentina)	<b><u>Estela Mercedes Santalla</u></b> (Argentina)
Ole-Kenneth Nielsen (Denmark)	Qing Tong (China)	<b><u>Andrea H. Pickering</u></b> (Global Research Alliance)	Roberta Zecchini Cantinho (Brazil)	Zhanyun Ma (China)
Amit Garg (India)	Dalia A. Nakhla (Egypt)	Niveta Jain (India)	<b>Jianhua Zhu</b> (China)	Tomonori Ishigaki (Japan)
Zbigniew Klimont (IIASA)	Kristina Saarinen (Finland)	Elizabeth Adobi Okwuosa (Kenya)	Anke Herold (Germany)	Geeta Devi Somaroo (Mauritius)
Cynthia A. Randles (IPIECA)	Kerstin Martens (Germany)	<b>Muhammad Arif Goheer</b> (Pakistan)	Yasumasa Hirata (Japan)	Irina Govor (Russian Federation)
<b>Hossein Khajepour</b> (Islamic Republic of Iran)	Ioannis Sempos (Greece)	Kristína Tonhauzer (Slovakia)	Raehyun Kim (Republic of Korea)	Sergii Shmarin (Ukraine)
Javier Marcelo Hanna Figueroa (UNFCCC)	Sébastien M. Raoux (USA)	Stephen J. Del Grosso (USA)	María José Sanz Sánchez (Spain)	Guadalupe Martínez (Uruguay)
		Martial Bernoux (FAO)		

Members who are newly selected: highlighted in bold

Members who are re-selected: highlighted in bold with underline