INTERGOVERNMENTAL PANEL ON climate change

Task Force on National Greenhouse Gas Inventories (TFI)

MEETING REPORT

Expert Meeting on the IPCC Inventory Software Users' Feedback

Valdivia, Chile - 25-27 November 2025

Prepared by: TFI TSU
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1. Introduction

The Expert Meeting on IPCC Inventory Software Users' Feedback was held in Valdivia, Chile, from 25 to 27 November 2025. The meeting was hosted by the Ministry of Environment of Chile, INFOR – Instituto Forestal, and the Regional Government of Los Ríos, with support from the Technical Support Unit of the IPCC Task Force on National Greenhouse Gas Inventories (TFI). This was the first TFI-promoted meeting in South America in seven years, marking an important return to the region.

The meeting brought together 22 participants representing 12 countries, primarily GHG inventory compilers from across Latin America, including both experienced and newer users of the IPCC Inventory Software. Participants shared lessons from their national inventory systems, reflected on their experiences using the Software, and discussed challenges encountered during the preparation of their first Biennial Transparency Reports (BTR1).

The overall objective of the meeting was to collect structured user feedback to support the continuous improvement of the IPCC Inventory Software, strengthen its interoperability with reporting tools, and identify priority areas for future development. The discussions also contributed to a broader understanding of user needs related to documentation, support materials, and community engagement.

2. Meeting Objectives

The Expert Meeting was designed to deepen the understanding of how countries in the region use the IPCC Inventory Software in the preparation of their national greenhouse gas inventories, and to identify common challenges and sector-specific needs that arise in practical implementation. A key objective was to document real user experiences—often not shared collectively—and to create space for technical exchanges among experienced and newer users.

The meeting sought to gather practical and actionable feedback on both cross-cutting and sector-level functionalities of the Software. This included identifying priority issues requiring attention, clarifying areas where users need additional support, and collecting country-specific suggestions for improvements and potential new features.

The inputs generated during the meeting will guide the future development of the IPCC Inventory Software, as well as updates to its User Manual, sectoral guidebooks, and online support materials. The meeting also aimed to reinforce the user community by strengthening communication channels between national experts and the IPCC TFI Technical Support Unit.

3. Summary of Sessions

Session 1 – Tour de Table: Experiences & Expectations

Purpose: The session introduced all participants and collected initial reflections on their experience using the IPCC Inventory Software, as well as expectations for the meeting. It was followed by presentations from Cuba, Panama, and Chile on their use of the Software during BTR1 preparation.

Summary: Participants described a wide range of experiences, with many working in very small teams and facing constraints when transitioning fully to the Software. Users emphasized the value of interoperability with the ETF Reporting Tool, but also noted challenges such as managing large datasets, navigating AFOLU land representation, and the effort required to update databases when new versions are released. Non-users expressed interest in adopting the Software—particularly due to the ability to generate ETF-compatible outputs.

There was strong interest in having Spanish-language support materials. Participants agreed that translated guidance could help new users, although maintaining translations would require sustainable resources. Questions were also raised about the Software's ability to support precursor emissions and its link to future methodological work.

Main Takeaways:

- Many teams are small and transitioning to the Software is resource intensive.
- Interoperability is highly valued.
- Users face persistent challenges with large datasets and AFOLU land representation.
- Strong interest in Spanish-language support materials.
- Growing interest in adopting the Software for future submissions

Session 2 – Software Overview, Near-Term Improvements

Purpose: To present Version 2.99 of the IPCC Inventory Software, outline planned near-term improvements and explore user needs related to time-series workflows, multi-user arrangements, and export/import functionality.

Summary: The TSU introduced the new features available in Version 2.99 and described the work planned for upcoming releases. Participants discussed several cross-cutting topics where further development could improve usability. A major theme was the need for greater flexibility in time-series data entry and extraction. Many users expressed interest in being able to export full databases in Excel format to integrate with national tools, while also improving the existing time-series import function to handle multiple parameters or categories at once.

Multi-user workflows were also considered, with countries describing their current practices and expressing interest in testing server- or cloud-based arrangements in the future. The updated export/import menu was well received, and participants emphasized the importance of efficient data import and updating when working with higher-tier methods that require larger, more detailed datasets.

Main Takeaways:

- Strong demand for more flexible time-series workflows and full-database extraction.
- Multi-user or server-based setups are of interest but not yet implemented by participants.
- Updated import/export tools are essential for handling large and complex datasets.

Session 3 – Interoperability with the UNFCCC ETF Reporting Tool

Purpose: To review the interoperability functionalities of the Software—particularly for generating the CRT Data Set and JSON file—and to identify issues encountered by countries when using these tools for BTR reporting.

Summary: The TSU presented the interoperability workflow between the IPCC Inventory Software and the UNFCCC ETF Reporting Tool, covering creation and updating of the CRT Data Set, notation key handling, JSON generation, and version-setting considerations. Most participants had prior experience with these functions and confirmed the substantial time savings they provide for CRT preparation.

A small number of issues were raised, particularly concerning changes to notation keys when uploading data to the UNFCCC tool. Following discussion, these were traced to specific version-setting configurations, and the TSU clarified how such issues can be avoided. Relevant guidance is provided in the revised CRT Export Guide.

Participants also asked about the scope of interoperability, including uncertainty analysis, key category analysis, and precursor emissions. The TSU explained that uncertainty analysis is not transferred, as it is not part of the CRT structure, and that key category analysis is recalculated by the UNFCCC ETF Reporting Tool. Some current limitations in data transfer (e.g. FLEX tables) are linked to constraints in the UNFCCC tool rather than to the export functionality of the IPCC Inventory Software.

Main Takeaways:

- Interoperability remains a major benefit for users, especially for CRT preparation.
- Some issues stem from version-setting choices in the UNFCCC tool rather than the Software.

Session 4 – Deep dive in Sectors: Waste

Purpose: To present new features for calculating emissions from open burning at solid waste disposal sites (SWDS) and to discuss user-identified needs for the Waste sector

Summary:
The demonstration presented the new links between open burning and the SWDS model, a feature frequently requested by users. Discussion focused primarily on data entry challenges, including the need for Excel-based upload options for SWDS activity data, improved tools for completing time series, and practical ways to manage data from large numbers of waste sites and different landfill types.

Participants also raised interest in enhanced QA/QC functionality, particularly related to carbon and nitrogen mass balance checks.

Main Takeaways:

- Users identified data input as a key challenge, particularly for SWDS activity data.
- There is strong demand for Excel upload options and automated tools to complete time series in the SWDS model.
- Improved guidance is needed on handling multiple waste sites and landfill types.
- Additional functionality related to site closures, landfill conversions, and QA/QC was suggested.

Session 5 – Deep dive in Sectors: AFOLU

Purpose: To present the new Land Representation Tool, through a demonstration of its use.

Summary: The demonstration showed how the tool can be used to derive a consistent land representation dataset organised as a time series, consistent with the data input requirements of the IPCC Inventory Software for IPCC Approach 2.

The tool requires users to define land categories and associated characteristics (e.g. climate, soil type, soil status) and to populate a consistent set of land conversion matrices over time. Built-in QC checks ensure coherence across the time series. Once completed, the tool generates summary land-use data suitable for direct use in the Software.

Participants expressed strong interest in the tool and provided detailed feedback, summarised in Annex 2. In particular, questions were raised regarding the current focus on IPCC Approach 2, given that IPCC good practice guidance recognises three approaches to land representation.

Main Takeaways:

- Strong interest in the release of the Land Representation Tool.

- High expectations for future development, particularly for automated transfer of land representation data into the IPCC Inventory Software.
- Clear request for additional tools supporting IPCC Approach 1 for land representation; TSU plans to begin work on this in the second trimester of 2026.

Session 6 – Deep dive in Sectors: IPPU F-gases

Purpose: To present the F-gases allocation tool and discuss its implementation within the IPCC Inventory Software.

Summary: Participants reviewed the F-gases allocation tool as a cross-category quality control feature for F-gas emissions. They recognised F-gases as an area requiring increased methodological and practical support and expressed appreciation for the tool's role in ensuring mass conservation across categories and over time.

Participants also discussed areas where further improvements are needed, including refinements to specific Tier 2 worksheets to address identified calculation issues. The TSU presented proposed technical solutions and participants agreed on the need to prioritise their implementation, alongside clearer guidance to support users.

Main Takeaways:

- The F-gases allocation tool was seen as a valuable QC feature, particularly for ensuring mass conservation.
- Participants requested prioritisation of the identified technical improvements.
- Updates to the relevant guidebooks and clearer explanations of parameter calculations were considered essential to support effective use.

Session 7 – Consolidation of Priorities for Future Software Development

Purpose: To consolidate the feedback collected throughout the meeting and agree on a structured set of priorities for future development of the IPCC Inventory Software and its supporting materials.

Summary: In this final session, participants and the TSU reviewed all cross-cutting and sector-specific discussions from the previous days. Using a draft table prepared by the TSU, the group worked through each proposed area of improvement, clarifying user needs, identifying practical implications, and discussing the feasibility of potential developments. The exercise brought together inputs related to data management, time-series workflows, interoperability, multi-user arrangements, AFOLU and Waste sector tools, F-gases modules, and support materials, as well as broader issues such as communication channels and possible translations.

Participants refined the descriptions of several proposed developments, provided additional examples based on national inventory practices, and highlighted which items they considered most urgent. The TSU also explained resource constraints, dependencies, and ongoing plans, helping to distinguish between short-term enhancements, medium-term developments, and longer-term structural changes.

Main Takeaways:

- The discussion confirmed broad alignment on the main priorities for future Software development.
- Many of the users' needs relate to data handling, interoperability, and sector-specific tools.
- Several improvements require feasibility assessments or depend on larger structural decisions, such as platform migration or upcoming methodological work.
- Participants emphasized the importance of updated guidance materials and maintaining communication channels through the User Community.

Note on Documentation

A detailed table summarizing all proposed developments—including descriptions, comments, priority levels, and indicative resource considerations—is provided in Annex 2 for reference. This table reflects the consolidated inputs from Session 7 and will inform future planning by the TSU.

4. Meeting Conclusions

The meeting provided a clear and comprehensive picture of how countries in the region are using the IPCC Inventory Software and the challenges they face in practical implementation. Participants reaffirmed the Software's value—particularly for structured data management and interoperability with the UNFCCC ETF Reporting Tool—while also highlighting areas where additional flexibility, automation, or sector-specific support would be beneficial.

Across sessions, consistent themes emerged relating to data handling, time-series management, AFOLU land representation, and the effort required to manage version updates. Users also expressed growing interest in integrating the Software more effectively into national systems, including through enhanced data extraction options, multi-user arrangements, and clearer workflows. The strong demand for Spanish-language support materials reflects the importance of improving accessibility for new and less experienced users.

The consolidated table developed in Session 7 captures the full set of proposed developments and associated considerations. These priorities range from short-term enhancements to longer-term structural options that may require further feasibility assessments, partnerships, or alignment with future methodological work.

Beyond the technical discussion, the meeting strengthened regional collaboration and provided valuable insights into the diversity of national contexts and workflows. As the first TFI-promoted meeting in South America in seven years, it demonstrated the importance of in-person exchanges for capturing practical feedback and fostering a shared understanding of user needs.

5. Next Steps

Following the meeting, the TSU will consolidate all feedback received from participants, including the priority items identified during the plenary discussions. These inputs will be reviewed in detail with the Software developers to assess feasibility, resource implications, and potential timelines for implementation. The consolidated findings will inform updates to both the IPCC Inventory Software and its supporting materials, including guidance documents and sectoral tools.

In parallel, the TSU will prepare a summary of key messages for the TFI Task Force Co-Chairs and the Task Force Bureau. Once finalized, the Meeting Report documenting the outcomes of the Valdivia meeting will be circulated to all participants for their reference and future use.

6. Annexes

Annex 1. List of Participants

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Annex 2. Notes on IPCC Inventory Software Development from Valdivia 2025

Findings	Comments	Priority	Resources
General & Others			
Facilitate Data upload	A. Enhance the current time series functionality by: ✓ Having records sourced for the entire time series rather than the single year in which is generated ✓ Using user-code, where available, for records of units of land	High	Allocated
	B. "Export to excel" functionality: ✓ Extend to the entire time series ✓ Convert to a download/upload functionality	High	Not allocated Depends on IT assessment of technical difficulty
	C. Produce a dedicated excel tool for the upload of data for: ✓ 4.A ✓ 2.F.1	*Depends on B*	Not allocated *Would be redundant if B implemented*
Recalculation & Time series	Adding a new functionality, possibly external to the sofwtare, to allow for time series analysis and recalculation analysis [*i.e. the entire dataset is downloaded in a structured workbook where to perform both analysis, recalculation & time series*]	High	Not Allocated, but is a priority [*subject to feasibility studio by IT coder*]
Splicing technique	New functionality	High	Not allocated – to be designed yet
Online use of the Database	Explore its feasibility and efficiency	High	Depends on partners
Interoperability (xml, json, DB) with national systems	Not implementable before a migration of the Software to an open-source platform [*de-Microsoft*]	High	Dependent on Software migration to an open-source platform

Findings	Comments	Priority	Resources
General & Others			
Extend capacity to estimate SLCF emissions	Not implementable before the adoption of the IPCC new MR on SLCF	Low	None Explore IPCC funds for Publication
Adding alert/functionality to CRT xml export/import to prompt the export/import of the xml data from the underlying calculation worksheets	To be defined with the IT developer	High	Allocated

Support			
Translation into Spanish of support material [Guidebooks, Manual]	Multiple options not mutually exclusive: ➢ securing dedicated funding ➢ setting a collaborative effort among Spanish-speaking experts	High	A. No financial resources available B. IPCC Users Community as the tool to coordinate a voluntary work from experts. C. No Spanish-speaking capacity at TSU
Interoperability Guidebook	✓ Add guidance on how to set the UNFCCC ETF to allow a selected application of FX to specific F-gas and/or categories ✓ Add guidance on characters' limits for NK information as well as for the Documentation Box	High	Allocated
Waste Guidebook	Adding guidance on how to deal with treatment technologies in SWDS	High	Allocated
Manual	Additional guidance on the use of comma vs period as separator for decimals and thousands	High	Allocated

Support			
Communication with TSU	TSU welcomes and solicits continuous communication, preferably through the IPCC Users Community, of users' problems, needs, wishes on Software's use & development	High	TSU core budget [allocated]

Sectoral & Tools			
Waste – SWDS closure	Specifications to be drafted by TSU and shared	Medium	Not Allocated
Waste – SWDS conversion to a different type	Specifications to be drafted by TSU and shared	Medium	Not Allocated
Waste – N and C mass conservation	To be explored	Low	Not Allocated
Waste – SWDS	Functionality for linear interpolation of AD	Medium	Not Allocated
Land Matrix Tool	Extend subdivisions characterisation to N content in organic soil	High	Allocated
	Fix formula for ID column in subdivisions sheet so that users around the world don't get error		
	Add a reset /clean sheet button to each sheet		
	Update label from "initial division" to "initial subdivision"		
	Add a macro to force pasted values to be pasted as values only	Medium	
	Update formatting of generated sheets so that the numbers have a thousand separator		
	Update land use summary sheet to have table lines		
	Add Approach 1 [*likely in a different excel file*]		
F-gases – Allocation Tool	Allocation Tool should include Grow Rate	High	Allocated

Sectoral & Tools			
F-gases – Allocation tool	Select relevant categories [columns]	Medium	Not Allocated
F-gases – Annual EF	Integration of Year EF in a Tier 3 Approach	Low	Not Allocated In the meanwhile add workaround into the Guidebook
F-gases – Servicing	It should be possible to define servicing by sub-application. [*This requires a lot of work in testing current equations and modify those*]	High	Not Allocated
F-gases – 2.F.1 – Tier 2a	Addition of Stockpile	High	Allocated