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## **Subsidiary Body for Scientific and Technological Advice**

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Item 14 of the provisional agenda

**Annual report on technical reviews: technical review of greenhouse  
gas inventories of Parties included in Annex I to the Convention**

## **Technical review of greenhouse gas inventories of Parties included in Annex I to the Convention**

### **Report by the secretariat**

#### *Summary*

This report provides information on the technical review of national greenhouse gas inventory reports submitted by Parties included in Annex I to the Convention in the 2025 review cycle.



## Abbreviations and acronyms

Annex I Party	Party included in Annex I to the Convention
BTR	biennial transparency report
COP	Conference of the Parties
CRT	common reporting table
GHG	greenhouse gas
IEF	implied emission factor
MPGs	modalities, procedures and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement
NDC	nationally determined contribution
NE	not estimated
NIR	national inventory report
SBSTA	Subsidiary Body for Scientific and Technological Advice

## I. Introduction

### A. Mandate

1. COP 9 requested the secretariat to prepare an annual report on GHG inventory review activities, including any recommendations resulting from the meetings of inventory lead reviewers participating in the technical review of GHG inventories of Annex I Parties, for consideration by the SBSTA.<sup>1</sup>
2. COP 20 requested the secretariat to prepare an annual report to the SBSTA on the composition of expert review teams, including the selection of experts for the review teams and the lead reviewers, and on the actions taken to ensure the application of the selection criteria for expert review teams, and also requested the lead reviewers to collectively prepare an annual report to the SBSTA as part of the same annual report, containing suggestions on how to improve the quality, efficiency and consistency of the reviews.<sup>2</sup>
3. COP 24 decided that, for the purpose of fulfilling national inventory reporting obligations under the Convention, Parties to the Paris Agreement submitting annual NIRs under the Convention shall use the MPGs for NIRs contained in chapter II of the annex to decision [18/CMA.1](#), with the technical expert review to be conducted in accordance with the corresponding MPGs contained in chapter VII of the annex to decision [18/CMA.1](#), including in years in which a BTR is not due under the Paris Agreement.<sup>3</sup> In accordance with the MPGs, NIRs submitted in such years shall be subject to a simplified review.<sup>4</sup>

### B. Scope

4. This report provides information on activities conducted in 2025 relating to the technical review of GHG inventories submitted by Annex I Parties. It focuses, in particular, on the simplified reviews of NIRs, given that 2025 is not a year in which a BTR is due under the Paris Agreement.

### C. Possible action by the Subsidiary Body for Scientific and Technological Advice

5. The SBSTA will be invited to take note of this report.

## II. Submissions and review of information from Annex I Parties

6. The secretariat received original submissions of annual GHG inventories for 2025 from 42 Annex I Parties (see the table below).<sup>5</sup> The secretariat conducted the 2025 simplified review cycle between 15 April and 5 August 2025 for 41 Parties.
7. The simplified review process of a Party's NIR submitted in a year when a BTR is not due entails an initial assessment of completeness and consistency with the MPGs.<sup>6</sup> This assessment is undertaken in accordance with the simplified review procedures developed by the lead reviewers of BTRs at their 1<sup>st</sup> meeting<sup>7</sup> and with the assistance of the secretariat.

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<sup>1</sup> Decision [12/CP.9](#), para. 10.

<sup>2</sup> Decision [13/CP.20](#), annex, paras. 40 and 44.

<sup>3</sup> Decision [1/CP.24](#), para. 42.

<sup>4</sup> Decision [18/CMA.1](#), annex, para. 161.

<sup>5</sup> The United States of America had not submitted a 2025 NIR by the date of publication of this report.

<sup>6</sup> Decision [18/CMA.1](#), annex, para. 155.

<sup>7</sup> See the conclusions and recommendations from the 2023 joint meeting of lead reviewers, available at <https://unfccc.int/documents/627213>.

**2025 simplified review cycle for greenhouse gas inventory submissions**

<i>Party</i>	<i>Date of submission of 2025 NIR</i>	<i>Date of transmission of draft initial assessment to the Party</i>	<i>Date of submission of comments by the Party on the draft initial assessment</i>	<i>Date of publication of final initial assessment</i>
Australia	30 May 2025	3 June 2025	30 June 2025	7 July 2025
Austria	15 April 2025	16 May 2025	13 June 2025	23 June 2025
Belarus	15 April 2025	26 May 2025	24 June 2025	27 June 2025
Belgium	14 April 2025	20 May 2025	16 June 2025	26 June 2025
Bulgaria	30 April 2025	16 May 2025	13 June 2025	23 June 2025
Canada	21 March 2025	15 May 2025	12 June 2025	24 June 2025
Croatia	14 April 2025	16 May 2025	14 June 2025	24 June 2025
Cyprus	7 May 2025	22 May 2025	24 June 2025	27 June 2025
Czechia	15 April 2025	20 May 2025	16 June 2025	26 June 2025
Denmark	15 April 2025	21 May 2025	19 June 2025	27 June 2025
Estonia	15 April 2025	20 May 2025	22 June 2025	27 June 2025
European Union <sup>a</sup>	15 April 2025	—	—	—
Finland	15 April 2025	21 May 2025	18 June 2025	27 June 2025
France	15 April 2025	21 May 2025	23 July 2025	5 August 2025
Germany	15 April 2025	23 May 2025	23 June 2025	27 June 2025
Greece	10 April 2025	15 May 2025	12 June 2025	17 June 2025
Hungary	10 June 2025	13 June 2025	22 July 2025	5 August 2025
Iceland	14 April 2025	22 May 2025	3 June 2025	13 June 2025
Ireland	15 April 2025	21 May 2025	24 June 2025	27 June 2025
Italy	4 April 2025	15 May 2025	11 June 2025	18 June 2025
Japan	25 April 2025	21 May 2025	18 June 2025	27 June 2025
Latvia	11 April 2025	15 May 2025	9 June 2025	18 June 2025
Liechtenstein	11 April 2025	20 May 2025	4 June 2025	17 June 2025
Lithuania	15 April 2025	22 May 2025	19 June 2025	27 June 2025
Luxembourg	15 April 2025	21 May 2025	26 June 2025	1 July 2025
Malta	27 March 2025	14 May 2025	6 June 2025	19 June 2025
Monaco	14 April 2025	16 May 2025	17 June 2025	27 June 2025
Netherlands (Kingdom of the)	15 April 2025	21 May 2025	12 June 2025	24 June 2025
New Zealand	15 April 2025	16 May 2025	14 July 2025	21 July 2025
Norway	14 March 2025	14 May 2025	13 June 2025	20 June 2025
Poland	14 April 2025	20 May 2025	11 June 2025	18 June 2025
Portugal	14 April 2025	16 May 2025	13 June 2025	24 June 2025
Romania	14 April 2025	21 May 2025	18 June 2025	27 June 2025
Russian Federation	19 April 2025	22 May 2025	26 June 2025	27 June 2025
Slovakia	14 April 2025	16 May 2025	20 May 2025	10 June 2025
Slovenia	14 April 2025	20 May 2025	17 June 2025	27 June 2025
Spain	13 March 2025	14 May 2025	10 June 2025	17 June 2025
Sweden	15 April 2025	16 May 2025	11 June 2025	18 June 2025
Switzerland	10 April 2025	15 May 2025	10 June 2025	17 June 2025
Türkiye	2 June 2025	3 June 2025	1 July 2025	7 July 2025
Ukraine	2 April 2025	14 May 2025	13 June 2025	20 June 2025
United Kingdom of Great Britain and Northern Ireland	15 April 2025	11 June 2025	9 July 2025	24 July 2025

<sup>a</sup> The NIR submitted by the European Union was not subject to a simplified review as it compiles the reports of its member States, each of which underwent a simplified review individually.

8. In the absence of a fully automated and integrated simplified review tool<sup>8</sup> and to ensure timely completion and publication of the simplified review reports, the secretariat developed a streamlined, stepwise, simplified review process and a contingency Excel-based tool within a very short time frame and without employing any additional resources from the UNFCCC trust fund for supplementary activities. The Excel-based tool used automated approaches in the initial assessment that focused exclusively on the information reported in the CRTs.

9. The initial assessment of completeness and consistency with the MPGs involved:

(a) Identifying recalculations for the reference year of the Party's NDC and the latest common year since the Party's previous NDC submission that resulted in changes to estimated total GHG emissions or removals (excluding land use, land-use change and forestry) by more than 2 per cent for any category or subcategory above the threshold of significance for the Party under review;<sup>9</sup>

(b) Conducting completeness checks by detecting the use of notation key "NE" and identifying any gases or sectors missing from the emission trends summary (CRT 10);

(c) Identifying changes since the previous GHG inventory submission in the notation keys reported for the reference year of the Party's NDC and the latest common year since the Party's previous NDC submission;

(d) Detecting differences in estimates between the reference and sectoral approaches for energy consumption or carbon dioxide emissions, by fuel type, with a focus on differences exceeding 5 per cent for the latest reported year;

(e) Assessing time-series consistency by calculating inter-annual changes in estimated emissions for each category and gas and applying the z-score method to flag outliers, defined as values exceeding a z-score of 3, based on the statistical distribution of the full time series;<sup>10</sup>

(f) Comparing the IEFs reported for significant subcategories under key categories with the range of IEFs reported by developed country Parties for the latest inventory year (2023) in their 2025 submission;<sup>11</sup>

(g) Identifying new key categories for emission level and trend since the previous submission.

10. For each Party subject to a simplified review, the secretariat prepared a draft initial assessment consistently with the procedures developed by the lead reviewers referred to in paragraph 7 above. While automated approaches were used, this simplified review process was not fully automated and still required human intervention. The draft initial assessment underwent a quality control process conducted by the secretariat before being transmitted to the respective Party for comments. All draft initial assessments were shared with Parties within six weeks of the submission of the 2025 NIRs. In accordance with the MPGs, Parties were invited to provide comments within four weeks of receiving the draft initial assessment. Excel files containing the individual findings of the draft initial assessment were made available to each Party to facilitate the process.<sup>12</sup> While comments on individual findings are not published in the simplified review reports, they will be made available for the subsequent technical review of the Party's NIR. Parties also had the opportunity to submit general comments on the simplified review, which were included in the final review report.

11. In the 2025 simplified review cycle, 7,712 individual findings were identified through the simplified review process for all Parties subject to the review. The findings mostly concern changes in notation keys (42.1 per cent of total individual findings), time-series

<sup>8</sup> The development, use and maintenance of the tool is subject to the availability of financial resources.

<sup>9</sup> Threshold calculated as 0.05 per cent of the national total GHG emissions for 2023, excluding land use, land-use change and forestry, or 500 kilotonnes of carbon dioxide equivalent, whichever is lower (see decision 18/CMA.1, annex, para. 32).

<sup>10</sup> Statistical measure that indicates how many standard deviations a data point is from the mean.

<sup>11</sup> Range defined by the median plus or minus two times the standard deviation, calculated from all available data points per category.

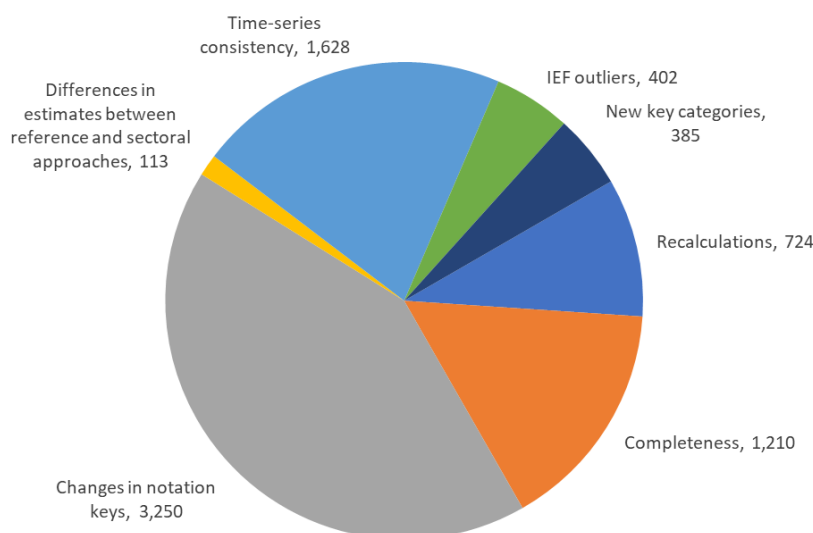
<sup>12</sup> Decision [18/CMA.1](#), annex, para. 163.

consistency (21.1 per cent), completeness (15.7 per cent) and recalculations (9.4 per cent). Findings on IEF outliers, new key categories and differences in estimates between the reference and sectoral approaches represent 5.2, 5.0 and 1.5 per cent of total findings respectively.

12. Figure 1 provides information on the number of findings per type of finding in the 2025 simplified review cycle.

Figure 1

**Number of findings identified per type of finding in the 2025 simplified review cycle**



13. Of the Parties subject to a simplified review, 29 provided comments on individual findings. In addition, 14 Parties provided general comments on the simplified review report.

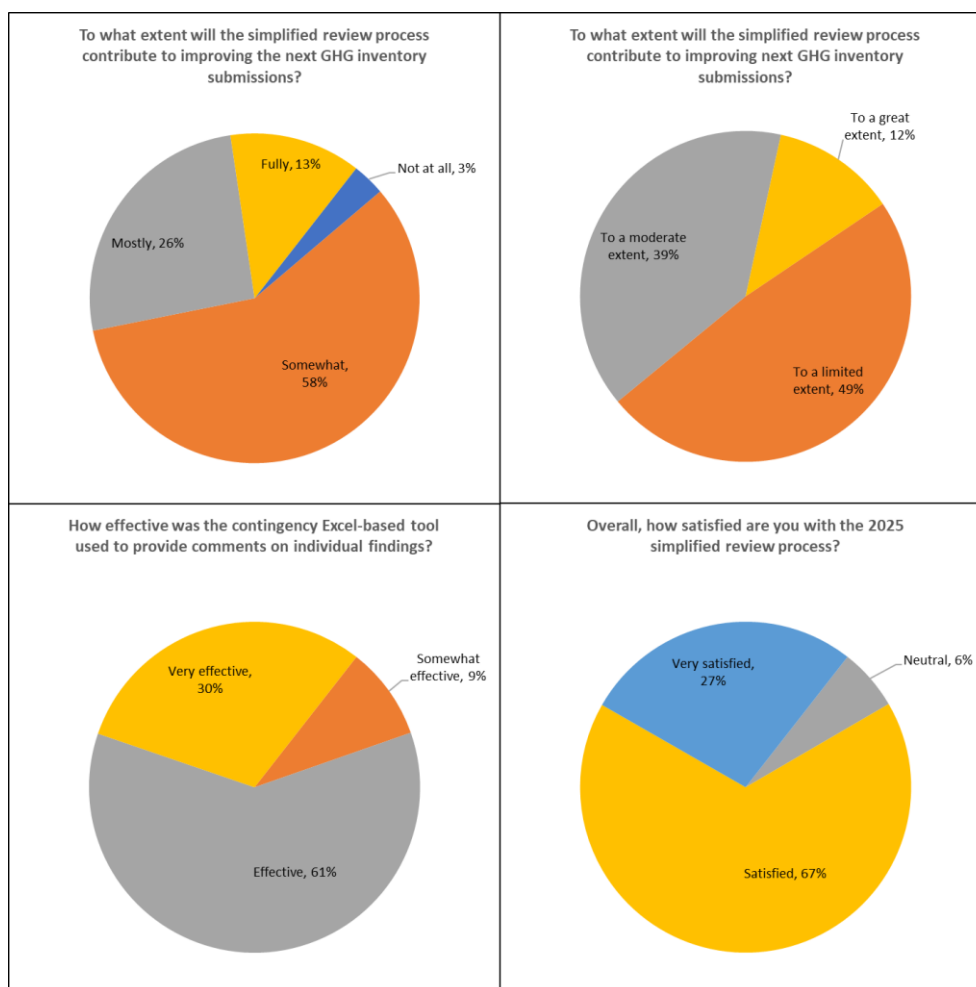
14. The secretariat addressed the comments received from Parties and published the final initial assessments on the UNFCCC website<sup>13</sup> within four weeks of receipt of the Party's comments, in accordance with the MPGs.<sup>14</sup>

15. At the end of the 2025 simplified review cycle, the secretariat conducted a survey to collect feedback from Parties on that cycle. Of 41 Parties, 33 responded to the survey, representing an 80.5 per cent response rate. Overall, Parties reported that the process was smooth and efficient and expressed satisfaction with the review cycle. Parties considered the 2025 simplified review process useful in identifying technical issues, particularly those related to time-series consistency and IEF outliers. Several Parties suggested that the findings related to IEF outliers would benefit from information on the ranges used to identify them. In addition, three Parties raised concerns about duplication of work, particularly in relation to the assessment of recalculations that are already explained in the NIRs. One Party questioned the usefulness of the completeness check referred to in paragraph 9(b) above. In summary, the feedback highlighted the value of simplified reviews and identified areas for consideration by lead reviewers for future simplified review cycles. Figure 2 provides information on the results from the survey on the 2025 simplified review cycle.

<sup>13</sup> <https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/inventory-review-reports/simplified-review-reports-2025>.

<sup>14</sup> Decision [18/CMA.1](#), annex, para. 163.

Figure 2  
Results from the survey on the 2025 simplified review cycle



### III. Meeting of lead reviewers

16. According to the MPGs, lead reviewers shall meet annually to discuss how to improve the quality, efficiency and consistency of technical expert reviews, and develop conclusions from their meetings.<sup>15</sup> Matters relating to reviews of GHG inventories are considered at the annual meeting of lead reviewers of BTRs. The 2<sup>nd</sup> meeting of lead reviewers of BTRs was held online on 23 September 2025.<sup>16</sup>

<sup>15</sup> Decision [18/CMA.1](#), annex, para. 186.

<sup>16</sup> The conclusions from the meeting are available at <https://unfccc.int/documents/650053>.