Final Review Report

2025 Comprehensive Review of National Greenhouse Gas Inventory Data

pursuant to Article 38(1a) of Regulation (EU) No 2018/1999 and Article 4(4) of Regulation (EU) No 2018/841

Greece

28 August 2025

European Environment Agency

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Introduction and conclusions from the 2025 comprehensive review

This Final Review Report presents the findings from the 2025 comprehensive review of the greenhouse gas (GHG) emission inventory of Greece.

The comprehensive review was carried in accordance with Article 38(1a) of Regulation (EU) 2018/1999 ('Governance Regulation'). The purpose of the comprehensive review is to enable the Commission to set out the annual limit values of Greece for the years from 2026 to 2030, in terms of tonnes of CO_2 equivalent, as required by Article 4(4) of Regulation (EU) No 2018/841 (the 'LULUCF Regulation').

The reviewers carried out checks to verify the transparency, accuracy, consistency, comparability and completeness of the national GHG inventory for the years 2016, 2017 and 2018 as well as 2021, 2022 and 2023 submitted in 2025 by Greece pursuant to Articles 26(4) of the Governance Regulation.

The initial checks were carried out on the draft inventory submissions submitted pursuant to Article 26(3) of the Governance Regulation. The review builds on the initial checks performed by the EU inventory team (European Environment Agency (EEA) and the European Topic Centre on Climate Change Mitigation (ETC/CM)). The comprehensive review was performed by a Technical Expert Review Team (TERT).

More information on the procedures for the 2025 comprehensive review is presented in the annexes of this review report.

Initial check and comprehensive review conclusions

1. The reviewers raised 23 issues with Greece during the initial check and comprehensive review (see Table 1). The TERT provided recommendations for 9 of these issues. Other issues raised during the comprehensive review were clarified and are considered resolved.

2. The TERT identified cases where inventory data were prepared in a manner which is inconsistent with UNFCCC guidance documentation or Union rules. However, the TERT did not identify any under-estimates or over-estimates exceeding the threshold of significance pursuant to Article 31 of Commission Implementing Regulation (EU) No 2020/1208.

3. Greece provided no revised estimates.

4. The TERT did not deem necessary any technical corrections in the meaning of Article 38(2)(d) of Regulation (EU) No 2018/1999.

5. The TERT identified recommendations in order to improve the national inventory data of Greece (see Table 3).

6. The TERT considers that it received a response from Greece that was sufficient in order to undertake the comprehensive review appropriately.

Table 1: Overview of issues raised with Greece

	Issues raised during the initial check	Issues raised during the comprehensive review	Recommendations	Revised estimates[1]	Technical corrections[2]
LULUCF	**10**	**13**	**9**	**-**	**-**

[1] Revised estimates: changes in inventory estimates triggered by the review and provided by the country.

[2] Technical corrections: changes in inventory estimates triggered by the review and provided by the TERT.

National totals for the purpose of Article 4(4) of Regulation (EU) 2018/841 (LULUCF)

Table 2 Totals net LULUCF emissions for the purpose of Article 4(4) of Regulation (EU) No 2018/841

Emission source category	Reference	Emission estimates (kt CO_2 equivalent)[1]					
		2016	2017	2018	2021	2022	2023
Total net greenhouse gas emissions for the LULUCF sector, pursuant to Article 26(4) of Regulation (EU) No 2018/1999	GRC-CRT-2025-V0-2-DataEntry-20250304-173225	-4 050.743	-3 802.044	-4 644.114	-5 046.507	-5 180.493	-4 103.012
Total net greenhouse gas emissions for the LULUCF sector		-4 050.743	-3 802.044	-4 644.114	-5 046.507	-5 180.493	-4 103.012

[1] The tables presented in this report show numbers rounded to three decimal places, although most numbers are available with greater precision. For all calculations all available decimal places were used. Therefore, the totals shown may slightly differ from calculation results where only three decimals are taken into account.

Statement from Greece on the conclusions presented by the TERT

Greece agrees with the aggregated GHG emission inventory estimates presented in Table 2.

Recommendations from the TERT, considering revised estimates and technical corrections deemed necessary by the TERT

Table 3: Recommendations from TERT (RE = Revised estimate; TC = Technical correction)

EMRT-ID	Key category	Category, gas, year	Recommendation	Revised estimate or technical correction in 2025 (RE/TC/no)
GR-4-2024-0002		4 Land use, land-use change and forestry, CO_2, 1990-2022	For category 4A2.2 Grassland converted to Forest land the TERT noted that emissions/ removals for all carbon pools are reported as 'NE' due to the area of Forest land assumed to be unmanaged. According to the IPCC guidelines, managed land generally cannot become unmanaged as the legacy effects of past management can continue for extended periods. Therefore, removals from this category are under-estimated. In response to a question raised during the review, Greece confirmed that there is an under-estimate of removals but that there is no indication on the magnitude due to lack of official data on these types of forest land. However, estimates will be available based on the publication of the ongoing national forest inventory in 2025, and Greece intends to include the entire area of forest land as managed forest in the 2028 submission. The TERT agreed with the explanation provided by Greece. The TERT recommends that Greece report all Forest land as managed and the associated emissions and removals once data from the 2025 NFI is available, and provides an update on progress in its next NID.	No
GR-4-2025-0001		4 Land use, land-use change and forestry, CO_2, 1990 - 2023	The TERT notes with reference to all LULUCF categories that the requirement related to the use of Approach 3 for land use changes according to the Governance Regulation, Annex V, Part III is not fulfilled. According to the NID (Section 6.1.6 p.344) Greece has started compiling the available geospatial data, and the field work has been completed with full implementation is planned for the 2028 submission. To ensure that the reporting of the LULUCF sector is compliant with the requirements in the LULUCF regulation, the TERT recommends to use activity data that meets the requirements of Approach 3 according to the 2006 IPCC Guidelines (e.g. repeated sampling approach with a spatially defined grid and/or repeated wall to wall mapping sufficiently comprehensive to detect land use changes) in future submission.	No
GR-4-2025-0003		4 Land use, land-use change and forestry, CO_2, 1990 - 2023	The TERT noted that in the 2022 ARR (#L.4) it was recommended that Greece includes in its NID disaggregated information on forests from the FMP database that is relevant for the GHG inventory, such as a general description of the forest together with information on purpose, parameters, planning and products, and provide a link to the web-based tool for the FMP database or any central database containing the FMP maps once they become available. The TERT also notes that the NID (page 354) provides information on the planned improvement for the 2028 submission regarding the	No

EMRT-ID	Key category	Category, gas, year	Recommendation	Revised estimate or technical correction in 2025 (RE/TC/no)
			on-going reform of the forestry sector, including the operation of a digital platform for FMP. During the review Greece confirmed that there are discussions on the need and intention of the Greek Ministry of Environment & Energy on establishing an online database for FMPs, however no official decisions have been made yet. The TERT noted that Greece should include an update on progress in its next submission.	
GR-4B-2025-0004		4B Cropland, CH_4, CO_2, N_2O, 1990 - 2023	For 4(IV) Biomass burning on Cropland the TERT noted that emissions are reported as 'NO' in CRT Table 4(IV) despite controlled burning practices occurring on perennial cropland (NID page 371). In response to a question raised during the review, Greece explained that activity data for perennial cropland is available for the biomass used as biofuel and the biomass burnt in situ, but that the latter results in insignificant level of emissions. The TERT agreed that the associated LULUCF emissions fall below the threshold of significance. In addition, Greece confirmed that there is a planned improvement to estimate wildfires on cropland based on geographically explicit land monitoring and biomass data from the LIFE CLIMATREE project and other scientific publications for the most important crops. The TERT recommends that Greece include information on controlled burning and wildfires on cropland in the next NID, including if appropriate evidence that the emissions fall below the level of significance or reports emissions in CRT Table 4(IV).	No
GR-4B-2025-0005	No	4B Cropland, CO_2, 1990 - 2023	For category Land converted to Annual Cropland the TERT noted that there may be an inconsistency in the reporting of gains in the year of conversion, which are reported as 'NO' in CRT Table 4B, but losses are reported when Annual Cropland is converted to other land use categories, causing a potential under-estimate in removals. In addition, the TERT noted a potential inconsistency in the assumed Annual Cropland living biomass carbon stock. For Cropland converted to Forest land losses are based on an average CSCF from four Italian regions (NID page.366), for Cropland converted to Wetlands and Settlements a CSCF of 4.7 t C/ha is applied (NID pages. 393 and 397) and for Cropland converted to Grassland category 5 t C/ha is used (NID page 387). In response to a question raised during the review, Greece explained currently all conversions are to Annual Cropland which is assumed to be annual and in equilibrium, but acknowledged that as losses are accounted for when Annual Cropland is converted to other land uses, the equivalent gain should be accounted for in the Land converted to Cropland category. Greece provided an updated compilation file applying a carbon stock change of 4.7 t C/ha in the year of conversion. The TERT noted that the issue is below the threshold of significance for technical correction. The TERT recommends that Greece update the estimates for Land converted to Cropland in the next submission to include the gains in living biomass, ensures that the carbon stock change is consistent across all categories and includes a description in the NID.	No

EMRT-ID	Key category	Category, gas, year	Recommendation	Revised estimate or technical correction in 2025 (RE/TC/no)
GR-4C1-2025-0002	No	4C1 Grassland remaining grassland, CO_2, 1990 - 2023	For 4C1 Grassland remaining Grassland, the TERT noted that 'NO' is reported for the SOC pool despite land use conversions occurring within the Grassland remaining category. In response to a question raised during the review Greece explained that changes in SOC resulting from the conversion of shrubs to grassland are considered insignificant, given their small area and the fact that during the conversion there is only minimal disturbance to the topsoil, from the removal of the woody vegetation. However, improved accounting for soils in the Grassland category is planned by the 2028 submission (NID page 346). The TERT agreed with the explanation and noted that the issue is below the threshold of significance for a technical correction. The TERT recommends that Greece provide this information in the next NID to enhance transparency and includes carbon stock changes in the SOC pool for 4C1 Grassland remaining Grassland once estimates become available.	No
GR-4C1-2025-0001	No	4C1 Grassland remaining grassland, CO_2, 1990 - 2023	For category 4C1 Grassland remaining Grassland the TERT noted that only losses in living biomass and not gains are reported in CRT Table 4C. The NID (page 383) in relation to living biomass in the Grassland remaining Grassland category states that "no change in biomass stocks was followed for the majority of these lands, except some cases where vegetation clearing took place and woody vegetation was substituted by annual vegetation". Therefore the TERT noted that there may be an over-estimate of emissions, as gains in the year of conversion to annual vegetation are not accounted for. In response to a question raised during the review, Greece confirmed that gains in living biomass from grassland are not included due to lack of data on the current status of grasslands with woody vegetation. This includes both area per grassland type and increment data. Sclerophyllous vegetation, included in the grassland category, represents a significant part of grasslands and is prioritized for inclusion, as part of the planned improvements by the 2028 submission. The TERT agreed with the explanation provided by Greece. The TERT recommends that Greece ensure consistency in the approach for accounting for gains and losses in Grassland living biomass and provides an update on progress in collecting activity data for grasslands with woody vegetation in its next NID.	No
GR-4C2-2025-0001	Yes	4C2 Land converted to grassland, CO_2, 1990 - 2023	For category 4C2 Land converted to Grassland, living biomass pool the TERT noted that according to the NID (386) for Forest land converted to Grassland, gains in grassland are taken from Kokkinidis, 1989. Whereas for Cropland converted to Grassland, the gains in grassland are based on averaged IPCC defaults (2006, Table 6.4) based on climatic classification for Greece. The TERT also notes that gains in living biomass for the category Land converted to Grassland are reported as 'NO' in CRT Table 4C, which does not appear to be aligned with the methodological description in the NID. In response to a question raised during the review, Greece explained that Forest land converted to Grassland refers to the removal of trees and conversion to grassland, without woody vegetation. Whereas Cropland converted to Grassland refers to land set aside, which means that after the last harvest	No

EMRT-ID	Key category	Category, gas, year	Recommendation	Revised estimate or technical correction in 2025 (RE/TC/no)
			there has been no other activity on the land. Different carbon stock changes are applied due to the different site conditions i.e. soil substrate, slope, microclimate within forest environment leading to strong competition. The TERT agreed with the explanation provided by Greece. The TERT noted that Greece should provide this information in the next NID to enhance transparency and report the gains from land converted to Grassland during the first year of conversion separately and not as IE in the NID.	
GR-4G-2025-0001	Yes	4G Harvested wood products, CO_2, 1998, 1999, 2000, 2008, 2009	For 4G HWP the TERT noted that there are large inter-annual variations in the estimates of removals from HWP produced and consumed domestically (particularly between 1998 and 1999, 1999 and 2000, and 2008 and 2009), and that an explanation for these variations is not provided in the NID. In response to a question raised during the review, Greece explained that data from FAOSTAT is used for the estimation of HWP and provided an updated estimate that will be submitted in the 2026 submission. The TERT noted that the issue is below the threshold of significance for a technical correction. The TERT recommends that Greece provide a clear explanation in the NID to explain the trend in HWP, particularly for the production of industrial roundwood (peaks in 2012 and 2017) and wood-based panels (drop in production between 2011 and 2012). In case, the production trend cannot be explained, we recommend to improve the assessment system of HWP production.	No

Annex I: Legal background and procedures of the 2025 comprehensive review

The LULUCF Regulation (EU) 2018/841 sets net emission removal targets for 2030 and net emission budgets in the period 2026 to 2029. In Article 4(5) of the LULUCF Regulation, the Commission is required to adopt decision setting out the annual limit values for net greenhouse gas removals for each year in the period from 2026 to 2029, for which it shall carry out a comprehensive review.

The Governance Regulation (EU) 2018/1999 lays down annual reporting obligations, compliance checks and a review process to ensure that the compliance with annual GHG emission limits is assessed in a credible, consistent, transparent and timely manner.

The requirements for the review of the national inventory data submitted by countries are set out in Article 38 of Regulation (EU) 2018/1999. The details concerning the review process, such as the timing and steps of conducting of the annual and comprehensive reviews are set out in Chapter V and Annex XXII of the Commission Implementing Regulation (EU) No 2020/1208.

The 2025 reviews were thus held as a comprehensive review in line with Article 38(1a) of Regulation (EU) 2018/1999in concert with the reviews required by the LULUCF Regulation.

Objectives

The objectives of the comprehensive review of countries' GHG emission inventories in 2025 are:

a) to support the European Commission by ensuring it has accurate, reliable and verified information on annual GHG emissions for
   - determining the budget for the period 2026-2029 according to Article 4(4) of Regulation (EU) 2018/841.

b) to assist countries in improving the quality of their GHG inventories.

Procedures

The scope of the 2025 comprehensive review is presented in Table A1. The checks carried out during the 2025 comprehensive review are presented in Annex II.

The initial checks were carried out by the EEA with support from the ETC/CM. All findings from the initial checks that were partly resolved or not resolved within the initial check phase were followed up in the comprehensive review.

The EEA LULUCF experts consisted of the following experts:

- Sector experts: Raul Abad-Viñas and Peter Iversen (EEA)
- Quality coordinator: Lucia Perugini (EEA)

The comprehensive review 2025 was performed by a Technical Expert Review Team (TERT) under service contract **No 3502/B2025/EEA.60384** implementing Framework service contract No EEA/CET/24/002of the European Environment Agency. The lead reviewers and sector review experts did not review emission inventories of countries where these individuals have themselves contributed to the compilation of that inventory, or presently are or have been any part of the decision-making process related to the compilation of that inventory.

The TERT consisted of the following experts:

- Iordanis Tzamtzis, Lora Stoeva, Rosie Brook, Carmen Schmid, Boštjan Mali, Andis Lazdiņš, Sven van Baren, Bradley Matthews, Valentin Bellassen, Aldis Butlers, Mattias Lundblad, Juan José Rincón Cristóbal, Etienne Mathias, Erwin Moldaschl and Mélanie Juillard;
- Lead reviewers: Peter Weiss, Kevin Black, Sandro Federici and Marina Vitullo.

The comprehensive review was coordinated by Bernd Gugele and Justin Goodwin.

The EEA review secretariat consisting of Claire Qoul, Lærke Callisen, Peter Iversen and Roxy Cottey prepared and coordinated the comprehensive review as foreseen in Article 30 of Commission Implementing regulation (EU) No 2020/1208 and Article 42 of the Governance Regulation (EU) 2018/1999.

The comprehensive review was performed on the basis 15 April submissions of GHG emission data and the national inventory document (NID) under the Governance Regulation.

Where relevant, the TERT calculated technical corrections for over- or under-estimates identified in a mandatory category in the countries' GHG inventories that exceed the threshold of significance. Technical corrections have been calculated only for the years 2016-2018 and 2021-2023. If the technical correction exceeds the threshold of significance for at least one year of the inventory under review (2021-2023) but not for all the years, the technical correction was calculated only for those years where the technical correction exceeds the threshold of significance.

Table A1: Scope of the comprehensive review 2025

Element	Scope	Further information
Countries	EU geographical coverage of the Member States, Norway and Iceland	
Years	2016, 2017, 2018, 2021, 2022 and 2023	According to GovReg Article 38(1a) According to LULUCF Article 4(4)
Gases	CO_2, CH_4 and N_2O	
Sectors	LULUCF	

Annex II: Checks carried out during the 2025 initial checks and review

The checks carried out during the 2025 initial checks are pursuant to Article 37(4) of Regulation (EU) 2018/1999 and Article 6 of Commission Delegated Regulation (EU) 2020/1044 and the comprehensive review following Article 38(1a) of Regulation (EU) 2018/1999 and Article 30 of the Commission Implementing Regulation (EU) No 2020/1208.

Initial checks may include:

1. Assessment whether all emission source categories and gases required under Regulation (EU) No 2018/841 are reported;
2. Assessment whether emissions data time series are consistent;
3. Assessment whether implied emission factors across Member States/countries are comparable taking the IPCC default emission factors for different national circumstances into account;
4. Assessment of the use of ‘Not Estimated’ notation keys where IPCC Tier 1 methodologies exist and where the use of the notation key is not justified in accordance with point 32 of the Annex to Decision 18/CMA.1;
5. Analysis of recalculations performed for the inventory submission, including whether the recalculations are based on methodological changes;
6. Assessment whether issues from earlier Union initial checks and reviews as well as recommendations from UNFCCC reviews have been implemented by the Member State;
7. Assessment of the accuracy of Member States’ emissions by sources and removals by sinks estimates in relation to Union key categories;
8. Assessment of the transparency and completeness of the methodological descriptions reported by Member States for the Union key categories;
9. Assessment of monitoring and reporting of emissions by sources and removals by sinks in the land use, land use change and forestry (LULUCF) sector pursuant to Part 3 of Annex V to Regulation (EU) 2018/1999, including the assignment of key categories, Tier methodology applied, and a comparison of reported land use and land use change activity data with information derived from the Union and Member State programmes and surveys.

Comprehensive review checks:

1. Detailed examination of the inventory estimates including methodologies used by the Member State in the preparation of inventories;
2. Detailed analysis of the Member State's implementation of recommendations related to improving inventory estimates as listed in its most recent UNFCCC annual review report made available to that Member State before the submission under review where recommendations have not been implemented;
3. Detailed analysis of the justification provided by the Member State for not implementing them;
4. Detailed assessment of the time series consistency of the greenhouse gas emissions estimates;
5. Detailed assessment whether the recalculations made by a Member State in the given inventory submission as compared to the previous one are transparently reported and made in accordance with the greenhouse gas inventory guidelines;
6. Follow-up on the results of the initial checks and on any additional information submitted by the Member State under review in response to questions from the technical experts review team and other relevant checks; -
7. Other relevant checks complementing the initial checks;
8. Check that all gases and pools are reported under LULUCF.