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Report on the individual review of the annual submission of Malta submitted in 2022*

Note by the expert review team

Summary

Each Party included in Annex I to the Convention must submit an annual inventory of emissions and removals of greenhouse gases for all years from the base year (or period) to two years before the inventory due date (decision 24/CP.19). Parties included in Annex I to the Convention that are Parties to the Kyoto Protocol are also required to report supplementary information under Article 7, paragraph 1, of the Kyoto Protocol with the inventory submission due under the Convention. This report presents the results of the individual review of the 2022 annual submission of Malta, conducted by an expert review team in accordance with the “Guidelines for review under Article 8 of the Kyoto Protocol”. The review took place from 12 to 17 September 2022 in Bonn.

* In the symbol for this document, 2022 refers to the year in which the inventory was submitted, not to the year of publication.



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Abbreviations and acronyms

2006 IPCC Guidelines	<i>2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
2019 Refinement to the 2006 IPCC Guidelines	<i>2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories</i>
AAU	assigned amount unit
AD	activity data
Annex A source	source category included in Annex A to the Kyoto Protocol
AR	afforestation and reforestation
Article 8 review guidelines	“Guidelines for review under Article 8 of the Kyoto Protocol”
AWMS	animal waste management system(s)
CER	certified emission reduction
CH ₄	methane
CM	cropland management
CO ₂	carbon dioxide
CO ₂ eq	carbon dioxide equivalent
Convention reporting adherence	adherence to the “Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories”
COPERT	software tool for calculating road transport emissions
CORINE	Coordination of Information on the Environment (programme)
CPR	commitment period reserve
CRF	common reporting format
EF	emission factor
ERT	expert review team
ERU	emission reduction unit
EU	European Union
EU ETS	European Union Emissions Trading System
EUROCONTROL	European Organisation for the Safety of Air Navigation
Eurostat	statistical office of the European Union
FAOSTAT	statistical database of the Food and Agriculture Organization of the United Nations
F-gas	fluorinated gas
FM	forest management
FMRL	forest management reference level
GHG	greenhouse gas
GM	grazing land management
HFC	hydrofluorocarbon
IE	included elsewhere
IEA	International Energy Agency
IEF	implied emission factor
IPCC	Intergovernmental Panel on Climate Change
IPPU	industrial processes and product use
KP reporting adherence	adherence to the reporting guidelines under Article 7, paragraph 1, of the Kyoto Protocol
KP-LULUCF	activities under Article 3, paragraphs 3–4, of the Kyoto Protocol
LULUCF	land use, land-use change and forestry
MCF	methane correction factor
MRA	Malta Resources Authority
MSW	municipal solid waste

N	nitrogen
N ₂ O	nitrous oxide
NA	not applicable
NCV	net calorific value
NE	not estimated
Nex	nitrogen excretion
NF ₃	nitrogen trifluoride
NIR	national inventory report
NO	not occurring
PFC	perfluorocarbon
QA/QC	quality assurance/quality control
RMU	removal unit
RV	revegetation
SEF	standard electronic format
SF ₆	sulfur hexafluoride
SIAR	standard independent assessment report
UNFCCC Annex I inventory reporting guidelines	“Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual greenhouse gas inventories”
UNFCCC review guidelines	“Guidelines for the technical review of information reported under the Convention related to greenhouse gas inventories, biennial reports and national communications by Parties included in Annex I to the Convention”
WDR	wetland drainage and rewetting
Wetlands Supplement	<i>2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands</i>

I. Introduction

1. This report covers the review of the 2022 annual submission of Malta, organized by the secretariat in accordance with the Article 8 review guidelines (adopted by decision 22/CMP.1 and revised by decision 4/CMP.11). In accordance with the Article 8 review guidelines, this review process also encompasses the review under the Convention as described in the UNFCCC review guidelines, particularly in part III thereof, namely the “UNFCCC guidelines for the technical review of greenhouse gas inventories from Parties included in Annex I to the Convention” (annex to decision 13/CP.20). The review took place from 12 to 17 September 2022 in Bonn and was coordinated by María José López (secretariat). Table 1 provides information on the composition of the ERT that conducted the review for Malta.

Table 1

Composition of the expert review team that conducted the review for Malta

<i>Area of expertise</i>	<i>Name</i>	<i>Party</i>
Generalist	Agita Gancone	Latvia
	Ole-Kenneth Nielsen	Denmark
Energy	Yuriko Hayabuchi	Japan
	Ole-Kenneth Nielsen	Denmark
IPPU	Juan Luis Martin Ortega	El Salvador
	Alexander Valencia	Colombia
Agriculture	Paul Duffy	Ireland
	Braulio Pikman	Brazil
LULUCF and KP-LULUCF	Markus Didion	Switzerland
	Amanda Thomson	United Kingdom
	Marina Vitullo	Italy
Waste	Violeta Hristova	Bulgaria
	Erick Masafu	Kenya
Lead reviewers	Paul Duffy	
	Braulio Pikman	

2. The basis of the findings in this report is the assessment by the ERT of the Party’s 2022 annual submission in accordance with the UNFCCC review guidelines and the Article 8 review guidelines.

3. The ERT has made recommendations that Malta resolve identified findings, including issues¹ designated as problems.² Other findings, and, if applicable, the encouragements of the ERT to Malta to resolve related issues, are also included in this report.

4. A draft version of this report was communicated to the Government of Malta, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

5. Annex I presents the annual GHG emissions of Malta, including totals excluding and including LULUCF, indirect CO₂ emissions, and emissions by gas and by sector, and contains background data on emissions and removals from KP-LULUCF, if elected by the Party, by gas, sector and activity.

6. Information to be included in the compilation and accounting database can be found in annex II.

¹ Issues are defined in decision 13/CP.20, annex, para. 81.

² Problems are defined in decision 22/CMP.1, annex, paras. 68–69, as revised by decision 4/CMP.11.

II. Summary and general assessment of the Party's 2022 annual submission

7. Table 2 provides the assessment by the ERT of the Party's 2022 annual submission with respect to the tasks undertaken during the review. Further information on the issues identified, as well as additional findings, may be found in tables 3 and 5.

Table 2

Summary of review results and general assessment of the 2022 annual submission of Malta

Assessment	Issue/problem ID#(s) in table 3 or 5 ^a
Dates of submission	Original submission: NIR, 11 April 2022; CRF tables (version 3), 13 April 2022; SEF tables, 13 April 2022 Revised submission: NIR (addendum), 15 September 2022; CRF tables (version 5), 16 September 2022 Unless otherwise specified, values from the most recent submission are included in this report
Review format	Centralized
Application of the requirements of the UNFCCC Annex I inventory reporting guidelines and the Wetlands Supplement (if applicable)	Have any issues been identified in the following areas:
	(a) Identification of key categories? No
	(b) Selection and use of methodologies and assumptions? Yes E.9, I.9, I.11, A.11, W.12
	(c) Development and selection of EFs? Yes E.25, A.7, A.10, L.7
	(d) Collection and selection of AD? Yes E.16, E.24, A.12, L.6, W.4, W.6
	(e) Reporting of recalculations? No
	(f) Reporting of a consistent time series? Yes E.3, E.10, E.14, E.15, I.3, I.10
	(g) Reporting of uncertainties, including methodologies? Yes G.11, G.12, G.13, G.14
	(h) QA/QC? QA/QC procedures were assessed in the context of the national system (see supplementary information under the Kyoto Protocol below)
	(i) Missing categories, or completeness? ^b Yes I.2
	(j) Application of corrections to the inventory? No
Significance threshold	For categories reported as insignificant, has the Party provided sufficient information showing that the likely level of emissions meets the criteria in paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines? Yes
Description of trends	Did the ERT conclude that the description in the NIR of the trends for the different gases and sectors is reasonable? Yes
Supplementary information under the Kyoto Protocol	Have any issues been identified related to the following aspects of the national system:
	(a) Overall organization of the national system, including the effectiveness and reliability of the institutional, procedural and legal arrangements? No
	(b) Performance of the national system functions? No
	Have any issues been identified related to the national registry:
	(a) Overall functioning of the national registry? No
	(b) Performance of the functions of the national registry and the adherence to technical standards for data exchange? No

Assessment	Issue/problem ID#(s) in table 3 or 5 ^a		
Have any issues been identified related to the reporting of information on AAUs, CERs, ERUs and RMUs and on discrepancies in accordance with decision 15/CMP.1, annex, chapter I.E, in conjunction with decision 3/CMP.11, taking into consideration any findings or recommendations contained in the SIAR?	No		
Have any issues been identified in matters related to Article 3, paragraph 14, of the Kyoto Protocol, specifically problems related to the transparency, completeness or timeliness of the reporting on the Party's activities related to the priority actions listed in decision 15/CMP.1, annex, paragraph 24, in conjunction with decision 3/CMP.11, including any changes since the previous annual submission?	Yes G.1		
Have any issues been identified related to the following reporting requirements for KP-LULUCF:			
(a) Reporting requirements of decision 2/CMP.8, annex II, paragraphs 1–5?		No	
(b) Demonstration of methodological consistency between the reference level and reporting on FM in accordance with decision 2/CMP.7, annex, paragraph 14?		No	
(c) Reporting requirements of decision 6/CMP.9?		No	
(d) Country-specific information to support provisions for natural disturbances in accordance with decision 2/CMP.7, annex, paragraphs 33–34?		No	
CPR	Was the CPR reported in accordance with decision 18/CP.7, annex; decision 11/CMP.1, annex; and decision 1/CMP.8, paragraph 18?	Yes	
Adjustments	Has the ERT applied any adjustments under Article 5, paragraph 2, of the Kyoto Protocol?	No	
	Has the Party submitted a revised estimate to replace a previously applied adjustment?	NA	Malta does not have a previously applied adjustment
Response from the Party during the review	Has the Party provided the ERT with responses to the questions raised, including the data and information necessary for assessing conformity with the UNFCCC Annex I inventory reporting guidelines and any further guidance adopted by the Conference of the Parties?	Yes	
Recommendation for an exceptional in-country review	On the basis of the issues identified, does the ERT recommend that the next review be conducted as an in-country review?	No	
Questions of implementation	Did the ERT list any questions of implementation?	No	

^a Further information on the issues identified, as well as additional findings, may be found in tables 3 and 5.

^b Missing categories for which methods are provided in the 2006 IPCC Guidelines may affect completeness and are listed in annex III.

III. Status of implementation of recommendations included in the previous review report

8. Table 3 compiles the recommendations from previous review reports that were included in the most recent previous review report, published on 29 November 2022,³ and had not been resolved by the time of publication of the report on the review of the Party's 2021 annual submission. The ERT has specified whether it believes the Party had resolved, was addressing or had not resolved each issue or problem by the time of publication of this review report and has provided the rationale for its determination, which takes into consideration the publication date of the most recent previous review report and national circumstances.

Table 3
Status of implementation of recommendations included in the previous review report for Malta

<i>ID#</i>	<i>Issue/problem classification^{a,b}</i>	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
General			
G.1	Article 3.14 (G.3, 2021) (G.2, 2019) (G.12, 2017) (G.21, 2016) (G.21, 2015) KP reporting adherence	Include, as appropriate, information on the minimization of adverse impacts in accordance with decision 15/CMP.1, annex, paragraphs 23–24, including any changes since the previous annual submission.	Addressing. The Party reported in its NIR (pp.414–415) information on the minimization of adverse impacts, including financial support provided to developing countries for the implementation of alternative technologies, adaptation actions and capacity-building through bilateral and multilateral funding channels for 2013–2020. However, Malta did not report information on changes since the previous annual submission. The ERT concludes that this potential problem of a mandatory nature does not influence the Party's ability to fulfil its commitments for the second commitment period of the Kyoto Protocol and therefore this issue was not included in the list of potential problems and further questions raised by the ERT.
G.2	Inventory planning (G.4, 2021) (G.14, 2019) Transparency	Include information on annual inventory improvement plans, clearly detailing targets, responsibilities and schedules, and document these and the results of the improvement actions in the NIR.	Addressing. The Party reported sector-specific planned improvements in different sections of its NIR. However, the NIR does not include information on the schedules of planned implementation of the improvements, including for uncertainty evaluation at the category level. During the review, the Party clarified that each sectoral chapter of the NIR includes a detailed overview of improvements in tabular format, primarily addressing findings from previous reviews, included additional category-specific improvements under each category. Malta noted that it remains open to any suggestions for how it can improve the presentation of improvements in future inventory submissions. Additionally, the Party provided information on the envisaged time frames for improvements discussed in the NIR at the sectoral level and also noted that for future submissions the NIR will be improved to provide such information in a more transparent manner. Further, the Party clarified that it is difficult to define a more exact plan of action, with more defined time frames for improvement of the uncertainty assessment for specific sink or source

³ FCCC/ARR/2021/MLT.

ID#	Issue/problem classification ^{a,b}	Recommendation from previous review report	ERT assessment and rationale
G.3	National registry (G.5, 2021) (G.15, 2019) KP reporting adherence	Include in the annual submission information on actions and changes to address discrepancies in accordance with decision 15/CMP.1, annex, paragraph 17.	<p>categories because, in many cases, it requires the direct involvement of data providers who themselves may not have the relevant expertise to determine the uncertainty of the data they provide, in a manner consistent with GHG inventory requirements. The Party noted that it is looking at the possibility of requesting support from external experts to provide technical guidance in taking this work forward with relevant stakeholders.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet included in the NIR information on the schedules of the improvement actions at the sectoral and general level, including uncertainty evaluation at the category level.</p>
G.4	National registry (G.6, 2021) (G.15, 2019) KP reporting adherence	Include in the annual submission details of publicly available information in accordance with decision 13/CMP.1, annex, paragraphs 45 and 47–48.	<p>Resolved. The Party reported in its NIR (p.410) very limited information on accounting of Kyoto Protocol units. The statement on actions and changes to address discrepancies in accordance with decision 15/CMP.1, annex, paragraph 17, was not provided.</p> <p>During the review, the Party clarified that the consolidated EU Registry has procedures for dealing with discrepancies and no changes to such procedures have occurred in the reporting period and no discrepancies were identified for Malta during the reporting period. The Party officially submitted through the UNFCCC portal an addendum to its NIR with all the relevant information.</p> <p>Resolved. The Party reported in its NIR (p.410) very limited information on accounting of Kyoto Protocol units. The ERT noted that information on publicly available information, as required by decision 13/CMP.1, annex, paragraphs 45 and 47–48, was not provided.</p> <p>During the review, the Party clarified that the publication of information in accordance with decision 13/CMP.1, annex, paragraphs 45 and 47–48, is coordinated by the European Union Central Administrator and provided the weblink to the publicly available information (https://unionregistry.ec.europa.eu/euregistry/MT/public/reports/publicReports.xhtml). The ERT noted that the 2022 submission is the last annual submission for reporting under the Kyoto Protocol, so it will not be possible to include this updated information in future submissions. Therefore Malta officially submitted through the UNFCCC portal an addendum to its NIR during the review with all the relevant information.</p>
G.5	Notation keys (G.7, 2021) (G.5, 2019) (G.19, 2017) Transparency	Provide relevant explanations in CRF table 9 for all cases of “NE” and “IE” being reported.	<p>Addressing. The Party reported in CRF table 9 explanations for its reporting of “NE” for the agriculture (3.H), LULUCF (4.C) and waste (5.C) sectors, and “IE” for the energy (1.A.d), LULUCF (4.E and 4(IV)) and waste (5.D) sectors. However, explanations were not provided for its reporting of “IE” for the energy (1.A.4.c.ii), IPPU (2.F.1, see ID# I.6 below) and waste (5.D) sectors and for its reporting of “NE” for the IPPU (2.F.2.a (2000–2020) and 2.G.2 other (2007–2020)) sector.</p> <p>During the review, the Party clarified that efforts have been made to ensure that explanations are provided for all instances where “NE” or “IE” have been used and information is also provided in the NIR where appropriate. The Party further stated that</p>

ID#	Issue/problem classification ^{a,b}	Recommendation from previous review report	ERT assessment and rationale
G.6	Notation keys (G.8, 2021) (G.16, 2019) Convention reporting adherence	Correct the use of notation keys (in particular those referred to in ID#s I.7, I.8, L.8, W.11, W.13 and W.14 in table 3 of document FCCC/ARR/2019/MLT) and include the previously missing information on the use of “NE” both in CRF table 9 and in the NIR.	<p>in its 2022 submission there remain two instances where there is a missing explanation in CRF table 9 for “IE” owing to an issue of data entry into the system and confirmed that these will be corrected in future submissions. The Party provided detailed explanations for reporting “IE” for energy subcategory 1.A.4.c.ii and “NE” for IPPU subcategory 2.F.2.a; and clarified that, for open-cell foam, the notation key “NE” has to be replaced with “IE”, and “NE” for 1.G.2 Other has to be replaced with “IE” for subcategory 2.G.2.e other (medical) for SF₆ and octafluoropropane. The Party also confirmed that this use of notation keys will be explained in CRF table 9 in the next annual submission.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet included explanations for all occurrences of “IE” and “NE” in all relevant subcategories in CRF table 9.</p> <p>Addressing. The ERT noted that Malta corrected the use of notation keys for the majority of cases mentioned in the previous review report; however, for HFC emissions for category 2.F.1 (see ID# I.7 below), the use of notation keys was not corrected. During the review, the Party clarified that efforts have been made to use the correct notation keys and provide explanations for its use of “NE” and confirmed that this recommendation will be addressed by explaining its use of “NE” and “IE” in CRF table 9 in the next annual submission.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet corrected all the notation keys wrongly reported.</p>
G.7	Other (G.9, 2021) (G.6, 2019) (G.17, 2017) Completeness	Provide emission estimates for the missing categories. If these emissions are considered insignificant in accordance with paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines, provide reporting information on emissions sources in the inventory that are considered insignificant, including their likely emission levels.	<p>Resolved. The Party reported in its NIR (section 1.7, p.46) that it includes all emissions and removals from “all known sources and sinks within the whole Maltese territory”. The Party provided explanations for its reporting of “NE” in its NIR and CRF table 9 (for categories 3.H, 4.C. and 5.C).</p> <p>During the review, the Party clarified that Malta does not exclude from reporting any category because it is deemed to be insignificant. The Party noted that every effort is made to reduce the number of categories for which emissions cannot be estimated. Explanations for such instances are provided in CRF table 9 and cross-referencing information is provided in the NIR.</p>
G.8	QA/QC and verification (G.10, 2021) (G.7, 2019) (G.3, 2017) (G.6, 2016) (G.6, 2015) (table 3, 2013) (17, 2012) (18, 2011) Convention reporting adherence	Develop a QA/QC plan, in particular tier 1 QC procedures, and provide information on the QA/QC plan in the NIR.	<p>Resolved. The Party reported in its NIR (section 1.2.3, pp.13–18) general information on its QA/QC and verification plan, and also reported on category-specific QA/QC activities in the sectoral chapters of the NIR.</p> <p>During the review, the Party explained that each sectoral chapter includes information on sector-specific QA/QC checks performed and category-level QA/QC activities. The Party also noted that the GHG inventory activities of the national inventory agency (MRA) are guided by a quality management system certified by the International Organization for Standardization.</p>

<i>ID#</i>	<i>Issue/problem classification^{a,b}</i>	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
G.9	QA/QC and verification (G.11, 2021) (G.8, 2019) (G.4, 2017) (G.14, 2016) (G.14, 2015) Convention reporting adherence	Elaborate an inventory QA/QC plan, implement general inventory QC procedures in accordance with the QA/QC plan and report information on these issues in the NIR.	Resolved. The Party reported in its NIR (section 1.2.3, pp.13–18) general information on its QA/QC and verification plan, and also reported on category-specific QA/QC activities in the sectoral chapters of the NIR. During the review, the Party explained that each sectoral chapter includes information on sector-specific QA/QC checks performed and category-level QA/QC activities. The Party also noted that the GHG inventory activities of the national inventory agency (MRA) are guided by a quality management system certified by the International Organization for Standardization.
G.10	Uncertainty analysis (G.15, 2021) (G.10, 2019) (G.6, 2017) (G.9, 2016) (G.9, 2015) (table 4, 2013) (14, 2012) Transparency	Improve the transparency of the uncertainty analysis by including information on the assumptions used to calculate the uncertainty of AD and EFs at the category level.	Addressing. The Party reported category-specific uncertainty analyses in its NIR (in different chapters) by including information on the assumptions used for calculating the uncertainty of AD and EFs at the category level (e.g. for categories 2.A.2, 2.A.4, 2.B.19, 2.D, 2.E, 2.F.1, 2.G, 3.A, 4, 5.A, 5.B.2, 5.C.1, 5.D). However, information was not included in the NIR regarding the assumptions used for estimating the uncertainty of AD and EFs for all categories in the energy and agriculture sectors. During the review, the Party clarified that more effort is being targeted towards improving the discussion on the uncertainty analyses, both at the level of the inventory in its entirety and at the sector and category level. The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet included information on the assumptions used for calculating the uncertainty of AD and EFs for all categories of the inventory in the NIR (i.e. information is missing for some categories of the energy and agriculture sectors).
G.11	Uncertainty analysis (G.16, 2021) (G.11, 2019) (G.7, 2017) (G.10, 2016) (G.10, 2015) (table 4, 2013) (14, 2012) Transparency	Provide information to explain how the uncertainty analysis is used to prioritize further inventory improvements.	Addressing. The Party reported in its NIR (p.26) the results of an approach 1 assessment of uncertainty, and indicated that the national inventory agency has recently been working with external consultants (Aether Ltd) to set up a tool that provides detailed uncertainty analyses of Malta's national GHG inventory. This will involve updating the method for determining sector-specific uncertainties and determining overall inventory and trend uncertainties, for reporting in subsequent submissions. During the review, the Party clarified that improving the national GHG inventory of Malta depends on a number of considerations, with uncertainty being one of these elements. Malta recognizes that the use of uncertainty analysis as a means for prioritizing further inventory improvements remains an area where further development is required, including via collaboration with data providers. The ERT considers that the recommendation has not yet been fully addressed because the way the uncertainty analysis is used to prioritize improvements is not fully described in the NIR.
G.12	Uncertainty analysis (G.17, 2021) (G.12, 2019) (G.8, 2017) (G.20,	Discuss qualitatively the uncertainty of the data used for all source and sink categories in a transparent manner in the NIR, in	Addressing. The Party reported in its NIR (p.26) the results of an approach 1 assessment of uncertainty, and indicated that the national inventory agency has recently been working with external consultants to set up a tool that provides detailed uncertainty

<i>ID#</i>	<i>Issue/problem classification</i> ^{a,b}	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
	2016) (G.20, 2015) Convention reporting adherence	particular for categories identified as key categories.	<p>analyses of Malta's national GHG inventory. However, the Party did not include a qualitative assessment of the uncertainty of the data used for all source and sink categories in a transparent manner in the NIR, in particular for categories identified as key categories (e.g. in the energy and agriculture sectors).</p> <p>During the review, the Party clarified that more effort is being targeted towards improving the discussion on uncertainty analysis, both at the level of the inventory as a whole, and at the sector and category level.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet reported qualitatively the uncertainty of the data used for all source and sink categories in a transparent manner in the NIR.</p>
G.13	Uncertainty analysis (G.19, 2021) (G.18, 2019) Convention reporting adherence	Document in the NIR details on the calculation of uncertainties at the category level, and include information on the assumptions made when estimating the uncertainties of AD and EFs at the category level.	<p>Addressing. The Party reported in its NIR (section 1.6, p.26) that, as part of an ongoing capacity-building project, the national inventory agency has recently been working with external consultants to set up a tool that provides detailed uncertainty analyses of Malta's national GHG inventory. The Party stated in the NIR that the consideration and assessment of uncertainties is a priority that will be addressed in future submissions. MRA will look to develop its uncertainty assessment in collaboration with sectoral experts, inventory stakeholders and data providers. For the 2022 submission the Party has documented details on the calculation of uncertainties in different chapters of the NIR (e.g. in the IPPU, LULUCF and waste chapters) as well as providing overall inventory and trend uncertainties (p.26). However, the ERT noted that the uncertainty calculations at the category level are not sufficiently documented in the NIR, in particular in the energy and agriculture chapters.</p> <p>During the review, the Party clarified that efforts are being targeted towards improving the documentation of calculations on uncertainty at the level of the inventory as a whole, and at the sector and category level.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet documented in the NIR details on the calculation of uncertainties for all categories (e.g. for the energy and agriculture sectors).</p>
G.14	Uncertainty analysis (G.20, 2021) (G.18, 2019) Convention reporting adherence	Use the results of the uncertainty analysis to prioritize improvements to the inventory, and include a statement in the NIR on how the results of the analysis are used to prioritize improvements.	Addressing. See ID# G.11 above.
Energy			
E.1	1. General (energy sector) (E.1, 2021) (E.1, 2019) (E.1, 2017) (E.3, 2016) (E.3, 2015) (16, 2013)	Allocate AD and emissions to the appropriate subcategories in order to improve the comparability of the emission	Resolved. During the review, the Party clarified that no energy-intensive manufacturing industries occur in Malta and the data regarding manufacturing industries in Malta are reported under "other industries" by Eurostat. For these reasons the Party reported all

<i>ID#</i>	<i>Issue/problem classification</i> ^{a,b}	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
	(28, 2012) Comparability	estimates with those of other Parties included in Annex I to the Convention.	emissions for category 1.A.2 under subcategory 1.A.2.g other in CRF table 1.A(a)s2 and reported AD and emissions for the other subcategories of 1.A.2 as “NO”.
E.2	1. General (energy sector) (E.2, 2021) (E.3, 2019) (E.3, 2017) (E.6, 2016) (E.6, 2015) (18, 2013) Transparency	Improve the description in the NIR of the category-specific QA/QC activities performed on the AD, with the objective of better understanding the links between the EU ETS, the energy balances and the data reported in the CRF tables.	Not resolved. Detailed information on QA/QC activities regarding links to the EU ETS, energy balances and the data reported in the CRF tables was not provided in the NIR. During the review, the Party indicated that it is making efforts to address this issue for its reporting in future submissions. The ERT considers that the recommendation has not been addressed because the description in the NIR of the category-specific QA/QC activities performed on the AD, with the objective of better understanding the links between the EU ETS, the energy balances and the data reported in the CRF tables has not been improved.
E.3	Fuel combustion – reference approach (E.3, 2021) (E.5, 2019) (E.5, 2017) (E.11, 2016) (E.11, 2015) (23, 2013) (33, 2012) (33, 2011) Convention reporting adherence	Estimate CO ₂ emissions using the reference approach for all years of the time series.	Addressing. The Party reported CO ₂ emissions using both the reference and the sectoral approach for the whole time series. For gaseous fuels, the reference approach covers 2017 onward. The reference approach for biomass fuels covers 2010 onward. During the review, the Party indicated that efforts are being made to cover the other years in the time series. The ERT considers that the recommendation has not been fully addressed because the reference approach is not provided for all fuels for all years of the time series.
E.4	Fuel combustion – reference approach (E.4, 2021) (E.6, 2019) (E.6, 2017) (E.12, 2016) (E.12, 2015) (23, 2013) Transparency	Explain differences in CO ₂ emissions that are above 2 per cent.	Not resolved. The Party reported differences in CO ₂ emissions that are above 2 per cent for liquid fuels (all years between 1990 and 2004, except 1991) and for gaseous fuels (2017). The Party did not provide any explanation in the NIR for the difference between liquid fuels reported using the reference and the sectoral approach. The Party cited a lack of data as one of the challenges resulting in the differences in its NIR (section 3.2.1.2.3.). During the review, the Party indicated that it is making efforts to identify the source of the discrepancies between both approaches. The ERT considers that the recommendation has not been addressed because the NIR does not provide explanations for the differences in CO ₂ emissions by fuel that are above 2 per cent.
E.5	Fuel combustion – reference approach – gaseous, liquid and solid fuels – CO ₂ (E.6, 2021) (E.29, 2019) Transparency	Review whether the same fuels are reported in the IEA data and in the CRF tables and investigate the emissions from other bituminous coal for the whole time series and report the related information transparently in the NIR, or revise the calculations.	Resolved. The Party reported apparent energy consumption for other bituminous coal as “NE”, whereas it reported “NO” in the previous submission for the entire time series in CRF table 1.A(b). The ERT noted that apparent energy consumption (excluding non-energy use, reductants and feedstocks) reported in the IEA data is greater than the apparent energy consumption reported in CRF table 1.A(b) for solid fuels and other fossil fuels. The ERT also noted that the difference is almost entirely caused by the import of bituminous coal, which is reported in the IEA data but not in the CRF tables.

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E.6	Comparison with international data – liquid fuels – CO ₂ (E.7, 2021) (E.30, 2019) Transparency	Investigate and address the inconsistencies identified between the IEA data and the reference approach data, in particular those related to stock changes and imports and exports of liquid fuels, correct the values reported under the reference approach and provide related explanations in the NIR, if appropriate.	<p>Not resolved. The Party did not correct the values for stock changes and imports and exports of liquid fuels. No explanations have been provided in the NIR for the inconsistencies identified between the IEA data and the reference approach.</p> <p>During the review, the Party stated that it has not undertaken any investigation in this regard because any AD used for the purposes of the NIR are acquired from the National Statistics Office of Malta and from Eurostat. The Party indicated that it is making efforts to investigate the comparability of data from the above-mentioned sources and data published by the IEA and will report on this in future submissions.</p> <p>The ERT considers that the recommendation has not been addressed because the Party has not undertaken an investigation on the comparability of data used in the CRF tables and data published by the IEA and has not provided an explanation in the NIR for remaining inconsistencies.</p>
E.7	Comparison with international data – liquid fuels – CO ₂ (E.8, 2021) (E.31, 2019) Transparency	Investigate and address the inconsistencies identified between the IEA data and the aviation gasoline data reported in the CRF tables, correct the values reported and provide related explanations in the NIR, if appropriate.	<p>Not resolved. The Party did not correct the values for stock changes and imports and exports of liquid fuels. No explanations have been provided in the NIR for the inconsistencies identified between the IEA data and the aviation gasoline data reported in the CRF tables.</p> <p>During the review, the Party stated that it has not undertaken any investigation in this regard because the AD used are acquired from the National Statistics Office of Malta and from Eurostat. The Party indicated that it is making efforts to investigate the comparability of data from the above-mentioned sources and data published by the IEA so that it can explain the differences in aviation gasoline in future submissions.</p> <p>The ERT considers that the recommendation has not been addressed because the Party has not undertaken an investigation on the comparability of data used in the CRF tables and data published by the IEA and has not provided an explanation in the NIR for the remaining inconsistencies.</p>
E.8	Feedstocks, reductants and other non-energy use of fuels – bitumen, lubricants – CO ₂ (E.9, 2021) (E.32, 2019) Comparability	Report in CRF table 1.A(d) CO ₂ emissions from the non-energy use of fuels for bitumen and lubricants.	<p>Addressing. The Party reported CO₂ emissions from the non-energy use of fuels for lubricants and bitumen under the IPPU sector and reported them as “IE” in CRF table 1.A(d).</p> <p>During the review, the Party confirmed that there are no combustion activities of lubricants and bitumen in Malta, as explained in the NIR (section 3.2.3), noting that it will report the value of the CO₂ emissions reported under the IPPU sector in CRF table 1.A(d), column I, in its next annual submission.</p>
E.9	International bunkers and multilateral operations – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.10, 2021) (E.33, 2019) Accuracy	Investigate and address the differences in the reporting of jet kerosene, residual fuel oil and gas and diesel oil used in international aviation and navigation in CRF tables 1.A(b) and 1.D.	Addressing. The differences in the reporting of residual fuel oil and gas and diesel oil between CRF tables 1.A(b) and 1.D were largely resolved for 2003 and 2000, respectively, with only minor differences remaining owing to rounding. Differences remain for earlier years. For jet kerosene, the ERT continued to observe differences through the current inventory year.

ID#	Issue/problem classification ^{a,b}	Recommendation from previous review report	ERT assessment and rationale
E.10	1.A.1.a Public electricity and heat production – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.11, 2021) (E.14, 2019) (E.13, 2017) (E.23, 2016) (E.23, 2015) (29, 2013) Transparency	Report estimates, including any relevant information such as country-specific NCVs, oxidation factors, EFs and AD used for the estimation of emissions for the whole time series, in the NIR.	<p>During the review, the Party clarified that the AD for residual fuel oil and gas/diesel oil were updated for the whole time series. The difference in AD for jet kerosene in CRF tables 1.A(b) and 1.D is due to the use of different data sources. EUROCONTROL data are being used to report emissions in CRF table 1.D, whereas Eurostat data are being used to report emissions in CRF table 1.A(b). However, the reasons and justification for using different data sources were not provided in the NIR.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet transparently explained in the NIR the differences in the reporting of jet kerosene, residual fuel oil and gas and diesel oil used in international aviation and navigation in CRF tables 1.A(b) and 1.D.</p>
E.11	1.A.3.a Domestic aviation – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.12, 2021) (E.17, 2019) (E.16, 2017) (E.27, 2016) (E.27, 2015) (38, 2013) Convention reporting adherence	Make use of additional sources of information such as EUROCONTROL, which is based on higher-tier methods, as a supplementary QA activity to verify the fuel allocation for domestic and international uses.	<p>Addressing. The Party continues to report the country-specific EFs and oxidation factors for only the current year (NIR table 3.13), and not the different factors used for 1990–2004 and 2005 onward. The Party indicated in the NIR that it has used the most reliable information available in different periods. For 1990–2004, the calculation of emissions was carried out using a country-specific NCV for each of the fuels used in the power stations and an oxidation factor of 1, in accordance with the 2006 IPCC Guidelines (vol. 2). For 2005 onward, the Party used the NCVs and oxidation factor identified in the verified emission reports submitted by the operators of public electricity generators operating in Malta that fall within the scope of EU ETS directive 2003/87/EC and the NCVs, oxidation factors, EFs and AD were reported in the NIR 2020 (section 3.2.4.2, pp.77–78).</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet transparently reported in the NIR relevant information used for estimating emissions for the whole time series.</p> <p>Addressing. During the review, the Party explained that Malta is no longer using EUROCONTROL data for estimating emissions arising from category 1.A.3.a domestic aviation, and indicated the three different data sources used in different periods in the NIR (section 3.2.6.1). For 1990–2006, AD were collected through MRA from the relevant aviation fuel suppliers (only one active supplier). For 2007–2014, interpolation based on the 2006 IPCC Guidelines (vol. 1) was used. For 2015–2020, AD were available through the national oil balance provided by Eurostat. The Party confirmed that this category is still under review to explain the relationship between different data sources, gap-filling methodologies and interpolation, and any updates will be provided in future submissions.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet transparently reported in the NIR relevant information used to verify the fuel allocation for domestic and international uses.</p>
E.12	1.A.3.a Domestic aviation – liquid fuels –	Use an IPCC default EF or justify in the NIR the use of a country-specific EF.	Resolved. The Party reported the values and sources regarding the EFs and the NCVs used for this category in the NIR (section 3.2.6.1, tables 3-18, 3-19 and 3-20). During

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	N ₂ O (E.13, 2021) (E.18, 2019) (E.26, 2017) Accuracy		the review, the Party clarified that recalculations of all GHG emissions have been done in the 2022 submission owing to changes in the AD (fuel consumption) and methodology. The EFs used were the IPCC default EFs.
E.13	1.A.3.b Road transportation – liquid fuels – CO ₂ (E.14, 2021) (E.19, 2019) (E.17, 2017) (E.28, 2016) (E.28, 2015) (33, 2013) Consistency	Obtain data on the NCVs and carbon content from the fuel suppliers in order to develop and use a more accurate EF when estimating CO ₂ emissions from gasoline; if such data are not available, use the default CO ₂ EF from the 2006 IPCC Guidelines that is applicable to European gasoline passenger cars.	Resolved. The Party applied the default CO ₂ EF from the 2006 IPCC Guidelines for gasoline (69.30 t/TJ) for 2010 onward (see ID# E.15 below). During the review, the Party clarified that the default CO ₂ EFs from the 2006 IPCC Guidelines are used because country-specific EFs (carbon content) are not available.
E.14	1.A.3.b Road transportation – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.15, 2021) (E.20, 2019) (E.20, 2017) (E.37, 2016) (E.37, 2015) Consistency	Ensure the time-series consistency of the CO ₂ , CH ₄ and N ₂ O emission estimates for liquid fuels in road transportation by using the same methodology (COPERT IV model) for the entire time series, or demonstrate in the NIR that the use of two different methodologies does not introduce inconsistencies in the time series.	Addressing. The Party reported in its NIR (p.88) that the same methodology is now used for 2010–2020. During the review, the Party clarified that it had updated the methodology for GHG emission estimates for category 1.A.3.b road transportation. CO ₂ emissions are estimated following the tier 1 methodology in the 2006 IPCC Guidelines (vol. 2, chap. 3, table 3.2.1). Since fuel consumption data disaggregated by vehicle type (i.e. cars, light-duty vehicles, heavy-duty vehicles, buses) are not available, the amount of fuel allocated to each category is estimated using the COPERT V model (the updated version available of COPERT IV model). The energy consumption data for each subcategory are extracted and used as AD following the above-mentioned tier 1 approach and using the default CO ₂ EFs and default NCVs provided by the 2006 IPCC Guidelines (vol. 2, chap. 3, table 3.2.2). The Party explained that, because there are many different types of vehicles, activities and fuels, the EFs are numerous and complex. In order to cope with this complexity, CH ₄ and N ₂ O emission estimates for road transport are calculated using the COPERT V model, which follows a detailed tier 3 method (NIR section 3.2.6.2.1, pp.89–90). Regarding 1990–2009, the Party is still gathering the necessary data to recalculate all emissions for this category and is planning to report them in the next submission. The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet demonstrated the time-series consistency of the CO ₂ , CH ₄ and N ₂ O emission estimates for liquid fuels in road transportation.
E.15	1.A.3.b Road transportation – liquid fuels – CO ₂ and N ₂ O (E.16, 2021) (E.21, 2019) (E.21, 2017) (E.39, 2016)	Review the CO ₂ and N ₂ O IEFs for cars for gasoline, diesel oil and liquefied petroleum gas and explain any significant inter-annual changes and how the consistency of the time series is ensured.	Addressing. In recent years, there have been no significant inter-annual changes in the CO ₂ and N ₂ O IEFs for gasoline, diesel oil or liquefied petroleum gas, but there are changes earlier in the time series (e.g. between 2009 and 2010 for CO ₂ and N ₂ O emissions from gasoline and CO ₂ emissions from diesel oil). During the review, the Party provided the explanation given for ID# E.14 above.

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	(E.39, 2015) Consistency		The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet demonstrated the time-series consistency of the CO ₂ and N ₂ O emission estimates for cars for gasoline, diesel oil and liquefied petroleum gas.
E.16	1.A.3.b Road transportation – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.17, 2021) (E.22, 2019) (E.27, 2017) Accuracy	Apply the procedure for validating vehicle kilometres travelled with fuel statistics data, and correct the data if necessary, before estimating CH ₄ and N ₂ O emissions using the COPERT V model, and describe this procedure and the results in the NIR.	Addressing. The Party uses default EFs from the 2006 IPCC Guidelines and the tier 1 methodology instead of the COPERT V model for CO ₂ emissions. NIR table 3.31 (p.97) presents a comparison of the CO ₂ EFs used in COPERT and the IPCC default EFs for CO ₂ by fuel type for category 1.A.3.b road transportation. NIR table 3.30 (p.96) presents a comparison of CO ₂ estimates (using the IPCC tier 1 methodology and COPERT V) for road transport in 2020 by vehicle subcategory. However, the NIR does not include a validation procedure of vehicle kilometres travelled with fuel statistics data. During the review, the Party provided the explanation given for ID# E.14 above. The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet applied a procedure for validating vehicle kilometres travelled with fuel statistics data.
E.17	1.A.3.b Road transportation – gaseous and liquid fuels – CO ₂ , (E.28, 2021) Transparency	Reflect the corrected CO ₂ emission estimates and fuel consumption AD for subcategory 1.A.3.b road transportation for 2017 and 2018 as they are in the resubmitted 2021 CRF tables.	Resolved. The information on the corrected CO ₂ emission estimates and fuel consumption AD for subcategory 1.A.3.b road transportation for 2017 and 2018 as they were in the resubmitted 2021 CRF tables was no longer relevant in the 2022 NIR.
E.18	1.A.3.b.i Cars – liquid fuels – CO ₂ and CH ₄ (E.18, 2021) (E.23, 2019) (E.28, 2017) Transparency	Add a description in the NIR of the treatment of biodiesel in the COPERT V model.	Resolved. The Party explained that the biodiesel reported in the NIR (section 3.6.2, p.95) includes an amount of fatty acid methyl esters, which contains methanol. The emissions from this fossil part of biodiesel are included in national totals and are reported in subcategory 1.A.3.b road transportation under “other fossil fuels”.
E.19	1.A.3.b.i Cars – liquid fuels – N ₂ O (E.19, 2021) (E.24, 2019) (E.29, 2017) Accuracy	Justify in the NIR the use of the country-specific N ₂ O EF for biodiesel.	Resolved. The Party reported in its NIR (section 3.2.6.2, p.97) that all N ₂ O emissions were estimated using the latest version of the COPERT model (V) and the N ₂ O EFs used come from the COPERT model.
E.20	1.A.3.b.i Cars – diesel – CO ₂ and CH ₄ (E.20, 2021) (E.34, 2019) Convention reporting adherence	Provide in the NIR verification information on the COPERT V model used to estimate GHG emissions from cars under category 1.A.3.b.i (para. 41 of the UNFCCC Annex I inventory reporting guidelines).	Resolved. NIR table 3.31 (p.97) presents a comparison of the CO ₂ EFs used in the COPERT model with the IPCC default EFs for CO ₂ by fuel type for subcategory 1.A.3.b road transportation. NIR table 3.30 (p.96) presents a comparison of CO ₂ estimates (IPCC tier 1 and COPERT V) for road transport in 2020 by vehicle subcategory B.

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E.21	1.A.3.b.iv Motorcycles – lubricants – CO ₂ (E.21, 2021) (E.35, 2019) Transparency	Transparently explain in the NIR the method used for estimating CO ₂ emissions from lubricants used as fuel in two-stroke engines.	Resolved. The Party reported the method for estimating CO ₂ emissions from lubricants used as fuel in two-stroke engines in the NIR (section 3.2.6.2, p.97). During the review, the Party clarified that the total lubricant consumption in Malta is provided by the National Statistics Office, and that the gasoline consumption for two-stroke motorcycle engines is derived using COPERT. According to the 2006 IPCC Guidelines (vol. 2, chap. 3, box 3.2.4), the common ratios of lubrication oil and gasoline are 1:25, 1:33 and 1:50 depending on engine type. The Party used the median value of 1:33 to calculate the amount of lubricant used under category 1.A.3.b.iv Motorcycles – lubricants.
E.22	1.A.3.d Domestic navigation – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.22, 2021) (E.25, 2019) (E.30, 2017) Consistency	Document the changes in data sources and methodology in the NIR, and describe in the NIR how the consistency of the time series is maintained.	Resolved. The NIR presents the fuel consumption for all fuel types used in this category, including an analysis of multiple data sources. All emissions were recalculated for 1990–2020, on the basis of the results of an analysis described in the NIR (section 3.2.6.4.2, p.101). During the review, the Party clarified that this analysis includes fuels used for military marine purposes, which were subtracted to estimate emissions for domestic navigation.
E.23	1.A.3.d Domestic navigation – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.23, 2021) (E.26, 2019) (E.30, 2017) Transparency	Describe in the NIR the factors contributing to the significant inter-annual variation in the consumption of residual fuel oil.	Resolved. In its NIR (section 3.2.6.4, pp. 103–105) the Party analysed AD for residual fuel oil from different data sources to explain the inter-annual variations in consumption. In addition, the Regulator for Energy and Water Services confirmed that residual fuel oil has not been used in Malta since 2012 (pp.103–104).
E.24	1.A.4.a Commercial/institutional – biomass – CH ₄ (E.24, 2021) (E.36, 2019) Transparency	Transparently report the type of fuel constituting the biomass used in the commercial/institutional sector and the quantities of each fuel type used over the time series, and refer to table 1.1 in chapter 1, volume 2, of the 2006 IPCC Guidelines for information on fuel classification.	Not resolved. The Party reported in its NIR (section 3.2.7.1, p.110) that biodiesel and biogas are used in the commercial/institutional sector, but provided no further details on their use across the time series. During the review, the Party indicated that it is making efforts to gather the relevant information in order to provide the quantities of each fuel type used over the time series according to the classification provided in the 2006 IPCC Guidelines (vol. 2, chap. 1, table 1.1) in future submissions. The ERT considers that the recommendation has not been addressed because the Party has not provided the quantities of each fuel type used over the time series according to the classification provided in the 2006 IPCC Guidelines (vol. 2, chap. 1, table 1.1).
E.25	1.A.4.a Commercial/institutional – biomass – CH ₄ (E.25, 2021) (E.36, 2019) Transparency	Transparently report the CH ₄ EFs applied for each biomass type and any recalculations for this category.	Not resolved. No explanations have been provided in the NIR on the CH ₄ EFs applied. During the review, the Party indicated that it is making efforts to report the relevant data under section 3.2.7.2 of the NIR in the next submission. The ERT considers that the recommendation has not been addressed because the Party has not reported the CH ₄ EFs applied for each biomass type.

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E.26	1.A.5 Other (not specified elsewhere) – liquid fuels – CO ₂ , CH ₄ and N ₂ O (E.26, 2021) (E.27, 2019) (E.22, 2017) (E.41, 2016) (E.41, 2015) Transparency	Explain in the NIR the methodology, assumptions and sources of AD and EFs used to estimate and report CO ₂ , CH ₄ and N ₂ O emissions from fuel use in the military (both stationary and mobile combustion) for the entire time series since 1990.	Resolved. Any fuel used for military purposes is subtracted from the total fuel consumption for aviation, navigation and road transportation (NIR, section 3.2.8, p.115). During the review, the Party clarified that the emissions generated by military activities in Malta fall under mobile combustion only because no stationary combustion activities from the military occur in Malta. The Party also stated that the updated fuel consumption for military purposes was provided by the Armed Forces of Malta for 2013–2020, but no data are available for the years prior to 2013. The Party analysed historical data in previous submissions as well as the ratios of the data provided by the Armed Forces of Malta over the total fuel consumption as presented in the national oil balance (NIR, section 3.2.8.2, p.115).
E.27	1.A.5 Other (not specified elsewhere) – gaseous, liquid and solid fuels – CO ₂ , CH ₄ and N ₂ O (E.27, 2021) Comparability	Report CO ₂ , CH ₄ and N ₂ O emissions from fuel delivered to the military under category 1.A.5 in accordance with the definitions provided in the 2006 IPCC Guidelines (vol. 2, chap. 2, table 2.1), or provide a transparent justification for their allocation to another category.	Resolved. The Party reported in its NIR (p.115) that any fuel used for military purposes is subtracted from the respective categories and any emissions generated by military aviation, navigation, road transportation or any other military purposes are reported under category 1.A.5.b. During the review, the Party clarified that the emissions generated by military activities in Malta fall under mobile combustion only because no stationary combustion activities from the military occur in Malta.
E.28	1.A.5 Other (not specified elsewhere) – gaseous, liquid and solid fuels – CO ₂ , CH ₄ and N ₂ O (E.27, 2021) Consistency	Allocate emissions from the military to the same category for all years in the time series.	Resolved. The Party reported in its NIR (p.115) that any fuel used for military purposes is subtracted from the respective categories and any emissions generated by military aviation, navigation, road transportation or any other military purposes are reported under category 1.A.5.b. During the review, the Party clarified that the emissions generated by military activities in Malta fall under mobile combustion only because no stationary combustion activities from the military occur in Malta.
IPPU			
I.1	2. General (IPPU) (I.1, 2021) (I.1, 2019) (I.1, 2017) (I.1, 2016) (I.1, 2015) (42, 2013) (50, 2012) Convention reporting adherence	Develop and implement QA/QC procedures for the IPPU sector.	Resolved. The Party reported in its NIR (p.122) that the data and information received from data providers are checked and compared with the trend of the specific AD “over the previous years”. Any variations and outliers are discussed with the data providers. In some cases, these discussions lead to revision of the data or information (except the data obtained from the National Statistics Office, which are provisional). However, discussions are ongoing with this entity to improve the transfer of information between it and the national inventory agency. Nonetheless, the national inventory agency is trying to identify alternative sources of data, where possible, to allow more robust QA/QC checks. During the review, the Party clarified that the practice of checking data and information received from data providers and comparing them with the trend of the specific AD over the previous years, as stated in its NIR, continues to be performed. Efforts to identify

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I.2	2.A.4 Other process uses of carbonates – CO ₂ (I.2, 2021) (I.2, 2019) (I.2, 2017) (I.5, 2016) (I.5, 2015) (48, 2013) Completeness	Investigate the extent of the use of carbonates in the production of ceramics (at least one company seems to produce ceramic products in Malta), calculate the emissions, if appropriate, and report on the results in the NIR.	<p>alternative sources of data to allow more robust QA/QC checks have been focused on the imports of bulk F-gases (for category 2.F.1 refrigeration and air conditioning), given the importance of this category in the IPPU sector emissions.</p> <p>Addressing. The Party reported in its NIR (p.122) that the use of carbonates in the production of ceramics is being investigated further. The Party did not provide information to justify considering these emissions as insignificant, including their likely emission levels. The national inventory agency intends to determine whether the processes carried out in the local ceramics industry emit GHGs or if the processes are simply working with imported products.</p> <p>During the review, the Party clarified that once it has determined the amount of clay imported it will request the related AD, then calculate any emissions following the 2006 IPCC Guidelines (vol. 3, chap. 2.5) and report the results in the 2026 submission.</p> <p>The ERT considers that the recommendation has not yet been addressed because the Party has not yet requested AD for estimating the emissions from the use of carbonates in the production of ceramics or demonstrated that the emissions from the use of carbonates in the production of ceramics are considered insignificant in accordance with paragraph 37(b) of the UNFCCC Annex I inventory reporting guidelines.</p>
I.3	2.D.3 Other (non-energy products from fuels and solvent use) – CO ₂ (I.3, 2021) (I.3, 2019) (I.4, 2017) (I.10, 2016) (I.10, 2015) (51, 2013) Consistency	Investigate the time-series inconsistency of the estimates of CO ₂ emissions from road paving with asphalt, recalculate the emissions, if appropriate, and report on the findings in the NIR.	<p>Addressing. The Party reported in its NIR (p.122) that the time series consistency of the AD is being analysed. The national inventory agency has started a discussion on the matter with the data provider, which is the agency entrusted with the development, maintenance and upgrading of roads and other public infrastructure in the Maltese Islands. The aim is to determine a time series of actual data that is as consistent as possible and that dates back as far as possible. Based on such a time series, data could be extrapolated back to 1990. Moreover, the Party is planning to analyse the data reported in earlier GHG inventories, particularly for the years up to 2004, to determine whether the data need to be revised.</p> <p>During the review, the Party clarified that Malta is taking the necessary steps to have a consistent data set for the whole time series for the 2025 submission.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet completed the necessary steps to have a consistent data set for the whole time series of CO₂ emissions from road paving with asphalt.</p>
I.4	2.D.3 Other (non-energy products from fuels and solvent use) – CO ₂ (I.4, 2021) (I.16, 2019) Completeness	Report emissions from the use of urea in road transportation in order to ensure completeness.	<p>Resolved. The Party reported in its NIR (p.141) that, under road transportation, CO₂ emissions from urea used for denoxification in selective catalytic reduction have been estimated using the COPERT model, including its default values for urea consumption as a function of fuel consumption.</p> <p>During the review, the Party confirmed that it uses the same model for reporting, in the CRF tables, its estimates of emissions from urea solution consumption for use in selective catalytic reduction in transport.</p>

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I.5	2.F.1 Refrigeration and air conditioning – HFCs and PFCs (I.5, 2021) (I.5, 2019) (I.6, 2017) (I.12, 2016) (I.12, 2015) (44, 2013) Transparency	Proceed with the project to develop a better methodology for estimating emissions from refrigeration and air conditioning and report on the status in the NIR.	Resolved. The Party reported in its NIR (p.145) that the project for the improvement of the methodology for estimating emissions from refrigeration and air conditioning conducted between 2012 and 2014 has been concluded and was first reported in the 2015 NIR. Other continuous improvements are being made to revise the number of vehicles for the whole time series using actual data from the local authority for transport and to obtain the number of registered vehicles in a consistent and timely manner.
I.6	2.F.1 Refrigeration and air conditioning – commercial refrigeration – HFCs (I.6, 2021) (I.7, 2019) (I.9, 2017) (I.15, 2016) (I.15, 2015) Transparency	Ensure consistency between the notation keys used to report AD for “filled into new manufactured products” (“NO”) and for “remaining in products at decommissioning” (“NE”) and the associated emissions (“NO”).	Not resolved. The Party continues to report “NO” for AD for “filled into new manufactured products” for all HFCs except HFC 152-a, “NE” for “remaining in products at decommissioning” and “IE” for emissions from disposal for commercial refrigeration. The Party did not report in its NIR or CRF table 9 explanations for the notation keys used to report AD for “filled into new manufactured products” and for “remaining in products at decommissioning” or emissions from disposal. During the review, the Party confirmed its intention to explain the use of “IE” in CRF table 9 in the 2025 submission. The ERT considers that the recommendation has not yet been addressed because the Party has not yet explained the use of “IE” for emissions from disposal in CRF table 9.
I.7	2.F.1 Refrigeration and air conditioning – transport refrigeration and stationary air conditioning – HFCs (I.7, 2021) (I.8, 2019) (I.11, 2017) (I.16, 2016) (I.16, 2015) Transparency	Review the notation keys reported for disposal emissions in CRF table 2(II).B-H to ensure that the correct notation keys are used.	Addressing. The Party estimated all emissions from disposal for transport refrigeration in CRF table 2(II).B-Hs2, except HFC-32, for which “NO” was reported, and “IE” for emissions from disposal from stationary air conditioning, but did not provide an explanation for this in CRF table 9. During the review, the Party clarified that in the 2022 GHG inventory the notation keys used for emissions from disposal in the transport refrigeration subcategory for HFC-32 have been updated to “NO” and explanations for the use of “IE” will be included in CRF table 9 in the 2025 submission. The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet explained the use of “NE” and “IE” in CRF table 9.
I.8	2.F.1 Refrigeration and air conditioning – HFCs (I.8, 2021) (I.13, 2019) (I.19, 2017) Comparability	Report emissions from mobile air conditioning separately in subcategory 2.F.1.e mobile air conditioning in order to ensure transparency and comparability.	Resolved. The Party reported in CRF table 2(II)B-Hs2 and in its NIR (pp.163–167) emissions for subcategory 2.F.1.e mobile air conditioning separately, and reported that revised vehicle fleet data were used.
I.9	2.F.1 Refrigeration and air conditioning – HFCs (I.9, 2021) (I.17, 2019) Accuracy	Explain why the average charge factor for buses and coaches is higher than for mobile refrigeration vehicles.	Not resolved. The Party reported in its NIR (p.161) that for subcategory 2.F.1.d transport refrigeration it uses the same average charge of 3.9 kg for mobile refrigeration as reported in the NIR of the United Kingdom (2013) because most vehicles in the country are imported from the United Kingdom. The NIR (p.165) indicates that for buses and coaches the average charge is 12 kg for mobile air conditioning. The ERT noted that table 7.9 of the 2006 IPCC Guidelines (vol. 3, chap. 7) provides charge rates

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I.10	2.F.2 Foam blowing agents – HFCs (I.10, 2021) (I.9, 2019) (I.14, 2017) (I.18, 2016) (I.18, 2015) Transparency	Review the AD and ensure that there is a robust and consistent approach to collecting AD for this category in a way that eliminates any possibility of data gaps from some of the importers, and explain any significant inter-annual changes in emissions.	<p>significantly higher for transport refrigeration (3–8 kg) than for mobile air conditioning (0.5–1.5 kg) and concluded that there could be a potential overestimation of emissions.</p> <p>During the review, the Party clarified that it is considering the revision of the average charges for mobile air conditioning and transport refrigeration so that, as far as possible, they are brought into line with the ranges defined in the 2019 Refinement to the 2006 IPCC Guidelines and will report the results in the 2025 submission.</p> <p>The ERT considers that the recommendation has not yet been addressed because the Party has not yet explained why the average charge factor for buses and coaches is higher than for mobile refrigeration vehicles.</p> <p>Addressing. The ERT notes that the recommendation from the previous review report related to the review of AD to ensure coverage of importers was resolved in the 2021 submission, and the outstanding issue is related to explaining the inter-annual changes in the NIR. The Party did not report in the NIR on an analysis of the inter-annual changes.</p> <p>During the review, the Party clarified that the inter-annual variations have been analysed. Emissions from the following HFCs were reported under category 2.F.2: HFC-134a, HFC-365mfc, HFC-245fa and HFC-227ea. Specifically, HFC-134a is emitted from imported closed-cell foam panels; HFC-365mfc is emitted from locally manufactured open-cell foam and from imported closed-cell foam panels; HFC-245fa is emitted from imported closed-cell foam panels; and HFC-227ea is emitted from locally manufactured open-cell foam and from imported closed-cell spray-on foams. There are limited inter-annual variations in the emissions of HFC-245fa. Only HFC-365mfc and HFC-227ea have been used in locally manufactured open-cell foams. The inter-annual variations in the emissions of these two gases are primarily due to the inter-annual variations in the AD. Only HFC-134a is emitted from imported closed-cell foam panels. The inter-annual variations in emissions of HFC-134a are primarily due to the inter-annual variations in the AD obtained from the National Statistics Office. The Party identified an error in the estimation of emissions of HFC-134a which resulted in an overestimation of the emissions from this gas that will be corrected in the 2023 submission.</p> <p>The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet explained the inter-annual variations in its NIR.</p>
Agriculture			
A.1	3. General (agriculture) – (A.1, 2021) (A.2, 2019) (A.2, 2017) (A.4, 2016) (A.4, 2015) (56, 2013) (69, 2012) Consistency	Review the population data for all livestock categories, ensure time-series consistency and report on any recalculations.	<p>Resolved. The Party reported in its NIR (section 5.1.1, p.187) that the livestock population for most livestock categories is available for 2000 onward from the National Statistics Office. Pre-2000 totals for every livestock category are taken from FAOSTAT, and the populations for the livestock subcategories are extrapolated back using a trend extrapolation of six years.</p> <p>During the review, the Party clarified that there are currently no data sources that provide a reliable complete time series of livestock population data, so it performs a</p>

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			revision and aggregation of data from multiple sources. The Party further clarified its plans to implement a data-collection system for agriculture as well as to review livestock AD in order to ensure time-series consistency, and confirmed that it will include an explanation of the method used and justifications in the 2023 submission.
A.2	3. General (agriculture) – (A.2, 2021) (A.3, 2019) (A.3, 2017) (A.22, 2016) (A.22, 2015) Consistency	Use appropriate techniques as detailed in the 2006 IPCC Guidelines for the development of a consistent time series of AD (animal populations).	Resolved. The Party reported in its NIR (p.187) the description of the method used for updating the time series of populations (see ID# A.1 above).
A.3	3. General (agriculture) – CH ₄ and N ₂ O (A.20, 2021) Transparency	Include in the NIR a description of the national characterization and classification of the six swine categories presented in CRF table 3.A.	Resolved. The Party reported in its NIR (section 5.2.2.4, p.206) the description and characterization of the six swine categories. The Party also reported the methods applied for estimating CH ₄ emissions from enteric fermentation for swine.
A.4	3.A.1 Cattle – CH ₄ (A.21, 2021) Transparency	Document the methodologies and assumptions taken from the 2019 Refinement to the 2006 IPCC Guidelines to estimate CH ₄ emissions from enteric fermentation for cattle, demonstrate that they better represent the national circumstances and justify their use in the NIR.	Resolved. The Party reported in its NIR (section 5.1.3, p.188) that it now uses the methodologies and assumptions in the 2019 Refinement to the 2006 IPCC Guidelines (vol. 4) for estimating CH ₄ emissions from enteric fermentation for cattle. Owing to the Party’s use of the 2019 Refinement to the 2006 IPCC Guidelines, emission estimates for the agriculture sector increased slightly. In NIR table 5.5 the Party provided a comparison between the data for the agriculture categories estimated using the 2006 and 2019 versions of the IPCC references. The Party also demonstrated that the more detailed methodology provided in the 2019 Refinement to the 2006 IPCC Guidelines is more representative of Malta’s circumstances, given its size and environmental conditions.
A.5	3.A.1 Cattle – CH ₄ (A.22, 2021) Transparency	Include in the NIR a description of the gap-filling methods used for milk production data across the time series.	Resolved. The Party included in its NIR (section 17, p.443) a “note on gap filling for milk production” explaining that an interpolation between two existing points was performed (using AD on milk production for 1990 and 1995) and validated using surrogate data.
A.6	3.A.1 Cattle – CH ₄ (A.23, 2021) Transparency	Provide details on the sample size, describe the data analyses carried out and justify why the values used are representative of the country.	Resolved. The Party provided an explanation in its NIR (section 5.2.4, pp.210–211) for the feed and other characterizing data. The Party clarified that, as part of its internal QA/QC processes, data that do not change annually are revisited with the data provider every five years to verify any possible changes. As a result, the feed intake by non-lactating cows has been revised down to 15 kg/day from 24 kg/day following consultations with the local experts at the data provider (Koperattiva Produtturi tal-Halib). This decision was taken after it was found that a feed intake of 15 kg/day to non-lactating cows is more efficient in terms of yield returns (e.g. for milk production and beef) per unit feed given. Further, the Party indicated that additional checks are made by the inventory team to the extent possible, including data comparisons with other data sources, such as FAOSTAT.

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A.7	3.A.4 Other livestock – CH ₄ (A.8, 2021) (A.20, 2019) Accuracy	Review the EFs reported by the small number of Parties that report CH ₄ emissions from enteric fermentation for poultry, choose an EF that best represents poultry production practices in Malta, revise the estimates, if appropriate, and provide an appropriate rationale and reference for the choice of EF in the NIR.	<p>Not resolved. The Party reported in its NIR (section 5.2.2.5, p.208) that enteric fermentation from poultry is excluded from the inventory.</p> <p>During the review, the Party clarified the reasons for not reporting CH₄ emissions from enteric fermentation for poultry. Since no methodology or EF exist in the 2006 IPCC Guidelines, as indicated in table 10.10 of the guidelines (vol. 4, chap. 10), CH₄ emissions from enteric fermentation for poultry can be omitted if no country-specific EF is available. Moreover, Malta has reviewed the EFs reported by other countries, and has observed that Parties reporting these emissions have their own country-specific EF which cannot be used by Malta given the differences in rearing practices and environmental conditions. Therefore, Malta stopped reporting emissions of CH₄ from enteric fermentation for poultry from March 2022.</p> <p>The ERT noted that, according to the UNFCCC Annex I inventory reporting guidelines (para. 37(b)), once emissions from a specific category have been reported in a previous submission, emissions from this specific category are to be reported in subsequent GHG inventory submissions.</p> <p>The ERT considers that this recommendation has not been resolved because the Party has not reported CH₄ emissions from enteric fermentation for poultry and provided an appropriate rationale and reference for the choice of EF in the NIR.</p>
A.8	3.B.1 Cattle and 3.D.a.2.a Animal manure applied to soils – N ₂ O (A.12, 2021) (A.8, 2019) (A.15, 2017) (A.29, 2016) (A.29, 2015) Transparency	Explain in the NIR how N ₂ O emissions from manure management for dairy cattle, including the Nex used, and N ₂ O emissions from animal manure applied to soils are estimated, and how these estimates are consistent with the tier 2 approach used to estimate CH ₄ emissions from enteric fermentation for dairy cattle.	Resolved. The Party reported in its NIR (section 5.3.2.2, pp.221–225 and 230–231) the complete list of equations, assumptions and values used from the 2019 Refinement to the 2006 IPCC Guidelines. Further, the full list of EFs and relevant data (including the N retention) is presented in the NIR (section 17, table 17.21). The NIR explains that the N intake of cattle and sheep was estimated using equation 10.32 in the 2019 Refinement to the 2006 IPCC Guidelines, and the N retention rate of cattle was estimated using equation 10.33. The milk fat content is provided annually by Malta Dairy Products; this value varies annually, as does the milk production rate, based on the diet fed to dairy cattle. Gross energy intake was used for determining the Nex rate and the CH ₄ emissions from manure and enteric fermentation.
A.9	3.B.1 Cattle – CH ₄ (A.24, 2021) Convention reporting adherence	Correct the IEF values for cattle reported in the NIR to ensure consistency between the NIR and CRF table 3.B(a).	Resolved. The Party reported in its NIR (table 5-7, p.194) that the correct value is presented in the CRF tables. The ERT did not identify any discrepancies in the CH ₄ IEF between the NIR and CRF table 3.B(a).
A.10	3.B.3 Swine – CH ₄ (A.25, 2021) Accuracy	Clarify the unit of the resulting emissions in NIR equation 5.2 and explain and justify the values for the amount of slurry applied to soils across the time series.	<p>Addressing. The Party reported in its NIR (section 5.3.2.1.2, pp.216–217) that the two values used for fraction of slurry applied to soils (up to 2012, 0.1 and after 2012, 0.05) were based on expert judgment and on the Party's Nitrates Action Plan.</p> <p>The ERT considers that the Party has not fully addressed the recommendation because the values across the time series are not clearly justified and expert judgment is not documented.</p>

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A.11	3.B.4 Other livestock – N ₂ O (A.26, 2021) Transparency	Include background information in the NIR to justify the Nex values used.	Addressing. The Party reported in its NIR (section 5.3.2.2, p.223) that the country-specific Nex rates used for poultry of 0.82 kg/place (for broilers and other poultry) and 0.87 kg/place (for layers) were taken from table 4 of <i>Agricultural Waste Management Plan for the Maltese Islands</i> (Sustech, 2008, p.63), which provides the values and refers to a previous study that analysed the quantity and composition of the manure. However, that report does not include any further information on the specific study generating these data. The ERT considers that the Party has not fully addressed the recommendation because the original documentation used for deriving country-specific values is not provided in the NIR.
A.12	3.D Direct and indirect N ₂ O emissions from agricultural soils – N ₂ O (A.27, 2021) Accuracy	Obtain data on consumption and application of inorganic N fertilizer and provide the estimates for application rates of inorganic N fertilizer.	Addressing. The Party reported in its NIR (section 5.3.3, p.234) that uncertainty regarding the use of fertilizers and the input from inorganic N to soils has been partially addressed through the re-estimation of N applied using the newly calculated agricultural area and rate of application. The Party confirmed that it is conducting a survey to establish the N applied to agricultural soils based on the Fertilizer Plan. This exercise was planned to take place in 2021, and although no exact completion date can be provided at this point, it was assumed that it would be completed by the end of 2021. The ERT considers that the recommendation has not yet been fully addressed because no results have yet been made available.
A.13	3.D.a.2.a Animal manure applied to soils – N ₂ O (A.16, 2021) (A.15, 2019) (A.27, 2017) (A.37, 2016) (A.37, 2015) Transparency	Undertake a representative survey of AWMS for all livestock species as part of future improvements to the inventory and include in the NIR information on the AWMS used in the country.	Resolved. The Party reported in its NIR (section 5.3.2, table 5.13, p.214) that information on manure management systems has been provided by the Agriculture Department of the Ministry for Agriculture, Fisheries and Animal Rights, supported by farm visits. During the review, the Party clarified that it has conducted a data-gathering exercise with multiple cooperatives and data sources, and provided a description of AWMS in the NIR.
A.14	3.D.b Indirect N ₂ O emissions from managed soils – N ₂ O (A.28, 2021) Transparency	Include in the NIR details of the values used for N loss due to volatilization, including their sources and any assumption used.	Resolved. The Party reported in its NIR (section 17, table 17.21, pp.221–225) that Malta's Nitrates Action Plan and Code of Good Agricultural Practice, which respond to the requirements of EU directive 91/676/EEC, require all agricultural holdings to store their manure in enclosed, leak-proof spaces. Therefore the Party does not estimate emissions from range, pasture and paddock, given that no manure is left to lie as deposited and unmanaged. During the review, the Party clarified that it used the 2019 Refinement to the 2006 IPCC Guidelines (vol. 4, chap. 10, equation 10.26, using default values in table 10.22), including for the calculations of the Nex rate because that results in a more specific and detailed estimation, and the Party revised the calculation of N loss due to volatilization from manure management. Further, the NIR mentions that the tier 1 estimations for annual Nex rates of swine, poultry, goats, horses and rabbits were calculated using equation 10.30, while default Nex rates are from table 10.19 of the 2019 Refinement to

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LULUCF			
L.1	4. General (LULUCF) – CO ₂ (L.8, 2021) Accuracy	Check and correct the calculation of carbon stock change in biomass for all conversions of land.	the 2006 IPCC Guidelines, with the exception of poultry, where the Nex rates were from Sustech (2008). For sheep, the Party used equation 10.31 from the same guidelines for calculating the tier 2 annual Nex rates (cattle and sheep). Resolved. The Party checked and updated the information on biomass carbon stock changes due to land-use transitions in the NIR (section 6) and CRF tables 4.A, 4.B, 4.C, 4.D, 4.E and 4.F.
L.2	Land representation – (L.2, 2021) (L.3, 2019) (L.9, 2017) (L.15, 2016) (L.15, 2015) Transparency	Report all information, including assumptions, on the method applied to construct a consistent land representation while using two different data sets (national statistics for cropland and forest land and CORINE land-cover data for all other land uses).	Resolved. The Party reported detailed information in its NIR (sections 6.3, pp.261–262, and 6.3.1, pp.263–265). Section 6.3 of the NIR provides the different data sets used for identifying land-use areas, including information on a comparison exercise identifying the different land-use categories involved in the LULUCF sector. Section 6.3.1 of the NIR provides a detailed explanation of the methodology and assumptions used for developing the land-use representation, including the hierarchy of assumptions taken to construct the land-use conversions.
L.3	4.A.1 Forest land remaining forest land – CO ₂ (L.3, 2021) (L.5, 2019) (L.13, 2017) (L.19, 2016) (L.19, 2015) Transparency	Report any information collected from the surveillance system on any disturbance that has occurred on forest land and report the associated GHG emissions and subsequent removals.	Resolved. The Party reported information in its NIR (section 6.4, p.274) on AD, EFs and calculations for the forest land sector. The Party also provided additional information in its NIR, including evidence to support the assumption of no harvesting (in section 6.4.1) and on the legally protected status of woodlands.
L.4	4.F.2 Land converted to other land – CO ₂ (L.5, 2021) (L.11, 2019) Accuracy	Recalculate carbon stock changes in living biomass for land converted to other land in line with the 2006 IPCC Guidelines and include relevant information in the next annual submission.	Resolved. The Party amended and correctly recalculated carbon stock changes in living biomass for land converted to other land in CRF table 4.F and in the NIR (section 6.9.2, p.323).
Waste			
W.1	5. General (waste) – CH ₄ and N ₂ O (W.1, 2021) (W.2, 2019) (W.13, 2017) Transparency	Ensure all uses of “IE” in the waste sector are fully explained in CRF table 9.	Addressing. The Party reported in CRF table 9 explanations for its use of some occurrences of “IE” but did not fully explain the use of “IE” for the amount of N ₂ O emissions from industrial wastewater. During the review, the Party stated that an explanation for its use of “IE” for N ₂ O emissions in category 5.D.2 industrial wastewater will be presented in the 2023 submission. The ERT considers that the recommendation has not yet been fully addressed because not all uses of “IE” in the waste sector are fully explained in CRF table 9.
W.2	5.A Solid waste disposal on land – CH ₄ (W.2, 2021) (W.3, 2019)	Provide detailed information in the NIR on CH ₄ recovery for all years in which recovery	Resolved. The Party reported in its NIR (pp.354–355) detailed information on the quantity of CH ₄ recovered and the method used for quantifying CH ₄ for all years in which CH ₄ recovery is reported.

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	(W.3, 2017) (W.3, 2016) (W.3, 2015) (86, 2013) (102, 2012) Transparency	is reported (e.g. the quantity of CH ₄ recovered and method used to quantify CH ₄).	
W.3	5.A Solid waste disposal on land – CH ₄ (W.3, 2021) (W.4, 2019) (W.4, 2017) (W.10, 2016) (W.10, 2015) Accuracy	Justify, in accordance with the 2006 IPCC Guidelines, estimates of CH ₄ recovered, or use the assumption that no recovery occurs.	Resolved. The Party reported in its NIR (pp.354–355) that the oxidized value from the first-order decay managed model and the amount of CH ₄ oxidized from the first-order decay unmanaged model are obtained by direct measurement by the operator, Wasteserv Malta Ltd. The ERT concludes that the Party has sufficiently justified the reporting of CH ₄ recovered.
W.4	5.A.2 Unmanaged waste disposal sites – CH ₄ (W.5, 2021) (W.9, 2019) (W.15, 2017) Transparency	Provide further quantitative information in the NIR regarding the country-specific MCF value applied, such as the time series of adjusted MCF values and the measured landfill gas composition from the Maghtab landfill.	Resolved. The Party reported in its NIR (section 7.2.5.15., table 7.16, p.357) information regarding the measured landfill gas composition from the Maghtab landfill. It also reported (pp.351–353) that it applied the country-specific MCF values 0.4 for unmanaged shallow landfill (1977–1987), 0.8 for unmanaged deep landfill (1988–2004) and 1.0 for managed deep landfill (2004 onward), in accordance with the 2006 IPCC Guidelines (vol. 5, chap. 3, table 3.1, p.3.14). During the review, the Party clarified that the MCF value for 1950–1987 was 0.4.
W.5	5.A.2 Unmanaged waste disposal sites – CH ₄ (W.16, 2021) Transparency	Clearly report in the NIR the reasons for the significant decrease in CH ₄ emission estimates for subcategory 5.A.2 unmanaged waste disposal sites by providing the aeration factors used for all years of the time series and CH ₄ recovery applied, in addition to the CH ₄ and CO ₂ percentages used to estimate the aeration factor, and provide the reference for the methodology used to estimate the aeration factor.	Resolved. The Party reported in its NIR (table 7.16, p.357) the aeration factors used for 2008–2020, as well as the CH ₄ and CO ₂ percentages used for estimating the aeration factor, and the reference for the methodology used for estimating the aeration factor (p.356). The Party reported the amount of CH ₄ recovered as “IE” in the previous submission and “NO” in the current submission for the entire time series.
W.6	5.C Incineration and open burning of waste – CH ₄ and N ₂ O (W.9, 2021) (W.13, 2019) (W.11, 2017) Convention reporting adherence	Correct the CH ₄ and N ₂ O EFs for MSW and clinical and industrial waste reported in CRF table 5.C.	Addressing. The ERT checked for inconsistencies between the EFs reported in the NIR (pp.448–450) and the CH ₄ and N ₂ O IEFs for MSW, and clinical and industrial waste reported in CRF table 5.C and noted that the Party reported correctly the CO ₂ , CH ₄ and N ₂ O IEFs for MSW and industrial waste, and the CO ₂ IEFs for clinical waste in CRF table 5.C. However, there is a discrepancy between the N ₂ O and CH ₄ IEFs for clinical waste in CRF table 5.C (0.0001 kg N ₂ O/t waste and 0.0002 kg CH ₄ /t waste) and the EF reported in the NIR (p.449) (0.1 kg N ₂ O /t waste and 200 kg CH ₄ /t waste) reflecting a mistake in the units used for the automatic estimation of both the CH ₄ and N ₂ O IEF. The ERT considers that the recommendation has not yet been fully addressed because the Party has not yet corrected the input data used for the CH ₄ and N ₂ O IEFs for clinical waste reported in CRF table 5.C.

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W.7	5.C.1 Waste incineration – CH ₄ and N ₂ O (W.17, 2021) Convention reporting adherence	Correct the description in the NIR and ensure consistent reporting of the information on the category within the NIR.	Resolved. The Party corrected the description in its NIR (p.330) on the types of waste incinerated, and clarified that all sludge is disposed of at solid waste disposal sites (NIR, pp.354 and 378).
W.8	5.C.1 Waste incineration – CO ₂ (W.18, 2021) Accuracy	Revise the estimates by applying appropriate CO ₂ EFs for each MSW type in accordance with the 2006 IPCC Guidelines (vol. 5, chap. 5, equation 5.2 and table 5.2, and chap. 2, table 2.4).	Resolved. The Party reported in its NIR (p.370) that the fraction of carbon in dry matter for MSW was updated to improve accuracy depending on the code provided in the European Waste Catalogue. The Party continues to apply the same CO ₂ EF for different types of MSW. During the review, the Party provided the ERT with a calculation file and clarified that the carbon fraction value of 0.5 for total carbon content of dry weight for industrial waste has been used for recent years (from the 2006 IPCC Guidelines, vol. 5, chap. 5.4.1, table 5.2), depending on the European Waste Catalogue code.
W.9	5.C.1 Waste incineration – CO ₂ , N ₂ O (W.19, 2021) Convention reporting adherence	Correct the descriptions in the NIR of the N ₂ O EF for incineration of MSW (non-biogenic) for 2007 onward and indicate the correct fossil carbon fraction of MSW.	Resolved. The Party reported in its NIR (p.448) the fraction of fossil carbon in total carbon of MSW as 1 and corrected the descriptions of the N ₂ O EF for incineration of MSW (non-biogenic).
W.10	5.C.2 Open burning of waste – CO ₂ , CH ₄ and N ₂ O (W.20, 2021) Completeness	Provide estimates of CO ₂ , CH ₄ and N ₂ O emissions for subcategory 5.C.2 open burning of waste or provide, in the NIR, justification for reporting open burning as “NO” in CRF table 5.C.	Resolved. The Party reported in its NIR (p.368) that open burning of waste does not take place in Malta. However, in CRF table 5.C the Party reported open burning as “NE”. Since open burning of waste does not take place in Malta “NO” should be used and the Party will include the notation key “NO” in future submissions.
W.11	5.D Wastewater treatment and discharge – CH ₄ and N ₂ O (W.12, 2021) (W.20, 2019) Transparency	Revise the description in the NIR regarding wastewater from dwellings not connected to the sewer system. More specifically, remove references to uncollected wastewater and explain that where remote hamlets are served by communal and individual cesspits, the local water and wastewater utility company periodically collects the wastewater from the cesspits using tankers and discharges it into the sewer network at designated discharge points for treatment at urban wastewater treatment plants, and that related emissions are thus included in the inventory.	Resolved. The description regarding wastewater from dwellings not connected to the sewer system has been revised in the NIR (p.377).
W.12	5.D.1 Domestic wastewater – N ₂ O (W.14, 2021) (W.18,	Include in the NIR further quantitative and qualitative information on the N removal efficiency factor, including the source and	Addressing. The Party continues to report 70 per cent for removal capacity of plant and reported in its NIR (p.378) that the N removal efficiency factor (70 per cent) is a “ballpark figure”. Wastewater treatment plants in Malta have a 70 per cent N removal

<i>ID#</i>	<i>Issue/problem classification</i> ^{a,b}	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
	2019) (W.18, 2017) Accuracy	justification for the value used and a time series of the values applied.	capacity, on average. The Party also reported that it will further consult with the operator of the urban wastewater treatment system to determine whether the 70 per cent value remains applicable to the situation in Malta or whether it should be revised. The ERT believes that this issue should be given further consideration in future reviews to ensure that emissions are not underestimated.
W.13	5.D.1 Domestic wastewater – CH ₄ (W.21, 2021) Convention reporting adherence	Correct the description of the MCF for wastewater treatment plants in the NIR.	Resolved. The Party reported in its NIR (p.377) that although the N ₂ O emissions from domestic wastewater for 2012 were estimated, the CH ₄ emissions from wastewater are “0” because the MCF for wastewater treatment plants is 0.0; all four aerobic wastewater treatment plants in the country are well managed and the data provider (Water Services Corporation) clarified that all wastewater generated in 2012 was treated and there was no untreated wastewater.
KP-LULUCF			
KL.1	General (KP-LULUCF) (KL.1, 2021) (KL.1, 2019) (KL.1, 2017) (KL.1, 2016) (KL.1, 2015) Transparency	Report for all KP-LULUCF the following information in the NIR: (1) The methods used to calculate the carbon stock changes and GHG emission and removal estimates for each activity; (2) Information on whether indirect and natural GHG emissions and removals have been factored out of the calculations; (3) Information that demonstrates that the activity has occurred since 1 January 1990 and is human induced.	Resolved. The Party reported detailed information as follows: (1) The methods and data used for calculating carbon stock changes and GHG emissions and removals for each activity are described in the NIR (section 6.4.2, pp.285–294); (2) Information on the factoring out of indirect and natural GHG emissions and removals is discussed in the NIR (section 11.3.1.3, p.404); (3) Evidence that activities have occurred since 1 January 1990 and are human induced is provided in section 11.4 of the NIR (p.405) and in NIR table 6.14 (pp.284–285).
KL.2	General (KP-LULUCF) (KL.2, 2021) (KL.2, 2019) (KL.2, 2017) (KL.1, 2016) (KL.1, 2015) Transparency	Report information in the NIR on conversion of natural forest to planted forest.	Resolved. The Party reported the relevant information in the NIR (section 11.5.2.1, p.407).
KL.3	General (KP-LULUCF) (KL.3, 2021) (KL.7, 2019) Comparability	Report “NA” for activities not elected under Article 3, paragraph 4, of the Kyoto Protocol in CRF table NIR-1.	Resolved. The Party reported the appropriate notation key in CRF table NIR-1.
KL.4	Deforestation – CO ₂ (KL.4, 2021) (KL.8, 2019) Transparency	Increase the transparency of reporting by including the definition of deforestation applied in line with decision 16/CMP.1,	Resolved. The Party reported its definition of deforestation in the NIR (section 11.1.3, p.399), and it is in line with decision 16/CMP.1, annex, paragraph 1(d).

<i>ID#</i>	<i>Issue/problem classification</i> ^{a,b}	<i>Recommendation from previous review report</i>	<i>ERT assessment and rationale</i>
		annex, paragraph 1(d), in the next annual submission.	
KL.5	FM (KL.5, 2021) (KL.4, 2019) (KL.5, 2017) (KL.5, 2016) (KL.5, 2015) Accuracy	Identify the areas that meet the forest definition and that are not reported under any KP-LULUCF and report on the impact of such exclusion on the accounting.	Resolved. The Party's categorization of forest consistently excludes trees in urban or rural settlements in its reporting for both category 4.A.1 forest land remaining forest land and FM under Article 3, paragraph 4, of the Kyoto Protocol. During the review, the Party clarified that tree planting in land identified as settlements took place in gardens and parks and in urban greening areas, mainly for the purpose of landscaping and habitat restoration. The Party informed the ERT that only the number of trees planted was documented, not the area, and that the majority of these trees are distributed in green zones along existing roads or along newly built or rebuilt roads. The Party clarified that these treed lands will not meet the forest definition and carbon stocks in these areas are assumed to be stable. The ERT agrees that these treed areas within the settlements category will not meet the forest definition threshold of 1 ha, and their exclusion from reporting has no material impact on KP-LULUCF accounting. The ERT notes that Malta has a continuing collaboration project to produce a spatially explicit representation of land use and land-use change over time, as described in chapter 6 of the NIR.
KL.6	FM (KL.6, 2021) (KL.5, 2019) (KL.7, 2017) (KL.7, 2016) (KL.7, 2015) Transparency	Report in the NIR information on the entities involved in the implementation of the FM plan, including surveillance, and information on the entities involved in the monitoring of forest land, so that anthropogenic sources and sinks are identified, and the associated emissions and removals are reported when they actually occur.	Resolved. The Party stated in its NIR (section 6.4.1.3, p.279) that the Mizieb reserve is a woodland area of mixed broadleaf and conifer forest managed by a committee of the Federation for Hunting and Conservation, which has not provided additional information to the LULUCF inventory compilers. Information on the legal protection (Trees and Woodland Protection Regulations; legal notice 12, 2001) and management of woodlands in Malta is reported in section 11.1 of the NIR. During the review, the Party clarified that 62 ha forest in the Mizieb reserve is included in the area of FM under Article 3, paragraph 4, of the Kyoto Protocol and, in the absence of other information, this woodland is assumed to be in carbon equilibrium, as is the case for the majority of the other woodland included under FM. A small area was afforested in 2020 and is included under category 4.A.2 land converted to forestry and afforestation under Article 3, paragraph 3, of the Kyoto Protocol. The Party has included as much information as is available and has made justifiable assumptions for this area using expert judgment, which will not lead to an overestimation of sinks or underestimation of sources.

^a References in parentheses are to the paragraph(s) and the year(s) of the previous review report(s) in which the issue or problem was raised. Issues are identified in accordance with paras. 80–83 of the UNFCCC review guidelines and classified as per para. 81 of the same guidelines. Problems are identified and classified as problems of transparency, accuracy, consistency, completeness or comparability in accordance with para. 69 of the Article 8 review guidelines in conjunction with decision 4/CMP.11.

^b The reports on the review of the 2018 and 2020 annual submissions of Malta were not available at the time of this review. Therefore, 2018 and 2020 are excluded from the list of review years in which issues could have been identified.

IV. Issues and problems identified in three or more successive reviews and not addressed by the Party

9. In accordance with paragraph 83 of the UNFCCC review guidelines, the ERT noted that the issues and/or problems included in table 4 have been identified in three or more successive reviews, including the review of the 2022 annual submission of Malta, and had not been addressed by the Party by the time of publication of this review report.

Table 4

Issues and/or problems identified in three or more successive reviews and not addressed by Malta

<i>ID#</i>	<i>Previous recommendation for issue</i>	<i>Number of successive reviews issue not addressed^a</i>
General		
G.1	Include, as appropriate, information on the minimization of adverse impacts in accordance with decision 15/CMP.1, annex, paragraphs 23–24, including any changes since the previous annual submission.	5 (2015–2022)
G.2	Include information on annual inventory improvement plans, clearly detailing targets, responsibilities and schedules, and document these and the results of the improvement actions in the NIR.	3 (2019–2022)
G.5	Provide relevant explanations in CRF table 9 for all cases of “NE” and “IE” being reported.	4 (2017–2022)
G.6	Correct the use of notation keys (in particular those referred to in ID#s I.7, I.8, L.8, W.11, W.13 and W.14 in table 3 of document FCCC/ARR/2019/MLT) and include the previously missing information on the use of “NE” both in CRF table 9 and in the NIR.	3 (2019–2022)
G.10	Improve the transparency of the uncertainty analysis by including information on the assumptions used to calculate the uncertainty of AD and EFs at the category level.	7 (2012–2022)
G.11	Provide information to explain how the uncertainty analysis is used to prioritize further inventory improvements.	7 (2012–2022)
G.12	Discuss qualitatively the uncertainty of the data used for all source and sink categories in a transparent manner in the NIR, in particular for categories identified as key categories.	5 (2015–2022)
G.13	Document in the NIR details on the calculation of uncertainties at the category level, and include information on the assumptions made when estimating the uncertainties of AD and EFs at the category level.	3 (2019–2022)
G.14	Use the results of the uncertainty analysis to prioritize improvements to the inventory, and include a statement in the NIR on how the results of the analysis are used to prioritize improvements.	3 (2019–2022)
Energy		
E.2	Improve the description in the NIR of the category-specific QA/QC activities performed on the AD, with the objective of better understanding the links between the EU ETS, the energy balances and the data reported in the CRF tables.	6 (2013–2022)
E.3	Estimate CO ₂ emissions using the reference approach for all years of the time series.	8 (2011–2022)
E.4	Explain differences in CO ₂ emissions that are above 2 per cent.	6 (2013–2022)

<i>ID#</i>	<i>Previous recommendation for issue</i>	<i>Number of successive reviews issue not addressed^a</i>
E.6	Investigate and address the inconsistencies identified between the IEA data and the reference approach data, in particular those related to stock changes and imports and exports of liquid fuels, correct the values reported under the reference approach and provide related explanations in the NIR, if appropriate.	3 (2019–2022)
E.7	Investigate and address the inconsistencies identified between the IEA data and the aviation gasoline data reported in the CRF tables, correct the values reported and provide related explanations in the NIR, if appropriate.	3 (2019–2022)
E.8	Report in CRF table 1.A(d) CO ₂ emissions from the non-energy use of fuels for bitumen and lubricants.	3 (2019–2022)
E.9	Investigate and address the differences in the reporting of jet kerosene, residual fuel oil and gas and diesel oil used in international aviation and navigation in CRF tables 1.A(b) and 1.D.	3 (2019–2022)
E.10	Report estimates, including any relevant information such as country-specific NCVs, oxidation factors, EFs and AD used for the estimation of emissions for the whole time series, in the NIR.	6 (2013–2022)
E.11	Make use of additional sources of information such as EUROCONTROL, which is based on higher-tier methods, as a supplementary QA activity to verify the fuel allocation for domestic and international uses.	6 (2013–2022)
E.14	Ensure the time-series consistency of the CO ₂ , CH ₄ and N ₂ O emission estimates for liquid fuels in road transportation by using the same methodology (COPERT IV model) for the entire time series, or demonstrate in the NIR that the use of two different methodologies does not introduce inconsistencies in the time series.	5 (2015–2022)
E.15	Review the CO ₂ and N ₂ O IEFs for cars for gasoline, diesel oil and liquefied petroleum gas and explain any significant inter-annual changes and how the consistency of the time series is ensured.	5 (2015–2022)
E.16	Apply the procedure for validating vehicle kilometres travelled with fuel statistics data, and correct the data if necessary, before estimating CH ₄ and N ₂ O emissions using the COPERT V model, and describe this procedure and the results in the NIR.	4 (2017–2022)
E.24	Transparently report the type of fuel constituting the biomass used in the commercial/institutional sector and the quantities of each fuel type used over the time series, and refer to table 1.1 in chapter 1, volume 2, of the 2006 IPCC Guidelines for information on fuel classification.	3 (2019–2022)
E.25	Transparently report the CH ₄ EFs applied for each biomass type and any recalculations for this category.	3 (2019–2022)
IPPU		
I.2	Investigate the extent of the use of carbonates in the production of ceramics (at least one company seems to produce ceramic products in Malta), calculate the emissions, if appropriate, and report on the results in the NIR.	6 (2013–2022)
I.3	Investigate the time-series inconsistency of the estimates of CO ₂ emissions from road paving with asphalt, recalculate the emissions, if appropriate, and report on the findings in the NIR.	7 (2012–2022)
I.6	Ensure consistency between the notation keys used to report AD for “filled into new manufactured products” (“NO”) and for “remaining in products at decommissioning” (“NE”) and the associated emissions (“NO”).	5 (2015–2022)

<i>ID#</i>	<i>Previous recommendation for issue</i>	<i>Number of successive reviews issue not addressed^a</i>
I.7	Review the notation keys reported for disposal emissions in CRF table 2(II).B-H to ensure that the correct notation keys are used.	5 (2015–2022)
I.9	Explain why the average charge factor for buses and coaches is higher than for mobile refrigeration vehicles.	3 (2019–2022)
I.10	Review the AD and ensure that there is a robust and consistent approach to collecting AD for this category in a way that eliminates any possibility of data gaps from some of the importers, and explain any significant inter-annual changes in emissions.	5 (2015–2022)
Agriculture		
A.7	Review the EFs reported by the small number of Parties that report CH ₄ emissions from enteric fermentation for poultry, choose an EF that best represents poultry production practices in Malta, revise the estimates, if appropriate, and provide an appropriate rationale and reference for the choice of EF in the NIR.	3 (2019–2022)
LULUCF	No issues identified.	
Waste		
W.1	Ensure all uses of “IE” in the waste sector are fully explained in CRF table 9.	4 (2017–2022)
W.6	Correct the CH ₄ and N ₂ O EFs for MSW and clinical and industrial waste reported in CRF table 5.C.	4 (2017–2022)
W.12	Include in the NIR further quantitative and qualitative information on the N removal efficiency factor, including the source and justification for the value used and a time series of the values applied.	4 (2017–2022)
KP-LULUCF	No issues identified.	

^a The reports on the reviews of the 2018 and 2020 annual submissions of Malta have not yet been published. Therefore, 2018 and 2020 were not included when counting the number of successive years for this table. In addition, as the reviews of the Party’s 2015 and 2016 annual submissions were conducted together, they are not considered successive reviews and 2015/2016 is counted as one year.

V. Additional findings made during the individual review of the Party’s 2022 annual submission

10. Table 5 presents findings made by the ERT during the individual review of the 2022 annual submission of Malta that are additional to those identified in table 3.

Table 5

Additional findings made during the individual review of the 2022 annual submission of Malta

<i>ID#</i>	<i>Finding classification</i>	<i>Description of finding with recommendation or encouragement</i>	<i>Is finding an issue/problem?^a</i>
General		No general findings additional to those included in table 3 were made by the ERT during the review.	

<i>ID#</i>	<i>Finding classification</i>	<i>Description of finding with recommendation or encouragement</i>	<i>Is finding an issue/problem?^a</i>
Energy		No findings for the energy sector additional to those included in table 3 were made by the ERT during the review.	
IPPU			
L.11	2.F.1 Refrigeration and air conditioning – HFCs and PFCs	<p>The Party reported information in its NIR (section 4.7.1, pp.145–169) on the methodology used for estimating emissions for category 2.F.1. However, the ERT noted that information on expert judgment and assumptions is not documented, justified and reported in the NIR.</p> <p>During the review, the Party clarified that the national inventory agency intends to improve the transparency of this category by including a more detailed explanation of the model being used, describing the assumptions and the expert judgments made. Malta is also taking steps to identify alternative sources of data for the imports of bulk F-gases for category 2.F.1 refrigeration and air conditioning, which includes imports from within the EU but also from elsewhere. Malta has compiled annual statistical data on imported F-gases shipped from outside the EU for 2020 (NIR, section 4.7.1). However, owing to potential confidentiality issues, these data could not be mapped with the data obtained directly from the importers, which include imports from both within and outside the EU. Thus, more work is needed, so the Party is planning to complete the necessary mapping and include the results in the 2025 submission. The Party also reported in the NIR (p.168) that the national inventory agency plans to revise the number of vehicles for the whole time series with actual data from the national authority for transport. Discussions are being held to obtain the number of registered vehicles in a consistent and timely manner for future submissions.</p> <p>The ERT recommends that the Party include a more detailed explanation of the model being used, describing the assumptions and the expert judgments made.</p>	Yes. Transparency
Agriculture		No findings for the agriculture sector additional to those included in table 3 were made by the ERT during the review.	
LULUCF			
L.5	4. General (LULUCF) – CO ₂	<p>The Party has updated its reporting of carbon stock changes from land-use transitions in its latest submission. For transitions between the cropland and grassland subcategories (4.B.2.2 and 4.C.2.2 respectively), the Party has reported carbon stock changes in biomass as either gains or losses in the CRF table, whereas the NIR (tables 6.28 and 6.32) indicates that the net changes are a combination of both gains and losses, owing to regrowth of woody biomass.</p> <p>The ERT encourages the Party to report gains and losses in carbon stock changes arising from land-use transitions separately in the NIR to improve transparency in future reporting.</p>	Not an issue/problem
L.6	4.D.1 Wetlands remaining wetlands – CO ₂	<p>The Party submitted estimates for carbon stock change in category 4.D.1 wetlands remaining wetlands for the first time in the 2022 submission. The time series for gains in living biomass and net carbon stock change in soil are reported as constant for 1990–2020 in CRF table 4.D. However, the area, and hence the implied carbon stock change factors, change in 2010. This is the time when there are similar transitions from 4.D.2 Land converted to 4.D.1 Wetlands remaining wetlands. During the review, the Party clarified that there had been an error in uploading the correctly calculated values for carbon stock change for living biomass and soils to CRF Reporter.</p> <p>The ERT recommends that the Party ensure that the correct carbon stock changes in biomass and soil for category 4.D.1 wetlands remaining wetlands are calculated from the area time series and uploaded to CRF Reporter.</p>	Yes. Accuracy

<i>ID#</i>	<i>Finding classification</i>	<i>Description of finding with recommendation or encouragement</i>	<i>Is finding an issue/problem?^a</i>
L.7	4.D.2 Land converted to wetlands – CO ₂	<p>The Party submitted estimates for carbon stock change from category 4.D.2 land converted to wetlands for the first time in the 2022 submission. Soil carbon stock changes arising from conversion to wetlands were reported as zero, with the justification that vegetation on the relevant area was established by recolonization and therefore the EF for recolonization was zero following the tier 1 methodology (Wetlands Supplement, chap. 4, section 4.2.3.3, equation 4.7). This is inconsistent with the statement in the NIR (section 6.7.1) that trees were planted in the new wetlands and that the transition to wetlands was from other land (with a reference soil carbon stock of zero).</p> <p>During the review, the Party noted that trees were planted and not recolonized in the new wetlands area and that the EF for recolonization of tidal marsh (Wetlands Supplement, table 4.12) would be a more appropriate EF.</p> <p>The ERT recommends that the Party update the calculation for soil carbon stock change in category 4.D.2 land converted to wetlands using the EF for recolonization of tidal marsh in its CRF tables and NIR in its next submission.</p>	Yes. Accuracy
Waste		No findings for the waste sector additional to those included in table 3 were made by the ERT during the review.	
KP-LULUCF		No findings for KP-LULUCF additional to those included in table 3 were made by the ERT during the review.	

^a Recommendations made by the ERT during the review are related to issues as defined in para. 81 of the UNFCCC review guidelines or problems as defined in para. 69 of the Article 8 review guidelines.

VI. Application of adjustments

11. The ERT did not identify the need to apply any adjustments for the 2022 annual submission of Malta.

VII. Accounting quantities for activities under Article 3, paragraph 3, and, if any, activities under Article 3, paragraph 4, of the Kyoto Protocol

12. Table I.5 presents the accounting quantities for KP-LULUCF reported by Malta and the final values agreed by the ERT. The final quantity of units to be issued and cancelled is presented in table I.6.

VIII. Questions of implementation

13. No questions of implementation were identified by the ERT during the individual review of the Party's 2022 annual submission.

Annex I

Overview of greenhouse gas emissions and removals and data and information on activities under Article 3, paragraphs 3–4, of the Kyoto Protocol, as submitted by Malta in its 2022 annual submission

1. Tables I.1–I.4 provide an overview of the total GHG emissions and removals as submitted by Malta.

Table I.1
Total greenhouse gas emissions and removals for Malta, base year–2020
 (kt CO₂ eq)

	<i>Total GHG emissions excluding indirect CO₂ emissions</i>		<i>Total GHG emissions and removals including indirect CO₂ emissions^a</i>		<i>Land-use change (Article 3.7 bis as contained in the Doha Amendment)^b</i>	<i>KP-LULUCF (Article 3.3 of the Kyoto Protocol)^c</i>	<i>KP-LULUCF (Article 3.4 of the Kyoto Protocol)</i>	
	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>	<i>Total including LULUCF</i>	<i>Total excluding LULUCF</i>			<i>CM, GM, RV, WDR</i>	<i>FM</i>
FMRL								–49.00
Base year ^d	2 591.13	2 599.28	NA	NA	NA		NA, NO	
1990	2 591.13	2 599.28	NA	NA				
1995	2 678.31	2 682.41	NA	NA				
2000	2 784.67	2 789.72	NA	NA				
2010	2 956.11	2 944.94	NA	NA				
2011	2 947.95	2 949.95	NA	NA				
2012	3 130.58	3 132.39	NA	NA				
2013	2 793.53	2 795.16	NA	NA		–0.01	NA, NO	–0.01
2014	2 796.46	2 800.66	NA	NA		–0.01	NA, NO	–0.01
2015	2 119.11	2 122.95	NA	NA		–0.01	NA, NO	–0.01
2016	1 831.96	1 835.78	NA	NA		–0.01	NA, NO	–0.01
2017	2 016.17	2 018.05	NA	NA		–0.01	NA, NO	–0.01
2018	2 028.87	2 030.01	NA	NA		–0.01	NA, NO	–0.01
2019	2 130.39	2 131.76	NA	NA		–0.02	NA, NO	–0.01
2020	2 119.41	2 121.59	NA	NA		–0.04	NA, NO	–0.01

Note: Emissions and removals reported for the sector other (sector 6) are not included in the total GHG emissions.

^a The Party did not report indirect CO₂ emissions in CRF table 6.

^b The value reported in this column relates to GHG emissions from conversion of forests (deforestation) in 1990 as contained in the report on the review of the Party's report to facilitate the calculation of the assigned amount for the second commitment period of the Kyoto Protocol.

^c Activities under Article 3, para. 3, of the Kyoto Protocol, namely AR and deforestation.

^d “Base year” refers to the base year under the Kyoto Protocol, which is 1990 for all gases except NF₃, for which the base year is 1995. Malta has not elected any activities under Article 3, para. 4, of the Kyoto Protocol. For activities under Article 3, para. 3, of the Kyoto Protocol and FM under Article 3, para. 4, only the inventory years of the commitment period must be reported.

Table I.2

Greenhouse gas emissions and removals by gas for Malta, excluding land use, land-use change and forestry, 1990–2020(kt CO₂ eq)

	<i>CO₂^a</i>	<i>CH₄</i>	<i>N₂O</i>	<i>HFCs</i>	<i>PFCs</i>	<i>Unspecified mix of HFCs and PFCs</i>	<i>SF₆</i>	<i>NF₃</i>
1990	2 394.19	125.19	79.89	NO, NE, NA	NO, NA	NA, NO	0.01	NA
1995	2 439.42	157.23	84.33	0.00	NO, NA	NA, NO	1.44	NA
2000	2 507.26	190.44	83.85	6.70	NO, NA	NA, NO	1.47	NA
2010	2 589.13	147.76	65.20	141.07	0.00	NA, NO	1.79	NA
2011	2 577.20	146.07	58.15	163.86	0.00	NA, NO	4.69	NA
2012	2 726.21	150.23	58.09	197.32	0.00	NA, NO	0.54	NA
2013	2 379.19	147.80	55.94	209.46	0.00	NA, NO	2.77	NA
2014	2 364.39	159.50	55.83	220.27	0.00	NA, NO	0.68	NA
2015	1 665.29	171.09	55.51	230.78	0.00	NA, NO	0.28	NA
2016	1 356.35	181.00	54.00	244.29	0.00	NO, NA	0.14	NA
2017	1 530.88	177.88	52.53	255.77	0.00	NO, NA	0.99	NA
2018	1 546.95	184.95	52.53	245.29	0.00	NO, NA	0.30	NA
2019	1 649.19	192.11	55.37	234.77	0.00	NO, NA	0.33	NA
2020	1 599.58	193.81	55.47	272.34	0.00	NO, NA	0.40	NA
Percentage change 1990– 2020	–33.2	54.8	–30.6	NA	NA	NA	3 683.9	NA

Note: Emissions and removals reported for the sector other (sector 6) are not included in this table.

^a Malta did not report indirect CO₂ emissions in CRF table 6.

Table I.3

Greenhouse gas emissions and removals by sector for Malta, 1990–2020(kt CO₂ eq)

	<i>Energy</i>	<i>IPPU</i>	<i>Agriculture</i>	<i>LULUCF</i>	<i>Waste</i>	<i>Other</i>
1990	2 403.14	7.78	119.07	–8.15	69.30	NA
1995	2 449.55	9.29	119.04	–4.10	104.53	NA
2000	2 519.12	14.99	115.41	–5.05	140.20	NA
2010	2 598.51	147.96	86.21	11.17	112.26	NA
2011	2 585.43	174.13	83.08	–2.00	107.31	NA
2012	2 733.55	205.18	85.04	–1.81	108.62	NA
2013	2 379.19	224.81	83.48	–1.63	107.68	NA

	<i>Energy</i>	<i>IPPU</i>	<i>Agriculture</i>	<i>LULUCF</i>	<i>Waste</i>	<i>Other</i>
2014	2 364.46	232.78	82.25	-4.20	121.17	NA
2015	1 664.68	241.26	81.95	-3.84	135.05	NA
2016	1 356.84	253.84	79.65	-3.82	145.45	-
2017	1 533.82	262.41	78.12	-1.88	143.70	-
2018	1 549.09	252.06	78.44	-1.14	150.43	-
2019	1 653.05	241.25	78.58	-1.37	158.87	-
2020	1 602.33	279.62	80.24	-2.18	159.41	-
Percentage change 1990–2020	-33.3	3 493.8	-32.6	-73.3	130.0	NA

Notes: (1) Malta did not report emissions or removals for the sector other (sector 6); the corresponding cells in the CRF tables were left blank; (2) Malta did not report indirect CO₂ emissions in CRF table 6.

Table I.4

Greenhouse gas emissions and removals from activities under Article 3, paragraphs 3–4, of the Kyoto Protocol by activity, base year–2020, for Malta
(kt CO₂ eq)

	<i>Article 3.7 bis as contained in the Doha Amendment^a</i>	<i>Activities under Article 3.3 of the Kyoto Protocol</i>		<i>FM and elected activities under Article 3.4 of the Kyoto Protocol</i>				
	<i>Land-use change</i>	<i>AR</i>	<i>Deforestation</i>	<i>FM</i>	<i>CM</i>	<i>GM</i>	<i>RV</i>	<i>WDR</i>
FMRL				-49.00				
Technical correction				48.99				
Base year	NA				NA	NO	NO	NO
2013		0.01	NO	0.01	NA	NO	NO	NO
2014		0.01	NO	0.01	NA	NO	NO	NO
2015		0.01	NO	0.01	NA	NO	NO	NO
2016		0.01	NO	0.01	NA	NO	NO	NO
2017		0.01	NO	0.01	NA	NO	NO	NO
2018		0.01	NO	0.01	NA	NO	NO	NO
2019		0.02	NO	0.01	NA	NO	NO	NO
2020		0.04	NO	0.01	NA	NO	NO	NO
Percentage change base year–2019					NA	NA	NA	NA

Note: Values in this table include emissions from land subject to natural disturbances, if applicable.

^a The value reported in this column relates to 1990.

2. Table I.5 provides information on the Party's accounting quantities for reporting under Article 3, paragraphs 3–4, of the Kyoto Protocol.

Table I.5
Accounting quantities for activities under Article 3, paragraph 3, and forest management and any elected activities under Article 3, paragraph 4, of the Kyoto Protocol for Malta

(kt CO₂ eq)

GHG source/sink activity	Net emissions/removals										Accounting parameters	Accounting quantities ^d
	Base year ^b	2013	2014	2015	2016	2017	2018	2019	2020	Total ^c		
A.1. AR		0.007	0.008	0.009	0.010	0.010	0.013	0.017	0.036	0.110		0.110
Excluded emissions from natural disturbances		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
Excluded subsequent removals from land subject to natural disturbances		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
A.2. Deforestation		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
B.1. FM										0.047		0.034
Net emissions/removals		0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.005	0.047		
Excluded emissions from natural disturbances ^d		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
Excluded subsequent removals from land subject to natural disturbances		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
Any debits from newly established forest		NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
FMRL ^e											49.000	
Technical corrections to FMRL											48.990	
FM cap											552.898	0.034
B.2. CM (if elected)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA		NA

<i>GHG source/sink activity</i>	<i>Net emissions/removals</i>										<i>Accounting parameters</i>	<i>Accounting quantities^d</i>
	<i>Base year^b</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>	<i>Total^c</i>		
B.3. GM (if elected)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
B.4. RV (if elected)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO
B.5. WDR (if elected)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO		NO

^a The accounting quantity is the total quantity of units to be issued or cancelled for a particular activity.

^b Net emissions and removals from CM, GM, RV and/or WDR, if elected, in the Party's base year as established in decision 9/CP.2.

^c Cumulative net emissions and removals for all years of the commitment period reported in the annual submission under review.

^d The Party indicated that it does not intend to exclude emissions from natural disturbances.

^e As inscribed in the appendix to the annex to decision 2/CMP.7 in kt CO₂ eq per year.

3. Table I.6 provides an overview of key data from Malta's reporting under Article 3, paragraphs 3–4, of the Kyoto Protocol.

Table I.6

Key data for Malta under Article 3, paragraphs 3–4, of the Kyoto Protocol from its 2022 annual submission

<i>Parameter</i>	<i>Data</i>
Periodicity of accounting	(a) AR: commitment period accounting (b) Deforestation: commitment period accounting (c) FM: commitment period accounting (d) CM: not elected (e) GM: not elected (f) RV: not elected (g) WDR: not elected
Elected activities under Article 3, paragraph 4, of the Kyoto Protocol	None
Election of application of provisions for natural disturbances	No
3.5% of total base-year GHG emissions, excluding LULUCF	69.112 kt CO ₂ eq (552.898 kt CO ₂ eq for the duration of the commitment period)
Cancellation of AAUs, CERs and ERUs and/or issuance of RMUs in the national registry for:	
1. AR	Issue 110 RMUs
2. Deforestation	NA
3. FM	Cancel 34 units

Note: Values in this table reflect the accounting quantities for activities under Article 3, para. 3, and FM and any elected activities under Article 3, para. 4, of the Kyoto Protocol as reported in table I.5.

Annex II

Information to be included in the compilation and accounting database

Tables II.1–II.8 include the information to be included in the compilation and accounting database for Malta. Data shown are from the Party's annual submission, including the latest revised estimates submitted, adjustments (if applicable) and the final data to be included in the compilation and accounting database.

Table II.1

Information to be included in the compilation and accounting database for 2020, including on the commitment period reserve, for Malta

(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
CPR	8 369 792			8 369 792
Annex A emissions				
CO ₂	1 599 576	–	–	1 599 576
CH ₄	193 809	–	–	193 809
N ₂ O	55 467	–	–	55 467
HFCs	272 335	–	–	272 335
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NO, NA	–	–	NO, NA
SF ₆	402	–	–	402
NF ₃	NA	–	–	NA
Total Annex A sources^a	2 121 590	–	–	2 121 590
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	36	–	–	36
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	–5	–	–	–5

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.2

Information to be included in the compilation and accounting database for 2019 for Malta

(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	1 649 193	–	–	1 649 193
CH ₄	192 107	–	–	192 107
N ₂ O	55 369	–	–	55 369
HFCs	234 766	–	–	234 766
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NO, NA	–	–	NO, NA
SF ₆	328	–	–	328
NF ₃	NA	–	–	NA
Total Annex A sources^a	2 131 764	–	–	2 131 764
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	17	–	–	17
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.3

Information to be included in the compilation and accounting database for 2018 for Malta(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	1 546 948	–	–	1 546 948
CH ₄	184 953	–	–	184 953
N ₂ O	52 526	–	–	52 526
HFCs	245 288	–	–	245 288
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NO, NA	–	–	NO, NA
SF ₆	299	–	–	299
NF ₃	NA	–	–	NA
Total Annex A sources^a	2 030 014	–	–	2 030 014
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	13	–	–	13
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.4

Information to be included in the compilation and accounting database for 2017 for Malta(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	1 530 878	–	–	1 530 878
CH ₄	177 879	–	–	177 879
N ₂ O	52 530	–	–	52 530
HFCs	255 775	–	–	255 775
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NO, NA	–	–	NO, NA
SF ₆	988	–	–	988
NF ₃	NA	–	–	NA
Total Annex A sources^a	2 018 050	–	–	2 018 050
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	10	–	–	10
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.5

Information to be included in the compilation and accounting database for 2016 for Malta(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
CO ₂	1 356 353	–	–	1 356 353
CH ₄	180 997	–	–	180 997
N ₂ O	54 000	–	–	54 000
HFCs	244 293	–	–	244 293
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NO, NA	–	–	NO, NA
SF ₆	138	–	–	138
NF ₃	NA	–	–	NA
Total Annex A sources^a	1 835 781	–	–	1 835 781
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	10	–	–	10
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.6

Information to be included in the compilation and accounting database for 2015 for Malta(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	1 665 291	–	–	1 665 291
CH ₄	171 089	–	–	171 089
N ₂ O	55 508	–	–	55 508
HFCs	230 780	–	–	230 780
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NA, NO	–	–	NA, NO
SF ₆	280	–	–	280
NF ₃	NA	–	–	NA
Total Annex A sources^a	2 122 949	–	–	2 122 949
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	9	–	–	9
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.7

Information to be included in the compilation and accounting database for 2014 for Malta(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	2 364 387	–	–	2 364 387
CH ₄	159 500	–	–	159 500
N ₂ O	55 826	–	–	55 826
HFCs	220 269	–	–	220 269
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NA, NO	–	–	NA, NO
SF ₆	676	–	–	676
NF ₃	NA	–	–	NA

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Total Annex A sources^a	2 800 658	–	–	2 800 658
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	8	–	–	8
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Table II.8

Information to be included in the compilation and accounting database for 2013 for Malta
(t CO₂ eq)

	<i>Original submission</i>	<i>Revised submission</i>	<i>Adjustment</i>	<i>Final value</i>
Annex A emissions				
CO ₂	2 379 190	–	–	2 379 190
CH ₄	147 797	–	–	147 797
N ₂ O	55 941	–	–	55 941
HFCs	209 461	–	–	209 461
PFCs	0	–	–	0
Unspecified mix of HFCs and PFCs	NA, NA	–	–	NA, NA
SF ₆	2 768	–	–	2 768
NF ₃	NO, NA	–	–	NO, NA
Total Annex A sources^a	2 795 157	–	–	2 795 157
Activities under Article 3, paragraph 3, of the Kyoto Protocol				
AR	7	–	–	7
Deforestation	NO	–	–	NO
FM and elected activities under Article 3, paragraph 4, of the Kyoto Protocol				
FM	6	–	–	6

^a The sum of the values for the individual gases and groups of gases may not match the total owing to rounding.

Annex III

Additional information to support findings in table 2

Missing categories that may affect completeness

The only category for which an estimation method is included in the 2006 IPCC Guidelines that was reported as “NE” or for which the ERT otherwise determined that there may be an issue with the completeness of the reporting in the Party’s inventory is 2.A.4 other process uses of carbonates (CO₂) (see ID# I.2 in table 3).

Annex IV

Reference documents

A. Reports of the Intergovernmental Panel on Climate Change

IPCC. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. S Eggleston, L Buendia, K Miwa, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies. Available at <http://www.ipcc-nggip.iges.or.jp/public/2006gl>.

IPCC. 2014. *2013 Supplement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Wetlands*. T Hiraishi, T Krug, K Tanabe, et al. (eds.). Geneva: IPCC. Available at <https://www.ipcc.ch/publication/2013-supplement-to-the-2006-ipcc-guidelines-for-national-greenhouse-gas-inventories-wetlands/>.

IPCC. 2019. *2019 Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*. E Calvo Buendia, K Tanabe, A Kranjc, et al. (eds.). Geneva: IPCC. Available at <https://www.ipcc-nggip.iges.or.jp/public/2019rf/index.html>.

B. UNFCCC documents

Annual review reports

Reports on the individual reviews of the 2013, 2015, 2016, 2017, 2019 and 2021 annual submissions of Malta, contained in documents FCCC/ARR/2013/MLT, FCCC/ARR/2015/MLT, FCCC/ARR/2016/MLT, FCCC/ARR/2017/MLT, FCCC/ARR/2019/MLT and FCCC/ARR/2021/MLT respectively.

Other

Aggregate information on greenhouse gas emissions by sources and removals by sinks for Parties included in Annex I to the Convention. Note by the secretariat. Available at <https://unfccc.int/documents/510888>.

Annual status report for Malta for 2022. Available at https://unfccc.int/sites/default/files/resource/asr2022_MLT.pdf.

C. Other documents used during the review

Responses to questions during the review were received from Saviour Vassallo (MRA), including additional material on the methodology and assumptions used. The following references may not conform to UNFCCC editorial style as some have been reproduced as received:

Sustech 2008. *Agricultural Waste Management Plan for the Maltese Islands Report*.

Valletta, P.P. 2011. *The establishment of the Local Sheep Population as a Breed*, unpublished diploma dissertation. University of Malta, Malta.