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Report on the technical review of the third biennial report of Malta

Developed country Parties were requested by decision 2/CP.17 to submit their third biennial report to the secretariat by 1 January 2018. This report presents the results of the technical review of the third biennial report of Malta, conducted by an expert review team in accordance with the "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".

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Abbreviations and acronyms

AEA	annual emission allocation
Annex II Party	Party included in Annex II to the Convention
AR4	Fourth Assessment Report of the Intergovernmental Panel on Climate Change
BR	biennial report
CER	certified emission reduction
CH_4	methane
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CRF	common reporting format
CTF	common tabular format
ERT	expert review team
ERU	emission reduction unit
ESD	effort-sharing decision
EU	European Union
EU ETS	European Union Emissions Trading System
F-gas	fluorinated gas
GDP	gross domestic product
GHG	greenhouse gas
HFC	hydrofluorocarbon
IE	included elsewhere
IPPU	industrial processes and product use
LULUCF	land use, land-use change and forestry
NA	not applicable
NC	national communication
NE	not estimated
NF_3	nitrogen trifluoride
NIR	national inventory report
non-Annex I Party	Party not included in Annex I to the Convention
non-ETS sectors	sectors not covered by the European Union Emissions Trading System
NO	not occurring
N_2O	nitrous oxide
PaMs	policies and measures
PFC	perfluorocarbon
SF_6	sulfur hexafluoride
UNFCCC reporting guidelines on BRs	"UNFCCC biennial reporting guidelines for developed country Parties"
UNFCCC reporting guidelines on NCs	"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications"
WAM	'with additional measures'
WEM	'with measures'
WOM	'without measures'

I. Introduction and summary

A. Introduction

1. This is a report on the centralized technical review of the BR3[1] of Malta. The review was organized by the secretariat in accordance with the "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", particularly "Part IV: UNFCCC guidelines for the technical review of biennial reports from Parties included in Annex I to the Convention" (annex to decision 13/CP.20).

2. In accordance with the same decision, a draft version of this report was transmitted to the Government of Malta, which provided comments that were considered and incorporated, as appropriate, into this final version of the report.

3. The review was conducted from 21 to 26 May 2018 in Bonn by the following team of nominated experts from the UNFCCC roster of experts: Ms. Amrita Narayan Achanta (India), Ms. Damla Dogan (Turkey), Mr. Christopher John Dore (United Kingdom of Great Britain and Northern Ireland), Mr. Sangay Dorji (Bhutan), Mr. A. Ricardo J. Esparta (Brazil), Mr. Sandro Federici (San Marino), Mr. Ross Alexander Hunter (United Kingdom), Mr. Naoki Matsuo (Japan), Ms. Roisin Moriarty (Ireland), Mr. Rostislav Neveceral (Czechia), Ms. Agnieszka Maria Patoka-Janowska (Poland) and Ms. Verica Taseska Gjorgievska (the former Yugoslav Republic of Macedonia). Mr. Dorji, Mr. Federici, Mr. Matsuo and Ms. Patoka-Janowska were the lead reviewers. The review was coordinated by Ms. Sevdalina Todorova, Mr. Davor Vesligaj and Ms. Marion Vieweg (UNFCCC secretariat).

B. Summary

4. The ERT conducted a technical review of the information reported in the BR3 of Malta in accordance with the UNFCCC reporting guidelines on BRs (annex I to decision 2/CP.17).

1. Timeliness

5. The BR3 was submitted on 12 February 2018, after the deadline of 1 January 2018 mandated by decision 2/CP.17. The CTF tables were submitted on 13 February 2018.

6. Malta did not inform the secretariat about its difficulties with making a timely submission in accordance with decision 13/CP.20 and decision 22/CMP.1. The ERT noted with concern the delay in the submission and recommended that Malta make its next submission on time.

2. Completeness, transparency of reporting and adherence to the reporting guidelines

7. Issues and gaps identified by the ERT related to the reported information are presented in table 1. The information reported by Malta in its BR3 mostly adheres to the UNFCCC reporting guidelines on BRs.

Table 1
Summary of completeness and transparency of mandatory information reported by Malta in its third biennial report

Section of BR	*Completeness*	*Transparency*	*Reference to description of recommendations*
GHG emissions and trends	Mostly complete	Mostly transparent	Issues 1 and 2 in table 3
Assumptions, conditions and methodologies related to the	Mostly complete	Mostly transparent	Issues 1 and 2 in table 4

[1] The BR submission comprises the text of the report and the CTF tables, which are both subject to the technical review.

Section of BR	*Completeness*	*Transparency*	*Reference to description of recommendations*
attainment of the quantified economy-wide emission reduction target			
Progress in achievement of targets	Mostly complete	Partially transparent	Issues 1 and 2 in table 6; issue 1 in table 8; issues 3, 5–7 and 10 in table 12
Provision of support to developing country Parties[a]	NA	NA	NA

Note: A list of recommendations pertaining to the completeness and transparency issues identified in this table is included in chapter III below.

[a] Malta is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention.

II. Technical review of the information reported in the third biennial report

A. Information on greenhouse gas emissions and removals related to the quantified economy-wide emission reduction target

1. Technical assessment of the reported information

8. Malta provided a summary of information on GHG emission trends for the period 1990–2015 in its BR3. This summary information is consistent with the Party's 2017 national GHG inventory submission. Summary tables, including trend tables for emissions (in kt CO_2 eq), are provided in the BR3. During the review, the ERT took note of the recently submitted 2018 annual submission in which the GHG emissions for 2016 were presented. The data from the 2018 annual submission were used for this section of the report and a comparison with the inventory data provided in the BR3 and 2017 annual submission is presented in paragraph 9 below.

9. The difference in total GHG emissions including LULUCF between the 2018 annual submission and the NC7 (and the 2017 annual submission, which is the basis for the data presented in the NC7) for the year 2015 is only –0.1 per cent, which is mainly due to recalculations in the energy sector based on an update of activity data and changes in methodology.

10. Total GHG emissions[2] excluding emissions and removals from LULUCF decreased by 9.1 per cent between 1990 and 2016, and total GHG emissions including net emissions or removals from LULUCF also decreased by 9.1 per cent over the same period. Table 2 illustrates the emission trends by sector and by gas for Malta.

Table 2
Greenhouse gas emissions by sector and by gas for Malta for the period 1990–2016

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2015*	*2016*	*1990–2016*	*2015–2016*	*1990*	*2016*
Sector									
1. Energy	1 949.12	2 579.94	2 598.06	1 765.44	1 426.85	–26.8	–19.2	92.7	74.7
A1. Energy industries	1 366.80	1 679.46	1 884.51	892.46	581.40	–57.5	–34.9	65.0	30.4
A2. Manufacturing industries and construction	52.83	62.64	19.84	30.22	33.39	–36.8	10.5	2.5	1.7
A3. Transport	330.62	580.13	556.35	661.07	632.71	91.4	–4.3	15.7	33.1

[2] In this report, the term "total GHG emissions" refers to the aggregated national GHG emissions expressed in terms of CO_2 eq excluding LULUCF, unless otherwise specified. Values in this paragraph are calculated based on the 2018 annual submission, version 9.

	GHG emissions (kt CO_2 eq)					*Change (%)*		*Share (%)*	
	1990	*2000*	*2010*	*2015*	*2016*	*1990–2016*	*2015–2016*	*1990*	*2016*
A4. and A5. Other	198.87	257.71	137.37	181.68	179.35	–9.8	–1.3	9.5	9.4
B. Fugitive emissions from fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C. CO_2 transport and storage	NO	NO	NO	NO	NO	NO	NO	NO	NO
2. IPPU	7.93	15.20	152.17	247.77	259.04	3166.6	4.6	0.4	13.6
3. Agriculture	76.52	76.05	67.94	65.84	64.86	–15.2	–1.5	3.6	3.4
4. LULUCF	2.96	3.15	2.00	3.18	3.41	15.1	7.4	NA	NA
5. Waste	68.49	139.35	149.59	146.10	159.00	132.2	8.8	3.3	8.3
6. Other	NA	NA	NA	NA	NA	–	–	–	–
Gas [a]									
CO_2	1 943.32	2 570.87	2 590.22	1 757.75	1 420.28	–26.9	–19.2	92.4	74.4
CH_4	105.92	173.53	179.72	178.36	191.06	80.4	7.1	5.0	10.0
N_2O	52.81	57.96	50.64	42.47	41.83	–20.8	–1.5	2.5	2.2
HFCs	IE, NA, NE,NO	6.70	145.49	246.37	256.55	NA	4.1	NA	13.4
PFCs	NA, NO	NA, NO	0.00	0.00	0.00	NA	0.0	NA	0.0
SF_6	0.01	1.47	1.69	0.19	0.05	338.4	–75.4	0.0	0.0
NF_3	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Total GHG emissions without LULUCF	**2 102.06**	**2 810.52**	**2 967.77**	**2 225.14**	**1 909.75**	**–9.1**	**–14.2**	**100.0**	**100.0**
Total GHG emissions with LULUCF	**2 105.03**	**2 813.68**	**2 969.77**	**2 228.32**	**1 913.16**	**–9.1**	**–14.1**	**NA**	**NA**

Source: GHG emission data: Malta's 2018 annual submission, version 9.

[a] Emissions by gas without LULUCF and without indirect CO_2.

11. The decrease in total emissions was driven mainly by factors such as the shift in electricity production from the use of heavy fuel oil, oil and coal to natural gas, and connection to the European electricity grid, which has facilitated better management of peaks in electricity demand and therefore more efficient production. The grid interconnection has also resulted in a reduction in the amount of electricity produced within the national borders and the associated emissions.

12. The summary information provided on GHG emissions and removals in the BR3 is slightly inconsistent with the information reported in CTF table 1 and the 2017 annual submission. The inconsistencies were in HFC emission estimates and the differences were not explained.

13. In brief, Malta's national inventory arrangements were established in accordance with Legal Notice 259 of 2015 on the National System for the Estimation of Anthropogenic Greenhouse Gas Emissions by Sources and Removals by Sinks. No changes in the arrangements have occurred since the BR2. The Malta Resources Authority is the responsible agency for setting and managing arrangements for the national inventory.

2. Assessment of adherence to the reporting guidelines

14. The ERT assessed the information reported in the BR3 of Malta and identified issues relating to completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 3.

Table 3
Findings on greenhouse gas emissions and trends from the review of the third biennial report of Malta

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 2 Issue type: transparency Assessment: recommendation	The ERT noted a slight inconsistency between the HFC emissions reported in the BR3 (table 2-1, p.3) and those reported in CTF table 1 and the 2017 NIR (table ES.1), leading to corresponding differences in total emissions reported. No explanation for this difference is provided in the BR3. During the review, Malta clarified that the values reported for HFC emissions in the BR3 (table 2-1), are incorrect. The ERT recommends that Malta ensure consistency of the information reported between the BR and CTF tables and between the BR submission and the annual submission.
2	Reporting requirement specified in paragraph 3 Issue type: completeness Assessment: recommendation	The ERT noted that Malta did not provide summary information, or a reference to sources of information, on the national inventory arrangements. During the review, Malta provided a reference to its 2018 annual submission; however, the ERT noted that the information in the 2018 NIR (table 1.3 on the roles and responsibilities of various agencies and entities in relation to data collection and data transfer for GHG inventory preparation) lacks a reference to what data of which GHG inventory category are collected by each agency, and the contact details of these agencies. The ERT recommends that Malta provide in its next BR summary information on its national inventory arrangements or a reference to complete information, and on any changes since the previous BR.

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

B. Assumptions, conditions and methodologies related to attainment of the quantified economy-wide emission reduction target

1. Technical assessment of the reported information

15. For Malta the Convention entered into force on 15 June 1994. Under the Convention Malta committed to contributing to the achievement of the joint EU economy-wide emission reduction target of 20 per cent below the 1990 level by 2020. The EU offered to move to a 30 per cent reduction target on the condition that other developed countries commit to a comparable target and developing countries contribute according to their responsibilities and respective capabilities under a new global climate change agreement.

16. The target for the EU and its member States is formalized in the EU 2020 climate and energy package. The legislative package regulates emissions of CO_2, CH_4, N_2O, HFCs, PFCs and SF_6 using global warming potential values from the AR4 to aggregate the GHG emissions of the EU until 2020. Emissions and removals from the LULUCF sector are not included in the quantified economy-wide emission reduction target under the Convention. The EU generally allows its member States to use units from the Kyoto Protocol mechanisms as well as new market mechanisms for compliance purposes, subject to a number of restrictions in terms of origin and type of project and up to an established limit. Companies can make use of such units to fulfil their requirements under the EU ETS.

17. The EU 2020 climate and energy package includes the EU ETS and the ESD. The EU ETS covers mainly point emissions sources in the energy, industry and aviation sectors. An EU-wide emissions cap has been put in place for the period 2013–2020 with the goal of reducing emissions by 21 per cent below the 2005 level by 2020. Emissions from non-ETS sectors are regulated through member State specific targets that add up to a reduction at the EU level of 10 per cent below the 2005 level by 2020.

18. Under the ESD, Malta has a target of limiting its emission growth to 5 per cent above the 2005 level by 2020 for non-ETS sectors. National emission targets for non-ETS sectors for 2020 have been translated into binding quantified AEAs for the period 2013–2020. Malta's AEAs change following a linear path from 1,168.51 kt CO_2 eq in 2013 to 1,171.95 kt CO_2 eq in 2020.[3]

19. In CTF table 2(e)I Malta reported a possible contribution from the use of CERs towards meeting its target of 264.00 kt CO_2 eq and used the notation key "IE" to report the possible scale of the contribution from ERUs. During the review, Malta clarified that it is not using and does not intend to use market-based mechanisms as defined under the Convention to meet the compliance requirements under the ESD, and the reported 264.00 kt CO_2 eq is the maximum amount that can be used in the form of either CERs or ERUs. The Party also explained that the notation key "IE" was used in CTF table 2(e)I to illustrate that the total amount of ERUs is included in the total provided for CERs. The totals for each are not separately determined, as this would require additional effort considered unnecessary given neither CERs nor ERUs are used now and they are not planned to be used in the future.

20. The ERT noted that Malta is not currently on track to be compliant with its target under the ESD by 2020 even when implemented, adopted and planned PaMs are taken into account. During the review, Malta clarified that it intends to meet its 2020 target by continuing to purchase AEAs, as permitted under the ESD, through a bilateral agreement with Bulgaria.

21. As noted in the previous review report, the ESD target for Malta is based on 2005 emissions reported in 2012. Subsequent recalculations have led to a revision of the 2005 estimate, but not of the target inscribed in EU decision 2013/162/EU. Recalculations of the historical GHG emission estimates have also resulted in an increase of the emission projections to 2020.

22. Malta does not have any further domestic national or sectoral targets. Rather, it relies solely on its participation in and contribution to EU level targets and processes, the details of which are explained fully in the BR3, using its obligations under these commitments to shape domestic climate change policymaking.

2. Assessment of adherence to the reporting guidelines

23. The ERT assessed the information reported in the BR3 of Malta and identified issues relating to transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 4.

Table 4
Findings on the quantified economy-wide emission reduction target from the review of the third biennial report of Malta

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 5 Issue type: transparency Assessment: recommendation	Although Malta is not using and does not intend to use market-based mechanisms as defined under the Convention to meet the compliance requirements under the ESD, it reported in CTF table 2(e)I a possible contribution from the use of CERs towards meeting its target of 264.00 kt CO_2 eq and used the notation key "IE" to report the possible contribution from ERUs. During the review, Malta clarified that the reported 264.00 kt CO_2 eq is the maximum amount that could be used in the form of either CERs or ERUs. The notation key "IE" was used in CTF table 2(e)I to illustrate that the total amount of ERUs is included in the total provided for CERs. The ERT recommends that Malta improve the transparency of its reporting by clearly stating that it is not using and does not intend to use market-based mechanisms to reach its ESD target, and by filling in CTF table 2(e)I accordingly. The ERT notes

[3] European Commission decision 2017/1471 of 10 August 2017 amending decision 2013/162/EU of 26 March 2013 to revise member States' AEAs for the period from 2017 to 2020.

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
		that Malta could use the notation key "NA" to indicate that it does not plan to make use of any such units.
2	Reporting requirement specified in paragraph 5 Issue type: transparency Assessment: recommendation	The ERT noted that in CTF table 2(b) the base year for NF_3 is not reported. During the review, Malta stated that NF_3 does not form part of the target and therefore should not be included. The ERT recommends that Malta report in its next BR on the gases and sectors covered by its target. The ERT notes that Malta could use the notation key "NA" when reporting the base year for NF_3 in CTF table 2(b).

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

C. Progress made towards the achievement of the quantified economy-wide emission reduction target

1. Mitigation actions and their effects

(a) Technical assessment of the reported information

24. Malta provided information on its package of PaMs implemented, adopted and planned, by sector, in order to fulfil its commitments under the Convention and its Kyoto Protocol.

25. Legal arrangements in Malta are derived from the implementation of commitments established at the EU level, via the EU Monitoring Mechanism (decision 280/2004/EC) and monitoring and reporting under the EU ETS. Malta also reported on its policy context and legal and institutional arrangements put in place to implement its commitments and monitor and evaluate the effectiveness of its PaMs.

26. Since its last submission, Malta has enacted the Climate Action Act (2015), which provides the main framework for climate action in Malta. Under this framework, two ministerial committees have been established: an interministerial steering committee, which coordinates actions relating to climate change and is led by the Ministry for Sustainable Development, Environment and Climate Change; and the Steering Committee on Emissions Modelling and Projections, under the responsibility of the Malta Resources Authority.

27. Malta provided information on a set of PaMs similar to those previously reported. A total of 28 PaMs were included in CTF table 3. During the review Malta, indicated that it is exploring options for the establishment of a national system for PaMs, as mandated by the EU Monitoring Mechanism Regulation and the new EU regulation on the governance of the energy union. The Party also provided the additional information that, as required under the latter regulation, Malta is currently developing its National Energy and Climate Plan. One key aim of this plan is to develop approaches for assessing the impacts of policy actions and to further develop national capacity to enable their implementation.

28. Malta reported on its self-assessment of compliance with emission reduction targets and national rules for taking action against non-compliance. This is largely related to the Party's participation in and compliance with obligations under EU legislation.

29. The key overarching related cross-sectoral policy in the EU is the 2020 climate and energy package, adopted in 2009, which includes the revised EU ETS and the ESD. The package is supplemented by renewable energy and energy efficiency legislation and legislative proposals on the 2020 targets for CO_2 emissions from cars and vans, the carbon capture and storage directive, and the general programmes for environmental conservation, namely the 7th Environment Action Programme and the clean air policy package.

30. In operation since 2005, the EU ETS is a cap-and-trade system that covers all significant energy-intensive installations (mainly large point emissions sources such as power plants and industrial facilities) that produce 40–45 per cent of the GHG emissions of the EU. It is expected that the EU ETS will guarantee that the 2020 target (a 21 per cent emission reduction below the 2005 level) will be achieved for sectors under the scheme. The third phase of the EU ETS started in 2013 and the system now includes aircraft operations (since 2012) as well as N_2O emissions from chemical industries, PFC emissions from aluminium production and CO_2 emissions from industrial processes (since 2013).

31. The ESD became operational in 2013 and covers sectors outside the EU ETS, including transport (excluding domestic and international aviation, and international maritime transport), residential and commercial buildings, agriculture and waste, together accounting for 55–60 per cent of the GHG emissions of the EU. The aim of the ESD is to decrease GHG emissions in the EU by 10 per cent below the 2005 level by 2020 and includes binding annual targets for each member State for 2013–2020, which are underpinned by national policies and actions of EU member States. The ESD target for Malta is to limit emission growth to 5 per cent above the 2005 level by 2020. As of 2014, EU member States have also agreed on a binding EU target of at least a 40 per cent reduction in GHG emissions below 1990 levels, by 2030. This target is the focus of the EU's 2030 Climate and Energy Framework.

32. Malta highlighted the EU-wide mitigation actions that are implemented, such as the EU ETS. Further to this, the overarching policies, regulations and requirements set out at the EU level and adopted at the individual EU member State level form the basis for many of Malta's mitigation actions.

33. Malta introduced national-level policies to achieve its targets under the ESD. The key policies reported include a suite of energy policies under the National Energy Policy for the Maltese Islands (2012) as well as the National Energy Efficiency Action Plan (2014) and the National Renewable Energy Action Plan (2011). Among the mitigation actions that are critical for Malta's contribution to attaining the EU-wide 2020 emission reduction target are those related to the energy sector, more specifically to energy supply. These include more efficient generation through the installation of a new and more efficient power station at Delimara and fuel switching (primarily from heavy fuel/gas oil to gas) at the main electricity generation plants. Both refer to thermal power generation and impact installations under the provision of the EU ETS. These measures, implemented in 2015, are supplemented by the submarine connection with the EU unified electricity grid and have considerable potential to reduce emissions from 2016 onwards by replacing electricity from local older carbon-intensive power generation plants.

34. In addition, other measures support the installation of further renewable energy capacity (e.g. incentives and grants for the installation of solar or wind power in businesses or households, and associated incentives via the introduction of feed-in tariffs) and energy efficiency (e.g. improving energy efficiency of buildings, and introducing energy-saving measures in state-owned industry and intelligent metering). For the transport sector the key policy relates to the introduction of a biofuel substitution obligation. This obliges importers and wholesalers to ensure that the fuels they supply incorporate a mix of biofuels, with the aggregate percentage increasing by 1 per cent per year, reaching 10 per cent by 2020. Other policies that have delivered significant emission reductions are the implementation of CH_4 recovery and capture at several of Malta's main landfill sites and the diversion of organic waste from landfills to mechanical and biological treatment plants with subsequent production of energy.

35. Malta did not highlight any further domestic mitigation actions that are under development.

36. Further information was provided in the BR3 regarding the national Transport Strategy 2050 and Transport Master Plan 2025. These cover all forms of transport and provide a strategic direction for transport for the longer term as well as an overview of key priorities for the next 10 years Further information regarding the implementation of these overarching commitments, via the national Intelligent Transport Systems Action Plan and

the MODUS project (improvements to public transport), is included in the BR3. Malta outlines future emissions savings from the roll-out of these plans in the BR3.

37. The ERT noted that Malta's current projections indicate that, even with all existing measures implemented, it will not meet its 2020 target under the ESD. This is a change from information reported in the BR2, in which Malta outlined that it would meet its 2020 target. The change is largely due to methodological revisions in the historical emission estimates, which led to increases in the estimates and corresponding impacts on the projections. Additional action, namely the use of market-based mechanisms, may therefore be required in order for Malta to meet the 2020 target. Further information on the application of market-based mechanisms by Malta are outlined in chapter II.C.2 below. Table 5 provides a summary of the reported information on the PaMs of Malta.

Table 5
Summary of information on policies and measures reported by Malta

Sector	*Key PaMs*	*Estimate of mitigation impact by 2020*[a] *(kt CO_2 eq)*	*Estimate of mitigation impact by 2035*[b] *(kt CO_2 eq)*
Policy framework and crosssectoral measures	EU ETS	NE	NE
	ESD	NE	NE
Energy	Supply of natural gas to fuel existing and future generating plants	463.2	473.6
	Energy supply (comprising the submarine connection to the European electricity grid and efficiency improvements in energy generation and transformation)	65.3	259.8
Energy efficiency	Photovoltaics – competitive bidding	42.3	37.1
Waste	Operation of urban waste water treatment plant	46.0	45.6
	Aerial emissions works at Maghtab and Qortin landfills and capping and extraction of gases from managed landfills	45.1	56.1

Note: The estimates of mitigation impact are estimates of emissions of CO_2 or CO_2 eq avoided in a given year as a result of the implementation of mitigation actions.

[a] Estimates for 2020 from BR3 CTF table 3.

[b] Estimates for 2035 from the NC7.

38. The ERT noted that, since the previous submission, developments have taken place in the policymaking process and Malta provided a clear, although high-level, overview of these in the BR3 describing, in particular, that it is exploring options for the establishment of a national system for PaMs, as mandated by the EU Monitoring Mechanism Regulation and the new EU regulation on the governance of the energy union. During the review, the Party provided the additional information that, as required under the latter regulation, it is currently developing its National Energy and Climate Plan.

(b) Policies and measures in the energy sector

39. The BR3 included 21 energy sector PaMs, all of which are described in CTF table 3 by name, type of instrument, GHGs affected, status and estimates of mitigation impact by 2020.

40. **Energy supply**. Electricity is generated in Malta by two oil-fired power stations, in Marsa and Delimara. In order to comply with the exemption under the EU directive on large combustion plants (directive 2001/80/EC), the plant loading of the heavy fuel oil-fired Marsa power station has been reduced since 2008. Consequently, production at the Delimara power station with newer and more efficient gasoil (2012) and new combined-cycle gas turbine (2017) plants has increased. By 2020, the oil-fired electricity generation plant in Marsa will be decommissioned. A connection to Sicily has also been installed and initiated, linking

Malta to the European electricity grid, and is estimated to result in GHG emission reductions of 259.79 kt CO_2 eq by 2035.

41. Electricity generation at the Delimara power station is also planned to shift completely from oil to natural gas in the coming years. This shift is estimated to result in GHG emission reductions of 65.33 kt CO_2 eq by 2020.

42. The ERT noted the considerable progress that has been made in implementing the measures above since the previous BR and the detailed explanation of this progress provided in the BR3.

43. **Renewable energy sources**. Under the EU directive on renewable energy (directive 2009/28/EC) Malta is committed to reaching a 10 per cent share of renewable energy sources in gross final energy consumption by 2020. The target is considered to be the main driver of the introduction of renewable energy into the Maltese energy system.

44. Given the biophysical and climatic conditions of Malta, wind (both onshore and offshore) and solar energy are considered to be the greatest potential renewable energy sources. Currently the most important is the biogas installation (WasteServ Malta Ltd, a government-owned company) in operation at the Sant'Antnin solid waste treatment plant, which has a capacity of 1.74 MW.

45. In terms of instruments to promote the use of renewable energy sources, the Government of Malta has provided grants for investments, introduced feed-in tariffs and granted licences for rooftop solar photovoltaic systems. Guidelines for small and medium-sized wind turbines have been published.

46. Solar energy, both for electricity generation and for water heating in households and businesses, has developed strongly, resulting in substantial capacity being in place in 2015, with annual production potential of 40.1 GWh for water heating. The ERT acknowledges the importance of this achievement.

47. The uptake of wind energy has lagged behind that of solar energy for a variety of reasons. For small and microscale turbines, the main barriers have been identified as uncertainty in energy yields, relatively high installation costs, and issues in planning and in obtaining permits. Three planned large-scale wind farms have stalled because of environmental concerns. While the ERT notes the potential importance of wind energy to Malta as a contributor to its original National Renewable Energy Plan (2010), which outlined how the Party would achieve its target of a 10 per cent share for renewable energy sources by 2020, it also notes the action taken to try to develop new wind generation capacity and the difficulties associated with its implementation.

48. **Energy efficiency**. As stipulated in the National Energy Efficiency Action Plan under the EU energy services directive (2006/32/EC), Malta is aiming to achieve energy savings of 27 per cent over the period 2014–2020. This saving is to be achieved in the residential, commercial and industrial sectors, mainly through financial assistance and regulation, and with the public sector leading by example. The ERT notes that a Near Zero Energy Plan for Malta has been developed and is awaiting final approval, and that the Party will likely provide information in the next BR as to how this plan could supplement Malta's existing efforts related to energy efficiency.

49. **Residential and commercial sectors**. Several energy efficiency instruments have been implemented for buildings in the residential and commercial sectors. A building regulations office has been established, and grants and financial support are being offered for roof insulation, double glazing of windows and the purchase of energy-efficient household appliances. In addition, intelligent metering and solar water heaters have been promoted.

50. **Transport sector**. Malta reported that after some initial difficulties with the introduction of biofuels, a substitution obligation was adopted and a substitution target was set, which is foreseen to increase biofuel uptake incrementally from 1.5 per cent in 2011 to 10 per cent in 2020.

51. Malta considers electromobility an important measure for reducing GHG emissions from road transportation. The National Strategy for the Introduction of Electromobility in Malta and Gozo (2012) sets an indicative target of the uptake of 5,000 battery-powered

electric vehicles by 2020. Financial incentives in the form of grant contributions towards individual purchases of electric vehicles have also been introduced, alongside the roll-out of a public charging infrastructure and priority parking for these vehicles. The ERT notes Malta's ambition and achievements in this area, including the installation of 45 public vehicle charging points. A number of other measures in road transportation have also been identified, including the promotion of a modal shift in transport through public transport reform.

52. **Industrial sector**. Malta reported several energy efficiency PaMs in industries, including a number of schemes have been launched to encourage investments in energy efficiency, supplemented by subsidized energy auditing. In total, a GHG emission reduction of 13 kt CO_2 eq is expected from these measures by 2020.

(c) Policies and measures in other sectors

53. **Industrial processes**. Between 1990 and 2015, GHG emissions from the industrial processes sector increased by 3,128.3 per cent (from 7.94 kt CO_2 eq in 1990 to 248.39 kt CO_2 eq in 2015). Since 2000 (the first year with all F-gases reported), GHG emissions in the sector have increased 16-fold. In the BR3, Malta did not provide an explanation for the significant increase in emissions in the industrial processes sector, in particular the increase in emissions of HFCs. During the review, the Party clarified that the increase in emissions of HFCs is related to the increase in the installation of air-conditioning equipment in households.

54. Malta reported in the BR3 that implementation of the EU regulation on F-gases (regulation 2006/842/EC) will be the main driver of avoided emissions in the industrial processes sector. It is estimated that by 2020 measures in this sector will deliver GHG emission reductions of 10.37 kt CO_2 eq per year compared with the 2012 emission level. This constitutes a significant change in the estimated emission savings from this measure as reported in the BR2 where, as noted in the previous review report, it was expected to deliver GHG emission reductions of 127.93 kt CO_2 eq per year by 2020 compared with 2011. As part of ongoing support relating to Malta's preparation of a National Energy and Climate Plan under the new EU regulation on the governance of the energy union, technical support is being provided to the Malta Resources Authority to develop further Malta's capacity to project emissions of F-gases and to understand the impact on the industrial processes sector of implementing the F-gas regulation.

55. **Agriculture**. Between 1990 and 2015, PaMs implemented have contributed to GHG emissions from the agriculture sector decreasing by 17.0 per cent (11.2 kt CO_2 eq). All subcategories showed a decreasing trend, and the majority of the reductions achieved relate to animal husbandry activities.

56. The BR3 briefly introduces the Rural Development Programme 2007–2013, which outlines the strategic plan for utilizing the financing opportunities provided by the European Agricultural Fund for Rural Development, but the ERT noted that the information provided on possible measures is given mainly at the EU level.

57. The Nitrates Action Programme, pursuant to the EU nitrates directive (91/676/EEC), is identified as the main GHG emission reduction measure for the agriculture sector in the BR3. However, the ERT noted that it is not included as a specific policy or measure, although it was included as such and quantified emission reductions were estimated for it in the BR2.

58. **LULUCF**. Malta reported in its BR3 that afforestation projects have been implemented in recent years; however, the ERT noted that potential emission removals have not been estimated. The ERT notes the very small influence of this sector, primarily due to the lack of available land for tree planting.

59. **Waste management**. Between 1990 and 2011, GHG emissions from the waste sector increased by 99.3 per cent (68.93 kt CO_2 eq). However, from 2005 to 2015, emissions decreased by 30.3 per cent (41.67 kt CO_2 eq) mainly owing to a reduction in CH_4 emissions from two open landfills that have since been closed, capped and gas extraction systems installed. These have been replaced by managed landfills.

60. Further significant PaMs implemented in this sector include a large mechanical and biological treatment plant at Sant'Antnin and installation of an anaerobic sludge digestion system at the Malta South Urban Waste Water Treatment Plant.

(d) Response measures

61. Malta did not report on the assessment of the economic and social consequences of response measures. In its 2018 annual submission Malta reported that any legislation proposed at the EU level is subject to a formal process of impact assessment, including of the economic and social impacts of the proposed legislation, and that Malta also undertakes direct action with developing countries in the areas of capacity-building, transfer of technology and knowledge-sharing.

(e) Assessment of adherence to the reporting guidelines

62. The ERT assessed the information reported in the BR3 of Malta and identified issues relating to completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 6.

Table 6
Findings on the mitigation actions and their effects from the review of the third biennial report of Malta

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 7 Issue type: transparency Assessment: recommendation	The BR3 includes an overview of how legal and institutional arrangements are used for domestic compliance, monitoring, reporting, archiving of information and evaluation of progress made towards Malta's target, as required by the UNFCCC reporting guidelines on BRs. However, the ERT found that this overview is insufficiently clear and does not include approaches implemented as part of the forthcoming National Energy and Climate Plan. During the review, Malta provided further information outlining that it is exploring options for the establishment of a national system for PaMs, as mandated by the EU Monitoring Mechanism Regulation (Article 12) and the new EU regulation on the governance of the energy union (Article 32). The ERT reiterates the recommendation made in the previous review report that Malta provide in the next BR information on changes in its domestic institutional arrangements resulting from the (currently under development) National Energy and Climate Plan. The Party could provide a diagram describing the process of and institutions and their roles in the domestic institutional arrangements.
2	Reporting requirement specified in paragraph 6 Issue type: transparency Assessment: recommendation	It is not clear from the information reported by Malta in its BR (and its NC) which of the PaMs reported are implemented, adopted or planned. Different chapters and tables in the BR and the NC contain different information. For example, at the beginning of chapter 4 of the BR3 it is stated that "The policies and measures presented in this section include those that are implemented, adopted and/or planned". However, in CTF table 3 Malta indicates that all PaMs reported are implemented. The ERT recommends that Malta provide consistent information within its BR and between the BR, including CTF tables, and the NC with regard to the status of PaMs reported as implemented, adopted or planned.
3	Reporting requirement specified in paragraph 8 Issue type: completeness Assessment: encouragement	Malta did not report on the assessment of the economic and social consequences of response measures. During the review, Malta provided information outlining that such adverse effects are minimized primarily through the Party's participation in the development and implementation of EU legislation. However, no further information on the domestic implementation of relevant EU legislation was provided. The ERT reiterates the encouragement made in the previous two review reports for Malta to provide information on the assessment of the economic and social consequences of response measures in its next BR.

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

2. Estimates of emission reductions and removals and the use of units from market-based mechanisms and land use, land-use change and forestry

(a) Technical assessment of the reported information

63. For 2014 Malta reported in CTF table 1 annual total GHG emissions excluding LULUCF of 2,930.27 kt CO_2 eq, which is 23.0 per cent above the 1990 level. In 2014 emissions from non-ETS sectors relating to the target under the ESD amounted to 1,272.72 kt CO_2 eq.

64. For 2015 Malta reported in CTF table 1 annual total GHG emissions excluding LULUCF of 2,226.14 kt CO_2 eq, which is 6.5 per cent below the 1990 level. In 2015 emissions from non-ETS sectors relating to the target under the ESD amounted to 1,334.65 kt CO_2 eq.

65. Malta confirmed during the review that it has not used and does not intend to use market-based mechanisms as defined under the Convention to meet its target under the ESD. Rather, the Party is using and intends to continue using flexible mechanisms via the trading of AEAs. Further details on this matter are included in chapter II.B.1 below.

66. Table 7 illustrates Malta's total GHG emissions, the contribution of LULUCF and the use of units from market-based mechanisms to achieve its target.

Table 7
Summary of information on the use of units from market-based mechanisms and land use, land-use change and forestry by Malta to achieve its target

Year	*Emissions excluding LULUCF (kt CO_2 eq)*	*Contribution of LULUCF (kt CO_2 eq)*[a]	*Emissions including contribution of LULUCF (kt CO_2 eq)*	*Use of units from market-based mechanisms (kt CO_2 eq)*[b]
1990	2 382.04	NA	NA	–
2010	3 019.21	NA	NA	–
2011	3 115.01	NA	NA	–
2012	3 233.55	NA	NA	–
2013	2 901.92	NA	NA	82.26
2014	2 930.27	NA	NA	124.60
2015	2 226.14	NA	NA	135.68

Sources: Malta's BR3 and CTF tables 1; information provided by the Party.

[a] The EU's unconditional commitment to reduce GHG emissions by 20 per cent below the 1990 level by 2020 does not include emissions/removals from LULUCF.

[b] Information included refers to actual AEAs that Malta has purchased and that was provided by the Party during the review. Trading of AEAs is allowed and facilitated under the EU Monitoring Mechanism.

67. In assessing the progress towards the achievement of the 2020 target, the ERT noted that Malta's emission reduction target for non-ETS sectors is 5 per cent above the 2005 level (see para. 18 above). As discussed above, in 2015 Malta's annual total GHG emissions excluding LULUCF emissions from non-ETS sectors were 14.7 per cent (1,332.74 kt CO_2 eq) above the AEA under the ESD. In addition, the ERT noted that in 2015 the contribution of LULUCF was a net removal of 3.13 kt CO_2 eq and the use of market-based mechanisms accounted for 0 kt CO_2 eq (although Malta used 135.68 kt CO_2 eq via the purchase of AEAs under the ESD in 2015).

68. The ERT noted that Malta is making progress towards its emission reduction target by implementing mitigation actions that are delivering some emission reductions and by using units from flexible mechanisms under the ESD. On the basis of the results of the projections (see para. 85 below), the ERT also noted that the Party is making progress towards achieving its target under the Convention.

69. The ERT noted that Malta has implemented mitigation actions that have resulted in, and will continue to contribute, significant emission reductions to 2020. In particular, policies

relating to thermal energy production have reduced and will continue to reduce GHG emissions substantially over the period. Other notable mitigation actions are in the waste and transport (roads) sectors, in which Malta has been proactive in reducing emissions and harnessing energy for wider use. The Party is, however, exceeding its annual AEA target under the ESD and will continue to exceed it to 2020. To avoid non-compliance, Malta has a bilateral agreement with Bulgaria for the purchase of additional AEAs via an authorized flexible mechanism under the ESD.

(b) Assessment of adherence to the reporting guidelines

70. The ERT assessed the information reported in the BR3 of Malta and identified an issue relating to completeness and adherence to the UNFCCC reporting guidelines on BRs. The finding is described in table 8.

Table 8
Findings on estimates of emission reductions and removals and the use of units from the market-based mechanisms and land use, land-use change and forestry from the review of the third biennial report of Malta

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement specified in paragraph 10 Issue type: completeness Assessment: recommendation	CTF table 4 was submitted but was not filled in. However, much of the necessary information was provided in CTF table 1 and the BR3 (chapter 2). The ERT recommends that Malta provide a completed CTF table 4. The ERT notes that in its next BR Malta could complete the column in CTF table 4 titled "Total emissions excluding LULUCF" with available data and fill in the remaining columns using the notation key "NA".

Note: Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on BRs. The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on BRs.

3. Projections overview, methodology and results

(a) Technical assessment of the reported information

71. Malta reported updated projections for 2020 and 2030 relative to actual inventory data for 2015 under the WEM scenario. The WEM scenario reported by Malta includes implemented and adopted PaMs until the end of 2015.

72. In addition to the WEM scenario, Malta reported the WOM scenario. The WOM scenario excludes all PaMs implemented, adopted or planned after 2015. Malta provided a definition of its scenarios, explaining that its WEM scenario includes PaMs (e.g. connection to the European electricity grid, a switch in the fuel mix for electricity production and in transport, energy efficiency measures on both the supply and the demand side, utilization of renewable energy sources, uptake of electric cars, promotion of transport modal shifts, implementation of the F-gas regulation, waste management plans) that are being implemented or for which a firm decision to adopt has been taken (with the end of 2015 as the cut-off date). The definition indicates that the scenario was prepared according to the UNFCCC reporting guidelines on NCs.

73. Malta reported that the WAM scenario is not included in the BR3 because the information submitted by the relevant responsible stakeholders indicated that all the measures submitted are either existing or implemented. Malta reported that efforts are being made to address the lack of information, particularly to translate current and planned strategies being drawn up in various sectors into PaMs with quantifiable emission reductions.

74. The projections are presented on a sectoral basis, using the same sectoral categories as those used in the reporting on mitigation actions, and on a gas-by-gas basis for CO_2, CH_4, N_2O, PFCs, HFCs and SF_6 (treating PFCs and HFCs collectively in each case) for 1990–2030. The projections are also provided in an aggregated format for each sector as well as for a Party total using global warming potential values from the AR4.

75. Malta did not report emission projections for indirect GHGs such as carbon monoxide, nitrogen oxides, non-methane volatile organic compounds or sulfur oxides.

76. Emission projections related to fuel sold to ships and aircraft engaged in international transport were not reported separately and were not included in the totals. Malta did report on factors and activities affecting emissions for each sector (see para. 83 below).

(b) Methodology, assumptions and changes since the previous submission

77. The methodology used for the preparation of the projections is identical to that used for the preparation of the emission projections for the BR2. Malta reported supporting information further explaining the methodologies in chapter 5 of the BR3. The methodology used for the projections is based on a number of sector-specific models developed during 2015 covering emissions from the energy, transport, IPPU, agriculture, LULUCF and waste sectors.

78. A cost-optimization modelling approach was used for the estimation of emissions from the energy sector, which includes demand based on economic growth models, development in energy efficiency and energy-saving measures, and the choice of fuel depending on price, but superseded by policy decisions such as the mandatory use of renewable energy sources. For the transport sector, the model used includes the expected impact of existing and new measures on road transport, subdividing transport between transport modes and fuel types, and by the categories passenger vehicles and cargo transport. Both models calculated the emissions of CO_2, CH_4 and N_2O on the basis of the fuel used by sector.

79. For the IPPU sector, the model is built mainly on historical emissions. The major action envisaged in this sector is the implementation of the F-gas regulation, and Malta reported that a measure of this nature is not quantifiable with certainty but has a high probability of influencing in a positive manner the way these gases are used. For the agriculture sector, the model is built mainly on historical activity data. For the LULUCF sector, which is a relatively small sector in Malta, the model simply assumes that the sequestration rate will remain constant over time. Lastly, for the waste sector, the model is built on the current relationship between solid waste and GDP per capita and industrial waste per GDP unit, with an expected reduction in such relationships over time (i.e. a percentage change in GDP per capita will cause a rise of 1.4 per cent in municipal solid waste per capita but municipal solid waste is expected to decline over time to 0.04 per cent per capita, while the industrial waste per unit of GDP is expected to decrease by 0.116 t).

80. In the BR3 Malta described the models used for emission projections for each of the sectors, but information on which gases are covered was provided only for the energy and transport sectors. The BR3 also does not include a summary of the strengths and weaknesses of the models used and the Party did not explain how the models used account for any overlap or synergies that may exist among different PaMs. During the review, Malta specified that the IPPU model focuses on F-gases, that the agriculture model relates to projections of both CH_4 and N_2O emissions, and that the waste sector model is primarily related to the projection of CH_4 emissions.

81. Malta also explained that all three models are subject to further development in the context of support being received by Malta for the preparation of its National Energy and Climate Plan under the EU regulation on the governance of the energy union. In addition, the Party clarified that its present capacity to assess the impacts of its PaMs is particularly focused on individual PaMs and is very limited in the extent to which interactions can be assessed and quantified. The capability of modelling the interactions among different PaMs (and possibly, among sectors), is yet to be developed. The Party also informed the ERT of ongoing efforts to improve its capacity to model GHG emission projections and, in some instances, this may result in new models replacing existing models, while in others, existing models should be improved.

82. To prepare its projections, Malta used GDP and population projections. The assumptions were updated on the basis of the most recent economic developments known at the time of the preparation of the projections. For GDP, a moderate growth of 1.9 per cent is assumed with small variations between years. Population growth is expected to decrease from

0.5 per cent in 2015 to 0.3 per cent in 2030. In the sectoral models, Malta also reported other assumptions more specific to the sector, such as energy prices (for energy industries) and passenger-kilometres, vehicle efficiency and modal shifts (for transport).

83. Malta provided information on the key variables and assumptions used in the preparation of the projection scenarios in CTF table 5 of the BR3. The table contains information on the GDP growth rate (in per cent), population (in thousands) and population growth (in per cent), as well as both historical data (for 1990, 1995, 2000, 2005, 2010 and 2011) and projected values (for 2015, 2020, 2025 and 2030).

84. Malta did not report on a quantitative sensitivity analysis, but qualitatively discussed the sensitivity of the projections for some of the most important underlying assumptions. During the review, Malta explained that this reporting will be improved as a part of the ongoing development of its capacity to model projections of GHG emissions, through the technical support being provided for the preparation of its National Energy and Climate Plan under the EU regulation on the governance of the energy union.

85. Malta reported on factors and activities affecting future emissions for each sector. During the review, Malta clarified that the projections of future emission trends are dependent on the methodology used for deriving such projections. Furthermore, in a small country such as Malta, relatively large single policy measures or projects can have a considerable impact. Thus, as the Party described, a single major residential, commercial or institutional development could represent a substantive increase in energy demand. In contrast, a major development in energy generation could enhance the emissions-related efficiency of energy generation at the national level in a substantive and rapid manner (as has been the case in recent years with regard to the reduction in emissions from local electricity generation due to the EU interconnection and investment in new generation plants). Malta explained that this will remain applicable in the future and any new PaMs, such as investment in a waste-to-energy plant or the substitution of HFCs with alternative gases will have a direct and potentially important impact in relevant sectors, albeit their consideration remains subject to official policy decisions being taken.

(c) Results of projections

86. The projected emission levels under different scenarios and information on the Kyoto Protocol targets and the quantified economy-wide emission reduction target are presented in table 9 and the figure below. The WOM scenario projections were updated during the review to correct an error in the original submission.

Table 9
Summary of greenhouse gas emission projections for Malta

	GHG emissions (kt CO_2 eq per year)	*Changes in relation to base-year[a] level (%)*	*Changes in relation to 1990 level (%)*
Quantified economy-wide emission reduction target under the Convention[b]	NA	NA	NA
Inventory data 1990[c]	2 382.04	20.6	NA
Inventory data 2015[c]	2 226.87	12.8	–6.5
WOM projections for 2020[d]	1 828.89	–7.4	–23.2
WEM projections for 2020[d]	1 606.42	–18.6	–32.6
WAM projections for 2020[d]	NA	NA	NA
WOM projections for 2030[d]	2 083.93	5.5	–12.5
WEM projections for 2030[d]	1 683.48	–14.7	–29.3
WAM projections for 2030[d]	NA	NA	NA

Note: Updated projections were provided by the Party during the review; the projections are for GHG emissions without LULUCF.

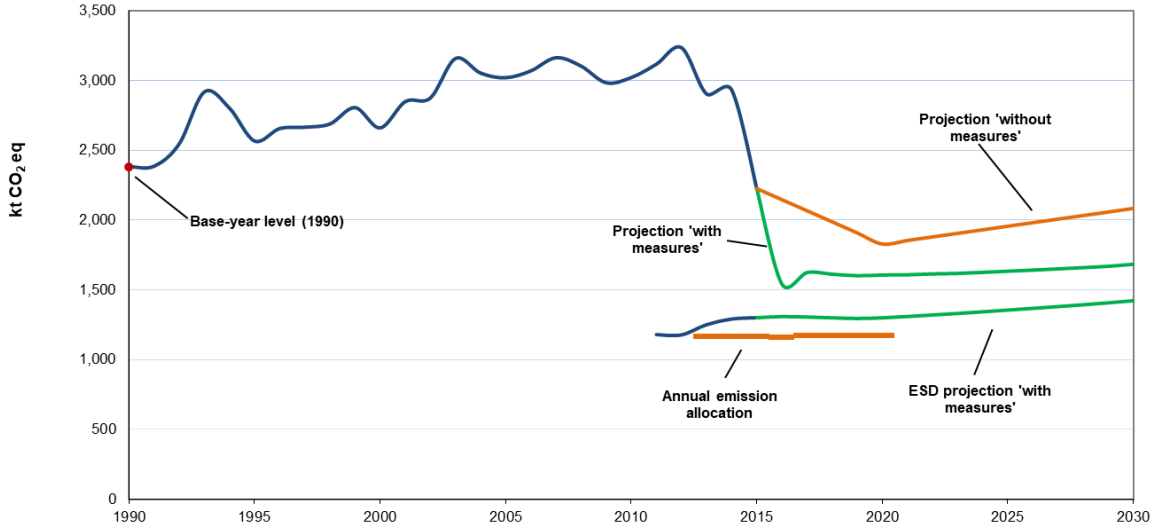
[a] "Base year" in this column refers to the base year used for the target under the Kyoto Protocol, while for the target under the Convention it refers to the base year used for that target.

[b] The quantified economy-wide emission reduction target under the Convention is a joint target of the EU and its 28 member States. The target is to reduce emissions by 20 per cent compared with the base-year (1990) level by 2020.

[c] From Malta's BR3 CTF table 1.

[d] From Malta's BR3 CTF table 6.

Greenhouse gas emission projections reported by Malta



Sources: (1) data for the years 1990–2015: provided by Malta during the review; total GHG emissions excluding LULUCF; (2) data for the years 2015–2030: WEM scenario: data on an annual basis provided by Malta during the review; WOM scenario: Malta's updated CTF table 6(b) provided during the review; total GHG emissions excluding LULUCF; ESD projections provided by the Party during the review; (3) ESD review data from the European Environment Agency (2005–2015); (4) EU transaction log (AEA).

87. Malta's total GHG emissions excluding LULUCF are projected to be 1,606.42 and 1,683.48 kt CO_2 eq, in 2020 and 2030 respectively, under the WEM scenario, which represents a decrease of 32.6 and 29.3 per cent, respectively, below the 1990 level. No WAM scenario was reported. The 2020 projections suggest that Malta should strive to contribute to the achievement of the EU target under the Convention (see para. 20 above).

88. Malta's target for non-ETS sectors is to limit the growth of emissions to 5 per cent above the 2005 level by 2020 (see para. 18 above). Malta's AEAs, which correspond to its national emission target for non-ETS sectors, change linearly from 1,168.51 kt CO_2 eq in 2013 to 1,171.95 kt CO_2 eq for 2020. According to the projections under the WEM scenario, emissions from non-ETS sectors are estimated to reach 1,299.86 kt CO_2 eq by 2020. The projected level of emissions under the WEM scenario is 127.91 kt CO_2 eq above the AEAs for 2020. The ERT noted that this suggests that Malta may face challenges in meeting its target under the WEM scenario. Malta confirmed during the review that it is using and intends to continue using flexible mechanisms via the trading of AEAs available to it under the EU Monitoring Mechanism (see para. 20 and table 4 above).

89. Malta presented the WEM scenario by sector for 2020 and 2030, as summarized in table 10.

Table 10
Summary of greenhouse gas emission projections for Malta presented by sector

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
		2020	*2030*	*1990–2020*	*1990–2030*
Sector	*1990*	*WEM*	*WEM*	*WEM*	*WEM*
Energy (not including transport)	1 908.42	676.36	753.24	–64.6	–60.5
Transport	319.54	471.52	408.83	47.6	27.9
Industry/industrial processes	7.94	240.18	281.23	2 924.9	3 441.9

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
		2020	*2030*	*1990–2020*	*1990–2030*
Sector	*1990*	*WEM*	*WEM*	*WEM*	*WEM*
Agriculture	77.13	61.41	62.62	–20.4	–18.8
LULUCF	2.96	2.84	2.81	–4.1	–5.1
Waste	69.02	156.94	177.57	127.4	157.3
Other (specify)					
Total GHG emissions without LULUCF	**2 382.03**	**1 606.42**	**1 683.48**	**–32.6**	**–29.3**

Source: Malta's BR3 CTF table 6.

90. According to the projections reported for 2020 under the WEM scenario, the most significant emission reductions are expected to occur in the energy sector (not including transport), amounting to projected reductions of 1,232.06 kt CO_2 eq (64.6 per cent) between 1990 and 2020. The pattern of projected emissions reported for 2030 under the same scenario slightly changes owing to an increase in electricity demand. The energy sector remains the sector with the largest emission reductions, amounting to 1,155.18 kt CO_2 eq (or 60.5 per cent) between 1990 and 2030. During the review, Malta explained that two particularly important events in the energy industries category have influenced the trend in emissions from 2015 onwards, namely the investment in a more efficient plant, with the older plants at Marsa and Delimara being replaced by new plant at Delimara, and the completion of the connection to the European grid.

91. The emission projections under WEM scenario for the other sectors show an increasing trend, with the highest increase in the IPPU sector, amounting to 232.29 kt CO_2 eq (or 2,924.9 per cent) by 2020 compared with the 1990 level, followed by the transport sector with an increase of 151.98 kt CO_2 eq (or 47.6 per cent) and the waste sector with 8.92 kt CO_2 eq (or 127. 4 per cent), while the projections of emissions from the agriculture sector slightly decrease, by 15.72 kt CO_2 eq (or 20.4 per cent) in 2020 relative to 1990.

92. Malta presented the WEM scenario by gas for 2020 and 2030, as summarized in table 11.

Table 11
Summary of greenhouse gas emission projections for Malta presented by gas

	GHG emissions and removals (kt CO_2 eq)			*Change (%)*	
		2020	*2030*	*1990–2020*	*1990–2030*
Gas	*1990*	*WEM*	*WEM*	*WEM*	*WEM*
CO_2	2 170.72	1 069.39	1 095.57	–50.7	–49.5
CH_4	154.96	199.50	219.82	28.7	41.9
N_2O	56.34	101.72	91.24	80.5	61.9
HFCs	0.00	234.57	275.57	NA	NA
PFCs	0.00	0.00	0.00	NA	NA
SF_6	0.01	1.24	1.28	12 300.0	12 700.0
NF_3	0.00	0.00	0.00	NA	NA
Total GHG emissions without LULUCF	**2 382.03**	**1 606.42**	**1 683.48**	**–32.6**	**–29.3**

Source: Malta's BR3 CTF table 6.

93. For 2020 the most significant reductions are projected for CO_2 emissions: 1,101.33 kt CO_2 eq (50.7 per cent) between 1990 and 2020.

94. Projections for 2030 follow a similar trend, with CO_2 emissions projected to decrease by 1,075.15 kt CO_2 eq (49.5 per cent) between 1990 and 2030.

(d) Assessment of adherence to the reporting guidelines

95. The ERT assessed the information reported in the BR3 of Malta and identified issues relating to completeness, transparency and adherence to the UNFCCC reporting guidelines on BRs. The findings are described in table 12.

Table 12
Findings on greenhouse gas emission projections reported in the third biennial report of Malta

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
1	Reporting requirement[a] specified in paragraph 28 Issue type: completeness Assessment: encouragement	Malta reported a WEM and a WOM scenario but not a WAM scenario. During the review, Malta reiterated that the WAM scenario has not been included but indicated that efforts are being made to address this issue. The ERT encourages Malta to include a WAM scenario in its next BR, noting the efforts being made to do so.
2	Reporting requirement[a] specified in paragraph 30 Issue type: completeness Assessment: encouragement	Malta did not report a sensitivity analysis for any of the projections. During the review, Malta confirmed that a sensitivity analysis should form part of the ongoing development of the Party's capacity to model projections of GHG emissions. The ERT encourages Malta to report a sensitivity analysis for all of the projections in the next BR, but should aim to limit the number of scenarios presented.
3	Reporting requirement[a] specified in paragraph 33 Issue: transparency Assessment: recommendation	Malta presented emission projections relative to actual inventory data for the preceding years in graphs (starting from 2005) in its BR3 and in CTF table 6. The ERT noted inconsistencies between the data for the historical emissions reported in CTF table 6 and in CTF table 1 for the years 2005, 2010 and 2015. During the review, Malta explained that the discrepancy arises from the sourcing of the values for HFCs and SF_6 for the respective tables. Data for CTF table 1 were derived from the CRF tables (2017 submission). Data for CTF table 6 were derived from an internal overview sheet which, in the case of these two gases, includes values for historical emissions that are slightly different from the values derived from the CRF tables. The difference arises from the fact that the GHG inventory process and the projections process are not necessarily fully synchronized across all sectors. The Party informed the ERT that there is ongoing work to update Malta's projections in the context of the preparation of Malta's National Energy and Climate Plan; this work should fully synchronize both processes. The ERT recommends that Malta improve the transparency of its reporting by ensuring consistency in the information provided in the BR and the CTF tables. The ERT notes that Malta should clearly explain any differences in the historical values used in the projections compared with the values reported in the inventory.
4	Reporting requirement[a] specified in paragraph 35 Issue type: completeness Assessment: encouragement	Malta did not provide projections for the indirect GHGs carbon monoxide, nitrogen oxides, non-methane volatile organic compounds or sulfur oxides. The ERT encourages Malta to provide projections for indirect GHGs in the next BR.
5	Reporting requirement[a] specified in paragraph 35 Issue type: transparency	The ERT noted that SF_6 emission projections reported for 2020 and 2030 in CTF table 6(a) are not included in the aggregated F-gas projections reported in the BR3 (table 5-1). The difference was also reflected in the totals reported in the latter table. During the review, Malta provided a corrected version of table 5-1 of the BR3.

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
	Assessment: recommendation	The ERT recommends that Malta ensure the consistency of the information provided in the BR and the CTF tables.
6	Reporting requirement[a] specified in paragraph 36 Issue type: completeness Assessment: recommendation	In the BR3, emission projections related to fuel sold to ships and aircraft engaged in international transport were not reported, neither separately nor included in the totals. During the review, Malta acknowledged that these emission projections were not provided. The ERT reiterates the recommendation made in the previous review report that Malta ensure consistency with inventory reporting by providing, to the extent possible, the emission projections related to fuel sold to ships and aircraft engaged in international transport separately and not included in the totals in the next BR.
7	Reporting requirement[a] specified in paragraph 35 Issue type: transparency Assessment: recommendation	The ERT noted that in CTF table 6(b) Malta reported sudden changes in the emission projections of HFCs and SF_6 in 2020 and 2030 relative to data for 2015. During the review, Malta explained that an error had been made in the transfer of data to the CTF table. A corrected CTF table 6(b) was provided. The ERT recommends that Malta ensure the accuracy of the information provided in the CTF tables.
8	Reporting requirement[a] specified in paragraph 43 Issue type: transparency Assessment: encouragement	Malta described the models used for emission projections for each of the sectors, but information on gases covered was provided only for the energy and transport sectors. The BR3 also does not include a summary of the strengths and weaknesses of the models used and Malta did not explain how the models used account for any overlap or synergies that may exist among different PaMs. During the review, Malta provided the required information for the other sectors, specifying that the IPPU model focuses on F-gases, the agriculture model relates to projections of both CH_4 and N_2O emissions, and the waste sector model is primarily related to the projection of CH_4. The Party also explained that its present capacity to address the other requirements is very limited and it informed the ERT of ongoing efforts to improve its capacity to model GHG emission projections. As a result, the existing models should be improved and, in some cases, new models could replace the existing models. The ERT encourages Malta to explain in its next NC for which gases and/or sectors the model or approach was used, to summarize the strengths and weaknesses of the model or approach used, and to briefly explain how the model or approach used accounts for any overlap or synergies that may exist among different PaMs.
9	Reporting requirement[a] specified in paragraph 46 Issue type: transparency Assessment: encouragement	Malta did not report on quantitative sensitivity analyses, but qualitatively discussed the sensitivity of the projections for some of the most important underlying assumptions. During the review, Malta confirmed that the sensitivity analysis of assumptions used in the modelling reported in the BR3 was very limited and explained that the analysis will be improved with the development of its capacity to model GHG emission projections through the technical support being provided under the EU regulation on the governance of the energy union. The ERT, welcoming the ongoing efforts made by Malta, reiterates the encouragement made in the previous review report for Malta to provide, where possible, a quantitative discussion on the sensitivity of the projections to underlying assumptions in the next BR.
10	Reporting requirement[a] specified in paragraph 48 Issue type: transparency	In the BR3 Malta provided information on the underlying factors and activities for emission trends only for the energy sector (e.g. a combination of technological changes in local generation capacity, changes in fuel mix and changes in demand). During the review, Malta explained that the historical emission trends in the other sectors depend on relevant changes in activities contributing to such emissions.

No.	*Reporting requirement, issue type and assessment*	*Description of the finding with recommendation or encouragement*
	Assessment: recommendation	Emissions from transport primarily reflect an increase in the use of vehicles coupled with changes to the overall vehicle fleet composition and performance. For industrial processes, the dominant GHGs are F-gases, reflecting (in the early 2000s) the substitution of ozone-depleting substances with HFCs and the increase in the use of air-conditioning and refrigeration equipment over time. Agriculture and waste emission trends again primarily reflect developments over the years in the nature of activities taking place in the two sectors, such as changes in waste management approaches, from unmanaged to managed landfilling, and a decrease in the area of agricultural land. Regarding the projections of future emission trends to 2020, the Party explained that these are dependent on the methodology used for deriving such projections, superimposing the effect of measures, in terms of emission savings of individual measures, onto a WOM scenario, with projected activity data also reflecting projected future trends of parameters such as GDP and population growth, where relevant. The ERT considers that this information is useful for enhancing the transparency of reporting, especially in the case of a small country such as Malta wherein a single emission source or the non-implementation of a particular measure can have a significant impact on the Party's emissions. The ERT recommends that Malta include in its next BR information on factors and activities for each sector for the years 1990–2020. The information may be presented in tabular format. The ERT notes that it would be useful to provide this information to 2030 or the end year of projections.

Note: The reporting on the requirements not included in this table is considered to be complete, transparent and adhering to the UNFCCC reporting guidelines on NCs and BRs.

[a] Paragraph number listed under reporting requirement refers to the relevant paragraph of the UNFCCC reporting guidelines on NCs.

1. Assessment of the total effect of policies and measures

(e) Technical assessment of the reported information

96. In the BR3 Malta presented the estimated and expected total effect of implemented PaMs, in accordance with the WEM scenario.

97. Malta reported that the total estimated effect of its implemented PaMs (without LULUCF) is 1,606.42 kt CO_2 eq and 1,683.48 kt CO_2 eq in 2020 and 2030, respectively. As suggested by Malta during the review, if a calculation is made on the basis of data presented in CTF table 6, the total emissions avoided are projected to be 222.48 kt CO_2 eq and 400.44 kt CO_2 eq in 2020 and 2030, respectively. According to the information reported in the BR3, PaMs implemented in the energy sector (in particular, the improvement in electricity generation efficiency of turbines, the switching to natural gas from heavy fuel oil and connection to the EU electricity grid) will deliver the largest emission reductions, followed by PaMs implemented in the transport sector (in particular the biofuel substitution obligation and the promotion of transport modal shifts), and by PaMs in the industrial processes and waste sectors (in particular the implementation of the F-gas regulation and the management of landfills).

D. Provision of financial, technological and capacity-building support to developing country Parties

98. Malta is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, Malta provided information in the BR3 on its provision of support to developing country Parties. The ERT commends Malta for reporting this information and suggests that it continue to do so in future BRs.

99. Malta reported information on the provision of financial support under the Convention and its Kyoto Protocol, including on financial support provided, committed and pledged, allocation channels and annual contributions.

100. Malta described how its resources address the adaptation and mitigation needs of non-Annex I Parties. It also described how those resources assist non-Annex I Parties to mitigate and adapt to the adverse effects of climate change, facilitate economic and social response measures, and contribute to technology development and transfer and capacity-building related to mitigation and adaptation.

101. During the period 2013–2016 Malta provided financial and technical support to, for example, projects for the installation of a solar power backup system in Pakistan (USD 8,312) and for clean burning wood stoves in Guatemala (USD 7,017), and it provided grants for specific projects and scholarships in climate action for students from developing countries to undertake postgraduate studies at the University of Malta (USD 64,178).

102. With regard to the most recent financial contributions aimed at enhancing the implementation of the Convention by developing countries, Malta reported that its climate finance has been allocated on the basis of projects identified by the development unit of the Directorate General Global Issues, International Development and Economic Affairs.

103. Malta reported on its climate-specific public financial support, totalling USD 0.13 million in 2015 and USD 0.11 million in 2016. The ERT noted that Malta reported in CTF table 7(b) its bilateral support allocated to Parties included in Annex I to the Convention in 2015 and 2016.

104. The BR3 includes information on the types of support provided. In terms of the focus of public financial support, as reported in CTF table 7 for 2015, the shares of the total public financial support allocated for adaptation and cross-cutting projects were 48.9 and 51.1 per cent, respectively. In addition, 100.0 per cent of the total public financial support was allocated through bilateral, regional and other channels. In 2016, the shares of total public financial support allocated for adaptation and cross-cutting projects were 44.0 and 56.0 per cent, respectively. Furthermore, 100.0 per cent of the total public financial support was allocated through bilateral, regional and other channels.

105. CTF tables 7(a) and 7(b) include information on the types of financial instrument used in the provision of assistance to developing countries, which include grants only.

III. Conclusions and recommendations

106. The ERT conducted a technical review of the information reported in the BR3 and CTF tables of Malta in accordance with the UNFCCC reporting guidelines on BRs. The ERT concludes that the reported information mostly adheres to the UNFCCC reporting guidelines on BRs and provides an overview of emissions and removals related to the Party's quantified economy-wide emission reduction target; assumptions, conditions and methodologies related to the attainment of the target; and progress made by Malta in achieving its target.

107. Malta's total GHG emissions excluding LULUCF covered by its quantified economy-wide emission reduction target were estimated to be 9.1 per cent below its 1990 level, whereas total GHG emissions including LULUCF were also 9.1 per cent below its 1990 level in 2016. Emission decreases were driven by a significant reduction in electricity production due to the connection to the European mainland, improvements in the efficiency of energy supply thanks to older plants at Marsa and Delimara being replaced by a new plant at Delimara and improvements in the efficiency of energy use. However, such factors have been almost outweighed by strong economic growth, mainly in tourism, population growth and the continued reliance on fossil fuels for primary energy supply.

108. Under the Convention, Malta committed to contributing to the achievement of the joint EU quantified economy-wide emission reduction target of a 20 per cent reduction in emissions below the 1990 level by 2020. The target covers all sectors and CO_2, CH_4, N_2O, HFCs, PFCs and SF_6, expressed using global warming potential values from the AR4. Emissions and removals from the LULUCF sector are not included. Malta intends to meet its 2020 target by continuing to purchase AEAs, as permitted under the ESD, and does not intend to use the market-based mechanisms under the Kyoto Protocol.

109. Under the ESD, Malta has a target of limiting its emission growth to 5 per cent above the 2005 level by 2020. The 2013–2020 linear progression in Malta's AEAs (its national emission target for non-ETS sectors) is 1,168.51–1,171.95 kt CO_2 eq.

110. For 2015 Malta reported total GHG emissions excluding LULUCF of 2,226.14 kt CO_2 eq, or 6.5 per cent below the 1990 (base-year) level. Malta did not report on its use of units from market-based mechanisms to achieve its target, although supplementary information was provided during the review to clarify its position on this. The Party did report on the contribution of LULUCF towards achieving its target. Malta reported a significant decrease in total GHG emissions for 2015 and these emissions are projected to decrease further in 2016 before stabilizing at a much lower level. This trend is due to significant mitigation measures taking effect during this time, relating to fuel switching, the installation of new and efficient generating capacity and the submarine connection to the European electricity grid, all of which target energy supply and fall under the auspices of the EU ETS. Emissions for other sectors display less change, with emissions from transport and industrial processes showing a significant upward trend since 1990.

111. The GHG emission projections provided by Malta include those under the WOM and WEM scenarios. In the two scenarios, emissions are projected to be 23.2 and 32.6 per cent below the 1990 level in 2020, respectively. On the basis of the reported information, the ERT concludes that Malta may face challenges in achieving its target for non-ETS sectors. During the review Malta clarified that it intends to meet its 2020 target by continuing to purchase AEAs, as permitted under the ESD, through a bilateral agreement with Bulgaria.

112. The ERT noted that, in the context of Malta's commitments under the EU ETS and ESD and its contribution towards meeting the collective EU emission reduction target for 2020 under the Convention and its Kyoto Protocol, Malta is making progress and intends to achieve these targets.

113. Malta is not an Annex II Party and is therefore not obliged to adopt measures and fulfil obligations defined in Article 4, paragraphs 3, 4 and 5, of the Convention. However, Malta provided information in the BR3 on its provision of support to developing country Parties. Support was mainly provided in the form of grants for projects on promoting access to water, renewable energy and capacity-building. Also Malta provided climate change related scholarships for students from developing countries.

114. In the course of the review, the ERT formulated the following recommendations for Malta to improve its adherence to the UNFCCC reporting guidelines on BRs in its next BR:[4]

(a) To improve the completeness of its reporting by:

(i) Providing summary information on its national inventory arrangements or a reference to complete information, and on any changes since the previous BR (see issue 2, table 3);

(ii) Providing a completed CTF table 4. The ERT notes that in its next BR Malta could complete the column in CTF table 4 titled "Total emissions excluding LULUCF" with available data and fill in the remaining columns using the notation key "NA" (see issue 1, table 8);

(iii) Providing, to the extent possible, the emission projections related to fuel sold to ships and aircraft engaged in international transport separately and not included in the totals in the next BR (see issue 6, table 12);

(b) To improve the transparency of its reporting by:

(i) Ensuring consistency of the information reported between the BR and CTF tables and between the BR submission and the annual submission (see issue 1, table 3);

(ii) Providing a clear statement that Malta is not using and does not intend to use market-based mechanisms to reach its ESD target, and by filling in CTF table 2(e)I accordingly. The ERT notes that Malta could use the notation key "NA" to indicate that it does not plan to make use of any such units (see issue 1, table 4);

[4] The recommendations are given in full in the relevant chapters of this report.

(iii) Reporting on the gases and sectors covered by its target. The ERT notes that Malta could use the notation key "NA" when reporting the base year for NF_3 in CTF table 2(b) (see issue 2, table 4);

(iv) Providing in the next BR information on changes in its domestic institutional arrangements resulting from the (currently under development) National Energy and Climate Plan. The Party could provide a diagram describing the process of, and institutions and their roles in, the domestic institutional arrangements (see issue 1, table 6);

(v) Providing consistent information within its BR and between the BR, including CTF tables, and the NC with regard to the status of PaMs reported as implemented, adopted or planned (see issue 2, table 6);

(vi) Ensuring the consistency in the information provided in the BR and the CTF tables. The ERT notes that Malta should clearly explain any differences in the historical values used in the projections compared with the values reported in the inventory (see issue 3, table 12);

(vii) Ensuring consistency of the information provided in the BR and the CTF tables (see issue 5, table 12);

(viii) Ensuring accuracy of the information provided in the CTF tables (see issue 7, table 12);

(ix) Providing information on factors and activities for each sector for the years 1990–2020. The information may be presented in tabular format. The ERT notes that it would be useful to provide this information to 2030 or the end year of projections (see issue 10, table 12);

(c) To improve the timeliness of its reporting by submitting its next BR on time (see para. 6 above).

Annex

Documents and information used during the review

A. Reference documents

2017 GHG inventory submission of Malta. Available at https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/submissions/national-inventory-submissions-2017.

2018 GHG inventory submission of Malta. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2018.

BR3 of Malta. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-reports-annex-i-parties/third-biennial-reports-annex-i.

BR3 CTF tables of Malta. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-reports-annex-i-parties/third-biennial-reports-annex-i.

"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". Annex to decision 24/CP.19. Available at http://unfccc.int/resource/docs/2013/cop19/eng/10a03.pdf.

"Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications". FCCC/CP/1999/7. Available at http://unfccc.int/resource/docs/cop5/07.pdf.

"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". Annex to decision 13/CP.20. Available at http://unfccc.int/resource/docs/2014/cop20/eng/10a03.pdf.

NC7 of Malta. Available at https://unfccc.int/process-and-meetings/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-reports-annex-i-parties/seventh-national-communications-annex-i.

Report of the technical review of the second biennial report of Malta. FCCC/TRR.2/MLT. Available at https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/national-communications-and-biennial-reports--annex-i-parties/international-assessment-and-review/review-reports.

"UNFCCC biennial reporting guidelines for developed country Parties". Annex I to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

B. Additional information provided by the Party

Responses to questions during the review were received from Mr. Saviour Vassallo (Malta Resources Authority), including additional material. The following documents[1] were provided by Malta:

Climate Change Unit. 2018. *Operations & Quality Manual*. Marsa: Malta Resource Authority.

[1] Reproduced as received from the Party.

European Environment Agency. 2018. *EEA database on climate change mitigation policies and measures in Europe – Malta*. Available at http://pam.apps.eea.europa.eu.

European Environment Agency. 2017. *Trends and projections in Europe 2017. Tracking progress towards Europe's climate and energy targets*. Luxembourg Publications Office of the European Union, 2017. ISBN 978-92-9213-923-0. Available at https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2017.

European Environment Agency. 2016. *Trends and projections in Europe 2016 - Tracking progress towards Europe's climate and energy targets. Chapter 3 Progress towards Member States' greenhouse gas emission targets*. Luxembourg Publications Office of the European Union, 2016. ISBN 978-92-9213-827-1. Available at https://www.eea.europa.eu/publications/trends-and-projections-in-europe.

Government Gazette. Available at https://gov.mt/en/Government/Government%20Gazette/Pages/Government%20Gazette.aspx.

Minimisation of Adverse Impacts in Accordance with Article 3, Paragraph 14 of the Kyoto Protocol.

National Statistics Office. 2017. *Electricity statistics for the years 2013 to 2016.* News Release 163/2017: Electricity Generation: 2007-2016.

Public access site to all Maltese legislation. Available at: http://www.justiceservices.gov.mt.

Qoul, C., Caruana, P. 2017. *Malta's Report on Policies and Measures and Projections, Report 2/2017. Report submitted to the EU according to Articles 13.1 and 14.1 of Regulation (EU) No 525/2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at national and Union level relevant to climate change and repealing Decision No 280/2004/EC.* Available at http://cdr.eionet.europa.eu/mt/eu/mmr/art04-13-14_lcds_pams_projections/colwkw8yg/envwkq0hw/MMR_Article_13_1__PAMs_report_MT_2017_Final__3_.pdf/manage_document.

Trend in total CO_2 emissions from local electricity generation plants compared to indigenous electricity generation.