

# Initial Report of Malta Under the Kyoto Protocol 2016

**REPORT TO FACILITATE THE CALCULATION OF THE ASSIGNED AMOUNT  
PURSUANT TO ARTICLE 3, PARAGRAPHS 7BIS, 8 AND 8BIS OF THE KYOTO  
PROTOCOL FOR THE SECOND COMMITMENT PERIOD 2013-2020**

*Report prepared by the Malta Resources Authority on behalf of the Ministry for Sustainable  
Development, the Environment and Climate Change*

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## 1. Introductory statement

Decision 2/CMP.8<sup>1</sup> of the Conference of the Parties to the UNFCCC serving as the meeting of the Parties to the Kyoto Protocol states that a Party with “a quantified emission limitation and reduction commitment inscribed in the third column of Annex B to the Kyoto Protocol, as contained in annex I to decision 1/CMP.8, shall submit to the secretariat, by 15 April 2015, a report to facilitate the calculation of its assigned amount pursuant to Article 3, paragraphs 7bis, 8 and 8bis, of the Kyoto Protocol for the second commitment period and to demonstrate its capacity to account for its emissions and assigned amount.”

In addition, this report also reflects the additional guidance contained in Decision 3/CMP.11 and Decision 4/CMP.11. These decisions contain relevant provisions related to reporting, accounting, review and adjustments for the second commitment period under the Kyoto Protocol.

This Report constitutes Malta’s report to facilitate the calculation of its assigned amount for the period 2013-2020 (2<sup>nd</sup> Commitment Period of the Kyoto Protocol).

## 2. Complete inventory for all years

Table 1 gives an overview of total gross (without LULUCF) and net (with LULUCF) national greenhouse gas emissions and emissions disaggregated by gas. The change in total emissions between base year and the latest reported year (2014) for the without-LULUCF estimates represents an increase of 48.94%, while for the with-LULUCF estimates this represents an increase of 48.99%. Carbon dioxide (CO<sub>2</sub>) maintains its standing as the gas with the highest share of total national emissions, followed by hydrofluorocarbons (HFCs) and methane (CH<sub>4</sub>).

**Table 1: Greenhouse gas emissions, by gas and total gross (without LULUCF) and net (with LULUCF), for the period 1990 to 2014**

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Gg CO <sub>2</sub> equivalent												
CO <sub>2</sub> (without LULUCF)	1860.47	2313.22	2414.28	2736.31	2776.31	2831.64	2822.41	2684.52	2690.52	2785.90	2868.64	2476.07	2483.54
CO <sub>2</sub> (with LULUCF)	1857.90	2310.57	2411.64	2733.63	2773.59	2828.88	2819.61	2681.73	2687.69	2783.03	2865.73	2473.21	2480.71
CH <sub>4</sub>	78.28	112.68	130.42	149.10	161.80	173.26	174.40	185.94	196.62	185.96	186.65	188.68	196.51
N <sub>2</sub> O	61.49	73.35	75.92	71.07	72.50	74.76	72.02	69.23	65.48	67.51	67.83	68.20	68.23
HFCs	NO,NA,NE,IE	0.00	3.72	41.12	78.49	95.58	111.71	132.77	144.50	167.74	200.93	218.33	233.78
PFCs	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SF <sub>6</sub>	0.01	1.44	1.47	1.56	1.57	1.58	1.75	1.50	1.69	4.59	0.45	2.68	0.58
NF <sub>3</sub>	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO	NA,NO
<b>Total (without LULUCF)</b>	<b>2000.25</b>	<b>2500.69</b>	<b>2625.81</b>	<b>2999.16</b>	<b>3090.68</b>	<b>3176.83</b>	<b>3182.28</b>	<b>3073.96</b>	<b>3098.81</b>	<b>3211.71</b>	<b>3324.50</b>	<b>2953.96</b>	<b>2982.64</b>
<b>Total (with LULUCF)</b>	<b>1997.68</b>	<b>2498.04</b>	<b>2623.16</b>	<b>2996.48</b>	<b>3087.96</b>	<b>3174.07</b>	<b>3179.49</b>	<b>3071.17</b>	<b>3095.98</b>	<b>3208.84</b>	<b>3321.59</b>	<b>2951.09</b>	<b>2979.81</b>

<sup>1</sup> Decision 2/CMP.8 Implications of the implementation of decisions 2/CMP.7 to 5/CMP.7 on the previous decisions on methodological issues related to the Kyoto Protocol, including those relating to Articles 5, 7 and 8 of the Kyoto Protocol; Document FCCC/KP/CMP/2012/13/Add.1; UNFCCC, 2013.

Table 2 presents an overview of emission and removal trends by sector. Sector Energy, which includes, among others, energy industries and road transport, remains the sector with the highest contribution to national total emissions. The sector Industrial Processes and Product Use has the second highest contribution, in recent years surpassing other sectors such as Agriculture and Waste. The increase in emissions of the sector Industrial Processes and Product Use is due primarily to the increase in emissions of HFCs.

**Table 2: Emissions of greenhouse gases by sector for the period 1990 to 2014**

	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Gg CO <sub>2</sub> equivalent												
<b>Energy</b>	1868.32	2323.51	2426.96	2750.67	2790.06	2846.84	2837.46	2698.47	2702.15	2801.04	2884.83	2491.15	2498.86
<b>Industrial Processes and product use</b>	7.49	8.94	11.85	48.27	86.15	103.05	119.02	139.60	150.79	177.32	206.34	225.54	238.67
<b>Agriculture</b>	82.01	108.00	112.26	102.90	104.08	108.21	101.83	98.21	94.89	88.65	87.55	90.11	88.86
<b>LULUCF</b>	-2.57	-2.65	-2.65	-2.68	-2.72	-2.76	-2.79	-2.79	-2.83	-2.87	-2.90	-2.87	-2.83
<b>Waste</b>	42.44	60.24	74.74	97.33	110.40	118.73	123.97	137.68	150.98	144.69	145.78	147.16	156.25
<b>Other</b>	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
<b>Total (with LULUCF)</b>	1997.68	2498.04	2623.16	2996.48	3087.96	3174.07	3179.49	3071.17	3095.98	3208.84	3321.59	2951.09	2979.81

### 3. Identification of base year for Fluorinated Gases

Malta has selected 1990 as the base year for all the fluorinated gases, except for nitrous trifluoride (NF<sub>3</sub>) in accordance with Article 3, paragraph 8 of the Kyoto Protocol. The base year applicable for NF<sub>3</sub> shall be 1995 in accordance with Article 3, paragraph 8bis of the Protocol.

### 4. Agreement under Article 4 of the Kyoto Protocol

The Kyoto Protocol, under Article 4, provides the option for Parties to fulfil their commitments under Article 3 jointly, acting in the framework of and together with a regional economic integration organization.

The targets for the European Union, its Member States and Iceland are inscribed in the Doha Amendment with a footnote stating that those targets are based on the understanding that they will be fulfilled jointly, in accordance with Article 4 of the Kyoto Protocol. The European Union, its Member States and Iceland also issued a joint statement upon the adoption of the Doha Amendment on 8 December 2012, expressing their intention to jointly fulfil their commitments for the second commitment period. The statement was agreed during an *ad hoc* meeting of EU Ministers in Doha and endorsed by the European Council on 17 December 2012.

Council Decision (EU) 2015/146<sup>2</sup> authorized the signing on behalf of the European Union of an agreement between the European Union and its Member States, and Iceland, concerning Iceland's

<sup>2</sup> Council Decision (EU) 2015/146 of 26 January 2015 on the signing, on behalf of the European Union, of the agreement between the European Union and its Member States, of the one part, and Iceland, of the other part,

participation in the joint fulfilment of commitments for the second commitment period of the Kyoto Protocol, subject to the conclusion of such an agreement. This agreement was eventually ratified on behalf of the European Union through Council Decision (EU) 2015/1340<sup>3</sup>.

## 5. The calculation of the assigned amount

The quantified emission limitation and reduction commitments for the Member States of the European Union listed in the third column of Annex B to the Doha Amendment to the Kyoto Protocol are 80%. The joint assigned amount of the Member States for the second commitment period will be determined pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis of the Kyoto Protocol, and its calculation will be facilitated by the report submitted by the European Union pursuant to paragraph 2 of Decision 2/CMP.8. Malta's assigned amount is determined as part of the European Union's joint fulfilment agreement and is based on Global Warming Potential (GWP) figures as set out in the 4<sup>th</sup> Assessment Report of the Intergovernmental Panel on Climate Change.

The assigned amounts of the Member States shall be equal to their respective emission levels.

The assigned amount as determined for Malta in accordance with Annex 2, Table 1 of the agreement concerning emission levels of the Member States and Iceland (before application of Article 3, paragraph 7bis) is presented in Table 3.

The method of calculation of the assigned amount pursuant to Article 3, paragraphs 7 bis, 8 and 8 bis is applied only to the calculation of the joint assigned amount. It does not apply to the calculation of the individual assigned amounts, which are instead determined pursuant to the joint fulfilment agreement.

**Table 3 Determination of Malta's assigned amount for the period 2013-2020.**

<b>Years accounted for by the assigned amount</b>	<b>Assigned amount<sup>4</sup></b>
<b>2013 - 2020</b>	<b>9,299,769 tonnes CO<sub>2</sub> equivalent</b>

The assigned amount presented in Table 3 accounts for emissions related to the non-Emissions Trading Scheme (non-ETS) sectors (i.e. emissions not covered by the EU's Emissions Trading Scheme as established by Directive 2003/87/EC<sup>5</sup>).

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concerning Iceland's participation in the joint fulfilment of commitments of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

<sup>3</sup> Council Decision (EU) 2015/1340 of 13 July 2015 on the conclusion, on behalf of the European Union, of the Agreement between the European Union and its Member States, of the one part, and Iceland, of the other part, concerning Iceland's participation in the joint fulfilment of commitments of the European Union, its Member States and Iceland for the second commitment period of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

<sup>4</sup> As inscribed in Council Decision (EU) 2015/1339 of 13 July 2015 on the conclusion, on behalf of the European Union, of the Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder.

Emissions falling within the scope of the EU Emissions Trading Scheme (EU ETS) are covered in the European Union's calculation of assigned amount as described in the joint fulfilment agreement.

## 6. Difference between the assigned amount for the second commitment period and the average emissions for the first three years of the preceding commitment period

The application of provisions in Article 3, paragraphs 7bis and 7ter of the Kyoto Protocol does not result in any alteration of the calculated assigned amount.

## 7. Application of paragraphs 23 – 26 of decision 1/CMP.8

According to Decision 1/CMP.8, paragraph 23, each Party included in Annex I with a commitment inscribed in the third column of Annex B as contained in annex I to this decision shall establish a previous period surplus reserve (PPSR) account in its national registry. Based on this provision, the European Union, each Member State and Iceland will establish PPSR accounts in their respective registries.

### 7.1. The calculation of the commitment period reserve (CPR)

Paragraphs 6 to 10 of the Annex to Decision 11/CMP.1<sup>6</sup> and paragraph 18 of Decision 1/CMP.8<sup>7</sup> require Parties included in Annex B to the Kyoto Protocol to maintain, in their respective national registries, a commitment period reserve (CPR) which should decrease to a level below either (i) 90 per cent of the Party's assigned amount calculated pursuant to Article 3, paragraphs 7bis and 8bis of the Kyoto Protocol, or (ii) eight times its most recently reviewed inventory, whichever is the lowest.

### 7.2. Comparing the two methodologies for calculating the CPR for Malta:

(i) 90% of the assigned amount as determined in Table 3 above:

$$CPR = 0.9 * 9,299,769 = 8,369,793 \text{ tCO}_2 \text{ eq};$$

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<sup>5</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

<sup>6</sup> Decision 11/CMP.1 Modalities, rules and guidelines for emissions trading under Article 17 of the Kyoto Protocol; Document FCCC/KP/CMP/2005/8/Add.2.; UNFCCC, 2006.

<sup>7</sup> Decision 1/CMP.8 Amendment to the Kyoto Protocol pursuant to its Article 3, paragraph 9 (the Doha Amendment); Document FCCC/KP/CMP/2012/13/Add.1.; UNFCCC, 2013.

- (ii) eight times the most recently reviewed inventory<sup>8,9</sup> for emissions in the relevant sectors<sup>10</sup>:

$$CPR = 8 * 1,315,663 = 10,525,304 \text{ tCO}_2\text{eq};$$

The commitment period reserve for Malta is thus established at 8,369,793 tCO<sub>2</sub>eq, being the lowest value obtained when calculating the reserve using the two methods described above.

## 8. Identification of single minimum values for tree crown cover, land areas and tree height for use in accounting under Article 3(3) and Article 3(4) of the Kyoto Protocol

For the purposes of accounting of emissions and removals under Article 3(3) and Article 3(4) of the Kyoto Protocol, Malta has identified the minimum values for the three relevant parameters as presented in Table 4.

Table 4: Minimum values for parameters to be used in the estimation of emissions and removals under Article 3, paragraph 3 and Article 3, paragraph 4 of the Kyoto Protocol.

Parameter	Minimum value
Tree crown cover	30%
Land area	1 hectare
Tree height	5 metres

The identified values correspond to the highest possible minimum values for these parameters as provided for in the UNFCCC definition<sup>11</sup> of 'forests'.

<sup>8</sup> 'Most recently reviewed inventory' is interpreted as referring to 2014 emissions as estimated in the Malta's May 2016 submission of its national GHG inventory.

<sup>9</sup> Data from the May 2016 submission of Malta's national greenhouse gas inventory is used for this calculation, with conversion to CO<sub>2</sub> equivalents using global warming potentials as set out in the 4<sup>th</sup> Assessment Report of the IPCC.

<sup>10</sup> The value for annual emissions used in this calculation only takes into account emissions covered by the current scope of Decision No 406/2009/EC of the European Parliament and of the Council of 23 April 2009 on the effort of Member States to reduce their greenhouse gas emissions to meet the Community's greenhouse gas emission reduction commitments up to 2020.

<sup>11</sup> Draft decision -/CMP.1 (Land Use, Land-use Change and Forestry), Annex: Definitions, modalities, rules and guidelines relating to land use, land-use change and forestry activities under the Kyoto Protocol; Document FCCC/CP/2001/13/Add.1.; UNFCCC, 2001. The term 'Forest' is defined as "a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 meters at maturity in situ".

## 9. Identification of the election of activities under Article 3(4) for inclusion in the accounting for the 2nd Commitment Period

Malta confirms 'Forest Management' as the only activity under Article 3, paragraph 4 of the Kyoto Protocol for the inclusion in the accounting for the 2<sup>nd</sup> Commitment Period of the Kyoto Protocol.

## 10. Identification of the frequency of accounting for each activity

Malta intends to account for the activities under Articles 3, paragraphs 3 and 4 of the Kyoto Protocol at the end of the 2<sup>nd</sup> Commitment Period of the Kyoto Protocol.

## 11. The forest management reference level

The European Union report '*Submission of information on forest management reference levels by the European Union as requested by Decision 2/CMP.6: The Cancún Agreements: Land use, land-use change and forestry*', published in 2011 defined the FMRL value for Malta at -0.049 Mt CO<sub>2</sub> equivalent/year, indicating that this was derived through extrapolation of historic data on greenhouse removals related to forest management.

Since the national greenhouse gas inventory submission of 2011, Malta has changed the methodology for estimating emissions and removals for the sector LULUCF. Until that time the category '*Forestland remaining forestland*' was taken to include coniferous forest, mixed forest and shrubland (*maquis*).

Malta has now a national definition which states that *a forest is defined as area minimum of 1 hectare with a tree crown cover more than 30% and minimum height of 5 meters*. This has resulted in shrubland no longer being considered as part of the category 'Forestland', but is now classified as part of the category 'Grassland'.

In view of this, Malta requires a correction of the Forest Management Reference Level (FMRL) currently inscribed under the Kyoto Protocol.

This methodological change means that from a sink of -49Gg CO<sub>2</sub> equivalent originally reported using the previous methodology (and reflected in the European Union report referred to above), the net removal for the category '*Forestland remaining forestland*' has now been reduced to -1.2Gg CO<sub>2</sub> equivalent. This means that if a FMRL value of -49Gg CO<sub>2</sub> equivalent continues to apply for Malta, Malta always starts with a deficit of 47.8Gg CO<sub>2</sub> equivalent when accounting for national emissions under the Kyoto Protocol. In such a case Malta would have to surrender an extra amount of Assigned Amount Units equivalent to the deficit in addition to the amount of units required to account for actual emissions.

## **12. Information on how emissions from harvested wood products have been calculated**

Malta does not produce any harvested wood products; therefore, this category is determined as not occurring in Malta.

## **13. Information regarding provisions to exclude emissions from natural disturbances**

Malta will exclude emissions from natural disturbances.

## **14. A description of the national greenhouse gas inventory system**

The overall responsibility for the national greenhouse gas inventory is vested in the Single National Entity being the Ministry responsible for climate change policy, the Ministry for Sustainable Development, Environment and Climate Change (MSDEC) as designated by national law<sup>12</sup>.

The Malta Resources Authority (MRA), through the Climate Change Unit, is the National Inventory Agency<sup>13</sup> and mainly responsible for the planning, preparation and management of the national GHG inventory. The Climate Change Unit performs those functions related to the preparation of the annual greenhouse gas inventory, including the gathering of data from the relevant data providers, estimating sectoral emissions or removals of greenhouse gases, drafting of the national inventory report (NIR), inputting of data into the CRF Reporter software and final submission to the European Commission, the European Environment Agency and the UNFCCC Secretariat.

## **15. A description of the national registry**

Malta is currently in discussions with the European Commission to set up its Kyoto Protocol registry within the Union Registry infrastructure. Preparations relating to national administration of the Kyoto Protocol registry and the fulfilment of other relevant requirements are also ongoing.

The registry infrastructure is expected to be in place and ready for initialisation and connection to the International Transaction Log (ITL) by the end of 2016 subject to the necessary technical arrangements being completed accordingly.

The National Administrator designated for the EU ETS registry is expected to be appointed as the National Administrator for the Kyoto Protocol registry.

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<sup>12</sup> Legal Notice 259 of 2015, National System for the Estimation of anthropogenic Greenhouse Gas Emissions by Sources and Removals by Sinks Regulations, 2015.

<sup>13</sup> Inventory Agency in accordance with L.N. 259 of 2015 CLIMATE ACTION ACT (CAP. 543) National System for the Estimation of Anthropogenic Greenhouse Gas Emissions by Sources and Removals by Sinks Regulations, 2015, and Government Notice No. 1036 dated 27/10/2015