The First Biennial Report of Malta

annex to the National Communication (3rd, 4th, 5th and 6th) of Malta under the UNFCCC

The Malta Resources Authority on behalf of the Ministry for Sustainable Development, Environment and Climate Change

The First Biennial Report of Malta under the United Nations Framework Convention on Climate Change

March 2014

I. Introduction

At the 16th Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) held in Cancun, Mexico, in 2010, it was decided that "Developed countries should submit [...] biennial reports on their progress in achieving emission reductions, including information on mitigation actions to achieve their quantified economy-wide emission targets and emission reductions achieved, projected emissions and the provision of financial, technology and capacity-building support to developing country Parties"¹.

At the subsequent Conference of the Parties held in Durban, South Africa, in 2011, a decision was taken for Annex I Parties to submit these biennial reports prepared in accordance with guidelines established under Decision 2/CP.17².

This is Malta's First Biennial Report, and is submitted as an annex to the 3rd, 4th, 5th and 6th National Communication of Malta, 2014. To this effect the discussion of relevant elements covered by this report is not presented in detail, and where applicable, reference is made to sections in the National Communication which provide a deeper understanding of the information presented here

The Biennial Report is accompanied by data and information submitted electronically in Common Tabular Format (CTF). Relevant tables submitted thus are reproduced in this report.

¹ Decision 1/CP.16 'The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention', FCCC/CP/2010/7/Add.1.

² Decision 2/CP.17 'Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention', FCCC/CP/2011/9/Add.1.

II. Greenhouse Gas Emissions and Trends

Refer to Chapter 2 of the National Communication, 2014, for more detailed information.

The estimation of emissions by sources and removals by sinks of greenhouse gases (GHG) contained in Malta's inventory submission covers the following greenhouse gases:

- Carbon dioxide (CO₂);
- Methane (CH₄);
- Nitrous Oxide (N2O);
- Hydro fluorocarbons (HFCs);
- Per fluorocarbons (PFCs); and,
- Sulphur Hexafluoride (SF₆).

The sectors for which estimation of emissions or removals is carried out are:

- Energy;
- Industrial Processes;
- Solvents and Other Products Use;
- Agriculture;
- Land Use, Land-Use Change and Forestry (LULUCF); and,
- Waste.

This Biennial Report submission includes data on emissions and removals for the period from 1990 to 2011, as provided in Malta's submission of its national GHG Inventory under the UNFCCC in 2013³.

Figure II-1 presents the trend in national emissions as split by gas, while Figure II-2 shows emission and removal trends split by sector. Figure II-1 shows that CO_2 is the greenhouse gas that accounts for the absolute majority of national emissions in Malta, in 2011 amounting to 87.9% of total national greenhouse gas emissions (in terms of CO_2 equivalent). CH_4 and HFCs respectively have the second and third highest share of total emissions, followed by N_2O . The sector Energy is responsible for the highest share of emissions (Figure II-2) among all sectors covered by Malta's inventory, with a share of 89% of gross (i.e. excluding removals of CO_2 by the sector LULUCF) total national greenhouse gas emissions in 2011. This sector includes, among others, source categories Energy Industries and Road Transport, themselves the first and second highest contributing source categories to total national greenhouse gas emissions.

CTF tables reproduced in this section:

Table 1 Emissions Trends: Summary;

Table 1 (a) Emissions Trends (CO₂);

Table 1 (b) Emission Trends (CH₄);

Table 1 (c) Emissions Trends (N₂O);

Table 1 (d) Emissions Trends (HFCs, PFCs and SF₆).

³ National Greenhouse Gas Emissions Inventory for Malta 2013, Malta Resources Authority, 2013.

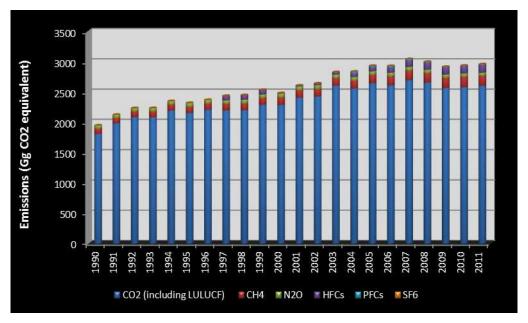


Figure II-1 Trends in national greenhouse gas emissions, by gas.

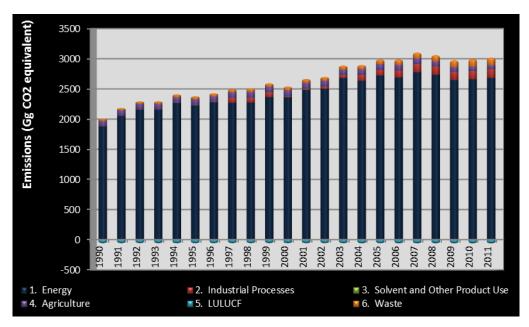


Figure II-2 Trends in national greenhouse gas emissions and removals, by sector.

(Sheet 1 of 3)

Table 1
Emission trends: summary (1)

	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS EMISSIONS	kt CO 2 eq	kt CO 2 eq	kt CO ₂ eq	kt CO ₂ eq	kt CO₂ eq	kt CO₂ eq	kt CO2 eq	kt CO₂ eq	kt CO2 eq
CO ₂ emissions including net CO ₂ from LULUCF	1,808.97	1,984.46	2,088.92	2,084.87	2,196.32	2,156.49	2,208.66	2,198.73	2,202.09
CO ₂ emissions excluding net CO ₂ from LULUCF	1,865.50	2,041.00	2,145.45	2,141.41	2,252.86	2,213.03	2,265.20	2,255.27	2,258.63
CH ₄ emissions including CH ₄ from LULUCF	91.11	91.36	94.38	98.11	100.87	104.70	106.97	110.40	112.16
CH ₄ emissions excluding CH ₄ from LULUCF	91.11	91.36	94.38	98.11	100.87	104.70	106.97	110.40	112.16
N ₂ O emissions including N ₂ O from LULUCF	49.94	50.42	51.66	52.83	54.28	59.15	54.94	55.41	61.21
N ₂ O emissions excluding N ₂ O from LULUCF	49.94	50.42	51.66	52.83	54.28	59.15	54.94	55.41	61.21
HFCs	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	73.87	73.87
PFCs	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
SF ₆	0.01	0.01	1.50	1.50	1.50	1.51	1.52	1.52	1.54
Total (including LULUCF)	1,950.02	2,126.25	2,236.45	2,237.32	2,352.98	2,321.85	2,372.09	2,439.93	2,450.86
Total (excluding LULUCF)	2,006.56	2,182.79	2,292.99	2,293.85	2,409.52	2,378.38	2,428.63	2,496.47	2,507.40

CREENTIALISE CAS SOURCE AND SDIVE CATEGORIES	Base year ^a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO 2 eq kt	kt CO 2 eq	kt CO2 eq						
1. Energy	1,878.10	2,054.36	2,159.82	2,156.12	2,267.74	2,226.04	2,278.68	2,268.69	2,272.74
2. Industrial Processes	0.33	0.53	1.65	1.69	1.99	3.21	3.04	77.11	76.54
3. Solvent and Other Product Use	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48	2.48
4. Agriculture	87.81	85.53	86.96	87.53	86.80	93.83	90.93	92.85	95.39
5. Land Use, Land-Use Change and Forestry ^b	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54
6. Waste	37.84	39.88	42.08	46.04	50.51	52.81	53.49	55.34	60.25
7. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)	1,950.02	2,126.25	2,236.45	2,237.32	2,352.98	2,321.85	2,372.09	2,439.93	2,450.86

¹ The common tabular format will be revised, in accordance with relevant decisions of the Conference of the Parties and, where applicable, with decisions of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol."

Table 1 Emission trends: summary ⁽³⁾ (Sheet 2 of 3)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS EMISSIONS	kt CO 2 eq	kt CO 2 eq	kt CO ₂ eq							
CO ₂ emissions including net CO ₂ from LULUCF	2,292.18	2,289.28	2,408.93	2,428.89	2,606.68	2,560.42	2,646.95	2,612.14	2,698.03	2,656.76
CO ₂ emissions excluding net CO ₂ from LULUCF	2,348.08	2,345.19	2,464.84	2,484.80	2,663.68	2,618.59	2,704.03	2,671.01	2,756.89	2,715.63
CH ₄ emissions including CH ₄ from LULUCF	113.79	125.00	125.50	126.91	126.78	132.84	139.88	148.73	158.78	157.99
CH ₄ emissions excluding CH ₄ from LULUCF	113.79	125.00	125.50	126.91	126.78	132.84	139.88	148.73	158.78	157.99
N ₂ O emissions including N ₂ O from LULUCF	56.48	61.00	58.68	58.19	55.46	56.48	58.51	59.89	59.26	55.73
N ₂ O emissions excluding N ₂ O from LULUCF	56.48	61.00	58.68	58.19	55.46	56.48	58.51	59,89	59.26	55.77
HFCs	73.87	8.29	15.33	28.70	40.06	60.42	64.51	87.50	106.15	116.73
PFCs	NA, NE, NO	0.00	0.00	0.00	0.00	27.90	23.39	23.27	22.81	12.93
SF ₆	1.54	1.54	1.56	1.57	2.16	1.62	1.64	1.65	1.66	1.83
Total (including LULUCF)	2,537.86	2,485.12	2,610.00	2,644.26	2,831.14	2,839.68	2,934.88	2,933.18	3,046.69	3,001.96
Total (excluding LULUCF)	2,593.76	2,541.03	2,665.91	2,700.17	2,888.14	2,897.85	2,991.95	2,992.04	3,105.56	3,060.82

CAPPANIALISE CAS CONTROL AND COME CAPPACABLES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt CO 2 eq kt	kt CO 2 eq	kt CO ₂ eq							
1. Energy	2,363.35	2,360.56	2,480.70	2,500.77	2,680.35	2,634.63	2,722.43	2,689.09	2,775.93	2,734.83
2. Industrial Processes	75.80	10.11	17.27	30.61	42.43	90.34	89.92	112.80	130.90	131.66
3. Solvent and Other Product Use	2.72	3.01	2.33	2.56	2.38	2.37	2.26	2.03	2.71	2.10
4. Agriculture	91.27	102.95	98.77	97.94	91.10	95.65	93.58	93.36	95.23	86.45
5. Land Use, Land-Use Change and Forestry ^b	-55.91	-55.91	-55.91	-55.91	-57.00	-58.17	-57.08	-58.87	-58.86	-58.86
6. Waste	60.62	64.40	66.84	68.29	71.88	74.86	83.76	94.76	100.78	105.77
7. Other	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total (including LULUCF)	2,537.86	2,485.12	2,610.00	2,644.26	2,831.14	2,839.68	2,934.88	2,933.18	3,046.69	3,001.96

Note: All footnotes for this table are given on sheet 3.

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MLT_BR1_v0.1

Table 1 MLT_BR1_v0.1 Emission trends: summary (1) (Sheet 3 of 3)

GREENHOUSE GAS EMISSIONS	2009	2010	2011	Change from base to latest reported year
	It CO 2 eq	kt CO 2 eq	àt CO ₃ eq	(49)
CO ₂ emissions including net CO ₂ from LULUCF	2,569.60	2,580.95	2,603.42	43.92
CO ₂ emissions excluding net CO ₂ from LULUCF	2,628.48	2,640.62	2,663.09	42.75
CH4 emissions including CH4 from LULUCF	167.21	175.38	167.36	83.69
CH4 emissions excluding CH4 from LULUCF	167.21	175.38	167.36	83.69
N ₂ O emissions including N ₂ O from LULUCF	54.35	51.90	50.42	0.97
N ₂ O emissions excluding N ₂ O from LULUCF	54.35	51.90	50.42	0.97
HFC5	120.34	121.61	132.18	100.00
PFCs	7.02	6.63	3.34	100.00
SF ₆	1.57	1.78	4.81	43,055.17
Total (including LULUCF)	2,920.09	2,938.24	2,961.52	51.87
Total (excluding LULUCF)	2,978.96	2,997,92	3,021.19	50.57
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	ht CO 3 eq	kt CO 2 eq	kt CO2 eq	(%)
1. Energy	2,647.29	2,659.62	2,681.65	42.79
2. Industrial Processes	129.17	130.24	140.57	42,747.85
3. Solvent and Other Product Use	1.60	1.29	1.31	-47.30
4. Agriculture	83.26	78.04	70.90	-19.26
5. Land Use, Land-Use Change and Forestry	-58.87	-59.67	-59.67	5.55
6. Waste	117.64	128.73	126.76	234.98
20200				
7. Other	NA.	NA	NA	0.00

Notes

- (2) 2011 is the latest reported inventory year.
- (3) 1 kt CO2 eq equals 1 Gg CO2 eq.

Abbreviation: LULUCF = land use, land-use change and forestry.

⁽¹⁾ Further detailed information could be found in the common reporting format tables of the Party's greenhouse gas inventory, namely "Emission trends (CO₂)", "Emission trends (CH₀)", "Emission trends (N₂O)" and "Emission trends (HFCs, PFCs and SF₀)", which is included in an annex to this biennial report.

The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

b Includes net CO₂, CH₄ and N₂O from LULUCF.

Table 1 (a)
Emission trends (CO₂)
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Have year*	1991	1992	1993	1994	1995	1996	1997	1998
	la .	kt	let	kt	kt	kt	le	le .	kt
1. Energy	1,864.82	2,040.11	2,144.93			2,210.95	2,263.31	2,253.15	2,257.16
A. Fuel Combustion (Sectoral Approach)	1,564.52	2,040.11	2,144.93	2,140.53		2,210.95	2,263.31	2,253.18	2,257.16
1. Energy Industries	1,367.03	1,511.60	1,596.46	1,571.82	1,668.76	1,605.78	1,633.08	1,625.27	1,639.82
2. Manufacturing Industries and Construction	39.27	62.42	58.97	58.16	57.44	39.96	62,46	37.32	41.26
3. Transport	342.39	362.37	386.68	407.63	424.41	437.41	460.04	471.30	478.59
4. Orber Sectors	96.13	103.71	102.81	103.24	101.39	107.79	107.72	99.28	97.49
5. Other	NA.	NA	NA	NA	NA	NA	NA	NA	NA.
B. Fugitive Emissions from Fuels	NA, NE, NO	NA. NE, NO	NA NE NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA NE NO	NA NE NO	NA. NE. NO
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA. NO	NA, NO	NA, NO
2. Oil and Natural Ges	NA, NE, NO	NA NE NO	NA NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA NE NO	NA NE NO
2. Industrial Processes	0.32	0.52	0.15	0.19	0.49	1.71	1.52	1.72	1.13
A. Masseal Products	0.18	0.25	0.02	0.03	0.30	1.51	1.41	1.54	0.97
B. Chamical Industry	0.14	0.27	0.13	0.17	0.19	0.20	0.11	0.18	0.16
C. Metal Production	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
D. Other Production	NA.	NA	NA.	NA.	NA.	NA	NA	NA	N.A
E. Production of Halocarbons and SF6									
F. Communition of Halocarbons and SF6									
G. Other	NA.	NA.	NA.	NA	NA.	NA.	. NA	NA	N.A
3. Solvens and Other Product Use	NA.	NA	NA	NA	NA	NA	NA	MA	N.A
4. Agriculture									
A. Entwic Fermentation									
B. Manure Management									
C. Rice Cultivation									
D. Agricultural Soils									
E. Prescribed Burning of Savannas									
F. Field Burning of Agricultural Residues									
G. Other									
5. Land Use, Land-Use Change and Forestry	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54	-56.54
A. Forest Land	-48.68	-48.68	-48.68	-48.68		-48.68	-48.68	48.68	-48.68
B. Cropland	-7.86	-7.56	-7.86	-7.55	-7.56	-7.56	-7.56	-7.86	-7.86
C. Granisad	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO.	NO	NO	340	340	NO	3/0	NO	NO
E. Settlement	NE, NO	NE. NO	NE. NO	NE. NO	NE. NO	NE. NO	NE. NO	NE. NO	NE. NO
F. Other Land	NO	NO	NO		300	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Watte	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.35
A. Solid Waste Disposal on Land	NA.	NA	NA.		1.00	NA	NA	NA	N.A
B. Waste-water Handling		1.7.83						5/27)	
C. Waste Incinerating	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.35
D. Other	NO.	NO	NO	NA.		NA	NA	NA	N.A
7. Other (as specified in the summary (able in CRP)	NA.	NA				NA	NA	NA	NA.
Total CO2 emissions including net CO2 from LULUCF	1.505.97	1.984.46			2,196.32	2,156.49	2,200,66	2.198.73	2.202.09
Total CO2 emission: excluding net CO2 from LULUCF	1,863.30	2,041.00	1 7422277	7407070	2,252.96	2,213.03	2,261.20	2,215.27	2,259.63
Memo Items:	2,000.00		794 71537	797.707.8		4,510.00			
International Bunkers	469.06	497.33	675.40	\$25.60	790.09	\$24.10	1,037.53	1,271.22	957,52
Aviation	209.46	201.51	250.15			342.31	343.68	360.93	346.43
Marine	259.59	295.82				481.79	691.83	910.27	611.09
Multilateral Operations	NA.	NA.				NA.	NA	NA.	NA NA
CO2 Emissions from Biomass	575						IE. NA. NE.		
CV: Lancium nell Diolisis	NO.	NO NO				NO NO	NO NO	NO NO	NO.

Table 1 (a)
Emission trends (CO₂)
(Sheet 2 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kr	kt	kı	kt	kt	kt	kı	kı	kt	kı
l. Energy	2,347.35	-,	-,	-,	2,663.13	2,617.87	2,703.33	2,670.31	-,	2,715.10
A. Fuel Combustion (Sectoral Approach)	2,347.35	2,344.56	-,	_,	2,663.13	2,617.87	2,703.33	2,670.31		2,715.10
1. Energy Industries	1,703.09	1,687.84	1,808.38	1,824.44	2,000.37	1,951.16	1,989.43	2,004.19	2,046.35	2,003.35
2. Manufacturing Industries and Construction	54.48	57.34	49.24		48.01	59.12	50.92		51.31	47.59
3. Transport	487.32					500.64	554.42			547.72
4. Other Sectors	102.46	105.32	88.77	90.72	91.09	106.95	108.57	99.86	109.02	116.45
5. Other	NA NA	NA				NA	NA			NA
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
1. Solid Fuels	NA, NO	NA, NO	NA, NO			NA, NO				
2. Oil and Natural Gas	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
2. Industrial Processes	0.39	0.29	0.38		0.21	0.40	0.38		0.28	0.17
A. Mineral Products	0.28	0.22	0.21	0.20	0.14	0.28	0.17	0.31	0.20	0.12
B. Chemical Industry	0.11	0.07	0.16	0.14	0.08	0.13	0.21	0.08	0.08	0.05
C. Metal Production	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
D. Other Production	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E. Production of Halocarbons and SF6										
F. Consumption of Halocarbons and SF6										
G. Other	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
4. Agriculture										
A. Enteric Fermentation										
B. Manure Management										
C. Rice Cultivation										
D. Agricultural Soils										
E. Prescribed Burning of Savannas										
F. Field Burning of Agricultural Residues										
G. Other										
5. Land Use, Land-Use Change and Forestry	-55.91	-55.91	-55.91	-55.91	-57.00	-58.17	-57.08	-58.87	-58.86	-58.86
A. Forest Land	-48.68	-48.68	-48.68	-48.68	-48.68	-48.68	-48.68	-48.68	-48.68	-48.68
B. Cropland	-7.22	-7.22	-7.22	-7.22	-8.32	-9.49	-8.39	-10.18	-10.18	-10.18
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
F. Other Land	NE, NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Waste	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.35
A. Solid Waste Disposal on Land	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
B. Waste-water Handling										
C. Waste Incineration	0.35	0.35	0.35	0.35	0.35	0.32	0.32	0.32	0.32	0.35
D. Other	NA NA	NA	NA	NA	NA	NA	NA	NA	NO	NO
7. Other (as specified in the summary table in CRF)	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CO2 emissions including net CO2 from LULUCF	2,292.18	2,289.28	2,408.93	2,428.89	2,606.68	2,560.42	2,646.95	2,612.14	2,698.03	2,656.76
Total CO2 emissions excluding net CO2 from LULUCF	2,348.08	2,345.19	2,464.84	2,484.80	2,663.68	2,618.59	2,704.03	2,671.01	2,756.89	2,715.63
Memo Items:										
International Bunkers	1,279.25	1,579.58	2,624.86	2,654.72	3,217.16	3,426.19	4,040.18	1,866.52	4,133.17	3,372.29
Aviation	359.17	344.09	291.92	269.44	266.76	270.61	275.29	281.54	296.84	300.50
Marine	920.08	1,235.48	2,332.95	2,385.27	2,950.40	3,155.58	3,764.89	1,584.99	3,836.33	3,071.79
Multilateral Operations	NA NA	NA	NA	NA	NA.	NA	NA	NA	NA	NA
CO2 Emissions from Biomass	IE, NA, NE,	IE, NA, NE,	IE, NA, NE,		0.07	0.15	3.15	5.12	6.35	4.41

Table 1(a) Emission trends (CO₂) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
A SOCIAL PROPERTY OF THE PROPE	le:	kt	kt	14
1. Energy	2,627.76	2,639.87	2,662.16	
A. Fuel Combustion (Sectoral Approach)	2,627.76	2,639.87	2,662.16	
1. Energy Industries	1,897,03	1,887.17	1,931.48	
Manufacturing Industries and Construction	40.43	46.04	72.77	
3. Transport	561.81	583.42	553.28	
4. Other Sectors	128.50	123.24	104.63	0.777
5. Other	NA.	NA	NA	
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00
1. Solid Fuels	NA, NO	NA NO	NA. NO	0.00
2. Oil and Natural Gas	NA, NE,	NA, NE,	NA, NE,	.0.00
2 Industrial Processes	NO 0.24	NO 0.23	NO 0.25	
A. Mineral Products	0.16	0.15	0.15	
B. Chemical Industry	0.10	0.08	0.15	
C. Metal Production	NA NO	NA. NO	NA NO	
D. Other Production	NA. NA	NA.NO	NA. NO	
E. Production of Halocarbons and SF6	NA.	- NA	D.A.	0.00
F. Consumption of Halocarbons and SF6				
G. Other	NA NA	NA	NA	0.00
3. Solvent and Other Product Use	NA NA	NA.	NA.	
4. Agriculture	, na	11/1		0.00
A. Enteric Fermentation				
B. Manure Management				
C. Rice Cultivation				
D. Agricultural Soils				
E. Prescribed Burning of Savannas				
F. Field Burning of Agricultural Residues				
G. Other				
5. Land Use, Land-Use Change and Forestry	-58.87	-59.67	-59.67	5.55
A Forest Land	-48.69	-48.69	-48.69	
B. Crepland	-10.18	-10.98	-10.98	
C. Grassland	NO	NO	NO	0.00
D. Wetlands	NO	NO	NO	0.00
E. Settlements	NE, NO	NE, NO	NE, NO	0.00
F. Other Land	NO	NO	NO	0.00
G. Other	NO	NO	NO	0.00
6. Waste	0.47	0.52	0.69	85.43
A. Solid Waste Disposal on Land	NA NA	NA	NA	0.00
B. Waste-water Handling				
C. Waste Incineration	0.47	0.52	0.69	85.43
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	NA	NA	NA	0.00
Total CO2 emissions including net CO2 from LULUCF	2,569.60	2,580.95	2,603,42	43.92
Total CO2 emissions excluding net CO2 from LULUCF	2,628.48	2,640.62	2,663.09	42.75
Memo Item:				
International Bunkers	4,291.60	3,642.34	4,578.09	876.02
Aviation.	284.34	318.43	330.77	57.91
Marine	4,007.26	3,323.90	4,247.32	1,536.15
Multilateral Operations	NA	NA	NA	0.00
CO2 Emissions from Biomass	5.00	4.88	3.03	100.00

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry.

The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

 $^{^{9}}$ Fill in net emissions/removals as reported in CRF table Summary 1.A of the latest reported inventory year. For the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

Table 1(b)
Emission trends (CH₄)
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year a	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt
1. Energy	0.14	0.16	0.17	0.17	0.18	0.19	0.20	0.20	0.20
A. Fuel Combustion (Sectoral Approach)	0.14	0.16	0.17	0.17	0.18	0.19	0.20	0.20	0.20
1. Energy Industries	0.04	0.04	0.05	0.04	0.05	0.06	0.06	0.06	0.06
2. Manufacturing Industries and Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3. Transport	0.10	0.10	0.11	0.11	0.12	0.12	0.12	0.13	0.12
4. Other Sectors	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
5. Other	NA				NA				
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Gas	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO
2. Industrial Processes	NA, NO	NA, NO	NA, NO		NA, NO				
A. Mineral Products	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Chemical Industry	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C. Metal Production	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	N.A	NA	NA	NA.	NA	NA.	NA	NA	NA.
3. Solvent and Other Product Use									
4. Agriculture	2.97	2.88	2.91	2.95	2.91	2.98	3.01	3.08	2.99
A. Enteric Fermentation	1.60	1.59	1.61	1.62	1.61	1.70	1.68	1.70	1.67
B. Manure Management	1.36	1.28	1.30	1.33	1.31	1.28	1.33	1.38	1.32
C. Rice Cultivation	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
D. Agricultural Soils	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE	NA, NE
E. Prescribed Burning of Savannas	N.A	NA							
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
G. Other	NA	NA	NA	NA	NA	NA	NA	NA	NA
5. Land Use, Land-Use Change and Forestry	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
A. Forest Land	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Cropland	NE, NO	NE, NO	NE. NO	NE, NO	NE, NO	NE, NO	NE. NO	NE. NO	NE. NO
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Waste	1.22	1.32	1.41	1.55	1.71	1.81	1.88	1.98	2.15
A. Solid Waste Disposal on Land	0.66	0.75	0.84	0.93	1.03	1.13	1.23	1.33	1.45
B. Waste-water Handling	0.56	0.56	0.57	0.58	0.59	0.59	0.59	0.61	0.60
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	NO	NO	NO	0.04	0.09	0.09	0.06	0.04	0.09
7. Other (as specified in the summary table in CRF)	NA	NA	NA	NA.	NA	NA.	NA	NA	NA
Total CH4 emissions including CH4 from LULUCF	4.34	4.35	4.49	4.67	4.80	4,99	5.09	5.26	5.34
Total CH4 emissions excluding CH4 from LULUCF	4.34		4.49		4.80	4.99	5.09	5.26	
Memo Items:									
International Bunkers	0.03	0.03	0.04	0.05	0.05	0.05	0.07	0.09	0.06
Aviation	0.00		0.00		0.00			0.00	
Marine	0.00				0.05				
Multilateral Operations	NA NA				NA				
CO2 Emissions from Biomass					1121				2122

(Sheet 2 of 3)

Table 1(b)

Emission trends (CH₄)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
	lar .	kt	ler .	le .	let	let	le	le .	let	kt
1. Energy	0.20		0.20			-	0.21	0.21	0.22	0.22
A. Fuel Combustion (Sectoral Approach)	0.20	0.20	0.20	0.20	200		0.21	0.21	0.22	0.22
1. Energy Industries	0.07	0.07	0.07	0.07		-	0.08	0.08	0.08	0.08
Manufacturing Industries and Construction	0.00	0.00	0.00	0.00	1 70-7	200	0.00	0.00	0.00	0.00
3. Transport	0.12	0.12	0.12	0.11	0.11	-	0.12	0.12	0.12	0.12
4. Other Sectors	0.01	0.01	0.01	0.01		0.01	0.01	0.01	0.01	0.02
5. Other	NA.	NA	NA	NA	la la companya da la	NA	NA	NA.	NA.	NA
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO				
1. Solid Pisels	NA, NO	NA NO	NA, NO	NA, NO	NA, NO	NA NO	NA, NO	NA, NO	NA, NO	NA NO
2. Oil and Natural Gas	NA, NE, NO	NA NE NO	NA, NE, NO	NA, NE, NO	NA, NE, NO	NA, NE, NO				
2. Industrial Processes	NA NO	NA NO	NA NO	NA NO	NA NO	NA NO				
A. Mineral Products	NO	NO	NO				NO	NO	NO	NO
B. Chemical Industry	NA NO	NA NO	NA NO			S. Contract	NA NO		NA NO	NA NO
C. Metal Production	NA NO	NA NO	NA NO	62069	0.00000	335555	140,000		NA NO	NA NO
D. Other Production	100,000		100,000	344,510	14,770	1112.000	700		0000000000	111270
E. Production of Halocarbons and SF6										
F. Communition of Halocarbons and SF6										
G. Other	NA NA	NA.	NA	NA	NA	NA	NA	NA	NA	NA
3. Solvent and Other Product Use					0			****		
4. Agriculture	3.00	3.38	3.30	3.27	3.11	3.27	3 19	3.11	3.21	2.94
A. Exteric Fermentation	1.66	1.79	1.72	1.73	1.67	1.75	1.74	1.67	1.71	1.61
B. Manure Management	134	1.58	1.58	1.54	1.45	1.53	1.45	1.44	1.40	134
C. Rice Cultivation	NA NO	NA NO	NA, NO	NA NO	NA NO	NA NO	NA NO	NA NO	NA, NO	NA NO
D. Aericultural Soils	NA NE	NA NE	NA. NE	NA NE	NA NE	NA NE	NA NE		NA NE	NA NE
E. Prescribed Burning of Savannas	NA NA	NA	NA	NA	NA	NA.	NA	NA.	NA	NA.
F. Field Burning of Agricultural Residues	NA, NO	NA NO	NA, NO	NA, NO	NA NO	NA NO	NA NO	NA, NO	NA NO	NA NO
G. Other	NA.	NA	NA	NA	NA	NA	NA	NA.	NA	NA
5. Land Use, Land-Use Change and Forestry	NE NO	NE. NO	NE NO	NE. NO	NE, NO	NE. NO	NE NO	NE, NO	NE NO	NE NO
A. Forest Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Crepland	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO				
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetands	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
E. Settlements	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
6. Waste	2.21	2.38	2.48	2.57	2.72	285	3.27	3,76	4.14	4.36
A. Solid Waste Disposal on Land	1.58	1.71	1.82	1.94	2.07	219	2.60	3.08	3.53	3.79
B. Waste-water Handling	0.58	0.61	0.58	0.59	0.59	0.60	0.60	0.60	0.61	0.57
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	0.05	0.06	0.07	0.04	0.06	0.06	0.06	0.08	NO	NO
7. Other (as specified in the summary table in CRF)	NA NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total CH4 emissions including CH4 from LULUCF	5.42	5.95	5.98	6.04	6.04	6.33	6.66	7.08	7.56	7.52
Total CH4 emissions excluding CH4 from LULUCF	5.42	595	5.98	6.04	6.04	633	6.66	7.08	7.56	7.52
Memo Items:										
International Bunkers	0.09	0.12	0.21	0.22	0.27	0.29	0.34	0.15	0.35	0.28
Aviation.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	0.08	0.11	0.21	0.22	0.27	0.29	0.34	0.15	0.35	0.28
Multilateral Operations	NA NA	NA	NA	NA	NA.	NA	NA	NA.	NA	NA.
CO2 Emissions from Biomess										

Table 1(b) Emission trends (CH₄) (Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year
	Ar	kt	kt	- %
1. Energy	0.22	0.22	0.22	53.43
A. Fuel Combustion (Sectoral Approach)	0.22	0.22	0.22	53.43
1. Energy Industries	0.07	0.07	0.08	111.35
2. Manufacturing Industries and Construction	0.00	0.00	0.00	21.98
3. Transport	0.13	0.13	0.13	31.17
Other Sectors	0.02	0.02	0.02	66.39
5. Other	NA.	NA	NA	0.00
B. Fugitive Emissions from Fuels	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00
1. Solid Fuels	NA, NO	NA, NO	NA, NO	0.00
2. Oil and Natural Gas	NA, NE, NO	NA, NE, NO	NA, NE, NO	0.00
2. Industrial Processes	NA, NO	NA, NO	NA, NO	0.00
A. Mineral Products	NO	NO	NO	0.00
B. Chemical Industry	NA, NO	NA, NO	NA, NO	0.00
C. Metal Production	NA, NO	NA, NO	NA, NO	0.00
D. Other Production				
E. Production of Halocarbons and SF6				
F. Consumption of Halocarbons and 5F6				
G. Other	NA.	NA	NA	0.00
3. Solvent and Other Product Use				
4. Agriculture	2.82	2.69	2.41	-18.94
A. Enteric Fermentation	1.52	1.41	1.37	-14.68
B. Manure Management	1.30	1.28	1.04	-23.96
C. Rice Cultivation	NA, NO	NA, NO	NA, NO	0.00
D. Agricultural Soils	NA, NE	NA, NE	NA, NE	0.00
E. Prescribed Burning of Savannas	NA.	NA	NA	0.00
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	0.00
G. Other	NA	NA	NA	0.00
5. Land Use, Land-Use Change and Forestry	NE, NO	NE, NO	NE, NO	0.00
A. Forest Land	NO	NO	NO	0.00
B. Cropiand	NE, NO	NE, NO	NE, NO	0.00
C. Grassland	NO	NO	NO	0.00
D. Wetlands	NO	NO	NO	0.00
E. Settlements	NO	NO	NO	0.00
F. Other Land	NO	NO	NO	0.00
G. Other	310	NO	NO	0.00
6. Waste	4.92	5.44	5.34	336.29
A. Solid Waste Disposal on Land	4.42	4.90	5.20	683.00
B. Waste-water Handling	0.50	0.54	0.14	-74.65
C. Waste Incineration	0.00	0.00	0.00	-99.92
D. Other	NO	NO	NO	0.00
7. Other (as specified in the summary table in CRF)	NA.	NA	NA	
Total CH4 emissions including CH4 from LULUCF	7.96	8.35	7.97	
Total CH4 emissions excluding CH4 from LULUCF	7.96	8,35	7.97	83.69
Memo Items:				
International Bunkers	0.37	0.31	0.39	
Aviation	0.00	0.00	0.00	
Marine	0.37	0.30	0.39	1,000,000
Multilateral Operations	NA	NA	NA	0.00

Abbreviations: CRF = common reporting formst, LULUCF = land use, land-use change and fo

[&]quot;The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Confirence of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

Table 1(c)
Emission trends (N₂O)
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Base year*	1991	1992	1993	1994	1995	1996	1997	1995
	kr	le .	kt	le .	kr	kt	kt	kr	le .
1 Energy	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.0
A. Fuel Combustion (Sectoral Approach)	0.03	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
1. Energy Industries	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01
2. Manufacturing Industries and Construction	0.00	0.00	0.00	0,00	0.00	0.00	0.00	0.00	0.00
3. Transport	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00
4. Other Sectors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5. Other	NA NA	NA	NA	NA	NA	NA	NA	NA.	NA.
B. Fugitive Emissions from Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
1. Solid Fuels	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA NO	NA, NO	NA, NO	NA, NO
2. Oil and Natural Ges	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
2. Industrial Processes	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
A. Mineral Products	NO	340	NO	340	NO	310	NO	NO	390
B. Chemical Industry	NO	NO	NO	NO	NO	NO	NO	NO	NO
C. Metal Production	NA.	NA							
D. Other Production									
E. Production of Halocarbons and SF6									
F. Consumption of Halocarbons and SF6									
G. Other	NA.	NA	N.A						
3. Solvent and Other Product Use	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0
4. Agriculture	0.08	0.08	0.08	0.08	0.08	0.10	0.09	0.09	0.1
A. Enteric Fermentation									
B. Manure Management	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.0
C. Rice Cultivation									
D. Agricultural Soils	0.07	0.07	0.07	0.07	0.07	0.09	0.07	0.08	0.09
E. Prescribed Burning of Savannes	NA.	NA	NA	NA	NA	NA	NA	NA.	NA
F. Field Burning of Agricultural Residues	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA NO	NA, NO	NA, NO
G. Other	NA.	NA							
5. Land Use, Land-Use Change and Forestry	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO	NE, NO
A. Forest Land	NO	NO	NO	NO	NO	NO	NO	NO	NO
B. Cropland	NE, NO	NE. NO	NE, NO						
C. Grassland	NO	NO	NO	NO	NO	NO	NO	NO	NO
D. Wetlands	NO	NO	NO	NO	NO	200	NO	NO	NO
E Settlements	310	NO							
F. Other Land	NO	NO	NO	NO	NO	NO	NO	NO	NO
G. Other	NO	NO	NO	NO	NO	NO	NO	NO	340
6. Watte	0.04	0.04	0.04	0.04	0.05	0.05	0.04	0.04	0.01
A. Solid Waste Disposal on Land									
B. Waste-water Handling	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
D. Other	NO	NO	NO	0.00	0.01	0.01	0.00	0.00	0.0
7. Other (as specified in the summary table in CRF)	NA.	NA	NA.	NA	NA	NA	NA	NA	30.4
Total N2O emission: including N2O from LULUCF	0.16	0.16	0.17	0.17	0.18	0.19	0.18	0.18	0.20
Total N2O emissions excluding N2O from LULUCF	0.16	0.16	0.17	0.17	0.18	0.19	0.18	0.18	0.20
Memo Item:	.4.10		9141		0,10			7.9149	
International Bunkers	0.01	0.01	0.02	0.02	0.02	0.02	0.03	0.03	0.03
Aviation	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0
Marine	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.00
Multilateral Operations	NA NA	NA.	38.4						
CO2 Emissions from Biomess	144				+10/4				

(Sheet 2 of 3)

Table 1(c)
MLT_BR1_v0.1
Emission trends (N₂O)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	
1997 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 1988 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998 - 1998	ls .	ke	le .	Set.	kt	kr	le .	ke	le .	kt	
1. Energy	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.0	
A. Fuel Combustion (Sectoral Approach)	0.04	0.04	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.0	
1. Energy Industries	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.0	
Manufacturing Industries and Construction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	
3. Transport	0.02	0.02	0.03	0.03	0.03	0.02	0.03	0.03	0.03	0.0	
4. Other Sectors	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	
5. Other	NA.	NA	N/								
B. Fugitive Emissions from Fuels	NA, NO										
1. Solid Fuels	NA, NO	NA NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	
2. Oil and Natural Gas	NA, NO										
2. Industrial Processes	NA, NO	NA NO	NA, NO	NA, NO	NA, NO	NA, NO					
A. Mineral Products	NO										
B. Chemical Industry	NO	110	NO								
C. Metal Production	NA.	NA.	NA.	NA	NA	NA	NA	NA	NA	N	
D. Other Production											
E. Production of Halocarbons and SF6											
F. Communition of Halocarbons and SF6											
G. Other	NA.	NA	N/								
3. Solvent and Other Product Use	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.0	
4. Agriculture	0.09	0.10	0.10	0.09	0.08	0.09	0.09	0.09	0.09	0.00	
A. Enteric Fermentation											
B. Manure Management	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.00	
C. Rice Cultivation											
D. Azricultural Soils	0.08	0.09	0.08	0.08	0.07	0.07	0.07	0.07	0.07	0.00	
E. Prescribed Burning of Savannas	NA.	NA	N/								
F. Field Burning of Agricultural Residues	NA, NO	NA NO	NA. NO	NA. NO	NA NO	NA NO	NA. NO	NA. NO	NA NO	NA NO	
G. Other	NA	N/									
5. Land Use, Land-Use Change and Forestry	NE. NO	NE. NO	NE. NO	NE. NO	NE, NO	NE. NO	NE. NO	NE NO	NE NO	NE. NO	
A. Forest Land	NO										
B. Cropland	NE NO	NE. NO	NE, NO	NE. NO	NE NO	NE NO	NE, NO	NE, NO	NE. NO	NE, NO	
C. Grassland	NO										
D. Wedands	NO										
E. Settlements	NO										
F. Other Land	NO										
G Other	NO										
6. Waste	0.04	0.05	0.05	0.04	0.05	0.05	0.05	0.05	0.04	0.0	
A. Solid Waste Disposal on Land									-		
B. Waste-water Handling	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	
C. Waste Incineration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
D Other	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.01	NO	N	
7. Other (as specified in the summary table in CRF)	NA NA	NA.	NA.	NA	NA.	NA.	NA.	NA.	NA NA	N/	
Total N2O emissions including N2O from LULUCF	0.18	0.20	0.10	0.19	0.18	0.18	0 19	0.19	0 19	0.11	
Total N2O emissions excluding N2O from LULUCF	0.18	0.20	0.19	0.19	0.18	0.18	0.19	0.19	0.19	0.1	
Memo Items:		0.20	9.42	9.42	0.20	V-15	9.47	V.42	9.32	9.44	
International Bunkers	0.03	0.04	0.07	0.07	0.08	0.09	0.11	0.05	0.11	0.09	
Aviation	0.03	0.04	0.07	0.07	0.08	0.09	0.01	0.03	0.11	0.0	
10077777	0.707.7	0.01	1.7176	10.77	0.01	7,17,5	0.01	0.01	2077	0.0	
Marine Multilateral Operations	0.02 NA	0.03 NA	0.06 NA	0.06 NA	0.08 NA	0.08 NA	0.10 NA	0.04 NA	0.10 NA	0.00 NA	
CO2 Emissions from Biomass	NA.	PA	DA.	P.A.	IVA	NA	PΑ	P/A	IVA.	N/	

Table 1(c)
Emission trends (N₂O)
(Sheet 3 of 3)

A. Fuel Combustion (Sectoral Approach) I. Energy Ladustries J. Manufacturing Industries and Construction S. Transport S. Other S. Other S. Tyugrive Emissions from Fuels J. Solid Fuels Other Sectors Other J. Solid Fuels J. Industrial Processes A. Mineral Products S. Chemical Industry C. Metal Production D. Other Production D. Other Production of Halocarbons and SF6 C. Consumption of Halocarbons and SF6 J. Odher J. Solivent and Other Product Use A. Agriculture A. Enteric Fermentation B. Manure Management C. Rice Cultivation D. Agricultural Souls E. Prescribed Burning of Savannas F. Field Burning of Agricultural Residues O. Other S. Land Use, Land-Use Change and Forestry A. Forest Land G. Cropland C. Grassland D. Wednads S. Serlements C. Other S. Waste A. Solid Waste Disposal on Land B. Waste-water Handling C. Waste Incineration D. Other O. Other S. Waste O. Other C. Other (as specified in the summary table in CRF)	2009	2010	2011	Change from base to latest reported year	
	kr	le	kt	- %	
1. Energy	0.05	0.05	0.05	44.80	
A. Fuel Combustion (Sectoral Approach)	0.05	0.05	0.05	44.80	
1. Energy Industries	0.01	0.01	0.02	-3.57	
2. Manufacturing Industries and Construction	0.00	0.00	0.00	22.51	
3. Transport	0.03	0.03	0.03	92.75	
4. Other Sectors	0.00	0.00	0.00	1.85	
5. Other	NA	NA	NA	0.00	
B. Fugitive Emissions from Fuels	NA, NO	NA, NO	NA, NO	0.00	
1. Solid Fuels	NA, NO	NA, NO	NA, NO	0.00	
2. Oil and Natural Gas	NA. NO	NA, NO	NA, NO	0.00	
2. Industrial Processes	NA, NO	NA, NO	NA, NO	0.00	
A. Mineral Products	NO	NO	NO	0.00	
B. Chemical Industry	NO	NO	NO	0.00	
C. Metal Production	NA	NA	NA	0.00	
D. Other Production					
E. Production of Halocarbons and SF6					
F. Consumption of Halocarbons and SF6					
G. Other	NA.	NA	NA	0.00	
3. Solvent and Other Product Use	0.01	0.00	0.00	-47.30	
4. Agriculture	0.08	0.07	0.07	-20.03	
A. Enteric Fermentation					
B. Manure Management	0.01	0.01	0.01	-20.33	
C. Rice Cultivation					
D. Agricultural Soils	0.06	0.06	0.05	-19.97	
	NA.	NA	NA		
	NA NO	NA NO	NA. NO		
	NA.	NA	NA		
	NE, NO	NE NO	NE, NO		
	NO	NO	NO		
	NE NO	NE. NO	NE NO		
50 (121) (A) (A	NO	NO	NO		
	NO	NO	NO	4/17/22	
	NO	NO	NO	1,500	
	NO	NO	NO		
	NO	NO	NO		
	0.04	0.05	0.04		
N. C.	0.04	9.93	0.04	10.50	
	0.04	0.04	0.04	16.98	
21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	0.00	0.00	0.00		
	NO	NO	NO.		
	NA NA	NA NA	NA NA		
Total N2O emissions including N2O from LULUCF	0.18	0.17	0.16		
Total N2O emissions excluding N2O from LULUCF	0.18	0.17	0.16	1,000	
Memo Items:	0.10	0.17	9.10	0.97	
International Bunkers	0.11	0.10	0.12	846.15	
Aviation	0.01	0.10	0.12		
Aviation Marine	0.10	0.01	0.01		
	0.10 NA	0.09 NA	0.11 NA	A CAMPAGE STATES	
Multilateral Operations CO2 Emissions from Biomass	NA.	NA	NA	0.00	

 $Abbreviations: {\it CRF} = {\it common reporting formst}, {\it LULUCF} = {\it land-use, land-use, change and forest land-use, land-u$

[&]quot;The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

Table 1(d)
Emission trends (HFCs, PFCs and SF₆)
(Sheet 1 of 3)

CREENHOUSE CASSOURCE AND SHIP CATEGORIES	Base year	1991	1992	1993	1994	1995	1996	1997	1998
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	λt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCse - (kt CO2 eq)	NA, NE, NO	73.87	73.87						
HFC-23	NA, NO	NA, NO	NA, NO						
HFC-32	NA, NO	NA, NO	NA, NO						
HFC-41	NA, NO	NA, NO	NA, NO						
HFC-43-10mee	NA, NO	NA, NO	NA, NO						
HFC-125	NA, NO	NA, NO	NA, NO						
HFC-134	NA, NO	NA, NO	NA, NO						
HFC-134a	NA, NO	NA, NO	NA, NO						
HFC-152a	NA, NO	NA, NO	NA, NO						
HFC-143	NA, NO	NA, NO	NA, NO						
HFC-143a	NA, NO	NA, NO	NA, NO						
HFC-227ea	NA, NO	NA, NO	NA, NO						
HFC-236fa	NA, NO	NA, NO	NA, NO						
HFC-245ea	NA, NO	NA, NO	NA, NO						
Unspecified mix of listed HFCsd - (kt CO ₂ eq)	NA, NO	NA, NO	NA, NO						
Emissions of PFCsc - (kt CO2 eq)	NA, NE, NO N	IA, NE, NO N	IA, NE, NO						
CF ₄	NA, NO	NA, NO	NA, NO						
C ₂ F ₆	NA, NO	NA, NO	NA, NO						
C 3F8	NA, NO	NA, NO	NA, NO						
C ₄ F ₁₀	NA, NO	NA, NO	NA, NO						
c-C ₄ F ₈	NA, NO	NA, NO	NA, NO						
C ₃ F ₁₂	NA, NO	NA, NO	NA, NO						
C ₆ F ₁₄	NA, NO	NA, NO	NA, NO						
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)	NA, NO	NA, NO	NA, NO						
Emissions of SF6(3) - (Gg CO2 equivalent)	0.01	0.01	1.50	1.50	1.50	1.51	1.52	1.52	1.54
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1(d)
Emission trends (HFCs, PFCs and SF₆)
(Sheet 2 of 3)

CREED HOUSE CAS SOURCE AND SDAY CATECORIES	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
GREENHOUSE GAS SOURCE AND SINK CATEGORIES	kt	kt	kt	kt	kt	kt	kt	kt	kt	kt
Emissions of HFCsc - (kt CO2 eq)	73.87	8.29	15.33	28.70	40.06	60.42	64.51	87.50	106.15	116.73
HFC-23	NA, NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-32	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.01	0.01	0.01
HFC-41	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-43-10mee	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-125	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00	0.01	0.01	0.01
HFC-134	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-134a	NA, NO	0.01	0.01	0.02	0.02	0.03	0.03	0.03	0.03	0.04
HFC-152a	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFC-143	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-143a	NA, NO	NA, NO	NA, NO	0.00	0.00	0.00	0.00	0.01	0.01	0.01
HFC-227ea	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.00	NA, NO	0.00	0.00	0.00
HFC-236fa	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
HFC-245ca	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed HFCsd - (kt CO ₂ eq)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.81	3.25	3.25
Emissions of PFCsc - (kt CO2 eq)	NA, NE, NO	0.00	0.00	0.00	0.00	27.90	23.39	23.27	22.81	12.93
CF ₄	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C_2F_6	NA, NO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C 3F8	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	0.00	0.00
C ₄ F ₁₀	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
c-C ₄ F ₈	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C ₅ F ₁₂	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
C ₆ F ₁₄	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)	NA, NO	NA, NO	NA, NO	NA, NO	NA, NO	27.90	23.39	23.27	22.81	12.93
Emissions of SF6(3) - (Gg CO2 equivalent)	1.54	1.54	1.56	1.57	2.16	1.62	1.64	1.65	1.66	1.83
SF ₆	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Table 1(d)
Emission trends (HFCs, PFCs and SF₆)
(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	2009	2010	2011	Change from base to latest reported year	
	kr	kt	kt		
Emissions of HFCsc - (kt CO2 eq)	120.34	121.61	132.18	100.00	
HFC-23	0.00	0.00	0.00	100.00	
HFC-32	0.01	0.01	0.01	100.00	
HFC-41	NA, NO	NA, NO	NA, NO	0.00	
HFC-43-10mee	NA, NO	NA, NO	NA, NO	0.00	
HFC-125	0.01	0.01	0.01	100.00	
HFC-134	NA, NO	NA, NO	NA, NO	0.00	
HFC-134a	0.04	0.04	0.04	100.00	
HFC-152a	0.00	0.00	0.00	100.00	
HFC-143	NA, NO	NA, NO	NA, NO	0.00	
HFC-143a	0.01	0.01	0.01	100.00	
HFC-227ea	0.00	0.00	0.00	100.00	
HFC-236fa	NA, NO	NA, NO	NA, NO	0.00	
HFC-245ca	NA, NO	NA, NO	NA, NO	0.00	
Unspecified mix of listed HFCsd - (kt CO ₂ eq)	1.62	NA, NO	3.39	100.00	
Emissions of PFCsc - (kt CO2 eq)	7.02	6.63	3.34	100.00	
CF ₄	NA, NO	NA, NO	NA, NO	0.00	
C ₂ F ₆	0.00	0.00	0.00	100.00	
C 3F8	0.00	0.00	0.00	100.00	
C ₄ F ₁₀	NA, NO	NA, NO	NA, NO	0.00	
c-C ₄ F ₈	NA, NO	NA, NO	NA, NO	0.00	
C ₅ F ₁₂	NA, NO	NA, NO	NA, NO	0.00	
C ₆ F ₁₄	NA, NO	NA, NO	NA, NO	0.00	
Unspecified mix of listed PFCs(4) - (Gg CO ₂ equivalent)	7.02	6.63	3.34	100.00	
Emissions of SF6(3) - (Gg CO2 equivalent)	1.57	1.78	4.81	43,055.17	
SF ₆	0.00	0.00	0.00	43,055.17	

Abbreviations: CRF = common reporting format, LULUCF = land use, land-use change and forestry.

^a The column "Base year" should be filled in only by those Parties with economies in transition that use a base year different from 1990 in accordance with the relevant decisions of the Conference of the Parties. For these Parties, this different base year is used to calculate the percentage change in the final column of this table.

Enter actual emissions estimates. If only potential emissions estimates are available, these should be reported in this table and an indication for this be provided in the documentation box. Only in these rows are the emissions expressed as CO2 equivalent emissions.

⁴In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part I: UNFCCC reporting guidelines on annual inventories", HFC and PFC emissions should be reported for each relevant chemical. However, if it is not possible to report values for each chemical (i.e. mixtures, confidential data, lack of disaggregation), this row could be used for reporting aggregate figures for HFCs and PFCs, respectively. Note that the unit used for this row is kt of CO2 equivalent and that appropriate notation keys should be entered in the cells for the individual chemicals.)

III. Quantified Economy-wide Emission Reduction Target

Refer to Chapter 1, section 1.4 of the National Communication, 2014, for more detailed information.

For the first commitment period (CP1; 2008-2012) under the Kyoto Protocol, Malta did not have a quantified emission limitation or reduction target. This situation was maintained even when its status under the Convention changed to that of Annex I Party in 2010.

However, inspite of the situation of the country vis-a-vis the Convention and the Protocol, as of 2005, a large share of national greenhouse gas emissions, namely CO₂ emissions from the two power generation plants, became subject to compliance with the European Union Emissions Trading Scheme (EU ETS) Directive⁴, including the surrender of allowances in respect of reported emissions.

With the further development of European Union greenhouse gas emission mitigation policy, all other emissions of greenhouse gases (except for emissions from source category civil aviation and emissions and removals from sector LULUCF) are, for the period 2013 to 2020, subject to the quantified emission limitation target inscribed for Malta in the Effort-Sharing Decision (ESD)⁵. The emissions limit for Malta under the ESD is set at 5% over 2005 emission levels, in 2020, with interim binding targets for the years 2013-2019 determined on the basis of a linear trajectory starting in 2013 at a level equivalent to the average of covered emissions from 2008, 2009 and 2011, and ending at the emission level for 2020 as determined in accordance with the +5% limit for 2020.

The accession to Annex I status meant that Malta is now inscribed in the list of Parties to the Kyoto Protocol that intend to take on a quantified emission limitation or reduction commitment for the second commitment period of the Protocol (CP2; 2013-2020). The Doha Amendments to the Protocol include a target of -20% by 2020, compared to 1990 emission levels, for Malta. This covers the six greenhouse gases already mentioned in section 1 of this report, and in addition, nitrogen trifluoride (NF₃).

It is the intention of the EU and its Member States to jointly fulfil the commitments set out in the Doha Amendments⁷. To this effect, the sharing of emission mitigation effort as expressed in particular through EU legislation such as the EU ETS and the ESD remains the primary emission limitation roadmap for Malta until 2020.

⁴ 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; OJ L 275, 25.10.2003, pg. 32.

⁵ Decision 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; OJ L 140, 5.6.2009, pg. 136.

⁶ The Doha Amendments were adopted by Parties to the Kyoto Protocol through Decision 1/CMP.8 at the eighth session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol held in Doha, Qatar, in December 2012.

⁷ Footnote 4 to the table in part A of the Doha Amendments states that: "The QELRCs for the European Union and its member States for a second commitment period under the Kyoto Protocol are based on the understanding that these will be fulfilled jointly with the European Union and its member States, in accordance with Article 4 of the Kyoto Protocol. The QELRCs are without prejudice to the subsequent notification by the European Union and its member States of an agreement to fulfil their commitments jointly in accordance with the provisions of the Kyoto Protocol."

CTF Tables reproduced in this section:

- Table 2(a) Description of quantified economy-wide emission reduction target: base year;
- Table 2(b) Description of quantified economy-wide emission reduction target: gases and sectors covered;
- Table 2(c) Description of quantified economy-wide emission reduction target: global warming potential values (GWP);
- Table 2(d) Description of quantified economy-wide emission reduction target: approaching to counting emissions and removals from the LULUCF sector.

NOTE: Malta has not yet determined the potential participation in, and use of, market-based measures under the UNFCCC, or other market-based measures, in respect of the Kyoto Protocol CP2. CTF Table 2(e) is thus not reproduced here.

Table 2(a) MLT_BR1_v0.1

Description of quantified economy-wide emission reduction target: base year^a

Party	Malta								
Base year /base period	1990								
Emission reduction target	% of base year/base period	% of 1990 ^b							
	20.00								
Period for reaching target	BY-2020								

^a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b Optional.

Table 2(b) MLT_BR1_v0.1

Description of quantified economy-wide emission reduction target: gases and sectors covered^a

Ga	ises covered	Base year for each gas (year):					
CO ₂		1990					
CH ₄		1990					
N ₂ O		1990					
HFCs		1990					
PFCs		1990					
SF ₆		1990					
NF ₃		1990					
Other Gases (specify))						
Sectors covered ^b	Energy	Yes					
	Transport ^f	Yes					
	Industrial processes ^g	Yes					
	Agriculture	Yes					
	LULUCF	Yes					
	Waste	Yes					
	Other Sectors (specify)						

Abbreviations: LULUCF = land use, land-use change and forestry.

Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

More than one selection will be allowed. If Parties use sectors other than those indicated above, the explanation of how these sectors relate to the sectors defined by the IPCC should be provided.

f Transport is reported as a subsector of the energy sector.

Endustrial processes refer to the industrial processes and solvent and other product use sectors.

Table 2(c) MLT BR1 v0.1

Description of quantified economy-wide emission reduction target: global warming potential values $(GWP)^a$

Gases	GWP values ^b
CO ₂	2nd AR
CH ₄	2nd AR
N ₂ O	2nd AR
HFCs	2nd AR
PFCs	2nd AR
SF ₆	2nd AR
NF ₃	2nd AR
Other Gases (specify)	-

Abbreviations: GWP = global warming potential

Table 2(d) MLT_BR1_v0.1

Description of quantified economy-wide emission reduction target: approach to counting emissions and removals from the LULUCF sector^a

Role of LULUCF	LULUCF in base year level and target	Excluded
	Contribution of LULUCF is calculated using	

Abbreviation: LULUCF = land use, land-use change and forestry.

^a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

b Please specify the reference for the GWP: Second Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) or the Fourth Assessment Report of the IPCC.

^a Reporting by a developed country Party on the information specified in the common tabular format does not prejudge the position of other Parties with regard to the treatment of units from market-based mechanisms under the Convention or other market-based mechanisms towards achievement of quantified economy-wide emission reduction targets.

IV. Progress in achievement of Quantified Economy-wide Emissions Reduction Target

Refer to Chapter 3 of the National Communication, 2014, for more detailed information.

Policy-making in respect of greenhouse gas emission mitigation in Malta is a combination of sectoral action coupled with a more holistic top-down approach starting from a set overarching goal which is then translated into sectoral measures. Policies and measures that directly or indirectly contribute to the mitigation of national greenhouse gas emissions practically cover all sectors, albeit the effectiveness, in terms of actual emission savings (or enhancement of removal potential in the case of the sector LULUCF) varies. The sector Energy shows the highest potential for reducing emissions.

Table IV-1 Summary of greenhouse gas emission mitigation policy approach.

Sector	Mitigation action focus					
	Conventional energy generation;					
Enorgy	Energy end-use efficiency;					
Energy	Energy-related cross sectoral;					
	Transport (particularly road transport.					
Industrial processes and other product use	Fluorinated greenhouse gases.					
Agricultura	Rural development;					
Agriculture	Nitrates action programme.					
Land use, land-use change and forestry	Afforestation.					
Waste	Solid waste management;					
wasie	Waste water treatment.					

The policies and measures presented in this section include those that are implemented, adopted or planned, reflecting the state of play of mitigation policy as at the end of 2012. This timeframe also applies to the discussion of projections of emissions that will be presented in the subsequent section.

CTF tables reproduced in this section:

Table 3 Progress in achievement of the quantified economy-wide emissions reduction target: information on mitigation actions and their effects.

Table 3
Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

MLT_BR1_v0.1

Name of mitigation action*	Sector(s) affected	GHG(s) affected	Objective and/or activity affected	Type of instrument"	Status of implementation d	Brief description*	Start year of implementation	Implementing entity or entitles	Estimate of mitigat cumulative, in			
Plant loading and fuel witching	law gy	CH ₄ , CO ₅ , N ₅ O	To comply with the derogation under the Large Combustion Plants Directive (LCPD)	Economic	Implemented	With a nominal installed capacity of 267 MW, the plant at MPS provides almost helf of the national installed electricity generating capacity. For this installation, Essenable has availed the Po of the decognition available under the LCPD, wherein the plant will continue to be operated for a limited time only. In fact, under this decognition, the plant at MPS will be operated for not more than 20,000 hours starting from 1 January 2008 and ending no later than 31 December 2013. Since 2008, plant disposich and load management has changed, with a larger proportion of the load shifting from MPS to DPS. The effect has been a reduction in the overall GRGs emitted per MWN generated, in view of the higher efficiency of this plant and the lower emissions per TJ of gas cell compared to heavy that cell.	2008	Enemalita	20/5 1,092.96	2020 1,152.01	2025 1,190.67	20,50 1,186.78
installation of new and efficient generating capacity	Esergy	CH _e CO ₃ N ₁ O	Installation of new and efficient generating capacity (144MW) at 144MW) at 164MW at 164MW at 164MW at 164MW at 164MW at 164MW at 164MW at 164MW at 164MW Maria Power Station (MPS)	Есововые	Implemented	Due to the increasing electrical demand and in order to reduce the output from the less efficient plant at Marsa Power Station (in these of finite plant at Marsa Power Station (in these of increasing plants are finitely presented in the obligations under the LCPD). Ensurable Corporation requires additional installed generation capacity preferably located within the Delimens Power Station sits, to be connected to the electricity distribution network.		Enemalts	E	Е	Œ	E
Submarine electrical comments to European metroris	Energy	CO ₃ CH ₄ N ₂ C	Electrical connection to european network (2003/W HVAC) to further replace generating capacity at MPS	41000000000	Implemented	The implementation of an electrical interconnection to the European soargy grid in consignation with the retention of significant local electricity generation capacity would offse greater flexibility in mosting local damand while providing a potential for considerable reduction in the national CO2 emissions through the reduction of local emissions from the main countributor of CO2 emissions.	2013		E	E	12.	2
On-shore wind firms	Energy	CO ₃ CH ₆ N ₆ O	Generate recentable energy supply	Economic	Pamed	A large scale wind farm at Wied Rim, limits of Robert is planned to have a maximum generating capacity of 10.2 MW. It is estimated that the project will cover an area of circa 0.65 km?, with the abitude being around 100 metres above on level. Another wind farm is planned in the limits of Zurnier, This is to have a maximum capacity of 4.25 MW. The project covers as read or circa 1.7 km?, with the abitude above see level varying between 43 and 77 m. The Government is in councer with foreign sentities currently developing novel deep offshore wind technologies.	2013	National government (responsible ministries / departments)	8.41	17.40	792	18.12
Off-shore wind form	Zowrg/	CO, CH, NO	Generate recewable energy supply	Есопошіс	Planned	An Elmetre Wind Monitoring Mast was installed in October 2009 at Alirax Point, limits of Mellisha, as part of a project to assess the viability of the wind resource at Sakis 1-Bajds, where an offshore wind farm is projected.	2015		0.00	98.77	191.80	102.90
Robatos on energy efficient domestic appliances	Energy	CO ₃ CH ₆ N ₂ O	To incentivise energy efficient domestic arolisaces	Economic	Implemented	Government substidy scheme on energy efficient appliances to provid financial incentives	2006		1.16	1.09	1.13	1.14
Distribution of energy saving lamps in the domestic sector	Energy	CO ₃ CH ₄ N ₂ O	To focus surrounser friendly mentality	Economic	Implemented	Distribution of energy saving lamps	2009		19.82	18.62	19.29	19.40

Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of mitigation action*	Sector(s) affected ⁴	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation ^d	Brief description*	Start year of implementation	Implementing entity or entities	Estimate of mitigate cumulative, in i				
Promotion of solar water heaters	Energy	CO ₃ CH ₆ N ₂ O	Increase demestic uptake of solar water heaters	Economic	Implemented	Rabata on purchase price	2006	National government (responsible ministries / departments)	2013 8.13	2929 8.32	2025	2030	8.68
Incentives for the uptake of PV systems	Energy	CO ₃ , CH ₄ , N ₂ O	Encourage electricity generation from renewable sources	Economic	Implemented	Government grant schemes	2006	National government (responsible ministries / departments)	21.39	21.49	2:	1.15 2	22.39
Grant on Purchase of micro wind turbines	Energy	CO, CH, N,O	Promotion of micro wind turbines	Economic	Implemented	A scheme for the promotion of micro wind turbines installed on domestic premise was immobed in 2006 and is still ongoing	2006	National government (responsible ministries / departments)	0.05	0.07	9	0.07	0.07
Energy savings and RES measures in state schools	Energy	CO _p CH _p , N ₂ O	Energy conservation and inclusion of renewable energy sources in the design and construction of new schools	Есевоніс	Implemented	Son pipes, double glazing, efficient lighting systems, solar water heaters, photovoltaic systems, water conservation systems	2005	National government (responsible ministries / department)	E	E		E	正
Energy taying measures in total housing	Energy	CO ₅ CH ₆ N ₅ O	Energy conservation and inclusion of renewable energy sources in the design and construction of social housing	Economic	Implemented	double glazing, wall insulation, solar water heaters, photovoltaic panels, water runoff collection and use	2004	National government (responsible ministries / department)	E	Œ		匝	Œ
Action in the public sector	Energy	CO ₃ , CH ₄ , N ₂ O	To meet Government responsibilities with report to the savironment	Information	Implemented	Create environmental awareness within ministries, promote environmentally friendly practices including energy efficienty and renewable energy	2004	National government (responsible ministries / departments)	1.15	2.82	-	1.59	2.92
Energy saving measures in government owned industry (WSC)	Energy	CO ₃ , CH ₆ , N ₂ O	Reducing energy consumptionin government owned industry	Economic	Implemented	Optimisation of reverse osmosis process, energy reduction in water transfer and distribution network, energy efficienty at Malta shippards	1991	National government (responsible ministries / departments)	39.41	19.17	19	1.76 1	19.97
Support schemes for industry, SMEs and the commercial sector	Energy	CO, CH, N ₁ O	Grant scheme to promote investments in energy efficient equipment	Economic	Implemented	ERDF Great scheme	2009	National government (responsible ministries / department)	11.66	12.55	11	1.94 1	13.08
linelligent metering	Energy	CO, CH, N,O	Automated moter reading system to provide required information for the management of low voltage networks	Regulatory	Implemented	Deployment of automated mater reading systems will increase theiff effectiveness, responsiveness and energy market transit. The eventual implementation of pre-payment and time-of-use tariffs are believed to contribute to reduction in energy demand.		Ensemble	0.00	11.41	1	1.76 1	11.89

Table 3
Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

MLT_BR1_v0.1

Name of mitigation action "	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation d	Brief description*	Start year of implementation	Implementing entity or entities	Estimate of mitigat cumulative, in i				
The introduction of Annogas	Transport	CH _b , CO _b , N _i O	LPG to used as a fuel for road vehicles	Fiscal	Implemented	The publishing of Legal Notice 393 of 2010, Autogas (Installation and Certification). Regulations under the Malin Resources Authority Act in a bid towards the introduction of autogas for vehicles on the Malines merket and to lay market regulation for retrofinning of engines. Accompaning the Legal Notice the MEA issued Codes OF Practice to guide installars on the installation of kin and engineer on the design of Autogas service stations. The first service station opened in the Ind quarter of 2012 and by the end of the year four technicisms were approved to serve as competent installars. Government is planning a to subsidize the retrofitting of vehicles.	2011	National government (responsible ministries / departments)	2015 0,42	2030 0.95	2025	0.95	2836 0.91
The introduction of a biofuel "Substitution Obligation"	Transport, Waste management wast e		The obligatory blending of biofisels by importure of transport fisels	Regulatory	Implemented	The use of biofusis up to some years ago had not resulted in a significant decrease in national GHG emissions as its use decreased from 1.75%, by energy, of discel used in road transport in 2007 to 0.68% in 2009. This triggered fite MRA to introduce a substitution obligation on all importers and/or wholesalers of pertoleum fisel used for transport. The animal mandatory substitution obligation in 2011 was 1.5% of the total energy content pertoleum place on the market. The obligations rises in intervals of 1% to reach 9.5% by 2019 and then 10% by 2020.	501.50	National government (responsible ministries / department)	28.71	54.28	5(5.44	58.38
The introduction of bioethanol in ES3 blends	Transport	CH ₄ , CO ₃ , N ₂ O	The proposed introduction of 85% bioethanol blands with petrol	Regulatory	Implemented	In order to reach the substitution obligation bio- ETBE shall have to be blended however in parallel there will be the introduction of ES3 i.e. a blend of 5.5% bioethanol to 15% conventional perrol.	NA	National government (responsible ministries / departments)	NE	NE		NE	NE
Uptake of Electrical Cars	Energy, Transport	: CH ₄ , CO ₃ , N ₂ O	The increase in the use of Electric vehicles	Regulatory	Implemented	The use of electric valueles is being promoted as an alternative means of transportation. The use and purchase of such valueles is being encouraged through (i) a decrease in their registration tax and (ii) new owners of M1 electric valueles may apply for a grant of 25% or \$4000 of the purchase price.	2011	National government (responsible ministries / departments)	-0.36	-1.56	H	1.66	-1.70
Promotion of E-working and Tele-working	Тамерет	CH _e CO _p N ₂ O	Reducing transport emissions via e- working and rele- working	Voluntary Agreement	Implemented	In 2008 a teleworking policy was published by government which took into consideration feedback received from a research project carried out together with the National Commission for the Promotion of Equality (NCPE). The purpose of this policy was to up a formal framework for the administration of Malta and the policy document outlines the general principles on which telework should be administrated in the Public Administration of Malta.	2010	National government (responsible ministries / departments)	0.55	0.66		0.66	0.66

Table 3

Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

MLT_BR1_v0.1

Name of mitigation action"	Sector(s) affected ^b	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of amplementation d	Brief description*	Start year of implementation	Implementing entity or entitles	Estimate of mitigate cumulative, or i			
Promotion of Transport Model Shift towards Public Transportion	Tranport	CH _a CO _b N ₂ O	Increase public transport use	Regulatory	Implemented	The Model thiff in the transport sector is mainly driven by the public transport selform A model white 65% from the use of private cars to use of public transport is being tregeted. Government in implementing measures to reform the public transport system as part of the new transport policy and contract has been avarded to a major instructional transport company to manage and upgrade the national but system.		National government (responsible ministries / department)	2013 16.86	2020 39.89	2025 41.63	2030 43.21
Improving Energy Efficiency in the Transport Sector to module Scrappage Schame and Licence categorization	Transport	CO, CH, N,O	Set up formal framework for administration of talework in the public administration	Fiscal	Implemented	Several actions were implemented or are being prepared e.g. vehicle scrappage scheme and registration licence reform	2008	National government (responsible ministries / departments)	0.10	0.11	9.11	0.11
Modernisation of Agricultural holdings	Agriculture	CH _b CO _b N _c O	To contribute to the promotion of sustainable rural day alopment	Economic	Implemented	The Ministry fir Resources and Rural Affairs Psying Agency lumined a project call for the agricultural sector under the European Agricultural thinks for Rural Development (EARDF) – Measure 121 – Medemainstone of Agricultural Hoddings. Farmers and enterprises suppaged in agricultural production were slightle to apply for the finds allocated and the project grant was 30% of slightle count. One of the otherseasures (sub-measure 3) slightle for finding within this call was environmental investments.	2010	National government (responsible ministries / departments)	Z	п	2	12
Nitratus Action Programma	Agriculture	CH, CO, NO	To target the contamination of both surface and ground waters from nitrates derived from both organic and inorganic fortilisers	Regulatory	Implemented	The Nitrates Action Programme has the general purpose of "techning water pollution caused or induced by nitrates from agricultural sources and preventing further such pollution." At threshold nitrate concentration of 50 mg/l is set as the mentinum pseusistible level, and the Programme limits the application of livestock mature to land in excess of 170 kg Niha'yr.	2010	National government (responsible ministries / department)	21.61	32.63	32.66	30.76
Aerial Emissions Works at Magliarb and Qortin + Capping and Extraction of Gassa from managed Landfills.	Wests menagement/west a, Emergy	CH,	Extraction of gauss from all non- hanardous wasts handfills.	Other (other)	Implemented	Ges extraction from closed waste dumps to treat odour and actious gas emissions. The works also involved the recontouring works of the landform to improve subsidity, control of emissions and acuthetic. Copying and extraction of gases from the engineered non- hanardous waste landfill. Estracted gases to be utilized for power	2008	Wastenery Ltd	30.80	33.99	37,04	39.60
Sant'Antain Mechanical Biological treatment Plant	Energy, Waste management/wast		Biological treatment of organic waste	Other (planning)	Implemented	Treatment of organic waste to obtain energy and direct waste from Landfill	2011	Wasteserv Ltd	3.37	3.18	3.27	3.30
Plant UWWTP south operation	Energy, Waste management/wast		Treatment of wastewater	Other (planning)	Implemented	Treatment of wastewater to obtain energy and reduce untreated wastewater being pumped to see	2011	National government (responsible ministries / departments)	3.82	3.60	3.70	3.74
Wastewater sludge treatment	Energy, Waste management/wast		treatment of wastewater sludge	Other (other)	Adopted	Treatment of wastewater sludge leading to a reduction of untreated sludge being placed in the landfull	2012	National government (responsible ministries / departments)	0.00	0.00	0.00	0.00

Table 3

Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of mitigation action*	Section(a) affected b	GHG(s) affected	Objective and/or activity affected	Type of matrument'	Status of implementation ^d	Brief description*	Start year of implementation	Emplementing entity or entitles	Estimate of mitigati cumulative, in k			
Establishment of new Mechanical Biological restment Plant in the North of Malta	Foregy, Waste menagement wast		Biological treatment of organic wasts (including Manure)	Other (other)	Planned	Treatment of organic waste to obtain energy and divert waste from Landfill, treatment of manners for farms to obtain energy	2015	National government (responsible ministries / departments)	2013 14.02	2029 13.57	2023 13.57	2030 13.73
Establishment of Biological treatment Plant in Gono	Energy, Waste management wast a	CH _a , CO ₃ , N ₂ O	Biological treatment of organic waste (including Mazore)	Other (planning)	Planned	Treatment of organic waste to obtain energy and direct waste from Landfill, treatment of memore for farms to obtain energy	2018	National government (responsible ministries / departments)	0.00	2.05	2.11	2.11
Establishment of a Waste to Energy Facility for the treatment of refuse derived fisel and other waste streams which cannot undergo other	Energy, Waste management/wast a		Treatment of refuse derived finel and other wasts streams which cannot undergo other treatment	Other (planning)	Adopted	Thermal treatment of waste	2011	National government (responsible ministries / departments)	0.00	-69.99	-68.92	-69.4
Large Installations in PV parks	Energy		To generate electricity from renovable energy through the installation of PV parks	Other (planning)	Planned	Education on the potential use of renewable energy sources	2021	National government (responsible ministries / departments)	0.00	0.00	0.37	0.30
Siggieuri Cattle farus	Energy, Agriculture	CH ₆ , CO ₃ , N ₂ O	the treatment of animal masses in Sigglessi.	Other (planning)	Planned	Treatment of animal manure and production of energy	2015	Private company	0.00	1.14	1.17	1.18
Supply of natural gas to feel existing and fature generating plant at DPS in 2018	Energy	CH, CO, No	Conversion of fossil final fired plants to natural gas and reduction of CO2 emissions	Economic	Planned	Once gas in available all existing generating plants at DPS will be converted to natural gas if found feasible.	2018	National government (responsible ministries / departments)	0.00	1,527.19	1,592.63	1,597.44
Future installation of a further new and efficient generating capacity of 140MW in 2020	Energy		Ensure sufficient reserve capacity, meet demand growth and further replace the loss efficient steam plant at DPS.	Economic	Planned	A further new and efficient plant (140MW) is planned in 2020 to sensor reserve capacity, meet demand and replace less efficient steam plant. It is assumed that if gas is available by 2000 this plant will be capable of operating with natural gas.		Ensemalts	Œ	Ξ	I	E
Future installation of new generating capacity in 2025	Energy	CH ₊ CO _{>} N ₁ O	To replace existing combined cycle gas turbines plant since it would have reached in end of life.	Economic	Planet	New efficient generating capacity will be required in 2025 to ruplace the combined cycle plant. It is assumed that if gas is available by 2020 (PAMS) this plant will be capable of operating with natural gas and would need to have a capacity of not less than 120MW.	2025	Esecults	E	п	E	I
Requirements on the energy performance of building regulations	Energy		Minimum Equipment Energy Performance Standards	Regulatory	Adopted	New building regulations to minimise energy consumption in newly built buildings and others that undergo major renovations.	2008	National government (responsible ministries / departments)	NE	NE	NE	NE
Energy Management Plans for Major Projects	Energy	CH _b CO ₃ N ₂ O	Energy me in buildings	Ragulatory	Adopted	Large scale residential and commercial projects are required to submit energy and water management plans as part of the application procedure for a development planning permit.	2006	National government (responsible ministries / departments)	NE	NE	NE	NE
Energy Audits for households	Energy	CH _a , CO _b , N _i O	Energy we in buildings	Regulatory	Adopted	The local electricity supplier, Ensumbs, will be providing energy sufin for households (and SMEs) in conjunction with the Ministry for Resources and Infrastructure.	2012	National government (responsible ministries / departments)	NE	NE	NE	NE

Table 3

Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

MLT_BR1_v0.1

Name of mitigation action*	Sector(s)	GHG(s) affected	Objective and/or activity affected	Type of instrument	Status of implementation ^a	Brief description*	Stars year of implementation	Implementing entity or entities	Estimate of mitigati cumulative, in k				
	872-5771.54%	363500004	5-17000348809000	20/04/2007	F-25/20/20/20/20/20		-teascondnesses	6500000	2015	2020	2025		2030
Energy Efficiency measures in the hospitality sector	Energy	CH ₄ CO ₅ N ₂ O	Energy use by hotels and restaurants	Есовонис	Adopted	Enterprises in the hospitality sector such as licemed hotels, guesthouses, hostels, mack bars and restaurants may all benefit from a loan financed by Malta Enterprise.	2011	National government (responsible ministries / departments)	NE	NE		NE	NE
Premotion of ground water heating/cooling	Energy	CH ₄ , CO ₃ , N ₂ O	Heating & Cooling in Buildings	Research	Adopted	There is growing interest in Malm on the use of groundwater for heating and cooling buildings, by means of heat exchange through a borshole system. The Malm Resources Authority issued a communiton paper in 2009 cutlining the required information and the studies necessary for the application of such an installation to be considered by the Authority.	10000	National government (responsible ministries / departments)	NE	NE		NE	NE
Premotion of CHP for Industry and large tourist complexes	Energy	CH, CO, N20	Heat use in industry	Research	Adopted	Promotion of CHP for large users who use heat in their processes	2009	National government (responsible ministries / departments)	NE	NE		NE	NE
Creation of an energy efficiency fund	Energy	CH, CO, N,O	Establishment on a sound basis energy efficiency support schemes	Economic	Adopted.	Government will ensure energy efficiency finding that will provide support for energy efficiency activates. Apart from national finding, 61 smillion from structural finals will be allocated to energy efficiency and 610 million for renewable sources of energy.	2009	National government (responsible ministries / department)	NE	NE		NE	NE
Information Campaign	Energy	CH ₄ , CO ₃ , N ₂ O	Energy efficiency	Information	Adopted	The campaign aims to target energy saving practices than previous campaigns. It aims to inform people about the options available and thus empower them to be able to take actions to reduce their energy consumption by purchasing or installing energy efficient products in their homes or offices and by choosing more sustainable modes of transport.	2006	National government (responsible ministries / department)	NE	NE		NE	NE
Revision of administrative arrangements	Energy	CH ₄ , CO ₂ , N ₂ O	Energy efficiency and renovables	Information	Adopted	Clarification of roles of entities involved in energy efficiency Envering the continuous development, refinement and implementation of energy efficiency measures and the collection of data and knowledge to support these actions.	2009	National government (responsible ministries / departments)	NE	NE		NE	NE
participation and research regarding energy saving measures	Energy	CH ₊ CO ₂ N ₂ O	Participate in and promote research relevant to the islands - such as new solar technology, marine RES.	Information	Adopted	Certain energy saving measures that are currently not yet cost effective or commercially available may have a higher potential in Malta than in other member states. Such a typical area of interest is solar cooling, given the high decand for air conditioning in residences and offices in summer in Malta. This measure will seek to keep shreast; and promote participation in, research in energy efficiency.	2007	National government (responsible ministries / departments)	NE	NE		NE	NE

Table 3

Progress in achievement of the quantified economy-wide emission reduction target: information on mitigation actions and their effects

Name of mitigation action*	Sector(s) affected ⁶	GHG(s) affected	Objective and/or activity affected	T)pc of incomment"	Status of implementation ^d	Brief description*	Start year of implementation	Implementing entity or entities	Estimate of mitigat cumulative, in			
Subsidity schemes for building envelope improvement	Energy		In order to reduce the energy consumed in households and to educate citinens on energy saving meetings in building government launched a scheme in 2006 to subsidies roof insulation on domeoric buildings.		Implemented	The roof insulation eligible under this scheme had to most the requirements of the technical guidance conservation of final, energy & matural recourses(minimum requirements on energy performance of building regulations, 2006).	2006	National government (suppossible ministries / departments)	2015	2029 0.46	2923 Q.A	2039 7 0.47
Finheries Fund	Energy	CH, CO, NO	The Malts Fisheries operational programme 2007 -13 included a component relating to modernication of fishing vorsile with the objective of lowering emissions and improving engine efficiency.	Agreement	Adopted	The target was 7 vessels (\$76kW) improved by 2015	2016	National government (responsible ministries / departments)	ΝE	NE	N	E NE
Diversion of Waste from Landfills	Waste menagement/wast e	CH,	Divert waste from landfills to other treatment options	Other (other)	Adopted	Summary measure including all emission reductions resulting in the waste sector from dissertions of waste from landfills to other treatment facilities included in PAM 28, 33, 34	2012	Notional government (responsible ministries / departments)	7.58	17.53	24.5	1 30.38
Implementation of F- grass Regulation	Industry industria I processes	HFCs, PFCs, SF ₄	Control and limit F- gas emissions from sectors such as Refrigeration and Air- conditioning		Implemented	Control through training and cartification of technical personnel and reporting of usage, ratilling and destruction.	2012	National government (responsible ministries / departments)	76.52	127.93	180.4	8 233.68
Afforestation projects in various locations in Gozo. 34U (Tree for you campaign)	Forestry/LULUC F	CO ₃	Planting of indigenous tree, forestation, increase the surface area with permanent	Voluntary Agreement	Implemented	Trees and shrubs/climbers and personnials have been planned from 2010 to date shrough a mather of different initiatives. Other planned afforestation projects will take place in 2013.	2004	National government (responsible ministries / departments)	5.42	7.48	8.3	1 8.31
					Implemented Implemented Implemented Implemented Implemented							

[&]quot; Parties should use an asteriak (*) to indicate that a mitigation action is included in the "with measures" projection.

To the extent possible, the following sectors should be used energy, transport industry industrial processes, agriculture, forestry/LULUCF, wasts management/wasts, other sectors, cross-cutting, as appropriate.

To the extent possible, the following types of instrument should be used economic, focal, voluntary agreement, regulatory, information, education, research, other

To the extent possible, the following descriptive terms should be used to report on the status of implementation implemented, adopted, planned.

^{*} Additional information may be provided on the cost of the mitigation actions and the relevant timescale.

Optional year or years deemed relevant by the Party.

V. GHG Emission Projections

Refer to Chapter 4 of the National Communication, 2014, for more detailed information.

The projections of greenhouse gas emissions and removals presented in this section reflect the state of play of mitigation policy as at the end of 2012.

Figure V-1 shows the projected aggregate effect of policies and measures discussed in the previous section when comparing the no policy ('without measures') scenario, the 'with existing measures' (or 'with measures') scenario and the 'with additional measures' scenario. The main contributing factor in the reduction of overall greenhouse gas emissions is the policies and measures that impact on emissions from the electricity generation sector (Figure V-2), either through direct influence on emissions from local electricity generation plants (e.g. fuel switching or new, more efficiency, generating plant) or measures that reduce the demand for locally generated electricity, thus leading to a reduction in emissions.

If one had to assess to what extent Malta will comply with its obligations under the Effort-Sharing Decision (ESD), the suite of policies and measures presented in this report should permit Malta to maintain greenhouse gas emissions falling within the scope of the ESD to a level below the quantified targets for the years 2013-2020, as established pursuant to that decision (Figure V-3).

CTF tables reproduced in this section:

Table 5	Summary	of kev	variables and	assumptions use	ed in the	projections	analysis:
1000	00111111011	0.10,	T GITGOTOS GITG	assoring none os	O G	projections	G11G1, 515,

- Table 6(a) Information on updated greenhouse gas projections under a 'with measures' scenario:
- Table 6(b) Information on updated greenhouse gas projections under a 'without measures' scenario;
- Table 6(c) Information on updated greenhouse gas projections under a 'with additional measures' scenario.

Table 5
Summary of key variables and assumptions used in the projections analysis^a

MLT_BR1_v0.1

Key underlying	assumptions			Historia	al h			Projected				
Assumption	Unit	1990	1995	2000	2005	2010	2011	2015	2020	2025	2030	
GDP growth rate	96			6.30	3.70	2.50	2.10	1.90	1.90	2.00	1.90	
Population	thousands			380.20	402.67	414.37	417.62	425.24	428.88	431.13	429.88	
Population growth	96			0.44	0.70	0.18	0.78	0.37	0.16	0.04	-0.12	
aParties should include key u	nderlying assumptions a	as appropriate Inte	mational oil	37.50	61.90	78.00	81.00	94.50	108.10	117.60	123.20	

^b Parties should include historical data used to develop the greenhouse gas projections reported.

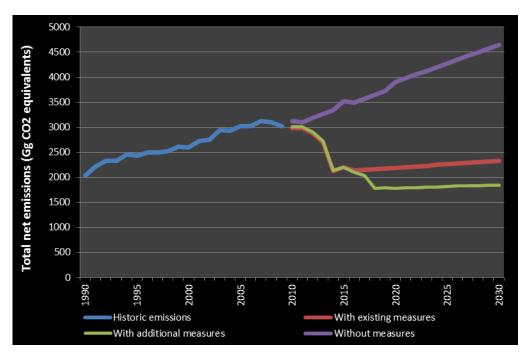


Figure V-1 Projection of the aggregated effect of policies and measures for different scenarios.

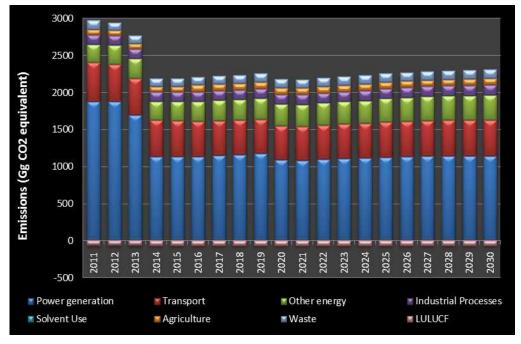


Figure V-2 Projection (with existing measures) of total emissions differentiated by sector.

Table 6(a) MLT_BR1_v0.1
Information on updated greenhouse gas projections under a 'with measures' scenario"

			GHG em	issions and re	movals*			GHG emission	projections
				(kt CO; eq)				(kt CO;	eq)
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector									
Energy						2,655.40	2,650.20	1,844.30	1,966.00
Transport						575.00	580.00	516.00	562.00
Industry industrial processes						121.90	121.90	141.70	147.10
Agriculture						78,10	71.10	85.90	83.80
Forestry LULUCF						-59.00	-60.00	-64.00	-64.00
Waste management/waste						126.20	126.20	114.50	128.10
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF						2,579.90	2,574.60	1,767.00	1,887.40
CO ₂ emissions excluding net CO ₂ from LULUCF						2,638.50	2,634.30	1,830.50	1,951.30
CH ₄ emissions including CH ₄ from LULUCF						175.33	169.45	167.55	179.39
CH4 emissions excluding CH4 from LULUCF						175.33	169.45	167.55	179.97
N ₂ O emissions including N ₂ O from LULUCF						47.33	45.34	48.13	48.12
N ₂ O emissions excluding N ₂ O from LULUCF						47.33	45.34	48.13	48.12
HFCs						118.70	118.70	134.80	140.20
PFCs						0.10	0.10	3.80	3.80
SF _n						1.60	1.60	1.60	1.60
Other (specify)									
Total with LULUCF						2,922.96	2,909.79	2,122.88	2,260.51
Total without LULUCF					II	2,981.56	2,969.49	2,186.38	2,324.99

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry

In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention,
Part II. UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a "with measures" scenario, and may
report 'without measures' and 'with additional measures' scenarios. If a Party choose to report 'without measures' and/or 'with additional
measures' scenarios they are to use tables 6(b) and/or 6(c), respectively. If a Party does not choose to report 'without measures' or 'with
additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

²⁰XX is the reporting due-date year (i.e. 2014 for the first biennial report).

In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II. UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered, energy, transport, industry, agriculture, forestry and waste management.

⁴ To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

Parties may choose to report total emissions with or without LULUCF, as appropriate.

Table 6(b) MLT_BR1_v0.1
Information on updated greenhouse gas projections under a 'without measures' scenario"

			GHG em	issions and re	movals *			GHG emission	projections
				(It CO ; eq)				(kt CO ₂	eq)
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector de									
Energy						2,655.40	2,650.20	3,363.40	3,962.50
Transport						575.00	580.00	795.00	944.00
Industry industrial processes						121.90	121.90	246.90	358.00
Agriculture						78.10	71.10	116.90	126.70
Forestry/LULUCF						-59.00	-60.00	-59.00	-59.00
Waste management/waste						126.20	126.20	174.90	196.20
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF						2,579.90	2,574.60	3,292.50	3,889.40
CO ₂ emissions excluding net CO ₂ from LULUCF						2,638.50	2,634.30	3,351.40	3,948.30
CH ₄ emissions including CH ₄ from LULUCF						175.33	169.45	244.86	272.35
CH ₄ emissions excluding CH ₄ from LULUCF						175.33	169.45	244.86	272.35
N ₂ O emissions including N ₂ O from LULUCF						47.33	45.34	60.59	66.31
N ₂ O emissions excluding N ₂ O from LULUCF						47.33	45.34	60.59	66.31
HFCs						118.70	118.70	239.90	351.10
PFCs						0.10	0.10	3.80	3.80
SF ₄				1		1.60	1.60	1.60	1.60
Other (specify)									
Total with LULUCF						2,922.96	2,909.79	3,843.25	4,584.56
Total without LULUCF						2,981.56	2,969.49	3,902.15	4,643.40

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and or 'with additional measures' scenarios they are to use tables 6(b) and/or 6(c), respectively: If a Party does not choose to report 'without measures' or 'with additional measures' or 'wit

^b Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

²⁰XX is the reporting due-date year (i.e. 2014 for the first biennial report).

In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Couvention, Part II: UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

^{*} To the extent possible, the following sectors should be used: energy, transport, industry industrial processes, agriculture, forestry LULUCF, waste management waste, other sectors (i.e. cross-cutting), as appropriate.

Parties may choose to report total emissions with or without LULUCF, as appropriate.

Table 6(c) MLT_BR1_v0.1
Information on updated greenhouse gas projections under a 'with additional measures' scenario"

			GHG em	nizzionz and re	movais*			GHG emission	projections
				(kt CO 2 eq)				(kt CO ₂	eq)
	Base year (1990)	1990	1995	2000	2005	2010	2011	2020	2030
Sector da									
Energy						2,655.40	2,650.20	1,455.40	1,544.00
Transport						575.00	580.00	516.00	562.00
Industry industrial processes						121.90	121.90	137.90	143.30
Agriculture						78.10	71.10	85.90	83.80
Forestry LULUCF						-59.00	-60.00	-64.00	-64.00
Waste management/waste						126,20	126.20	101.00	77.90
Other (specify)									
Gas									
CO ₂ emissions including net CO ₂ from LULUCF						2,579.90	2,574.60	1,333.40	1,411.00
CO ₂ emissions excluding net CO ₂ from LULUCF						2,638.50	2,634.30	1,397.00	1,474.90
CH ₄ emissions including CH ₄ from LULUCF						175.33	169.45	153.12	128.78
CH, emissions excluding CH, from LULUCF						175.33	169.45	153.12	128.78
N ₂ O emissions including N ₂ O from LULUCF						47.33	45.34	45.49	45.36
N ₂ O emissions excluding N ₂ O from LULUCF						47.33	45.34	45.49	45.36
HFCs						118.70	118.70	134.80	140.20
PFCs						0.10	0.10	3.80	3.80
SF ₆						1.60	1.60	1.60	1.60
Other (specify)									
Total with LULUCF						2,922.96	2,909.79	1,672.21	1,730.74
Total without LULUCF						2,981.56	2,969.49	1,735.81	1,794.64

Abbreviations: GHG = greenhouse gas, LULUCF = land use, land-use change and forestry.

[&]quot; In accordance with the "Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC seporting guidelines on national communications", at a minimum Parties shall report a 'with measures' scenario, and may report 'without measures' and 'with additional measures' scenarios. If a Party chooses to report 'without measures' and or 'with additional measures' scenarios then it should not include tables 6(b) or 6(c) in the biennial report.

Emissions and removals reported in these columns should be as reported in the latest GHG inventory and consistent with the emissions and removals reported in the table on GHG emissions and trends provided in this biennial report. Where the sectoral breakdown differs from that reported in the GHG inventory Parties should explain in their biennial report how the inventory sectors relate to the sectors reported in this table.

^{* 20}XX is the reporting due-date year (i.e. 2014 for the first biennial report).

In accordance with paragraph 34 of the "Guidelines for the preparation of national communications by Parties included in Annex I to the Couvention, Part II. UNFCCC reporting guidelines on national communications", projections shall be presented on a sectoral basis, to the extent possible, using the same sectoral categories used in the policies and measures section. This table should follow, to the extent possible, the same sectoral categories as those listed in paragraph 17 of those guidelines, namely, to the extent appropriate, the following sectors should be considered: energy, transport, industry, agriculture, forestry and waste management.

^{*} To the extent possible, the following sectors should be used: energy, transport, industry/industrial processes, agriculture, forestry/LULUCF, waste management/waste, other sectors (i.e. cross-cutting), as appropriate.

Parties may choose to report total emissions with or without LULUCF, as appropriate.

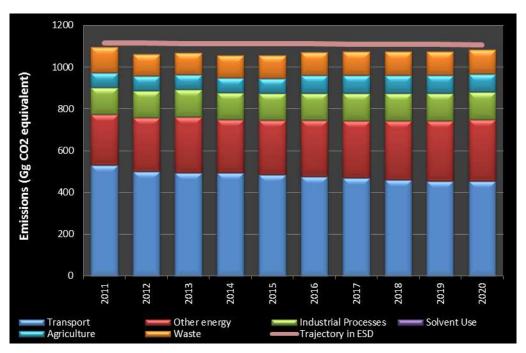


Figure V-3 Projection of emissions covered by the Effort-Sharing Decision (ESD) in relation to the linear trajectory indicated for Malta by the same decision.

VI. Provision of Financial, Technological and Capacitybuilding Support to Developing Country Parties.

Refer to Chapter 6 of the National Communication, 2014, for more detailed information.

Between 2011 and 2012 Malta contributed public funds amounting to €600,000 (\$810,810) in total under the Fast Start Finance programme. These funds were targeted at financing projects in eight developing countries, thus also contributing to the transfer of a wide array of technologies and practices that should assist in enhancing the resilience of the targeted vulnerable communities.

CTF tables reproduced in this section:

Table 7 Provision of public financial support: summary information in 2011;

Provision of public financial support: summary information in 2012;

Table 7(b) Provision of public financial support: contribution through bilateral, regional and

other channels in 2011;

Provision of public financial support: contribution through bilateral, regional and

other channels in 2012.

Table 7 Provision of public financial support: summary information in 2011a

					Yes	27"				
		Eur	opean euro - E	UR				USD b		
Allocation channels	Core/		Climate-s	pecific d		Core/		Climate-specific d		
	general*	Mitigation	Adaptation	Cross- cutting*	Other f	general"	Mitigation	Adaptation	Cross- cutting*	Other [
Total contributions through multilateral channels:	NA				NA	NA				NA
Multilateral climate change funds ^g	NA				NA	NA				NA
Other multilateral climate change funds ^a										
Multilateral financial institutions, including regional development banks	NA				NA	NA				NA
Specialized United Nations bodies	i i								T I	
Total contributions through bilateral, regional and other channels		59,818.00	50,550.00	189,632.00			80,855.99	68,328.44	256,325.57	
Total	NA	59,818.00	50,550.00	189,632.00	NA	NA	80,855.99	68,328.44	256,325.57	NA

Abbreviation: USD = United States dollars.

- Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.
- * This refers to support to multilateral institutions that Parties cannot specify as climate-specific.
- d Parties should explain in their biennial reports how they define funds as being climate-specific
- This refers to funding for activities which are cross-cutting across mitigation and adaptation.
- Please specify.
- 8 Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.
- b Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

Table 7 Provision of public financial support: summary information in 2012*

MLT_BR1_v0.1

					Yes	ır				
		Eur	opean euro - E	UR				USD b		
Allocation channels	Core/		Climate-s	pecific ^d		Core/		Climate-s	pecific ^d	
	general*	Mitigation	Adaptation	Cross- cutting	Other f	general*	Mitigation	Adaptation	Cross- cutting	$Other^f$
Total contributions through multilateral channels:	NA				NA	NA				NA
Multilateral climate change funds ⁶	NA				NA	NA				NA
Other multilateral climate change funds ^h										
Multilateral financial institutions, including regional development banks	NA				NA	NA				NA
Specialized United Nations bodies										
Total contributions through bilateral, regional and other channels		33,205.00	96,025.00	170,768.00			44,893.00	129,825.00	230,891.15	
Total	NA	33,205.00	96,025.00	170,768.00	NA	NA	44,893.00	129,825.00	230,891.15	NA

Abbreviation: USD = United States dollars.

- * Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.
- Parties should provide an explanation on methodology used for currency exchange for the information provided in table 7, 7(a) and 7(b) in the box below.
- This refers to support to multilateral institutions that Parties cannot specify as climate-specific
- ^d Parties should explain in their biennial reports how they define funds as being climate-specific.
- ^e This refers to funding for activities which are cross-cutting across mitigation and adaptation.
- f Please specify.
- # Multilateral climate change funds listed in paragraph 17(a) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.
- Other multilateral climate change funds as referred in paragraph 17(b) of the "UNFCCC biennial reporting guidelines for developed country Parties" in decision 2/CP.17.

Table 7(b)

MLT_BR1_v0.1

Provision of public financial support: contribution through bilateral, regional and other channels in 2011^a

Recipient country/ region/project/programme*	Total amount Climate-specific		Status (Funding source ^s	Financial instrument 8	Type of support to the	Sector d	Additional information*
	otal contributions through bilateral, egional and other channels	300,000.00	405,510.00					
Ethiopia / Integrated environmental intervention in Meki's rural area providing biogas, compost, soil and water conservation	18,767.00	25,367.35	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy, Agriculture, Water and sanitation	
United Republic of Tanzania / Construction of a Biogas Plant and a delivery system at Makiungu Hospital	25,000.00	33,792.50	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy	
Uganda / Rainwater Harvesting for natural resource management and sustainable development	50,550.00	68,328.44	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Adaptation	Water and sanitation	
Ethiopia / Community Managed Evironmental Sanitation and Biogas Development	32,570.00	44,024.87	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy, Water and sanitation	
Ghana / Bore-hole project for the HopexChange Health Centre in Ghana and neighbouring villages and solar water heating project	113,295.00	153,140.85	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy, Water and sanitation	
Uganda / Installation of a mini-grid as a means of establishing renewable energy sources in the Kids of Africa orphanage in Garuga/Entebbe	59,818.00	80,855.99	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Mingation	Energy	

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

[&]quot; Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

Parties should report, to the extent possible, on details contained in this table.

Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

^{*} Parties should report, as appropriate, on project details and the implementing agency.

Parties should explain in their biennial reports how they define finds as being climate-specific.

Please specify.

h Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.

Table 7(b) MLT_BR1_v0.1

Provision of public financial support: contribution through bilateral, regional and other channels in 2012a

Total amount								
Recipient country/ region/project/programme ^b	Climate-specific f		Status ^c	Funding source ⁸	Financial instrument ⁸	Type of support 8-h	Sector d	Additional information *
	European euro - EUR	USD		20				
Total contributions through bilateral, regional and other channels	299,998.00	405,609.15						
Philippines / Construction of water canals and access roads	24,334.00	32,913.09	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Water and sanitation	
Kenya / Construction of boreholes	39,500.00	53,404.00	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Adaptation	Water and sanitation	
India / Finance for Solar Lighting for two educational institutions	37,691.00	50,958.23	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy	
Madagascar / Water Harvesting Project	14,752.00	19,944.00	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Water and sanitation	
Ghana / Biogas system for the production of gas for cooking in a hospital and hospital residences	93,991.00	127,075.83	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Cross- cutting	Energy, Other (Waste management)	
Uganda / Water and food scarcity projects	56,525.00	76,421.00	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Adaptation	Water and sanitation	
Ethiopia / Environmental education, model organic farming and water harvesting	33,205.00	44,893.00	Provided	Other (Funds budget for Fast Start Finance by the Government of Malta)	Grant	Mitigation	Agriculture, Energy, Water and sanitation	

Abbreviations: ODA = official development assistance, OOF = other official flows; USD = United States dollars.

 $[^]a$ Parties should fill in a separate table for each year, namely 2011 and 2012, where 2014 is the reporting year.

 $^{^{\}it b}$ Parties should report, to the extent possible, on details contained in this table.

⁶ Parties should explain, in their biennial reports, the methodologies used to specify the funds as provided, committed and/or pledged. Parties will provide the information for as many status categories as appropriate in the following order of priority: provided, committed, pledged.

 $[^]d$ Parties may select several applicable sectors. Parties may report sectoral distribution, as applicable, under "Other".

Parties should report, as appropriate, on project details and the implementing agency.

 $^{^{}f}$ Parties should explain in their biennial reports how they define funds as being climate-specific.

⁸ Please specify.

h Cross-cutting type of support refers to funding for activities which are cross-cutting across mitigation and adaptation.