

Cyprus

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1. SUMMARY

Cyprus is a non-Annex I party signatory to the Kyoto Protocol and hence does not have emission reduction targets for 2010. However, as an EU member state, it is bound by the various environmental directives. Hence it has submitted a draft Monitoring Mechanism report under Article 3(2) of EU Decision 280/2004 EC, and a National Allocation Plan for 2008-2012 as part of the EU ETS process. This first MMS from Cyprus, submitted first in March 2007 (used 2007) and re-submitted with changes in June 2007 (used in this report), provides the first available projections data for Cyprus, since no National Communication has been submitted to the UNFCCC as yet.

Cyprus projects that its emissions will rise from 5.9 MtCO₂ eq in 1990 to 8.7 MtCO₂ eq in 2010 under the “with existing measures” scenario or 8.5 MtCO₂ eq in 2010 under the “with additional measures” scenario, representing an increase of 44.8% from 1990 levels under the “with existing measures” scenario or 47.8% under the “with additional measures” scenario. Although Cyprus does not have any emission reduction targets, it does wish to reduce its emissions. The impacts of policies and measures to be implemented by 2010 were partially quantified and estimated to provide 1.9 MtCO₂ eq savings in 2010 compared to the “business as usual” scenario. Most savings have been made in the energy and waste sector.

Although Cyprus intends to make use of the flexible mechanisms under Kyoto Protocol, there was no quantification of the impacts of this on its emission projections for 2010.

2. GHG PROJECTIONS AND PROGRESS TO KYOTO TARGETS

Cyprus does not have any individual reduction limitation commitments; the country fully supports the European Commission in leading all 27 Member States towards ambitious reductions in greenhouse gas emissions, together with the EU's leading role in the international action on climate change. Also, as a Member State of the European Union, Cyprus is now bound by the obligations set out in European Union legislation, including the Emissions Trading Directive.

Cyprus provides information based on three scenarios: WOM, WEM and WAM. Projections are given for total emissions in 2010 without measures, and then the MM provides numbers for the savings made from WEM and WAM.

Cyprus does not have a Kyoto target so progress towards it cannot be measured. To give a brief overview of how Cyprus' emissions are developing, it is worth to mention that projections for 2010 are expected to be approximately 41.3 to 44.2% above 1990 base year level. Cyprus is expected to experience slight increases in all sectors, however, the largest increase is expected in the energy sector where an increase of over 80% is expected between 1990 and 2010. After 2010 emissions are then projected to fall, because of current and additional measures, and are expected to be back down to base year level by the year 2020.

Cyprus' projections for 2010 and 2020 have significantly improved from last year as more both planned and implemented measures are now being reported.

Table 1 shows, for all gases and main sectors:

- GHG emission projections for the two scenarios "with existing measures" (WEM) and "with additional measures" (WAM), as reported by Cyprus;
- Historic emissions (in the "reference year") as reported together with projections.

For Cyprus, the reference year is 1990.

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Table 1. Summary of reported projections by sector and by gas in 2010 (Mt CO₂-eq.)

	Carbon dioxide			Methane			Nitrous oxide			F-gases			Total		
	Reference year	2010 WEM	2010 WAM	Reference year	2010 WEM	2010 WAM	Reference year	2010 WEM	2010 WAM	Reference year	2010 WEM	2010 WAM	Reference year	2010 WEM	2010 WAM
Energy (excl. transport)	3.1	NE	NE	0.0	NE	NE	0.4	NE	NE	NE	NE	NE	3.5	NE	NE
Energy supply	1.7	NE	NE	0.0	NE	NE	0.3	NE	NE	NE	NE	NE	2.0	NE	NE
Energy – industry, construction	0.8	NE	NE	0.0	NE	NE	0.0	NE	NE	NE	NE	NE	0.8	NE	NE
Energy – other (commercial, residential, agriculture)	0.6	NE	NE	0.0	NE	NE	0.0	NE	NE	NE	NE	NE	0.6	NE	NE
Transport (energy)	0.9	NE	NE	0.0	NE	NE	0.010	NE	NE	NE	NE	NE	0.9	NE	NE
Industrial processes	0.6	NE	NE	0.0	NE	NE	NE	NE	NE	NE	NE	NE	0.6	0.6	0.6
Waste	0.0	NE	NE	0.4	NE	NE	NE	NE	NE	NE	NE	NE	0.4	0.1	0.1
Agriculture	0.0	NE	NE	0.3	NE	NE	0.3	NE	NE	NE	NE	NE	0.6	0.7	0.7
Other	0.0	NE	NE	0.7	NE	NE	NE	NE	NE	NE	NE	NE	0.7	NE	NE
Total (excl. LULUCF)	4.6	8.2	8.0	1.4	0.4910	0.4910	0.7	1.1	1.1	NE	NE	NE	6.7	9.9	9.7

Key:

Reference year: 1990.

WEM: 'with existing measures' projection

WAM: 'with additional measures' projection

Source: Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007.

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Table 2 shows, for all gases and main sectors:

- 1990 GHG emissions as reported in the latest (2008) GHG emissions inventory (1990-2006);
- Adjusted GHG emission projections for the WEM and WAM scenarios. This adjustment of the projections reported in Table 1 is carried out to allow consistency and comparability between projections and the latest (2008) GHG inventory data¹.

Table 2. Summary of projections by sector and by gas in 2010 compared to 1990 emissions (MtCO₂-eq.)

	Carbon dioxide			Methane			Nitrous oxide			F-gases			Total		
	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM
Energy (excl. transport)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	4.5	NE	NE
Energy supply	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Energy – industry, construction	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Energy – other (commercial, residential, agriculture)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Transport (energy)	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
Industrial processes	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.6	0.6	0.6
Waste	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.4	0.1	0.1
Agriculture	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.6	0.7	0.7
Other	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	0.0	NE	NE
Total (excl. LULUCF)	4.6	7.3	7.1	0.7	0.4	0.4	0.7	1.0	1.0	0.0	NE	NE	6.0	8.7	8.5

Key:

WEM: 'with existing measures' projection

WAM: 'with additional measures' projection

Source: Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007. Base-year emissions from the UNFCCC website.

¹ The adjustment consists in applying an adjustment factor to projections from Table 1. This factor is the ratio between total emissions in the reference year as reported in the 2008 GHG inventory report (or, if the reference year is the base-year under the Kyoto Protocol, in the report of the review of the initial report under the Kyoto Protocol) and total emissions in the reference year as reported by the country with projections (Table 1).

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Table 3. Summary of projections by sector and by gas in 2010 compared to 1990 emissions (index 100 = 1990)

	Carbon dioxide			Methane			Nitrous oxide			F-gases			Total		
	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM	1990	2010 WEM	2010 WAM
Energy (excl. transport)	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Energy (incl. transport)	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	187.4	182.9
Energy supply	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Energy – industry, construction	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Energy – other (commercial, residential, agriculture)	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Transport (energy)	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Industrial processes	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Waste	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	99.8	99.8
Agriculture	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	27.3	27.3
Other	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE	100	NE	NE
Total (excl. LULUCF)	100	156.7	153.0	100	60.9	60.9	100	146.3	146.1	100	NE	NE	100	144.2	141.3

Key:

WEM: 'with existing measures' projection

WAM: 'with additional measures' projection

Source: Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007. Base-year emissions from the UNFCCC website.

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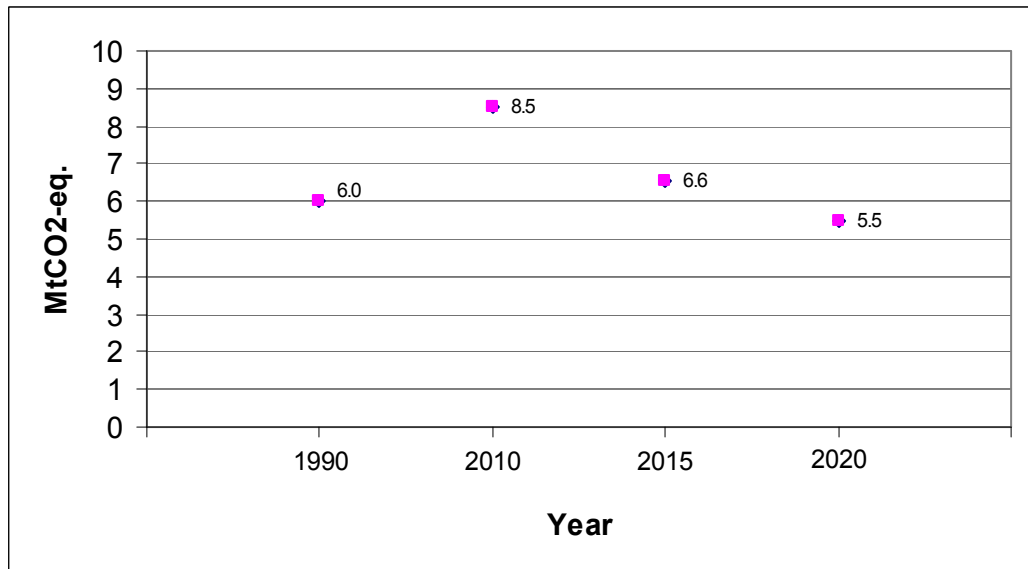
Table 4. Summary of projections in 2010 compared to base year emissions under the Kyoto Protocol

	Unit	Base-year emissions under the Kyoto Protocol	2010 projections 'with existing measures'	2010 projections 'with additional measures'
Total GHG emissions (excluding LULUCF)	Mt CO ₂ -eq.	NA	8.7	8.5
	Index (base-year emissions = 100)	100	NA	NA

Source: Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007. Base-year emissions from the UNFCCC website.

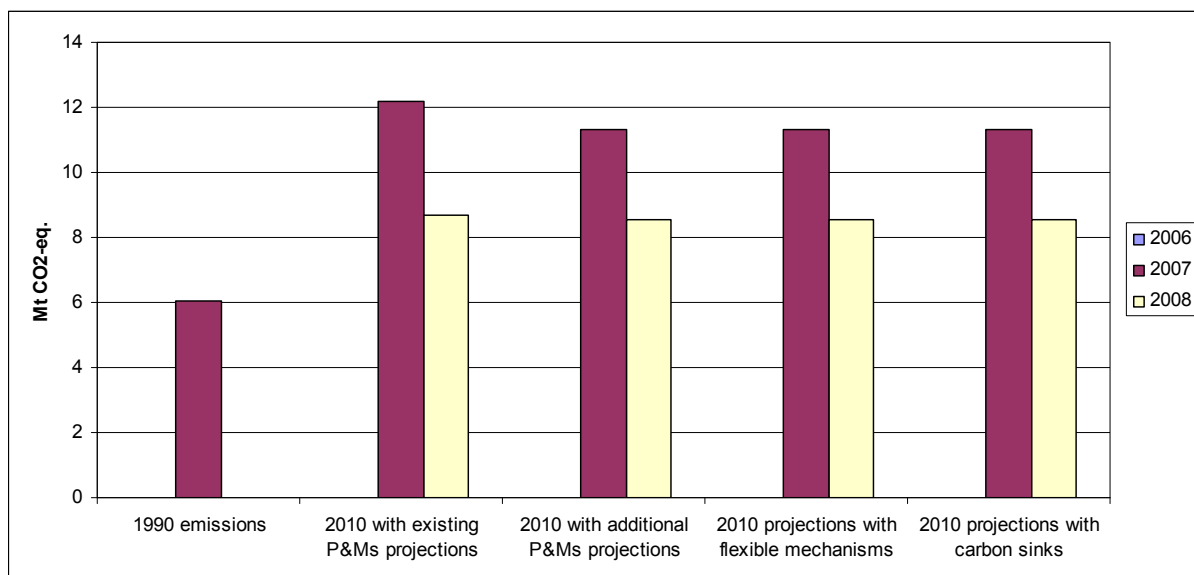
In Figure 1, the same correction factor used in Table 2 has been applied to the projections for 2010, 2015 and 2020. Figure 1 presents the “with additional measures” scenario.

Figure 1. Greenhouse gas projections in 2010, 2015 and 2020 (Mt CO₂-eq.)



Source: Cyprus’s national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007. 1990 emissions from the UNFCCC website.

Figure 2. Comparison of 2010 projections reported in 2006, 2007 and 2008



Source: 2006 data: No projections were provided for Cyprus in 2006; 2007 data: Cyprus’s national report submitted to the European Commission under the Monitoring Mechanism, Decision 280/2004/EC. Report dated March 2007; 2008 data: Cyprus’s national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007.

3. CLIMATE CHANGE MITIGATION POLICIES AND MEASURES

Cyprus only expects to experience emissions reductions in the waste sector in 2010 compared to 1990 emission levels. All other sectors are expected to show significant increases. However, as table 4 demonstrates, considerable savings are expected in the energy and waste sector, and some smaller savings are also expected in transport and industrial processes.

The policies and measures that result in the most emissions reductions are the Use of RES for electricity generation (0.713 Mt CO₂-eq) and the Use of high efficiency air conditioning systems (0.146 Mt CO₂-eq) for the energy sector. In the waste sector Methane Recovery reduces emissions by 0.478 Mt CO₂-eq, reducing total emissions to only 1/4 of the sector's base year total.

Table 5. Summary of the effect of policies and measures included in the 2010 projections (Mt CO₂-eq.)

	Top down calculation		Bottom Up calculation	
	Existing Measures	Planned Measures	Existing Measures	Planned Measures
Energy (total, excluding transport)	NE	0.2	1.1	NE
Energy supply	NE	NE	0.7	0.002
Energy – industry, construction	NE	NE	NE	NE
Energy – other (commercial, residential, agriculture)	NE	NE	0.5	NE
Transport (energy)	NE	NE	0.1	0.024
Industrial processes	NE	0.0	0.2	0.2
Waste	NE	0.0	0.5	NE
Agriculture	NE	0.0	NE	NE
Cross-sectoral	NE	0.0	NE	NE
Total (excluding LULUCF)	NE	0.2	1.9	0.2

Note: The effects of measures detailed above are calculated firstly by determining the difference between total projections in each scenario ('top down calculation') and secondly by summing the reported effect of individual measures ('bottom up calculation').

Source: Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007

Table 6. Detailed information on Existing Policies and measures

Sector	Name	Type	GHG	Status	Absolute Reduction			Costs
					[kt CO ₂ eq. p.a.]			[EUR/t]
					2005	2010	2020	
Energy consumption	Improvement of the thermal behaviour of buildings in the residential sector	Economic Regulatory Voluntary/ negotiated agreement	CO2	Implemented		72	216	
Energy consumption	Improvement of the thermal behaviour of buildings in the tertiary sector	Economic Regulatory	CO2	Implemented		46	138	
Energy consumption	Maintenance of central heating boilers	Economic Voluntary/ negotiated agreement	CO2	Implemented		3	10	
Energy consumption	Replacement of central heating boilers	Economic Voluntary/ negotiated agreement	CO2	Implemented		5	16	
Energy consumption	Use of high efficiency air conditioning systems	Economic Voluntary/ negotiated agreement	CO2	Implemented		146	437	
Energy consumption	Use of high efficiency electric appliances	Economic Voluntary/ negotiated agreement	CO2	Implemented		25	74	
Energy consumption	Use of energy-efficient lighting bulbs	Economic Voluntary/ negotiated agreement	CO2	Implemented		131	394	
Energy consumption	Automations in lighting	Information Voluntary/ negotiated agreement	CO2	Implemented		26	79	
Energy consumption	Solar collectors for water heating	Economic Voluntary/ negotiated agreement	CO2	Implemented		61	184	
Energy supply	Use of RES for electricity generation	Economic Regulatory	CO2	Implemented		713	1805	

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Energy supply	Reduction of losses from the transfer and distribution system	Regulatory	CH4 CO2	Implemented		14	41	
Energy supply Industrial Processes	Various energy conservation measures	Economic Regulatory	CO2	Implemented		40	119	
Energy supply Industrial Processes	Use of waste derived fuel	Information	CO2	Implemented		110	330	
Transport	Maintenance of cars and trucks	Regulatory	CO2	Implemented		10	31	
Transport	Promotion of small cars in urban transport	Economic Regulatory Voluntary/ negotiated agreement	CO2	Implemented		17	52	
Transport	Promotion of public transport	Information	CO2	Implemented		78	235	
Transport	Improvements in road signalling	Planning Regulatory	CO2	Implemented		11	33	
Industrial Processes Waste	Recycling	Regulatory	CO2	Implemented		20	59	
Waste	Methane recovery	Economic Regulatory	CH4 CO2	Implemented		478	932	

Source: Öko Institut, (accessed 20/06/2008), ECCP Policies and Measures database, <http://www.oeko.de/service/pam/index.php>

Table 7. Detailed information on Planned Policies and measures

Sector	Name	Type	GHG	Status	Absolute Reduction			Costs
					[kt CO ₂ eq. p.a.]			[EUR/t]
					2005	2010	2020	
Energy consumption	Roof-top photovoltaic systems connected to the electricity grid	Economic Voluntary/ negotiated agreement	CO2	Planned		2	5	

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Energy supply	All power plants to be constructed after 2011 will use natural gas	Regulatory	CO2	Planned				
Energy supply	Use of natural gas in Vassilio power station	Economic	CO2	Planned			3029	
Energy supply	Decommissioning of Moni and Dekelia power units	Regulatory	CO2	Planned				
Energy supply Industrial Processes	Promotion of Co-generation	Voluntary/ negotiated agreement	CO2	Planned		92	275	
Energy supply Industrial Processes	Promotion of natural gas for thermal uses	Economic Voluntary/ negotiated agreement	CO2	Planned		54	163	
Energy supply Industrial Processes	Promotion of solar energy	Economic Voluntary/ negotiated agreement	CO2	Planned		25	75	
Transport	Development of non-urban public transport	Regulatory	CO2	Planned		24	72	
Transport	Use of natural gas in public transport	Regulatory	CO2	Planned				

Source: Öko Institut, (accessed 19/06/2008), ECCP Policies and Measures database, <http://www.oeko.de/service/pam/index.php>

Table 8. Status of national policies and measures (PAM) in relation to European common and coordinated policies and measures (CCPM)

Status	CCPM	Sector
National policies and measures already in force before CCPM was adopted	Emissions trading 2003/87/EC	Cross-cutting
	Kyoto Protocol project mechanisms 2004/101/EC	Cross-cutting
	Integrated pollution prevention and control 96/61/EC	Cross-cutting
	Internal electricity market 2003/54/EC	Energy supply
	Promotion of electricity from RE sources 2001/77/EC	Energy supply
	Directives on energy labelling of appliances	Energy consumption
	Energy performance of buildings 2002/91/EC	Energy consumption
	Eco-management & audit scheme (EMAS) EC 761/2001	Energy consumption
	F-gas regulation (Regulation No 842/2006)	Industrial Process
	HFC emissions from air conditioning in motor vehicles 2006/40/EC	Industrial Process
	Support under CAP (1782/2003)	Agriculture
	Nitrates 91/676/EEC	Agriculture
	Landfill directive 1999/31/EC	Waste
	Packaging and packaging waste (Directive 94/62/EC, 2004/12/EC, 2005/20/EC)	Waste
Existing national policies and measures re-enforced by CCPM		
New national policies and measures implemented after CCPM was adopted	Ecodesign requirements for energy-using products 2005/32/EC	Energy consumption
Status of national policy or measure not reported		
	Promotion of cogeneration 2004/8/EC	Energy supply
	Taxation of energy products 2003/96/EC	Energy supply
	Internal market in natural gas 98/30/EC	Energy supply
	End-use efficiency and energy services 2006/32/EC	Energy consumption
	Energy-efficiency labelling for office equipment Regulation No. 2422/2001	Energy consumption
	Efficiency fluorescent lighting 2000/55/EC	Energy consumption
	Efficiency of hot water boilers 92/42/EEC	Energy consumption
	Motor challenge, voluntary EC programme	Energy consumption
	Environmental performance freight transport (Marco Polo Programme)	Transport
	Promotion of biofuels for transport 2003/30/EC	Transport
	Integrated European railway area (2 nd + 3rd Railway package) (COM(2002)18 final)	Transport
	Transport modal shift to rail 2001/12/EC etc.	Transport
	Consumer information on cars 1999/94/EC	Transport
	Agreement with car manufacturers ACEA etc.	Transport
	Support under CAP - amendment (1783/2003)	Agriculture
	Transition to rural development support No 2603/1999	Agriculture
	Agricultural production methods compatible with environment Regulation (EEC) No 2078/92	Agriculture

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Aid scheme for forestry measures in agriculture (Regulation (EEC) No 2080/92)	Agriculture
Emission by engines to power agricultural or forestry 2000/25/EC	Agriculture
Pre-accession measures for agriculture and rural development Regulation (EC) No 1268/1999	Agriculture

Source: MS responses to the CCPMs questionnaire, 2005. Personal communications.

Cyprus has been pro-active at implementing PAM, as most PAM were implemented before CCPM.

4. METADATA

Sources of information

Cyprus's national report submitted to the European Commission under Article 3(2) of the Monitoring Mechanism, Decision 280/2004/EC. Report dated June 2007.

European Climate Change Programme (ECCP), Database on Policies and Measures in Europe <http://www.oeko.de/service/pam/index.php>

Cyprus - Sensitivity Analysis. SUPPLEMENTARY INFORMATION as requested on the 29th of October 2007 for Reasoned Opinion of Infringement no. 2007/2348

EEA greenhouse gas data viewer, 2008

<http://dataservice.eea.europa.eu/PivotApp/pivot.aspx?pivotid=455>

Kyoto base-year emissions

Kyoto base-year emissions are presented throughout, except Table 1, which presents projections reference year emissions (see below). Kyoto base year emissions of greenhouse gases were calculated using 1990 emissions for carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) but emissions for fluorinated gases (SF₆, HFCs and PFCs) were not reported.

Kyoto base-year emissions have now been reviewed and set for all EEA countries.

Projections reference year emissions

Projections reference year emissions are presented in Table 1.

Projections reference year emissions are defined as projections-consistent emissions data for a given historic year, as chosen by the Member State. Inventory recalculations from year to year may mean that latest inventory data cannot be compared with projections based on older inventory data. Where such an inconsistency has arisen, MS projections have been corrected by applying the following formula, in Table 2:

Corrected projection = Reported projections * latest inventory total GHG emissions / Table 1 reported total GHG emissions for the same reference year

Quality of Reporting

Member State reporting in the sources detailed above was assessed semi-qualitatively. Scoring was attributed according to the level of detail and clarity: from 0 (representing not reported) to +++ (representing very detailed and/or clear reporting). Guidance used for this assessment included the reporting requirements laid down in:

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- EU legislation: Monitoring Mechanism (280/2004/EC) and Implementing Provisions (2005/166/EC)
- UNFCCC reporting guidelines for national communications available in English, French, Spanish (“Guidelines for the preparation of national communications by Parties included in Annex I to the Convention, Part II: UNFCCC reporting guidelines on national communications - FCCC/CP/1999/7”)

The following tables detail reporting considered to be best practice for the purposes of this assessment.

Information provided	Example of good practice
Policy names	Clear names and description provided with unique identifier.
Objectives of policies	Good description of objectives
Types of policies	Type of policy instrument specified e.g. regulatory, fiscal
Which greenhouse gases?	Specifies which gases each PAM affects
Status of Implementation	Clear for each PAM: planned, adopted, implemented, expired
Implementation body	Clear which authorities are responsible for implementation
Quantitative assessment of emission reduction effect and cost of policies	Almost all PAMs are actually quantified. Total effect of all PAMs specified. WOM projection provided.
Interaction with other national and EU level policies	Detailed discussion and analysis of policy interactions.
Measures implementing community legislation	Report details which national policies are implementing individual pieces of EU legislation.
Arrangements for flexible mechanisms	Details arrangements for use of flexible mechanisms.
Balance between domestic action and flexible mechanisms	Regarding reductions required to meet Kyoto target, details proportion to result from domestic action and flexible mechanisms.

Category of Information	Example of good practice
Projection scenarios	"With existing measures" and "with additional measures" projections required, "without measures projection" optional.
Policies included in each projection	Clear presentation of the policies included in each projections scenario.
Expressed relative to historic reference year data	Projections are presented alongside consistent historic emissions.
Starting year	Starting year and emissions used as basis for projections is detailed.
Split of projections	Projection split by all 6 gases (or F-gases together), all sectors and years
Presentation of results	Clear, both tables and graphs provided and/or used excel reporting template.
Description of methodologies	Description of approach, model and assumptions
Sensitivity analysis	Was an analysis carried out to determine the sensitivity of projections to variance in the input parameters? Are high medium and low scenarios presented?
Discussion of uncertainty	Is an uncertainty range for the projections provided?
Details of parameters and assumptions	Are parameters as required under Monitoring Mechanism

	280/2004/EC reported?
Indicators for projections	Are indicators for projections as required under Monitoring Mechanism 280/2004/EC reported?

Table 9. Information provided on policies and Kyoto flexible mechanisms

Information provided	Level of information provided	Comments
Policy names	++	Individual policies and measures not well differentiated at a detailed level
Objectives of policies	+++	Good description of objectives
Types of policies	+++	Information clear and available in Oko database
Which greenhouse gases?	+	Generally no specifies which greenhouse gases are affected
Status of Implementation	++	All policies either states as planned or implemented
Implementation body	0	Implementation body is not specified
Quantitative assessment of emission reduction effect and cost of policies	+++	Information clear and available in Oko database
Interaction with other national and EU level policies	0	Interaction not discussed
Measures implementing community legislation	0	CCPMs described in section 3 of report but no cross-reference to regional/national PAMs
Arrangements for flexible mechanisms	0	Flexible mechanisms not discussed
Balance between domestic action and flexible mechanisms	NA	Cyprus is not using flexible mechanisms

Table 1. Information provided on projections

Category of Information	Level of information provided	Comments
Projection scenarios	++	WEM, WAM and WOM scenarios are presented. Totals are there, but more detailed numbers for sectors and gases would be useful
Policies included in each projection	+++	Presentation of the policies included in the projections is clear
Expressed relative to historic reference year data	+++	Projections are presented alongside consistent historic emissions
Starting year	+++	Starting year and emissions used as basis for projections is detailed
Split of projections	+	F-gases are missing from projections. Split projections by both gas and sector would be usefule.
Presentation of results	++	Rather clear and consistent.

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Description of methodologies	++	A brief description of the model used is given, together with assumptions.
Sensitivity analysis	++	Sensitivity analysis is provided. Two scenarios are presented.
Discussion of uncertainty	0	Uncertainty range for projection is not provided
Details of parameters and assumptions	++	Some parameters are reported
Indicators for projections	++	Some indicators are reported

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Parameters for projections are presented in Table 10. Cyprus provides parameters on GDP, population, energy demand, annual degree days for space heating, operation of air conditioning months, number of households, area of crops, nitrogen from fertilizers and assumptions in the waste sector.

Table 2. Parameters for Projections

1. Mandatory parameters on projections	2005	2010	2015	2020	Units
Assumptions for general economic parameters					
GDP (value at given years or annual growth rate and base year)	5%	4%	4%	3%	
Population (value at given years or annual growth rate and base year)	1%	1%	1%	1%	
International coal prices at given years in euro per tonne or GJ (Gigajoule)	n/a	n/a	n/a	n/a	
International oil prices at given years in euro per barrel or GJ	n/a	n/a	n/a	n/a	
International gas prices at given years in euro per m3 or GJ	n/a	n/a	n/a	n/a	
Assumptions for the energy sector					
Total gross inland consumption (PJ) (split by oil, gas, coal, renewables, nuclear, other)					
Total electricity production by fuel type (oil, gas, coal, renewables, nuclear, other)					
Energy demand by sector split by fuel (delivered)	0.037	0.037	0.027	0.027	
Assumptions on weather parameters, especially heating or cooling degree days					
annual degree days for space heating	1050	1050	1050	1050	degree days
operation of air-conditioning units (months)	5	5	5	5	months
Assumptions for the industry sector					
<i>For Member States using macroeconomic models:</i>					
The share of the industrial sector in GDP and growth rate					
<i>For Member States using other models:</i>					
The production index for industrial sector					
Assumptions for the transport sector					
<i>For Member States using macroeconomic models:</i>					
The growth of transport relative to GDP					
<i>For Member States using other models:</i>					
The growth of passenger person kilometres					
The growth of freight tonne kilometres					
Assumptions for buildings (in residential and commercial or tertiary sector)					
<i>For Member States using macroeconomic models:</i>					
The level of private consumption (excluding private transport)					
The share of the tertiary sector in GDP and the growth rate					
<i>For Member States using other models:</i>					
The rate of change of floor space for tertiary buildings and dwellings	0.2%	0.2%	0.1%	0.1%	
The number of dwellings and number of employees in the tertiary sector					
change in number of persons/household/year	-0.7%	-0.7%	-0.7%	-0.7%	
Assumptions in the agriculture sector					
<i>For Member States using macroeconomic models:</i>					
The share of the agriculture sector in GDP and relative growth					
<i>For Member States using other models:</i>					
Livestock numbers by animal type (for enteric fermentation beef, cows, sheep, for manure management pigs and poultry)					

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The area of crops	-0.3%	-0.3%	-0.3%	-0.3%
Emissions factors by type of livestock for enteric fermentation and manure management (t)				
Amount of nitrogen from synthetic fertilizers (Base year 1990)		-5.0%		-20%
Assumptions in the waste sector				
Amount of material recycled	3.0%	20%		40%
Added value INDUSTRY/year	2.7%	2.7%	1.5%	1.5%
Added value SERVICES/year	5.0%	5.0%	5.0%	5.0%
Added value AGRICULTURAL SECTOR/year	2.5%	2.5%	2.0%	2.0%
Assumptions in the forestry sector				
Forest definitions				
Areas of:				
managed forests				
unmanaged forests				

2. Recommended parameters on projections	2005	2010	2015	2020	Units
Assumptions for general economic parameters					
GDP growth rates split by industrial sectors in relation to 2000					
Comparison projected data with official forecasts					
Assumptions for the energy sector					
National coal, oil and gas energy prices per sector (including taxes)					
National electricity prices per sector as above (may be model output)					
Total production of district heating by fuel type					
Assumptions for the industry sector					
Assumptions fluorinated gases:					
Aluminium production and emissions factors					
Magnesium production and emissions factors					
Foam production and emissions factors					
Stock of refrigerant and leakage rates					
<i>For Member States using macroeconomic models:</i>					
Share of GDP for different sectors and growth rates					
Rate of improvement of energy intensity (1990 = 100)					
<i>For Member States using other models:</i>					
Index of production for different sectors					
Rate of improvement or index of energy efficiency					
Assumptions for buildings (in residential and commercial / tertiary sector)					
<i>For Member States using macroeconomic models:</i>					
Share of tertiary and household sectors in GDP					
Rate of improvement of energy intensity					
<i>For Member States using other models:</i>					
Number of households					
Number of new buildings					
Rate of improvement of energy efficiency (1990 = 100)					
Assumptions for the transport sector					
<i>For Member States using econometric models:</i>					
Growth of transport relative to GDP split by passenger and freight					
Improvements in energy efficiency split by vehicle type					
Improvements in energy efficiency split by vehicle type, whole fleet/new cars					
Rate of change of modal split (passenger and freight)					
Growth of passenger road kilometres					

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Growth of passenger rail kilometres				
Growth of passenger aviation kilometres				
Growth of freight tonne kilometres on road				
Growth of freight tonne kilometres by rail				
Growth of freight tonne kilometres by navigation				
Assumptions for the agriculture sector				
<i>For Member States using econometric models:</i>				
Agricultural trade (import/export)				
Domestic consumption (e.g. milk/beef consumption)				
<i>For Member States using other models:</i>				
Development of area of crops, grassland, arable, set-aside, conversion to forests etc				
Macroeconomic assumptions behind projections of agricultural activity				
Description of livestock (e.g. by nutrient balance, output/animal production, milk production)				
Development of farming types (e.g. intensive conventional, organic farming)				
Distribution of housing/grazing systems and housing/grazing period				
Parameters of fertiliser regime:				
Details of fertiliser use (type of fertiliser, timing of application, inorganic/organic ratio)				
Volatilisation rate of ammonia, following spreading of manure on the soil				
Efficiency of manure use				
Parameters of manure management system:				
Distribution of storage facilities (e.g. with or without cover):				
Nitrogen excretion rate of manures				
Methods of application of manure				
Extent of introduction of control measures (storage systems, manure application), use of best available techniques				
Parameters related to nitrous oxide emissions from agricultural soils				
Amount of manure treatment				