

Romania

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1. SOURCES OF INFORMATION

Report by Romania for the assessment of projected progress; under Decision No 280/2004/EC on the European Parliament and of the Council concerning a mechanism for monitoring Community GHG emissions and for implementing the Kyoto Protocol, 2007 (hereinafter MMS).

Romania's Fourth National Communication on Climate Change under the United Nations Framework Convention on Climate Change, submitted in November, 2006 (hereinafter 4 NC)

Romanian National Allocation Plan for 2007 and 2008-2012 periods, Ministry of Environment and Water Management, December, 2006 (hereinafter NAP2)

Romania's Greenhouse Gas Inventory 1989-2005, National Inventory Report, March 2007, Bucharest, Romania (hereinafter NIR 2007)

ECCP Policies and Measures database, Öko Institut, 2007
<http://www.oeko.de/service/pam/index.php>

Base-year emissions

Base-year emissions of greenhouse gases are not reported in MMS. Hence in this Country Profile the base-year data quoted are taken from the NIR 2007. They equal 282.467 Mt CO₂ eq.

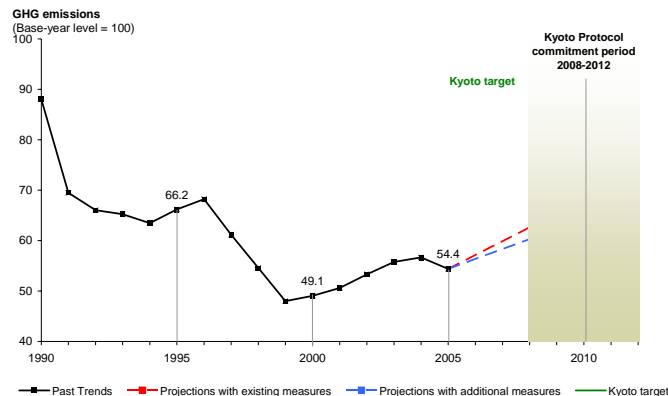
The year 1989 is chosen for emissions of all 6 gases, including fluorinated gases - hydro-fluorocarbons (HFC), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).

Base year data is not included in *The European Community's initial report under the Kyoto Protocol - Report to facilitate the calculation of the assigned amount of the European Community pursuant to Article 3, paragraphs 7 and 8 of the Kyoto Protocol (Submission to the UNFCCC Secretariat)*, EEA Technical report No 10/2006. Romania, being in the year 2006 an accession country, was not obliged to make a submission.

2. SUMMARY

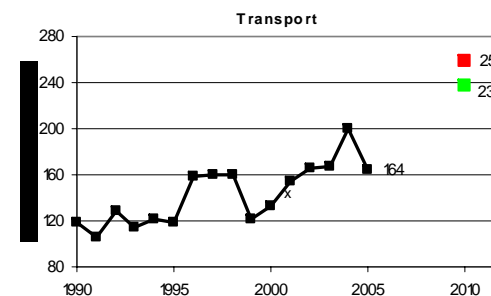
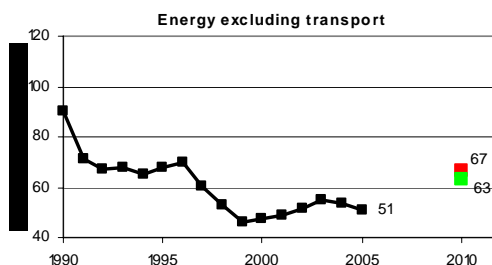
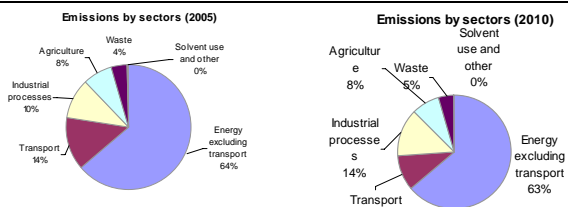
ROMANIA

Emissions base year (initial report)	282.5 Mt
Emissions 2005	153.7 Mt
Emissions base year (for projections)	282.5 Mt
Projections 2010 with existing measures	192.5 Mt
Projections 2010 with additional measures	181.4 Mt
Kyoto target (absolute, based on latest inventory)	259.9 Mt
Kyoto target (% from base year)	- 8.0 %
Change base year to 2005	- 45.6 %
Change 2004-05	- 4.0 %
Change base year to 2010 with existing measures	- 31.9 %
Change base year to 2010 with additional measures	- 35.8 %
Distance to linear target path 2005	- 39.6 index points
Use of Kyoto mechanisms	n.a.
Sinks (Articles 3.3 and 3.4)	n.a.
Emissions in 1990 (Article 3.7)	n.a.



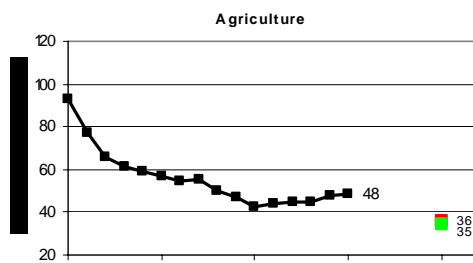
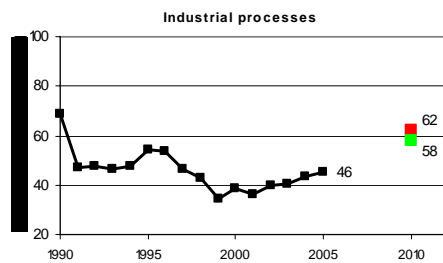
Past emissions: Romania's GHG emissions were 4.0 % below those of 2004 and 45.6 % below base-year levels (1989) in 2005. The main factors for decreasing emissions with regard to 2004 were decreases in fossil fuel combustion from energy industries and from transport. The emission decreases between the base year (1989) and 2005 — as for other new Member States — were the result of a decline of energy-inefficient heavy industry and the overall restructuring of the economy in late 1980s and early 1990s.

Emission projections: Emissions in 2005 were 14 percentage points below projections with existing measures for 2010. Romania will be far below the Kyoto target in both 'with existing measures' and 'with additional measures' projections (24 and 28 percentage points respectively).



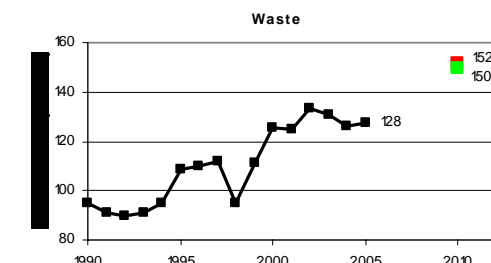
Past trends
 Projections with existing measures
 Projections with additional measures

Past trends
 Projections with existing measures
 Projections with additional measures



Past trends
 Projections with existing measures
 Projections with additional measures

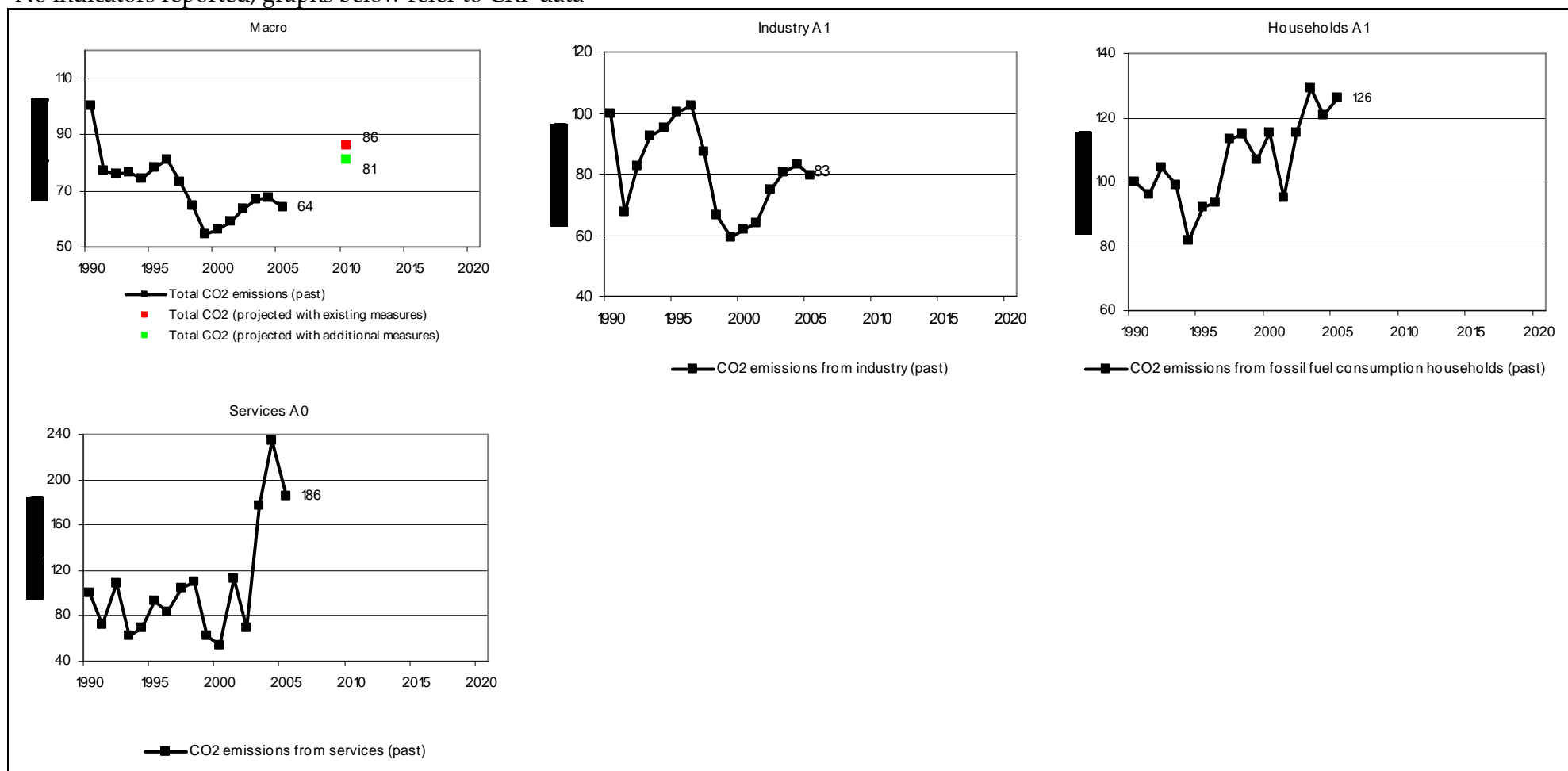
Past trends
 Projections with existing measures
 Projections with additional measures



Past trends
 Projections with existing measures
 Projections with additional measures

3. REPORTED INDICATORS

No indicators reported, graphs below refer to CRF data



4. OVERVIEW OF CCPM IMPLEMENTATION IN ROMANIA

Table 1. Information provided on the implementation of policies and measures
No information was provided by Romania.

Sector	CCPM	Status
Cross-cutting	Emissions trading 2003/87/EC	
Cross-cutting	Kyoto Protocol project mechanisms 2004/101/EC	
Cross-cutting	Integrated pollution prevention and control 96/61/EC	
Energy supply	Promotion of cogeneration 2004/8/EC	
Energy supply	Taxation of energy products 2003/96/EC	
Energy supply	Internal electricity market 2003/54/EC	
Energy supply	Promotion of electricity from RE sources 2001/77/EC	
Energy supply	Internal market in natural gas 98/30/EC	
Energy supply	Emissions from large combustion plants 88/609/EEC	
Energy consumption	Directives on energy labelling of appliances	
Energy consumption	End-use efficiency and energy services 2006/32/EC	
Energy consumption	Ecodesign requirements for energy-using products 2005/32/EC	
Energy consumption	Energy performance of buildings 2002/91/EC	
Energy consumption	Eco-management & audit scheme (EMAS) EC 761/2001	
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	
Transport	Environmental performance freight transport (Marco Polo Programme)	
Transport	Motor challenge, voluntary EC 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.	
Industrial Process	F-gas regulation (Regulation No 842/2006)	
Industrial Process	HFC emissions from air conditioning in motor vehicles 2006/40/EC	
Agriculture	Support under CAP (1782/2003)	
Agriculture	Support under CAP - amendment (1783/2003)	
Agriculture	Nitrates 91/676/EEC	
Agriculture	Transition to rural development support No 2603/1999	
Agriculture	Agricultural production methods compatible with environment Regulation (EEC) No 2078/92	
Agriculture	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	
Waste	Directive on waste 2006/12/EC	
Waste	Landfill directive 1999/31/EC	
Waste	Packaging and packaging waste (Directive 94/62/EC, 2004/12/EC, 2005/20/EC)	

Legend

New national PAM implemented after CCPM was adopted	N
Existing national PAM re-enforced by CCPM	R
National PAM already in force before CCPM was adopted	B
Not reported	

5. COMPLETENESS OF REPORTING

Table 2. Information provided on policies and measures

Information provided	Level provided	Comments
Policy names	+++	
Objective of policies	++	
Which greenhouse gases?	+++	
Status of Implementation	+	Limited information on status given
Implementation body specified	++	
Quantitative assessment of implementation	o	Impact of P&Ms is not quantified
Interaction with other P&Ms discussed	+	

Table 3. Information provided on projections

Category of Information	Level of Information Provided	Comments
Scenarios considered	+++	WOM, WM and WAM are considered in 2010, 2015 and 2020.
Expressed relative to inventory for previous years	o	
Starting year	o	Not clear from MMS. 2005 is known to be starting year from personal communications
Projections	++	
Split of projections	++	The data on the several sectors are not available.
Presentation of results	+	Comparisons with base year data are not conducted.
Description of model (level of detail, approach and assumptions)	+	
Sensitivity analysis (key inputs to model / high, central and low projections scenarios)	o	Not provided
Discussion of uncertainty	o	Not provided
Details of parameters and assumptions	+	Very limited.

6. ASSESSMENT OF POLICIES AND MEASURES

Table 4. Summary of the effect of policies and measures included in the 2010 projections (Mt CO₂-eq.)

	With measures	With additional measures
Energy (total, excluding transport)	10.5	7.1
Energy supply	NE	NE
Energy – industry, construction	NE	NE
Energy – other (commercial, residential, agriculture)	NE	NE
Transport (energy)	0.9	1.6
Industrial processes	1.4	1.8
Waste	0.3	0.1
Agriculture	1.2	0.5
Cross-sectoral	0.0	NE
Total (excluding LULUCF)	14.3	11.1

Source: MMS 2007

Table 5. Detailed information on policies and measures

Policies and measures in the "with measures" projection

Sector	Name	Objective	Type of GHG affected	Type of instrument	Status	Implementing entity	Estimated savings (MtCO ₂ -eq.)		Related CCPM
							2010	2020	
Cross-cutting	Joint Implementation	Emission reduction	CO ₂	Economic	Implemented	National Government (Ministry of the environment and water management (MEWM)) Others(Other countries)			Cross-cutting: Kyoto Protocol project mechanisms (Dir 2004/101/EC)
Cross-cutting	EU-Emission trading scheme	Reduce GHG emissions in an efficient and cost effective manner	CO ₂	Economic		National Government (Ministry of the environment and water management (MEWM))			Cross-cutting: Emissions trading scheme (Dir 2003/87/EC)
Cross-cutting	Increase Romania's participation in the "Intelligent Energy Europe" programme	Reducing the carbon intensity of production and consumption of energy and materials	CO ₂	Economic Regulatory		National Government (Ministry of Economy and Commerce (MEC) and its subordinated agencies MAI, MEWM, MTCT, and MED)			
Energy consumption	Promote cogeneration and energy efficiency in district heating	To increase energy efficiency and improve supply by creating a framework for promotion and development of high efficiency cogeneration of heat and power (CHP).	CO ₂	Economic Regulatory Education	Implemented	National Government (Ministry of Administration and Internal Affairs (MAI), Ministry of Economy and Commerce (MEC), Ministry of Environment and Water Management (MEWM), local authorities and other relevant institutions.)			Energy supply: Promotion of cogeneration (Dir 2004/8/EC)

Sector	Name	Objective	Type of GHG affected	Type of instrument	Status	Implementing entity	Estimated savings (MtCO ₂ -eq.)		Related CCPM
							2010	2020	
Energy consumption	Romanian Energy Efficiency Fund	Rational use of energy	CO ₂	Economic	Implemented				
Energy supply	Green certificate system	Increase production of renewable energy	CO ₂	Economic Regulatory					Energy supply: Electricity production from renewable energy sources (Dir 2001/77/EC)
Energy supply	Strategy for renewable energy sources	In 2010 the renewable energy will be about 11% out of consumption of the primary energy. In 2015 the rate is estimated at 11.2% • New renewable energy facilities in 2010 will have 441.5 MW installed electric energy, respectively 3 274 640 toe thermal energy • New renewable energy facilities in 2015 will have 789.0 MW installed electric energy, respectively 3 527 700 toe thermal energy	CO ₂						Energy supply: Electricity production from renewable energy sources (Dir 2001/77/EC)
Transport	Manage GHG emissions from transport	The improvement of energy efficiency in transport results in a reduction of GHG emissions from transport and of the	CO ₂	Information Education Planning	Implemented	National Government (MCTT, MEWM, and the Ministry of Administration and Internal Affairs (MAI) and other relevant in-			

Sector	Name	Objective	Type of GHG affected	Type of instrument	Status	Implementing entity	Estimated savings (MtCO ₂ -eq.)		Related CCPM
							2010	2020	
		environmental impacts.				stitutions.)			
Transport	Transport strategies	<ul style="list-style-type: none"> • Modernization of 5701 km of national roads at European standards • Modernization of 1 200 Km of railway • Increase of freight amount in the internal harbors (with 3.79 mil. tones compared with 2004) and maritime harbors (with 39.47 mil. tones compared with 2004) • Modernization of airport facilities 	CO ₂	Economic		National Government (Ministry of transport)			
Energy supply Waste	Promote energy recovery from landfills	The energy use of landfill gas would replace fossil fuels as an energy resource with the related environmental and economic benefits.	CO ₂ CH ₄	Regulatory Information Planning	Implemented	National Government (Ministry of Environment and Water Management (MEWM), Ministry of Administration and Internal Affairs (MAI), and local public authorities and other relevant institutions.)			Waste: Landfill Directive (Dir 1999/31/EC)

Policies and measures in the "with additional measures" projection

Sector	Name	Objective	Type of GHG affected	Type of instrument	Status	Implementing entity	Estimated savings (MtCO ₂ -eq.)		Related CCPM
							2010	2020	
Agriculture Forestry	National Strategic Plan for Agriculture and Rural Development for 2007-2013		CO ₂ CH ₄ N ₂ O		Planned	National Government (Ministry of Agriculture and Rural Development)			
Cross-cutting	"Redusere" database for GHG emissions reduction projects	Provide an overview of GHG reduction potentials and JI potential	CO ₂ CH ₄ N ₂ O HFC PFC SF ₆	Economic	Planned	National Government (Romanian Ministry of Environment and French Ministry) Research institutions (Price Water Cooper House)			
Energy consumption	Promote energy efficiency among energy end users	Measures reducing the carbon intensity of production and consumption of energy and materials involving the increased use of advanced technologies.	CO ₂	Regulatory	Planned	National Government (MEC, the Romanian Agency for Energy Conservation ARCE (coordination), the Ministry of Environment and Water Management (MEWM), and the Ministry of Administration and Internal Affairs (MAI) and other relevant institutions.)			Energy consumption: Energy performance of buildings (Dir 2002/91/EC)

Source: Öko Institut, (accessed June 2007), ECCP Policies and Measures database, <http://www.oeko.de/service/pam/index.php>

7. EVALUATION OF PROJECTIONS

Table 6. Summary of projections by gas in 2010 (Mt CO₂-eq.)

	Base-year	With measures	With additional measures
Carbon dioxide (excl. LULUCF)	193.9	148.7	139.5
Methane	51.4	31.0	29.5
Nitrous oxide	33.8	12.3	11.9
HFCs	NE	0.57	0.57
PFCs	3.3		
SF6	NE		
Total (excl. LULUCF)	282.5	192.5	181.4
% change relative to base year (excl. LULUCF)		-31.9%	-35.8%

Note: Base year is 1989 for all gases.

Source: Data for base year is taken from 2007 NIR. Other data is from MMS 2007.

Table 7. Summary of projections (6 gas basket) by sector in 2010 (Mt CO₂-eq.)

	Base-year	with measures	% change relative to base-year	with additional measures	% change relative to base-year
Energy (total, excluding transport)	183.6	122.5	-33%	115.4	-37%
Energy supply	NE	78.8	-	73.7	-
Energy – industry, construction	NE	28.4	-	27.2	-
Energy – other (commercial, residential, agriculture)	NE	14.9	-	14.0	-
Transport (energy)	7.3	19.0a	159%	17.4a	138%
Industrial processes	43.8	27.2	-38%	25.4	-42%
Waste	5.8	8.8	52%	8.7	50%
Agriculture	41.9	15.1	-64%	14.5	-65%
Total (excl. LULUCF)	282.5	192.5	-32%	181.4	-36%

Note: Base year is 1989 for all gases.

Source: Data for base year is taken from 2007 NIR. Other data is from MMS 2007.

^a As N₂O emissions from energy and transport are not separated, aggregated emissions of N₂O for those sectors are added to the energy sector. Therefore total energy sector emissions do not match the sum of the energy sector breakdowns. F-gases' breakdowns are also not provided and the total value is added to the industrial processes sector.

Table 8. Summary of projections by sector and by gas in 2010 (Mt CO₂-eq.) compared to base-year emissions

	Carbon dioxide			Methane			Nitrous oxide			F-gases (SF ₆ , HFCs and PFCs)		
	Base-year	With measures	With additional measures	Base-year	With measures	With additional measures	Base-year	With measures	With additional measures	Base-year	With measures	With additional measures
Energy (excl. transport)	NE	107.30	101.40	NE	14.67	13.58	NE	0.47	0.46	NE	NE	NE
Transport (energy)	NE	18.90	17.35	NE	0.07	0.07	NE	NE	NE	NE	NE	NE
Industrial processes	NE	22.44	20.79	NE	0.03	0.03	NE	4.11	3.96	NE	0.57	0.57
Waste	NE	0.01	0.01	NE	8.15	8.04	NE	0.65	0.65	NE	NE	NE
Agriculture	NE	NE	0.00	NE	8.02	7.73	NE	7.04	6.79	NE	NE	NE
Total (excl. LULUCF)	193.93	148.65	139.55	51.35	30.95	29.45	33.84	12.27	11.86	3.35	0.57	0.57

Figure 1. Share by sector of 2010 greenhouse gas emissions according to the "With existing measures" projections

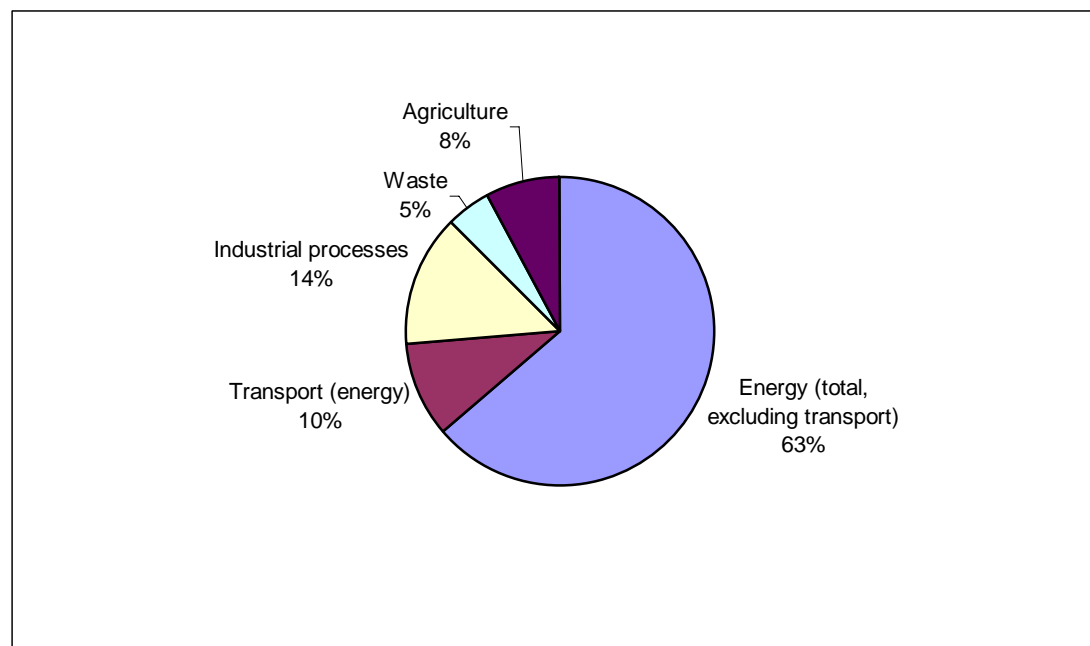


Table 9. Summary of projections (6 gas basket) in 2010, 2015 and 2020 (Mt CO₂-eq.) under "with additional measures" scenario

	Base-year*	2010	2010 % of base- year level	2015	2015 % of base- year level	2020	2020 % of base- year level
Total (excl. LULUCF)	282.5	181.4	64.2%	201.2	71.2%	222.1	78.6%

Source: Data for base year is taken from 2007 NIR. Other data is from MMS 2007.

*Base year is 1989.

Table 10. Assessment of the target (6 gas basket), with a comparison of 2010 projections in 2005, 2006 and 2007 national reports excluding LULUCF*

	Emissions in MtCO ₂ -equiv., excluding LULUCF			
	2010 projections from 2005	2010 projections from 2006	2010 projections from 2007	2010 projections from 2007, % of base year level
Base year emissions used for projections	265.1	262.3	282.5**	100%
Kyoto Commitment/burden sharing	243.9	241.3	259.9	-8.0%
With existing P&Ms projections	164.6	192.5	192.5	68.1%
Gap (-ve means overachievement of target)	-79.3	-48.8	-67.4	-23.9%
With additional P&Ms projections	158.7	181.4	181.4	64.2%
Remaining gap	-85.2	-59.9	-78.5	-27.8%
Effect of flexible mechanisms	0.0	0.0	0.0	0.0%
Remaining gap (with use of flexible mechanisms)	-85.2	-59.9	-78.5	-27.8%

Source: Data for 2005 is Progress Report submitted in February 2006, Other data is from MMS 2007 except base year 2007, which is taken from 2007 NIR.

*LULUCF will be covered in the main report, based on the questionnaire submissions

**Base year data for Romania is not reported in *The European Community's initial report under the Kyoto Protocol - Report to facilitate the calculation of the assigned amount of the European Community pursuant to Article 3, paragraphs 7 and 8 of the Kyoto Protocol (Submission to the UNFCCC Secretariat)*, EEA Technical report No 10/2006. This data is currently undergoing a review procedure by UNFCCC and is therefore subject to change.

Table 11. Comparison with projections for the trading sector (EU ETS)

The table below compares predicted CO₂ emissions from the trading sector (using NAP 2 projections) with projected WM 2010 CO₂ emissions.

	MMS 2007	NAP 2 projections	Difference in %
Energy sector	107.3 ^a	66.82	37.7
Energy sector included in EU ETS	107.3	66.82	37.7
Industry sector	22.44 ^b	17.75	20.9
Industry sector included in EU ETS	22.15 ^c	17.75	19.9
Total Energy & Industry	129.74	84.57	34.8

Energy use from industry is normally included in the energy sector for projections under the UNFCCC and is included in the industry sector for NAP 2 projections. Due to this and other differences in the sector definitions, projections for the individual sectors may not be comparable.

NAP2 projections include CO₂ emissions from the sectors mineral oil refineries, iron and steel, cement clinker, lime, glass, ceramic products, pulp and paper production.

^a MMS CO₂ emissions from the sectors Energy excluding Transport are included. As there are no fugitive emissions, this number is identical to that of the next cell.

^b MMS CO₂ emissions from the sectors Industrial processes are included.

^c MMS CO₂ emissions from the sectors Industrial processes are included (excluding Solvents and Other Product Use).

8. DESCRIPTION OF MODELLING APPROACH

The projections are based on calculations carried out using the ENPEP (Energy and Power Evaluation Program) package program, developed by Argonne National laboratory of US Department of Energy (DOE) and distributed to Romania by the International Atomic Energy Agency (IAEA). The main models used are MAED (Model for Analyses of Energy Demand), WASP (Wiener Automatic Simulation Program), BALANCE and IMPACT.

9. PROJECTION INDICATOR REPORTING

Very few indicators of the projection for monitoring have been provided.

10. REPORTING OF PARAMETERS ON PROJECTIONS

Very few parameters, including mandatory ones, for projections have been provided.

Table 12. Indicators for projections to monitor and evaluate progress with policies and measures (2005/166/EC) Annex III

No	Eurostat Sectors	Indicator	2005	2010	2015	2020	Numerator/denominator	2005	2010	2015	2020
1	Macro	CO ₂ intensity of GDP, t/Euro million		1501	1658	1184	Total CO ₂ emissions, kt		148689	164319	183359
							GDP,10 ⁹ Euro2005)	79.26	99.08	123.85	154.82
2	Transport C0	CO ₂ emissions from passenger cars, kt									
		Number of kilometres by passenger cars, Mkm									
3	Transport D0	CO ₂ emissions from freight transport (all modes), kt									
		Freight transport (all modes), Mtkm									
4	Industry A1	Energy related CO ₂ intensity of industry, t/Euro million					CO ₂ emissions from fuel consumption industry, kt				
							Gross value-added total industry, Bio Euro (EC 95)				
5	Households A1	Specific CO ₂ emissions of households, t/dwelling					CO ₂ emissions from fossil fuel consumption households, kt				
							Stock of permanently occupied dwellings, 1000				
6	Services A0	CO ₂ intensity of the services sector, t/Euro million					CO ₂ emissions from fossil fuel consumption services, kt				
							gross value-added services, bio Euro (EC95)				
7	Transformation B0	Specific CO ₂ emissions of public and autoproducer power plants, t/TJ					CO ₂ emissions from public and autoproducer thermal power stations, kt				
							all products-output by public and autoproducer thermal power stations, PJ				
8	Agriculture	Specific N ₂ O emissions of fertilizer and manure use, kg/kg					N ₂ O emissions from synthetic fertilizer and manure use, kt				
							use of synthetic fertiliser and manure, kt nitrogen				

9	Agriculture	Specific CH ₄ emissions of cattle production, kg/head					CH ₄ emissions from cattle, kt				
							cattle populations, 1000 head				
10	Waste	Specific CH ₄ emissions from landfills, kt/kt					CH ₄ emissions from landfills, kt				
							Municipal solid waste going to landfills, kt				

Table 13. List of parameters on projections (Annex IV of Implementing Provisions¹)

In case that the values are different between WOM and WM, the values of WM are used.

1. Mandatory parameters on projections	2005	2010	2015	2020
Assumptions for general economic parameters				
GDP (10 ⁹ Euro 2005)	79.26	99.08	123.85	154.82
Population (10 ⁶)	21.7	21.2	20.8	20.5
International coal prices at given years in euro per tonne or GJ (Gigajoule)				
International oil prices at given years in euro per barrel or GJ				
International gas prices at given years in euro per m3 or GJ				
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)				
Assumptions on weather parameters, especially heating or cooling degree days				
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)				

¹ Commission Decision of 10 February 2005 laying down rules implementing Decision No 280/2004/EC of the European Parliament and of the Council concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol

1. Mandatory parameters on projections	2005	2010	2015	2020
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				
The number of dwellings and number of employees in the tertiary sector				
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)				
The area of crops by crop type				
Emissions factors by type of livestock for enteric fermentation and manure management (t)				
Assumptions in the waste sector				
Waste generation per head of population or tonnes of municipal solid waste				
The organic fractions of municipal solid waste				
Municipal solid waste disposed to landfills, incinerated or composted (in tonnes or %)				
Assumptions in the forestry sector				
Forest definitions				
Areas of:				
managed forests				
unmanaged forests				

2. Recommended parameters on projections	2005	2010	2015	2020
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)				

2. Recommended parameters on projections	2005	2010	2015	2020
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)				

2. Recommended parameters on projections	2005	2010	2015	2020
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				
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				

2. Recommended parameters on projections	2005	2010	2015	2020
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				

11. COUNTRY CONCLUSIONS

Updated emission projections were provided in the recently submitted MMS. Projections are provided for 2010, 2015 and 2020.

However, several key data are not provided, including base year emissions. Data for the base year was therefore taken from the 2007 National Inventory Report and may not be fully consistent with the latest projections.

Almost all the indicators and the parameters are missing.

Romania is expected to meet the Kyoto target with significant margin even without additional measures. Additional reduction potentials, however, have been identified and if additional measures are introduced, further significant reduction is expected.