Romanian Ministry of Environment and Water Management

National Strategy on Climate Change of Romania 2005 - 2007

Foreword

Climate Change is one of the major challenges of our century - a complex area of which we still need to improve our knowledge and understanding in order to take timely and correct measures for tackling the climate change challenges in the most cost effective way, while following the precautionary principle.

Climate change affects us all. Globally, as well as at national and local levels within our own country. Just recently, we have seen in the Southern parts of Romania an increased incidence of flooding. Whether or not these are the direct result of climate change, they provide an indication of the kind of future impacts that climate change may have on our local communities.

With this Strategy, Romania takes its first steps towards a targeted and coordinated national effort to limit emissions of greenhouse gas emissions and deal with the climatic changes that are to be expected, regardless of efforts to limit emissions.

The Romanian Government wishes to consider and address the future requirements for Romania resulting from our future membership of the EU as well as from our international commitments under the UNFCCC and Kyoto Protocol, in order to prepare for the most feasible national approach both in the short, medium and long term.

The present Climate Change Strategy is the first step. It will be followed later this year by a National Action Plan on Climate Change, which will prioritize the actions needed to implement the strategy at all levels of our country. The challenge of responding to climate change will not be completed with this. Future international and European actions in this area will place new requirements on Romania and call for innovative policies and measures in the coming years. By taking early action to lower the energy and carbon intensity of our economy and preparing to adapt to inevitable climatic change, we are able to create the best possible point of departure for Romania's participation in this process. The Romanian industry has started to take the question seriously, and we believe that tackling climate change will offer our companies many new commercial opportunities.

We shall all have responsibilities for this development in the years to come. Government, business and industry, NGOs, research institutions, local government as well as individual consumers and citizens will all have to contribute. To this end, an important concern of the Government and this Strategy is to strengthen the capacity of stakeholders at all levels and ensure access to information and public participation in decision-making.

The Ministry of Environment and Water Management of Romania wishes to thank the Danish Environmental Protection Agency for providing the financial support to elaborate this strategy, and at the same time the international technical consultants that worked hard to develop the strategy.

Sulfina BARBU

Minister of Environment and Water Management

1 Introduction

National Strategy on Climate Change 2005-2007
The National Strategy on Climate Change of Romania (NSCC) outlines Romania's policies in meeting the international obligations under the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol as well as Romania's national priorities in climate change.

The NSCC also specifies the environmental and economic benefits for Romania in participating in the flexible mechanisms under the Kyoto Protocol, namely Joint Implementation (JI) and International Emissions trading (IET).

Furthermore, the main approach is established for implementing the climate change activities necessary for Romania's accession to the EU and for participating in the EU Emissions Trading Scheme.

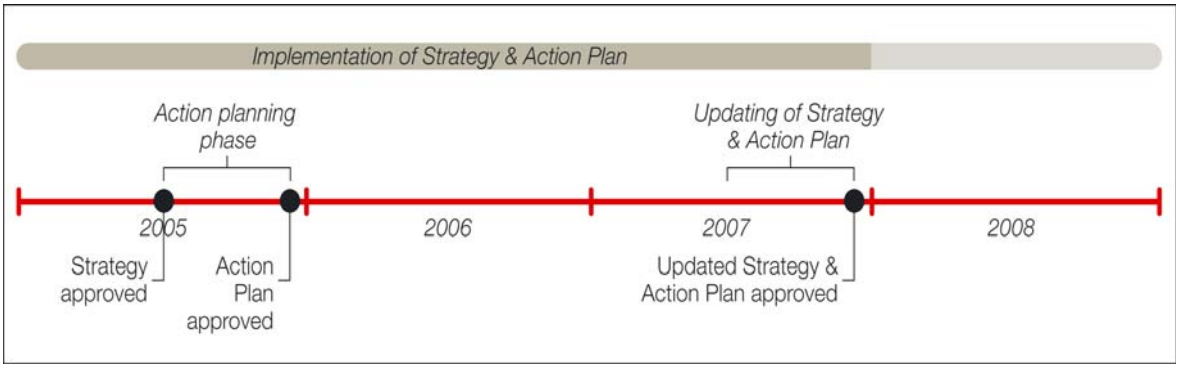
The NSCC has been developed under the responsibility of the Ministry of Environment and Water Management (MEWM) in close cooperation with other ministries through the National Commission on Climate Change (NCCC). The NSCC will form the framework for implementing Romania's climate change policies in the period 2005-2007.

The NSCC glossary is presented in the Appendix A.

National Action Plan on Climate Change
The National Action Plan on Climate Change (NAPCC) will further elaborate the individual policies and concrete measures to be developed and implemented under the NCCC.

Time frame of the NSCC
The time frame of the strategy and its specific objectives cover the period until the end of 2007. The underlying policies and activities as further defined in the NAPCC will be carried out during the same period. In the assessment of the impact of the NSCC, a longer-term perspective is taken, in particular up to the end of the first commitment period of the Kyoto Protocol in 2012. This relatively short period is adopted because the rapid changes in the national economic situation and international climate change framework, particularly with Romania's accession to the European Union, will make an update of the NSCC by 2008 necessary.

Figure 1-1: The Strategy and Action Plan process



Overview of the NSCC

Chapter 2 introduces the overall objective of the NSCC. The overall objective is further elaborated in specific objectives covering the different issues in climate change. The subsequent chapters of the NSCC address the activities required to meet the specific objectives.

Chapter 3 provides background information on the UNFCCC, the Kyoto Protocol, the policy of the European Union, and Romania's current position.

Chapter 4 addresses the development of greenhouse gas emissions estimation in Romania and the progress in meeting the emission reduction target under the Kyoto Protocol.

Chapter 5 addresses Romania's vulnerability to climate change and the approach to adapting to these impacts.

Chapter 6 establishes the policy, institutional and legislative framework for the implementation of the NSCC.

Chapter 7 elaborates the requirements under the UNFCCC and the Kyoto Protocol.

Chapter 8 addresses the implementation of the EU Directive on a European Emissions Trading Scheme in Romania.

Chapter 9 identifies the priorities for policies and measures to reduce the carbon intensity of the Romanian economy.

Chapter 10 describes the activities to incorporate climate change issues in education and research, and to increase the level of awareness and public participation of stakeholders in Romania on climate change issues.

Chapter 11 gives an overall estimation of the resources initially required for implementation of the NSCC and describes the process of elaborating the NAPCC.

2 Objectives of the Strategy

2.1 Overall objective

Romania ratified the UNFCCC by Law 24/1994 and the Kyoto Protocol by Law 3/2001. By signing and ratifying the UNFCCC and its Kyoto Protocol and adopting a GHG emissions reduction target, Romania has clearly manifested its concern for the global climate change and the political will to fulfil the commitments under the Convention.

The overall objective of the NSCC is twofold:

1. To secure compliance with Romania's commitments under the UNFCCC, the Kyoto Protocol and climate change related commitments of the EU.

2. To establish and implement the voluntary objectives and activities of Romania related to adaptation to climate change impacts, reduction of the carbon intensity of the Romanian economy and the participation in the flexible mechanisms under the Kyoto Protocol for the increase of the Romanian economy competitiveness.

2.2 Specific objectives

In order to meet the overall objective, and taking into consideration the issues listed in the previous section, the National Strategy on Climate Change of Romania has the following specific objectives. The activities required to meet these specific objectives are elaborated in the following chapters:

1 To meet the target for the level of national GHG emissions in Romania adopted under the Kyoto Protocol. In Chapter 4 it is argued that no additional activities are needed to meet this specific objective.

2 To limit the long-term economic, environmental and social costs of the impacts of climate change in Romania (Chapter 5)

3 To establish an adequate policy, legal and institutional framework allowing for the development and implementation of policies and measures in the field of climate change (Chapter 6).

4 To implement a national GHG emissions and removals assessment system in compliance with UNFCCC and EU requirements (Chapter 7)

5 To participate in flexible mechanisms under the KP (JI and IET) to the maximum benefit of the Romanian environment and economy in compliance with UNFCCC and EU regulation, and in a stable and transparent domestic policy, institutional and regulatory framework (Chapter 7).

6 To prepare the position of Romania regarding future international climate change policies and regulatory regimes post 2012 (Chapter 7)

7 To transpose and implement the directives on the EU Emissions Trading Scheme to allow the start of trading by 1.1.2007 (Chapter 8).

8 To continue implementing the existing domestic policies and measures to reduce the carbon intensity of the Romanian economy in full compliance with the EU acquis communautaire (Chapter 9).

9 To incorporate climate change issues in education and research, and to increase the level of awareness and public participation of stakeholders in decision-making in Romania on climate change issues (Chapter 10).

10 To elaborate the National Action Plan on Climate Change on the specific policies and measures to be implemented under the NSCC, to monitor progress on implementation and update the NSCC and NAPCC (Chapter 11).

3 Climate change: a global and national concern

The adverse impacts of human-induced climate change have been on the international political agenda for more than a decade. This chapter introduces the global concerns and the international actions that have been taken to address climate change.

3.1 Causes and impacts of climate change

Climate change is caused directly or indirectly by human activity that alters the composition of the global atmosphere and which is observed over comparable time periods in addition to natural climate variability. The International Panel on Climate Change (IPCC) has provided considerable scientific evidence on this. Climate variability refers to variations in the mean state and other measures (such as standard deviations, the occurrence of extremes, etc.) of the climate on all temporal and spatial scales beyond that of individual weather events. Variability may be due to natural internal processes within the climate system (internal variability), or to variations in natural or anthropogenic external forcing (external variability).

The majority of the global scientific community agrees that climate change resulting from the anthropogenic activities emitting greenhouses gases (GHGs provided by the Kyoto Protocol are CO_2, CH_4, N_2O, HFCs, PFCs and SF_6) can already be recognized. Effects are visible in the average temperature of the Earth, which has risen by around $0.6^{o}\pm0.2^{o}C$ since the beginning of monitoring (the year 1860). Other indicators are the increased melting of the ice during summers and a 10-20 cm rise of the sea level during the 20th century.

Although these occurrences might seem insignificant at first sight, the effects on everyday life can become very large. Climate change is believed to lead to a further sea level rise endangering coastal areas with erosion and floods. It will also result in more extreme weather and changes of precipitation patterns on global scale, causing floods and droughts. Furthermore, local ecosystems might change because of changed circumstances, and even global water cycles might be disturbed.

In Romania, the impacts of climate change on agriculture, forestry, water management and human settlements are a growing concern. The issue of impacts is further addressed in Chapter 5.

3.2 The United Nations Framework Convention on Climate Change

In 1992, world leaders and environmental experts from more than 200 countries convened at the Earth Summit in Rio de Janeiro to confront the global environmental crises. It was agreed to adopt the United Nations Framework Convention on Climate Change (UNFCCC) to set an overall framework for intergovernmental efforts to tackle the challenge posed by climate change. It was recognized that the climate system is a shared resource whose stability can be affected by anthropogenic emissions of carbon dioxide and other greenhouse gases.

The objective of the UNFCCC is: *"to achieve stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner."*

Romania ratified the UNFCCC by Law 24/1994 thus manifested clearly its concern for the global climate change and the political will to fulfil the commitments under the Convention.

3.3 The Kyoto Protocol to the UNFCCC

The third Conference of the Parties held in December 1997 in Kyoto, Japan, was a further step in addressing climate change from a global perspective. The emerging scientific evidences had indicated the necessity for more stringent measures for GHG mitigation. Parties to the Convention were asked to go beyond stabilizing their GHG emissions (as agreed in UNFCCC) and take on a legally binding commitment to limiting or reducing their GHG emissions by a negotiated share in the first commitment period (2008-2012). Romania signed the Kyoto Protocol in 1999 and ratified it in January 2001 by Law 3/2001 being the first UNFCCC Annex I Party to do so. The target adopted by Romania is an 8% reduction compared to the base year 1989. The Kyoto Protocol became legally binding on 16 February 2005.

The Protocol also establishes three flexible mechanisms known as Joint Implementation (JI), the Clean Development Mechanism (CDM) and International Emissions Trading (IET). These are designed to help Annex B Parties cut the cost of meeting their emissions targets by taking advantage of opportunities abroad to reduce emissions or increase GHG removals at lower cost than at home. They also provide the opportunity for host countries to secure financing for GHG emissions reduction projects.

3.4 Accession to the European Union

This Strategy is based on the assumption that Romania joins the EU on 1st of January 2007. In preparation of this, Romania is in the process of harmonizing its policies in line with the European Union as well as transposing and implementing the EU *acquis communautaire*. Climate change policy has high priority in the EU and covers a wide range of measures aiming at the reduction of GHG emissions.

The European Climate Change Programme (ECCP) consists of policies and regulations at EU level that directly or indirectly contribute to achieving the EU's GHG emission reduction target by 2008-2012 of minus 8% compared to 1990. The programme has furthermore formed the basis for the EU Emissions Trading Scheme.

The EU's 6th Environmental Action Programme sets environmental targets for 2001-2010 including a range of specific measures for tackling climate change such as: enhanced energy efficiency and energy savings; integration of climate change objectives into the Community's sector policies on transport, energy, industry, regional policy and agriculture; energy taxation; enhancement of research; and improving the access to information for citizens and business. The 6th EAP also calls for a global reduction in GHG emission of 20-40 % of 1990 levels by 2020 and a total cut of 70 % in the long term.

The institutional and financial capacity will need to be strengthened as soon as possible among all major stakeholders involved in tackling climate change problems in Romania taking into account the possible actions and schemes to be implemented under a future post-2012 regime.

4 Greenhouse gas (GHG) emissions in Romania

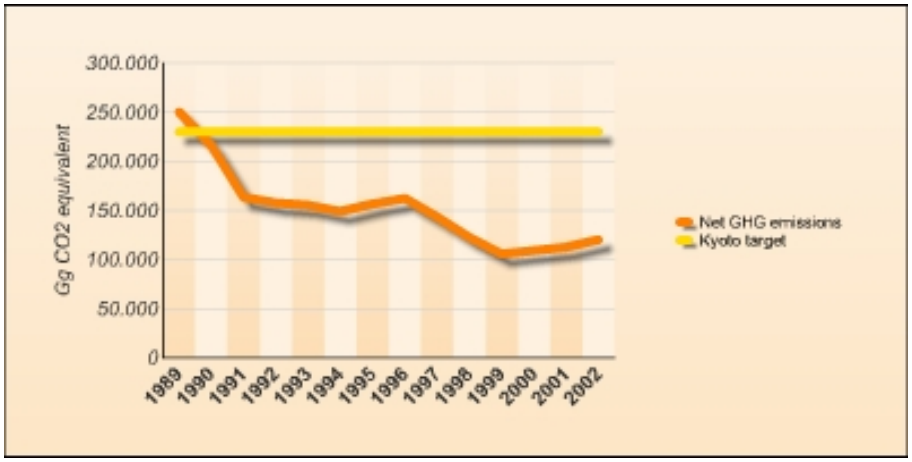
This Chapter summarises findings on the development of GHG emissions in Romania from the Third National Communication and National GHG Inventory Report 2004.

4.1 Current GHG emissions in Romania

In accordance with the provisions of the Kyoto Protocol, Romania has committed itself to reduce the greenhouse gas emissions (GHG) by 8% comparing to 1989 (base year) levels in the first commitment period 2008 - 2012. The base year for HFC, PFC, SF6 has been established as 1995. In accordance with Article 12 of the UNFCCC, Romania submitted its first National Communication (NC1) to the UNFCCC Secretariat in the year 1995, and the NC2 in 1998. NC3 was submitted in the second quarter of 2005. The latest National GHG Inventory containing Common Reporting Format (CRF) tables and the National Inventory Report for the years 1989-2002 was submitted in 2004.

Figure 4-1 shows the total GHG emissions in Romania in the period 1989-2002 compared to the target under the Kyoto Protocol.

Figure 4-1: The total net GHG emissions in CO_2 equivalent in the period 1989-2002.

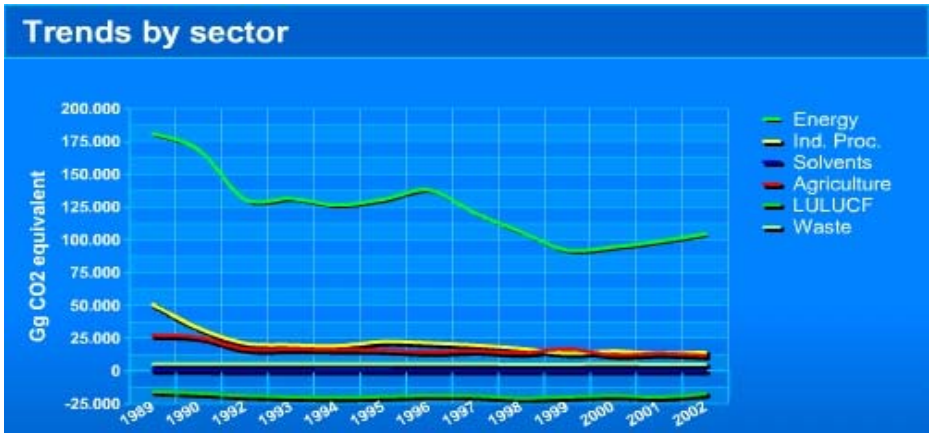


Source: "National Inventory Report 1989-2002", Ministry of Environment and Water Management and National Research and Development Institute for Environmental Protection-ICIM Bucharest, 2004

The total net GHG emissions decreased by about 50 % in 2002 compared to the reference year 1989. The decrease was mainly due to a strong decline in industrial production and the restructuring of the economy in the transition to a market economy. Finally, the commissioning of the first reactor at the Cernavoda nuclear power plant in 1996 had a significant impact on GHG emissions.

Figure 4-2 shows that the most important sector in GHG emissions in Romania during the period 1989-2002 was the Energy sector. In all sectors, except in transport, emissions have declined.

Figure 4-2: Trends in GHG emissions by sector in the period 1989-2002



Source: "National Inventory Report 1989-2002", Ministry of Environment and Water Management and National Research and Development Institute for Environmental Protection - ICIM Bucharest, 2004

The GHG inventory still needs to be further improved. Some gases and emission sources are not yet fully included, particularly for HFCs and SF6. The overall quality

of the inventory can still be substantially improved to reduce the level of uncertainty. A small upward adjustment of the emission levels can be expected as a result.

4.2 GHG emission scenarios

Policymakers in Romania require insight in the future trends in GHG emissions and in the impact of alternative policies and measures on emissions. For this purpose, scenarios have been developed for the future growth of GHG emissions in Romania to the year 2020. A series of scenarios have been developed with different assumptions about growth in GDP and a different level of implementation of domestic policies and measures reducing GHG emissions. The scenarios reported in the Third National Communication of Romania to the UNFCCC Secretariat (2005) are in accordance with the Romanian Sustainable Development Strategy "Orizont 2025". The following overall conclusions can be drawn from the scenario analyses:

- Even under an assumption of high GDP growth, GHG emissions in the 2012 will remain far below the Kyoto target. Beyond 2012, emission may continue to increase.

- GHG emissions in the base scenario grow at app. 2%/year, which is a lower growth rate than GDP growth. This is mainly the result of the assumed shift to less energy intensive economic sectors, and the fuel shift and energy efficiency improvements in the energy sector. Fossil fuel combustion in the energy sector will remain the largest source of GHG emissions, while the largest growth in emissions in relative terms can be witnessed in the transport sector.

- A substantive potential exists to further reduce the carbon intensity of the Romanian economy. The options include, among others, further fuel switch and efficiency improvements in the power sector as well as an increased share of renewable electricity production and further energy efficiency improvements in the end-use sectors of the economy. In the non-energy sectors, methane emissions from agriculture and waste sectors can be further reduced, while the sink capacity can be increased with forestation and changes of land-use. Finally, in agriculture and industry, N_2O could be reduced significantly.

- Further identification of the need for developing specific scenarios will be addressed in the NAPCC.

4.3 Important aspects of Romania's greenhouse gas emissions

Meeting the Kyoto Protocol target

The current level of GHG emissions is app. 50% below the Kyoto target. Even in a high economic growth scenario without any additional measures, it is very unlikely that emissions will increase above the level of the Kyoto Protocol's target before the end of the first commitment period (2012).

Post-2012 GHG emissions
GHG emissions may continue to grow after 2012. Increased insight in the development of emissions and the factors influencing these emissions is necessary to allow Romania to manage GHG emissions on the longer term. Also, Romania needs to prepare for future national and international policy and regulatory regimes for the period post 2012.

Decreasing the carbon intensity of economic growth
The current energy and carbon intensity of the Romanian economy is still high compared to the average in the EU. The economic growth over the coming years could cause an increase of GHG emissions in 2020 compared to 2002 of up to 40% according to the 3rd National Communication. Exploiting the large potential for decreasing the carbon intensity of economic growth remains important for the following reasons:

1 The competitiveness of the Romanian industry in the European and international market will be enhanced.

2 Romania will be better positioned in the upcoming negotiations for a future international climate change regime under the UNFCCC beyond 2012, being able to show it is already making an effort in further reducing the carbon intensity of the economy. Romania will also be better prepared for possible future obligations in the form of emission caps.

3 In the current situation of high level investments and technology turnover, a window exists to introduce energy efficiency and GHG emission reduction measures, which have a long-lasting benefit over the lifetime of the new technologies.

Potential for international emissions trading under the Kyoto Protocol
The GHG emission scenarios show that a gap of at least 50 million tons CO_2 equivalent annually is expected to remain between the total emissions in the commitment period 2008-2012 and the Kyoto target, considering the possible uncertainties in the GHG emissions inventories and projections.

Improving inventories and emission scenarios
The completeness and quality of the inventories will have to be improved over the coming years to reduce uncertainty. In particular, the insufficient data for some non-CO_2 gases (HFCs and SF6) and some source categories remains an important problem. Data collection and processing procedures for these gases need to be improved in future inventories.

Improving the quality and completeness of the scenarios for future GHG emissions in Romania also deserves much attention. The information from the scenarios is essential as an input to the policy making process in order to keep track of the impacts of the developing economy on future GHG emissions as well as to assess the impacts of alternative policies and measures.

5 Impacts, vulnerability and adaptation to climate change

5.1 Background

Changes in regional and local climatic conditions will influence ecosystems as well as man-made settlements and infrastructure. The expected shifts in temperature and precipitation patterns may result in the modification of vegetation periods and displacement of the borderline between forests and grassland. Extreme weather events (storms, floods, droughts) may appear more often and the related risks and damages may become more significant. Areas affected by dryness have increased over the last decades in Romania. The most drought-prone areas are in the Southeast of the country, but almost the entire country has been affected by prolonged droughts. Together with floods, prolonged dry periods lead to significant economic losses in agriculture, transports, energy supply, water management, health and households. Forecasts based on global climate models show that an increasing occurrence of extreme weather events is likely.

Impacts on agriculture
Over the last decade, drought- and flood-related periods have become more frequent with negative effects on crop yields, in particular on wheat and maize crop. The National Administration of Meteorology (ANM) has used different agro meteorological models to analyze the potential impacts on the yield of key agricultural crops in Romania.

Impacts on forestry
About one fourth of Romania is forested area, hosting a large number of species and ecosystems. The impact of climate change on Romanian forests has been assessed using global climate models. For lowland and hilly forest areas, a serious decrease in forest productivity is predicted after the year 2040 due to increasing temperatures and decreasing precipitation.

Impacts on water management
The hydrological consequences of increased CO_2 concentrations are significant. Modelling has been done for Romania, focusing on the main river basins. The results show the likely effects of changes in precipitation and evapo-transpiration.

Impacts on human settlements
The industrial, commercial, residential, tertiary and infrastructure sectors (including energy and water supply, transport, and waste management) are each in different ways vulnerable to climate change. The sectors are either directly affected by changes in temperature and precipitation or affected indirectly, through the general impact on the environment, natural resources, and agricultural production. The sectors most vulnerable to climate change are construction; transport; oil & gas exploitation; tourism and industries located in coastal areas. Other industries that are likely to be affected are food processing, wood processing, textile industry, biomass production and the renewable energy production.

5.2 Specific objective

The specific objective is to limit the long-term economic, environmental and social costs of the impacts of climate change impacts in Romania.

In order to limit the economic and social costs of climate change in Romania, the knowledge on impacts of climate change, vulnerability and adaptation will be increased. Based on the improved knowledge, no-regret and cost-effective precautionary adaptation policies and measures will be identified and prioritised. In the period 2005-2007, high priority policies and measures regarding adaptation will be implemented.

5.3 Key Actions

The following actions will be carried out to meet the specific objective:

1 Strengthening the cooperation between and capacity in relevant agencies and research institutions regarding assessment of the impact and vulnerability of climate change in Romania.

2 Increasing the knowledge about the ecological, economical and social consequences of climate change impacts.

3 Strengthening the subject of climate change impacts and adaptation in education curricula. This will also contribute to increased public participation in policy making in the field of climate change.

4 Improving the assessment and prioritization of adaptation policies and measures, including the economic consequences of different adaptation measures. This includes the following sectors: agriculture, water management, forestry, and human settlements.

5 Increasing the capacity to develop and implement adaptation policies and measures on the national, regional and local level, including taking adaptation into account in agriculture, forestry, water management and infrastructure

The NAPCC will identify the main policies and measures regarding the adaptation to climate change.

5.4 Expected impacts of actions on Adaptation

Increased knowledge on vulnerability and climate change impacts in Romania will support effective and cost-efficient precautionary adaptation policies. Many adaptation measures that can be taken in view of the anticipated climate change are those measures, which even in the absence of climate change impacts will prove beneficial, and adaptation measures that can be implemented at low costs.

6 Institutional, legislative and policy framework

An effective, consistent and transparent institutional, legislative and policy framework is an important condition for the implementation of a climate change policy in Romania. This chapter is partly based on the Climate Change Thematic elaborated under the project "National Capacity Self Assessment for Global Environment Management", supported by UNDP-GEF.

6.1 Specific objective

The specific objective is to establish an adequate institutional, legal and policy framework allowing for the development and implementation of policies and measures in the field of climate change.

6.2 Institutional framework

Ministry of Environment and Water Management
The responsibilities of MEWM in the field of climate change are as follows:

- MEWM is authorized to conduct activities pertaining to the implementation, coordination, control and evaluation of policies and measures related to the implementation of the UNFCCC and the Kyoto Protocol.
- MEWM has been assigned UNFCCC Focal Point and represents the Romanian Government in UNFCCC negotiations and other international meetings on climate change.
- MEWM coordinates the development, implementation and update of the NSCC and NAPCC.
- MEWM chairs the National Commission on Climate Change (NCCC).
- MEWM is in charge of transposing and implement the EU Emissions Trading Directive (2003/87/EC) and its amendment Directive 2004/101/EC, the so-called "Linking Directive".

The capacity of the MEWM in terms of available staff has been increased, particularly by establishing a new Directorate for Environmental Policies, Air Quality and Climate Change. This Directorate will coordinate and implement MEWM's activities in climate change.

National Environmental Protection Agency
The National Environmental Protection Agency (NEPA) is the central institution, which ensures the technical support for MEWM and coordinates the regional EPAs (REPA) and county-level EPAs. NEPA coordinates the elaboration, implementation and monitoring of environmental action plans at national, regional and county level, including climate change related activities.

Other ministries
The Ministry of Economy and Commerce (MEC) plays a crucial role in the implementation of the NSCC, being responsible for developing the energy and industry policies. MEC is represented in the National Commission on Climate Change (NCCC). MEC will play a leading role in the implementation of the EU ETS Directive.

The Ministries also represented in the NCCC are: Ministry of Foreign Affairs, Ministry of European Integration, Ministry of Public Finance, Ministry of National Defence, Ministry of Administration and Interior, Ministry of Agriculture, Forests and Rural Development, Ministry of Transportation, Constructions and Tourism, the Ministry of Education and Research, and Ministry of Health. Their responsibilities in developing and implementing specific policies and measures or in facilitating the implementation of these policies and measures will be established in the NAPCC.

National Commission on Climate Change (NCCC)
The NCCC was established by the Governmental Decision 1275/1996. The NCCC functions as the main advisory body to the Minister of EWM on decisions regarding climate change policy. The tasks include advisory services in connection with the approval of national communications and GHG inventories, and the approval of JI projects and emissions trading activities.

The role of the NCCC will be strengthened as an instrument of incorporating climate change considerations in other policy fields and, thus, securing the implementation of the NSCC. In addition, other relevant stakeholders, including NGOs, will be included.

Regional and local authorities
Regional and local authorities, particularly municipalities, play an important role in the implementation of local policies and measures in reducing the carbon intensity of the economy as well as in adaptation to the negative impacts of climate change. They play a vital role in areas such as urban planning, including the constructions, land use, water supply, energy and transport systems and infrastructure as well as emergency services, and will in the future need to elaborate and implement targeted climate change actions at municipal level. Also, the municipalities have a crucial role in preparing the Joint Implementation project proposals.

Research institutions
A number of research institutions currently support the government in developing and implementing climate change policies, including the following:

- The National Research and Development Institute for Environmental Protection (ICIM Bucharest)
- National Administration of Meteorology (ANM)
- Institute of Research on Forestry Management (ICAS)

The capacity of governmental institutions as well as the supporting research institutions in implementing the NSCC and the NAPCC needs to be increased, particularly in the following fields:

- National GHG assessment system and national inventories
- Research and policy making in the field of vulnerability assessment and adaptation
- Implementation of the EU ETS, particularly the National Allocation Plan and monitoring.
- Operation of the national GHG registry.
- Policy making and implementation of policies and measures on reducing the carbon intensity of the Romanian economy.

6.3 Legislative framework

Romania ratified the United Nations Framework Convention for Climate Change (UNFCCC) by Law 24/1994 and was the first Annex-I country, which ratified the Kyoto Protocol by Law 3/2001. These Acts are the only laws in Romania related directly to the climate change. Currently, in several fields, legislation includes provisions for climate change.

In recent years, key EU Directives have been transposed and implemented in Romania with a substantial impact on GHG emissions in the energy sector and others**.** New legislation on climate change issues will be introduced within the framework of the NSCC, including the following:

- Updating the GD no. 1275/1996 establishing the National Commission on Climate Change, reflecting the new mandate, participation and cooperation between the institutions
- Approving the NAPCC
- Transposing of the EU Emissions Trading Directive 2003/87/EC as amended by Directive 2004/101/EC
- Establishing the responsibilities and institutional and procedural framework for Joint Implementation
- Establishing a mechanism for international emissions trading under Article 17 of the Kyoto Protocol under a Green Investment Scheme
- Regulations on establishing a national system for GHG assessment and an emission registry (GD or MO)

6.4 Policy framework

Romania's policy in the field of environment is outlined in the *National Environmental Protection Strategy,* which also mentions climate change. The *Strategy and*

Action Plan on Air Protection further elaborates Romania's policies in improving the air quality.

The present *National Strategy on Climate Change of Romania* outlines Romania's general policy in meeting the EU and UNFCCC obligations as well as Romania's voluntary activities in the field of climate change. The *National Action Plan on Climate Change* (NAPCC) will elaborate on the goals set out in the NSCC, by identifying concrete policies and measures. The NSCC interacts with the strategies of the Romanian Government in other policy fields and, therefore, takes into account, in particular, the following documents:

- Romanian Strategy fir Sustainable Development "Horizon 2025"
- Romanian Industry Policy
- Road map for Romanian energy sector (GD 890/2003)
- National Strategy for Energy Efficiency (GD 163/2004)
- Strategy for Renewable Energy Sources Capitalization (GD 1535/2003)

In the future, it should be ensured that new national sector strategies and action plans are consistent with the NSCC, in order to efficiently integrate climate change objectives into national policies. This can be achieved inter alia by increasing the capacity at the different Ministries, and include climate change considerations in the planning process of sector strategies as well as consulting with the National Commission on Climate Change in its advisory function. The NAPCC will further elaborate this issue.

7 Implementation of the UNFCCC and Kyoto Protocol

7.1 Background

The Kyoto Protocol mandates that all UNFCCC Annex-I parties should establish a national system to estimate anthropogenic emissions for all GHGs not covered by the Montreal Protocol. Romania must submit an annual national GHG emission inventory based on the national system for the assessment of GHG emissions and regular national communications under the UNFCCC and Kyoto Protocol.

This compliance will also secure Romania's eligibility for the voluntary participation in the flexible mechanisms under the Kyoto Protocol.

Romania must also establish and maintain a national registry to track and record transactions under the flexible mechanisms and to demonstrate compliance with the Kyoto Protocol's commitments.

Finally, an analysis is needed regarding the activities in preparing Romania's position on future international policies and regulatory regime after 2012.

7.2 National GHG assessment system

7.2.1 Specific objective

The accurate assessment of GHG emissions in Romania is an essential requirement for the development of Romania's national and international climate change policy. Romania will, therefore, implement a national GHG assessment system in full compliance with UNFCCC and EU requirements.

Article 5 of the Kyoto Protocol mandates that all UNFCCC Annex-I parties should establish a national system to estimate anthropogenic emissions for all GHGs not covered by the Montreal Protocol. The system should comply with the requirements and decisions of UNFCCC and Decision 280/2004/EC on a mechanism for monitoring GHG emissions. Romania has regularly submitted annual GHG inventories, but the national system still needs to be improved.

The specific objective is, therefore, to implement the national system for GHG emissions and removals assessment in compliance with UNFCCC and EU requirements.

7.2.2 Key Actions

The following actions are needed to implement the national system for GHG assessment:

1 Introducing the legislative or administrative framework for establishing a national system for assessment of the GHG emissions. This will be done within the framework of the national system for integrated air quality assessment and management, set up by GD no. 586 /2004. The system ensures the organizational, institutional and legal framework for cooperation between authorities and public institutions that have competences in atmosphere protection and air quality assessment and management in Romania. The organisations involved in the national GHG system include, apart from MEWM, the National Environmental Protection Agency (NEPA), the National Research Institute for Environmental Protection (ICIM) and the Forest Research and Management Institute (ICAS). In addition, MEWM has signed a Memorandum with the National Institute for Statistics (NIS).

2 Establishing and regulating a system for formatting, collection, processing and presentation of data and information required for the national inventory. Particularly attention should be given to non-CO_2 gases as well as emissions and sinks in agriculture and forestry. This activity also includes the introduction of a quality assessment and control system.

3 Securing the required resources (financial, technical, human) and capacity for the timely preparation of the inventories and their submission after their internal verification and approval.

4 Establishing mechanisms and practices for the annual analysis and evaluation of the emission trends.

5 Submitting the report to the UNFCCC to demonstrate its capacity to account for its emissions and assigned amount. The compliance is subject to review by the Compliance Committee under the UNFCCC. The report should be submitted in September 2006 to allow Romania to participate in JI Track I and IET from January 2008 onwards.

7.2.3 Expected Impacts of the national system for GHG assessment

The national system for GHG assessment will provide an accurate and timely assessment of GHG emissions in Romania, the trends and the main drivers. The national system is required by the Kyoto Protocol and is one of the eligibility criteria for emissions trading (JI Track 1 and IET). As an additional advantage, the national system would allow Romania's climate policies to become more efficient and effective:

- Romania will be better positioned for the upcoming negotiations on a post-2012 climate change regime and potential new obligations, because it would be based on a better insight in future trends in GHG emissions.
- The potential for implementation of the flexible mechanisms under he Kyoto Protocol and their benefits can be better assessed.
- Domestic policies and measures to reduce the carbon intensity of the Romanian economy can be better focused to the benefit of the stakeholders involved.

7.3 Joint Implementation and International Emissions Trading

7.3.1 Background

The Kyoto Protocol has established three flexible mechanisms (JI, CDM, and IET). These were designed to help Annex B Parties cut the cost of meeting their GHG emissions targets by taking advantage of opportunities abroad to reduce emissions or increase greenhouse gas removals that are less costly than at home.

Joint Implementation
Romania has been successfully involved in Joint Implementation (JI) under the Kyoto Protocol for several years. 10 JI projects amounting to a total of 7.2 Mt CO_{2eq} emission reductions have been approved to date (June 2005)

Two different tracks can be distinguished for JI:

Track II applies if Romania is Party to the Kyoto Protocol, the assigned amount calculated, and a national registry is in place. Under Track II, international oversight under a framework of international rules and guidelines has the key role in validation and verifying the emission reductions from a JI project. Until now, all JI projects in Romania have been developed as Track II projects.

Track I allows the host country to use national guidelines for approving projects and for monitoring and verifying emission reductions. Track I allows host countries to

introduce simple and shorter procedures in comparison to JI Track II. The eligibility criteria are equal to those for IET, among which:

- Party to the Kyoto Protocol
- Assigned amount calculated
- National system in place for estimating emissions/removals
- National registry in place for tracking assigned amount
- Submission of most recent required emissions inventory

At the moment, Romania does not yet comply with these criteria. The future JI framework will be based on the following principles and assumptions:

1 The largest potential for JI projects is in the field of energy (including cogeneration, district heating systems, renewable energy and energy efficiency). Also projects in forestry are eligible.

2 The emissions reduced by the project before 2008 can be rewarded in the form of early credits (in the form of AAUs) on a case-by case basis and depending on whether project is considered to be of high importance.

3 The implementation of the EU Emissions Trading Directive (2003/87/EC) in Romania in combination with the Directive linking the EU emissions trading scheme to other trading systems and CO_2 reduction projects (2004/101/EC), in short "Linking Directive", is expected to have a large impact on the demand for ERUs from Romania.

4 Accession to the EU will reduce the number of types of potential JI projects, because new EU legislation will make some projects mandatory and, therefore, not eligible any more for JI.

Although the future potential for JI Track 2 is limited, Romania will continue to pursue Joint Implementation under Track 2 for the coming years, until becoming eligible for JI Track I and IET. The preparations for meeting the eligibility criteria and designing the internal procedures for JI Track 1 and IET are already ongoing.

International emissions trading and green investment scheme

The emission scenario analysis presented in Chapter 3 has indicated a substantive potential for Romania to sell AAUs under Article 17 of the Kyoto Protocol. Romania, therefore, also intends to become involved in international emissions trading under Article 17 of the Kyoto Protocol in the near future.

The Green Investment Scheme (GIS) is an optional instrument to secure the environmental benefits of the sales of AAUs through IET. In a GIS, the revenues are traditionally earmarked to support projects that reduce GHG emissions or have other environmental benefits. The GIS can be set up by the seller country unilaterally or in bilateral agreements between buyer and seller. The main advantage of the GIS is the flexibility in project eligibility and approval as well as the flexibility in designing financial mechanisms for project support.

Romania intends to use two flexible mechanisms under the Kyoto Protocol: JI (Track I) and IET. In additional, the larger emitters in Romania will participate in the EU Emissions Trading Scheme. The simultaneous use of the two flexible mechanisms and the EU ETS will be analysed in the future.

Clean Development Mechanism
Romania could also voluntarily participate in CDM. Given the likely compliance in the Kyoto Protocol's first commitment period (2008-2012), Romania will not use this option. This may be reconsidered in the future.

7.3.2 Specific objective

The specific objective is to secure Romania's future participation in flexible mechanisms under the Kyoto Protocol JI and IET to the maximum benefit of the Romanian environment and economy, while complying with UNFCCC and EU regulations.

7.3.3 Key Actions

Establishing a JI framework for Joint Implementation
Though initial practical procedures on JI have been adopted by the NCCC in 2004, more streamlined JI evaluation and approval procedures and project eligibility criteria need to be further developed and adopted. Also, the institutional setting and responsibilities have not yet been established. To support Romania's future JI programme under Track 1, the following activities are needed:

1 Evaluation of existing eligibility and approval procedures.

2 Drafting legislation and other regulation on JI eligibility, evaluation and approval.

3 Developing efficient and effective JI methodology.

System for international emissions trading
Romania will introduce a system for international emissions trading under Article 17 of the Kyoto Protocol, including a Green Investment Scheme. The system will be based on allocating the revenues of IET to promote GHG emission reduction investments in Romania and other project with environmental benefits. The first transfer of AAU could be in 2008, although the first revenues may be expected earlier.

7.3.4 Expected impact of JI and IET

JI and IET can secure additional sources of income for investment projects in Romania and additional sources of funding for domestic policies and measures on climate change. The additional investments that these flexible mechanisms can secure will have direct or indirect substantial positive economic and environmental impacts in Romania.

The total potential revenues of ERU sales under JI in Romania depend on the potential for JI projects. Projects producing a volume of about 7.2 Mtons CO_{2eq} in ERUs

and AAUs, corresponding to a value of approx. € 40 million, have already been contracted to date. Assuming the JI legislation and procedures for JI Track I are put in place soon, this volume could be substantially increased until the end of the first commitment period (2012).

The theoretical potential for international emissions trading of AAU under Article 17 of the Kyoto Protocol is much higher. The emission scenario analysis for the 3rd National Communication has indicated a surplus volume of AAU of at least 50M tons CO_{2eq} annually during the first commitment period.

The trading will take place under a Green Investment Scheme (GIS) and the traded volumes will, therefore, be restricted by the potential of projects that are feasible under the GIS. The potential of trading will, as a result, depend on the exact design of the GIS and the willingness of AAU buyers to invest in the Romanian GIS to support the decisions on the use of JI and GIS in sectors covered by the EU ETS.

7.4 Establishing a National Registry

As a Party included in Annex B to the Kyoto Protocol, Romania will establish a National Registry no later than December 31st, 2006. The Registry will ensure the accurate accounting of the issuance, holding, transfer, acquisition, cancellation and withdrawal of Assigned Amount Units (AAUs), removal units (RMUs), emission reduction units (ERUs), and certified emission reductions (CERs) as well as the carry-over of these units. A National Registry must be in the form of a standardized electronic database and should have similar functional specifications to financial securities registries.

The Romanian National Registry will be administrated under the supervision of the MEWM. The national registry to be established under the UNFCCC will be combined with the registry to be established under the EU Emissions Trading Directive. The specific design of the National Registry including institutional and capacity needs will be further addressed at the NAPCC stage.

7.5 Post-2012

There is general recognition that the Kyoto Protocol only represents a first step to address the climate problem, and that further actions need to be taken to reach the ultimate objective of the UNFCCC.

Within the existing EU-25, discussions are ongoing on future actions and common reduction targets as part of a possible post 2012 commitment. Several Member States have in this respect already announced national mid- and long-term climate targets.

The European Commission has in its latest communication of 2005 outlined the need for broader international participation in reducing emissions; inclusion of more sectors such as aviation, maritime transport and forestry, a push for innovation in the EU to develop climate-friendly technologies as well as more focused research and adaptation policies. Also, the EU calls for improvement of the decisions to be taken on long-term investments in the energy, transport and building infrastructure as well as con-

tinued use of the flexible instruments for reducing emissions in the EU and globally, such as the EU ETS. Lastly, a new phase of the European Climate Change Programme will be launched in 2005.

These initiatives considered among the EU member states would obviously all affect the future performance of major economic sectors of Romania. Thus, Romania will follow this development closely in order to prepare its own national position for post-2012.

8 Implementation of the EU Emissions Trading Directive

8.1 Background

The EU Directive on establishing a scheme for GHG emissions allowance trading within the Community (2003/87/EC), in short "EU Emissions Trading Directive", was adopted in 2003.

The EU ETS is not a mechanism under the Kyoto Protocol but an instrument under EU climate change policy. The EU ETS is intended to assist the EU member states in achieving their Kyoto Protocol's emission reduction targets in a cost-effective way. It has established an entity-based cap-and-trade system for GHG emissions, starting in the first phase with the CO_2 emitting industrial installations. It concerns the following sectors: combustion installations with a rated thermal input exceeding 20 MW; refineries; coke ovens; ferrous metals: pig iron or steel; mineral industry: cement, glass, ceramics; paper and pulp.

The Directive on Emissions Trading has been amended by the Directive 2004/101/EC, the so-called "Linking Directive", to recognize JI and CDM credits and allowing their use within the EU ETS.

The 1st trading period in the EU ETS started in 1st January 2005 and will run to 31st December 2007, after which the 2nd five-year trading period will start (1st January 2008-31st December 2012).

8.2 Specific objective

As future member of the EU, Romania is obliged to transpose the Directive on Emissions Trading into national legislation by the date of accession at the latest. Romania also acknowledges the potential environmental and economic benefits of EU-wide emissions trading for Romania.

The specific objective, therefore, is to implement the EU Emissions Trading Scheme and transpose all relevant EU legislation to allow the start of trading at 1st January 2007, the expected date of Romania's accession to the EU.

8.3 Key Actions

The following actions need to be carried out to achieve the specific objective:

a) Establishing the Competent Authority
The Ministry of Environment and Water Management (MEWM) is in charge of transposition and implementing the Directive and has been assigned Competent Authority.

b) Establishing the institutional and procedural arrangements.
The involvement, responsibilities and mandates of the Ministries, agencies and other institutions will be established for the different activities in implementing the EU ETS. This also includes securing the required resources (financing, staff, and expertise).

c) Drafting and adopting the 1st and the 2nd National Allocation Plan (NAP) as it is presented at paragraph (g).

d) Introducing a monitoring system
The EC Monitoring and Reporting Guidelines (MRG) as determined by the Decision of the EC of 29 January 2004 establishes the guidelines for the monitoring and reporting of GHG emissions. These MRG should be transposed in the national legislation including the establishment of the detailed monitoring protocols, assigning the responsibilities for monitoring, adopting the verification rules and procedures and the accreditation procedures for verifiers.

e) Informing the future participants in the energy sector and industry
The current level of awareness of the EU ETS is still very low. This needs to be strongly improved to secure the participation of different stakeholders in the EU ETS. The sector Ministries, particularly the Ministry of Economy and Commerce, will play an important role in this.

f) Setting up an ETS Emissions Registry
The EU Directive requires that Romania sets up an emission allowance registry system by the date of full implementation. The system should comply with UNFCCC and EU requirements. The registry will be combined with the National Registry to be established under the UNFCCC. The registry will become operational by the end of 2006.

g) National Allocation Plan
The National Allocation Plan (NAP) determines the total amount of allowances that the Romanian government intends to allocate and how it will allocate them to individual installations. Assuming a start date for trading of 1st January 2007, the 1st Romanian NAP will cover the last year of the first trading period only (2007). For the 2nd trading period, 2008-2012, the 2nd NAP should be prepared.

Both NAPs could be elaborated in parallel and presented to the EC for approval by mid 2006.

The development of the NAP includes the following activities:

- Establishing the institutional arrangements and responsibilities of the different Ministries, agencies and other institutions to be involved in the NAP (by the end of 2005). The Ministry of Economy and Commerce (MEC) is responsible for energy and industrial policy, representing the two largest sectors covered by the EU ETS. MEC will, therefore, be strongly involved in drafting the NAP.

- Elaborating the inventory of installations and companies to be covered by the EU ETS (by the end of 2005).

- Raising the awareness of future participants to the EU ETS and securing their involvement in establishing the NAP (during 2005/2006)

- Assessing the quality and availability of the emissions data, and determining the data sources to be used (by the end of 2005).

- Determining the overall system emissions cap on the national level. This concerns the total amount of allowances that is allocated to the all installations.

- Selecting the methodology for allocation, including determining the base year. The economic and environmental consequences of different methodologies will be assessed to support the selection.

- Allocating allowances to each installation in the draft 1st and 2nd NAP (by the end of the 2nd quarter of 2006). Also, an allowance reserve could be established for future new entrants and for Joint Implementation projects.

- Conducting public consultations on the draft 1st and 2nd NAP (by 2nd quarter 2006).

- Notifying the 1st and 2nd NAP to the EC (by mid 2006).

- Adopting the final 1st and 2nd NAP (by the end of 2006).

MEWM will prepare a detailed work plan including a time schedule for the elaboration of the NAP by the end of 2005.

8.4 Expected Impact of the EU ETS in Romania

The EU ETS, covering about 50% of overall GHG emissions in the EU, will strongly contribute to achieving the emissions reduction targets in EU and Member States in a cost-effective way and the movement toward the low-carbon economy of the future. In Romania, the implementation of the EU ETS would allow a large number of Romanian companies in the energy sector and industry to participate in emissions trading. Where emission reductions are realized, the participating companies can create additional revenues by selling surplus allowances on the market.

The exact impact in terms of net revenues for the Romania economy as a whole and for individual sectors cannot yet be quantified. The process of preparing the National Allocation Plan will provide important information. The NAP will carefully balance the interests of the participation Romanian companies, allowing for future economic growth, while securing the environmental integrity and avoiding over-allocation of allowances.

The administrative burden on the participating companies should be minimised as much as possible, while securing the reliability and transparency of the system.

An additional advantage of the EU ETS is that, for the first time, many Romanian companies are introduced to the issues of climate change from a business perspective, thus raising awareness on this issue.

The impact of the interaction of the EU ETS with other climate change and energy policies in Romania, such as the introduction of green certificates, still remains open and requires careful monitoring.

9 Policies and measures for reducing the carbon intensity of the Romanian economy

9.1 Background

The need for Romania to undertake mitigation measures is limited given the current GHG emission level and the expected emissions trend. Implementing domestic climate change measures are, however, also driven by other factors:

Firstly, the commitments under the UNFCCC, the Kyoto Protocol and the EU accession require a proactive approach to mitigation of greenhouse gas emissions.

Secondly, national and EU regulation require specific actions.

Finally, various climate change measures will lead directly or indirectly to an efficiency improvement and contribute to the long-term competitiveness of the Romanian

economy. The specific policies and measures will be elaborated in the National Action Plan on Climate Change.

9.2 Specific objective

Romania has already introduced several polices and measures that directly or indirectly reduced GHG emissions as a result of the transposition of the EU acquis. A substantive potential still remains to be exploited. Given the state of the Romanian economy, the focus will be on those policies and measures that require a limited contribution from the state budget only and that show economic side-benefits.

The specific objective therefore is to continue implementing the existing domestic policies and measures to reduce the carbon intensity of the Romanian economy in full compliance with the EU acquis communautaire.

9.3 Key Actions

The following activities will contribute to achieving specific objective:

1. Adopting the National Action Plan on Climate Change
The National Action Plan on Climate Change (NAPCC) will be adopted by the end of 2005 and will cover the period to the end of 2007. The NAPCC elaborates the concrete actions, including the financial sources that are required to achieve the objectives adopted in the National Strategy on Climate Change (NSCC).

2. Integrating climate change objectives in sector policies
The priority sectors for introducing policies and measures for GHG emission reduction are: the energy sector; industry; transport; waste management and landfills; and buildings. The sector impacts of policies and measures to limit GHG emissions should be considered by the responsible Ministries. For this purpose, a close cooperation between the sector Ministries and the MEWM will be set up through the NCCC. Furthermore, MEWM will support sector Ministries in improving their capacity to integrate climate change objectives in sectoral policies.

3. Increasing the financing for domestic policies and measures
New financing sources for domestic policies and measures will be identified and explored, particularly through emissions trading.

4. Identification of the most cost-effective and feasible policies and measures
On the basis of the evaluation of all available policies and measures, a selection of priority policies and measures will be made. These will be included in the NAPCC.

9.4 Expected Impact of Domestic Policies and Measures

Many policies and measures are aimed at decreasing the energy intensity of the Romanian economy. This has the following advantages:

- Improved energy efficiency will enhance the competitive position of Romanian companies in international markets.

- The Energy Roadmap stresses the importance of reduction of the energy intensity as an important measure to secure Romania's energy security.

Measures reducing the carbon intensity of production and consumption energy and materials involve the increased use of advanced technologies. These technologies often have other benefits as well, like decreasing the use of other resources, increasing production levels, or, for example, increasing property values.

The reduction of GHG emissions often goes hand-in-hand with the reduction of other negative environmental impacts, such as local air pollution from SO_2, NOx, and particles from combustion plants.

The costs and benefits of individual policies and measures will be assessed in more detail in the National Action Plan on Climate Change.

10 Education, research, and raising awareness

10.1 Background

Article 6 of the UNFCCC refers directly to education, training, public awareness, access to information and international cooperation. The public awareness about climate change needs significant further enhancement, although the private sector, industry associations, and individual industrial facilities are becoming increasingly interested in climate change issues in Romania.

10.2 Specific objective

Climate change is a cross cutting issue that must be integrated in policies, plans, and projects in many different sectors. This requires a high level of knowledge and awareness about climate change in public institutions, private sector and among the general public. Specific effort is needed on the implementation of the Kyoto Protocol, particularly as regards participation by industry in Joint Implementation projects and emissions trading.

The specific objective therefore is to incorporate climate change issues in education and research, and to increase the level of awareness and public participation of stakeholders in Romania on climate change issues.

10.3 Key Actions

1. Education

Regarding the education an action plan for education, training and public awareness on climate change issues will be developed. This will include the elaboration of specific training programmes and preparation of curricula on climate change for schools and universities, as well as elaboration of training and information materials.

2. Research
In terms of *scientific research and development*, methodological "best practices" must be established that are to:

- identify or develop approaches and methodologies for assessment of the impacts of climate change policies and measures
- improve methodologies for emissions forecasting and scenarios;
- enhance methodologies for GHG emissions inventories and
- strengthen impact assessment, including risk assessment and risk management, and assessment of possibilities for adaptation.

3. Awareness Raising
Another important field of action is to introduce *public awareness raising* campaigns on climate change for relevant stakeholders such as the national government, the business community, environmental NGOs, and the media. These can range from general information activities to targeted information campaigns aimed at e.g. industry participating in Joint Implementation related activities or emissions trading under the EU ETS.

Increased awareness will also increase the level of public participation in policy making in climate change. Implementation of climate change policies involves and affects the public sector, business and households, and they require public understanding and participation in order to succeed. The Government of Romania will therefore make an effort to ensure strong public participation in policy making and implementation through early involvement of stakeholders and relevant groups.

4. Public Participation in Decision Making
A number of provisions in the UNFCCC and the Kyoto Protocol as well as requirements in the EU contain specific rules for the role and rights of civil society.

Although this approach varies, there are a number of requirements and procedures defined for public participation in decision-making, including the approval process for JI projects.

10.4 Expected Impact

Romania will benefit from all of the above actions to increase the capacity and knowledge of stakeholder groups within the field of climate change:

An improved scientific basis for climate change policy and increased co-operation between the scientific community and policy makers will increase the efficiency and effectiveness of those policies.

Increased public awareness, education and public participation in decision making will facilitate the implementation of those measures that require the active support of stakeholders in society.

11 Implementation and updating of the NSCC

11.1 Resources required for implementing the National Strategy on Climate Change

The following categories of resource requirements have been identified:

- Necessary institutional capacity in terms of staff with the Ministry of Environment and Water Management (MEWM), other Ministries and implementing agencies, and supporting institutions.

- Required expertise of the staff of MEWM, of other Ministries, implementing agencies, and supporting institutions.

- Institutional capacity in terms of necessary cooperation and establishment of cooperation mechanisms between governmental institutions and between the government and stakeholders in society.

- Required financing for implementation of the NSCC and identified actions. Possible financing sources are also indicated (contributions from the national budget, international donors, EU funds and revenues from the Green Investment Scheme (GIS).

The table in Annex summarises a rough indication of resources required for each of the objectives of the NSCC.

11.2 Developing the National Action Plan on Climate Change

The first NAPCC is the main instrument in implementing the NSCC. The NAPCC will specify how implementation will take place and will determine how progress on the implementation is to be reported. The NAPCC will further operationalize the NSCC objectives into specific actions, measures and projects for the period 2005-2007.

The NAPCC will assign tasks and responsibilities to individual institutions and will clearly identify who is the responsible actor(s) for the specific actions and related tasks. Clear timeframes for the objectives and for the actions to be carried out will be set, and sources of funding for the specific actions will be identified where possible. Indicators should further be established for the specific objectives.

Although the Ministry of Environment and Water Management is overall responsible for developing the NAPCC, close coordination between all sector Ministries as well as other Romanian institutions, private sector and NGOs is needed on an ongoing basis to ensure the implementation of the NAPCC. It is essential that objectives and actions are developed in a spirit of cooperation to ensure ownership by the parties concerned.

11.3 Monitoring and updating the NSCC

Monitoring the progress of implementation
The MEWM will on a yearly basis present a report on the progress in implementation, based on the input from other ministries and responsible actors. The National Commission on Climate Change will be involved in monitoring the progress of implementation. Indicators for implementation of the strategy will be developed as part of the NAPCC

Updating the NSCC and the NAPCC
Given that the overall purpose of the NSCC is to have an updated and coordinated approach to the climate change challenges and to focus actions on common priorities, and given at the same time it is the first such exercise, the NSCC and the NAPCC should be dynamic instruments to reflect changing circumstances and increased knowledge. During 2007, NSCC will be updated to cover the subsequent period 2008-2012, being identical with the Kyoto Protocol's first commitment period.

12 Conclusions

The Ministry of Environment and Water Management initiated the development of the first NSCC and the NAPCC taking into account the art. 10 of the Kyoto Protocol to the UNFCCC, providing that "all Parties, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances", "reaffirming existing commitments under Art. 4 of UNFCCC, and continuing to advance the implementation of these commitments in order to achieve sustainable development" shall formulate, where relevant and to the extent possible national programmes on climate change.

The main approach of the Romanian Government on climate change, taking also into account sustainable development concept refers to:

- Addressing the UNFCCC and its Kyoto Protocol commitments;
- Meeting the EU acquis provisions based on the Romania's EU integration;
- Romania's possible economical benefits by using the Kyoto Protocol's flexible mechanisms (JI and IET through GIS), by implementing EU ETS and other cost effective initiatives on carbon intensity reduction;
- Climate change adaptation and negative impact minimization of climate change in Romania.

In the same time, NSCC refers to the EU 6th Programme of Action, having the sustainable development as the main objective, and providing for the improvement of the environment conditions in general and the quality of life in the EU, establishing also the priorities regarding the environment in the next 10 years to allow enough time to identify new measures for implementing and assessing of their effects. The programme firmly supports the EU key objectives and priorities on environment contributing to the development of sustainable development strategy.

Annex A

Glossary of the National Strategy on Climate Change of Romania

Terms	Acronyms	Description
Adaptation		Actions taken to help communities and ecosystems cope with changing climate conditions, such as the construction of flood walls to protect property from stronger storms and heavier precipitation, or the planting of agricultural crops and trees more suited to warmer temperatures and drier soil conditions.
Additionality		According to the Kyoto Protocol, gas emission reductions generated by Joint Implementation and Clean Development Mechanism project activities must be additional to those that otherwise would occur. Additionality is established when there is a positive difference between the emissions that occur in the baseline scenario, and the emissions that occur in the proposed project. Type of additionality (environment, legal, financial, technological, investment)
Annex B Parties of the Kyoto Protocol		The industrialized countries listed in this annex have accepted emissions targets for the period 2008-2012. This include the 24 original OECD members, the European Union, and 14 countries with economies in transition. Annex B of the Kyoto Protocol is almost identical with the Annex I of the UNFCCC, referred in the Strategy.
Article 6 Supervisory Committee	A6SC	A committee providing international oversight of "Track 2" joint implementation projects intended to reduce greenhouse-gas emissions. Joint implementation projects are carried out by sponsoring and recipient developed countries under Article 6 of the Kyoto Protocol -- with the recipient likely to be a country with an "economy in transition".
Assigned Amount	AA	The quantity of GHGs that an Annex B country can release in accordance with the Kyoto Protocol, during the first commitment period of that protocol (2008-2012).
Assigned Amount Unit	AAU	A unit of assigned amount (1 metric tonne of $CO_{2\ eq}$) that an Annex B country can release in accordance with the Kyoto Protocol, during the first commitment period (2008-2012).
Baseline		The emission of GHG that would occur without the project activity development, like JI or CDM.
Base year		Reference year as a starting level of GHG emission reductions through the Kyoto Protocol. For Romania the base year for reducing the GHG emissions with 8% is 1989 based on the Decisions 9/CP2 and 11/CP4.
Carbon Dioxide Equivalent	$CO_{2\ eq}$	The universal unit of measurement used to indicate the global warming potential of each of the six greenhouse gases. Carbon dioxide - a naturally occurring gas that is a by-product of burning fossil fuels and biomass, land-use changes, and other industrial processes - is the reference gas against which the other GHGs are measured.
Carbon Finance		Funds provided to projects generating (or expected to generate) GHG emission reductions (JI and CDM) in the form of the up-front purchase of such emission reductions.
Carbon Intensity		The amount of GHG (in terms of $CO_{2\ eq}$) that is emitted per unit added value (in terms of unit GDP). The carbon intensity is influenced by the fuel mix and energy efficiency of an economy.
Carbon Market		A trading system through which countries, business and individuals may buy or sell units of GHG emissions in an effort to meet their national limits on emissions, either under the Kyoto Protocol or under other agreements, such as that among the member states of the European Union.

Certified Emission Reductions.	CER	A unit of GHG emission reduction issued pursuant to the Clean Development Mechanism of the Kyoto Protocol, and measured in metric tonnes of $CO_{2\ eq}$.
Clean Development Mechanism	CDM	The mechanism provided by Article 12 of the Kyoto Protocol, designed to assist developing countries in achieving sustainable development by permitting industrialized countries to finance projects for reducing GHG emission in developing countries and receive emission reductions for doing so.
Cogeneration	CHP	The combined production of heat and power with an increased total efficiency compared to the separate production of heat and power.
Commitment Period		The period under the Kyoto Protocol during which Annex B Parties' GHG emissions (averaged over the period) must stay within their emission targets. The first commitment period covers 2008-2012.
Compliance		Fulfilment by Parties of emission reduction commitments under the Kyoto Protocol.
Compliance Committee		A committee that will focus on compliance with the provisions of the Kyoto Protocol, once the Protocol enters into force. It will have 20 members with representation spread among various regions, small-island developing states, Annex I and non-Annex I parties, and will function through a plenary, a bureau, a facilitative branch and an enforcement branch
Commitment period reserve	CPR	A reserve of AAUs being held by a Party to the Kyoto Protocol to ensure the meeting of the Kyoto Protocol's reduction commitment of GHG emissions.
Conference of the Parties	COP	The meeting of parties to the UNFCCC.
Conference of the Parties/Meeting of the Parties	COP/MOP	The Kyoto Protocol's supreme body, which will serve as the Protocol's meeting of the Parties. The sessions of the COP and the COP/MOP will be held during the same period to reduce costs and improve coordination between the UNFCCC and the Protocol.
Determination/Validation		The assessment of a JI project's PDD by an independent third party against the requirements of the JI mechanism. Procedures and requirements differ for JI Track 1 and JI Track 2.
European Climate Change Programme	ECCP	The ECCP from 2000-2003 contributed to the development of EU's strategy to implement the Kyoto Protocol. Work covered policies and measures to limit emissions in the energy, transport industry and agriculture sectors as well as sinks in forestry. A major result of the process was the EU Emission Trading Scheme.
Emission Reduction Unit	ERU	A unit of GHG emission reduction issued pursuant to a Joint Implementation project. This unit is equal to one metric tonne of $CO_{2\ eq}$.
Emission Reductions Purchase Agreement	ERPA	Agreement/contract, which governs the purchase and sale of emission reductions generated by JI and CDM projects.
EU Allowances	EUA	GHG emission allowances under the EU ETS
European Union Emission Trading Scheme	EU ETS	The ETS limits CO_2 emissions from large CO_2 emitters. These are allocated allowances on an annual basis through national allocation plans and must match their recorded emissions with their allowance holdings. If they reduce emissions below their limits, they can sell the excess allowances to other companies. In this way, the EU scheme will allow emissions reductions to take place at minimum cost to the companies. The EU ETS covers some 12,000 major installations representing close to half of the EU emissions of CO_2.

Expert Review Teams		Groups of experts who review national communications and GHG inventories submitted by Annex I Parties to the UNFCCC.
Green Investment Scheme	GIS	A scheme which allocates revenues from the Kyoto Protocol's International Emissions Trading to promote green investments in Romania. The revenues may be used to support: A) emission reduction projects; B) policies and programmes which lead indirectly to emission reductions C) capacity building.
Gross Domestic Product	GDP	The total output produced by the labour and capital located in Romania.
Global Warming Potential	GWP	An index representing the combined effect of the differing GHGs remain in the atmosphere and their relative effectiveness in absorbing outgoing infrared radiation.
Greenhouse Gases	GHG	The atmospheric gases responsible for causing global warming and climate change. The major GHGs are carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_20). Less prevalent - but very powerful - GHGs are hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). These gases are provided in the Annex A of the Kyoto Protocol.
Greenhouse Gas Inventory		The assessment of the GHG emissions of a country as required by the UNFCCC and Kyoto Protocol. The inventory is carried out on the basis of the national system for assessment of GHG emissions
Host Country		The country where a GHG emission reductions project, like JI and CDM, is physically located.
In-depth reviews	IDR	Thorough analysis and assessment by international experts of the National Communications submitted by Romania and other developed countries under the UNFCCC.
Integrated Pollution Prevention and Control	IPPC	A legal framework (based on an EU Directive 96/61/EC) under which specified industrial sectors must obtain permits to operate based on Best Available Techniques. It contains measures to limit waste and the pollution of air, water and land.
Intergovernmental Panel on Climate Change	IPCC	Established in 1988 by the World Meteorological Organization and the UN Environment Programme, the IPCC surveys worldwide scientific and technical literature and publishes assessment reports that are widely recognized as the most credible existing sources of information on climate change. The IPCC is independent of the UNFCCC.
International Emissions Trading	IET	Mechanism under Article 17 of the Kyoto Protocol through which Parties with emissions commitments may trade units of their assigned amount with other Parties. The aim is to improve the overall flexibility and economic efficiency of making GHG emissions cuts.
Joint Implementation	JI	Mechanism provided by Article 6 of the Kyoto Protocol, whereby a country included in Annex I of the UNFCCC might acquire Emission Reduction Units (ERU) when it helps to finance projects that reduce net emissions in another industrialized country (including countries with economies in transition).
JI Track 1		The procedure for carrying out projects under the Joint Implementation mechanism in cases where a Party to the Kyoto Protocol has met the requirements for the Joint Implementation mechanism. Track 1 does not require international oversight for validation and verification.
JI Track 2		A procedure for carrying out projects under the Joint Implementation mechanism in cases where a Party to the Kyoto Protocol has not yet met requirements for the standard Joint Implementation programme. Track 2 provides greater international oversight through a panel called the "Article 6 Supervi-

		sory Committee."
Flexible Mechanisms under the Kyoto Protocol		Three procedures established under the Kyoto Protocol to increase the flexibility and reduce the costs of making GHG emissions cuts. They are the Joint Implementation (JI), the Clean Development Mechanism (CDM), and the International Emissions Trading (IET).
Kyoto Protocol	KP	Adopted at the Third Conference of the Parties to the UNFCCC held in Kyoto, Japan in December 1997. The Kyoto Protocol commits industrialized country signatories to reduce their GHG emissions by an average of 5.2% compared with 1990 emissions, in the period 2008-2012.
Land use, land-use change, and forestry	LULUCF	Refers to the impact of land use by humans - and changes in such land use - on GHG emissions: expanding forests reduces atmospheric carbon dioxide; deforestation releases additional carbon dioxide; various agricultural activities may add to atmospheric levels of methane and nitrous oxide.
Marrakech Accords		Agreements reached at COP-7, which set various rules for "operating" the more complex provisions of the Kyoto Protocol. Among other things, the accords include details for establishing a greenhouse-gas emissions trading system; implementing and monitoring the Protocol's Clean Development Mechanism; and setting up and operating three funds to support efforts to adapt to climate change.
Ministry of Economy and Commerce	MEC	The responsible Romanian authority on energy and industry.
Ministry of Environment and Water Management	MEWM	The responsible Romanian authority on environment and water management.
Ministry of Transport, Construction and Tourism	MTCT	The responsible Romanian authority on transports, constructions, public works and tourism.
Mitigation		Actions to cut GHG emissions and so reduce climate change. Examples are using fossil fuels more efficiently for industrial processes or electricity generation, switching to renewable energy, improving the insulation of buildings, and expanding forests and other "sinks".
National System for GHG Assessment		Article 5 of the Kyoto Protocol mandates that all UNFCCC Annex I Parties should establish a national system to estimate anthropogenic emissions for all GHGs not covered by the Montreal Protocol. The National System describes how the national GHG inventory is elaborated.
National Action Plan on Climate Change	NAPCC	The National Action Plan on Climate Change (NAPCC) will identify the individual policies and measures to be developed and implemented under the National Strategy on Climate Change of Romania.
National Administration of Meteorology	ANM	The Romanian institution having responsibilities in climate observation and assessment of impacts.
National Allocation Plan	NAP	The core element of the EU ETS. For each trading period, each Member State shall develop a national plan for allocating emissions allowances for the sectors covered by the Annex 1 of the Directive. The NAP shall state the total amount of allowances and how they are to be allocated among the participating sectors. Guidelines and procedures for the development of

		NAPs have been developed at EU level.
National Commission on Climate Change	NCCC	The NCCC functions as the main advisory body to the MEWM on decisions regarding climate change policy.
National Communication		A document submitted in accordance with the UNFCCC by which a Party informs other Parties of activities undertaken to mitigate climate change. Many developed countries have now submitted their third national communications
National Strategy on Climate Change	NSCC	The NSCC provides the framework for future activities of Romania in the field of climate change. It describes the governmental strategy and main policies and measures.
Non-Annex I countries		Countries that have ratified or acceded to the UNFCCC that are not included in Annex I (developed and economy in transition countries).
Non-governmental organization.	NGO	A non-governmental organization is defined as a voluntary organization of citizens founded in order to realize non-material aims or non-commercial values.
No-Regret Options		Technology for reducing GHG emissions whose other benefits (in terms of efficiency or reduced energy costs) are so extensive that the investment is worth it for those reasons alone.
Policies and Measures	P&M	Referring to the steps taken or to be taken by countries to achieve GHG emissions targets under the Kyoto Protocol. Some possible policies and measures are listed in the Protocol and could offer opportunities for intergovernmental cooperation.
Project Design Document	PDD	A project specific document required under the procedures of JI Track 2 and CDM rules which will enable the determination whether the project has been approved by the parties involved in a project, would result in reductions of greenhouse gas emissions that are additional, has an appropriate baseline and monitoring plan.
Registries, Registry Systems		Systems, including electronic databases, that will track and record all transactions under the Kyoto Protocol's GHG emissions trading system (“carbon market”) and under mechanisms such as the JI and CDM. Also, the EU ETS requires member states to operate a registry.
Removal unit	RMU	Unit generated in Annex I Parties by LULUCF activities by sequestrating carbon dioxide.
Rio Conventions		Three environmental conventions adopted at the 1992 "Earth Summit" in Rio de Janeiro: the United Nations Framework Convention on Climate Change (UNFCCC), the United Nations Convention to Combat Desertification (UNCCD), and the Convention on Biodiversity (CBD).
Sequestration		Capture of carbon dioxide in a manner that prevents it from being released into the atmosphere for a specified period of time.
Sinks		Any process which removes a GHG from the atmosphere. The major sinks are forests and other vegetation, which through photosynthesis remove carbon dioxide. Under the Kyoto Protocol, developed countries, in their calculation of net greenhouse-gas emissions, may deduct from their totals the removal of greenhouse gases through the expansion of sinks. That may help them to meet their mandatory emissions targets. However, calculating the effects of sinks is methodologically complex and the standards for doing so still need to be clarified.
Supplementarity		The Kyoto Protocol requires use by Annex I Parties of flexible mechanism under the KP to be supplemental to domestic actions to limit or reduce their

		emissions.
Sustainable Development	SD	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs.
Technology Transfer		Exchange of knowledge, funds, and goods to allow the spreading of technology for adapting to or mitigating climate change.
United Nations Framework Convention on Climate Change.	UNFCCC	The international legal framework adopted in June 1992 at the Rio Earth Summit to address climate change. It commits the Parties to the UNFCCC to stabilize human induced greenhouse gas emissions at levels that would prevent dangerous manmade interference with the climate system.
Verification		The ex-post assessment of the amount of reductions in emission of GHG that are generated by the JI or CDM project against the requirements of the JI and CDM mechanisms.
Vulnerability		The degree to which a community, population, species, ecosystem, region, agricultural system, or some other quantity is susceptible to, or unable to cope with, adverse effects of climate change.

Specific objective and related chapter of the NSCC	**Activity**	**Required institutional resources**			**Required financial resources (apart from staff)**
		Staff required	**Expertise required**	**Cooperation**	**2005-2007**
Chapter 5: To limit the long term economic, environmental and social costs of climate change impacts in Romania	Strengthening impact and vulnerability assessment and cooperation between institutions. Strengthening the subject of climate change impacts and adaptation in education curricula Assessment and prioritization of adaptation policies and measures, in agriculture, water management, forestry, and human settlements	Staff dedicated to climate change at the sector Ministries relevant for adaptation in environment, water, agriculture, transports and forestry sectors Include specialised institutes and agencies	Knowledge on impacts and the evaluation of adaptation measures	Increased cooperation between MEWM and relevant sector Ministries and institutions Increased involvement of Romanian scientists in international scientific community on adaptation	Funding of national research projects: 300,000 EUR from the national budget Funding for international research projects on adaptation (applications to be submitted to the EU research programmes and could be supported from the national research budget): approx. 100,000 EUR from the national research budget
Chapter 6: Establishing the adequate institutional, legal and policy framework	Develop capacity and adequate institutional setup Introducing legislation on climate change	MEWM: dedicated climate change unit (5 person in total) Staff assigned to climate change in related areas of the MEWM (e.g. licensing, IPPC permits, etc) Staff assigned to climate change issues at other key sector Ministries	Knowledge on climate change and the links to sector policies Legal expertise	Active involvement of key sector ministries Operational and active National Commission on Climate change	Financial resources required to cover the costs related to capacity building in MEWM and other key Ministries: approx. 100,000 EUR from the national budget
Chapter 7: a. To implement a national GHG emission and removals assessment system and a National Registry in compliance with the UNFCCC and EU requirements	Establishing institutional and legal framework Establishing system for data collection and a National Registry Establishing mechanisms and practices for periodical analysis of the GHG emission trends	Dedicated staff for coordinating the national system and registry at appointed responsible institution (2 persons)	Expertise inventories and reporting Expertise in operating the National Registry	Increased cooperation with National Statistical Institute and other data providers	Contracting of research institutes for annual GHG inventory: approx 50,000 EUR from the national budget Financing for technical assistance for purchasing the software for the National Registry and training: approx. 200,000 EUR (request for funding submitted to DEPA)
b. To secure Romania's future participation in the flexible mechanisms under the Kyoto Protocol (Joint Implementation JI and International Emissions Trading IET	Establishing a JI framework under Track 1 Implementing a Green Investment Scheme (GIS) for IET	Dedicated staff at MEWM for coordinating JI (1 person) Establishment of an independent organisation with operational staff for running the GIS	Financial project development Design of GIS	Close cooperation between MEWM and MEC Strong involvement private sector	Financing for international technical assistance in JI rules and guidelines and for Green Investment Scheme GIS: approx. 70,000 EUR (request for funding submitted an international donor) Operational costs for running the

Specific objective and related chapter of the NSCC	**Activity**	**Required institutional resources**			**Required financial resources (apart from staff)**
		Staff required	**Expertise required**	**Cooperation**	**2005-2007**
c. To prepare the position of Romania regarding future international climate change policies and regulatory regimes post 2012	Assess alternative options and follow closely EU policy preparation	Staff at MEWM coordinating preparations of position	Knowledge on effects of alternative regulatory regimes	Active involvement of key ministries and institutions	GIS: approx. 70,000 EUR (to be financed from GIS revenues)
Chapter 8: Transposing and implementing the EU Emissions Trading Scheme and all relevant EU legislation to allow the start of trading	National Allocation Plan (NAP) Adopting monitoring rules and guidelines Adopting legislation Informing participants EU ETS Implementing the registry	MEWM: full time staff (1 person) NEPA: staff dedicated to monitoring the EU ETS and operation of the registry (2 persons)	NAP methodologies Monitoring guidelines Operation of the registry	Close cooperation between MEWM and MEC Involvement of future participants in implementation	International technical assistance in drafting the NAP: approx. 100,000 EUR from the national budget Financing for information campaign to participants: approx. 50,000 EUR from the national budget Financing for operating the registry and training (request for funding submitted to DEPA)
Chapter 9: To continue implementing the existing domestic policies and measures to reduce the carbon intensity of the Romanian economy	Integrating climate change objectives in sector policies Identifying and implementing low-cost policies and measures in different sectors	One full-time expert on climate change at all key sector ministries	Assessing the impact of sector policies on GHG emissions	Strong cooperation between MEWM and the sector Ministries responsible for implementing the policies and measures	Financial support to the implementation costs of priority measures and projects: approx. 50,000 EUR possible financing through Green Investment Scheme and approx. 50,000 EUR from the national budget
Chapter 10: To incorporate climate change issues in education and research, and to increase the level of awareness and public participation	Intensify research on climate change issues Awareness campaign, including a climate change website MEWM Public participation and consultation on projects and policies Include climate change topics in schools curricula	Staff involved with climate change issues at the Ministries responsible for education and research	Methods for awareness raising on climate change and procedures for public consultation Educational approached to climate change Priorities in research on climate change	Active cooperation between MEWM and the Ministries responsible for education and research institutions Increased involvement of the Romanian scientists in international scientific community	Financing for awareness campaign: approx. 50,000 EUR from the national budget Funding for international research projects: approx. 10,000 EUR from the national research budget (applications to be submitted to the EU research programme and national research programmes)
Chapter 11: To adopt and implement the National Action Plan on Climate Change on the specific policies and measures to be implemented under the NSCC	Drafting, adopting (by the end of 2005) and implementing the NAPCC (period 2005-2007) Updating the NSCC and NAPCC	At MEWM: staff dedicated to the implementation of the NSCC and the NAPCC (1 person)	Technical knowledge on policies and measures Assessment of costs	Active involvement of key sector ministries Operational and active National Commission on	Financing for international technical assistance for drafting NAPCC (currently funded by DEPA) Contracting national and interna-

Specific objective and related chapter of the NSCC	**Activity**	**Required institutional resources**			**Required financial resources (apart from staff)**
		Staff required	**Expertise required**	**Cooperation**	**2005-2007**
	(2007)	Staff dedicated to climate change issues at other key sector Ministries (1 person)	and benefits	Climate Change	tional expert to update the NSCC and NAPCC in 2007: approx. 50,000 EUR from the national budget