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# What are Sweden's emission rights worth?

*Handling and reporting of Sweden's Kyoto units*

Riksrevisionen (the Swedish National Audit Office, SNAO) has recently launched a new audit strategy focusing on central-government measures to decrease greenhouse-gas emissions. Over the next few years, this strategy will result in a number of performance audits within the area of climate change.

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This report is available on the SNAO website:  
<http://www.riksrevisionen.se/english>

Riksrevisionen (the Swedish National Audit Office, SNAO) is one of the bodies charged with exercising the powers of scrutiny vested in the Riksdag (parliament). Our task is to audit central-government administration so as to contribute to the economical use of resources and to effective and efficient administration.

One important role of the SNAO is to ensure democratic transparency, i.e. provide citizens with the opportunity to see how democratic decisions are made and implemented, how their tax money is used, and whether public administration follows directives, rules and regulations and achieves the objectives set for it.

The Riksdag and the Government are the most important target group for the findings from our audits. The audits are used to support decisions, for purposes of accountability and informed public discussion.

## What are Sweden's emission rights worth?

### *Handling and reporting of Sweden's Kyoto units*

Riksrevisionen (the Swedish National Audit Office, SNAO) has audited the Government's and responsible government agencies' reporting on and handling of the present holdings and future surplus of national emission rights. The findings of the audit are presented in this performance audit report.

Representatives of the Government Offices, the Environmental Protection Agency and the Energy Agency have been given the opportunity to read a draft version of the final report in order to examine its content from a factual point of view and to provide any other comments.

The report is submitted to the Government in accordance with Section 9 of the Act on the Audit of Public Operations (SFS 2002:1022), and it is submitted at the same time to the Board of Directors of the SNAO.

The report includes conclusions and recommendations which relate to the Government the Environmental Protection Agency and the Energy Agency. The SNAO will follow up the audit.

*Claes Norgren*, Auditor General, has had the right of decision in this matter. *Lena Björck*, Senior Auditor, has been in charge of presenting material. *Hans Folkesson*, Deputy Director, *Anna Carlsson*, Audit Director and *Madeleine Nyman*, Senior Auditor, have participated in the final handling of the matter.

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The Ministry of the Environment

The Environmental Protection Agency

The Energy Agency



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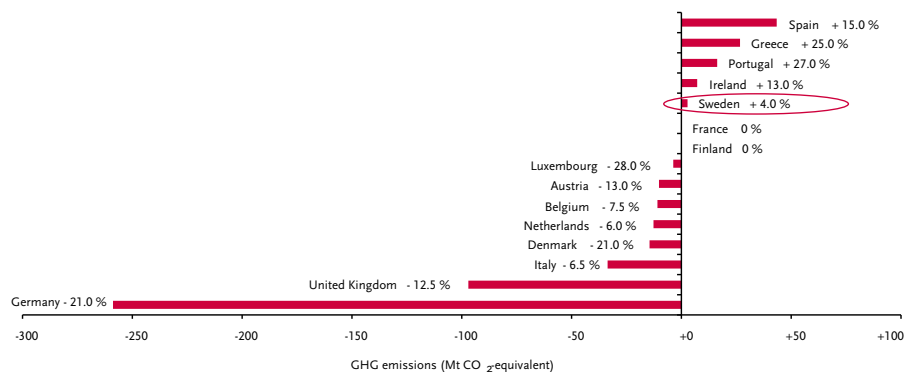
# Summary<sup>1</sup>

## *Climate change and the European Union*

Climate change is today widely recognised as a global threat. The significance of the issue and the high level of public interest it has attracted are two reasons why *Riksrevisionen* (the Swedish National Audit Office, SNAO) decided to audit the reporting and handling of emission rights.

Emissions of greenhouse gases in the EU-27 represent around 11–12 per cent of total global emissions. Sweden's commitment to reduce global emissions until 2012, like those of other EU-15 countries, is governed by the Kyoto Protocol and the subsequent EU burden-sharing agreement. Under that agreement, Sweden is allowed to *increase* its emissions by 4 per cent.

EU-15 commitments under the Kyoto Protocol and the EU burden-sharing agreement



Source: *European Environment Agency*.

However, the Riksdag (parliament) has established a considerably more ambitious national objective entitled Reduced Climate Impact, including an emission target for the period from 2008 to 2012. Under this national target, emissions are to decrease by at least 4 per cent.

<sup>1</sup> Please note that the English version of this summary has been redrafted and amended in order to enhance foreign readers' comprehension of the issues raised in the report. In some cases certain terms, e.g. national environmental-quality objective, have been substituted by terms deemed easier to understand, e.g. national emission target.

According to the European Environment Agency, about 14 EU-27 countries have reported average greenhouse-gas emissions lower than their commitments under the Kyoto Protocol and the EU burden-sharing agreement. Only Austria does not expect to reach its burden-sharing commitment under current arrangements.<sup>2</sup>

### *Sweden is forecast to have a significant surplus*

Sweden's greenhouse-gas emissions will have fallen by almost 10 per cent between 1990 and 2012.<sup>3</sup> This means that Sweden will meet its Kyoto Protocol commitment as established in the EU burden-sharing agreement (+4 per cent). Indeed, emissions in Sweden will fall significantly more than what is necessary to achieve Sweden's national emission target for 2012. Since the Kyoto Protocol-based allocation of emission rights<sup>4</sup> allows a 4 per cent increase of emissions, Sweden will have a significant surplus of emission rights for the 2008–2012 period.

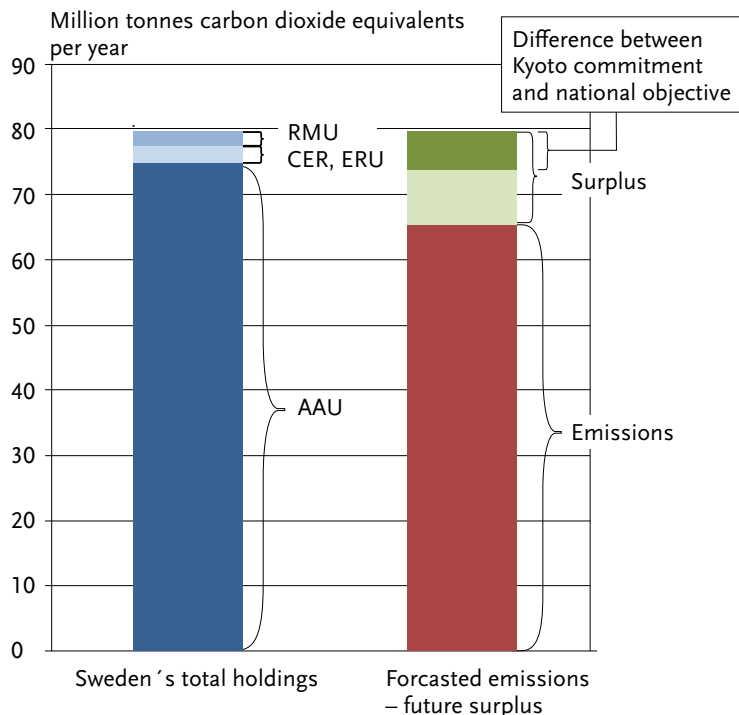
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<sup>2</sup> *EEA Report No. 9/2009, Greenhouse gas emission trends and projections in Europe 2009 –Tracking progress towards Kyoto targets. Cyprus and Malta have no commitments under the Kyoto Protocol.*

<sup>3</sup> Note that this forecast, from June 2008, predates the recent recession and thus does not encompass its potential effects. Actual emissions may well be lower, which would increase the surplus of emission rights. Larger surpluses of emission rights in Sweden and other countries may, in turn, decrease the price of emission rights.

<sup>4</sup> In Swedish legislation, the term 'Kyoto units' is used to denote emission rights in this context. However, the SNAO has chosen to use more widely used terms: 'emission rights' (for the English translation the terms 'emission allowances' and 'emission credits' could also have been chosen) and 'national holdings of emission rights'. The national holdings consist mainly of 'assigned-amount units' or AAUs. This report focuses on Sweden's national holdings of AAUs, but also covers emission rights deriving from project mechanisms (certified emission reductions or CERs and emission-reduction units or ERUs) as well as emission rights deriving from carbon-sink credits (removal units or RMUs). Each year a certain number of AAUs are converted into European Union allowances (EUAs), a type of emission rights allocated to Swedish installations that are part of the European Union Emissions Trading Scheme. Since they do not influence audit findings, these emission rights are not reported separately in the report but instead as part of the AAUs.

Sweden's future surplus of emission rights per year in 2008–2012<sup>5</sup>



Source: Data from the Swedish Environmental Protection Agency and the Swedish Energy Agency, processed by the SNAO.

The total value of the overall Swedish surplus is difficult to estimate but may amount to SEK 7 billion–8 billion over the entire 2008–2012 period.<sup>6</sup>

Under the Kyoto Protocol, surpluses can be cancelled, saved or sold. However, the Riksdag's considerably more ambitious emission target, if not revised, limits the number of options available.

Sweden's national emission target can be achieved if the part of the surplus corresponding to the difference between +4 per cent (Sweden's Kyoto commitment) and –4 per cent (Sweden's national target) is cancelled.

<sup>5</sup> AAUs are emission rights allocated to Sweden – including EUAs, which are emission rights allocated to Swedish installations under the European Union Emissions Trading Scheme. CERs are emission rights deriving from CDM projects (i.e. projects in the framework of the Clean Development Mechanism). ERUs are emission rights deriving from JI projects (i.e. projects in the framework of the Joint Implementation mechanism). RMUs are sink credits deriving from projects relating to carbon sinks.

<sup>6</sup> This value is based on the SNAO's overview of Sweden's future surplus: 70 million tonnes of AAUs (including EUAs), CERs, ERUs and RMUs (sink credits from carbon sinks) for the entire 2008–2012 period. The price of each emission right is based on the most frequent estimated prices in known deals between countries: EUR 10 per tonne of emissions. (Point Carbon for CAN Europe, 26 October 2009, *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime.*)

This would entail the withdrawal of emission rights from the market, contributing to a fall in global emissions.

If priority is instead to be given to strengthening the government budget, all or part of the future surplus may be sold. The revenue could then be used to finance a range of government commitments. If the entire surplus is sold, Sweden's national emission target for the 2008–2012 period will not be attained.<sup>7</sup>

### *Overall conclusion of the audit*

The SNAO audited how the Government and government agencies have reported on and handled Sweden's national holdings and future surplus of emission rights.

*The SNAO's overall conclusion is that reporting on Sweden's total holdings and future surplus of emission rights is not sufficiently transparent. Furthermore, there is a lack of information on how the handling of the surplus affects the attainment of the national climate objective and its emission target for the period from 2008 to 2012. The absence of a decision on the handling of the future surplus is part of the reason why the government agencies and ministries concerned differ in their views on how Sweden's national climate objective is to be achieved. The Riksdag has not been given the opportunity to decide on the use of substantial financial resources.*

### *The Government has not put the issue before the Riksdag*

The SNAO found that the Government has not put the issue of how Sweden should handle its future surplus of emission rights before the Riksdag. Furthermore, no statement of intention has been made as regards how the surplus is to be handled.

### *Shortcomings in the Environmental Protection Agency's reporting*

The Environmental Protection Agency has not provided information about the value of the future surplus of national emission rights or about how the handling of the surplus will affect the attainment of the emission target for the 2008–2012 period.

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<sup>7</sup> The SNAO has specifically assessed the possible legal implications of different alternatives to identify any European-law provisions obliging Sweden to share its surplus with other Member States. The SNAO's conclusion is that there are no such legal restrictions.

In fact, the Environmental Protection Agency and the Energy Agency have mentioned the surplus of emission rights only once, in a report published five years ago. In that report, the option of cancelling surplus emission rights was not addressed.

The SNAO concludes that there are serious shortcomings in the overall reporting of the Environmental Protection Agency. These shortcomings relate to reporting on emission rights, the future surplus of emission rights and the impact of the handling of the surplus on the attainment of the national climate objective and its emission target for the period from 2008 to 2012.

### *The Energy Agency's reporting is not sufficiently transparent*

The Energy Agency has not provided information about Sweden's total national holdings of the entire range of emission rights or about the surplus of such rights, either to the Government, to the Environmental Objectives Council or to the general public. The Energy Agency has not presented this information in a comprehensive way, although it is available from various public sources. The SNAO thus concludes that the Energy Agency has failed to fulfil its reporting duties.

### *Unclear mandate*

Swedish legislation does not explicitly lay down which party is to be considered the holder of the central-government sector's accounts in the Swedish registry of emissions trading (SUS).

The SNAO notes that such legislative provisions do exist in Finland, where government agencies – like their Swedish counterparts – have a high degree of autonomy.

### *The Government has not reported on the surplus to the Riksdag*

The Government has not reported on Sweden's total holdings of the entire range of emission rights or the future surplus, either in climate bills or in budget bills. The Riksdag has not been informed of how the handling of the surplus will affect the achievement of the national emission target for the period from 2008 to 2012.

Furthermore, the Government has not accounted for Sweden's holdings of emission rights or the future surplus of emission rights in the Central Government Annual Report.

Moreover, the Government has not informed the general public about Sweden's future surplus of emission rights and the consequences of various courses of action.

The Government has not specifically asked for information, either from the Environmental Protection Agency or from the Energy Agency, about the available options or their ramifications for the national emission target for the period from 2008 to 2012.

The SNAO notes that the Government has obtained some information – from the national Climate Commission and from a consultancy report ordered by the Government Offices – about the value of the future surplus of national emission rights and the possible courses of action.

### *The attainment of the national emission target remains uncertain despite the efforts made*

For Sweden's national emission target for the period from 2008 to 2012 to be achieved, emission rights corresponding to at least 8 percentage points must be cancelled. In the 2009 Climate Bill, the Government states that the national emission target for the period from 2008 to 2012 'looks likely to be attained'<sup>8</sup>, without mentioning that this depends on the handling of the future surplus of emission rights. In fact, given that the Government has not put the issue of the handling of the surplus before the Riksdag, it is presently uncertain whether this target will be attained, despite the measures that have been taken and the fact that emissions have fallen beyond what is required to meet the target.

### *The impact of additional citizen efforts to reduce emissions is uncertain*

The national surplus of emission rights is expected to amount to approximately 14 million tonnes of CO<sub>2</sub> equivalent per year. This can be compared with total emissions from private cars in Sweden, which amount to 13 million tonnes per year.

A number of government agencies, including the Energy Agency, provide the general public with tips and advice on how to be 'climate-smart': 'Leave your car at home and bike or walk if you're not going far', 'Use public transport whenever you can'. There are also a number of minor policy instruments of a voluntary or compulsory nature that the Government justifies by reference to Sweden's efforts to achieve the climate objective and help bring about global reductions of emissions. One example is the CO<sub>2</sub> tax.

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<sup>8</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['An integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, p. 30).

However, if the future surplus were to be sold, additional measures taken would have no effect at all, either on the climate objective or on global emissions, since the purchasing parties would then be allowed to increase their emissions by the corresponding amount. From a climate perspective, this would mean that a significant proportion of the efforts made by Swedish citizens would have no impact.

*The Riksdag has not been given the opportunity to decide on the use of substantial financial resource*

If sold, Sweden's surplus in relation to the Kyoto Protocol and the EU burden-sharing agreement could be worth about SEK 7 billion–8 billion (approximately EUR 600 million–700 million).

The Riksdag should have been informed of the value of the surplus and given an opportunity to decide on how it is to be handled.

*Lack of information and decisions leads to ambiguity for the government agencies and ministries concerned*

All SNAO reports undergo a process of fact clearance in which the auditees are asked to confirm audit findings. In this audit, the fact-clearance process revealed a significant lack of consensus among the government agencies and ministries concerned. Agencies and ministries differ in their view of the relationship between Sweden's national climate objective, including its emission target for 2012, and the impact that the handling of Sweden's future surplus of emission rights will have on the achievement of that objective. For example, the Energy Agency considers that the national emission target has been revised in such a way that the entire surplus may be saved to meet future targets.

This lack of consensus may have negative effects on the coherence, and thereby on the effectiveness and efficiency, of the ministries' and agencies' efforts to pursue Sweden's climate policy.

The lack of clarity and consensus also makes it unclear what measures will be required to achieve the subsequent national emission target for 2020. This target, unlike the 2012 target, may be attained through purchases of emission rights and use of carbon sinks.

## Recommendations for the Government

- Report to the Riksdag on Sweden's total national holdings of various types of emission rights, and on their estimated value. This may be done in the form of an 'informational note' included in the Central Government Annual Report;
- Present to the Riksdag a proposal for a decision on the handling of the future surplus of emission rights. If the Government intends to postpone such a decision, it should inform the Riksdag of that intention;
- Ensure that it is laid down in legislation which party is to be considered the holder of the central-government sector's accounts in the SUS registry;
- Ensure that the general public receives overall information about Sweden's total holdings of emission rights<sup>9</sup>, its future surplus of such rights and the ramifications of the handling of that surplus for the national climate objective and its emission target for 2012;
- Ensure that the Energy Agency promotes the national climate objective of *Reduced Climate Impact* and its emission target for 2012 by reporting to the Government and the Environmental Objectives Council on Sweden's total national holdings of the entire range of emission rights.

## Recommendations for the Environmental Protection Agency

- Inform the general public that Sweden will most likely have a significant surplus of emission rights. Describe how different courses of action as regards the handling of that surplus will affect compliance with the national climate objective of *Reduced Climate Impact* and with its emission target for 2012;
- Inform the general public of Sweden's total national holdings of various types of emission rights as well as the future surplus relative to Sweden's official emission forecasts.

## Recommendation for the Energy Agency

- Develop reporting to the Government, the Environmental Objectives Council and the general public so that it covers Sweden's total national holdings of the entire range of emission rights.

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<sup>9</sup> AAUs (including EUAs), CERs, ERUs and RMUs.

### The system for emissions trading under the Kyoto Protocol

The climate problem is caused by emissions of greenhouse gases. Fossil fuels are the largest source of emissions of greenhouse gases. Emissions from the combustion of fossil fuels come, for example, from road transport and heating.

The climate problem cannot be remedied unless emissions of greenhouse gases decrease. The Kyoto Protocol is an international agreement under the United Nations Framework Convention on Climate Change (the UNFCCC or the Climate Convention) in which a large number of countries have made commitments to reduce their emissions of greenhouse gases. The greenhouse gases covered by the Kyoto Protocol are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and certain fluorinated gases.

From a theoretical economic perspective, emissions trading is a cost-effective policy instrument to reduce emissions of greenhouse gases. It aims to put a price on emissions and emission reductions so as to ensure that abatement measures will be taken where they are cheapest.

The system for trading in the emission rights assigned to countries (assigned-amount units or AAUs) is governed by the emission cap negotiated and decided under the Kyoto Protocol and by the burden-sharing agreement concluded by the EU Member States for the period from 2008 to 2012. For Sweden, this cap entails an opportunity to increase emissions by 4 per cent compared with 1990 levels.

The individual countries decide themselves how to bring about emission reductions. They may either reduce emissions on their own territory or, as a complement, carry out projects in other countries to obtain emission rights (CERs and ERUs).

To enable cost-effective emission abatement, countries may also trade emission rights.

Flexible mechanisms allow countries to emit more than the amount originally allocated to them under the Kyoto Protocol. This is because a country's commitment under the Protocol means that its actual emissions must not exceed the amount assigned to it after adjustment for acquisitions and disposals of emission rights. International trade in emission rights (AAUs), the Clean Development Mechanism (CDM) and the Joint Implementation (JI) mechanism are the three flexible mechanisms included in the Kyoto Protocol.

International trade in emission rights gives countries having made commitments to reduce their emissions an opportunity to buy and sell AAUs as a way to meet those commitments. Trade in AAUs takes place primarily among Parties to the Kyoto Protocol (mainly countries, but the European Union itself is also a Party to the Protocol). The CDM and JI cover concrete projects to reduce emissions of greenhouse gases from sources in other countries and are therefore referred to as 'project mechanisms'.

Projects under the JI mechanism give rise to 'emission-reduction units' (ERUs). Such projects can be carried out by two or more countries that have all made commitments under the Kyoto Protocol to reduce their emissions. In reality, an ERU is an AAU that has been converted into an ERU in a Party's registry once the emission reduction has been verified.

The CDM covers projects carried out jointly by a country with emission-reduction commitments under the Kyoto Protocol and a developing country without such commitments. The emission rights generated by such projects are called 'certified emission reductions' (CERs).

The Kyoto Protocol makes it possible for countries having made emission-reduction commitments to meet those commitments by taking credit for the removal of CO<sub>2</sub> by 'carbon sinks': plants binding carbon through photosynthesis. Reduction units from projects relating to carbon sinks are called 'removal units' (RMUs). RMUs can be converted, subject to certain restrictions, into ERUs.\*

One reduction unit (ERU, CER or RMU), like one AAU, corresponds to one tonne of CO<sub>2</sub>.

The term used in Swedish legislation about national holdings of emission rights is 'Kyoto units'. In this report, however, we have chosen to use 'emission rights' as a general term. The national holdings consist of AAUs, ERUs, CERs and RMUs. A certain number of AAUs are converted each year into European Union allowances (EUAs), a type of emission rights allocated to Swedish installations that are part of the EU Emissions Trading Scheme. In this audit, EUAs are not accounted for separately but as part of the reporting of AAUs. This is because they do not influence the audit findings.

\*Point 29 of Decision 13/CMP.13. UNFCCC.



# 1 Introduction

*Riksrevisionen* (the Swedish National Audit Office, SNAO) has examined how the Government and the government agencies responsible have reported on and handled Sweden's national holdings and future surplus of emission rights.<sup>10</sup>

Sweden's commitment to reduce global emissions until 2012 is governed by the Kyoto Protocol, an agreement under which Sweden may actually *increase* its emissions.<sup>11</sup> Sweden will in all likelihood meet its commitment by a wide margin. The starting point for the allocation of emission rights is that Sweden may increase its emissions, but given the existing measures Sweden will actually *decrease* its emissions. As a result, Sweden will have a large surplus of emission rights until 2012. Under the Kyoto Protocol, surplus emission rights can be cancelled, saved or sold.

Sweden has decided to be a forerunner in efforts to reduce emissions of greenhouse gases. For this purpose, the Riksdag (parliament) has established a national environmental-quality objective called *Reduced Climate Impact*, including an emission target for the period from 2008 to 2012 which is more ambitious than the country's commitment under the Kyoto Protocol. Emissions in Sweden will fall by more than is necessary to achieve the national emission target for 2008–2012, but it is not yet clear whether that target will actually be achieved in practice or whether priority will be given to reinforcing the government budget. This depends on the handling of the expected surplus of emission rights.

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<sup>10</sup> The term used in Swedish legislation for emission rights in this context is 'Kyoto units'. In this report, however, we use a term which is in more general use: 'emission rights' (*for the English translation the terms 'emission allowances' and 'emission credits' could also have been chosen*). The national holdings of emission rights consist mainly of 'assigned-amount units' or AAUs. This report deals above all with Sweden's national holdings of AAUs, but it also covers emission rights deriving from project mechanisms (certified emission reductions or CERs and emission-reduction units or ERUs) as well as emission rights deriving from carbon-sink credits (removal units or RMUs). Further, a certain number of AAUs are converted each year into European Union allowances (EUAs), a type of emission rights allocated to Swedish installations that are part of the EU Emissions Trading Scheme. In this audit, EUAs are not accounted for separately but as part of the reporting of AAUs. This is because they do not influence the audit findings.

<sup>11</sup> In accordance with the EU burden-sharing agreement in relation to its joint commitment under the Kyoto Protocol. See also Section 2.3.

## 1.1 Reasons for the audit

*The climate issue is a matter of strong public interest. The handling of the future surplus of emission rights determines whether Sweden will comply with its national climate objective and the associated emission target for 2008–2012, thus contributing to a reduction of global emissions above and beyond the Kyoto Protocol.*

Transparent handling and reporting may be a crucial factor in determining the incentives for government agencies, businesses and the general public to take measures aiming to reduce emissions of greenhouse gases.

### **Strong interest in the climate issue**

Climate change and the threat it poses to societies are global in nature. This issue has attracted a great deal of attention among the general public. Ahead of the European elections in the spring of 2009, a majority of Swedes said that the climate is the most important issue of European cooperation. The importance of the issue and the high level of public interest are two of the reasons for the SNAO's decision to carry out the present audit.

### **Handling of emission rights of importance for goal attainment**

The handling of the future surplus of emission rights determines whether Sweden will comply with its national climate objective and the associated emission target for 2008–2012, thus contributing to a reduction of global emissions above and beyond the Kyoto Protocol. According to the official forecast<sup>12</sup>, Sweden will have a significant national surplus of emission rights during the period until 2012.<sup>13</sup> If it is sold, the surplus for the 2008–2012 period may be worth SEK 7 billion–8 billion.<sup>14</sup>

Under the Kyoto Protocol, surpluses can be cancelled, saved or sold. However, unless the Riksdag's more ambitious emission target for 2012 is revised, the number of options effectively available is limited.

If the surplus corresponding to between +4 per cent (Sweden's commitment under the Kyoto Protocol and the EU burden-sharing

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<sup>12</sup> Official forecast of the Environmental Protection Agency. Website of the Environmental Protection Agency: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Utslappsstatistik-och-klimatdata/Utslapp-av-vaxthusgaser/Prognos-for-vaxthusgasutslapp/>.

<sup>13</sup> The surplus is the difference between actual emissions and Sweden's commitments under the Kyoto Protocol.

<sup>14</sup> This value is based on the SNAO's overview of Sweden's future surplus: 70 million tonnes for the 2008–2012 period in the form of AAUs (including EUAs), CERs, ERUs and RMUs (sink credits from carbon sinks). The price of each emission right is based on the estimated prices that have occurred most often in known deals between countries: EUR 10 per tonne of emissions. Point Carbon for CAN Europe, 26 October 2009, *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime*.

agreement) and no less than –4 per cent (Sweden’s emission target for 2012) is cancelled, the Swedish climate objective can be deemed to have been achieved. This would entail the withdrawal of emission rights from the market, contributing to a fall in global emissions. From the perspective of the general public, the entire surplus should be cancelled to ensure that any measures taken, such as leaving one’s car at home and going by bike instead, will actually help reduce global emissions during the period until 2012.

If priority is instead to be given to reinforcing the government budget, all or part of the future surplus may be sold and the revenue can be used to finance various government commitments. The option of selling the future surplus of emission rights entails that Sweden’s national emission target for 2008–2012 will not be achieved, since the buyers will then be allowed to increase their emissions by an amount corresponding to the number of emission rights sold.

The sellable surplus consists of the difference between a Swedish increase in emissions of +4 per cent, which is allowed under the Kyoto Protocol, and the actual reduction in emissions, which was –9 per cent in 2007.<sup>15</sup> If the entire surplus is sold, Sweden will not contribute to a reduction of global emissions above and beyond the Kyoto Protocol, which actually allows Sweden to *increase* its emissions compared with 1990 levels.

### **Transparency important when decisions are made**

Transparent handling and reporting are crucial in determining various actors’ incentives to take measures aiming to reduce emissions of greenhouse gases.

One motivation for taking measures to reduce emissions may derive from the knowledge that one is helping to achieve Sweden’s environmental objectives by, for example, leaving one’s car at home and taking the bike to work instead.

If it were to emerge that such a measure actually has no impact, it may be harder in the future to convince government agencies, businesses and the general public to take emission-reduction measures. This could counteract the work of the central-government sector, for example the information it provides about how various actors can help reduce emissions.

The handling of the future surplus of emission rights is an important symbolic issue. In the longer run, it may strongly influence whether emissions trading will be an effective policy instrument to help reduce global emissions of greenhouse gases.

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<sup>15</sup> The actual reduction of emissions exceeds –9 per cent if carbon sinks (–2.13 million tonnes per year) and flexible mechanisms are included.

## 1.2 Purpose of the audit and audit questions

The purpose of the audit is to assess the transparency of the handling and reporting of the future surplus of emission rights. Transparency in reporting, which is in line with the Swedish public administration tradition, is necessary to ensure that various actors are given information on equal terms.

A decision – or an explicit statement of intention – in relation to the handling of the surplus is necessary for the various actors to be able to assess what the Swedish actions will entail and behave accordingly. This particularly applies to the extent to which emission reductions will help reduce global emissions above and beyond Sweden's Kyoto commitment, in line with the Riksdag's national environmental-quality objective of *Reduced Climate Impact* and the associated emission target for 2008–2012.

The SNAO therefore poses following audit questions:

- Has the Government put the issue of the handling of the expected surplus of emission rights before the Riksdag?
- Have the Government and the government agencies responsible reported in a transparent manner on Sweden's holdings of emission rights and its future surplus, especially in relation to Sweden's national climate objective?

'Transparency' refers to the extent to which adequate information has been provided to the Riksdag, to government agencies, to businesses and to the general public.<sup>16</sup> Such information is necessary as a basis for decisions to take measures that will reduce emissions.

Incentives to take such measures depend on their expected impact. The handling of the future surplus may therefore have a decisive influence on the behaviour of certain actors.

## 1.3 Scope of the audit

The audit deals with the reporting of Sweden's total national holdings and future surplus of emission rights. It covers the Kyoto Protocol trading period from 2008 to 2012 and relates to compliance with the Kyoto Protocol and the 2012 emission target under the Swedish environmental-quality objective of *Reduced Climate Impact*.

The SNAO does not evaluate the various options (selling, saving and cancelling). However, we have examined the issues of (i) which options are available if the national emission target for 2008–2012 is not given priority and (ii) which options are available if Sweden is to aim for that emission target.

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<sup>16</sup> For further information about the SNAO's assessment criteria, see Chapter 4.

## 1.4 Methodology

To find answers to the audit questions, we have examined whether the Government and the government agencies have reported on the present holdings and future surplus of national emission rights in a transparent manner and in accordance with applicable legislation. We have also examined whether there is any decision or statement of intention as regards the handling of the future surplus of emission rights.

The methods employed include interviews, literature reviews and the examination of rules (including the Kyoto Protocol, the EU Registries Regulation, the Swedish Central Government Budget Act and the Swedish Annual Reports and Budget Documentation Ordinance), case-law and existing decisions.

Interviews and documents show on how the Government and the agencies have reported on and handled the issue of the emission-right surplus.

Besides the members of the audit team, Fredrik Engström, Drazenko Jozic and Aleksandra Popovic have also participated in the audit.

## 1.5 Assessment criteria

On the basis of the applicable legislation, the SNAO has drawn up assessment criteria regarding what can be required of Government, the Environmental Protection Agency and the Energy Agency when it comes to the reporting and presentation of national holdings, of the future surplus and of the handling of Sweden's emission rights. The legal starting points are the Kyoto Protocol, European law and Swedish legislation. Quality assurance of the SNAO's legal assessments has been performed by Ulf Bernitz, Professor of European Law at Stockholm University. The SNAO's assessment criteria are described in Chapter 4. On the basis of those assessment criteria, the SNAO has analysed the Government's and the agencies' reporting and information.

## 1.6 Structure of the report

The report has the following structure: Chapter 1 introduces the report. Chapter 2 contains information about emissions and emission rights in Sweden and the European Union, while Chapter 3 describes the objectives, targets, rules and climate policy options. Chapter 4 presents the requirements imposed on the reporting and handling of emission rights: the SNAO's assessment criteria. Chapters 5 and 6 deal with the agencies' and the Government's reporting and information. Chapter 7 contains the SNAO's conclusions and recommendations.



## 2 Emissions and emission rights in Sweden and the European Union

*Swedish emissions of greenhouse gases will fall by almost 10 per cent between 1990 and 2012. This means that Sweden can meet its commitment under the Kyoto Protocol as negotiated in the EU burden-sharing agreement (+4 per cent) and achieve its national emission target for 2008–2012 (at least –4 per cent). As a result, Sweden will have a surplus of national emission rights. The total value of the overall Swedish surplus is difficult to estimate but may amount to SEK 7 billion–8 billion over the entire period until 2012.*

*Of the other EU Member States, only Austria expects not to meet its emission commitment under the Kyoto Protocol when the planned use of carbon sinks and project mechanisms is included.<sup>17</sup>*

### 2.1 Swedish emissions until today

Swedish emissions of greenhouse gases amounted to about 65.4 million tonnes of CO<sub>2</sub> equivalent<sup>18</sup> in 2007.<sup>19</sup> Sweden's commitment under the Kyoto Protocol relates to the development of emissions compared with 1990, which is the base year.<sup>20</sup> Our emissions of greenhouse gases were 9.1 per cent lower in 2007 than in 1990.<sup>21</sup>

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<sup>17</sup> EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*.

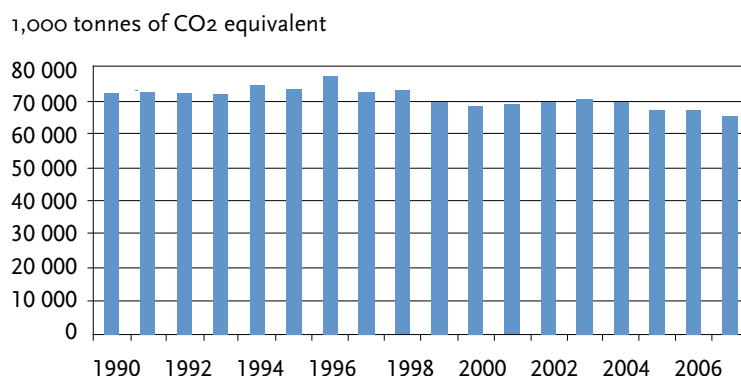
<sup>18</sup> Emission statistics are presented in the format decided by the countries that have signed the UN Climate Convention (UNFCCC). This format is used for reporting to the European Union and to the UNFCCC. It entails that emissions are reported exclusive of emissions from land use, land-use changes and forestry (LULUCF) and foreign transport. No account has been taken of 'carbon sinks'. The statistics do not include emissions occurring in other countries but associated with the production of goods imported to Sweden. They do, however, include emissions from the production of goods subsequently exported from Sweden. Website of the Environmental Protection Agency: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Utslappsstatistik-och-klimatdata/Utslapp-av-vaxthusgaser/Utslapp-fran-1990/>.

<sup>19</sup> Provisional emission data for 2008 will be published in December 2009.

<sup>20</sup> Except as regards fluorinated gases, where the base year for Sweden's emissions is 1995.

<sup>21</sup> Compared with the Kyoto Protocol base year, they were 9.4 per cent lower in 2007. However, the national emission target involves a comparison with all emissions in 1990. The Kyoto Protocol relates to emissions in 1990 of all greenhouse gases except fluorinated ones.

**Chart 1:** Total emissions of greenhouse gases 1990–2007



Source: Swedish Environmental Protection Agency.

Emissions vary somewhat from year to year. They were large in 1996, when there was little precipitation and thus reduced availability of hydroelectric power at the same time as the winter was cold. After that, there has been a slightly decreasing trend for emissions. The reduction in emissions is due to a wide range of factors, for example the replacement of oil boilers with other solutions, such as district heating using biofuels.

## 2.2 Sweden's official emission forecast

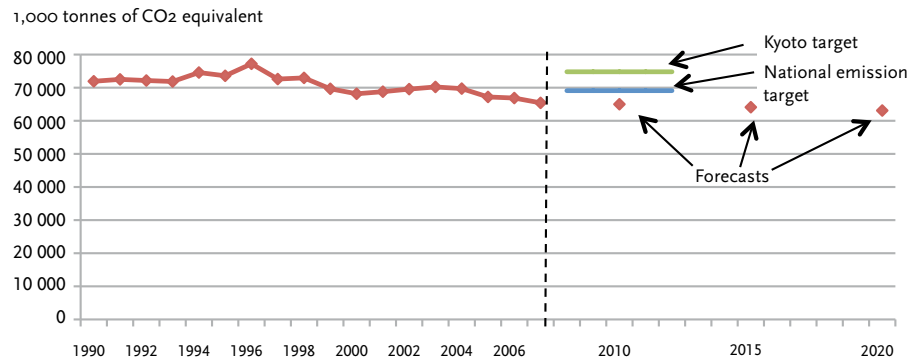
The most recent forecast drawn up by the Environmental Protection Agency shows that total emissions of greenhouse gases are expected to continue falling until 2010.<sup>22</sup> After 2010 emissions are expected to fall further, and total emissions of greenhouse gases in 2020 are forecast to be about 12 per cent lower than in the 1990 base year.<sup>23</sup> This means that Swedish emissions are likely to be considerably lower both than Sweden's commitment under the Kyoto Protocol and than its national emission target for 2012. The conditions and assumptions of the emission forecast were determined in June 2008, meaning that the strong economic downturn that began in the autumn of 2008 is not reflected in the forecast. Actual emissions may

<sup>22</sup> This forecast is based on the policy decisions that are in force in the relevant policy areas. It builds on a number of assumptions which are all associated with uncertainty. This must be kept in mind when the outcome of the forecasting work is interpreted. In fact, this outcome above all constitutes an impact assessment of the assumptions made. The assumptions and conditions underpinning the forecast were determined in June 2008, meaning that the economic downturn during the autumn of 2008 is not included in the estimates. Website of the Environmental Protection Agency: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Utslappsstatistik-och-klimatdata/Utslapp-av-vaxthusgaser/Prognos-for-vaxthusgasutslapp/>.

<sup>23</sup> Sweden's commitment under the Kyoto Protocol relates to the development of emissions compared with 1990, which is the base year.

thus turn out to be smaller than forecast, which would make the surplus of emission rights larger. Larger surpluses of emission rights in Sweden and other countries may, in turn, cause the price of emission rights to fall.

**Chart 2:** Total emissions of greenhouse gases and forecasts for 2010, 2015 and 2020



Source: Swedish Environmental Protection Agency.

The longer Sweden is expected to retain nuclear power, the lower the forecast of future greenhouse-gas emissions becomes. In the forecast discussed here, the economic life of nuclear power is assumed to be 60 years. Earlier forecasts by the Environmental Protection Agency and the Energy Agency have assumed a shorter economic life for nuclear power.<sup>24</sup>

### 2.3 The Kyoto Protocol and the EU burden-sharing agreement allow Sweden to increase its emissions

When the European Union endorsed the Kyoto Protocol, it reallocated its Member States' commitments according to a special burden-sharing agreement. See Section 3.1.1 for more information about the United Nations' climate policy and the Kyoto Protocol. Sweden was given an allocation of emission rights that entitles us to increase our emissions by at most 4 per cent compared with 1990 levels.<sup>25</sup> This can be compared with Sweden's national target for 2008–2012, which aims to reduce emissions by at least 4 per cent; see Section 3.1.2.

<sup>24</sup> Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency], *Den svenska klimatstrategins utveckling – En sammanfattning av Energimyndighetens och Naturvårdsverkets underlag till kontrollstation 2008* ['Development of the Swedish climate strategy: A summary of the information provided by the Energy Agency and the Environmental Protection Agency for the 2008 checkpoint'], p. 46.

<sup>25</sup> Annex II of Council Decision 2002/358/EC.

There are several reasons why Sweden was given permission to increase its emissions. For example, it may have been important that the planned phase-out of nuclear power in Sweden was part of the basis for the EU burden-sharing agreement. Two of the factors taken into account in the model used to share the burden were the fuel mix of each country's power-generation sector and the importance of energy-intensive heavy industry. Since Sweden intended to phase out nuclear power, its emissions from power generation were expected to grow by 414 per cent between 1990 and 2010; see the table below.

If nuclear power had been phased out, this would have entailed an increase in emissions of greenhouse gases. By contrast, emissions from the heavy-industry sector and domestic sectors in Sweden were expected to fall. The assumption of a phase-out of nuclear power thus resulted in the model indicating that Sweden would increase its total emissions by 21 per cent over the period.<sup>26</sup> In practice, however, emissions from the Swedish power-generation sector have not changed much between 1990 and today. This is one of the reasons why Swedish overall emissions have fallen.

**Table 1.** Base scenario according to the model used to determine Sweden's commitment under the Kyoto Protocol and the EU burden-sharing agreement

	Power generation		Heavy industry		Domestic sectors		Total	
	Emissions in 2010 (MT)	Reduction compared to 1990 (%)	Emissions in 2010 (MT)	Reduction compared to 1990 (%)	Emissions in 2010 (MT)	Reduction compared to 1990 (%)	Emissions in 2010 (MT)	Reduction compared to 1990 (%)
B	18.5	-11.5	29.6	-7.8	41.4	-22.4	89.5	-15.8
DK	23.8	-18.6	5.2	-7.8	19.4	-10.5	48.3	-14.4
D	272.0	-27.3	145.7	-22.1	352.9	-16.5	770.7	-21.7
GR	36.7	-10.4	10.8	12.3	27.6	2.8	75.1	3.0
E	78.6	15.9	59.7	12.3	106.1	4.1	244.4	9.6
F	26.1	-32.1	60.0	-7.8	218.6	-11.2	304.7	-12.9
IRL	11.4	14.0	3.2	12.3	13.5	-16.8	28.1	-3.3
I	105.1	-9.7	83.5	-7.8	175.0	-10.0	363.6	-9.4
LUX	0.4	2.8	6.2	-7.8	3.3	-38.8	10.0	-20.8
NL	39.8	-6.5	32.1	-7.8	67.2	-12.9	154.0	-9.4
AU	12.4	3.3	13.3	-7.8	29.0	-5.6	54.7	-4.3
P	16.8	14.5	9.7	12.3	19.6	28.0	46.1	19.4
FIN	22.8	-6.3	12.0	-7.8	20.7	-7.4	55.5	-7.0
S	19.9	414.0	11.7	-7.8	34.9	-9.0	66.6	21.0
UK	150.6	-29.8	66.1	-7.8	232.2	-15.3	449.0	-19.9
EU	821.6	-17.6	549.0	-9.8	1361.5	-12.0	2760.2	-12.9

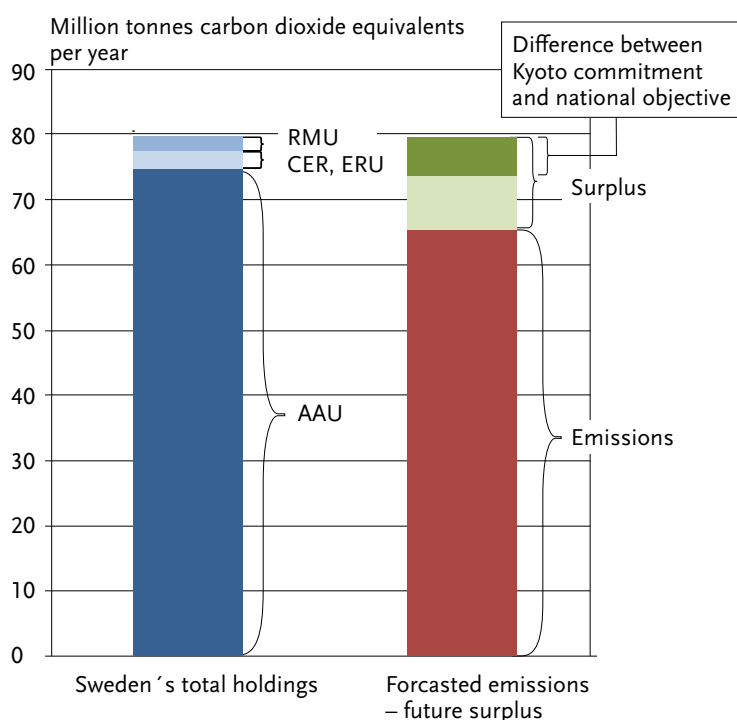
<sup>26</sup> Phylipsen, G J M, et. al., A Triptych sectoral approach to burden differentiation; GHG emissions in the European bubble, *Energy Policy*, Vol. 26, No 12, p. 929–943, 1998.

## 2.4 The allocation leads to a Swedish surplus of emission rights

It is expected that Sweden's allocation of emission rights for the 2008–2012 period will exceed its actual need by a wide margin. The amount of surplus emission rights relative to the Kyoto Protocol and the EU burden-sharing agreement is expected to correspond to just over 14 million tonnes<sup>27</sup> of CO<sub>2</sub> equivalent<sup>28</sup> per year, or just over 70 million tonnes for the entire period from 2008 to 2012.

The share of the surplus remaining when Sweden's national emission target for 2008–2012 has been attained is expected to be about 41 million tonnes over that five-year period.

**Chart 3.** Sweden's future surplus of emission rights per year in 2008–2012<sup>29</sup>



Source: Data from the Swedish Environmental Protection Agency and the Swedish Energy Agency, processed by the SNAO.

<sup>27</sup> The SNAO's overview includes AAUs (including EUAs), CERs, ERUs and RMUs. The data used to make the overview come from the Environmental Protection Agency's most recent forecast of greenhouse-gas emissions. Website of the Environmental Protection Agency: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Utslappsstatistik-och-klimatdata/Utslapp-av-vaxthusgaser/Prognos-for-vaxthusgasutslapp/>. See the SNAO's overview in Table 2.

<sup>28</sup> 'CO<sub>2</sub> equivalent' (CO<sub>2</sub>e) is a common unit of measurement for emissions of different greenhouse gases. It indicates the amount of a greenhouse gas expressed as the amount of CO<sub>2</sub> that would exert the same climate impact (or has the same 'global-warming potential'); for example, 1 kg of methane has the same global-warming potential as 21 kg of CO<sub>2</sub>. <http://www.naturvardsverket.se/sv/Nedre-meny/Fragor-och-svar/Klimat/Vad-ar-koldioxidekvivalenter/>.

<sup>29</sup> AAUs are emission rights allocated to Sweden – including EUAs, which are emission rights allocated to Swedish installations under the EU Emissions Trading Scheme. CERs are emission rights deriving from CDM projects (i.e. projects in the framework of the Clean Development Mechanism). ERUs are emission rights deriving from JI projects (i.e. projects in the framework of the Joint Implementation mechanism). RMUs are sink credits deriving from projects relating to carbon sinks.

The surplus emission rights - if they sold - represent cumulative annual revenues for Sweden.

Sweden's allocation corresponds to its national commitment under the Kyoto Protocol and the EU burden-sharing agreement, which allows average annual emissions of 75 million tonnes.<sup>30</sup> Each emission right corresponds to one tonne of emissions. The total allocation for the entire 2008–2012 period is thus 375 million emission rights. This corresponds to a 4 per cent increase in emissions.

Besides its allocation of emission rights under the Kyoto Protocol, Sweden— through the Energy Agency – invests in projects abroad to reduce emissions. These projects are carried out either under the Clean Development Mechanism (CDM) or under the Joint Implementation (JI) mechanism. The total budget for this investment programme until 2012 is just over SEK 1 billion.<sup>31</sup> In 2008, such investments had yielded emission rights corresponding to about 320,000 tonnes.<sup>32</sup> It is expected that by 2012, these investments will have yielded a cumulative total of emission rights corresponding to 11 million–14 million tonnes.<sup>33</sup> These emission rights are also part of, and will be added to, Sweden's national holdings.<sup>34</sup>

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<sup>30</sup> Just over 20 million of the 75 million emission rights allocated to Sweden each year under the Kyoto Protocol are converted into emission rights (European Union allowances, EUAs) for Swedish enterprises that are part of the EU Emissions Trading Scheme. The remaining emission rights (about 55 million tonnes per year) are supposed to cover all other emissions, for example from road traffic. In this audit, EUAs are not accounted for separately but as part of the reporting of AAUs. This is because they do not influence the audit findings.

<sup>31</sup> Website of the Energy Agency, 20 August 2009: <http://www.energimyndigheten.se/sv/Internationellt/NY-Internationellt-klimatsamarbete/Information-om-CDM-och-JI/Svenskt-klimatprogram-for-CDM-och-JI/http://www.energimyndigheten.se/sv/Internationellt/Internationellt-klimatsamarbete/Svenskt-klimatprogram-for-mekanismen-for-ren-utveckling-CDM-och-gemensamt-genomforande-JI/>.

<sup>32</sup> These investments began in 2005 or later.

<sup>33</sup> Energimyndigheten [Swedish Energy Agency], *Årsredovisning 2008* ['Annual report 2008'], ER 2009:01, p. 135.

<sup>34</sup> Parts of them will be used to attain Sweden's future climate targets. According to the Climate Bill, one-third of Sweden's climate target for 2020 will be achieved by means of investments in other EU countries or flexible mechanisms such as the CDM. One explicit purpose of investments financed from the appropriation for 2010, which is entitled *Insatser för internationella klimatinvesteringar* ['Actions for international climate investments'], is to meet future Swedish climate commitments. The part of Sweden's CER holdings which will be generated through that appropriation is thus intended to be saved and used to achieve future climate targets.

**Table 2.** Overview compiled by the SNAO of the future surplus of emission rights, by year

Emissions of greenhouse gases: Emission rights (Kyoto units)	Million tonnes of CO <sub>2</sub> equivalent per year	Relative to the EU burden-sharing agreement (75 million tonnes)		Relative to Sweden's national emission target for 2008–2012 (69.1 million tonnes)	
		Million tonnes	Percentage	Million tonnes	Percentage
Kyoto under EU burden-sharing agreement (AAUs including EUAs)	75.0	0	0%	+6	+9%
Sweden's national emission target for 2012	69.1	-6	-8%	0	0%
2010 emission forecast	65.0	-10	-13%	-4	-6%
Upward adjustment of the emission forecast*	0.5				
Carbon-sink credits (RMUs)	2.13				
Emission forecast after deduction of RMUs	63.4	-12	-15%	-6	-8%
CDM and JI projects (CERs and ERUs)	2.5**				
Emission forecast after deduction of CERs and ERUs	63.0	-12	-16%	-6	-9%
Total emission forecast after deduction of RMUs, CERs and ERUs	60.9	-14	-19%	-8	-12%
Total surplus forecast, tonnes per year		14.1		8.2	
Surplus for the entire five-year period		(14.1 × 5 years = 70.5)		(8.2 × 5 years = 41.0)	

Source: Swedish Environmental Protection Agency and Swedish Energy Agency.

\* The allocation for Swedish EU ETS installations (22.3 million tonnes) exceeds the emission forecast for Swedish EU ETS installations (21.8 million tonnes). Sweden's official emission forecast must therefore be adjusted upwards by 0.5 million tonnes of emissions.

\*\* The SNAO's estimate is based on the value of the emission rights that will be generated by CDM and JI projects according to the Energy Agency's 2008 annual report (11 million–14 million tonnes for the entire period, divided by 5 years = 2.5 million tonnes on average per year).

The national Climate Commission estimated that these investments will generate emission rights corresponding to 1.2 million tonnes per year.<sup>35</sup>

<sup>35</sup> The final report of the Climate Commission was published as SOU [Swedish Government Official Report] 2008:24, Svensk klimatpolitik [Swedish climate policy]. The Energy Agency thus made a significantly higher estimate in its 2008 annual report (11 million–14 million tonnes) than the Climate Commission did in its final report (1.2 million tonnes × 5 years = 6 million tonnes).

The Climate Commission also estimated that the carbon-sink credits (RMUs) available to Sweden correspond to 2.2 million tonnes of emissions per year.

In all, the Climate Commission estimated that Sweden would have a surplus of 12.9 million tonnes relative to the Kyoto Protocol and the EU burden-sharing agreement. The estimated surplus in relation to the national emission target for 2008–2012 was 6.7 million tonnes.

## 2.5 Estimating the value of Sweden's surplus

It is difficult to estimate the total value of Sweden's surplus.

At present, the trade in national emission rights is not transparent. Only a few large transactions are known. For example, trade has taken place between Japan and Latvia, and between a Japanese company and the Czech Republic.<sup>36</sup> However, trade volumes may well increase as 2012 approaches.

The prices paid for emission rights in transactions between countries are not always communicated openly.<sup>37</sup> This makes it difficult to estimate the value of Sweden's national holdings. Emission rights may also be included in broader trade agreements between countries. A country buying emission rights may, for example, also undertake to buy goods, technology systems or the like from the seller country.

However, the price of an emission right can be estimated at EUR 10 per tonne of emissions. The total value of Sweden's surplus may thus be SEK 7 billion–8 billion.<sup>38</sup> The part of the surplus that remains if Sweden is to achieve its national emission target for the period until 2012 may consequently amount to SEK 4 billion–5 billion.

The Climate Commission also attempted to estimate the value of Sweden's surplus. Starting from the assumption that the national climate target would be achieved, the Commission estimated the annual value of surplus emission rights – beyond a 4 per cent reduction – at between SEK 0.3 billion and 1.3 billion.<sup>39</sup>

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<sup>36</sup> According to an interview with the Environmental Protection Agency and the report by Point Carbon for CAN Europe of 26 October 2009 entitled *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime*.

<sup>37</sup> There is a report drawn up by Point Carbon for CAN Europe on 26 October 2009 entitled *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime* which includes estimates of the value of AAUs based on known deals.

<sup>38</sup> The price of EUR 10 per emission right is the estimated price that has occurred most often in relation to known deals between countries. Point Carbon for CAN Europe, 26 October 2009, *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime*.

<sup>39</sup> SOU [Swedish Government Official Report] 2008:24, *Svensk klimatpolitik* ['Swedish climate policy'], p. 523.

If account is taken only of Sweden's commitment under the Kyoto Protocol – a 4 per cent increase – the annual value of the surplus, using the Climate Commission's assumptions, more than doubles.

## 2.6 Emissions of EU countries

Emissions of greenhouse gases by the EU-27<sup>40</sup> correspond to 11–12 per cent<sup>41</sup> of global emissions. Of the EU-27 countries, Germany, the United Kingdom, Italy, France and Spain account for the largest emissions of greenhouse gases.

According to the most recent report from the European Environment Agency (EEA), 14 EU-27 countries already emit less greenhouse gases on average than they have committed to doing under the Kyoto Protocol.<sup>42</sup>

All countries but Austria find that they will meet their commitments once their planned use of carbon sinks and project mechanisms has been included.<sup>43</sup>

**Table 3.** Present situation of EU countries as regards domestic emissions versus commitments under the Kyoto Protocol

Group of countries	Countries whose average emissions are lower than their commitment under the Kyoto Protocol	Countries whose average emissions are higher than their commitment under the Kyoto Protocol
EU-15	France, Germany, Greece, Sweden, United Kingdom	Austria, Belgium, Denmark, Finland, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain
EU-12*	Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia	Slovenia

Source: EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*.

\* Malta and Cyprus have not made any emission-reduction commitments under the Kyoto Protocol.

<sup>40</sup> The EU-27 consists of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and the United Kingdom.

<sup>41</sup> Exclusive of emissions from land use, land-use changes and forestry (LULUCF) and foreign transport. EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*, p. 8.

<sup>42</sup> EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*.

<sup>43</sup> That is, including the use of project mechanisms (yielding CERs and ERUs) and carbon sinks (yielding RMUs). EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*.



## 3 Objectives, targets, rules and climate policy options

*Sweden's national emission target for the 2008–2012 period is more ambitious than its quantitative commitment under the Kyoto Protocol as negotiated in the EU burden-sharing agreement. However, both the national climate objective (and thereby the associated emission target for 2008–2012) and Sweden's commitment under the Kyoto Protocol emanate from the UN Climate Convention.*

*The future surplus of emission rights must be fully or partly cancelled in order for Sweden to attain its national emission-reduction target for 2012. There is thus a conflict between the overall aims of climate policy on the one hand and any decision to sell or save the entire surplus on the other.*

*The course of action chosen will influence the impact that individual citizens' efforts to save the climate will have on global emissions.*

### 3.1 Objectives, targets and rules of climate policy

#### 3.1.1 *The Kyoto Protocol puts a cap on Swedish emissions*

The Parties to the Kyoto Protocol must ensure that their anthropogenic emissions of greenhouse gases<sup>44</sup> do not exceed their quantified commitments under the Protocol. The goal is for the Parties' total emissions of greenhouse gases to fall by at least 5 per cent below their 1990 levels in the commitment period from 2008 to 2012.<sup>45</sup> By 2005 at the latest, each Party must have made demonstrable progress in achieving its commitments under the Protocol.<sup>46</sup> As a result of the EU burden-sharing agreement (see Section 2.3), this means that Sweden's emissions are allowed to increase by 4 per cent compared with 1990 levels.

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<sup>44</sup> The Kyoto Protocol covers the following greenhouse gases, expressed in CO<sub>2</sub> equivalent terms: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). See Article 3 and Annex A of the Kyoto Protocol.

<sup>45</sup> Sweden's quantified commitment is that emissions must not exceed 92 per cent of 1990 levels, which corresponds to a reduction of 8 per cent. As a result of the EU's internal burden-sharing agreement (see Section 2.3), however, our real commitment is instead that our emissions must not increase by more than 4 per cent.

<sup>46</sup> Article 3(1), 3(2) and 3(7) as well as Annex B of the Kyoto Protocol.

The Kyoto Protocol is an agreement under the United Nations Framework Convention on Climate Change (UNFCCC), also referred to as the 'Climate Convention', which was signed in Rio de Janeiro in 1992. It provides the framework for international climate policy. The ultimate goal of the Climate Convention and its associated Kyoto Protocol is the stabilisation of greenhouse-gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The Climate Convention entered into force in March 1994. Sweden adopted it in 1993.<sup>47</sup> It was adopted on behalf of the European Community by means of a Council Decision in December of the same year.<sup>48</sup>

The Parties to the Climate Convention then agreed the Kyoto Protocol in December 1997. Sweden adopted that Protocol in May 2002.<sup>49</sup> The European Community approved the Protocol by means of a Council Decision in April of the same year.<sup>50</sup> In conjunction with its approval of the Protocol, the European Community made a special declaration to the effect that the Community's quantified emission-reduction commitment under the Protocol would be fulfilled through action by the Community and its Member States within the respective competence of each party.<sup>51</sup> The Kyoto Protocol subsequently entered into force on 16 February 2005, after the Russian Federation had ratified it.

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<sup>47</sup> SÖ [Sweden's international agreements] 1993:13, *Förenta nationernas ramkonvention om klimatförändring*, New York den 9 maj 1992 ['United Nations Framework Convention on Climate Change, New York, 9 May 1992']; Government Bill 1992/93:179, *Åtgärder mot klimatpåverkan m.m.* ['Actions to combat climate impacts, etc.'].

<sup>48</sup> Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change.

<sup>49</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163). SÖ [Sweden's international agreements] 2002:41, *Kyotoprotokollet till Förenta nationernas ramkonvention den 9 maj 1992 om klimatförändringar* ['The Kyoto Protocol to the United Nations Framework Convention of 9 May 1992 on Climate Change']. The Government decided on 16 May 2002 to ratify the Protocol. On 31 May 2002 Sweden notified the UNFCCC Secretariat of the European Council's decision to the effect that the European Community and its Member States would fulfil their commitments under Article 3(1) of the Protocol jointly, in accordance with Article 4 of the Protocol.

<sup>50</sup> Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder. Official Journal of the European Communities No L 130, 15 May 2002, pp. 1–3.

<sup>51</sup> Declaration of the European Community made in accordance with Article 24(3) of the Kyoto Protocol; see Annex III of Council Decision 2002/358/EC, third paragraph.

### 3.1.2 Sweden has set a more ambitious national emission target

The Government and the Riksdag have decided a national emission target which goes beyond Sweden's international commitments.<sup>52</sup> When the Riksdag endorsed the Climate Convention in 1993, it also decided a national strategy under which CO<sub>2</sub> emissions from fossil fuels were to stabilise at 1990 levels in 2000 and then fall.<sup>53</sup>

In 1999, the Riksdag decided a series of national environmental-quality objectives intended to guide Swedish environmental policy; one of them was entitled *Reduced Climate Impact*.<sup>54</sup> This objective is directly linked to the Climate Convention and relates to the stabilisation of greenhouse-gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system (see Figure 1 for a translation of the exact wording of the objective). Its meaning has been progressively clarified, most recently in the 2009 Energy and Climate Bill.<sup>55</sup>

In 2002, the Riksdag decided an emission target for the period until 2012 as an interim target under the objective of *Reduced Climate Impact*.<sup>56</sup> In line with the proposal of its Committee on Environment and Agriculture, the Riksdag voted in favour of the Government's recommended objectives for Swedish climate policy.<sup>57</sup>

**The Government's proposal:** *Swedish emissions of greenhouse gases, on average over the period from 2008 to 2012, should be at least 4 per cent below emissions in 1990. Emissions should be accounted for in CO<sub>2</sub> equivalent terms and include the six greenhouse gases as defined in the Kyoto Protocol and by the IPCC. [...] The national target to reduce emissions of greenhouse gases by at least 4 per cent should be achieved without compensation for removal by carbon sinks and*

<sup>52</sup> Interim target, 2008–2012. Emissions of greenhouse gases:  
Swedish emissions of greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990. Emissions will be counted in CO<sub>2</sub> equivalent terms and include the six greenhouse gases as defined in the Kyoto Protocol and by the IPCC. This interim emission target will be achieved without compensation for removal by carbon sinks and without recourse to flexible mechanisms.

<sup>53</sup> *Åtgärder mot klimatpåverkan m.m.* ['Actions to combat climate impacts, etc.']. (Government Bill 1992/93:179, Riksdag Committee Report 1992/93:JoU19, Riksdag Written Communication 1992/93:361).

<sup>54</sup> *Svenska miljömål. Miljöpolitik för ett hållbart Sverige* ['Swedish environmental objectives: Environmental policy for a sustainable Sweden']. (Government Bill 1997/98:145, Riksdag Committee Report 1998/99:MJU6, Minutes 1998/99:87).

<sup>55</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate']. (Government Bill 2008/09:162, Riksdag Committee Report 2008/09: MJU28, Riksdag Written Communication 2008/09:300).

<sup>56</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy']. (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163).

<sup>57</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy']. (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, p. 5 'Utskottets förslag till riksdagsbeslut' ['The Committee's proposal for a Riksdag Decision'], Point 1, 'Mål för den svenska klimatpolitiken m.m.' ['Objectives of Swedish climate policy, etc.'], Riksdag Written Communication 2001/02:163).

*without recourse to flexible mechanisms.* At the 2004 checkpoint, the Government intends to consider setting a complementary target which includes the flexible mechanisms.<sup>58</sup> [...] (Translated from Swedish; italics by the SNAO.)

When the emission target for 2008–2012 was introduced, the Riksdag Committee on Environment and Agriculture stated that it ‘shares the Government’s view that a further tightening of the national target compared with the commitment laid down in the EU’s provisional internal burden-sharing agreement for 2008–2012, which amounts to an increase of 4 per cent compared with 1990 levels, will underscore the importance of trying to meet at an early stage the challenge that the threat of climate change entails.’<sup>59</sup> When the Government stated in 2009 that the 2008–2012 emission target should be attainable, the Committee made the following analogous statement: ‘The Committee agrees with the Government that it is important to meet at an early stage the challenge that the threat of climate change entails. This has previously been given concrete expression in the setting of a national target which is more ambitious than Sweden’s commitment under the EU burden-sharing agreement [...]’.<sup>60</sup>

‘Swedish emissions’ refers, according to the Government Bill, to ‘emissions for Sweden of the six greenhouse gases’.<sup>61</sup> The Riksdag Committee on Environment and Agriculture used corresponding expressions when taking a position on the Government Bill during its examination by the Riksdag.<sup>62</sup> Unlike the Kyoto commitment, the emission target will be achieved without compensation for removal by carbon sinks and without recourse to flexible mechanisms. The Committee Report describes this specification as entailing a higher level of ambition compared with the Kyoto commitment.<sup>63</sup> The SNAO concludes that transactions involving emission rights should be taken into account only if the rights are sold, in which case the measure at hand cannot be said to contribute to the achievement of the target (see Annex 5).

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<sup>58</sup> At the 2004 checkpoint, the Riksdag decided, in line with the Government’s proposal, that the emission target would remain unchanged (*Nationell klimatpolitik i global samverkan* [‘National climate policy in global cooperation’], Government Bill 2005/06:172, Riksdag Committee Report 2005/06:MJU14, Riksdag Written Communication 2005/06:389).

<sup>59</sup> *Sveriges klimatstrategi* [‘Sweden’s climate strategy’] (Riksdag Committee Report 2001/02:MJU10, p. 16) (quotation translated from Swedish).

<sup>60</sup> Riksdag Committee Report 2008/09:MJU28, p. 26 (quotation translated from Swedish).

<sup>61</sup> This is expressed as follows in the Government Bill: ‘The target entails that emissions for Sweden of the six greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990.’ (Government Bill 2001/02:55, p. 35; quotation translated from Swedish).

<sup>62</sup> This is expressed as follows in the Committee Report: ‘The target entails that emissions for Sweden of the six greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990.’ (Riksdag Committee Report 2001/02:MJU10, p. 15; quotation translated from Swedish).

<sup>63</sup> *Sveriges klimatstrategi* [‘Sweden’s climate strategy’] (Riksdag Committee Report 2001/02:MJU10, p. 17).

The Government's new Energy and Climate Bill reiterates that the national emission target until 2012 will remain unchanged.<sup>64</sup> The Riksdag and the Government have also set a second interim emission target (for the period until 2020) under the overall objective of *Reduced Climate Impact*.

### 3.1.3 Summary

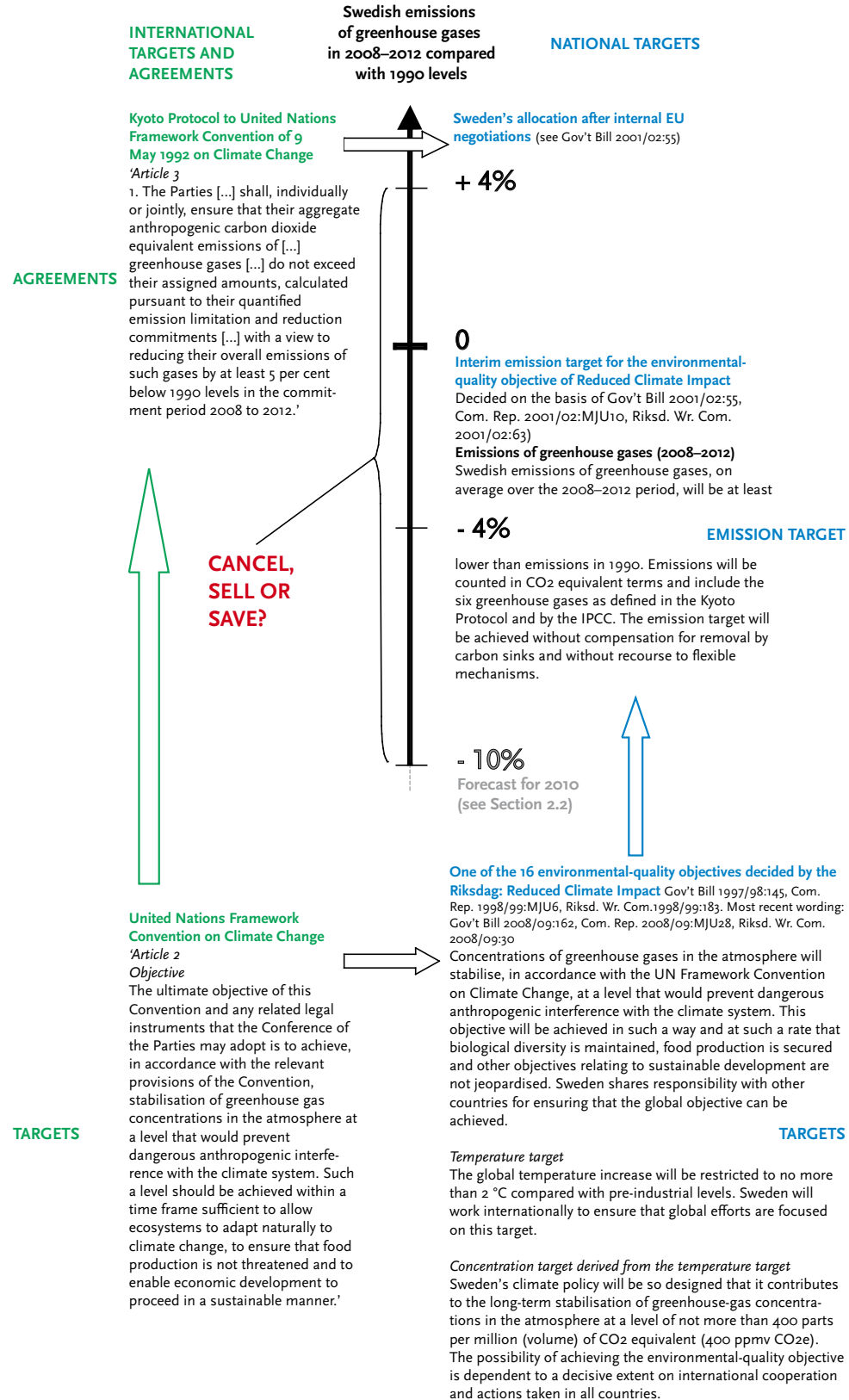
To sum up, the national emission objective represents a conscious attempt to aim higher than Sweden's quantitative commitment under the Kyoto protocol as negotiated in the EU burden-sharing agreement.

However, both the national objective (and thus consequently the associated emission-reduction target for 2008–2012) and Sweden's commitment under the Kyoto Protocol follow directly from the UN Climate Convention (see Figure 1).

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<sup>64</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, Riksdag Committee Report 2008/09: MJU28, Riksdag Written Communication 2008/09:300).

**Figure 1: Relationships between international targets and agreements as well as Swedish objectives and targets**



## 3.2 Links between targets, agreements and courses of action

### 3.2.1 *The Kyoto Protocol offers three possible courses of action*

The Swedish surplus of emission rights can be handled in three ways: it can be sold (or otherwise transferred), cancelled or saved (see Section 3.2.3).<sup>65</sup> These three options are described in greater detail in the 'modalities' of the Kyoto Protocol, where it is specified what transactions the Parties may perform and what their ramifications are.<sup>66</sup> While the SNAO provides a more thorough description of these modalities in Annex 2 of this report, their main features are presented below:<sup>67</sup>

- If a Party acquires emission rights or parts of the amount assigned to another Party, they are to be added to the assigned amount of emission rights for the acquiring Party;<sup>68</sup>
- If a Party transfers emission rights or parts of its assigned amount to another Party, they are to be subtracted from the assigned amount of emission reductions for the transferring Party;<sup>69</sup>
- To demonstrate compliance with the Protocol, each Party must retire emission rights. Assessment of a Party's compliance takes place at the end of the commitment period plus an additional period;<sup>70</sup>

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<sup>65</sup> In addition, the surplus can be used to increase domestic emissions during the current period. However, the SNAO has not found this to be a real option in this context.

<sup>66</sup> The Kyoto Protocol states at a general level that more detailed guidelines for the accounting of emission rights are to be decided by the Conference of the Parties (Article 7(4) of the Kyoto Protocol). At the Conference of the Parties in Marrakech, a number of detailed guidelines were agreed. They relate to annual reporting on greenhouse gases, to the inventory systems that Parties to the Kyoto Protocol have to establish, and to national registry systems. These guidelines, which are referred to as 'modalities', were then adopted at a Conference of the Parties in Montreal in 2005. More specific requirements imposed on registries are laid down in the section 'Registry requirements' under the main heading 'Modalities' (UNFCCC website, 30 September 2009: [http://unfccc.int/national\\_reports/accounting\\_reporting\\_and\\_review\\_under\\_the\\_kyoto\\_protocol/items/1029.php](http://unfccc.int/national_reports/accounting_reporting_and_review_under_the_kyoto_protocol/items/1029.php)). The more specific accounting guidelines are laid down in Decision 13/CMP.1 and the Annex entitled 'Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol'.

<sup>67</sup> The fundamental provisions are to be found in Article 3(10)–3(13) of the Kyoto Protocol. See also United Nations, Framework Convention on Climate Change, *Decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol*, 30 March 2006, FCCC/KP/CMP/Add.2, Decision 11/CMP.1, 'Modalities, rules and guidelines for emissions trading under Article 17 of the Kyoto Protocol'. The more specific guidelines are laid down in Decision 13/CMP.1 and the Annex entitled 'Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol'.

<sup>68</sup> Article 3(10) of the Kyoto Protocol.

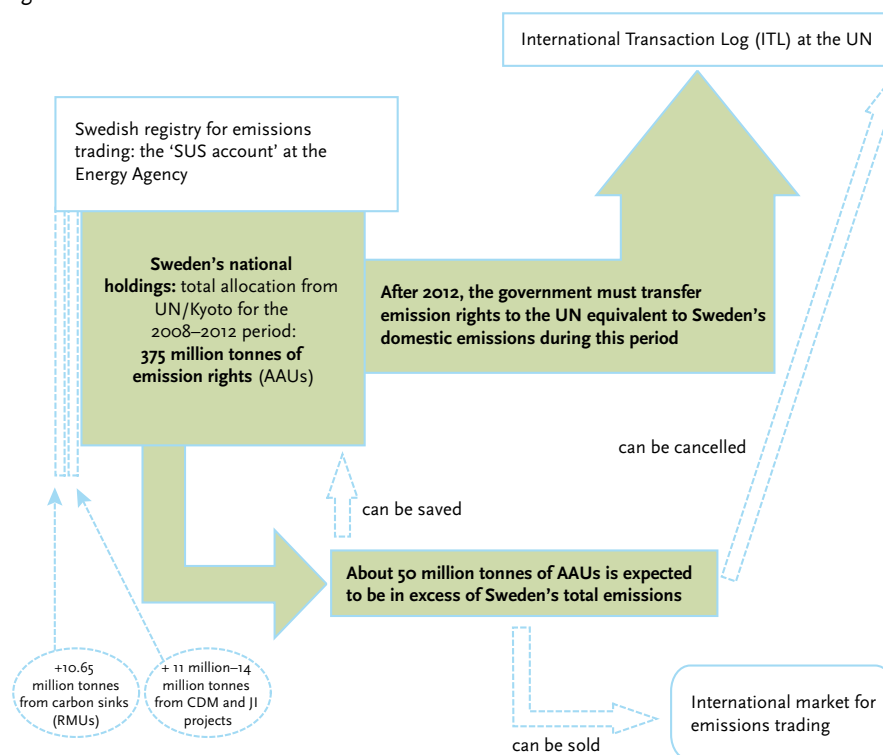
<sup>69</sup> Article 3(11)–3(12) of the Kyoto Protocol.

<sup>70</sup> Point 34 of Decision 13/CMP.1 (Annex).

- Following the expiration of the additional period, the Party must also report the total number of emission rights, the total amount of emission rights on its retirement account and the total amount of emission rights that the Party requests should be carried over to the next commitment period. Any emission rights not carried over in that way are to be cancelled.<sup>71</sup> The right to save surplus emission rights thus does not arise automatically but must be actively demanded by the Party;
- Each Party may also (voluntarily) cancel emission rights so that they cannot count towards compliance with the Party's commitments. To do this, emission rights are transferred to a special cancellation account in the national registry.<sup>72</sup> There is no requirement to the effect that this type of cancellation must take place at a particular time.

The SNAO interprets the last point to mean that cancellation can take place on an ongoing basis during the commitment period.

**Figure 2:** The picture below shows various options for handling a surplus of emission rights



<sup>71</sup> Article 3(13) of the Kyoto Protocol and Point 36 of Decision 13/CMP.1.

<sup>72</sup> Point 33 of Decision 13/CMP.1 (Annex).

### 3.2.2 *European law does not restrict national discretion*

The key issue examined in this section is whether Sweden could be forced to sell<sup>73</sup> its future surplus of emission rights to other EU Member States. The SNAO's examination shows that European law presents no obstacles to any of the options for the handling of Sweden's surplus of emission rights.

There is no legal basis authorising the EU to impose sanctions on a Member State that refuses to share a surplus of emission rights with other Member States. Any duty to share that might exist would be based on political rather than legal considerations.

For example, the British government has already declared that it reserves the right to retain or cancel emission-right surpluses for reasons of domestic policy.<sup>74</sup>

Participation in emissions trading under the Kyoto Protocol is voluntary. The Parties to the Kyoto Protocol *may* trade emission rights to fulfil their emission-reduction commitments under the Protocol. However, there are certain restrictions as regards the permissible extent of such trade. Any trade must be supplemental (i.e. secondary) to domestic actions taken for the purpose of meeting quantified commitments to limit and reduce emissions.<sup>75</sup>

In its 2002 Decision concerning the European Community's approval of the Kyoto Protocol, the Council lays down that the Community and its Member States are to fulfil their commitments under the Protocol jointly. The Council further states that the Community and its Member States have agreed quantified commitments to limit and reduce emissions, determining the respective emission levels allocated to each of them for the first commitment period from 2008 to 2012. According to the Council, the Community and its Member States will take the necessary measures to comply with the emission levels set out in an Annex to the Decision.<sup>76</sup> The Council Decision does not further specify the types of necessary measures that may be taken.

The main circumstances that could be construed as indicating that Sweden has a duty to share or sell surplus emission rights to other Member States are the following: In the recitals of the Council Decision

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<sup>73</sup> Or possibly to give emission rights away. From the perspective of the objectives of climate policy, selling and giving away are equivalent (provided that possible increases in revenues are not earmarked for climate measures).

<sup>74</sup> EEA Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*, note 42, p. 90. The exact wording is as follows: 'For example, the Government of the United Kingdom has repeatedly stated that it reserves the right to retain or cancel surplus units in order to meet domestic policy commitments.'

<sup>75</sup> Article 17 of the Kyoto Protocol. The Conference of the Parties is to define the relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability, for emissions trading.

<sup>76</sup> Article 2 of Council Decision 2002/358/EC.

it is emphasised that the Community and its Member States are jointly responsible, among other things, for ensuring that their emissions of greenhouse gases do not exceed the amounts assigned to them. It is stressed that Member States thus, and in accordance with Article 10 of the Treaty establishing the European Community, individually and collectively have the obligation to take all appropriate measures to ensure fulfilment, inter alia, of the Community's quantified emission-reduction commitment. This includes an obligation to facilitate the achievement of the Community's commitment and to abstain from any measure that could jeopardise the attainment of this commitment.<sup>77</sup>

The main circumstances indicating that Sweden does *not* have a duty to share or sell surplus emission rights to other Member States are the following: It is also stated in the recitals of the 2002 Council Decision that the Community and its Member States have an obligation to take measures in order to enable the Community to fulfil its obligations without prejudice to the responsibility of each Member State towards the Community and other Member States for fulfilling its own commitments.<sup>78</sup> What is more, each Member State has a specific commitment to limit its emissions.<sup>79</sup>

### 3.2.3 *Cancellation must take place for the 2012 emission target to be met*

In other words, all three options for handling the surplus of emission rights are possible. However, these options would affect compliance with the national targets in different ways.<sup>80</sup>

If the surplus is **sold**, this yields additional public revenues. In case the target of reducing Swedish emissions by 2012 had been independent, i.e. not subordinate to a more general objective, it could have been argued that the target would be attained even if the surplus were sold. Emissions *in* Sweden do not increase because of the sale of emission rights. However, such an interpretation is not possible given the Riksdag's wording to the effect that the target refers to emissions *for* Sweden (see Annex 5).

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<sup>77</sup> Recital 10 of Council Decision 2002/358/EC. This recital refers, inter alia, to Articles 3(1) and 4 of the Kyoto Protocol. Under Article 3(1), the Parties must ensure, individually or jointly, that their greenhouse-gas emissions do not exceed their assigned amounts. Article 4 lays down that Parties to the Protocol having agreed to fulfil their commitments under Article 3 jointly will be deemed to have met those commitments provided that their total combined aggregate anthropogenic emissions of the greenhouse gases covered by the Protocol do not exceed their assigned amounts.

<sup>78</sup> Recital 12, last sentence, of Council Decision 2002/358/EC.

<sup>79</sup> Annex II of Council Decision 2002/358/EC.

<sup>80</sup> Note that this reasoning is illustrative rather than exact. There is a certain difference between the Swedish emission target and our commitment under the Kyoto Protocol. The former must be achieved without compensation for removal by carbon sinks and without recourse to flexible mechanisms. Further, there are no statistics on outcomes for the period, since it has only just begun.

The fact that the emission target for 2012 is an interim target under the overall environmental-quality objective of *Reduced Climate Impact* further supports the conclusion that emissions for Sweden are the basis on which compliance with the 2012 emission target is to be assessed. The impact on target compliance is the same whether the emission rights are sold or used to increase emissions within Sweden's borders. The sale of the entire surplus, given the overall objective of *Reduced Climate Impact*, would entail a failure to achieve the interim emission target.

If Sweden were to choose instead to **cancel** its surplus, this would entail a de facto lowering of the international cap for emission trends. If emission rights corresponding to 8 percentage points were cancelled, the emission target would have been achieved. Any cancellation beyond that would entail increased compliance with the overall objective of *Reduced Climate Impact*.

Since the emission target for 2012 is phrased in such a way that the goal is a reduction of *at least* 4 per cent, such an additional cancellation would in fact also increase compliance with that target. What is more, doing so would be well in line with the ambition expressed by the Riksdag that Sweden should be a forerunner in climate policy.

The national Climate Commission also examined the issue of Sweden's future surplus of emission rights and the courses of action available.<sup>81</sup> The Commission stressed that the amount needed to comply with Sweden's national emission target for 2012 (-4 per cent) should be deducted from the surplus, given that Sweden has adopted a national target which is more ambitious than its commitment under the Kyoto Protocol. The Commission proposed that part of the surplus should be cancelled and part of it sold.

If Sweden chooses instead to **save** the surplus by carrying it over to the next period, the impact in the short term – i.e. during the current period – is the same as that of a cancellation. However, on the assumption that such saved emission rights will eventually be either used or sold, saving them will in the long term<sup>82</sup> counteract the objective of *Reduced Climate Impact*.

Given the link with the overall objective, saving the surplus would also be contrary to the spirit of the emission target. Doing so can be compared to a situation where the Government used central-government policy instruments to persuade citizens to postpone their emissions, say, from December 2012 to January 2013.

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<sup>81</sup> The final report of the Climate Commission was published as SOU [Swedish Government Official Report] 2008:24, *Svensk klimatpolitik* [*Swedish climate policy*].

<sup>82</sup> The definition of 'long term' here depends on the timing of such use or sale.

### 3.2.4 *The national emission target is still valid*

The fact-clearance process, in which the government agencies and ministries concerned were given the opportunity to scrutinise the SNAO's draft report from a factual perspective, showed that there is a lack of consensus among them. They differ in their view of the relationship between compliance with Sweden's national climate objective, including its interim emission target for 2012, and the impact that the handling of Sweden's future surplus of emission rights will have on compliance with that emission target. The view of the Energy Agency deviated from that of the others. In its fact-clearance statement, the Agency expresses the opinion that the emission target has already been revised through the EU Emissions Trading Scheme (EU ETS). The Agency notes that the EU ETS is a flexible mechanism and that the emission target for 2012 should be achieved without recourse to such mechanisms. According to the Agency, the use of the EU ETS as a policy instrument turns the Swedish emission target into an anomaly.

Given that the SNAO's starting point is the target set by the Riksdag, there is no reason to comment further on the Energy Agency's view. Nevertheless, the SNAO notes that the emission target for 2008–2012 was actually decided after it had become known that the EU would have a system for trade in emission rights.

The SNAO further notes that the Energy Agency's view on the validity of the emission target may also influence the Agency's opinion of how Sweden's measures to achieve the national climate objectives and targets should be implemented (see Annex 6).

### 3.2.5 *Summary*

To sum up, the future surplus of emission rights must be cancelled in whole or in part for Sweden's national interim target relating to emission reductions during the 2008–2012 period to be achieved. Another way phrasing this is that the Government's use of two of the options available to it under the system of emission rights – selling and saving – would conflict with the overall aims of climate policy. One of those who have previously identified this conflict is the economist Peter Bohm:

*One remaining issue is what Sweden should do with the unused 8 percentage points of the emission quota it has been assigned. Selling them on the IET market would be pointless, since this would mean accepting that the increase in emissions that we wish to avoid takes place in another country instead. [...] saving these AAUs for the next commitment period would, it is true, reduce costs, but*

*this option is also likely to have a strong impact on the psychological effect aimed for in conjunction with Sweden's wish to demonstrate the additional sacrifices it has made as a pioneer.*<sup>83,84</sup>

The Climate Commission, which consisted of Members of the Riksdag, also proposed that the surplus should be cancelled. It stressed that the amount needed to comply with Sweden's national emission target for 2012, i.e. at least –4 per cent, had to be deducted from the surplus, meaning that this amount would have to be cancelled. As regards the rest of the surplus, the Commission found that it could be cancelled or sold. Any revenues from sales should according to the Commission be used for climate-related actions, in Sweden or abroad.

### 3.3 Links between the options and the effects of actions taken by government agencies and individuals

#### 3.3.1 *Ministries and agencies cancel emission rights to ensure that their carbon offsetting has an impact*

The Government and some government agencies have offset the climate impact of their air travel by cancelling emission rights that they had acquired for that purpose.

The Government discusses carbon offsetting in the Budget Bill and the Climate Bill.<sup>85</sup> According to the Climate Bill, government agencies may strengthen climate efforts by choosing to carbon-offset their air travel. The Government considers that agencies should be entitled to use their administrative appropriations for 2010 and 2011 to buy carbon offsets for their official air travel.

The Government Offices (ministries) have carbon-offset all their air travel since 2008. Before that, carbon offsets were purchased for individual journeys, including to climate conferences. The emissions caused by air travel are offset by support for projects in developing countries that will reduce emissions correspondingly.<sup>86</sup>

<sup>83</sup> ITPS [Swedish Institute for Growth Policy Studies], 2004:3, *Den svenska klimatpolitikens kostnader och betydelse* ['Costs and importance of Sweden's climate policy'], report by Peter Bohm, p. 27 (quotation translated from Swedish).

<sup>84</sup> The SNAO's notes: IET = international emissions trading; AAU = assigned-amount unit (i.e. national emission right).

<sup>85</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:163), p. 145; and *Budgetproposition för 2010* ['Budget Bill for 2010'] (Government Bill 2009/10:01), p. 341.

<sup>86</sup> Carbon offsetting is undertaken because emissions from air transport are not subject to any policy instruments intended to reduce them. From 2012, air transport will be covered by the EU Emissions Trading Scheme.

Carbon offsetting takes place through the purchase of certified emission reductions (CERs) verified by the United Nations and deriving from projects under the Clean Development Mechanism, which is part of the Kyoto Protocol. The Energy Agency is in charge of intermediation and quality assurance. All emission rights bought for this purpose have been cancelled.

### 3.3.2 *Agencies endeavour to make the general public help reduce emissions*

A number of government agencies, including the Energy Agency, provide the general public with tips and advice on how to be 'climate-smart': 'Leave your car at home and bike or walk if you're not going far', 'Use public transport whenever you can'.<sup>87</sup>

If the surplus of emission rights is cancelled, anyone who follows the agencies' advice will help ensure that the national climate objective is achieved and that global emissions decrease. If emission rights are saved, however, a reduction today means that the corresponding amount can be emitted later instead. If the surplus is subsequently sold, there is no impact at all on the climate objective, the associated emission target for 2012 or global emissions, since the sale entails that the buyers obtain permission to increase their emissions by the corresponding amount. Instead, the sale of emission rights helps strengthen the government budget through the associated revenues.

There are also several minor policy instruments of a voluntary or compulsory nature that the Riksdag and Government justify by reference to Sweden's efforts to achieve its climate objective, including the emission target for 2008–2012, and help bring about global emission reductions. One such example is the CO<sub>2</sub> tax.

### 3.3.3 *The choice of options will influence the impact of individual citizens' efforts in favour of the climate*

The national surplus of emission rights is expected to amount to just over 14 million tonnes of CO<sub>2</sub> equivalent per year (see Section 2.4). This can be compared with total emissions from private cars in Sweden, which are 13 million tonnes per year.<sup>88</sup>

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<sup>87</sup> The Energy Agency, the National Board of Housing, Building and Planning, the Consumer Agency and the Environmental Protection Agency are engaged in a joint information campaign to make more people aware of existing opportunities to help reduce emissions of greenhouse gases by making energy-smart everyday choices. Their campaign provides information about subjects ranging from suitable heating systems to energy ratings of household appliances. Website of the Energy Agency: <http://www.energimyndigheten.se/sv/Press/Pressmeddelanden/Bli-Energismart-kampanjen-besoker-Eskilstuna-17-19-april/> (quotations translated from Swedish).

<sup>88</sup> Website of SIKA (Swedish Institute for Transport and Communications Analysis): <http://www.sika-institute.se>, 22 October 2009.

In order to clearer illustrate how the various options for handling the surplus of emission rights may affect individual citizens, let us consider an example.

The example is based on the following assumptions:

An average car consumes about 8.4 litres of petrol (gasoline) per 100 km.<sup>89</sup> This means that travel by car produces 1.91 kg CO<sub>2</sub> per 10 km travelled.<sup>90</sup> A person who drives about 10 km to work and back will cause emissions of 3.82 kg CO<sub>2</sub> each working day.<sup>91</sup> Assuming a five-day week and 45 working weeks per year, the average Swede's car travel to and from work during one year corresponds to emissions of about 0.86 tonnes of CO<sub>2</sub>. Going to work by bike instead would reduce emissions by that amount.

Given our assumptions, if Sweden were to use its surplus of emission rights, more than 11 million citizens, i.e. more than Sweden's total population, would be able to go to work by car instead of by bike.<sup>92</sup>

If the surplus of emission rights is cancelled, this will thus – according to the example – amount to a global reduction in emissions corresponding to over 11 million people going to work by bike instead of by car each year during the period concerned.

If the surplus is saved, over 11 million people could go to work by car at a later time, for example in each of the years from 2013 to 2017.

If the surplus is sold, over 11 million people in other countries with commitments under the Kyoto Protocol could be given permission to go to work by car each year until 2012.

If the surplus is used to increase emissions, over 11 million people more in Sweden could drive to work each year until 2012.

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<sup>89</sup> That is, it travels 11.9 km per litre, 33.6 miles per Imperial gallon and 28.0 miles per US gallon. Data on national petrol consumption per distance travelled by an average car, 2008, taken from the website of Statistics Sweden, 3 November 2009: [http://www.scb.se/Pages/Standard\\_\\_\\_\\_132382.aspx](http://www.scb.se/Pages/Standard____132382.aspx).

<sup>90</sup> The SNAO's calculations (0.00084 m<sup>3</sup> × 31.4 GJ/m<sup>3</sup> × 72.6 kg/GJ) according to the thermal values and emission factors for petrol provided by the Environmental Protection Agency. Website of the Environmental Protection Agency, 3 November 2009: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Minska-utslappen/Verktyslada-for-kommuner-och-foretag/Berakna-utslapp-av-vaxthusgaser/>.

<sup>91</sup> This assumption is reasonable in the light of Statistics Sweden's report on this subject: Statistiska centralbyrån [Statistics Sweden] (2004), *Så bor vi i Sverige, Bostäder, boendemiljö och transporter 1975–2002* ['This is how we live in Sweden: Dwellings, housing environments and transport, 1975–2002'], *Levnadsförhållanden* ['Living conditions'] series, Report No 107.

<sup>92</sup> Given the assumption that the surplus will amount to 10 million tonnes of emissions (0.86/10 million tonnes = 11.6 million). This is a theoretical and hypothetical example. In fact, according to Statistics Sweden there were only about 4.5 million gainfully employed people in Sweden in September 2009.

### 3.3.4 *Summary*

To sum up, the impact of the efforts undertaken by individual citizens in favour of the climate depends on the course(s) of action chosen by the Government. If individual citizens' climate efforts are to help achieve the national emission target for 2012, all or part of the surplus of emission rights must be cancelled. If the emission rights are saved, citizens' climate efforts permit corresponding emissions to be made at a later time. If the emission rights are sold, their efforts will help strengthen the government budget but the national emission target for 2012 will not be achieved.

## 4 Reporting and handling requirements for emission rights: the SNAO's assessment criteria

### **General requirements on central-government operations**

- *Public access to information is a fundamental norm in Swedish public administration.* This requirement derives from the Freedom of the Press Act and the legal literature on the principle of public access;
- *Central-government administration should be characterised by transparency.* This requirement derives from the Central Government Budget Act and its legislative history as well as subsequent statements by the Government and by the Riksdag Committee on Finance.

### **Requirements on the operations of government agencies**

- *Administrative agencies have an extensive duty to take initiatives of their own.* This requirement derives from the Government Agencies Ordinance;
- *The Environmental Protection Agency's role as the central agency in the environmental field entails extensive responsibilities.* This requirement derives from the Government's instructions for the Agency;
- *The Energy Agency is responsible for registry issues and for related reporting.* This requirement derives from the Government's instructions for the Agency.

### **Requirements on the operations of the Government**

- *The issue of the handling of the surplus should be put before the Riksdag.* This requirement derives from the Instrument of Government (part of the national constitution);
- *It should be clear who is the holder of the central-government sector's account.* This requirement derives from an international comparison taking the Swedish administrative model and the EU Registries Regulation as its starting points;
- *The Government should report on emission rights, for example in the Central Government Annual Report.* This requirement derives from the Central Government Budget Act and from generally accepted auditing standards.

The SNAO notes that the Kyoto Protocol and European law impose no requirement that national holdings of various types of emission rights should be reported openly. The SNAO further notes that, while imposing certain requirements of secrecy, European law does not prevent aggregate reporting on Sweden's holdings of the entire range of emission rights.

## 4.1 Requirements of international and European law

### 4.1.1 *The Kyoto Protocol and European law do not require open reporting of national holdings of various types of emission rights*

International rules do not require Sweden to report openly on its national holdings of various types of emission rights. However, the SNAO has chosen to describe the existing international requirements.

As regards transparency and the reporting of information to the general public, the Kyoto Protocol imposes requirements, or ‘modalities’ (see Section 3.2.1 and Annex 2), to the effect that the Parties must report specific information in national registries and on websites. The requirements relate to the registries as such and to their various components.

The main elements of the requirements are the following:

- The Parties must establish national registries for their handling of emission rights. These registries must include specific components;<sup>93</sup>
- Each national registry must make non-confidential information publicly available and provide a website about the information that allows interested persons to view it.<sup>94</sup> However, there is no requirement for further reporting, such as in the Parties’ national government budgets;
- The information in the registry and on the website must include up-to-date information about the various accounts in the registry and specified information about projects under the flexible mechanism of Joint Implementation (JI);<sup>95</sup>
- The registry and the website must also provide, inter alia, the following information about all four types of emission rights<sup>96</sup> for each calendar year:<sup>97</sup>
  - the total quantity of emission rights in each account at the beginning of the year;
  - the total quantity of emission rights acquired from and transferred to other registries, including information about the identity of the registries involved;
  - the total quantity of emission rights cancelled under various provisions of the guidelines;<sup>98</sup>
  - the total quantity of emission rights retired;
  - current holdings of emission rights in each account;
  - a list of legal entities authorised by the Party to hold emission rights.<sup>99</sup>

<sup>93</sup> Points 17–22 of Decision 13/CMP.1 (Annex).

<sup>94</sup> Point 44 of Decision 13/CMP.1 (Annex).

<sup>95</sup> Points 44, 45 and 46 of Decision 13/CMP.1 (Annex).

<sup>96</sup> The reporting *must* cover AAUs, ERUs, CERs and RMUs. For AAUs, ERUs and RMUs there are additional reporting requirements.

<sup>97</sup> Points 44 and 47 of Decision 13/CMP.1 (Annex).

<sup>98</sup> According to Point 32 of Decision 13/CMP.1, emission rights attributable to net changes in emissions from land use and forestry are to be cancelled by being transferred to a special cancellation account in the national registry. Parties may also voluntarily cancel emission rights of all types; see Points 12(f) and 33 of Decision 13/CMP.1.

<sup>99</sup> Point 48 of Decision 13/CMP.1.

In 2003, the European Community established a monitoring mechanism for emissions of CO<sub>2</sub> and other greenhouse gases.<sup>100</sup> It was replaced in 2004 by a new mechanism for monitoring Community greenhouse-gas emissions and for implementing the Kyoto Protocol.<sup>101</sup> This monitoring mechanism is described in greater detail in Annex 4.

The rules following from the EU monitoring mechanism, including those laid down in the EU Registries Regulation<sup>102</sup>, impose less detailed requirements as regards the content of national registries and websites than do the Kyoto Protocol and its modalities. However, the EU rules do specify one important aspect: Member States must each year retire (return) emission rights corresponding to their annual emissions once their national inventories have been completed.

The Registries Regulation also specifies the roles and responsibilities of various players within its field of application. The Member States and the Commission must designate registry administrators and ensure that there are no conflicts of interest between registry administrators and account holders.<sup>103</sup> It is also clear from the Regulation that the relevant bodies of the Member State and the Commission must submit an application to their respective registry administrator for the creation in their registries of Party holding accounts and retirement, cancellation and replacement accounts.<sup>104</sup>

#### 4.1.2 *European law entails certain secrecy requirements but does not prevent aggregate reporting*

Besides the requirement that certain information should be made available to the general public in national registries, the Registries Regulation also imposes certain requirements of secrecy. It follows from Article 10 of the Registries Regulation that all information – including the holdings of all accounts and all transactions made – held in the registries and the Community independent transaction log is to be considered confidential for any purpose other than the implementation of the requirements of the Registries Regulation, Directive 2003/87/EC or national law. In other words, the Registries Regulation provides an opening for the protection of secrecy to be ensured in a different way under national law. Furthermore, the registries may contain tables intended for other purposes than those following from European law.

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<sup>100</sup> Council Decision 93/389/EEC of 24 June 1993 for a monitoring mechanism of Community CO<sub>2</sub> and other greenhouse gas emissions.

<sup>101</sup> Article 1 of Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

<sup>102</sup> Commission Regulation (EC) No 2216/2004.

<sup>103</sup> Article 8(1) of Commission Regulation (EC) No 2216/2004.

<sup>104</sup> Article 12(1) of Commission Regulation (EC) No 2216/2004.

## 4.2 General requirements imposed on central-government operations

### 4.2.1 *Public access to information is a fundamental norm in Swedish public administration*

One of the cornerstones of Sweden's democracy is the principle of public access to information. This principle entails that the operations of government agencies should, to the widest extent possible, be public.

The judicial process and public administration in Sweden have long been characterised by extensive openness. Access to information regarding circumstances in the central-government and local-government sectors to a certain extent guarantees that public authorities will not abuse their powers.<sup>105</sup>

One manifestation of the principle of public access to information is the principle of public access to official documents. This principle is laid down in the Swedish constitution, specifically in Chapter 2, Section 1, of the Freedom of the Press Act (SFS 1949:105): 'Every Swedish citizen shall be entitled to have free access to official documents, in order to encourage the free exchange of opinion and the availability of comprehensive information.' (translated from Swedish). Under Chapter 2, Section 2, of the Freedom of the Press Act, this right of free access to official documents may be restricted only if this is necessary with regards to certain interests, including the protection of the personal or economic circumstances of private subjects.

The main restrictions to the right of access to official documents are specified in the grounds for secrecy laid down in the Public Access to Information and Secrecy Act (SFS 2009:400). Issues of secrecy in relation to the keeping of emission registries under the Emissions Trading Act (SFS 2004:1199) are covered by Chapter 31, Section 11, of the Public Access to Information and Secrecy Act. The SNAO finds that this secrecy provision does not hinder aggregate<sup>106</sup> reporting to the Riksdag and the general public of Sweden's national holdings of emission rights.<sup>107</sup> The SNAO also notes that there would be no need to disclose information from the SUS registry for the purpose of this reporting if the information was available from other open sources. In that case, there would be no need to examine the issue from the perspective of secrecy.

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<sup>105</sup> Bohlin (2007), *Offentlighetsprincipen* ['Principle of public access to documents'], 7th edition.

<sup>106</sup> 'Aggregate' reporting here refers to Sweden's total holdings of the entire range of emission rights: AAUs (including EUAs), CERs, ERUs and RMUs.

<sup>107</sup> Provided, however, that the balances of individual accounts are not disclosed as a result of reporting.

#### 4.2.2 Central-government administration should be characterised by transparency

In a number of performance audits, the SNAO has criticised the Government for the insufficient transparency of its reporting to the Riksdag. Budgetary discipline, cost control and transparency are three of the most important functions of the reformed budgetary process. When the Riksdag was about to enact the cornerstone of the new budgetary process, the Central Government Budget Act (SFS 1996:1059), its Committee on the Constitution emphasised that this Act would be able to make the parliamentary scrutiny of budget bills stricter and strengthen budgetary discipline.<sup>108</sup> In conjunction with its legislative proposal, the Government stressed that its main purposes were to make it easier to take an overall view, increase transparency and strengthen budgetary discipline.<sup>109</sup>

From the legislative history<sup>110</sup> of the Central Government Budget Act, it emerges that its principle of gross reporting is justified by a wish to provide a clearer view of the central-government sector's commitments and to facilitate comprehension of the central-government budget. In other words, the aim was to increase the transparency of central-government reporting. Indeed, when the Riksdag Committee on Finance criticised net reporting in 2003, it emphasised its impact on transparency: 'One fundamental starting point should be that revenues and expenditures are reported on a gross basis in the central-government budget, because this gives a better overview of central-government operations. This leads to greater clarity, or transparency, of reporting. It also gives the Riksdag an opportunity to examine the allocation of appropriations, meaning that it will be able to take a position each year on the appropriate extent of individual operations.'<sup>111</sup>

It can further be noted that, in recent years, the Government has expressed an ambition to further increase transparency and improve the information it provides to the Riksdag as a basis for the latter's decisions. The work of central-government administration is to be 'characterised by transparency, impartiality and integrity'.<sup>112</sup>

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<sup>108</sup> Riksdag Committee Report 1996/97:KU3, *Lag om statsbudgeten* ['Central Government Budget Act'].

<sup>109</sup> Government Bill 1995/96:220, *Lag om statsbudgeten* ['Central Government Budget Act'].

<sup>110</sup> See, for example, Government Bill 1995/96:220, *Lag om statsbudgeten* ['Central Government Budget Act'], p. 43.

<sup>111</sup> *Utgiftsområde 2 Samhällsekonomi och finansförvaltning* ['Expenditure Area 2 'National economy and financial management'] (Riksdag Committee Report 2003/04:FiU02, p. 37; quotation translated from Swedish). Similar statements can be found in *Riklinjer för den ekonomiska politiken, utgiftstak, skattefrågor m.m.* ['Guidelines for economic policy, expenditure ceilings, fiscal issues, etc.'] (Riksdag Committee Report 2000/01:FiU20).

<sup>112</sup> *Budgetpropositionen för 2007* ['Budget Bill for 2007'] (Government Bill 2006/07:1, Expenditure Area 2, p. 26; quotation translated from Swedish).

## 4.3 Requirements imposed on the operations of government agencies

### 4.3.1 *Administrative agencies have an extensive duty to take initiatives of their own*

According to the Swedish tradition of public administration, independent government agencies (rather than ministries) perform most of the operations of the central-government sector. Those agencies also have an extensive duty to take initiatives of their own within their respective remits, not least regarding reporting and information.

For example, the Government Agencies Ordinance<sup>113</sup> requires administrative agencies to provide information about their operations and to monitor circumstances outside their own organisation which are relevant to their operations.<sup>114</sup>

### 4.3.2 *The Environmental Protection Agency's role as the central agency in the environmental field entails extensive responsibilities*

Besides the Government and the Government Offices (ministries), the main entities concerned by the issue of the handling and reporting of Sweden's holdings of emission rights are the Environmental Protection Agency and the Energy Agency.

The Environmental Protection Agency, by virtue of the Government's instructions for it, has overall responsibility for issues relating to environmental objectives as well as responsibility for coordination, development, follow-up, evaluation, reporting and information in relation to, inter alia, the environmental-quality objective of *Reduced Climate Impact*. The Environmental Protection Agency should also monitor the effectiveness and efficiency of various policy instruments in achieving the environmental-quality objectives, and it should analyse and take account of socioeconomic, legal and international aspects of environmental action.<sup>115</sup>

The Environmental Objectives Council, a body within the Environmental Protection Agency, should compile and provide information to underpin the Government's recurrent in-depth evaluation of the efforts undertaken to achieve the environmental objectives, including financial follow-up of those efforts, and it should identify any conflicts between objectives and draw up proposals (with impact assessments) for cost-effective policy instruments.

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<sup>113</sup> Government Agencies Ordinance (SFS 2007:515).

<sup>114</sup> Section 6 of the Government Agencies Ordinance (SFS 2007:515).

<sup>115</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

The Environmental Objectives Council is also responsible for the provision of overall information about the efforts to achieve the environmental objectives.<sup>116</sup>

#### 4.3.3 *The Energy Agency is responsible for registry issues and for related reporting*

The work of the Energy Agency should help ensure compliance with those of the environmental-quality objectives adopted by the Riksdag that are relevant to the energy sector, with a special focus on certain objectives, including that of *Reduced Climate Impact*.<sup>117</sup> According to the Government's instructions for it, the Energy Agency has special sectoral responsibility for the efforts in relation to the environmental objectives.<sup>118</sup> The Energy Agency should assist the Government by producing information to underpin reporting within its remit. The Energy Agency's instructions also require it to report to the Environmental Objectives Council and to determine the necessary extent of reporting in consultation with the Council.<sup>119</sup>

The Energy Agency has been designated as registry administrator in Sweden under the EU Registries Regulation and bears responsibility for the design and operation of the registry where all transactions of emissions trading are recorded.<sup>120</sup> The Energy Agency is the 'account-keeping authority' and shares with the Environmental Protection Agency a duty to provide operators and the general public with information about the trading system on an ongoing basis.<sup>121</sup>

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<sup>116</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

<sup>117</sup> Section 1 of the Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

<sup>118</sup> Section 2 of the Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

<sup>119</sup> Section 17 of the Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

<sup>120</sup> By virtue of Section 4 of the Ordinance with Instructions for the Swedish Energy Agency, the Energy Agency is the account-keeping authority under the Emissions Trading Act (SFS 2004:1199). Chapter 4, Section 1, of the Emissions Trading Act lays down the following: 'Provisions on the accounting for emission rights and Kyoto units in a registry of emission rights are to be found in the EU Registries Regulation. A registry of installations is to be established including the operations subject to a permit requirement under this Act. The registry of emission rights and the registry of installations are to be kept by the authority designated by the Government (the "account-keeping authority").' (Translated from Swedish.)

<sup>121</sup> Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

## 4.4 Requirements imposed on the operations of the Government

### 4.4.1 *The issue of the handling of the surplus should be put before the Riksdag*

The Government may use the funds of the central-government sector only as determined by the Riksdag. This is clear from the Instrument of Government (part of the Swedish constitution).<sup>122</sup> The Constitutional Commission of Inquiry, which recently submitted its final report, proposed that the relevant provisions of the Instrument of Government should be modified to further emphasise that ‘appropriations and revenues must not be used other than as determined by the Riksdag in the Budget’.<sup>123</sup>

Since the surplus of emission rights has a – probably considerable – financial value, the SNAO finds that it falls within the scope of the Riksdag’s financial powers. The Government should therefore put the issue of the handling of the surplus of emission rights before the Riksdag. This should be done when it emerges that a surplus is likely.

The nature and the degree of detail of the position to be put before the Riksdag by the Government will depend, among other things, on its factual content – for example, on whether the Government proposes a sale. The material aspect from the perspective of the Riksdag’s financial powers is that the principles that will determine the orientation of the handling of the surplus should be put before the Riksdag for consideration.

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<sup>122</sup> The Riksdag has three types of powers: legislative powers, financial powers and powers of scrutiny. Its financial powers are described in Chapter 9, Section 2, first paragraph, of the Instrument of Government, where it is laid down that central-government funds may not be used other than as determined by the Riksdag. This is another way of expressing the rule already laid down in Chapter 1, Section 4, of the Instrument of Government that the Riksdag decides how central-government funds are to be employed. ‘Central-government funds’ here refers, according to the legislative history (*Grundlagspropositionen* [‘Constitutional Bill’], Government Bill 1973:90, p. 332), above all to monetary assets but also to other liquid assets as well as short-term receivables (current financial assets). The funds and other assets of the central-government sector are at the disposal of the Government by virtue of Chapter 9, Section 8, of the Instrument of Government. This follows naturally from the provision of Chapter 1, Section 6, of the Instrument of Government which lays down that the Government governs the Realm. At the Government’s ‘disposal’ refers to the Government’s ability to take both administrative measures – legal as well as practical – and ‘dispositional’ measures such as divestment and pledging. As regards the administration and disposition of the property of the central-government sector, Chapter 9, Section 9, of the Instrument of Government authorises the Riksdag to determine the applicable principles as required. Those principles are now laid down in the Central Government Budget Act.

<sup>123</sup> *En reformerad grundlag Del 1 och 2* [‘A reformed constitution, Parts 1 and 2’] (SOU [Swedish Government Official Report] 2008:125 Part 1, p. 578; quotation translated from Swedish); the above paragraphs on the powers of the Riksdag and the Government under the Instrument of Government are largely based on descriptions given in that report.

#### 4.4.2 *It should be clear who is the holder of the central-government sector's account*

The Instrument of Government lays down that the funds and other assets of the central-government sector are at the disposal of the Government. However, this does not per se imply the Government should be, for example, the holder of the accounts where the national holdings of emission rights are recorded.

In this respect a comparison with Finland may be instructive. Like Sweden, Finland has independent government agencies, even though a certain degree of centralisation has taken place there in recent years.<sup>124</sup> This is thus a country where there may be good reason to specify who should act as account holder in the sense of the EU Registries Regulation. In Finland, it is laid down in the Use of Kyoto Mechanisms Act (109/2007) that the Ministry of the Environment is the holder of the central-government sector's account and that the Ministry of the Environment decides whether emission rights are to be cancelled or retired.<sup>125</sup> Given that public administration is less centralised in Sweden than in Finland, there are even stronger reasons for having such a rule in place in Sweden.<sup>126</sup>

#### 4.4.3 *The Government should report on emission rights, for example in the Central Government Annual Report*

The Government's reporting to the Riksdag is subject to strict requirements. Under the Central Government Budget Act, the Government should report to the Riksdag on the objectives and the results achieved in various fields

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<sup>124</sup> For a presentation of the Finnish model of public administration, see, for example, *Den svenska förvaltningsmodellen i EU-arbetet* ['The Swedish model of public administration in EU work'], Statskontoret [Swedish Agency for Public Management], 2000:20A, p. 39.

<sup>125</sup> Chapter 2 (about participation in projects and in international emissions trading), Section 15, of the Act lays down that decisions to grant authority to hold emission rights in an account and to transfer them in the context of international emissions trading are to be made by the Finnish Ministry of the Environment. Chapter 3 (about the operations of the national registry), Section 23, specifies that the holder of the central-government sector's account in the national registry is the Ministry of the Environment. The Ministry of the Environment also decides whether emission rights are to be cancelled or retired. Section 29, which deals with supervision of the entire reserve of emission units, lays down the following: 'The Ministry of the Environment has a duty to monitor the development of the entire reserve of emission units in the national registry. For this purpose, the registry administrator must regularly notify the Ministry of the Environment of the total quantities of emission rights and other types of emission units held both in the accounts of all operators referred to in the Emissions Trading Act, taken together, and in the accounts of all other account holders, taken together, including the quantity of emission units in the retirement account.' (Translated from Swedish.)

<sup>126</sup> As regards the national body that should be designated as account holder, the EU Registries Regulation lays down that the Member States and the Commission must ensure that there are no conflicts of interest between registry administrators and account holders. (Article 8(1) of Commission Regulation (EC) No 2216/2004.) In other words, it is inappropriate for the national body designated as registry administrator to be also designated as account holder.

of activity.<sup>127</sup> The Central Government Budget Act further lays down that the Government is accountable to the Riksdag for the funds of the central-government sector. The Act specifies that this accountability also covers operations conducted by the central-government sector.<sup>128</sup>

The Government may report to the Riksdag either in Government Bills, such as the annual Budget Bill, or in Government Written Communications. The discussion below relates to the specific requirements that can be imposed on the Government's reporting in the Central Government Annual Report, which belongs to the category of Government Written Communications.<sup>129</sup> The SNAO has previously expressed that the Central Government Annual Report should be the key document for reporting to the Riksdag on the operations of the central-government sector and that the Government should therefore look into the issue of laying down more explicit rules for that report.<sup>130</sup>

The SNAO finds that it is not possible to impose a requirement that emission rights should be carried as an asset in the statement of financial position (balance sheet), provided that the Government does not actively decide that they are to be sold in conjunction with the next period. The SNAO further finds that the emission rights cannot at present be classified as contingent assets, given that there remains a great deal of uncertainty about the potential inflow of funds.

However, the Government should inform the Riksdag in an 'informational note' in the Central Government Annual Report. It is possible that the future claim on emission rights in 2012 should be recorded, given that emissions as estimated and reported will then be reconciled with the number of emission rights; this is because Sweden, by endorsing the Kyoto Protocol, has undertaken to hold emission rights corresponding to its reported emissions.

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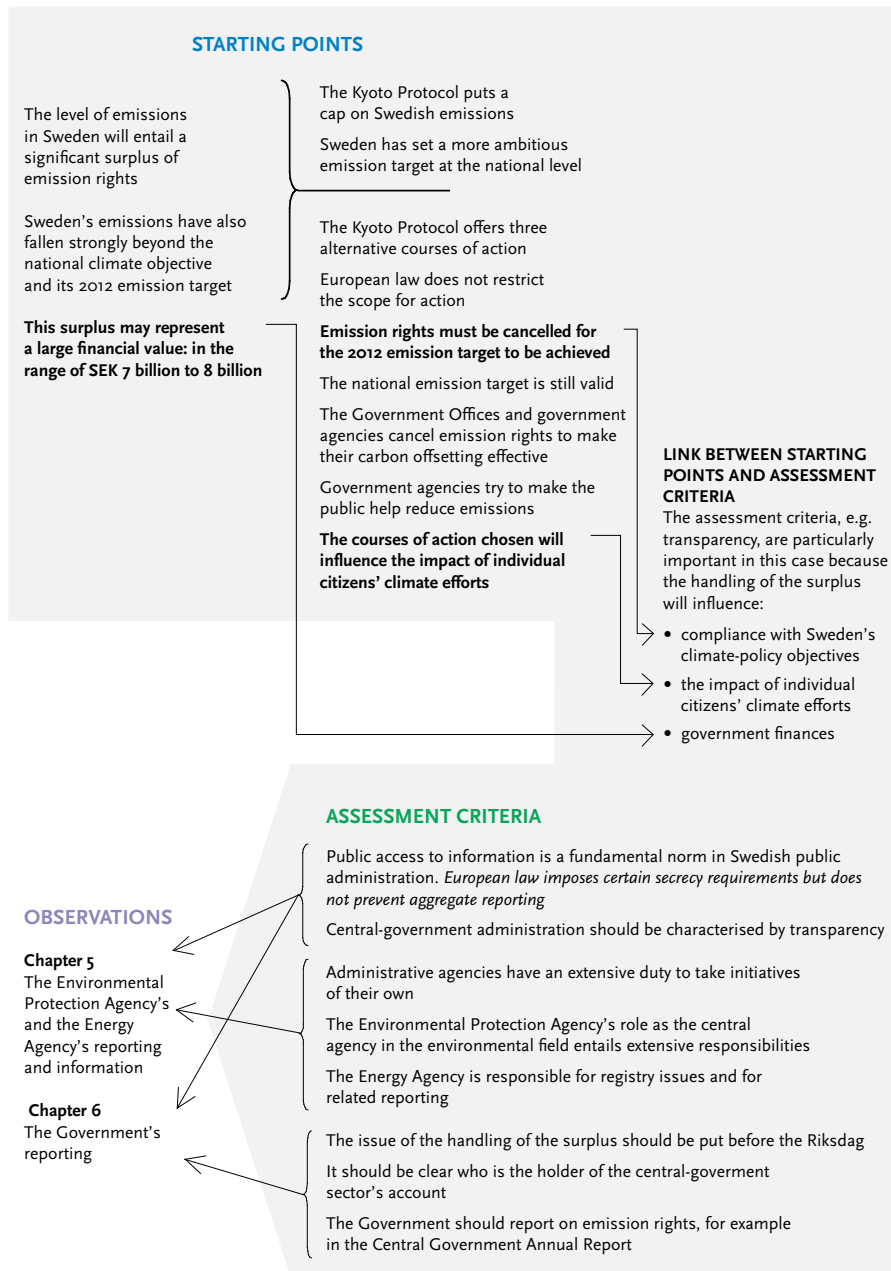
<sup>127</sup> Section 2 of the Central Government Budget Act.

<sup>128</sup> Section 44 of the Central Government Budget Act.

<sup>129</sup> The government agencies' annual reports to the Government are subject to the provisions of the Annual Reports and Budget Documentation Ordinance (SFS 2000:605). The National Financial Management Authority issues regulations and general advice relating to the application of that Ordinance. However, the Ordinance is not directly applicable to the Central Government Annual Report, which the Government draws up and submits to the Riksdag. The rules governing the Central Government Annual Report are instead to be found in Section 38 of the Central Government Budget Act (SFS 1996:1059). There it is laid down that the Government must ensure, as soon as possible but not later than nine months after the end of the financial year, that a central-government annual report is submitted to the Riksdag. Under the Central Government Budget Act, the annual report must include a statement of financial performance (income statement), a statement of financial position (balance sheet), a cash-flow statement and information about final outcomes for the revenue headings and appropriations of the central-government budget. Apart from the provisions of the Central Government Budget Act, the Government itself determines rules specifying the design and content of the Central Government Annual Report.

<sup>130</sup> See, for example, the annual report of the Auditors General for 2009, p. 14.

Figure 3: Summary of Chapters 3 and 4





## 5 The Environmental Protection Agency's and the Energy Agency's reporting and information

*The Environmental Protection Agency and the Energy Agency have not informed the general public of Sweden's total holdings of the entire range of emission rights. Information about the total holdings is necessary to estimate the size of Sweden's surplus. Also, the two agencies have not provided information about the various courses of action open to Sweden in relation to the future national surplus and the ramifications of each of them for compliance with Sweden's national climate objective and the associated emission target for 2012. The Government has not specifically requested that the agencies should provide information about these matters.*

### 5.1 Assessment criteria

At the national level, there are general requirements imposed on the operations of the central-government sector as well as requirements imposed on the operations of government agencies. The general public is entitled to obtain information about central-government operations by virtue of the principle of public access to information.

The Environmental Protection Agency's role as the central agency in the environmental field entails extensive responsibilities. By virtue of the Government's instructions, it has overall responsibility for issues relating to environmental objectives as well as responsibility for coordination, development, follow-up, evaluation, reporting and information in relation to, inter alia, the environmental-quality objective of *Reduced Climate Impact*. It should also monitor the effectiveness and efficiency of various policy instruments in achieving the environmental-quality objectives, and it should analyse and take account of socioeconomic, legal and international aspects of environmental action.<sup>131</sup> The Environmental Objectives Council, a body within the Environmental Protection Agency, should compile and provide information to underpin the Government's recurrent in-depth evaluation of the efforts undertaken to achieve the environmental objectives, including financial follow-up of those efforts, and it should identify any conflicts between objectives and draw up proposals (with impact assessments) for

<sup>131</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

cost-effective policy instruments. The Environmental Objectives Council is also responsible for the provision of overall information about the efforts to achieve the environmental objectives.<sup>132</sup>

The Energy Agency should help ensure compliance with those of the environmental-quality objectives adopted by the Riksdag that are relevant to the energy sector, with a special focus on certain objectives, including that of *Reduced Climate Impact*. The Energy Agency should also report to the Environmental Objectives Council and produce information to underpin any reporting that falls within its own remit.<sup>133</sup>

The Energy Agency is responsible for issues relating to the Swedish registry of emissions trading (SUS) and for reporting on the basis of that registry.

More detailed information about the assessment criteria can be found in Chapter 4.

## 5.2 Joint reporting by the Environmental Protection Agency and the Energy Agency

In *Sweden's Climate Strategy*, the Riksdag decided that Sweden's climate efforts and the national environmental-quality objective of *Reduced Climate Impact* would be followed up at designated 'checkpoints'.<sup>134</sup> The Environmental Protection Agency and the Energy Agency, as instructed by the Government, have produced documentation as a basis for the evaluations of Sweden's climate policy at the 2004 and 2008 checkpoints.

The joint report drawn up by the two agencies for the 2004 checkpoint briefly deals with various options for handling the surplus of emission rights.<sup>135</sup> However, it does not contain any overview of Sweden's national holdings of the various types of emission rights. It should be noted that the Government had not specifically requested such information.

At the time of publication of the report, the most recent estimate indicated a fall in emissions of 1 per cent compared with 1990 levels. It was thus known at the time that there would be a surplus relative to the Kyoto Protocol<sup>136</sup>:

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<sup>132</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

<sup>133</sup> Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

<sup>134</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163).

<sup>135</sup> Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2004), *Kontrollstation 2004* ['Checkpoint 2004'].

<sup>136</sup> By contrast, it was not known that Sweden would succeed in reducing emissions beyond the target for 2008–2012 (at least –4 per cent).

*If Sweden does not make use of all the emission rights (AAs) assigned to it under the Kyoto Protocol, which will be the case if Sweden achieves its national target, then Sweden will have additional scope under the Protocol for emissions of about 6 million tonnes of CO<sub>2</sub> equivalent per year.<sup>137</sup>*

Since that time, new estimates have been drawn up. They indicate that the surplus relative to Sweden's commitment under the Kyoto Protocol and the EU burden-sharing agreement will be even larger.<sup>138</sup>

In the report for the 2004 checkpoint, it was emphasised that the EU Member States are jointly responsible for meeting the commitment under the Kyoto Protocol:

*As has been noted before, the EU has a joint commitment under the Kyoto Protocol and is jointly responsible for meeting that commitment. This may influence the options open to Sweden as regards the emission rights/reduction credits that it does not itself use during the first commitment period.<sup>139</sup>*

The handling of the future surplus was described as follows:

*The measures taken in relation to any scope for emissions not made use of by Sweden will affect the environment, but this is also a financial issue. If such a scope for emissions is saved and Sweden makes a larger reduction commitment for the subsequent commitment period than it would otherwise have done, a corresponding environmental gain is achieved. If the scope for emissions is instead saved to be used during the next commitment period, however, the environmental impact will be small in a long-term perspective since this will amount only to the redistribution of emissions over time. It could be financially advantageous to save emission rights, since it can be assumed that their price will rise in the future. Another way of handling emission rights that one does not intend to exercise may be to sell them in the marketplace. Then somebody else will use them, meaning that there will be no positive environmental impact. Instead, this could help push down the price of emission rights.<sup>140</sup>*

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<sup>137</sup> Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2004), *Kontrollstation 2004* ['Checkpoint 2004'], p. 110 (quotation translated from Swedish).

<sup>138</sup> Comment by the Environmental Protection Agency: The 2007 estimate indicated a fall of 4 per cent. It was only in the 2009 estimate that there appeared a large surplus over the national target.

<sup>139</sup> Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2004), *Kontrollstation 2004* ['Checkpoint 2004'], p. 109 (quotation translated from Swedish).

<sup>140</sup> Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2004), *Kontrollstation 2004* ['Checkpoint 2004'], p. 110 (quotation translated from Swedish).

The option of cancelling emission rights was not discussed. Since their joint report for the 2004 checkpoint, the Environmental Protection Agency and the Energy Agency have not evaluated the ramifications of various courses of action for the handling of emission rights. The Government has not requested such an analysis from either of them.

In the report drawn up by the Energy Agency and the Environmental Protection Agency for the 2008 checkpoint, they describe the socioeconomic consequences of climate policy. However, Sweden's national holdings of various types of emission rights and the future surplus of national emission rights are not covered by their analysis.<sup>141</sup> However, the national climate objective and its associated emission target for 2008–2012 are dealt with in their report. The two agencies conclude that Sweden will achieve its Kyoto commitment by a wide margin.<sup>142</sup>

Neither the Environmental Protection Agency nor the Energy Agency have published any overview of Sweden's total holdings of the entire range of emission rights. The total number of AAUs<sup>143</sup> assigned to Sweden is presented in a table on the website of the Energy Agency. CERs are included in the annual report of the Energy Agency. Information about carbon sinks (RMUs) is presented on the website of the Environmental Protection Agency.<sup>144,145</sup> In other words, information about the various types of emission rights that together make up Sweden's total holdings can be found in various public sources.

### 5.3 Reporting by the Environmental Objectives Council

The Environmental Objectives Council has not addressed the issue of the handling of national emission rights. The Government has not specifically requested such information from the Council.

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<sup>141</sup> Energimyndigheten [Swedish Energy Agency] and Naturvårdsverket [Swedish Environmental Protection Agency], *Konsekvensanalys av klimatmål* ['Impact assessment of climate objectives'], delrapport 4 i Energimyndighetens och Naturvårdsverkets underlag till Kontrollstation 2008 ['sub-report 4 of the Energy Agency's and the Environmental Protection Agency's documentation for the 2008 checkpoint'], p. 57.

<sup>142</sup> Given the existence of several options for emission accounting under the Kyoto Protocol, the agencies present three different outcomes for Sweden's emissions: 8, 10 or 13 per cent below the levels of the 1990 base year.

<sup>143</sup> Including EUAs, i.e. emission rights converted for Swedish installations within the EU Emissions Trading Scheme.

<sup>144</sup> The only published overview of Sweden's national holdings of the entire range of emission rights is to be found in Annex 18 of the report of the Climate Commission: SOU [Swedish Government Official Report] 2008:24, p. 521.

<sup>145</sup> No emission rights (ERUs) have yet been generated by JI projects.

## 5.4 The Environmental Protection Agency's information for the general public

The Environmental Protection Agency has not, in its communications intended for the general public, provided any information about Sweden's overall holdings of the entire range of emission rights or about the future surplus of emission rights.<sup>146</sup> Also, the Environmental Protection Agency has also not provided information about how various courses of action will affect compliance with Sweden's national environmental-quality objective of *Reduced Climate Impact* or with the associated emission target for 2008–2012.

The Government has not specifically requested that the Agency should provide information about these matters.

## 5.5 Other reporting and information from the Environmental Protection Agency

The Environmental Protection Agency has not addressed the issue of the future surplus of emission rights or the handling of that surplus either in its annual reports or in other contexts.<sup>147</sup> What is more, the Government has not requested any such reporting.<sup>148</sup>

In its consultation comments on the report of the Climate Commission, the Agency did not discuss the Commission's estimates of the surplus nor its proposal that part of the future surplus should be cancelled and part of it should be sold to finance climate investments.<sup>149</sup>

The Environmental Protection Agency provides the basis for Sweden's national report on climate change. This national report is an extensive compilation of information about Sweden's climate efforts. It is addressed to the Government.<sup>150</sup> Among other things, it contains emission data and emission forecasts, presentations of the effects of the policies pursued, information about the support provided to developing countries and climate research, and a description of Sweden's work in relation to climate information. The documentation provided by the Agency as a basis for

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<sup>146</sup> On the Agency's website it is said that the Government has decided that, in meeting its commitment under the Kyoto Protocol, Sweden will make use of carbon sinks (RMUs) corresponding to a maximum of 2.13 million tonnes per year. In the Climate Commission's overview, which is based on information provided by the Environmental Protection Agency, the Energy Agency and others, the annual addition of RMUs is given as 2.2 million tonnes.

<sup>147</sup> Interview at the Environmental Protection Agency, 1 October 2009.

<sup>148</sup> Interview at the Environmental Protection Agency, 1 October 2009.

<sup>149</sup> SOU [Swedish Government Official Report] 2008:24, *Svensk klimatpolitik* ['Swedish climate policy'].

<sup>150</sup> Website of the Environmental Protection Agency, 6 October 2009.

Sweden's fifth national report on climate change includes estimates of compliance with Sweden's commitment under the Kyoto Protocol and with national and EU climate objectives.<sup>151</sup> However, the issue of the handling of the future surplus of emission rights is not discussed.<sup>152</sup> In the documentation intended as a basis for Sweden's national report and on the Agency's website, the annual maximum quantity of emission rights deriving from carbon sinks (RMUs) that Sweden can make use of is indicated: 2.13 million tonnes per year. No information is given in this context about the total quantity of the various types of emission rights that Sweden can make use of or about the expected size of the future surplus.

## 5.6 The Energy Agency's information for the general public

The Energy Agency has not informed the general public about Sweden's overall holdings of the various types of emission rights or about the future surplus of them.<sup>153</sup> The Agency's aim is to present certain data with a five-year delay in 2013.<sup>154</sup> According to the Agency, the data are presented in accordance with the EU Registries Regulation and the 'modalities' of the Kyoto Protocol.<sup>155</sup> The presentation available to the general public on the Agency's website looks like this:

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<sup>151</sup> Naturvårdsverket [Swedish Environmental Protection Agency] (2009), *Naturvårdsverkets underlag för Sveriges femte nationalrapport om klimatförändringar* ['Information provided by the Environmental Protection Agency as a basis for Sweden's fifth national report on climate change'], No 501-5470-08 Kp.

<sup>152</sup> Comment by the Environmental Protection Agency in the fact-clearance process: The UNFCCC has indicated clearly that it wishes to obtain information only about decisions and planned decisions. That is why the Agency has not addressed this issue.

<sup>153</sup> National emission rights or assigned-amount units (AAUs), certified emission reductions (CERs) from projects in the framework of the Clean Development Mechanism, emission-reduction units (ERUs) from projects in the framework of the Joint Implementation mechanism, and carbon-sink credits or removal units (RMUs).

<sup>154</sup> Interview at the Energy Agency on 8 October 2009.

<sup>155</sup> These requirements are described in greater detail in Annexes 2 and 3 of the present report. The SNAO's audit did not include assessing whether the Energy Agency's reporting actually complies with these requirements.

Reporting requirement	Data for 2008
Total number of ERUs, CERs, AAUs and RMUs in each account at the beginning of the year.	To be published on 15 January 2013
Total number of AAUs issued.	375,188,561
Total number of ERUs issued.	0
Total number of ERUs, CERs, AAUs and RMUs acquired from other registries, with information about the transferring accounts and registries.	To be published on 15 January 2013
Total number of RMUs issued.	0
Total number of ERUs, CERs, AAUs and RMUs transferred to other registries, with information about the acquiring accounts and registries.	To be published on 15 January 2013
Total number of ERUs, CERs, AAUs and RMUs cancelled on the basis of project activities carried out under Article 3(3) and 3(4) of the Kyoto Protocol.	0
Total number of ERUs, CERs, AAUs and RMUs cancelled following determination by the Compliance Committee under the Kyoto Protocol that the Member State is not in compliance with its commitment under Article 3(1) of the Kyoto Protocol.	0
Total number of ERUs, CERs, AAUs, RMUs and other emission rights cancelled, with information about the Article of the EU Registries Regulation by reference to which they were cancelled.	27,999
Total number of ERUs, CERs, AAUs and RMUs carried over from the previous commitment period.	0
Total number of emission rights from the previous commitment period that were cancelled and replaced.	0
Holdings in each account (person holding, operator holding, Party holding, cancellation and retirement accounts).	To be published on 15 January 2013

The data published refer to the entire SUS registry kept by the Energy Agency, without breakdown by account holders. This means that it cannot be seen from these data how large Sweden's overall national holdings of the entire range of emission rights are. Nor can it be seen whether the central-government sector has cancelled any emission rights. The number given for emission rights cancelled (27,999 – see the above table) does not refer to Sweden's holdings. Rather, it is the sum of emission rights cancelled by all account holders.

## 5.7 The Energy Agency's reporting to the EU and the UN

To determine the size of Sweden's overall national holdings, the various types of emission rights held by Sweden must be added up. However, this cannot be done using only the public registry data reported by the Energy Agency.

The Energy Agency each year reports public registry data from the SUS registry to the EU and to the UN Climate Secretariat (UNFCCC). However, these data are exclusively on an aggregate level, with totals being presented for the accounts of all actors. In other words, it cannot be discerned from the data reported how large Sweden's holdings are of the entire range of emission rights, nor, for example, how many CERs Sweden is holding.

The total holdings of actors who have registered their CER holdings in SUS accounts are presented as part of an aggregate total which also includes Sweden's national holdings of CERs.

## 5.8 Other reporting and information from the Energy Agency

The issues of the reporting of Sweden's total future surplus of emission rights and the handling of that surplus are not dealt with in the Energy Agency's reporting to the Government. The Government has not specifically requested any such reporting.

By contrast, the Agency reports on its investments in other countries –CDM and JI projects<sup>156</sup>– including in its annual report for 2008. The total cumulative holdings of emission rights (CERs and ERUs) generated by such projects are not clear from the annual report. However, the Agency states that it estimates that the projects will generate about 11 million–14 million emission rights before 2012.<sup>157</sup> Further, it emerges from the annual report that various projects have generated about 330,000 CERs during the year in question. Sweden's holdings of other emission rights (principally AAUs) are not addressed in the Agency's annual report.

In its consultation comments on the Climate Commission's report, the Agency recommended that Sweden's expected surplus of emission rights should be handled in a way that 'allows time for reflection and flexibility to meet future commitments'<sup>158</sup>.

The Agency has not raised the issue of the handling or presentation of surplus emission rights in the Environmental Objectives Council.

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<sup>156</sup> Projects in the framework of the Kyoto Protocol's Clean Development Mechanism (CDM) and Joint Implementation (JI) mechanism, respectively.

<sup>157</sup> Parts of them can be used to attain Sweden's future climate targets. According to the Climate Bill, one-third of Sweden's climate target for 2020 will be achieved by means of investments in other EU countries or flexible mechanisms such as the CDM. One explicit purpose of investments financed from the appropriation for 2010, which is entitled *Insatser för internationella klimatinvesteringar* ['Actions for international climate investments'], is to meet future Swedish climate commitments. The part of Sweden's CER holdings which will be generated through that appropriation is thus intended to be saved and used to meet future climate targets.

<sup>158</sup> Energimyndigheten [Swedish Energy Agency], *Yttrande angående klimatberedningens betänkande 'Svensk klimatpolitik'* SOU 2008:24 ['Opinion on the Climate Commission's Report "Swedish Climate Policy"', SOU [Swedish Government Official Report] 2008:24], decision of 18 June 2008, Ref. No. 02-08-1093.

## 5.9 Overall observations

- Neither the Environmental Protection Agency nor the Energy Agency has published an overview of Sweden's total holdings of the entire range of emission rights. The total number of AAUs<sup>159</sup> assigned to Sweden is given in a table on the Energy Agency's website. CERs are included in the annual report of the Energy Agency. Information about carbon sinks (RMUs) is presented on the Environmental Protection Agency's website.<sup>160,161</sup> In other words, information about the various types of emission rights that together make up Sweden's total holdings can be found in various public sources but not all in one place;
- The issues of the future surplus of emission rights and the ramifications of its handling were addressed in the joint report presented by the Environmental Protection Agency and the Energy Agency for the 2004 checkpoint. However, the option of cancelling surplus emission rights was not discussed. Since 2004, the Environmental Protection Agency has not reported on or provided information about these issues;
- In the documentation drawn up by the Energy Agency and the Environmental Protection Agency as a basis for the 2008 checkpoint, the two agencies describe the socioeconomic consequences of climate policy but do not include Sweden's future surplus of emission rights in their analysis;
- The Environmental Protection Agency, in its information for the general public, has not discussed the issue of the value of the surplus national emission rights and has not described the ramifications of various courses of action for the likelihood of achieving the national environmental-quality objective of *Reduced Climate Impact* and its associated emission target for 2008–2012;
- The Environmental Objectives Council has not discussed the issue of the future surplus of emission rights in its reporting. Neither the Environmental Protection Agency nor the Energy Agency has raised the issue of the handling or reporting of surplus emission rights in the Environmental Objectives Council. The Government has not specifically requested any such reporting;

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<sup>159</sup> Including EUAs, i.e. emission rights converted for Swedish installations within the EU Emissions Trading Scheme.

<sup>160</sup> The only published overview of Sweden's national holdings of the entire range of emission rights is to be found in Annex 18 of the report of the Climate Commission: SOU [Swedish Government Official Report] 2008:24, p. 521.

<sup>161</sup> No emission rights (ERUs) have yet been generated by JI projects.

- The only time that the Energy Agency has discussed the issue of the reporting and handling of the future surplus of Sweden's national emission rights in its reporting to the Government is in its consultation comments on the report of the Climate Commission. According to the Agency's comments, Sweden's expected surplus of emission rights should be handled in a way that allows time for reflection and flexibility to meet future commitments;
- The Government has not specifically requested information from the Environmental Protection Agency or the Energy Agency about the value of the future surplus of national emission rights or about the ramifications of the various possible courses of action in the light of the emission target for 2012 and the national environmental-quality objective of *Reduced Climate Impact*.

## 6 The Government's reporting

*The Government has not reported, in the Central Government Annual Report, on Sweden's overall national holdings of the entire range of emission rights<sup>162</sup> or on the future surplus of emission rights. Nor has the Government addressed these issues in climate or budget bills. The Government has also not put before the Riksdag the issue of how the future surplus should be handled or the issue of how rules governing decisions relating to the handling of the surplus should be determined.*

### 6.1 Assessment criteria

At the national level, there are general requirements imposed on the operations of the central-government sector as well as requirements imposed on the operations of the Government. The general public is entitled to obtain information about central-government operations by virtue of the principle of public access to information. Central-government administration should be characterised by transparency.

Since the surplus of emission rights represents a – probably substantial – financial value, the SNAO deems that it falls within the scope of the Riksdag's financial powers. This entails that the Riksdag should be given an opportunity to take a position on how the surplus of emission rights is to be handled.

To enable the size of the surplus to be assessed, the SNAO considers that information about the overall national holdings of the entire range of emission rights should be presented to the Riksdag and to the general public. In the SNAO's opinion, the Government should report on the holdings and the future surplus of emission rights in an 'informational note' in the Central Government Annual Report.

The Kyoto Protocol and European law do not entail any requirements for countries to account for their overall national holdings of various types of emission rights. While European law entails certain requirements of secrecy, it does not, in the SNAO's opinion, prevent aggregate reporting of Sweden's holdings. Information about holdings of the various types of emission rights is available from various open sources; what is missing is an overview.

A more detailed description of the assessment criteria can be found in Chapter 4.

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<sup>162</sup> AAUs (including EUAs), CERs, ERUs and RMUs.

## 6.2 The Government's reporting to the Riksdag

### 6.2.1 Central Government Annual Report

The Government has not discussed the holdings of emission rights in the Central Government Annual Report. Nor has it discussed the future surplus or its expected value.

### 6.2.2 Bills and other written communications

The Government has not put the issue of how Sweden should handle its future surplus of emission rights before the Riksdag. There is also no declaration of intent to postpone such a decision. What is more, the Government has not made any statement of intentions as regards the handling of the future surplus.

In the spring of 2007, the Government appointed a parliamentary commission of inquiry (the Climate Commission). One of its tasks was to shed light on the socioeconomic consequences (including in terms of government finances) and effects of climate change.<sup>163</sup>

The Climate Commission examined the issue of Sweden's future surplus of emission rights and the courses of action available.<sup>164</sup> It stressed that the amount needed to comply with Sweden's national emission target for 2012 (-4 per cent) should be deducted from the surplus, given that Sweden has adopted a national target which is more ambitious than its commitment under the Kyoto Protocol. It proposed that part of the surplus should be cancelled and part of it should be sold. Further, it proposed that the revenues from such sales should be used for climate-related measures in Sweden or other countries. It also proposed that the ramifications of the proposed measures for the national economy, the distribution of wealth and the national budget should be further examined.

The Government has not instructed the Environmental Protection Agency or the Energy Agency to perform such a study in relation to the proposal presenting the various courses of action. It has, however, commissioned a consultancy firm, Green Stream AB, to analyse and examine the issue of saving the surplus of emission rights for the subsequent commitment period.<sup>165</sup> The firm's report has not been published and there is no official communication or bill in which reference is made to it.

<sup>163</sup> Miljödepartementet [Ministry of the Environment], *Parlamentarisk beredning för översyn av klimatpolitiken* ['Parliamentary commission of inquiry to review environmental policy'], dir ['Terms of reference'] 2007:59.

<sup>164</sup> The final report of the Climate Commission was published as SOU [Swedish Government Official Report] 2008:24, *Svensk klimatpolitik* ['Swedish climate policy'].

<sup>165</sup> Green Stream, 24 April 2009, *Carry-over, Implementation Alternatives and Possible Implications for Sweden*. MN-090424-P6400-003.

The Government's 2009 Climate Bill did not address the issues of Sweden's future surplus, the various possible courses of action or their ramifications for the national climate objective and its associated emission target for 2012.<sup>166</sup> Nor has the Government addressed these issues in any previous climate or budget bill.

### 6.2.3 Legal provisions

There are no explicit legal provisions in Sweden laying down who has the authority to decide that emission rights are to be cancelled or sold, nor who is the holder of the central-government sector's accounts in the Swedish registry of emissions trading (SUS). The SNAO finds that, given the financial powers attributed to the Riksdag, any decision to cancel or sell emission rights should be subject to its approval (see Section 4.4.1).

However, the SNAO has observed that there are no legal provisions at the next level, given that the Government has not designated an account holder.

## 6.3 The Government's information for the general public

The Government has not informed the general public about Sweden's future surplus of emission rights or about the ramifications of the various possible courses of action for Sweden's national environmental-quality objective of *Reduced Climate Impact* and its associated emission target for 2012. Nor has the Government instructed the Environmental Protection Agency or the Energy Agency to provide the general public with information about these issues.

However, the Government has stated in several reports<sup>167</sup> and articles<sup>168</sup> that Sweden should be a forerunner in climate policy; see also Section 3.2.3.

<sup>166</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, Riksdag Committee Report 2008/09:MJU28, Riksdag Written Communication 2008/09:300).

<sup>167</sup> 'The Government finds, in accordance with the Climate Convention, that industrialised countries need to be a forerunner in efforts to counteract climate change.' *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163) (quotation translated from Swedish). 'Sweden and other industrialised countries have a special duty to be a forerunner in climate adjustment and to reduce emissions nationally and internationally.' *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, Riksdag Committee Report 2008/09:MJU28, Riksdag Written Communication 2008/09:300; quotation translated from Swedish).

<sup>168</sup> 'Sweden should continue to show leadership in a shift away from dependency on fossil fuels such as oil and petrol.' Miljödepartementet [Ministry of the Environment], *Internationellt klimatsamarbete – Sverige möter klimatutmaningen*. ['International climate cooperation: Sweden meets the climate challenge'], informational material from the Ministry of Environment, M2008:24 (quotation translated from Swedish).

## 6.4 Overall observations

- The Government has not discussed Sweden's holdings of emission rights and the future surplus of emission rights in the Central Government Annual Report. Nor has the Government reported in any other way to the Riksdag or the general public on Sweden's overall holdings of the entire range of emission rights and on the future surplus or its value;
- The Government has not put the issue of how Sweden should handle its future surplus of emission rights before the Riksdag. What is more, there is no clear statement of intentions as regards the handling of that surplus;
- The Government has not discussed the issue of the handling of emission rights in its climate or budget bills;
- There are no specific legal provisions laying down who has the right to decide, for example, to cancel Sweden's national holdings of emission rights or who is the holder of the central-government sector's accounts in the Swedish registry of emissions trading (SUS);
- The Government has not informed – and not instructed any government agencies to inform – the general public about Sweden's future surplus of emission rights. Nor has the Government provided information about the ramifications of various options as regards the handling of the surplus for the national climate objective and its emission target for 2012.

## 7 The SNAO's conclusions and recommendations

*The SNAO's overall finding is that there is insufficient transparency in reporting on Sweden's total holdings and future surplus of emission rights. There is also insufficient information about how the handling of the surplus will affect the national climate objective and its associated emission target for 2012. The absence of a decision on the handling of the future surplus is part of the reason why the government agencies and ministries concerned differ in their views on how Sweden's national climate objective is to be achieved. The Riksdag has not been given the opportunity to take a position on the appropriate use of significant financial resources.*

Climate change and the threat it poses to societies are global in nature. This issue has attracted a great deal of attention among the general public. Because of the high level of public interest, the interventions of the central-government sector should be handled in a transparent manner.

The Riksdag and the Government have long stressed the importance of proactive measures to deal with the climate threat. In its 2009 Climate Bill, for example, the Government makes the following statement: 'Climate change is one of the greatest challenges of our time. Sweden should show leadership to meet this challenge both internationally and through the measures we take in Sweden.'<sup>169</sup> The Riksdag Committee on Environment and Agriculture supported the Government's assessment in its report on the Bill. Among other things, the Committee stated that Sweden, by combining economic growth and environmental consideration, could set an example for many of the developing countries and emerging economies that strive for sustainable development.<sup>170</sup>

As one of Sweden's national environmental-quality objectives, the Riksdag has decided an overall objective of climate policy entitled *Reduced Climate Impact*. An interim emission-reduction target for the 2008–2012 period has been decided to make the meaning of that objective more concrete. The central position of climate objectives in Swedish environmental policy is underscored by the fact that the Government

<sup>169</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, p. 9) (quotation translated from Swedish).

<sup>170</sup> *Riktlinjer för klimatpolitiken m.m.* ['Guidelines for climate policy, etc.'] (Riksdag Committee Report 2008/09:MJU28, p. 23).

intends to instruct the government agencies concerned to review conditions for attaining the other environmental objectives in the light of a changed climate.<sup>171</sup>

Given existing measures, Sweden will reduce its emissions by about 10 per cent over the period ending in 2012. This means that Sweden's international commitment under the Kyoto Protocol and the EU burden-sharing agreement, which allows Sweden to increase its emissions by 4 per cent, will be met by a wide margin. The allocation of emission rights is based on a permission for Sweden to increase its emissions, whereas the official estimate<sup>172</sup> and outcomes so far indicate that Sweden is in fact reducing its emissions. This means that Sweden will have a surplus of emission rights. Under the Kyoto Protocol, surplus emission rights may be cancelled, sold or saved.

The handling of the surplus will determine whether Sweden can be said to meet the more ambitious national emission target for 2012. To achieve that target, emission rights corresponding to the difference between +4 per cent (the Kyoto commitment) and at least –4 per cent (the national emission target) must be cancelled. If, for example, the entire surplus were to be sold, the national emission target for 2012 would not be achieved – even though emissions in Sweden are expected to further decrease.

If priority is instead to be given to the strengthening the government budget, all or part of the future surplus may be sold and the revenue can be used to finance a range of government commitments. If the entire surplus was sold, Sweden's national emission target for the 2008–2012 period would not be attained.

The SNAO has examined whether the reporting and handling of the future surplus of emission rights are transparent. Transparency in reporting, which is in line with the Swedish tradition of public administration, is necessary to ensure that various actors are given information on equal terms.

A decision – or an explicit statement of intention – in relation to the handling of the surplus of emission rights is necessary in order for the various actors to assess what the Swedish actions will entail and behave accordingly. This is particularly true of Sweden's contribution to the reduction of global emissions above and beyond its Kyoto commitment, in line with the Riksdag's national environmental-quality objective of *Reduced Climate Impact* and the associated emission target for 2008–2012.

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<sup>171</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, p. 165).

<sup>172</sup> The conditions and assumptions of the emission forecast were determined in June 2008, meaning that the strong economic downturn that began in the autumn of 2008 is not reflected in the forecast. Actual emissions may thus turn out to be smaller than forecast, which would make the surplus of emission rights larger. Larger surpluses of emission rights in Sweden and other countries may, in turn, cause the price of emission rights to fall.

The SNAO has examined the following issues:

- Has the Government put the issue of the handling of the expected surplus of emission rights before the Riksdag?
- Have the Government and the government agencies responsible reported in a transparent manner on Sweden's holdings of emission rights and its future surplus, especially in relation to Sweden's national climate objectives?

The SNAO's overall finding is that there is insufficient transparency in reporting on Sweden's total holdings and future surplus of emission rights. There is also insufficient information about how the handling of the surplus will affect the national climate objective and its associated emission target for 2012. The absence of a decision on the handling of the future surplus is part of the reason why the government agencies and ministries concerned differ in their views on how Sweden's national climate objective is to be achieved. The Riksdag has not been given the opportunity to take a position on the appropriate use of significant financial resources.

## 7.1 Conclusions

### 7.1.1 *Conclusions on handling*

*Since the surplus of emission rights represents a – probably substantial – financial value, the SNAO deems that it falls within the scope of the Riksdag's financial powers. This entails that the Riksdag should be given an opportunity to take a position on how the surplus of emission rights is to be handled.*

#### **The Government has not put the issue before the Riksdag**

The SNAO finds that the Government has not put the issue of how Sweden should handle its future surplus of emission rights before the Riksdag. What is more, neither the Riksdag nor the Government has made any statement of intentions as regards the handling of that surplus.

### 7.1.2 *Conclusions on reporting*

*At the national level, there are general requirements imposed on the operations of the central-government sector as well as requirements imposed on the operations of government agencies. The general public is entitled to obtain information about central-government operations by virtue of the principle of public access to information.*

### Shortcomings in the Environmental Protection Agency's reporting

*The Environmental Protection Agency's role as the central agency in the environmental field entails extensive responsibilities. By virtue of the Government's instructions for it, the Agency has overall responsibility for issues relating to environmental objectives as well as responsibility for coordination, development, follow-up, evaluation, reporting and information in relation to, among other things, the environmental-quality objective of Reduced Climate Impact. It should also monitor the effectiveness and efficiency of various policy instruments in achieving the environmental-quality objectives, and it should analyse and take account of socioeconomic, legal and international aspects of environmental action.<sup>173</sup>*

*The SNAO finds that the Environmental Protection Agency, in its capacity as the central government agency in the environmental field with special responsibility for issues relating to environmental objectives, has extensive responsibilities not only to inform the Government and the general public but also to perform analyses and take initiatives independently.*

*The Environmental Objectives Council, a body within the Environmental Protection Agency, should compile and provide information to underpin the Government's recurrent in-depth evaluation of the efforts undertaken to achieve the environmental objectives, including financial follow-up of those efforts, and it should identify any conflicts between objectives and draw up proposals (with impact assessments) for cost-effective policy instruments. The Environmental Objectives Council is also responsible for the provision of overall information about the efforts to achieve the environmental objectives.<sup>174</sup>*

The only time that the Environmental Protection Agency and the Energy Agency have mentioned the issue of the surplus of emission rights was in a report published five years ago. On that occasion, they did not discuss the option of cancelling surplus emission rights.

The Environmental Protection Agency, in its information for the general public, has not indicated the value of the surplus national emission rights and has not described the ramifications of various courses of action for the likelihood that the national environmental-quality objective of *Reduced Climate Impact* and its associated emission target for 2008–2012 will be achieved.

Against this background, the SNAO finds that there are serious shortcomings in the overall reporting of the Environmental Protection Agency. These shortcomings relate to reporting on emission rights, the future surplus of emission rights and the impact that the handling of the surplus will have on compliance with the Riksdag's climate objective and the associated interim target for the 2008–2012 period.

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<sup>173</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

<sup>174</sup> Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

### **Insufficient transparency in the Energy Agency's reporting**

*The Energy Agency should help ensure compliance with those of the environmental-quality objectives adopted by the Riksdag that are relevant to the energy sector, with a special focus on certain objectives, including that of Reduced Climate Impact. According to the Government's instructions for it, the Energy Agency has special sectoral responsibility for the efforts to attain the environmental objectives.*

*The Energy Agency should also report to the Environmental Objectives Council and produce information to underpin any reporting that falls within its own remit.<sup>175</sup>*

The Energy Agency has not provided information about Sweden's total national holdings of the entire range of emission rights, or about future surpluses of such rights, to the Government, the Environmental Objectives Council or the general public. The Energy Agency has not presented the related information in an integrated manner even though it is available from various public sources. The SNAO finds that the Energy Agency has thus failed to fulfil the reporting duties following from the instructions it has been given by the Government.

### **Unclear mandate**

There are no explicit legal provisions in Sweden laying down who is the holder of the central-government sector's accounts in the Swedish registry of emissions trading (SUS).

The SNAO notes that such legal provisions do exist in Finland, where government agencies – like their Swedish counterparts – have a high degree of autonomy.

### **The Government has not reported on the surplus to the Riksdag**

The SNAO notes that the Government has obtained some information – from the Climate Commission and from a consultancy report ordered by the Government Offices – about the value of the future surplus of national emission rights and the possible courses of action.

However, the Government has not asked specifically for information, either from the Environmental Protection Agency or from the Energy Agency, about the possible courses of action or about their ramifications for the national climate objective and the associated emission target for 2012.

The Government has not discussed Sweden's total holdings of the entire range of emission rights or the future surplus, either in climate bills or in budget bills. Moreover, the Government has not informed the Riksdag of how the handling of the surplus will affect compliance with the national climate objective and the associated emission target for 2012.

<sup>175</sup> Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

Further, the Government has not discussed Sweden's holdings of emission rights or the future surplus of emission rights in the Central Government Annual Report.

The Government has also not informed the general public about Sweden's future surplus of emission rights or about the ramifications of various courses of action.

The SNAO finds that, given the considerable – both financial and environmental – value that national emission rights represent, the Government should have informed the Riksdag and the general public about the overall holdings and the future surplus. In the SNAO's opinion, the Government should also put the issue of the handling of the future surplus before the Riksdag.

### 7.1.3 *Consequences of the lacking reporting and the absence of decisions*

#### **The attainment of the national emission target remains uncertain despite the efforts made**

For Sweden's national emission target for 2012 to be achieved, emission rights corresponding to at least 8 percentage points must be cancelled. In the 2009 Climate Bill, the Government states that the 2012 emission target linked to the national environmental-quality objective of *Reduced Climate Impact* 'looks likely to be attained'<sup>176</sup>, without mentioning that this is contingent on the handling of the surplus. Given that the Government has not put the issue of the handling of the surplus before the Riksdag, it is actually unclear at present whether that target will be achieved – even though measures have been taken that have caused emissions in Sweden to fall further, beyond the 2012 emission target (of at least –4 per cent).

#### **The impact of additional citizen efforts to reduce emissions is uncertain**

The national surplus of emission rights is expected to amount to just over 14 million tonnes of CO<sub>2</sub> equivalent per year. This can be compared with total emissions from private cars in Sweden, which are 13 million tonnes per year. A number of government agencies, including the Energy Agency, provide the general public with tips and advice on how to be 'climate-smart': 'Leave your car at home and bike or walk if you're not going far', 'Use public transport whenever you can'.<sup>177</sup> There are also several minor policy instruments of a

<sup>176</sup> *En sammanhållen klimat- och energipolitik – Klimat* ['Integrated climate and energy policy: Climate'] (Government Bill 2008/09:162, p. 30) (quotation translated from Swedish).

<sup>177</sup> The Energy Agency, the National Board of Housing, Building and Planning, the Consumer Agency and the Environmental Protection Agency are engaged in a joint information campaign to make more people aware of existing opportunities to help reduce emissions of greenhouse gases by making energy-smart everyday choices. Their campaign provides information about subjects ranging from suitable heating systems to energy ratings of household appliances. Website of the Energy Agency: <http://www.energimyndigheten.se/sv/Press/Pressmeddelanden/Bli-Energismart-kampanjen-besoker-Eskilstuna-17-19-april/> (quotations translated from Swedish).

voluntary or compulsory nature that the Riksdag and Government justify by reference to Sweden's efforts to achieve the climate objective and help bring about global reductions of emissions. One example is the CO<sub>2</sub> tax.

If the surplus of emission rights were to be sold, however, all this would have no effect at all on the climate objective or on global emissions, given that the buyers would then be allowed to increase their emissions by the corresponding amount. From a climate perspective, this would mean that a significant proportion of the efforts made by Swedish citizens not impact global emissions.

### **The Riksdag has been given no opportunity to take a position on the appropriate use of significant financial resources**

The value of the national emission rights is uncertain and depends on a range of factors, including opportunities to save unused emission rights for the next commitment period. Since most of the players in the market for national emission rights are sovereign nations, non-economic factors (for example, political or diplomatic ones) may influence price levels.

With this proviso, however, national emission rights represent a considerable financial value. If sold, Sweden's surplus in relation to the Kyoto Protocol and the EU burden-sharing agreement could be worth about SEK 7 billion–8 billion. In the light of the above, the Riksdag should have been informed of the value of the surplus and should have been given an opportunity to take a position on how it is to be handled.

### **Lack of information and decisions leads to ambiguity for the government agencies and ministries concerned**

The fact-clearance process for the present SNAO report showed that there is a lack of consensus among the government agencies and ministries concerned. They differ in their view of the relationship between compliance with Sweden's national climate objective, including its interim emission target for 2012, and the impact that the handling of Sweden's future surplus of emission rights will have on compliance with that emission target. One example is that the Energy Agency is of the opinion that the emission target for 2012 has in fact been revised.

As a result of this lack of consensus, the ministries' and agencies' efforts to pursue Sweden's climate policy may come into conflict with each other and thus become less effective.

The lack of clarity and consensus also makes it unclear what actions will be required to achieve the later national emission target for 2020. That target, unlike the 2012 one, may be attained through purchases of emission rights and use of carbon sinks.

## 7.2 Recommendations

Against the background of its audit findings, the SNAO makes the following recommendations:

### For the Government

- Report to the Riksdag on Sweden's total national holdings of the entire range of emission rights, and on their estimated value. This may be done in the form of an 'informational note' provided in the Central Government Annual Report;
- Present to the Riksdag a proposal for a decision on the handling of the future surplus of emission rights. If the Government intends to postpone that decision, it should inform the Riksdag of that intention;
- Ensure that a legal provision is laid down establishing who is the holder of the central-government sector's accounts in the SUS registry;
- Ensure that the general public receives overall information about Sweden's total holdings of emission rights<sup>178</sup>, its future surplus of such rights and the ramifications of the handling of that surplus for the national climate objective and its emission target for 2012;
- Ensure that the Energy Agency promotes the environmental-quality objective of *Reduced Climate Impact* and its associated emission target for the 2008–2012 period by reporting to the Government and the Environmental Objectives Council on Sweden's total national holdings of the entire range of emission rights.

### For the Environmental Protection Agency

- Inform the general public that Sweden is most likely to have a significant surplus of emission rights. Describe how different courses of action as regards the handling of that surplus will affect compliance with the national environmental-quality objective of *Reduced Climate Impact* and with the associated emission target for 2012;
- Inform the general public of Sweden's total national holdings of the entire range of emission rights as well as the future surplus relative to Sweden's official emission forecast.

### For the Energy Agency

- Develop reporting to the Government, the Environmental Objectives Council and the general public so that it covers Sweden's total national holdings of the entire range of emission rights.

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<sup>178</sup> AAUs (including EUAs), CERs, ERUs and RMUs.

# Bibliography

## International conventions

United Nations Framework Convention on Climate Change, adopted in New York on 9 May 1992.

United Nations Framework Convention on Climate Change, *Decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol*, 30 March 2006, FCCC/KP/CMP/Add.2, Annex to Decision 13/CMP.1, 'Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol'.

## *European legislation*

### Regulations

Commission Regulation (EC) No 2216/2004 of 21 December 2004 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council ('Registries Regulation').

Commission Regulation (EC) No 994/2008 of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council (will replace Commission Regulation No 2216/2004 in its entirety on 1 January 2012).

### Directives

Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC ('Emissions Trading Directive').

Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms.

## Decisions

Council Decision 93/389/EEC of 24 June 1993 for a monitoring mechanism of Community CO<sub>2</sub> and other greenhouse gas emissions.

Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change.

Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder.

Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

## Swedish legislation

Freedom of the Press Act (SFS 1949:105).

Instrument of Government (SFS 1974:152).

Central Government Budget Act (SFS 1996:1059).

Annual Reports and Budget Documentation Ordinance (SFS 2000:605).

Emissions Trading Act (SFS 2004:1199).

Government Agencies Ordinance (SFS 2007:515).

Ordinance with Instructions for the Swedish Environmental Protection Agency (SFS 2007:1052).

Ordinance with Instructions for the Swedish Energy Agency (SFS 2007:1153).

Public Access to Information and Secrecy Act (SFS 2009:400).

## *Sweden's international agreements ('SÖ' series)*

SÖ 1993:13, *Förenta nationernas ramkonvention om klimatförändring*, New York den 9 maj 1992 ['United Nations Framework Convention on Climate Change, New York, 9 May 1992'].

SÖ 2002:41, *Kyotoprotokollet till Förenta nationernas ramkonvention den 9 maj 1992 om klimatförändringar* (SÖ 1993:13), *Kyoto den 11 december 1997* ['Kyoto Protocol to the United Nations Framework Convention of 9 May 1992 on Climate Change (SÖ 1993:13), Kyoto, 11 December 1997'].

## Foreign legislation

Finland, *Lag om användning av Kyotomekanismerna* ['Use of Kyoto Mechanisms Act'] (109/2007).

## Legislative history

### *Riksdag Committee Reports*

Riksdag Committee Report 1992/93:JoU19, Riksdag Written Communication 1992/93:361, *Åtgärder mot klimatpåverkan* ['Actions to combat climate impacts'].

Riksdag Committee Report 1996/97:KU3, *Lag om statsbudgeten* ['Central Government Budget Act'].

Riksdag Committee Report 1998/99:MJU6, *Svenska miljömål. Miljöpolitik för ett hållbart Sverige* ['Swedish environmental objectives. Environmental policy for a sustainable Sweden'].

Riksdag Committee Report 2000/01:FiU20, *Riktlinjer för den ekonomiska politiken, utgiftstak, skattefrågor m.m.* ['Guidelines for economic policy, expenditure ceilings, fiscal issues, etc.'].

Riksdag Committee Report 2001/02:MJU3, Riksdag Written Communication 2001/02:36, *Svenska miljömål – delmål och åtgärdsstrategier* ['Swedish environmental objectives: interim targets and action strategies'].

Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163, *Sveriges klimatstrategi* ['Sweden's climate strategy'].

Riksdag Committee Report 2003/04:FiU02, Riksdag Written Communications 2003/04:125, 2003/04:126 and 2003/04:127, *Utgiftsområde 2 Samhällsekonomi och finansförvaltning* ['Expenditure Area 2, "National economy and financial management" '].

Riksdag Committee Report 2005/06:MJU14, Riksdag Written Communication 2005/06:389, *Nationell klimatpolitik i global samverkan* ['National climate policy in global cooperation'].

Riksdag Committee Report 2008/09:MJU28, Riksdag Written Communication 2008/09:300, *Riktlinjer för klimatpolitiken m.m.* ['Guidelines for climate policy, etc.'].

### *Government Bills*

Government Bill 1973:90, *Grundlagspropositionen* ['Constitutional Bill'].

Government Bill 1992/93:179, *Åtgärder mot klimatpåverkan m.m.* ['Actions to combat climate impacts, etc.'].  
Government Bill 1995/96:220, *Lag om statsbudgeten* ['Central Government Budget Act'].

Government Bill 1997/98:145, *Svenska miljömål. Miljöpolitik för ett hållbart Sverige* ['Swedish environmental objectives. Environmental policy for a sustainable Sweden'].

Government Bill 2000/01:130, *Svenska miljömål – delmål och åtgärdsstrategier* ['Swedish environmental objectives: interim targets and action strategies'].

Government Bill 2001/02:55, *Sveriges klimatstrategi* ['Sweden's climate strategy'].

Government Bill 2005/06:172, *Nationell klimatpolitik i global samverkan* ['National climate policy in global cooperation'].

Government Bill 2006/07:1, *Budgetpropositionen för 2007* ['Budget Bill for 2007'].

Government Bill 2008/09:162, *En sammanhållen klimat- och energipolitik – Klimat* ['An integrated climate and energy policy: Climate'].

Government Bill 2009/10:1, *Budgetpropositionen för 2010* ['Budget Bill for 2010'].

### *Terms of Reference*

Dir 2007:59, Miljödepartementet [Ministry of the Environment], *Parlamentarisk beredning för översyn av klimatpolitiken* ['Parliamentary commission of inquiry to review environmental policy'].

### *Ministerial Communications Series*

Ds 2001:71, *Sveriges tredje nationalrapport om klimatförändringar* ['Sweden's third national report on climate change']. Submitted in accordance with the United Nations Framework Convention on Climate Change.

## Other written materials

Bohlin, Alf (2007), *Offentlighetsprincipen* ['Principle of public access to documents'], 7th edition.

Carlén, Björn, *Sveriges klimatpolitik – värdet av utsläppshandel och valet av målformulering* ['Sweden's climate policy: the value of emissions trading and the choice of target wording'], Rapport till expertgruppen för miljöstudier 2007:4 ['Report 2007:4 for the Expert Group on Environmental Studies'].

EEA [European Environment Agency] Report No. 9/2009, *Greenhouse gas emission trends and projections in Europe 2009: Tracking progress towards Kyoto targets*.

Energimyndigheten [Swedish Energy Agency], *Yttrande angående klimatberedningens betänkande 'Svensk klimatpolitik' SOU 2008:24* ['Opinion on the Climate Commission's Report "Swedish Climate Policy", SOU [Swedish Government Official Report] 2008:24'], decision of 18 June 2008, Ref. No. 02-08-1093.

Energimyndigheten [Swedish Energy Agency], ER 2008:28, *Utvecklingen på utsläppsmarknaden 2008* ['Trends in the emissions market in 2008'].

Energimyndigheten [Swedish Energy Agency], ER 2009:01, *Årsredovisningen 2008* ['Annual report for 2008'].

Energimyndigheten [Swedish Energy Agency] and Naturvårdsverket [Swedish Environmental Protection Agency], *Konsekvensanalys av klimatmål* ['Impact assessment of climate objectives'], delrapport 4 i Energimyndighetens och Naturvårdsverkets underlag till kontrollstation 2008 ['sub-report 4 of the Energy Agency's and the Environmental Protection Agency's documentation for the 2008 checkpoint'].

European Commission (2001), *Commission Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC*, Brussels, 23 October 2001, COM(2001) 581 final.

European Commission (2003), *Commission Proposal for a Directive of the European Parliament and of the Council amending the Directive establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms*, COM(2003) 403 final.

Green Stream, 24 April 2009, *Carry-over, Implementation Alternatives and Possible Implications for Sweden*, MN-090424-P6400-003.

ITPS [Swedish Institute for Growth Policy Studies], 2004:3, *Den svenska klimatpolitikens kostnader och betydelse* ['Costs and importance of Sweden's climate policy'], by Peter Bohm.

Miljödepartementet [Ministry of the Environment], *Internationellt klimatsamarbete – Sverige möter klimatutmaningen* ['International climate cooperation: Sweden meets the climate challenge'], informational material, M2008:24.

Naturvårdsverket [Swedish Environmental Protection Agency] (2009), *Naturvårdsverkets underlag för Sveriges femte nationalrapport om klimatförändringar* ['Information provided by the Environmental Protection Agency as a basis for Sweden's fifth national report on climate change'], No 501-5470-08 Kp.

Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2004), *Kontrollstation 2004* ['Checkpoint 2004'].

Naturvårdsverket [Swedish Environmental Protection Agency] and Energimyndigheten [Swedish Energy Agency] (2008), *Den svenska klimatstrategins utveckling – En sammanfattning av Energimyndighetens och Naturvårdsverkets underlag till kontrollstation 2008* ['Development of the Swedish climate strategy: A summary of the information provided by the Energy Agency and the Environmental Protection Agency for the 2008 checkpoint'].

Phylipsen, G J M, et. al., A Triptych sectoral approach to burden differentiation; GHG emissions in the European bubble, *Energy Policy*, Vol. 26, No 12, pp. 929–943, 1998.

Point Carbon for CAN Europe, 26 October 2009, *Assigned Amount Unit: Seller/buyer analysis and impact on post-2012 climate regime*.

*Riksrevisorernas årliga rapport 2009* ['Annual report for 2009 of the Auditors General'].

SOU [Swedish Government Official Report] 2008:24, *Svensk klimatpolitik* ['Swedish climate policy'].

SOU [Swedish Government Official Report] 2008:125, *En reformerad grundlag Del 1 och 2* ['A reformed constitution, Parts 1 and 2'].

Spector, Erik, *Dubbla miljömål, dubbelt så bra?* ['Two environmental objectives, twice as good?'] Master's thesis, Department of Economics, Uppsala University, thesis supervisor Mats Bergman, 5 June 2008.

Statistiska centralbyrån [Statistics Sweden] (2004), *Så bor vi i Sverige – Bostäder, boendemiljö och transporter 1975–2002* [‘This is how we live in Sweden: Dwellings, housing environments and transport, 1975–2002’], *Levnadsförhållanden* [‘Living conditions’] series, Report No 107.

Statskontoret [Swedish Agency for Public Management], 2000:20A, *Den svenska förvaltningsmodellen i EU-arbetet* [‘The Swedish model of public administration in EU work’].

## **E-mail messages**

E-mail message from the Environmental Protection Agency, 2 October 2009.

E-mail message from the Environmental Protection Agency, 5 October 2009.

E-mail message from the Energy Agency, 16 October 2009.

E-mail message from the Ministry of the Environment, 21 October 2009.

E-mail message from the Energy Agency, 22 October 2009.

E-mail message from the Ministry of the Environment, 4 November 2009.

E-mail message from the Energy Agency, 4 November 2009.

E-mail message from the Environmental Protection Agency, 4 November 2009.

E-mail message from the Ministry of Finance, 5 November 2009.

E-mail message from the Ministry of the Environment, 12 November 2009.

E-mail message from the Energy Agency, 12 November 2009.

## **Internet**

Website of the Energy Agency, 20 August 2009.

Website of the Environmental Protection Agency, 6 October 2009.

Website of the Environmental Protection Agency, 2 November 2009.

Website of the Environmental Protection Agency, 3 November 2009.

Website of SIKÅ (Swedish Institute for Transport and Communications Analysis), 22 October 2009.

## **Interviews, etc.**

Interview at the Ministry of the Environment, 30 September 2009.

Interview at the Environmental Protection Agency, 1 October 2009.

Interview at the Environmental Protection Agency, 6 October 2009.

Interview at the Energy Agency, 8 October 2009.

Telephone interview with the Energy Agency, 12 October 2009.

Interview at the Ministry of Finance, 16 October 2009.

Interview at the Ministry of the Environment, 20 October 2009.

# Glossary

This glossary is based on the list of terms and concepts included in Energimyndigheten [Swedish Energy Agency], *Utvecklingen på utsläppsmarknaden 2008* ['Trends in the emissions market in 2008'], ER 2008:28. Some additions, changes and deletions have been made.

**AAU:** *Assigned-amount unit.* The international emission rights assigned to each individual Party to the Kyoto Protocol at the start of the first commitment period in 2008. Each AAU represents one tonne of CO<sub>2</sub> equivalent, and the total allocation of AAUs constitutes the maximum allowed emissions during that period. The number of AAUs to be assigned is calculated by each Party but determined by assessors at the Climate Convention Secretariat.

**Carbon sink:** The Kyoto Protocol allows countries to take credit for the removal of CO<sub>2</sub> by 'carbon sinks': plants binding carbon through photosynthesis.

**CDM:** *Clean Development Mechanism.* Emission reductions by means of investments in individual projects carried out in countries that have not made any commitments under the Kyoto Protocol to achieve quantified emission reductions.

**CER:** *Certified emission reduction.* Deriving from projects in the framework of the Clean Development Mechanism (CDM), CERs are issued by the CDM Executive Board in the CDM Registry and can then be transferred to other accounts. CERs can be issued for reductions from 2000 onwards. One CER corresponds to a reduction of 1 tonne of CO<sub>2</sub> equivalent.

**CO<sub>2</sub>e:** *Carbon dioxide (CO<sub>2</sub>) equivalent.* The amount of a greenhouse gas expressed in terms of the amount of CO<sub>2</sub> that would exert the same climate impact (or has the same 'global-warming potential'). For example, 1 tonne of methane is equivalent to 21 tonnes of CO<sub>2</sub>, meaning that 1 tonne of methane = 21 CO<sub>2</sub>e.

**ERU:** *Emission-reduction unit.* Deriving from Joint Implementation (JI) projects, an ERU is in reality an AAU that has been converted into an ERU in the registry of a Party after the relevant emission reduction has been verified. ERUs can be issued from 2008 onwards, once the Parties have determined

their assigned quantities and are thus able to convert AAUs into ERUs. One ERU corresponds to a reduction of 1 tonne of CO<sub>2</sub> equivalent.

**EUA:** *European Union allowance.* EUAs are emission rights assigned to operators within the EU ETS. From 2005 to 2007 they were issued directly in Member States' registries. In 2008–2012, a proportion of AAUs corresponding to the trading sector's allocation will instead be converted into EUAs.

**EU ETS:** *European Union Emissions Trading Scheme.* Trade in emission rights began in January 2005 and covers about 12,000 installations in the industrial and energy sectors. During the 2008–2012 trading period, this trade will take place in parallel with the first commitment period of the Kyoto Protocol, and the EU ETS will be opened up to international trade in AAUs, CERs and ERUs.

**ITL:** *International Transaction Log.* The UN Climate Secretariat's central registry, where it records the issue, trade, cancellation, retirement and holding of emission rights in national registries belonging to Parties with commitments under the Kyoto Protocol.

**Jl:** *Joint Implementation.* Emission reduction by means of investments in individual projects in countries that have made commitments under the Kyoto Protocol to achieve quantified emission reductions.

**Kyoto Protocol:** An international agreement which was concluded in 1997 as part of the United Nations Framework Convention on Climate Change (UNFCCC) and which is the basis for commitments by a large number of industrialised countries to reduce their emissions by, on average, 5 per cent by 2008–2012 compared with 1990 levels. The protocol entered into force in 2005 and is binding on the countries that have ratified it. Countries may use three flexible mechanisms in their efforts to bring about emission reductions: trade in emission rights, Joint Implementation (JI) and the Clean Development Mechanism (CDM).

**Primary market:** The primary market includes transactions where project owners sell ERUs or CERs. Project owners and buyers often conclude a purchasing agreement at an early stage of the implementation of the project, i.e. before the technology investment has been completed.

**RMU:** *Removal unit.* Reduction units deriving from projects involving carbon sinks.

**Secondary market:** Transactions where the seller of ERUs or CERs is not the project owner but, for example, an intermediary or a bank.

**Supplementarity principle:** The rule of the Kyoto Protocol and the Marrakech Accords prescribing that trade in emission rights and the project mechanisms (JI and CDM) will be used only as a supplement to national measures aiming to control and reduce emissions.

**SUS:** The Swedish registry for trade in emission rights, established at the Energy Agency. The EU Emissions Trading Directive requires each Member State to have such a registry in which to record emission-right transactions within the trading scheme. The SUS is also Sweden's national registry under the Kyoto Protocol, where compliance with its national commitment is being monitored.



## Annex 1. Accounting for emission rights

### *General information and generally accepted accounting principles in the central-government sector*

The Energy Agency is the government agency responsible for the handling of emission rights. In its annual reports, the Agency has provided information about emission rights in the sections on performance, not in the financial sections. No related information was included in the 2008 Central Government Annual Report (CGAR).

Each central-government agency submits an annual report to the Government, which is audited by the SNAO. The Government submits the CGAR to the Riksdag. It includes consolidated accounts for all government agencies, with a few adjustments; for example, the Premium Pension Authority is not included, and nor are the national pension-insurance funds and the Riksbank (central bank). The CGAR is also audited by the SNAO.

Generally accepted accounting principles in the central-government sector are defined by the ordinances issued by the Government and the regulations and general advice issued by the National Financial Management Authority. As regards accounting issues not covered by those ordinances and regulations, it emerges that guidance should be sought in accounting principles that apply in the private sector and internationally. The ordinances and regulations are to be followed by all agencies, but they do not apply to the CGAR because they have not been decided by the Government's principal, i.e. the Riksdag. At present, the sole rule applicable to the CGAR is the provision of Section 38 of the Central Government Budget Act which lays down that the CGAR should include a statement of financial position (balance sheet), a statement of financial performance (income statement), a cash-flow statement and information about the outcome of the central-government budget. The Government is also allowed to provide additional information. The remit of the SNAO's financial-audit function extends only to the financial documents referred to in Section 38, not to the other information provided by the Government in the CGAR.

When drawing up the CGAR, the Government has largely taken the Annual Reports and Budget Documentation Ordinance as its starting point. The minor deviations that exist are mainly due to adjustments necessary for purposes of financial consolidation.

Chapter 9 of the Instrument of Government includes the following provision:

**Section 8** The funds and other assets of the central-government sector are at the disposal of the Government. This provision does not, however, apply to assets which are intended for the Riksdag or for authorities under the Riksdag, or which have been set aside in law for special administration.

The Central Government Budget Act includes the following provision:

**Section 44** The Government is accountable to the Riksdag for the funds and other assets of the central-government sector that are at the disposal of the Government by virtue of Chapter 9, Section 8, of the Instrument of Government. Such accountability also extends to the operations conducted by the central-government sector and its liabilities and other financial obligations.

### *Should emission rights be reported by the Energy Agency and in the CGAR?*

The emission rights are assigned to Sweden in its quality as a sovereign nation and are managed by the Government. The Government has entrusted the Energy Agency with the task of administering the emission rights.

The emission rights thus meet the requirements laid down in Section 44 of the Central Government Budget Act. They represent a form of operation at the disposal of and conducted by the Government, and they should therefore be included in its reporting. This does not automatically mean that the reporting in question should be financial in nature and that it should be included in the statement of financial position (balance sheet) of the CGAR. Rather, it could also mean that the appropriate choice would be reporting as other information, i.e. as an 'informational note' or equivalent.

The Government has holdings of emission rights representing a certain value if they are sold, but the Government may decide to cancel those emission rights. Cancellation entails that the emission rights lose their economic value and that they cannot be sold to raise revenue for the central-government sector.

If the Government were to make such a decision, reporting in the financial sections of the CGAR would no longer be appropriate.

If the Government does not make a cancellation decision, the financial sections of the CGAR may be affected if the Government chooses to sell the emission rights at some point during the period in question.

The discussion below starts from the assumption that the Government does not decide to cancel the emission rights.

### *How should emission rights be accounted for?*

Three options are discussed here: as an asset in the statement of financial position (balance sheet), as a contingent asset and in an informational note.

The holdings are not associated with any costs but may yield revenues in the future. These circumstances prompt the conclusion that the emission rights are a type of asset.

However, for something to be recognised as an asset in the statement of financial position, a number of criteria must be met. Those criteria, which are quoted below, are laid down in the Annual Reports and Budget Documentation Ordinance. That Ordinance is applicable above all to central-government agencies; it does not apply to the Government.

Assets are to be accounted for in the statement of financial position. However, there also exists a category of 'contingent assets' which are not to be recognised as assets in that statement but accounted for in conjunction with it.

### *Definition of 'asset'*

An asset is a resource which is controlled by a government agency as a result of past events and which is expected to give the agency economic benefits or a service potential in the future. An asset should be recognised in the statement of financial position when it is likely that the future economic benefits or service potential associated with the holding of that asset will accrue to the agency and when their value under Section 3 or 8 can be reliably estimated.

### **Non-current assets**

The classification of an asset is determined not by its nature as such but by the reason for holding it. For example, inventories held for purposes of emergency preparedness are to be classified as non-current, even if they are turned over on an ongoing basis. Non-current assets include mainly the following:

- shares, bonds and other securities held permanently;
- claims based on long-term lending and long-term trade receivables ('long-term' being defined as having an original maturity of more than one year);

- emergency assets, i.e. assets acquired to keep the country supplied in an emergency or to perform tasks in war;
- stock and inventory assets that are part of installations under construction or have been designated for such purposes; if such assets are part of installations being constructed for external parties, however, they are to be reported as current assets;
- technical plant, machinery, means of transport and equipment with an estimated economic life of not less than three years;
- costs of improvements to other people's property; and
- land, land improvements, buildings and other real property.

### **Acquisition cost of non-current assets**

**Section 3** Non-current assets shall be recognised at an amount corresponding to their cost of acquisition or manufacture (acquisition cost) unless otherwise provided in the second or third paragraph, in Sections 4–7 or in Section 11.

A non-current asset acquired for no consideration or for a consideration which is substantially lower than the market value of the asset shall be recognised at the time of acquisition at its market value.

### **Valuation of current assets**

**Section 8** Unless otherwise provided in Section 9 or Section 11, current assets shall be recognised at the lower of their acquisition cost and their actual value on the balance-sheet date.

Unless otherwise provided in Section 10, the acquisition cost is the cost of acquiring or manufacturing the asset.

A current asset acquired for no consideration or for a consideration which is substantially lower than the actual value of the asset shall be recognised at the time of acquisition at its actual value.

### **Assessment of whether emission rights can be classified as an asset in the statement of financial position (balance sheet)**

In the SNAO's opinion, the criteria that would enable emission rights to be recognised as an asset in the statement of financial position are not met, unless the Government actively decides that they are to be sold during the next period and also specifies the date on which they are to be sold. In that case, the emission rights can be expected to give the Government economic benefits in the future, and then it also becomes likely that these economic benefits will accrue to the Government, provided that their value can be reliably estimated and that there is a fully functional market. The uncertainties surrounding the Government's handling of the emission rights cause criteria not to be met.

It should also be added that the emission rights have no intrinsic value when they are assigned to Sweden as a nation, but that – provided that the market works and is established – each emission right represents a value of about SEK 100.<sup>179</sup> The acquisition cost is thus SEK 0, which provides an additional argument in favour of the conclusion that emission rights should not be recognised in the statement of financial position.

### *Contingent assets*

Contingent assets usually come into existence as a result of unplanned or otherwise unexpected events that give rise to a possible inflow of resources to the central-government sector. The reason why such assets are not recognised in the statement of financial position is that doing so would amount to recognising uncertain revenue. When an inflow is virtually certain to take place, the asset is no longer contingent in nature. It is therefore recognised in the statement of financial position at that point. An informational note about a contingent asset is provided when an inflow of resources is likely.

The Annual Reports and Budget Documentation Ordinance contains no provisions about contingent assets. This means that any guidance necessary should be sought in the accounting principles of the private sector. Recommendation RR 16 of the Swedish Financial Accounting Standards Council deals with the reporting of contingent assets.

### **Assessment of whether the emission rights should be classified as a contingent asset**

The SNAO finds that the emission rights cannot at present be classified as contingent assets, since there remains a great deal of uncertainty about the potential inflow of funds. What is more, the value of these assets is very difficult to estimate because they were assigned free of charge. The requirements and the method to be used when estimating the (present) value of a contingent asset are indicated in RR 16.

### *Informational note*

By means of an 'informational note' in the CGAR, the Government could provide information, in conjunction with the financial documents, to the effect that it holds emission rights. To achieve the objective of increasing transparency for the Riksdag, it should also be clear from the note what the market value of the holdings is.

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<sup>179</sup> Or EUR 10; for a discussion of the price of emission rights, see Section 2.5.



## Annex 2. Detailed description of the Kyoto Protocol accounting guidelines

### **The handling of emission rights can be described as follows:**

The Parties must establish national registries for their handling of emission rights. These registries must include specific components. Any non-confidential information must be made available on a website, and a great deal of data about the various emission rights issued by the Party and about their holders must be provided. However, there is no requirement for further reporting, for example in the Parties' national government budgets.

There are also specific rules for the various types of emission rights. At the beginning of the period, each Party must issue the number of emission rights that corresponds to its determined allocation under the Protocol. Those emission rights are referred to as Assigned Amount Units (AAUs).<sup>180</sup>

The guidelines for the information that the Parties must provide in their national registries and on their websites for each year<sup>181</sup> are reproduced below:

44. Each national registry shall make non-confidential information publicly available and provide a publicly accessible user interface through the Internet that allows interested persons to query and view it.
45. The information referred to in paragraph 44 above shall include up-to-date information for each account number in that registry on the following:
  - (a) Account name: the holder of the account;
  - (b) Account type: the type of account (holding, cancellation or retirement);
  - (c) Commitment period: the commitment period with which a cancellation or retirement account is associated;
  - (d) Representative identifier: the representative of the account holder, using the Party identifier (the two-letter country code defined by ISO 3166) and a number unique to that representative within the Party's registry;

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<sup>180</sup> United Nations Framework Convention on Climate Change, *Decisions adopted by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol*, 30 March 2006, FCCC/KP/CMP/Add.2, Annex to Decision 13/CMP.1, 'Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol', Point 23.

<sup>181</sup> Points 44–48 of Decision 13/CMP.1.

- (e) Representative name and contact information: the full name, mailing address, telephone number, facsimile number and e-mail address of the representative of the account holder.
46. The information referred to in paragraph 44 above shall include the following Article 6 project information, for each project identifier against which the Party has issued ERUs:
- (a) Project name: a unique name for the project;
  - (b) Project location: the Party and town or region in which the project is located;
  - (c) Years of ERU issuance: the years in which ERUs have been issued as a result of the Article 6 project;
  - (d) Reports: downloadable electronic versions of all publicly available documentation relating to the project, including proposals, monitoring, verification and issuance of ERUs, where relevant, subject to the confidentiality provisions in decision 9/CMP.1.
47. The information referred to in paragraph 44 above shall include the following holding and transaction information relevant to the national registry, by serial number, for each calendar year (defined according to Greenwich Mean Time):
- (a) The total quantity of ERUs, CERs, AAUs and RMUs in each account at the beginning of the year;
  - (b) The total quantity of AAUs issued on the basis of the assigned amount pursuant to Article 3, paragraphs 7 and 8;
  - (c) The total quantity of ERUs issued on the basis of Article 6 projects;
  - (d) The total quantity of ERUs, CERs, AAUs and RMUs acquired from other registries and the identity of the transferring accounts and registries;
  - (e) The total quantity of RMUs issued on the basis of each activity under Article 3, paragraphs 3 and 4;
  - (f) The total quantity of ERUs, CERs, AAUs and RMUs transferred to other registries and the identity of the acquiring accounts and registries;
  - (g) The total quantity of ERUs, CERs, AAUs and RMUs cancelled on the basis of activities under Article 3, paragraphs 3 and 4;
  - (h) The total quantity of ERUs, CERs, AAUs and RMUs cancelled following determination by the Compliance Committee that the Party is not in compliance with its commitment under Article 3, paragraph 1;
  - (i) The total quantity of other ERUs, CERs, AAUs and RMUs cancelled;
  - (j) The total quantity of ERUs, CERs, AAUs and RMUs retired;
  - (k) The total quantity of ERUs, CERs, and AAUs carried over from the previous commitment period;
  - (l) Current holdings of ERUs, CERs, AAUs and RMUs in each account.

48. The information referred to in paragraph 44 above shall include a list of legal entities authorised by the Party to hold ERUs, CERs, AAUs and/or RMUs under its responsibility.

- Activities undertaken under the Joint Implementation mechanism generate emission-reduction units (ERUs) by means of conversion from assigned-amount units (AAUs) and removal units (RMUs). No further description is given of how activities under the Clean Development Mechanism will yield certified-emission reductions (CERs).
- If a Party acquires emission rights or parts of the amount assigned to another Party, they are to be added to the acquiring Party's assigned amount of emission reductions.
- If a Party transfers emission rights or parts of its assigned amount to another Party, they are to be subtracted from the transferring party's assigned amount of emission reductions.
- Emission reductions under the CDM of the Protocol acquired by one Party from another Party are to be added to the acquiring Party's assigned amount.<sup>182</sup>

#### **Assessment of compliance with the Protocol**

- To demonstrate compliance with the Protocol, each Party must retire emission rights. Assessment of compliance will take place at the end of the commitment period plus an additional period for fulfilling commitments. Before the end of that additional period, each Party must retire emission rights to a special retirement account in the national registry. The number of emission rights (AAUs, ERUs, CERs and RMUs) is then compared with the number of emission rights retired by the Party. Following the expiration of the additional period, the Party must also report the total number of emission rights, the total number of emission rights on its retirement account and the total number of emission rights that the Party **requests** should be carried over into the next commitment period.
- At the expiration of the additional period for fulfilling commitments, a calculation is to be made of any emission rights added to and subtracted from the Party's original commitment.
- If the special Compliance Committee finds that a Party has not complied with its commitment to reduce emissions, that Party must transfer a number, calculated in a specified manner, of emission rights to a cancellation account in its national registry.

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<sup>182</sup> The details of the calculation methodology, with items to be added and subtracted in relation to the Party's initial assigned amount of emissions, are governed by Points 11–12 of Decision 13/CMP.1., 'Modalities for the accounting of assigned amounts under Article 7, paragraph 4, of the Kyoto Protocol'.

### **Detailed description of the transfer, acquisition, cancellation and carry-over of unused emission rights**

- Emission rights corresponding to net changes in emissions of anthropogenic greenhouse gases from sources and to removal by carbon sinks are to be cancelled by being transferred to a cancellation account in the Party's national registry.
- Each Party may also (voluntarily) cancel emission rights (of all four types) such that they cannot count towards compliance with the Party's commitments. To do this, emission rights are transferred to a special cancellation account in the national registry. There is no requirement that this type of cancellation must take place at a particular time. It should therefore be possible to cancel emission rights on an ongoing basis during the commitment period.
- If emissions for a Party during a commitment period are lower than that Party's assigned amount of emissions, the difference will be added, if the Party so requests, to the Party's assigned amount for subsequent commitment periods. This thus entails a right – but not an obligation – to carry over emission reductions in excess of the commitment to subsequent periods. This right can be exercised only if the number of emission rights retired by the Party to comply with its commitments at least corresponds to its emissions. If that condition is met, the Party is entitled to carry over all AAUs that have not been used or cancelled. As regards ERUs and CERs (which derive from Joint Implementation and Clean Development Mechanism projects, respectively), emission rights corresponding to a maximum of 2.5 per cent of the initial assigned amount of emissions may be saved. RMUs must not be carried over to the next period.<sup>183</sup> Any emission rights not carried over in this way are to be cancelled.

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Points 15 and 16 of Decision 13/CMP.1.

## Annex 3. Information about holdings and transactions to be presented in the publicly available part of the registry website

Reporting deadlines according to Points 5 and 7 of Annex XVI and Article 9(1) of Commission Regulation (EC) No 2216/2004.

One-year delay (X+1)	Five-year delay (X+5)
(b) The total quantity of AAUs issued in year X on the basis of Article 7 of Decision No 280/2004/EC shall be displayed from 15 January onwards of year (X+1).	(a) The total quantity of ERUs, CERs, AAUs and RMUs held in each account (person holding, operator holding, Party holding, cancellation, replacement or retirement) on 1 January of year X shall be displayed from 15 January onwards of year (X+5).
(c) The total quantity of ERUs issued in year X on the basis of project activity implemented pursuant to Article 6 of the Kyoto Protocol shall be displayed from 15 January onwards of year (X+1).	(d) The total quantity of ERUs, CERs, AAUs and RMUs acquired from other registries in year X and the identity of the transferring accounts and registries shall be displayed from 15 January onwards of year (X+5).
(e) the total quantity of RMUs issued in year X on the basis of each activity under Article 3, paragraphs 3 and 4, of the Kyoto Protocol shall be displayed from 15 January onwards of year (X+1).	(f) The total quantity of ERUs, CERs, AAUs and RMUs transferred to other registries in year X and the identity of the acquiring accounts and registries shall be displayed from 15 January onwards of year (X+5).
(g) The total quantity of ERUs, CERs, AAUs and RMUs cancelled in year X on the basis of activities under Article 3, paragraphs 3 and 4, of the Kyoto Protocol shall be displayed from 15 January onwards of year (X+1).	(m) Current holdings of ERUs, CERs, AAUs and RMUs in each account (person holding, operator holding, Party holding, cancellation or retirement) on 31 December of year X shall be displayed from 15 January onwards of year (X+5).
(h) The total quantity of ERUs, CERs, AAUs and RMUs cancelled in year X following determination by the Compliance Committee under the Kyoto Protocol that the Member State is not in compliance with its commitment under Article 3, paragraph 1, of the Kyoto Protocol shall be displayed from 15 January onwards of year (X+1).	

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(i) The total quantity of other ERUs, CERs, AAUs and RMUs, or allowances, cancelled in year X and the reference to the Article pursuant to which these Kyoto units or allowances were cancelled under this Regulation shall be displayed from 15 January onwards of year (X+1).

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(j) The total quantity of ERUs, CERs, AAUs, RMUs and allowances retired in year X shall be displayed from 15 January onwards of year (X+1).

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(k) The total quantity of ERUs, CERs, AAUs carried over in year X from the previous commitment period shall be displayed from 15 January onwards of year (X+1).

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(l) The total quantity of allowances from the previous commitment period cancelled and replaced in year X shall be displayed from 15 May onwards of year X.

## Annex 4. European law and the Kyoto Protocol

### *Interaction between the Kyoto Protocol and the EU Emissions Trading Scheme*

The EU Emissions Trading Scheme (EU ETS) was introduced through a 2003 Directive<sup>184</sup> and actual trade began in 2005.<sup>185</sup> The Directive covers the same greenhouse gases as the Kyoto Protocol.<sup>186</sup> Initially, however, the EU ETS covers only CO<sub>2</sub> emissions from certain explicitly specified operations.<sup>187</sup> One reason for this, according to the European Commission, is that CO<sub>2</sub> represented more than 80 per cent of the European Community's emissions of greenhouse gases in 1999. Another reason is that CO<sub>2</sub> emissions can be monitored in a way that generates good-quality data on a consistent basis.<sup>188</sup>

Ahead of the launch of the EU ETS, when the individual Member States were to determine the amounts of emission rights that they intended to assign, they were to take into account both the provisions of the Directive and their general commitments under the European Community's burden-sharing agreement in relation to the Kyoto Protocol.<sup>189</sup>

In theory, the interaction between the EU ETS and the Kyoto Protocol should work in the way described below. This description takes as its starting point the installations covered by the EU ETS.<sup>190</sup>

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<sup>184</sup> Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

<sup>185</sup> Commission MEMO/03/154, *Kyoto protocol*, Brussels, 23 July 2003, p. 4. The greenhouse gases concerned are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>).

<sup>186</sup> Articles 3 and 30 as well as Annex II of Directive 2003/87/EG of the European Parliament and of the Council.

<sup>187</sup> Article 2 as well as Annexes I and II of Directive 2003/87/EG of the European Parliament and of the Council.

<sup>188</sup> European Commission (2001), *Commission Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC*, Brussels, 23 October 2001, COM(2001) 581 final.

<sup>189</sup> Cf. the Declaration of the European Community made in accordance with Article 24(3) of the Kyoto Protocol; see Annex III of Council Decision 2002/358/EC, third paragraph.

<sup>190</sup> European Commission (2001), *Commission Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC*, Brussels, 23 October 2001, COM(2001) 581 final, p. 4f.

- If installations trade emission rights with other installations within the same Member State, this does not change the number of tonnes of CO<sub>2</sub> that the Member State in question may emit under the burden-sharing agreement;
- If an emission right is sold to an installation in another country, however, the 'originating' Member State loses the right to emit one tonne of CO<sub>2</sub> equivalent under the burden-sharing agreement. By contrast, if an emission right is bought from an installation in another Member State, the Member State where the buying installation is located becomes entitled to emit one additional tonne of CO<sub>2</sub> equivalent;
- Both of these cases therefore require adjustments to be made in the national registries to the number of tonnes of CO<sub>2</sub> that each Member State may emit under the burden-sharing agreement;
- The Commission states that, overall, the Community will emit the same number of tonnes as was foreseen under the Kyoto Protocol. However, the commitments of the individual Member States will be adjusted to correspond with the trades that their installations undertake;
- According to the Commission, there should be no danger of non-compliance by Member States as a consequence of the EU ETS as long as installations individually have enough emission rights to cover their actual emissions. If an installation sells emission rights, it must reduce its emissions by the same amount. Against this background, the Commission concludes that there is a need for strong national non-compliance provisions for installations that participate in the EU ETS;
- The special monitoring system of linked national registries is therefore central not only for the handling of emission rights and the tracking of trades, but also for the adjustment of the Member States' commitments under the burden-sharing agreement.<sup>191</sup>

A 2004 Directive implemented the 'project-based flexible mechanisms' of the Kyoto Protocol – Joint Implementation (JI) and the Clean Development Mechanism (CDM) – in the EU ETS.<sup>192</sup>

### *Links between the Kyoto Protocol and the Community mechanism to monitor emissions of greenhouse gases*

In 1993, the European Community established a monitoring mechanism for emissions of CO<sub>2</sub> and other greenhouse gases.<sup>193</sup> It was replaced in 2004 by a new mechanism for monitoring Community greenhouse-gas emissions

<sup>191</sup> More information about the monitoring mechanism is given below.

<sup>192</sup> Article 1 of Directive 2004/101/EC of the European Parliament and of the Council of 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms.

<sup>193</sup> Council Decision 93/389/EEC of 24 June 1993 for a monitoring mechanism of Community CO<sub>2</sub> and other greenhouse gas emissions.

and for implementing the Kyoto Protocol. The monitoring mechanism was established to:<sup>194</sup>

- monitor all anthropogenic emissions by sources and removals by sinks of greenhouse gases in the Member States;
- evaluate progress towards meeting commitments in respect of these emissions and removals by sinks;
- implement the UN Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, as regards national programmes, greenhouse-gas inventories, national systems and registries of the Community and its Member States, and the relevant procedures under the Kyoto Protocol; and
- ensure the timeliness, completeness, accuracy, consistency, comparability and transparency of reporting by the Community and its Member States to the UNFCCC Secretariat.

In the recitals of the Decision establishing a monitoring mechanism, the European Parliament and the Council emphasise that the Community and its Member States are Parties to the UNFCCC and the Kyoto Protocol. They also stress that the Community and the Member States are each responsible for reporting, establishing and accounting for their assigned amounts and establishing and maintaining their eligibility to participate in the Kyoto Protocol's mechanisms.<sup>195</sup>

In its proposal for the Decision on a Community monitoring mechanism, the Commission referred to the Kyoto Protocol guidelines for national registries. It stated that, as Parties to the Protocol, the Community and the Member States were required to establish national registries in accordance with those guidelines. Further, it emphasised that one important aim of modifying the previous Community system was to ensure that the design of the monitoring mechanism reflected the reporting requirements and guidelines for the implementation of the UNFCCC and the Kyoto Protocol in relation to which the Parties had reached political agreements and made legal decisions at the Conference of the Parties in Marrakech. The Commission stressed that it was appropriate to include a number of key provisions in the Community Decision. It also underscored the importance of limiting the reporting burden of the Member States by ensuring that only data of interest at the Community level would have to be provided under the monitoring mechanism.<sup>196</sup> The SNAO finds that the Commission perceived the Kyoto Protocol guidelines in these respects as binding.

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<sup>194</sup> Article 1 of Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

<sup>195</sup> Recital 14 of Directive 280/2004/EC of the European Parliament and of the Council.

<sup>196</sup> European Commission, *Proposal for a Decision of the European Parliament and of the Council for a monitoring mechanism of Community greenhouse gas emissions and the implementation of the Kyoto Protocol*, Brussels, 5 February 2003, COM(2003) 51 final, 2003/0029 (COD), pp. 1 and 8.

The monitoring mechanism covers the Member States' entire emission-reduction commitment under the Kyoto Protocol and the Community Decision to approve it.<sup>197</sup>

### **Member States' reporting to the Commission**

One of the areas covered by the monitoring mechanisms is Member States' annual reporting to the Commission. This reporting must be drawn up and submitted by 15 January each year. By 15 March each year, the Member States must send their complete national inventory report to the Commission.<sup>198</sup> In addition to a number of reporting requirements relating to emission levels in various years<sup>199</sup>, the Member States must determine and report a number of data items from their national emission-right registry. These items relate to the issue, acquisition, holding, transfer, cancellation, retirement and carry-over of all four types of emission rights under the Kyoto Protocol. They are to refer to the previous year.<sup>200</sup> To be able to fulfil these reporting requirements, the Member States must have established such detailed information about their holdings of the various emission rights under the Kyoto Protocol.

### **Requirements imposed on national registries**

The main requirements imposed on national registries by the Decision establishing the monitoring mechanism are the following. The Community and the Member States must establish and maintain registries in order to ensure the accurate accounting of the issue, holding, transfer, cancellation, retirement and carry-over of all four types of emission rights.<sup>201</sup> The link with the EU ETS is emphasised: the national registries must include the registries established to handle Community trade in emission rights.

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<sup>197</sup> Article 7(3) of Decision 280/2004/EC of the European Parliament and of the Council.

<sup>198</sup> Article 3(1) of Decision 280/2004/EC of the European Parliament and of the Council.

<sup>199</sup> Article 3(1)(a)–(d) of Decision 280/2004/EC of the European Parliament and of the Council. Point (a) lays down that such determination and reporting must take place as regards anthropogenic emissions of greenhouse gases listed in Annex A to the Kyoto Protocol.

<sup>200</sup> Article 3(1) and 3(1)(g) of Decision 280/2004/EC of the European Parliament and of the Council. By 15 January each year (year X), the Member States must determine and report a number of data items to the Commission for the assessment of actual progress and to enable the Community's annual reports under the UNFCCC and the Kyoto Protocol to be drawn up. As regards emission rights, this relates to information from the national registry, once established, on the issue, acquisition, holding, transfer, cancellation, retirement and carry-over of AAUs, RMUs, ERUs and CERs during the previous year (year (X–1)).

<sup>201</sup> Article 6(1) of Decision 280/2004/EC of the European Parliament and of the Council. 'Emission rights' here includes AAUs, RMUs, ERUs and CERs.

In a 2004 Regulation, the Commission laid down detailed provisions for a standardised and secured system of registries for the handling of emission rights.<sup>202</sup> That Regulation specifies the content of national registries and the methods for recording and accounting for transactions involving emission rights. As regards the content of the registries, it lays down that Member States' registries (from 1 January 2005, the date when trade in emission rights began) must include a table showing verified emissions, a table showing emission rights surrendered and a table showing compliance status. The registries may also include additional tables for other purposes.<sup>203</sup> The Regulation thus does not prevent national registries from containing additional tables to meet the more specific guidelines under the Kyoto Protocol.<sup>204</sup> The requirements imposed by the Regulation as regards the content of the tables that must be included in Member States' registries relate mainly to information about individual installations participating in the EU ETS.<sup>205</sup>

### **Reporting on the website of the national registry**

According to the Kyoto Protocol guidelines, each Party must report specified non-confidential information about emission rights on a website. This requirement is further specified by the Commission's 2004 Registries Regulation, which lays down that the website must make available certain explicitly indicated information, including about the various types of emission rights, in a transparent and organised manner. In Annex 3 we describe the information from the registry that must be reported at specified times.<sup>206</sup>

### **Cancellation and retirement of emission rights**

According to the Kyoto Protocol and its guidelines, assessment of the Parties' compliance with the provisions is to be performed in conjunction with the expiration of the first commitment period (plus an additional

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<sup>202</sup> Commission Regulation (EC) No 2216/2004 of 21 December 2004 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council. Commission Regulation (EC) No 994/2008 of 8 October 2008 for a standardised and secured system of registries pursuant to Directive 2003/87/EC of the European Parliament and of the Council and Decision No 280/2004/EC of the European Parliament and of the Council will replace Commission Regulation No 2216/2004 in its entirety on 1 January 2012 (see Article 91). However, certain articles of the 2008 Regulation amend certain articles of the 2004 Regulation with effect in October 2008. Article 24 of the 2004 Regulation (see Article 90 of Commission Regulation 994/2008) is not one of them, though.

<sup>203</sup> Article 24(1) of Commission Regulation (EC) No 2216/2004.

<sup>204</sup> The more specific guidelines under the Kyoto Protocol as regards the requirements imposed on national registries are indicated in Points 17–22 and 44–47 of Decision 13/CMP.1 (Annex).

<sup>205</sup> Article 24(3) and Annex II of Commission Regulation (EC) No 2216/2004.

<sup>206</sup> Article 9(1) and Annex XVI of Commission Regulation (EC) No 2216/2004.

period for fulfilling commitments). At that point, the Parties must also decide whether they wish to save surplus emission rights for the next commitment period. However, these provisions do not create any obligation to cancel emission rights on an ongoing basis.<sup>207</sup> Even so, the Community Decision establishing a monitoring mechanism lays down that, following the completion of the review of their national inventories under the Kyoto Protocol for each year of the Kyoto Protocol's first commitment period, including the resolution of any questions of implementation, the Member States must forthwith withdraw assigned emission rights (of all four types) equivalent to their net emissions during that year. In respect of the last year of the commitment period, such retirement must take place prior to the end of the additional period for fulfilling Member States' commitments.<sup>208</sup> The Commission has clarified Member States' obligation to retire emission rights equivalent to their annual emissions by making the following statement:

*This Article also provides that Member States are to retire [an] assigned amount equivalent to their annual emissions following the completion of all the procedures establishing the levels of those emissions. This mirrors the requirements of the EC emissions trading scheme on companies to surrender allowances in respect of their installation's annual emissions once these have been definitively calculated, and is essentially 'good housekeeping' which will promote the avoidance of non-compliance.*<sup>209</sup>

Overall, the Kyoto Protocol and its guidelines impose more detailed requirements on the content of national registries and websites than do Community legal acts. European law stands in the way of such more far-reaching guidelines when it comes to the content of the publicly available part of the registry websites. However, the registries may contain tables intended for purposes other than those following from European law. Reporting at an aggregate level to the Riksdag and the general public about Sweden's national holdings of emission rights would not, in the SNAO's opinion, be contrary to the secrecy requirements laid down in the EU Registries Regulation to safeguard the interests of individual account holders. The 2004 Community Decision establishing a monitoring mechanism imposes far-reaching requirements to the effect that Member States must each year, once they have completed their national inventories, retire emission rights equivalent to their annual emissions.

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<sup>207</sup> See above as well as Article 3(13) of the Kyoto Protocol and Points 33 and 36 of Decision 13/CMP.1. (Annex).

<sup>208</sup> Article 7(2) of Decision 280/2004/EC of the European Parliament and of the Council.

<sup>209</sup> European Commission, *Proposal for a Decision of the European Parliament and of the Council for a monitoring mechanism of Community greenhouse gas emissions and the implementation of the Kyoto Protocol*, Brussels, 5 February 2003, COM(2003) 51 final, 2003/0029 (COD), p. 9. The Commission's reference to the rules of the EC emissions-trading scheme [i.e. the EU ETS] relates to Article 12(3) of Directive 2003/87/EC of the European Parliament and of the Council of 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.

## Annex 5. The Swedish interim emission-reduction target for 2008–2012

### **The interim target concerns emissions for Sweden and must be attained without compensation for carbon sinks or recourse to flexible mechanisms**

In 2002, the Riksdag decided an emission target for the period until 2012 as an interim target under the objective of *Reduced Climate Impact*.<sup>210</sup> In line with the proposal of the relevant Committee, the Riksdag voted in favour of the Government's recommended objectives for Swedish climate policy.<sup>211</sup>

**The Government's proposal:** *Swedish emissions of greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990. Emissions will be counted in CO<sub>2</sub> equivalent terms and include the six greenhouse gases as defined in the Kyoto Protocol and by the IPCC. [...]*<sup>212</sup> The national target to reduce emissions of greenhouse gases by at least 4 per cent will be achieved *without compensation for removal by carbon sinks and without recourse to flexible mechanisms*. At the 2004 checkpoint, the Government intends to consider setting a complementary target which includes the flexible mechanisms.<sup>213</sup>[...] <sup>214</sup>. (Translated from Swedish; italics by the SNAO.)

<sup>210</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, Riksdag Written Communication 2001/02:163).

<sup>211</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Government Bill 2001/02:55, Riksdag Committee Report 2001/02:MJU10, p. 5 'Utskottets förslag till riksdagsbeslut' ['The Committee's proposal for a Riksdag Decision'], Point 1, 'Mål för den svenska klimatpolitiken m.m.' ['Objectives of Swedish climate policy, etc.'], Riksdag Written Communication 2001/02:163).

<sup>212</sup> The following text, which relates to monitoring of the target rather than to its content, has been excised from the above quotation of the Government's proposal: 'The starting point of the target is Sweden's emission forecast included in the third national report to the UNFCCC. Sweden's climate efforts and the national target will be continually monitored. If it turns out that the emission trend is less favourable than predicted today, or that the measures taken do not have the expected effect, the Government may propose additional measures and/or propose, if necessary, that the target should be re-examined. In this context, account will be taken of the consequences for Swedish industry and its competitiveness. Checkpoints are introduced in 2004 and 2008.' (Translated from Swedish.)

<sup>213</sup> At the 2004 checkpoint, the Riksdag decided, in line with the Government's proposal, that the emission target would remain unchanged (*Nationell klimatpolitik i global samverkan* ['National climate policy in global cooperation'], Government Bill 2005/06:172, Riksdag Committee Report 2005/06:MJU14, Riksdag Written Communication 2005/06:389).

<sup>214</sup> The following text, which relates to the overall objective rather than the interim emission target, has been excised from the above quotation of the Government's proposal: 'Under the environmental-quality objective of *Reduced Climate Impact*, the aggregate concentration in the atmosphere, in CO<sub>2</sub> equivalent terms, of the six greenhouse gases covered by the definitions of the Kyoto Protocol and the IPCC will stabilise at a level below 550 ppm. Sweden will strive internationally to ensure that global efforts are oriented towards achieving that objective. In 2050, overall emissions for Sweden should be less than 4.5 tonnes of CO<sub>2</sub> equivalent per year and inhabitant, and after that time a further reduction should take place. The achievement of the objective is crucially dependent on international cooperation and on interventions being made in all countries.' (Translated from Swedish.)

‘Swedish emissions’ refers, according to the Government Bill, to ‘emissions for Sweden of the six greenhouse gases’.<sup>215</sup> The Riksdag Committee on Environment and Agriculture used corresponding expressions when taking a position on the Government Bill in conjunction with its scrutiny by the Riksdag.<sup>216</sup> Unlike the Kyoto commitment, the emission target will be achieved without compensation for removal by carbon sinks and without recourse to flexible mechanisms. The Committee Report describes this specification as entailing a higher level of ambition compared with the Kyoto commitment.<sup>217</sup>

### **‘For Sweden’ = all emissions taking place as a result of Swedish emission rights**

‘For Sweden’ means all emissions taking place on behalf of Sweden, in the sense of being a result of Swedish emission rights. This means that purchases of emission rights are subtracted from total emissions and sales of emission rights are added to them. For example, the Riksdag Committee on Environment and Agriculture (in the same report where it first discussed the 2012 emission target) comments on the use of flexible mechanisms as follows:

*The use of flexible mechanisms may contribute to a further reduction of emissions for Sweden, and as the Government points out it is important for Sweden to be well prepared for participation in a trading system. The mechanisms supplement measures taken domestically and help achieve cost-effectiveness.*<sup>218</sup> (Translated from Swedish; italics by the SNAO.)

The new interim target under the overall objective of *Reduced Climate Impact* is worded as follows: ‘emissions for Sweden in 2020 should be 40 per cent below emissions in 1990’.<sup>219</sup> According to the Riksdag and the Government, two-thirds of the emission reductions are to take place in Sweden while the last third is to be attained through investments in other EU countries or through flexible mechanisms such as the CDM.

<sup>215</sup> This is expressed as follows in the Government Bill: ‘The target entails that emissions for Sweden of the six greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990.’ (Government Bill 2001/02:55, p. 35; translated from Swedish).

<sup>216</sup> This is expressed as follows in the Committee Report: ‘The target entails that emissions for Sweden of the six greenhouse gases, on average over the period from 2008 to 2012, will be at least 4 per cent below emissions in 1990’ (Riksdag Committee Report 2001/02:MJU10; translated from Swedish).

<sup>217</sup> *Sveriges klimatstrategi* [‘Sweden’s climate strategy’] (Riksdag Committee Report 2001/02:MJU10), p. 17.

<sup>218</sup> *Sveriges klimatstrategi* [‘Sweden’s climate strategy’] (Riksdag Committee Report 2001/02:MJU10), p. 40.

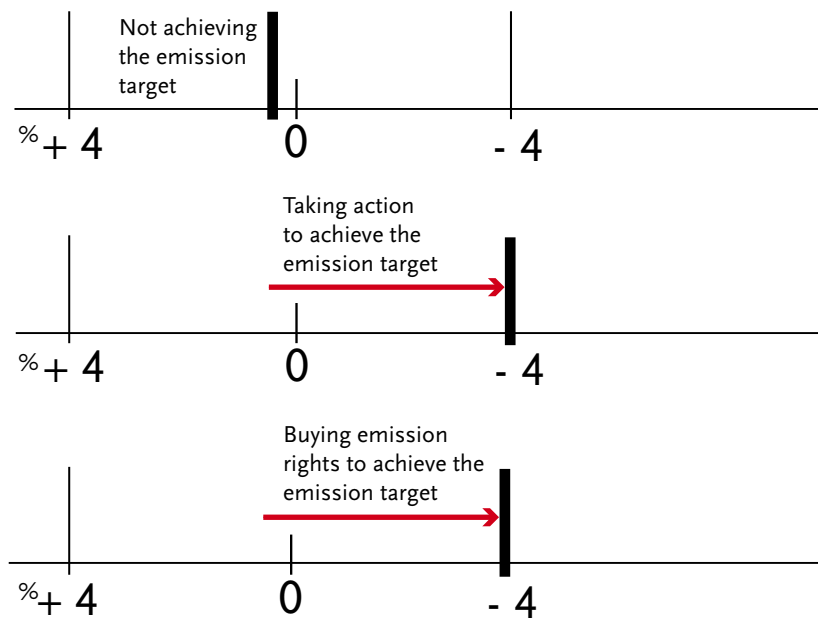
<sup>219</sup> *En sammanhållen klimat- och energipolitik – Klimat* [‘Integrated climate and energy policy: Climate’] (Government Bill 2008/09:162, p. 31, Riksdag Committee Report 2008/09: MJU28, Riksdag Written Communication 2008/09:300) (quotation translated from Swedish).

**When the 2012 emission target was decided, forecasts showed that Sweden would meet its Kyoto commitment but not achieve the emission target**

In 2002, when the Riksdag decided the 2012 emission target, the existing forecasts showed that emissions in Sweden would increase slowly, by 0.5 per cent.<sup>220</sup> Unless additional measures were taken, Sweden would fulfil its Kyoto commitment but not attain its national emission target.

At that stage, three courses of action were available (see figure below): Sweden could either abstain from achieving the emission target, take measures to achieve the emission target or buy emission rights from others to achieve the emission target. As is clear from the above, the Riksdag specified certain restrictions as regards how the emission target was to be achieved, namely without compensation for removal by carbon sinks and without recourse to flexible mechanisms (such as the purchase of emission rights).

**Figure 1:** Possible courses of action for Sweden based on the 2002 forecasts for 2008–2012



<sup>220</sup> Sveriges tredje nationalrapport om klimatförändringar ['Sweden's third national report on climate change']. Submitted in accordance with the United Nations Framework Convention on Climate Change. Ds [Ministerial Communications series] 2001:71.

**The 2012 emission target must not be achieved through flexible mechanisms, i.e. by means of the purchase of emission reductions from others**

The third course of action, i.e. buying emission rights to achieve the emission target, is discussed both in the Government Bill and in the report of the Riksdag Committee on Environment and Agriculture relating to the 2012 emission target. It is noted that it may be cheaper to reduce emissions in other countries than in Sweden, and the Committee expressed the opinion that there were grounds for considering a new target under which costs could be reduced in this manner. The Committee used the following wording:

Use of the flexible mechanisms of the Kyoto Protocol can reduce the cost of the commitments considerably. The Committee is therefore, like the Government, of the opinion that there are grounds for considering, at the 2004 checkpoint, a complementary target encompassing the flexible mechanisms.<sup>221</sup> (Translated from Swedish.)

**Emission rights that have been sold are part of emissions for Sweden but cannot be said to contribute to the achievement of the emission target**

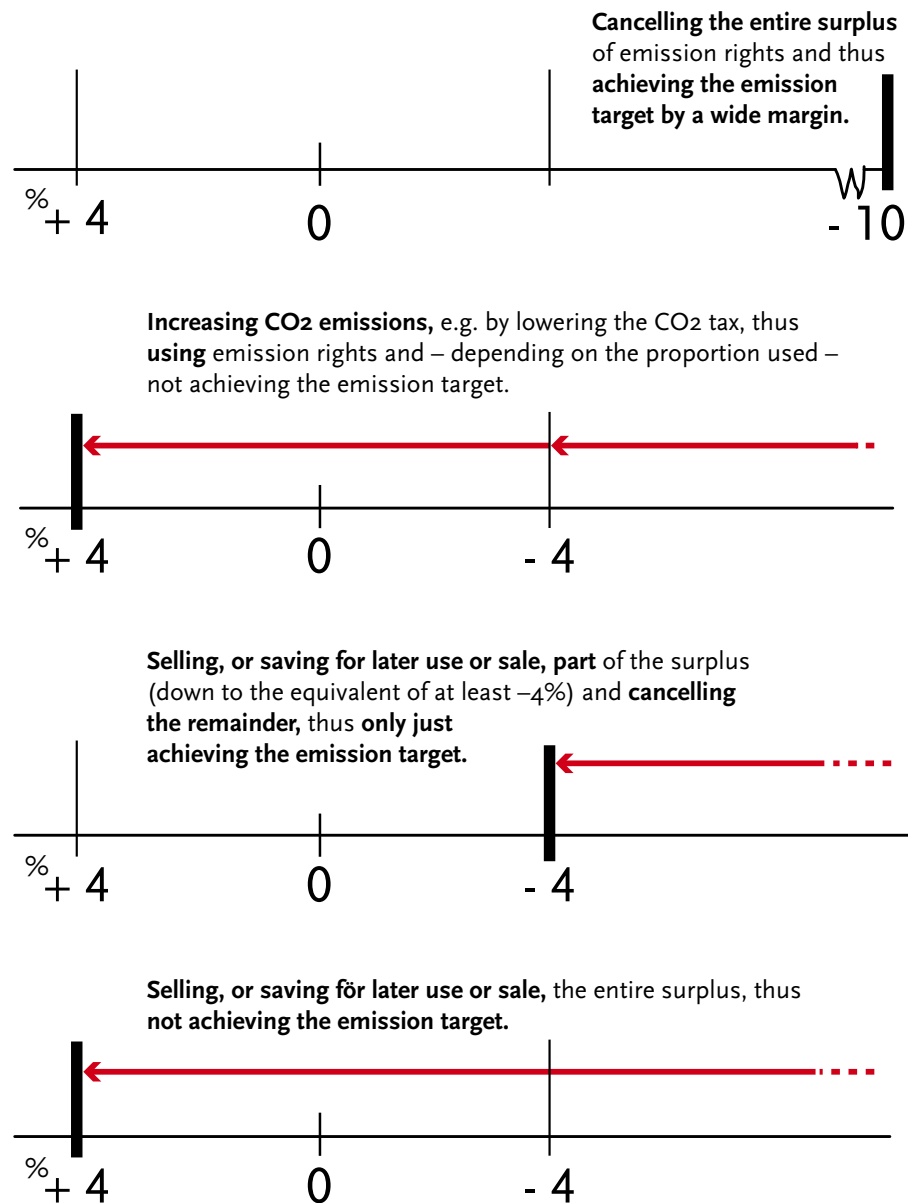
More recent forecasts have shown that emissions in Sweden during the 2008–2012 period will fall. According to the Environmental Protection Agency's most recent forecast for 2010, emissions will be 10 per cent below 1990 levels.<sup>222</sup> In other words, buying emission rights is no longer a relevant option. Instead, the question is how to handle the surplus (see Sections 3.2.1–3.2.3). The possible courses of action are illustrated in the figure below. The only way to achieve the Riksdag's emission target is to cancel – in whole or in part – the surplus of emission rights. If emission rights are sold, they are still included in 'emissions for Sweden' (see above). Since such a sale does not contribute to the achievement of the emission target but rather reduces compliance with that target, it should be included in the

<sup>221</sup> *Sveriges klimatstrategi* ['Sweden's climate strategy'] (Riksdag Committee Report 2001/02:MU10, p. 16).

<sup>222</sup> This forecast is based on the policy decisions that are in force in the relevant policy areas. It builds on a number of assumptions which are all associated with uncertainty. This must be kept in mind when the outcome of the forecasting work is interpreted. In fact, this outcome above all constitutes an impact assessment of the assumptions made. The assumptions and conditions underpinning the forecast were determined in June 2008, meaning that the economic downturn during the autumn of 2008 is not included in the estimates. The emissions forecast do not include emissions from land use, land-use changes and forestry (LULUCF) or from foreign transport. No account has been taken of carbon sinks. The forecast does not include emissions occurring in other countries but associated with the production of goods imported to Sweden. It does, however, include emissions from the production of goods subsequently exported from Sweden. Website of the Environmental Protection Agency: <http://www.naturvardsverket.se/sv/Klimat-i-forandring/Utslappsstatistik-och-klimatdata/Utslapp-av-vaxthusgaser/Prognos-for-vaxthusgasutslapp/>.

assessment of compliance, in particular given that the restriction against the use of flexible mechanisms was in fact introduced to make the emission target more ambitious. Not including sold emission rights in 'emissions for Sweden' would instead have the opposite effect, i.e. make the national emission target less ambitious. That would not be in line with Swedish climate policy as decided.

**Figure 2:** Possible Swedish actions on the basis of the 2009 forecast for the 2008–2012 period





## Annex 6. Possible ramifications of the revision of the emission target

The aim of the environmental-quality objective of *Reduced Climate Impact* is to reduce effects on temperatures and on atmospheric concentrations of greenhouse gases. It is an explicitly international objective in that it is emphasised that international cooperation and interventions made in all countries are decisive to its achievement. The ambitious emission reductions to be attained in Sweden have been described as a way for Sweden to be a forerunner in climate policy and thus to create international pressure by setting a positive example.

In its statement in the context of the fact-clearance process for the present report, the Energy Agency expresses the opinion that the emission-reduction target for 2012 has been revised. It also claims in its statement that compliance with the overall objective could improve if, instead of being cancelled, the surplus was used to help bring about a new climate agreement.

In other words, having saved emission rights would enable Sweden to propose larger percentages for emission reductions in international negotiations. This means that the emission rights saved could then be used to meet such a higher Swedish commitment without any need to take additional measures.<sup>223</sup> This alternative way for Sweden to exercise leadership in climate issues would involve orienting efforts more directly towards making other countries commit themselves to emission reductions at the most ambitious level possible, without really taking account of the Swedish commitment, whose impact on the greenhouse effect is relatively limited. To sum up, Sweden could choose several different strategies to try to achieve its objective of *Reduced Climate Impact*. However, the SNAO considers that the option put forward by the Energy Agency would require a Riksdag decision establishing a different interim target (2008–2012) under the national climate objective as well as changes to the wordings indicating that Sweden is to ‘be a forerunner’.

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<sup>223</sup> It should be noted, however, that there is no contradiction in terms between attempting to influence other countries and taking the lead oneself. Combining these two approaches – or, rather, influencing other countries by setting an example – is indeed, as noted above, the preferred choice expressed in the Riksdag’s publications.