

A Strategy for Biodiversity and Ecosystem Services

a translation of relevant parts of Government bill on biodiversity and ecosystem services *A Swedish strategy for biodiversity and ecosystem services Gov. Bill 2013/14:141*



1. A Strategy for Biodiversity and Ecosystem Services

The Government's assessment: The milestone targets for biodiversity and ecosystem services that the Government has adopted, together with the initiatives described in this bill, constitute the Government's overall strategy for biodiversity and ecosystem services for the period up to 2020. The strategy contributes to achieving several of the Swedish environmental quality objectives and the generational goal. The strategy also contributes to achieving the targets in the EU Biodiversity Strategy to 2020 and those in the Strategic Plan for Biodiversity 2011–2020, adopted as part of the Convention on Biological Diversity.

Reasons for the Government's assessment

Work with biodiversity is one of the Government's priorities

The conservation of biodiversity is a cornerstone of the Government's environmental policy. Biodiversity is a basic prerequisite for the long-term capacity of ecosystems to contribute to human well-being. Ecosystem services are a foundation on which the Swedish economy and welfare are built. Both the public and the private sectors are directly or indirectly dependent on the services that ecosystems provide.

Great progress has been achieved in efforts involving biodiversity in Sweden. Sweden was the first country in Europe to establish national parks, over one hundred years ago. In recent decades, efforts to create nature reserves, contribute to a European ecological network and to protect key biotopes have intensified. The previous interim target of exempting an additional 900 000 hectares of woodland from forestry production by 2010, compared with the level of protection for 1998, has been achieved. New drainage of wetlands has been reduced to a minimum and action programmes for endangered species have been established. Sweden now has over 4 000 Natura 2000 areas, 550 of which are specifically designated for birds, as well as 66 wetland areas that are protected in accordance with the Ramsar Convention. Sweden's first marine national park, Kosterhavet in Västra Götaland County, was established in 2009.

Healthy or restored biodiversity is a prerequisite for responsible long-term economic development and human prosperity. Analogously, loss of biodiversity and ecosystem services can lead to major economic costs. Conserving and sustainably utilising biodiversity is therefore an investment in prosperity.

The value of ecosystem services needs to be made clear

The term 'ecosystem services' encompasses ecosystems' contribution to human well-being. Ecosystem services reveal humans' dependency on the natural world and that the diversity of, for example, plant and animal species in forests, oceans, lakes, wetlands and other ecosystems supplies humanity with a wide range of utilities. The more visible ecosystem services, such as the production of food, bioenergy and wood products, affect and are dependent on other ecosystem services, for example the formation of soil and the regulation of water and nutrients. In addition, one single ecosystem can contribute more than one ecosystem service.

In the Government Bill 'Sweden's Environmental Objectives – For More Effective Environmental Action' (Govt Bill 2009/10:155), the Government announced that a strategy containing tools to demonstrate the value of ecosystem services and their relevance to different sectors and industries is to be developed. In the same environmental objective bill, the Government concluded that by better defining the economic value of ecosystem services and integrating these values into the economy as a whole, humanity will be better equipped to utilise ecosystems sustainably and to increase their capacity in the long term. A well-functioning ecosystem, with its functions preserved, involves a higher degree of certainty in terms of the production of necessary ecosystem services. An ecosystem in which many species have vanished is more sensitive to, for example, an infestation of parasites and is significantly less resistant to the impact of climate change. Consideration for biodiversity reinforces ecosystems' resilience (i.e. their ability to cope with changes and develop further, so that they can remain productive and supply ecosystem services).

This creates opportunities for the development of the enterprise sector and economies. The various functions of forests, such as wood products and bioenergy, food, climate regulation, pollination, flood protection, ground stability and nature experiences, with everything this means to individual people's quality of life and for tourism, are ensured through protection and environmental considerations in forestry.

The UN Food and Agriculture Organisation (FAO) estimates that around 70 per cent of the species that constitute important agricultural crops in the world are dependent on insects for pollination, including common Swedish crops such as rapeseed and turnip rape.

However, studies show a sharp reduction in the number of pollinating insects all over the world. In parts of the world, natural pollinators have declined to such an extent that trials involving manual pollination have been necessary.

The benefits to industry, organisations and authorities of visualising the value of ecosystem services

Businesses and their operations constitute an important basis for economic and environmental development. Four of the ten most important economic risk factors identified in the World Economic Forum's synthesis Global Risks 2014 are associated with a reduced future capacity among important ecosystem services.

Businesses' activities are directly or indirectly dependent on several ecosystem services. Businesses can contribute to the preservation of biodiversity and ecosystem services. Businesses can also have a detrimental impact on ecosystems. Efforts by businesses to contribute to strengthened ecosystems and to minimise or refrain from detrimental activities are important to the achievement of various biodiversity and ecosystem services targets and to making a contribution to the transition to a green economy. The Government's vision for sustainable enterprise is that all businesses have a long-term view of value creation and undertake operations that benefit sustainable development – economically, socially and environmentally.

It is particularly desirable that companies take into account their dependence on and impact on ecosystem services in business plans and strategies and counteract detrimental effects that harm the environment and society.

A developed practice is required for how business development can take into account the fact that natural resources are limited. A more effective use of resources should be possible through better utilisation of the multifunctionality of ecosystems. This may involve applying traditional knowledge about the utilisation of natural resources to modern problems, as well as acquiring new knowledge based on an awareness of the need to maintain ecosystem services in the long term. These perspectives can also bring with them new business opportunities. Business opportunities based on ecosystem services can be found within, for example, agriculture and forestry and the utilisation of the oceans' resources and within rural development and tourism.

Forward-looking municipalities and government authorities have long been integrating their dependence and impact on ecosystems into their planning and strategies. An increasing number of municipalities and county administrative boards are integrating the value of ecosystem services into their planning.

Ecosystem services' values to agriculture and forestry

The ecosystem services on which agriculture and forestry are based are food production and wood production. These services are priced according to market demand. Several other ecosystem services that agriculture and forestry depend on are not priced in the same way. Such ecosystems can be directly beneficial to agriculture and forestry by ensuring the supply of nutrients, natural pest control, pollination and resistance to extreme weather events. Forests are home to a multitude of mycorrhizal fungi that supply all trees with the nutrients and water they require and that also constitute a major carbon sink. Applying a value to such ecosystems provides an opportunity to obtain the full benefit of them.

The value of ecosystem services that benefit outdoor recreation

Ecosystems provide opportunities for people to enjoy outdoor recreational activities. This is an important general interest. The central government has a responsibility to create the conditions for rich and varied outdoor recreation and to ensure access and improve the accessibility of the natural and cultural landscape. It is of great importance that there are attractive and inspiring natural and cultural environments in all parts of the country, especially in the proximity of built-up areas. In December 2010, the Riksdag adopted overarching objectives for the outdoor recreation policy (Govt Bill 2009/10:238, bet. 2010/11:KrU3, Riksdag Comm. 2010/11:37 and 2010/11:38). The outdoor recreation policy's overarching goals are to support people's opportunities to spend time in nature and enjoy outdoor recreational activities, with the right of public access being a foundation for outdoor recreation.

All people are to have the possibility to experience nature, for their well-being, social interaction and to learn more about the natural world and the environment. The Government has also developed ten measurable targets for outdoor recreation. They were reported to the Riksdag in December 2012 in the communication *Mål för friluftslivspolitiken* [Objectives for the outdoor recreation policy] (Comm. 2012/13:51).

Ecosystem services' qualitative and quantitative values need to be ensured

To the greatest possible extent, the value of ecosystem services should be defined in both qualitative and quantitative terms. To the greatest possible extent, the value of ecosystem services should be defined in both qualitative and quantitative terms. In order to demonstrate values, it is necessary to identify the ecosystem services that are of great importance to different groups in society. The scope of the knowledge that is required in order to make well-founded decisions is often difficult to estimate in advance. Integration of the value of ecosystem services into decision-making processes is therefore best done through a successive learning process.

Mechanisms to safeguard ecosystem services need to be developed within many policy areas and sectors of society. Both laws and economic incentives need to be adapted to reflect the value of ecosystem services. Educational and informational initiatives are also required. All in all, these mechanisms should contribute to safer and more efficient production, more secure welfare and to improving society's potential to achieve sustainable development.

It is very important that the value of ecosystem services is integrated into business intelligence, impact analysis, risk assessment and business development; something which is already done by many municipalities, county administrative boards, authorities and businesses.

Objectives for Biodiversity and Ecosystem Services

There are objectives for biodiversity and ecosystem services at various levels – nationally, at the EU level and globally. A short description of the various objectives and how the Government's strategy relates to them is provided here. A more detailed description of the objectives and how they relate to one another is provided in Section 2.

National objectives for environmental work

Sweden was among the first to develop overarching objectives for the environment. The first environmental quality objectives were adopted by the Riksdag as early as 1999. Seven of these have a clear focus on biodiversity. These are Flourishing Lakes and Streams, Good-Quality Groundwater, A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos, Thriving Wetlands, Sustainable Forests, A Varied Agricultural Landscape, A Magnificent Mountain Landscape and A Rich Diversity of Plant and Animal Life.

The Government decided on five milestone target with a focus on biodiversity in 2012. These concern ecosystem services and resilience, the importance of biodiversity and the value of ecosystem services, threatened species and habitat types, invasive alien species and knowledge about genetic diversity.

In February 2014, the Government decided on another five milestone targets, which involve a holistic approach to the use of land, the protection of land areas, freshwater areas and marine areas, environmental consideration in forestry, varied forestry and on a dialogue process in a national forestry programme.

In Government Bill ‘Towards a toxin-free everyday environment – a platform for chemicals policy’ (Govt Bill 2013/14:39), the Government has reported an overall strategy for achieving the environmental quality objective A non-toxic environment and parts of the generational goal. The strategy consists of the eight milestone targets for harmful substances decided on by the Government and the initiatives that contribute to achieving the milestone targets needed to achieve the objectives. The strategy encompasses all objectives because the initiatives that result from the milestone targets for hazardous substances also improve the chances of achieving other environmental quality objectives, including A Varied Agricultural Landscape, A Rich Diversity of Plant and Animal Life, A Balanced Marine Environment, and Flourishing Coastal Areas and Archipelagos.

EU targets

The Government has been a driving force in encouraging the EU to define its area of responsibility in terms of biodiversity and ecosystem services. In December 2011, the EU’s environment ministers made a decision concerning the EU Biodiversity Strategy to 2020, encompassing six targets on the basis of a proposal from the Commission.

An important part of the EU strategy is the development of the European ecological network Natura 2000. It is important that Sweden contributes with a network that is as complete as possible, for example by ensuring that all areas concerned have adequate and up-to-date conservation plans. The ongoing implementation of the EU Water Framework Directive and the EU Marine Strategy Framework Directive are also of major significance to the biodiversity of lakes, watercourses and oceans.

Global objectives (the Aichi Targets)

A strategic plan for biodiversity was adopted at the tenth meeting of the parties to the Convention on Biological Diversity (CBD) in Nagoya in 2010. Sweden was a strong driving force in the work to draw up this plan.

The strategic plan’s vision is a world of “living in harmony with nature”, where “by 2050, biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people”. The intention of the strategic plan is for effective and prompt action to be taken in order to halt the loss of biodiversity so that, by 2020, ecosystems are resilient and can continue providing essential services. This ensures the variation of life on this planet and contributes to people’s well-being and to poverty reduction. The strategic plan contains 20 overarching targets, known as the Aichi Targets.

In its reporting to the Convention on Biological Diversity, Sweden has provided an account of how it is implementing the convention’s provisions concerning national strategies, plans or programmes for conservation and the sustainable use of biodiversity and concerning the integration of biodiversity in relevant sectors.

The strategy described in Government Bill ‘Towards a toxin-free everyday environment – a platform for chemicals policy’ (Govt Bill 2013/14:39) also contributes to achieving the Aichi target that pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity by 2020 (Aichi Target 8).

Overall strategy for biodiversity and ecosystem services

The Government’s overall strategy for biodiversity and ecosystem services consists of the ten milestone targets for biodiversity and ecosystem services that the Government has decided on and the initiatives described in this bill.

The ten milestone targets are:

– milestone target on ecosystem services and resilience,

- milestone target on importance of biodiversity and the value of ecosystem services,
- milestone target on threatened species and habitat types,
- milestone target on invasive alien species,
- milestone target on knowledge about genetic diversity,
- milestone target on a holistic approach to the use of land,
- milestone target on the protection of land areas, freshwater areas and marine areas,
- milestone target on environmental consideration in forestry
- milestone target on varied forestry, and
- milestone target on a dialogue process in a national forestry programme.

The milestone targets are reported in their entirety in the section on targets for biodiversity and ecosystem services (Section 2).

The strategy contributes to achieving the generational goal, primarily the environmental quality targets Flourishing Lakes and Streams, Good-Quality Groundwater, A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos, Thriving Wetlands, Sustainable Forests, A Varied Agricultural Landscape, A Magnificent Mountain Landscape and A Rich Diversity of Plant and Animal Life. To a varying extent, this also concerns Reduced Climate Impact, Natural Acidification Only, Zero Eutrophication, A Non-Toxic Environment and A Good Built Environment.

The strategy contributes to achieving the goals in the EU Biodiversity Strategy to 2020.

The strategy contributes to achieving the Aichi Targets, i.e. the global targets in the Strategic Plan for Biodiversity 2011–2020 that were adopted in Nagoya as part of the Convention on Biological Diversity (CBD). In work with the strategy, the emphasis is on achieving an effective and integrated programme of measures that leads overall to the targets for biodiversity and ecosystem services are achieved by 2020.

This applies to both national targets and EU and international targets. The preservation of biodiversity and ecosystem services needs to be integrated through a combination of various initiatives such as formal and voluntary protection, management, environmentally adapted use and restoration.

Integrated work is essential

If an effective programme of measures that, in combination, leads to achieving the targets at all levels is to be realised, it is essential to work in an integrated fashion with the targets and the initiatives required and take these into account in context. The overall strategy for biodiversity and ecosystems is to be regarded in the light of this. The Government is also working to reinforce the links to other parts of the environmental policy, as well as those to other policy areas, particularly within the fields of the economy, enterprise, development and culture.

It is important that the conservation of biodiversity and ecosystem services takes place in an integrated manner, with initiatives for protection, management, use and restoration. The strategy is important if such an integrated outlook is to have its full impact. The strategy is needed for a comprehensive view in the development of environmental considerations within cultivation and the voluntary initiatives, as well as the actions of government authorities. This is so as to achieve the targets in the most effective ways. This requires significantly more developed forms of cooperation between the actors concerned; something that the Government wants to incentivise with the scope of the strategy.

Work involving biodiversity and ecosystem services cannot take place within the scope of the national perspective alone. Many of the challenges require global initiatives. The Government would like to use this strategy to set itself out as a role model and inspiration for other countries to implement efforts involving biodiversity and ecosystem services. It is here that Sweden can show how aspects involving both production and the environment can be combined in a form of cultivation, such as within Swedish forestry.

The milestone targets for biodiversity and ecosystem services that the Government has decided on, together with the initiatives described in this bill, constitute the Government's overall strategy for biodiversity and ecosystem services for the period up to 2020.

Work should be based on an application of the ecosystem approach. This means adopting a comprehensive perspective for the conservation of natural values and a sustainable utilisation of natural resources, with the goal being to ensure that the use of ecosystems takes place within the limits of those ecosystems.

2. Objectives for Biodiversity and Ecosystem Services

This section contains an overview of the objectives relevant to biodiversity and ecosystem services.

2.1 The environmental objectives system

The objectives for environmental efforts the Government and the Riksdag have adopted and that are included in the national environmental objectives system are fundamental to the policy's focus on biodiversity and ecosystem services. The environmental objectives system consists of a generational goal, sixteen environmental quality objectives and milestone targets for the various areas. In its reporting to the Convention on Biological Diversity (CBD), Sweden has provided an account of how it is implementing the convention's provisions concerning national strategies, plans or programmes for conservation and the sustainable use of biodiversity and concerning the integration of biodiversity in relevant sectors.

The environmental objectives system is unique in an international context in that it gathers together the targets for all of the society's environmental efforts at the local regional and national level. The Government decides on strategies with milestone targets, incentives and measures within prioritised areas in which it is assessed that initiatives are urgent and where clear directions are needed (Govt Bill 2009/10:155).

2.1.1 The generational goal and its indents

The structure of the environmental objectives adopted by the Riksdag on the basis of the Government's proposals in Government Bill 'Sweden's Environmental Objectives – For More Effective Environmental Action' (Govt Bill 2009/10:155, bet. 2009/10:MJU25, Riksdag Comm. 2009/10:377) includes a generational goal that, together with its seven indents, has the following wording:

The overall goal of environmental policy is to be able to pass on to the next generation a society in which the major environmental problems have been solved, without increasing environmental and health problems beyond Sweden's borders. This calls for an ambitious environmental policy - in Sweden, in the EU and in international contexts. The generational goal means that the conditions for solving environmental problems are to be met within one generation and that environment policy should be directed towards ensuring that:

- ecosystems have recovered, or are on the way to recovery, and their long-term capacity to generate ecosystem services is assured,
- biodiversity and the natural and cultural environment are conserved, promoted and used sustainably,
- human health is subject to a minimum of adverse impacts from factors in the environment, at the same time as the positive impact of the environment on human health is promoted,
- materials cycles are resource-efficient and as far as possible free from dangerous substances,
- natural resources are managed sustainably,
- the share of renewable energy increases and use of energy is efficient, with minimal impact on the environment, and
- patterns of consumption of goods and services cause the least possible problems for the environment and human health.

The generational goal functions as a directional goal for the environmental policy and provides guidance concerning the values that are to be protected and the societal transformation required to achieve the desired environmental qualities.

The time at which achievement is to be assessed is 2020. The generational goal's indents apply across all the environmental quality objectives and are intended to ensure that cross-sectoral issues are integrated into the environmental objectives system. Therefore, the indents are to constitute a basis of the work to develop milestone targets and strategies within the environmental objectives system.

2.1.2 Environmental quality objectives of significance to biodiversity

The following environmental quality objectives are focused on biodiversity.

Flourishing Lakes and Streams

Lakes and watercourses must be ecologically sustainable and their variety of habitats must be preserved. Natural productive capacity, biological diversity, cultural heritage assets and the ecological and water-conserving function of the landscape must be preserved, at the same time as recreational assets are safeguarded.

A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos

The North Sea and the Baltic Sea must have a sustainable productive capacity, and biological diversity must be preserved. Coasts and archipelagos must be characterised by a high degree of biological diversity and a wealth of recreational, natural and cultural assets. Industry, recreation and other utilisation of the seas, coasts and archipelagos must be compatible with the promotion of sustainable development. Particularly valuable areas must be protected against encroachment and other disturbance.

Thriving Wetlands

The ecological and water-conserving function of wetlands in the landscape must be maintained and valuable wetlands preserved for the future.

Sustainable Forests

The value of forests and forest land for biological production must be protected, at the same time as biological diversity and cultural heritage and recreational assets are safeguarded.

A Varied Agricultural Landscape

The value of the farmed landscape and agricultural land for biological production and food production must be protected, at the same time as biological diversity and cultural heritage assets are preserved and strengthened.

A Magnificent Mountain Landscape

The pristine character of the mountain environment must be largely preserved, in terms of biological diversity, recreational value, and natural and cultural assets. Activities in mountain areas must respect these values and assets, with a view to promoting sustainable development. Particularly valuable areas must be protected from encroachment and other disturbance.

A Rich Diversity of Plant and Animal Life

Biological diversity must be preserved and used sustainably for the benefit of present and future generations. Species habitats and ecosystems and their functions and processes must be safeguarded. Species must be able to survive in long-term viable populations with sufficient genetic variation. Finally, people must have access to a good natural and cultural environment rich in biological diversity, as a basis for health, quality of life and well-being.

2.1.3 Milestone targets for biodiversity and ecosystem services

The Government's milestone targets are formulated against the background of the international targets expressed in the CBD's strategic plan (the Aichi Targets) and the EU Biodiversity Strategy to 2020. The Government will be considering further milestone targets once the All Party Committee on Environmental Objectives has provided its final reports on the strategy for long-term sustainable land use and a strategy for a cohesive and sustainable water policy.

The Government has decided on the following ten milestone targets with a focus on biodiversity. The first five were decided on in 2012 and the others on 27 February 2014.

Milestone target on ecosystem services and resilience

The milestone target regarding ecosystem services and resilience means that important ecosystem services and factors that affect their maintenance are to be identified and systematised by 2013.

Milestone target on the importance of biodiversity and the value of ecosystem services

The milestone target regarding the importance of biodiversity and the value of ecosystem services means that, by 2018, the importance of biodiversity and the value of ecosystem services are to be generally known and integrated into economic positions, political considerations and other decisions in society where it is relevant and reasonable to do so.

Milestone target on threatened species and habitat types

The milestone target regarding threatened species and habitat types means that action plans to achieve favourable conservation status for those threatened species and habitat types that cannot be safeguarded through ongoing measures for sustainable use of land and water and existing site protection are to be implemented, or in the process of being implemented, by 2015.

Milestone target on invasive alien species

The milestone target regarding invasive alien species means that the impact of invasive alien species in Sweden as regards biodiversity, and their socio-economic impact on health etc., are to be assessed and prioritised measures to control them are to be initiated by 2015.

Milestone target on knowledge about genetic diversity

The milestone target regarding knowledge about genetic diversity means that mapping and monitoring of genetic diversity are to be initiated by 2015.

Milestone target on a holistic approach to the use of land

The milestone target on a holistic approach to the use of land is that coordination in central government administration has been strengthened by 2016 so that the holistic approach to the use of land has increased.

Milestone target on the protection of land areas, freshwater areas and marine areas

The milestone target on the protection of land areas, freshwater areas and marine areas is that at least 20 per cent of Sweden's land and freshwater areas, and 10 per cent of Sweden's marine areas, by 2020 contribute to achieving national and international biodiversity targets. This will take place through protection or other conservation in areas of particular importance to biodiversity or ecosystem services. This conservation will take place with ecologically representative and well-connected systems, which include reserves, other effective area-based protective measures or environmentally sound usage. These systems are to be well integrated in the surrounding landscape and managed in an efficient and inclusive way. Between 2012 and 2020, at least 1 142 000 additional hectares are to be protected as follows:

- High nature value forests are to be protected from tree-felling. This will take place through an increase in formally protected forest land of approximately 150 000 hectares of high nature value forests in need of formal protection below the montane forest zone.
- Voluntary set-asides by the forestry industry should have increased by approximately 200 000 hectares to a total of 1 450 000 hectares of forest land in areas that are, or may develop into, high nature value areas.
- The formal protection of wetlands has increased by 210 000 hectares as a result of mires (natural peatlands) of high nature value being protected under the 'National mire protection plan.
- The formal protection of lakes and watercourses has increased by at least 12 000 hectares.
- The formal protection of marine areas has increased by at least 570 000 hectares.
- The ecological connections have been strengthened so that protected areas and areas and biotopes conserved in other ways are well connected and integrated in the landscape, including the marine environment.

Milestone target on environmental consideration in forestry

The milestone target on environmental consideration in forestry is that by 2015 the expectations of society on environmental considerations in forestry are clarified and known to the forestry industry so that they can be applied in practice.

Milestone target on varied forestry

The milestone target on varied forestry is that provisions have been clarified so that by 2015 there are good conditions for varied forestry.

Milestone target on a dialogue process in a national forestry programme

The milestone target on a dialogue process in a national forestry programme is that an open dialogue with stakeholders in forests and their value chain has been established by 1 July 2015. This dialogue covers economic, social and environmental values and aims for forests and their value chain to further contribute to the development towards a sustainable society and a growing bio-based economy.

2.2 The outdoor recreation policy's objectives

Outdoor recreation is a general interest. Central government has a responsibility to create the conditions for rich and varied outdoor recreation and to ensure access to and the accessibility of nature. It is important that there are attractive and inspiring natural and cultural environments in all parts of the country, especially in the proximity of built-up areas. Outdoor recreation also has a major significance to society as a whole, primarily for sustainable regional growth, rural development and improved public health.

Outdoor recreation and recreation, tourism, aesthetic values, spiritual welfare, cultural heritage, opportunities for education and research and inspiration for art, literature and music are examples of cultural ecosystem services.

In December 2010, the Riksdag adopted an overall objective for the outdoor recreation policy (Govt Bill 2009/10:238, bet. 2010/11:KrU3, Riksdag Comm. 2010/11:37 and 2010/11:38). The outdoor recreation policy's overall objective is to support people's opportunities to spend time in nature and enjoy outdoor recreational activities, with the right of public access being a foundation of outdoor recreation. All people are to have the possibility to experience nature, for their well-being, social interaction and to learn more about the natural world and the environment.

Measurable objectives for outdoor recreation have been drawn up as part of the Government's efforts to develop the outdoor recreation policy. They were reported to the Riksdag in December 2012 in the communication *Mål för friluftslivspolitik* [Objectives for outdoor recreation policy] (Comm. 2012/13:51). These objectives are of great significance to achieving the milestone targets concerning the importance of biodiversity and the value of ecosystem services. The outdoor recreation policy is specified in ten objectives that encompass, among other things, access to nature, consideration for the needs of outdoor recreation when land is used for other purposes, rural development and the significance of outdoor recreation to public health.

A number of clarifications are made in order to support the implementation and follow-up of the outdoor recreation objectives. The meaning of the objectives is made more explicit through these clarifications. The clarifications also constitute a basis of not only measurability and follow-up, but also of future efforts to develop outdoor recreation policy. Many of the environmental quality objectives also have clarifications that relate to outdoor recreation. The most important factors for the functioning of the ecosystem service outdoor recreation are access to nature for all and accessible natural environments for outdoor recreation.

The ten measurable objectives for outdoor recreation are:

- accessible natural environments for all,
- strong engagement and collaboration, in which personal and voluntary engagement are central,
- right of public access as the foundation of outdoor recreation,

- access to natural environments for outdoor recreation,
- attractive natural environments for outdoor recreation close to built-up areas,
- outdoor recreation that contributes to sustainable rural development and regional growth,
- protected areas as a resource for outdoor recreation,
- rich outdoor recreation in schools,
- creation of conditions in which people are able undertake regular physical activity in the natural and cultural landscape, and
- good knowledge about outdoor recreation.

2.3 Objectives for work involving the cultural environment

The biodiversity of today is largely the result of the historical use and traditional cultivation of the landscape. As these types of cultural environments disappear, so do the prerequisites for the survival of the species that live in these environments. Consequently, promoting the conservation of cultural environments and knowledge of these is important if it is to be possible to achieve the targets for biodiversity and ecosystem services. Aspects relating to the cultural environment are therefore present in a large number of the environment quality objectives.

On 13 June 2013, the Riksdag adopted national objectives for work involving the cultural environment (bet. 2012/13:KrU9, Riksdag Comm. 2012/13:273). The objectives mean that central government work involving the cultural environment is to promote:

- a sustainable society with a great diversity of cultural heritage sites that are preserved, used and developed,
- people's participation in cultural heritage management and opportunities for them to understand and take responsibility for cultural heritage,
- an inclusive society in which cultural heritage is a shared source of knowledge, education and experiences, and

- a comprehensive perspective on landscape management in which cultural heritage is utilised in the development of society.

2.4 The EU biodiversity targets

EU legislation

The two EU nature directives, encompassing the Birds Directive (Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds) and the Habitats Directive (Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora) are important pieces of EU legislation in relation to work with biodiversity. The Birds Directive contains rules protecting all bird species that occur naturally within the EU. The Habitats Directive aims to ensure biodiversity through the conservation of habitats and species. Both of these directives order member states to designate Natura 2000 areas. The directives are implemented in Swedish law through provisions including those in the Environmental Code, the Hunting Act (1987:259), the Ordinance (1998:1252) on area protection pursuant to the Environmental Code etc. and the Species Protection Ordinance (2007:845).

The Marine Strategy Framework Directive (Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy) and the Water Framework Directive (Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy) are important pieces of EU legislation in the areas of the oceans and fresh water.

Both of these directives require member states to set and implement actions plans in order to achieve the directives' objectives. The Marine Strategy Framework Directive is implemented in Swedish legislation principally in the Marine Environmental Ordinance (2010:1341) and the Water Framework Directive is implemented in Chapter 5 of the Environmental Code, the Water Quality Management Ordinance (2004:660) and the Ordinance (2007:825) with Instructions for the County Administrative Board.

One further important piece of EU legislation is Regulation No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy. The aim of this is the conservation of marine biological resources and the management of fishing. The Common Fisheries Policy has to ensure that fishing and aquaculture contribute to long-term environmental, economic and social sustainability. The regulation stipulates that sustainable use of marine biological resources should be based on the precautionary approach and ecosystem-based approach to fisheries management. This is so as to minimise the negative impact of fisheries on marine ecosystems. Fisheries management is to endeavour to ensure that fishing and aquaculture do not lead to a deterioration of the marine environment.

The EU strategy

The European Commission has chosen to draw up a specific strategy in order to contribute to the implementation of the strategic plan decided on within the Convention on Biological Diversity (CBD). In December 2011, the EU's environment ministers made a decision concerning the Strategy for Biodiversity to 2020 (Council of the European Union 18862/11) through council conclusions based on the Commission's proposals. The strategy contains six EU targets. The Swedish Government was a driving force behind the strategy and Swedish authorities are participating actively in several of the cooperation groups that have been established in order to implement the strategy. There follows a description of how the EU targets conform to the Aichi Targets and references to relevant parts of the Government Bill.

Target 1 – Fully implement the Birds Directive and Habitats Directive

The first EU target is the full implementation of the Birds Directive and Habitats Directive. This involves the ecological network Natura 2000 being completed and conservation plans for these areas being developed.

This target refers to Aichi Target 5, i.e. halving the loss of habitat, and Aichi Target 12, i.e. preventing the extinction of threatened species.

Target 2 – Maintain and restore ecosystems and their services

The second EU target is to maintain and restore ecosystems and their services. The emphasis in work involving this target is partly on making the value of ecosystems clear and partly on developing a strategy for green infrastructure.

This target is closest to Aichi Target 14, i.e. that ecosystem services are safeguarded and restored by 2020, and Aichi Target 15, i.e. that the resilience of ecosystems has been enhanced.

Target 3 – Increasing the contribution of agriculture and forestry to maintaining and enhancing biodiversity

The third EU target is to increase the contribution of agriculture and forestry to the maintaining and enhancing biodiversity. The Common Agricultural Policy is of major significance to this target. The European Council considers that the EU's common programme for genetic resources in agriculture (Council Regulation [EC] No 870/2004) can make a valuable contribution to meeting this target. The council conclusions also challenge member states to work for the conservation of protected species and habitats within forestry.

This target ties in to Aichi Target 7 concerning the sustainable use and conservation of biodiversity within agriculture, aquaculture and forestry. Aichi Target 13, which encompasses the conservation of genetic diversity, particularly that of cultivated plants and domesticated animals, is also touched on in the strategy.

Target 4 – Ensure the sustainable use of fisheries resources

The fourth target is to ensure the sustainable use of fisheries resources.

To meet this target, the European Council refers to the Common Fisheries Policy for an effective implementation of the ecosystem approach. The Council also refers to the implementation of the Birds Directive, the Habitats Directive and the Marine Strategy Framework Directive.

This target is consistent with Aichi Target 6 concerning sustainable fisheries.

Target 5 – Combat invasive alien species

The fifth target is to combat invasive alien species. The council conclusions draw attention to the need for proposals for a new plant protection regulation and a regulation concerning invasive alien species. Member states are encouraged to ratify the Ballast Water Management Convention.

This target contributes to meeting Aichi Target 9 concerning invasive alien species.

Target 6 – Help avert global biodiversity loss

The sixth target is to help avert global biodiversity loss. This target involves the EU's international efforts for biodiversity, primarily within the Convention on Biological Diversity.

The target is consistent with Aichi Target 3 concerning the phasing out of subsidies that are harmful to biodiversity and Aichi Target 4 concerning sustainable production and consumption. Furthermore, this target is consistent with Aichi Target 13 concerning the conservation of genetic variation and Aichi Target 16 concerning the entry into force of the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilisation. Finally, the target is consistent with Aichi Target 20 concerning the mobilisation of resources for implementing the strategic plan adopted by the parties to the Convention on Biological Diversity.

2.5 International biodiversity targets

New international targets for sustainable development

The global agenda for development and sustainability demonstrates the need for reinforcing the links between poverty reduction and a use of natural resources that does not harm the long-term function of ecosystems.

Humanity's opportunities to use ecosystem services in the form of, for example, clean water and for agriculture and forestry, are central to the eradication of extreme poverty. The UN Sustainable Development Goals that succeed the eight UN Millennium Development Goals in 2015 will apply to all countries and will thus also have an impact on domestic environmental efforts in Sweden.

The Government is working to ensure that the sustainable use of natural resources and ecosystem services receives a prominent place in the new agenda.

The Convention on Biological Diversity

The international objectives for biodiversity and ecosystem services are reported in the Strategic Plan for Biodiversity that were adopted at the meeting of the parties to the Convention on Biological Diversity (CBD) held in Nagoya in 2010. The strategic plan applies until 2020 and describes six strategic goals and 20 targets (the Aichi Targets).

3. Sweden's Role in International Cooperation

The Government's assessment: In future, Sweden should continue to have a high level of ambition in work involving biodiversity and ecosystem services, both internationally and within the EU. Ecosystem services should play a central role in future cooperation for sustainable development. As ecosystems in Sweden interact with ecosystems in other countries and organisms move naturally across national boundaries, it is vital that the work in Sweden is coordinated with the corresponding processes in other countries.

4. The Importance of Biodiversity and the Value of Ecosystem Services

4.1 Objectives

The initiatives described in this section aim to meet the milestone target on the importance of biodiversity and the value of ecosystem services. The initiatives are supported, for example by initiatives that have been enacted in order to achieve the milestone target on ecosystems and resilience.

In 2012, the milestone target on ecosystem services and resilience led to the Government commissioning the Swedish Environmental Protection Agency to produce a compilation concerning important ecosystems and ecosystem services.

The Swedish Environmental Protection Agency's report *Sammanställd information om ekosystemtjänster* [Compilation of information concerning ecosystem services] (Government Offices' ref. no M2012/1507/Nm) constitutes an important basis for future efforts to achieve the milestone target concerning the importance of biodiversity and the value of ecosystem services. The report's classification of ecosystem services into provisioning, regulating, supportive and cultural services should serve as the basis for authorities' efforts to achieve the milestone target on the importance of biodiversity and the value of ecosystem services.

The milestone target on ecosystem services and resilience means that that important ecosystem services and factors that affect their maintenance are to be identified and systematised by 2013. As there is a lack of data for making a final assessment of whether the milestone target has been achieved, the Government intends to report back with such an assessment in conjunction with the annual follow-up of the environmental quality objectives.

The initiatives for achieving the milestone target on the importance of biodiversity and the value of ecosystem services also contribute towards meeting the Aichi Targets concerning awareness of biodiversity, integration of values, transformation of incentives, safeguarding ecosystem services, enhancing ecosystems' resilience, traditional knowledge, improved knowledge, and financial resources (Aichi Targets 1, 2, 3, 14, 15, 18, 19 and 20). The initiatives also contribute to achieving the common EU targets of maintaining and restoring ecosystems and their services and helping to avert the loss of global biodiversity (EU Targets 2 and 6).

In the Government Bill 'Sweden's Environmental Objectives – For More Effective Environmental Action', the Government announced that a strategy containing tools to demonstrate the value of ecosystem services and their relevance to different sectors and industries is to be developed (Govt Bill 2009/10:155, bet. 2009/10:MJU25, Riksdag Comm. 2009/10:377).

A strategy of this type is presented here. The strategy consists of the milestone target on ecosystem services and resilience, the milestone target on the importance of biodiversity and the value of ecosystem services, and the specifications to the environmental quality objectives that were decided on in 2012 and that relate to the maintenance of ecosystem services.

The same Government Bill also announces a commission for the Swedish Environmental Protection Agency to draw up a strategy, in consultation with the Swedish National Heritage Board and other authorities concerned, for how biological cultural heritage can be managed so that important natural and cultural values are preserved. Biological cultural heritage has been shaped by human use through various forms of cultivation and is a part of overall biodiversity. This cultural heritage includes both various claimed habitats and domesticated plant and animal species. Biological cultural heritage should be managed collectively with the policy for ecosystem services in accordance with what is stated in relevant parts herein. Accordingly, no separate strategy is required in this area.

4.2 Initiatives

4.2.1 Ecosystem services in environmental accounts and indicators for sustainable development

The Government's assessment: Statistics Sweden should be tasked with analysing which parts of the official statistics can be compiled in order to meet the need for data on ecosystem services for environmental accounts, sustainability indicators and following up the environmental quality objectives.

Statistics Sweden should continue to participate in international cooperation in order to develop relevant indicators for sustainable development. In the long term, it should be possible to report available sustainability indicators in conjunction with the data on which fiscal policy decisions are based in order to clearly set out the links between economic, social and environmental sustainability.

4.2.2 Greater knowledge in central government authorities

The Government's assessment: Knowledge of the value of ecosystem services that is produced in efforts to achieve the milestone target concerning the importance of biodiversity and the value of ecosystem services should be collected and made available through the follow-up of the environmental quality objectives. This provides a basis for the design of several of the measures required in order to achieve the milestone target. It also contributes to providing the opportunity to undertake a more detailed analysis of policy options for sustainable production of ecosystem services in conjunction with the follow-up and evaluation of the milestone target.

The Swedish Environmental Protection Agency should be tasked with drawing up, in consultation with the authorities most closely affected, a guide for central government authorities' work on ecosystem services assessments. Consultation should also take place with all authorities that have responsibilities in the environmental objectives system. Swedish authorities should continue to actively support and participate in international cooperation concerning the development of methods and research into ecosystem services assessments.

4.2.3 Guidance for county administrative boards

The Government's assessment: County administrative boards should be provided with guidance concerning how to better take into account ecosystem services in their work relating to municipalities and regional planning bodies within the scope of physical planning and action plans for green infrastructure.

This guidance should also encompass how biological cultural heritage can be managed so that important natural and cultural values are preserved.

4.2.4 Guidance and support for municipalities

The Government's assessment: Municipalities should be provided with guidance and support for capacity building concerning the management of ecosystem services, e.g. social values of natural environments near urban areas and for physical planning when applying Chapter 2 of the Planning and Building Act and Chapters 3 and 4 of the Environmental Code. The Government intends to monitor the application of the ordinance concerning central government grants to local nature conservation projects so as to take action when necessary to facilitate the co-financing of municipal work with ecosystem services.

4.2.5 Current legislation

The Government's assessment: Integration of the significance of biodiversity and the value of ecosystem services into decision-making processes is in line with the legislation already in force. In conjunction with a review being conducted of acts and ordinances that govern the use of land and water, it should, when relevant, be continually made clear whether the provisions facilitate a comprehensive perspective on ecosystems' functions and a use of important ecosystems that is sustainable in the long term.

4.2.6 Economic incentives

The Government's assessment: The design of the economic incentives that have a direct impact on biodiversity and ecosystem services should be reviewed in the light of increased knowledge about the value of ecosystem services. Suitable changes to these should be made with the aim of cost-effectively achieving the environmental quality objectives concerned and contributing to developing the polluter pays principle.

In conjunction with reviews or evaluations of the Swedish implementation of systems of support and compensation for agriculture, fisheries and aquaculture, it should be made clear how this support and compensation already supports important ecosystem services or can do so to a greater degree.

Knowledge about the cost-effectiveness of various forms of support and compensation to contributing to the fulfilment of the environmental quality objectives needs to be improved. At the EU level, the Government intends to work towards a transfer of funds from direct support to agriculture to support and compensation through the rural programme within the scope of a reduced total agriculture budget.

4.2.7 Communication initiatives

The Government's assessment: A national coordinator for ecosystem services should be appointed, with a fixed-term commission to work towards improved expertise and an increased knowledge about biodiversity and ecosystem services among industry, municipalities and relevant authorities in Sweden. Furthermore, the Swedish Environmental Protection Agency should be tasked with implementing a communications effort about ecosystem services in partnership with the coordinator for ecosystem services and authorities concerned.

4.2.8 Innovations for ecosystem service-based solutions and products

The Government's assessment: Innovations in the form of new products and services and business and administration models can make an important contribution to sustainable utilisation of biodiversity and ecosystems' resources. Development of ecosystem services is relevant to a large number of sectors and knowledge about the multifunctionality of ecosystems should continue to be integrated into innovation initiatives when relevant.

4.2.9 Information for consumers and investors

The Government's assessment: With increased knowledge about the value of ecosystem services, certification systems and investment decisions will increasingly report their impact on biodiversity and ecosystem services.

4.2.10 Public procurement with an ecosystem services perspective

The Government's assessment: The Government expects that an increase in knowledge about the value of ecosystem services will contribute to providing more opportunities to consider the effects of public procurement on ecosystem services, when the type of procurement justifies this. In such cases, knowledge about the costs and effects of the procurement when ecosystem services are affected can be improved so that the development of tools and calculation methods to support such consideration can be contemplated.

5. Intensified Initiatives for Species

5.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning endangered species and habitats. These initiatives also contribute to achieving the Aichi Targets concerning halting the loss of habitats and species (Aichi Targets 5 and 12) and also to the common EU target of fully implementing the Birds Directive and Habitats Directive (EU Target 1).

5.2 Initiatives

5.2.1 Action plans for endangered species

The Government's assessment: Achieving the milestone target concerning endangered species and habitats is important to safeguarding biodiversity. The Government therefore intends to carefully monitor authorities' work with action plans and take action when necessary so that the milestone target is achieved.

5.2.2 Protection of species

The Government's assessment: A special commission of inquiry should be tasked with reviewing the Species Protection Ordinance and related regulations in the field of species protection.

The aim of this commission should be to follow up a general review of the provisions in this area by proposing, on the one hand, easily understandable and integrated species protection legislation and, on the other, individual provisions that better take into account national and international interests in this area that are well suited to their practical application.

Efforts to combat species protection offences need to be reinforced. Affected authorities should be tasked with reporting measures that aim to prevent offences and with strengthening, coordinating, and collaborating on efforts to tackle species protection offences. Authorities should also draw up an action plan in order to improve regulatory compliance and supervision in matters concerning species that are listed in the appendices to the Convention on International Trade in Endangered Species.

6. Invasive Alien Species

6.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning invasive alien species. These initiatives contribute to achieving the Aichi Target concerning invasive alien species (Aichi Target 9) and also to the common EU target concerning combating invasive alien species (EU Target 5).

6.2 Initiatives

The Government's assessment: Work with invasive alien species should be intensified in the light of, on the one hand, the major damage such species can inflict and, on the other, the EU legislation in this area. There needs to be an effective organisation for undertaking initiatives to prevent the introduction, spread and negative impact of invasive alien species.

7. Genetic Diversity

7.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning genetic diversity. These initiatives contribute to achieving the Aichi Targets concerning maintaining the genetic diversity of cultivated and domesticated species and concerning improved knowledge (Aichi Targets 13 and 19) and also to the common EU targets concerning increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity and contributing to halting the loss of global biodiversity (EU Targets 3 and 6).

7.2 Initiatives

The Government's assessment: The Swedish Agency for Marine and Water Management, Swedish Board of Agriculture, Swedish Environmental Protection Agency and Swedish Forest Agency should be given a commission to collaborate on the charting and monitoring of genetic diversity among wild and domesticated plants and animals.

8. Coordination for a more comprehensive view of land and water use

8.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning a comprehensive view of land use. These initiatives contribute to achieving the Aichi Targets concerning sustainable agriculture, forestry and aquaculture and concerning safeguarding ecosystem services (Aichi Targets 7 and 14) and also to the common EU targets concerning the maintenance and restoration of ecosystems and their services and increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity (EU Targets 2 and 3).

8.2 Initiatives

The Government's assessment: A special commission of inquiry is being appointed with the task of investigating how enhanced coordination can be achieved in the central government administration with the aim of obtaining a more comprehensive view of land and water use.

9. Protection and conservation of areas of natural areas

9.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning protection of areas of land, fresh water areas and marine areas. These initiatives contribute to achieving the Aichi Targets concerning halting the loss of habitats, sustainable agriculture, forestry and aquaculture, protection of nature and enhancing the resilience of ecosystems (Aichi Targets 5, 7, 11 and 15) and also to the common EU targets concerning the full implementation of the Birds Directive and Habitats Directives and the maintenance and restoration of ecosystems and their services (EU Targets 1 and 2). In addition to these initiatives, the interaction between biotope protection and an active agricultural sector. Improved conditions for a healthy agricultural sector promote the conservation of the cultivated landscape's biodiversity. The initiative described contributes to achieving the Aichi Target concerning sustainable agriculture, forestry and aquaculture and also the common EU target concerning increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity (EU Targets 3).

9.2 Initiatives

9.2.1 Ecologically representative protection

The Government's assessment: Sweden should live up to the milestone target concerning protection of areas of land, fresh water areas and marine areas that at least 20 per cent of Sweden's land and fresh water areas and 10 per cent of Sweden's marine areas contribute to fulfilling

national and international targets for biodiversity by 2020. This is to be done through protection or other forms of conservation of areas that are of particular significance to biodiversity and ecosystem services. This conservation is to take place using ecologically representative and well-linked systems that include reserves, other effective area-based protective measures or environmentally adapted use. These systems are to be thoroughly integrated into the surrounding landscape and managed in an efficient and inclusive way.

The Government should task the authorities concerned with developing the collection, compilation, accounting and reporting of statistics covering the protection of land and water areas in Sweden. The relevant authorities should also be tasked with conducting a detailed analysis of how ecologically representative the Swedish protection of land and fresh water areas is, and how this can be enhanced through the initiatives described in this bill.

9.2.2 Green infrastructure

The Government's assessment: Regional action plans for green infrastructure should be drawn up in partnerships between the landscape actors concerned, for example landowners, users, authorities, non-profit organisations and other relevant bodies at the local and regional level. The aim of these plans is to identify natural areas, biotopes, structures and elements of the landscape that create an ecological context in the landscape and constitute the prerequisites for conserving the landscape's biodiversity and promoting ecosystem services.

Existing instruments, information and voluntary initiatives are important foundations for this conservation effort. The action plans are to be based on geographical information in which the parts included are classified and needs analysed with respect to suitable cultivation methods, management, protection, conservation or restoration. This work should be initiated in 2014 and be completed in large parts of the country in 2017.

9.2.3 Natura 2000

The Government's assessment: The Swedish parts of the European ecological network Natura 2000 should be complete. Remaining transfers to the special conservation areas should be completed by the end of 2016 and all affected areas should have updated conservation plans.

9.2.4 The interaction between biotope protection and agriculture

The Government's proposal: When a question regarding exemption from biotope protection concerns implementing a measure that facilitates agriculture within a generally protected biotope protection area, specific grounds for this exemption will be considered to exist if

- the measure is required in order to develop or retain active cultivation of agricultural land, and
- the aim of the biotope protection programme can still be provided for while taking into account the occurrence of the same type of biotope protection area or with consideration for the natural values of the protected biotope protection area the exemptions applies to and the natural values the biotope protection area contributes to in the landscape.

10. Environmental Considerations in Forestry

10.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning environmental considerations in forestry. These initiatives contribute to achieving the Aichi Targets concerning halting the loss of habitats and concerning sustainable agriculture, forestry and aquaculture (Aichi Targets 5 and 7) and also to the common EU targets concerning the full implementation of the Birds Directive and Habitats Directives and increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity (EU Targets 1 and 3).

10.2 Initiatives

10.2.1 Dialogue concerning environmental considerations in forestry

The Government's assessment: The Swedish Forest Agency has the task of reporting annually on how the results of the project *Dialog om miljöbänsyn* [Dialogue concerning environmental considerations] is implemented with the agency's follow-up efforts and within the environmental considerations of forestry.

10.2.2 Plan for more effective supervision

The Government's assessment: The Swedish Forest Agency should draw up a plan for supervision in accordance with the forestry legislation.

10.2.3 Greater flexibility in the choice of supervisory measures

The Government's proposal: When conducting supervision in accordance with the Forestry Act, the Swedish Forest Agency may issue an injunction or prohibition without first having issued advice that is not complied with.

10.2.4 Voluntary environmental initiatives

The Government's assessment: If the environment policy and forestry policy objectives for forestry are to be achieved, it is vital that there are voluntary initiatives. Initiatives financed by central government should focus on stimulating and encouraging voluntary initiatives, for example through the provision of advice.

10.2.5 Other environmental measures

The Government's assessment: Quality-assured data is significant to enabling forestry planning to contribute to taking good account of environmental considerations. There needs to be an evaluation of economic support to the development of natural and cultural environmental values in woodlands.

10.2.6 Social values in forestry

The Government's assessment: The authority granted by Section 30 of the Forestry Act to the Government or the authority appointed by the Government to issue regulations concerning the considerations that are to be given to environmental protection and the protection of the cultural environment in the management of woodlands also encompasses consideration of social values. The provision does not need to be changed in order to make this clear.

11. Forestry Rich in Variation

11.1 Objectives

The initiatives described in this section aim to meet the milestone target concerning forestry that is rich in variation (see section 4.1.2). These initiatives contribute to achieving the Aichi Targets concerning halting the loss of habitats and concerning sustainable agriculture, forestry and aquaculture (Aichi Targets 5 and 7) and also to the common EU targets concerning increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity (EU Target 3).

11.2 Initiatives

11.2.1 Forms of forest management

The Government's proposal: The potential for the Swedish Forest Agency to issue exemptions in individual cases from the provision concerning allowed forms of logging in order to conserve or develop natural or cultural environmental values is replaced by the Government or the authority appointed by the Government being authorised to issue regulations concerning such exemptions.

The Government's assessment: The Swedish Forest Agency's regulations and general advice concerning the application of the regeneration and logging provisions in the Forestry Act should be reviewed in order to ensure they do not impair or prevent various forms of forest management that a landowner is interested in and that may be suitable in the individual case.

12. A National Forest Programme

12.1 Objectives

The objective of a national forest programme is, as a whole, broader than a milestone target and should also be of significance to several policy areas other than forestry policy.

The initiatives described in this section aims, for example, to meeting the milestone target concerning a process of dialogue in a national forest programme. The initiative described contributes to achieving the Aichi Target concerning sustainable agriculture, forestry and aquaculture (Aichi Target 7) and also the common EU target concerning increasing the contribution of agriculture and forestry to the maintenance and restoration of biodiversity (EU Targets 3).

12.2 Initiatives

The Government's assessment: Sweden should develop a national forest programme that encompasses the economic, social and environmental values of the forests, so that they and their value chain can contribute further to the development towards a sustainable society and a growing bio-based economy. An important aspect of the work on a national forest programme is providing forums and forms of dialogue and collaboration that can provide a more collective vision of forests' role in society and provide the opportunity to create a comprehensive long-term strategic direction for the sustainable use and conservation of forests.

13. Marine Biodiversity

13.1 Objectives

The initiatives described in this section primarily aim to achieve the environmental quality objectives A Balanced Marine Environment, Flourishing Coastal Areas and Archipelagos, but also Zero Eutrophication.

These initiatives contribute to achieving the Aichi Targets concerning halting the loss of habitats, sustainable fisheries and the protection of marine areas (Aichi Targets 5, 6 and 11) and also to the common EU targets concerning the maintenance and restoration of ecosystems and their services and ensuring that fisheries are sustainable (EU Targets 2 and 4).

13.2 Initiatives

The Government's assessment: A continued concrete programme of measures is necessary in order to maintain the marine and coastal biodiversity, cultural environments, ecosystem services and sustainable long-term productive capacity and to ensure the achievement of a good environmental status in accordance with the requirements in the EU Water Framework Directive and Marine Strategy Framework Directive. Measures need to be implemented at the international, national, regional and local level. The use of marine resources through business activities, recreation or other forms of use should take place in a way that is sustainable in the long term and that does not threaten the marine biodiversity. The protections of marine areas need to be strengthened. Knowledge about marine ecosystems and the distribution of marine habitats should be developed.

14. Research and Environmental Monitoring

14.1 Objectives

The initiatives described in this section aim to meet the milestone target on the importance of biodiversity and the value of ecosystem services and also to make environmental monitoring and the follow-up of the environmental quality objectives more effective and fit for purpose. These initiatives contribute to achieving the Aichi Targets concerning traditional knowledge and improved knowledge (Aichi Targets 18 and 19).

14.2 Initiatives

14.2.1 Research into ecosystem services and learning processes

The Government's assessment: The research council Formas should be given the task of conducting an analysis in consultation with the Swedish Environmental Protection Agency concerning how research into biodiversity and ecosystem services can be supported. This analysis should encompass what is currently known about ecological links, the effects of economic incentives, methods of valuing ecosystem services and learning processes in the management of ecosystem services.

14.2.2 Environmental monitoring

The Government's assessment: There is a need for more effective and robust environmental monitoring of the sea, surface water and ground water. Environmental monitoring of sea birds should also be strengthened.

15. Ecosystem Services and the Climate

The Government's assessment: Land use that is sustainable in the long term should contribute to complying with international undertakings and achieving the vision that by 2050 Sweden has no net greenhouse gas emissions. The ability of forests and woodland to take up and sequester carbon dioxide is significant to efforts to halt climate change and is a prerequisite for a future increase in the sustainable production of bioenergy and climate-smart materials. It is also important to safeguard the capacity of wetlands and peat bogs to sequester and store carbon and their function in terms of water regulation. Drained wetlands and peat bogs should be restored to resilient ecosystems where appropriate.

Climate change will have a far-reaching impact on biodiversity and ecosystem services. The Government intends to task the Swedish Environmental Protection Agency with investigating how national efforts involving biodiversity can be developed, with the aim of dealing strategically with the effects of an altered climate on biodiversity.