Ministerstvo životního prostředí

State Environmental Policy of the Czech Republic 2012–2020

As updated in 2016

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I. The vision

The State Environmental Policy of the Czech Republic (SEP) defines a plan for implementing effective environmental protection in the Czech Republic up to 2020.

The main objective is to ensure a healthy and good environment for citizens living in the Czech Republic, to significantly contribute to the efficient use of all resources and to minimise the negative effects of human activities on the environment, including transboundary impacts and thus contribute to improving the quality of life in Europe and worldwide.

The SEP is focused on the following thematic areas:

- Conservation and sustainable use of natural resources, protection of water and the improvement of its status, waste prevention, ensuring maximum recovery of waste and limiting its negative impact on the environment, protection and sustainable use of the soil and geological environment.
- Climate protection and air quality improvements with the aim of reducing greenhouse gas emissions, reducing the levels of air pollution, promoting efficient and environmentally friendly use of renewable energy sources and improving energy efficiency.
- Nature and landscape protection, consisting mainly in protecting and enhancing the ecological functions of the landscape, preserving the natural and landscape values, and improving the quality of the urban environment.
- Safe environment involving the prevention and reduction of the effects of natural hazards (floods, long-term drought, extreme weather phenomena, slope instability, erosion, etc.), reduction of the negative impacts of climate change on the territory of the Czech Republic and prevention of hazards of anthropogenic origin.

As a member of the European Union (EU), the Czech Republic will, in the field of the environment, put emphasis on the implementation of commitments arising from the approved environmental legislation of the EU and will continue to be an active and trusted partner in discussing new legislative, non-legislative and strategic EU documents at all levels of consultation in the EU structures.

The Czech Republic will actively develop both bilateral and multilateral environmental cooperation, which will help not only to address national, regional and global issues, but will also contribute to employing Czech experts, experience and to promoting the export of Czech technologies related to environmental protection.

Whereas it is necessary to reckon with limited financial resources from the State budget, it is foreseen that the implementation of the proposed measures will make use mainly of the EU funds resources. The allocation of funds from the State budget will be specified based on the approved budget for the year concerned and according to the mid-term budgetary framework.

The basic principles of the environmental policy

In the State Environmental Policy of the Czech Republic, the following principles are mainly applied:

The principle of integration of policies

The environmental policy is cross-cutting, having the same application as the other sectoral policies. These policies must be coordinated and interlinked. That requires cooperation at all levels of the public administration, where a number of strategic and conceptual documents are prepared with a central, sectoral and even regional scope. All relevant strategic documents should be based on a common analysis of external influences (the same socio-economic starting points), principles and possible development scenarios.

The principle of prevention

Prevention is the most important principle in environmental protection, because the most effective environmental policy is based on preventing damage to the environment. Timely introduction of preventative measures is more efficient and economically more effective than remedying damage in case of irreversibly polluted environmental compartments, exhausted resources, disturbed ecosystems and damaged health. Application of the prevention principle is also of great importance in cases of natural disasters, which mostly take the form of floods in the Czech Republic. An example of the preventive approach is the eco-design of products.

The precautionary principle

The principle of preventive action stems from the fact that it is necessary to act even in cases where there is no certainty in how quickly the undesirable phenomena will occur, or if they will occur at all, taking into account all of the related costs. If there is a risk of irreversible damage to health or the environment, and the phenomenon has not been sufficiently explored yet, preventive measures are taken nevertheless to avoid economic losses.

The "polluter pays" principle

The "polluter pays"[1] principle is based on the assumption that everyone should take responsibility for their actions. In the context of environmental protection, this means that "anyone who causes damage to the environment, should bear the costs associated with it". One of the goals of applying that principle is to include negative externalities[2] in the polluters' costs. The inclusion of negative externalities in the costs of polluters by projecting those costs into the price of the relevant products or services corrects the incorrect price signals towards the consumer. The subsequent reduction of the demanded quantity or the motivation of the polluters to implement preventive measures and new cost-effective solutions, helps to completely eliminate or mitigate the produced pollution.

The principle of cost effectiveness

[1]It arises from Directive 2004/35/EC on environmental liability in relation to the prevention and remedying of environmental damage, and also from Article 191(2) of the consolidated version of the Treaty on the Functioning of the European Union.

[2]An externality is a term marking the external effect of an economic decision or activity, i.e. a part of the impacts of the activity, which is borne by someone other than the originator. Externalities are the costs or revenues of other entities, which are not paid for: the originator cannot take ownership of these revenues (called positive externalities), or these costs (so-called negative externalities) cannot be recovered from the originator. An example of negative externalities is environmental pollution caused by economic activity; an example of a positive externality is education or non-productive useful functions of forests.

Effective allocation of limited resources is an attempt to reach an economically optimal level of degradation and protection of the environment. The effectiveness itself includes two areas: efficiency, i.e., to what extent the desired objectives will be achieved, and economy, i.e., at what cost. The principle of effectiveness requires achieving the best relationship between resources used on the given activity and the effects achieved.

Increasing public awareness of environmental issues

The prerequisite for successful implementation of the SEP is the appropriate public awareness of the environment. Raising public awareness of the importance of environmental protection and its sustainable use leads the public towards better understanding the context of the economic, environmental and social development of the society, to improving the quality of decision-making of the citizens as consumers and indirectly also to improving the quality of life.

The principle of international responsibility

The principle is applied in particular through development cooperation, by respecting the adopted commitments arising from EU membership and from international agreements, conventions and membership in organisations such as the United Nations (UN) and the Organisation for Economic Cooperation and Development (OECD). In sharing the global and regional responsibility from the position of an economically developed country it is also necessary to respect the specific conditions and the specific interests of the Czech Republic and the EU.

II. What are the starting points?

At present, in the context of the need for sustainable development, there is an increasingly pronounced interdependence of the impacts of economic, social and environmental policies, which carries with it an increased urgency of their coordination, including at cross-border and trans-regional level.

The overarching document which should be the basis of all policies is the Strategic Framework for Sustainable Development of the Czech Republic, approved by the government in January 2010. The aim of the document is not to impose specific measures or to replace Ministerial or cross-cutting strategies, but to support their long-term orientation and mutual coherence. The Framework specifies long-term objectives for three basic areas of development of a modern society – the economic, social and environmental.

The updated SEP contributes to the Strategic Framework cross-cuttingly, in all of its priority axes. The Strategic Framework for Sustainable Development of the Czech Republic also serves as a long-term framework for political decision-making in the context of international commitments, which the Czech Republic has adopted or intends to adopt, while respecting the specific conditions and needs of the Czech Republic. In 2016, a new strategic document for sustainable development of the Czech Republic – Czech Republic 2030 was being created to replace the above valid Strategic Framework for Sustainable Development of the Czech Republic.

In order to achieve the objectives of environmental protection, it is necessary that the State Environmental Policy (SEP), the Climate Protection Policy, the State Energy Policy, the Raw Material Policy, Secondary Raw Materials Policy, the Strategy of Ministry of Agriculture of the Czech Republic with an outlook to 2030, Territorial Development Policy, Regional Development Strategy, the general objectives of sustainable management of resources and the social aspects of the regions, as well as the Security Strategy of the Czech Republic, are interlinked. For that reason, all those strategic documents should be based on a common analysis of external influences (the same socio-economic starting points), and their objectives should be consistent. That joint consistency is ensured, in particular, by compliance with the priorities and principles of the Strategic Framework for Sustainable Development of the Czech Republic, or the upcoming successor document "Czech Republic 2030".

By increasing the resource efficiency, the SEP implementation should significantly contribute to increasing the competitiveness of the Czech Republic. The SEP will support measures aimed at economic growth and efficiency, without excessive and unwarranted limitation of main sectors of the economy. The implementation of the policy should include support for the export promotion policy and innovation in order to enhance the research and innovation potential of our companies and their market position in the Czech Republic and abroad. At the same time it needs to be linked with the policy of social cohesion, as the social situation of families is often reflected in their environmental behavior (as it shows, for example, in the area of local heating).

The SEP fully respects the obligations that arise for the Czech Republic from membership in the EU (mainly fulfilment of the obligations arising from EU legislation), in the United Nations, the OECD and other international organisations. In the global and European context, the starting point for achieving the objectives of the comprehensive environmental protection

are the conclusions of the summits and conferences of international organisations, and commitments under multilateral and bilateral treaties dedicated to the issues of sustainable development and the environment[3]. The SEP also takes into account the recommendations of the OECD granted to the Czech Republic in 2005, in a report on the evaluation of the policy, the status and development of the environment[4].

In policy making, the EU puts still greater emphasis on applying the principle of sustainability in order to stimulate such economic growth that will facilitate improvements in the quality of life while minimising the negative impacts on the environment. The principle of sustainability is significantly mainstreamed in strategic documents of the EU, such as the renewed EU Sustainable Development Strategy (SDS-EU) from 2006, or the Europe 2020 - a strategy for smart, sustainable and inclusive growth from 2010[5], which is the starting document for determining the long-term economic strategy of the EU with a view to 2020, aiming to increase its competitiveness and employment in Europe. The SEP respects both of those documents, that is, it reflects the EU strategy in this area, which has priorities determined until 2020, and also wants to contribute to the objectives laid down in the EU initiative: Resource efficient Europe.

At the level of Member States, the national targets and the share in the implementation of the Europe 2020 strategy reflect in the formulation of the so-called National Reform Programmes (NRPs), which are then assessed at EU level in the framework of the so-called European semester. The SEP is also consistent with the cohesion policy.

a) Analysis of external influences

The basic starting points that will affect the status and development of the environment in the Czech Republic, but also other areas that will be covered in the currently prepared sectoral policies and concepts, include the socio-economic development. It is related to a number of factors which include promotion of competitiveness of the Czech Republic and increasing the export potential.

The analysis of external influences evaluates the development to date of the main driving forces and gives an outline of their possible future development up to 2020, i.e. for the duration of the SEP.

Demographic trends

It results from the last projection of the population of the Czech Republic prepared by the CZSO in 2013 that the nature of the future development will be similar to trends in the EU-15: life expectancy should further lengthen and the population will age. Under the high variant of the projection, the population of the Czech Republic will increase by 2021 to 10.63

[3]For example, the conclusions of the United Nations Conference on the environment and development (Rio de Janeiro, 1992), the World Summit on sustainable development (Johannesburg, 2002) and the United Nations Conference on sustainable development, Rio+20 (Rio de Janeiro, 2012), the Convention on the protection of the world cultural and natural heritage (Paris 1972), the European Landscape Convention (Florence, 2000) and also the tasks formulated primarily in the Green Growth Strategy adopted by the ministerial meeting of the OECD Council in Paris on 25.5.2011 and in the Declaration of the 7th Ministerial Conference "Environment for Europe", adopted in Astana, Kazakhstan, on 23.9.2011, conclusions of the 10th Conference of the parties to the Convention on Biological Diversity held in Nagoya in 2010, and the conclusions of the UN Summit "Transforming our world: Agenda for a sustainable development 2030" approved in September 2015 in New York.
[4]OECD Environmental Performance Review: Czech Republic
[5]Communication of the European Commission "Europe 2020 - strategy for smart, sustainable and inclusive growth" from March 2010

million, with one-fifth of it (20.9% and 2.22 million people) will be aged 65 years or more. At the beginning of 2013, pensioners made up 16.8% of the population or 1.77 million[6]. In the Czech Republic, the proportion of the population living in towns and cities ranges around 75%[7] and this is related to a significant part of the population living in areas with deteriorated environment, mainly due to emissions from intensive transport and local negative environmental impacts.

In terms of the demographic analysis, a change in the qualification structure is of great importance. According to a study conducted by the Faculty of Economics, University of Economics in Prague[8], it can be assumed that by 2020 the population with a university degree will increase. This trend, based on a higher number of inhabitants employed in the field of science, research and innovation, can lead to an increased competitiveness of the Czech Republic. From the lowest levels of school establishments, emphasis is placed on increasing the knowledge in the field of environmental protection and care, and this trend will continue to grow in importance. The public awareness of the importance to take part in the prevention and solution of environmental problems will grow.

Macroeconomic indicators

It arises from the information of the macroeconomic scenario of the Convergence Programme for the period 2015-2019[9] that the global economic situation and outlook in the different regions of the world are gradually slightly deteriorating. The pace of economic growth in both developed and emerging economies is slowing and some large economies, such as Russia and Brazil, are going through a deep recession. The impact of low prices of oil and other commodities are different in each region. While in the oil-importing countries, it can be considered a significant bidding stimulus, the oil-exporting countries face a number of economic and social problems.
GDP in the EU-28 reported a growth of 1.9% in 2015. The revived activity during the year was mainly due to private consumption encouraged by the improving situation in the labour market and by low energy prices. In contrast, export growth was adversely affected by the dynamics of foreign demand and so net export inhibited the economic growth. Growth should continue to be driven mainly by spending on private consumption, supported by the improving situation in the labour market. On the contrary, economic growth will be dampened by a worsened global outlook or high debt levels in some economies.

Real GDP growth in the Czech Republic, according to the forecast from 2016, should maintain the level of 2.5% in 2016 and in subsequent years. However, the result for 2015 according to macroeconomic predictions from January 2016 was up to 4.2%, with a significant impact of spending the last EU funds from the programming period 2007-2013. Economic growth was driven mainly by domestic demand. Inflation in the Czech Republic, measured by the harmonised index of consumer prices, is low in the long term and for 2015 it

[6]The actual population at the end of 2015 was the closest to the high variant of the projection. Detailed results of the Projection of the population of the Czech Republic up to 2100 at: https://www.czso.cz/csu/czso/projekce-obyvatelstva-ceske-republiky-do-roku-2100-n-fu4s64b8h4
[7]Source: KAŠPAROVÁ, L., PŮČEK, M. ET AL. (2009): Cohesion policy: Settlements in the Czech Republic. Urban-rural partnerships. Ministry of Regional Development, p. 57
[8]Source: The updated forecast of the structure of education levels of the population of the Czech Republic. http://kdem.vse.cz/resources/relik09/Prispevky_PDF/Fiala_Langhamrova_Hulik.pdf, p. 10
[9]Source: Ministry of Finance CR. http://www.mfcr.cz/cs/zahranicni-sektor/pristoupeni-cr-k-eurozone/konvergencni-program/2016/konvergencni-program-ceske-republiky-24860

reached only 0.3%, which is comparable with inflation on a global scale and reflects the impact of a deep drop in the prices of mineral fuels.

Since 2013, the Czech National Bank has used the tool of currency interventions and thus maintains a weak exchange rate of the Czech crown against the euro, which is manifested in the promotion of exports. The labour market is affected by the economic cycle (boom) that is reflected in the unemployment rate, which dropped to 4.8% and according to the forecasts of the MoF it should decrease down to 4.2% in 2019.

The important external factors include geopolitical risks, including the migration crisis and the scandal around the Volkswagen Group diesel engines, associated with emissions of real operation. The forecast development of the average Brent crude oil price is a gradual increase to the level of USD 54/ barrel in 2019.

Research, development and innovation

One of the conditions for further economic, social and environmental development of the Czech Republic is the increase in the share of investment into the **support of research, development and innovation**, which results from the National Research, Development and Innovation Policy of the Czech Republic for the period 2016-2020. Since 1993, except for the years 2007-2008, a growing trend has been evident, in particular, in the total expenditure on research and development in the Czech Republic ("GERD"[10]). In 2014, its share in the GDP was 2% (compared to 1.17% in 2005)[11]. The largest components of the GERD are the business sector (56% in 2014) and the public sector (State budget 18.2%, higher education 25.4%). In terms of the ratio of GERD to GDP, the Czech Republic is approximating the average of the EU-28[12]. GERD has grown in the long term year on year, only in the last year the increase was not as intense as in the previous years. In an international comparison, the Czech Republic represents the European average in terms of GERD. Public financial resources were directed in 2013 mainly into the public sector (CZK 12.5 billion to higher education and 9.5 billion to the government sector). Business sector received an allocation of almost CZK 5 billion. Roughly 68% of that allocation is used by manufacturing companies and 55% by small and medium-sized enterprises. In the coming period, it is expected that the support for research, development and innovation will be further strengthened, in particular thanks to the European structural and investment funds.

State budget expenditure on R&D in the form of direct public support (GBARD) in 2014 reached 0.64% of the GDP. The proportion of expenditure according to the main socio-economic objectives concerning the environment was 8.2% (Environment 2.1%, Exploration and utilisation of the Earth's resources 1.6% and Energy 4.5%)[12]. For 2014, according to Eurostat, the share of public expenditure on research and development in the field of energy was 0.03% of GDP and in the field of the environment 0.01% of GDP[13].

In the event that the investment in research, development and innovation grows, **an increase in the competitiveness of the Czech Republic** can be expected. One of the key areas of

[10]GERD = Gross Domestic Expenditure on R&D
[11]Source: Analysis of the status of research, development and innovation in the Czech Republic and their comparison with foreign countries in 2014. http://www.vyzkum.cz/FrontClanek.aspx?idsekce=759405
[12]CZSO 2015. The publication "GBARD in the Czech Republic in 2014", available from https://www.czso.cz/documents/10180/23198142/gbard_211001_15.pdf/f573b22a-2ad8-4809-a1f5-bef4133d6c1d?version=1.1
[13]Source: Eurostat 2016. "Total GBAORD by NABS 2007 socio-economic objectives", available from http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=gba_nabsfin07&lang=en

support for research and development must be protection of the environment as an integral part of a full life of the inhabitants. When laying emphasis on research in specific areas (nanotechnologies, energy savings, optics, etc.) that have a wide application in all production areas, the potential to succeed in the world market should increase. For the next development of competitiveness with regard to environmental protection it will be very important to provide aid to small and medium-sized enterprises, because they are among the main users or innovators of unique technologies.

Energy and raw materials management

During the period of the SEP implementation, it can be expected that by 2020 the **energy and material intensity of the Czech economy**[14] will continue to decrease, and thus the specific environmental burden per unit of economic output (emissions, effects on the landscape, waste, etc.) will also decrease. The **consumption of both raw materials and energy** is rising globally at present (both in the rapidly developing, modernising countries such as the BRIC group--Brazil, Russia, India and China, and in many of the so-called developed countries), which is a phenomenon that will undoubtedly strongly affect the global conditions in the world and can generate significant negative impacts on the environment. The ongoing modernisation of third world countries is fraught with an increasing consumption of the entire spectrum of mineral and agricultural commodities. Following that systemic change, a series of new trends has been started in international relations. Global players, including the EU, have begun to be confronted with a high, in some cases a dangerous degree of import dependence, and began to emphasise the strengthening of their raw-material and energy security. As a European response to those challenges, the document For a European Industrial Renaissance[15] was introduced in January 2014, which, from the perspective of maintaining the competitiveness of European industry and ensuring sufficient input raw material resources, highlights the importance of innovation, promoting resource efficiency and circular economy. In a follow-up to the Europe 2020 strategy, the European Commission published in January 2011 a communication on the flagship initiative of the Europe 2020 strategy - A resource efficient Europe, in which it is stated that we cannot continue in the current trend of the consumption of resources that include not only raw materials such as fuel-energy materials, metal ores and mineral resources, but also food, land, water, air, biomass, or ecosystems. The flagship initiative provides a framework for a long-term strategy to increase resource efficiency in areas such as climate change, energy, the environment, research and development, transport, agriculture.

The Czech Republic has one of the highest levels of energy intensity compared to the other EU Member States[16]. The National Energy Efficiency Action Plan implements Article 7 of Directive of the European Parliament and of the Council No 2012/27/EU of 25 October 2012 on energy efficiency, amending Directives 2009/125/EC and 2010/30/EC and repealing Directives 2004/8/EC and 2006/32/EC, which sets a binding target for the Member States in the area of achieving savings in final energy consumption by 2020. This objective corresponds to new savings to be achieved at 1.5% of annual sales of energy to final customers. The last update of the 4th National Energy Efficiency Action Plan from March 2016 sets the target of energy saving at 50.67 PJ in 2020. In Government Resolution No 923

[14]Source: Report on the environment 2014, available e.g. from www.issar.cenia.cz
[15]Source: European Commission.
http://ec.europa.eu/enterprise/newsroom/cf/document.cfm?action=display&doc_id=894&userservice_id=1
[16]Source: Eurostat (2016). This is the share of primary energy sources in GDP (toe/1000 EUR)

of 4 December 2013, the Czech Republic decided to choose an alternative scheme in pursuing the set target. At the same time, the original indicative target remains in effect to reduce the annual average energy consumption of end-users by 9% in the period 2008-2016 compared to the average consumption for the period 2002 to 2006.

Transport

In the transport sector, if the economy growth scenarios are fulfilled, it is expected that the transport outputs of both **passenger and freight transport will continue to grow**. The structure of the transport outputs will continue to be (as in other countries of the EU-27) unfavorable with the dominance of road transport and private car transport. The specific problem of the Czech Republic in the field of transport is the obsolete and hence consumption- and emissions-intensive fleet of vehicles. In spite of those circumstances it is likely that modernisation of the fleet and the application of measures to reduce environmental burden from transport will further reduce emissions of air pollutants from traffic (NO_x, CO, VOC, PAH and particulate matter).

Another serious problem of transport is the inconvenient transport structure caused by excessive traffic load on town centres with a negative impact on the emission and noise situation in the given locations. The solution is the transition to clean mobility, a higher use of public transport and rail commuter transport, support for non-motorised transport and the introduction of low emission zones. It is needed to speedily complete the backbone road and rail transport infrastructure and to construct the infrastructure of a dense network of safe communications for non-motorised transport. A problem persists in the insufficient passability of roads for vehicles of the Integrated Rescue System (IRS), which hampers fast and effective interventions in crisis situations.

Agriculture

The Czech landscape is intensively farmed, the agricultural land fund (ALF) takes up approximately 50% of the Czech Republic's territory[17]. Around 70% of the ALF acreage consists of arable land, a minority share is taken up by grassland, the area of which is growing at the expense of arable land, and permanent crops with the acreage remaining at 1-2% of the ALF[18]. Agriculture therefore affects the character of the landscape and its ecosystem functions, the status of the natural environment and biodiversity. **The acreage of organically cultivated land is increasing.** The proportion of organically managed farmland has reached 12% of the total area of agricultural land[19]. According to the new Action Plan for the development of organic farming in the Czech Republic,[20] in the period 2016-2020, organic farming will be a fully-developed agricultural sector by 2020 with all corresponding characteristics such as a stable market, services and a State policy that supports the provision of public goods, including aspects relating to the environment and animal welfare.

[17]Source: State Administration of Land Surveying and Cadastre. http://www.cuzk.cz/Dokument.aspx?PRARESKOD=998&MENUID=0&AKCE=DOC:10-ROCENKA.
[18]Source: State Administration of Land Surveying and Cadastre. http://www.cuzk.cz/Dokument.aspx?PRARESKOD=998&MENUID=0&AKCE=DOC:10-ROCENKA.
[19]Source: CENIA. http://indikátory.cenia.cz
[20]Source: The Ministry of Agriculture. http://eagri.cz/public/web/mze/zemedelstvi/ekologicke-zemedelstvi/akcni-plan/, p. 17

Until 1991, a large amount of mineral fertilisers was applied to farmed land; then, due to the restructuring of agriculture, the application of mineral fertilisers[21] and plant protection products was significantly reduced. Around 2000, however, their consumption began to grow gradually again. Excessive and inappropriate application of fertilisers and other substances in conjunction with soil erosion are negatively reflected in the water status. Land belongs to the non-renewable resources, and therefore its continuing depletion is a growing problem, caused at present mostly by erosion and loss of soil organic matter. The soil is the main recipient of precipitation and surface water, but due to the insufficient content of organic matter the retention is not sufficient. An equally serious problem is the gradually **accelerating trend of agricultural land take**, which is most noticeable mainly in the vicinity of large towns.

b) The current status of the environment in the Czech Republic and its expected development up to 2020

The status of the environment over the last 20 years has significantly improved but it is still not, in particular as regards air quality, satisfactory and represents risks to human health and ecosystems in the affected areas. The unsatisfactory status of the environment occurs on territories of a small size (especially urban agglomerations and industrial regions), where, however, a considerable part of the population lives.

The main risks for maintaining or further improving the environmental status are changes in the landscape related to the development of settlements (expansion of existing built-up areas, changes in the functions of land use) **and the developing road infrastructure, increasing intensity of transport, intensive farming methods in the landscape and, last but not least, the consumer behavior of households** and individuals (heating, consumption of natural resources, etc.). The development of pressures on the environment will depend in the next 10 years on the development of the economy performance, while the specific burdens per unit of economic performance will continue to decrease over time. An important aspect for improving the consumer behavior of households is the support of increased consumer awareness of sustainable consumption and production and of the effects of strongly consumer behavior of the population regardless of exhaustibility of resources.

The development of anthropogenic burdens and the status of the environmental compartments may be affected by the changing climate and the associated change of the temperature and precipitation regimes. It can be assumed that this mechanism will influence the sum of emissions resulting from the production of electricity and heat, dispersion of pollutants and air quality, the quality and quantity of surface and groundwater, biodiversity and the status of forest stands, the quality of the soil, spreading of harmful organisms in agriculture and the related consumption of agrochemicals. Overall, it is likely that the so-called climate extremity will deepen, with a more frequent occurrence of risk hydrological and weather phenomena, such as floods, drought, strong wind, temperature variations, etc.

Model simulations expect a continued gradual growth of the average annual temperature by 0.3 °C per decade. The total annual precipitation will not change in a significant way, however, the volatility of total precipitation will grow both between years, and within the year, as well as the uneven territorial distribution of precipitation in our territory. The intensive utilisation of the landscape involves a reducing retention ability of the landscape which will, in connection with the expected more frequent torrential rainfall, become more

[21]Source: CENIA. http://indikátory.cenia.cz

susceptible to flooding and the risk of water and wind erosion increases. Similarly, it is also expected that droughts will be more frequent due to lack of rainfall (the so-called meteorological drought) as well as to an increased evaporation caused by high temperatures (the so-called agricultural drought). A serious phenomenon is the water shortage in sources (hydrological drought), which could escalate up to crisis situations.

Greenhouse gas emissions decreased between 1990 and 2014 by about 37%. Despite that, in comparison with the EU average, the Czech Republic has higher specific greenhouse gas emissions per capita (12.06 t of CO_2 eq./capita against 8.72 t of CO_2 eq./capita in the EU-28[22]). On the other hand, in the European context, the Czech Republic has a below-average share of transport in total emissions of greenhouse gases, which steadily ranges around 14%. Emission intensity, i.e. the emission intensity of GDP creation, is higher in the Czech Republic compared with the EU average due to the higher share of industry in GDP creation and higher emission intensity of transport. With regard to the gradual long-term decarbonisation of the energy sector and reduction of energy intensity of industry and heating, the relative share of transport in the greenhouse gas emissions will probably increase without any additional measures.

The most important **air quality problem** continues to be the excess concentrations of $PM_{2.5}$, PM_{10}, which the majority of the population is exposed to (the average annual target value recommended by the WHO for $PM_{2,5}$ is not complied with in most of the country for most of the population; the target value for average annual concentration of $PM_{2,5}$ in 2014 was exceeded in 1.8% of the territory, 8.6% of the population was exposed to exceeded concentrations, the limit for a 24-hour average concentration of PM_{10} was exceeded in 2014 in 8.16% of the territory, 24.4% of the population were exposed to excessive concentrations). Air pollution with $PM_{2,5}$ and PM_{10} which bond with carcinogenic and mutagenic polycyclic aromatic hydrocarbons (PAHs), including benzo(a)pyrene (B(a)P) results in damage to the population's genome, the occurrence of cardiovascular diseases, damage to the central nervous system, worse results of pregnancy, damage to the sperm, an increased incidence of respiratory diseases and premature deaths that exceed in an order of magnitude the deaths from road traffic accidents. The main source of that pollution in almost all settlements are home coal fired boilers and unsuitable wood fire-boxes, and in towns they are the emissions from diesel and gasoline engines that are not fitted with particle filters. The situation is worsened by bad dispersion conditions during the winter, when the concentrations of health-risk substances in the air are exceeded by one to two orders of magnitude.

By 2020, the emissions of dust, SO_2, NO_x, VOC, CO and NH_3 should be reduced. In the case of SO_2 the emissions are expected to decrease as of 2020 by more than 44% in comparison with 2009. In terms of SO_2 emissions production, the dominant influence of the public and industrial energy sector persists. NO_x emissions will fall by 2020 by almost 37%, the dominant producers will continue to be the energy and transport sectors. A relatively small reduction is expected in VOC emissions - by less than 25%. The reason is e.g. the increase in motor vehicle transport. In the case of NH_3 the emissions are expected to drop by 18% in comparison with 2005.

Water quality in watercourses is gradually improving, mainly due to the decreased quantity of discharged pollution from point sources. An important factor influencing the quality of

[22]Eurostat (2016), values for 2014:
http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=t2020_rd300&plugin=1

water is the share of the population connected to sewerage systems that end in a waste water treatment plant; their number has almost doubled since 1990, in particular wastewater treatment plants with tertiary degrees of treatment (removal of P and N) are spreading. Requirements of Council Directive 91/271/EEC on urban waste water treatment, which imposes the obligation to connect municipalities with over 2 000 inhabitants to wastewater treatment plants, have not been met only in a small number of the municipalities. The problem in point sources of pollution so far remains to be mostly phosphorus compounds that come from the cleaning and laundry preparations for professional use, and dishwashers. The problem may be also hormonal disruptors occurring in waters. On the contrary, we are failing to limit the level of diffuse pollution the source of which are some sectors of agricultural activities (the use of mineral fertilisers), which subsequently leads to eutrophication of watercourses and reservoirs. The problem of the quality of water is not only municipal water, or pollution from agricultural sources, but also e.g. pharmaceuticals that reach freely the sewage systems and are not decomposed in any way, and so re-enter the food chains. An equally important component of the assessment of the status of bodies of water according to the Framework Water Directive is their ecological status. Water quality in watercourses is also negatively affected by the longer stretches of lower flow rates, where both organic and mineral substances present in water are concentrated. Lower flow rates in the summer mean a temperature increase of water which, together with a lower content of oxygen, is lethal for fish and many other aquatic organisms. This fact is augmented in a significant way, in addition to the lower annual rainfall, by the hydro-morphological status of the beds of many rivers. Another problem causing the low flow rates is the non-compliance with minimum residual flow rates after water abstraction (e.g. small hydropower plants)

Trends in the use of landscape and climate change affect the resilience of **ecosystems**. The resilience of ecosystems is declining mainly due to the persistent effects of farming intensification in the 2nd half of the 20th century, accompanied by the unification of the landscape used that way, of the persistent significant proportion of forest stands with an unbalanced species, age and spatial composition, persistent degradation of forest soil loaded with emissions, regulation and fragmentation of watercourses and accelerating fragmentation of the landscape, above all by transport and construction. The decreased resilience of ecosystems is manifested in their reduced ability to eliminate or to absorb external influences including the dissemination of undesirable (non-indigenous, invasive or harmful) species of organisms, in the unfavourable conservation status of many wild species of plants and animals (including the plant and animal species of European importance) and in the decline of rare species, reduced number and vitality of the populations of common species, inter alia, in connection with the reduced migration permeability of the landscape and the interruption of migration routes and increased stress of plants and animals.

III. The method of determining the priorities

The determination of the priority areas and the resulting goals and their measures was mainly based on:

- assessment of the current status of the environment and of the expected development of the environment, which is briefly described in Chapter 2, part b. Account was also taken of the results of the performance evaluation of the previous SEP 2004-2010 and the mid-term evaluation of the SEP 2012-2020. The intent is to respond to the most fundamental issues in the field of the environment with the aim of improving the unsatisfactory status or maintaining the good conditions;
- an overview of the commitments arising from the approved environmental EU legislation up to 2020. The Czech Republic must fulfil all the obligations imposed by the national and European legislation, however, to determine the priorities, those obligations have been selected that have the greatest impact on improving the quality of the environment in the Czech Republic;
- the performance of the most important obligations arising from selected multilateral environmental agreements to which the Czech Republic is a contracting party and which are the most relevant for improving the environmental conditions in the Czech Republic, and from its activity in selected international organisations.

After taking into account the three basic parameters above, priorities have been set and marked according to the degree of urgency.

The most important and urgent goals are marked with three exclamation marks (14 goals in total):

- Achieving at least good ecological status or potential and good chemical status of surface water bodies, achieving good chemical and quantitative status of groundwater bodies and ensuring water protection in protected areas defined according to the Water Framework Directive
- Reducing the share of waste disposed by landfilling
- Increasing the share of material and energy recovery of waste
- Waste prevention
- Reduction of permanent take of agricultural land
- Improving air quality in areas where air pollution limits are exceeded
- Increasing the ecological stability of the landscape
- Restoring the landscape water regime
- Limiting and mitigating the impacts of landscape fragmentation
- Ensuring the protection and care of the most valuable parts of nature and landscape
- Improving the functional status of greenery in settlements
- Mitigating the impacts of natural hazards
- Mitigating climate change impacts and adaptation

Important goals, in particular of the medium-term or long-term nature, which are marked with two exclamation marks, primarily include (13 goals in total):

- Reducing the erosion risk for agricultural and forest land
- Limiting and controlling the contamination and other degradation of soil and rocks caused by human activities
- Reducing greenhouse gas emissions within the EU ETS by 21% and limiting the increase in emissions outside the EU ETS to 9% by 2020 compared with the 2005 level
- Implementing the national emission ceilings for sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and fine suspended particles ($P_{2.5}$)
- Securing 13% share of energy from renewable sources in the gross final energy consumption by the year 2020
- Ensuring a 10% share of energy from renewable sources in transport by the year 2020, while reducing emissions of NO_x, VOC and $PM_{2.5}$ from transportation
- Implementing the commitment to increase energy efficiency by 2020
- Maintaining and strengthening the non-productive functions of the agricultural landscape and forests
- Halting the decline of native species and natural habitats
- Limiting the negative impact of invasive species and taking effective measures to regulate them
- Strengthening the regeneration of brownfields with a positive impact on the quality of the environment in settlements
- Improving the management of rainwater in settlements
- Preventing the sources of anthropogenic risk
- Remediation of contaminated sites, including old environmental burdens, and repair of environmental harm

The last group are areas that mostly do not show a negative trend, but from the perspective of environmental protection it is important to maintain their good condition. They are marked with one exclamation mark, and include: (3 goals in total)

- Prevention and obliteration of negative consequences of mining operations and the extraction of minerals
- Reducing the emissions of heavy metals and persistent organic substances
- Mitigating the impacts of anthropogenic risks

IV. The structure of the State Environmental Policy

Thematic area	Strategic objective/ priority	Specific objective
1. Conservation and sustainable use of resources	1.1 Protecting water and improving its status	1.1.1 Achieving at least good ecological status or potential and good chemical status of surface water bodies, achieving good chemical and quantitative status of groundwater bodies and ensuring water protection in protected areas defined according to the Water Framework Directive
	1.2 Waste prevention, ensuring maximum waste recovery and limiting its negative impact on the environment. Supporting the use of waste as a substitute of natural resources	1.2.1 Reducing the share of waste disposed by landfilling
		1.2.2 Increasing the share of material and energy recovery of waste
		1.2.3 Waste prevention
	1.3 Protection and sustainable use of soil and of the rock environment	1.3.1 Reducing the agricultural land take
		1.3.2 Reducing the erosion risk for agricultural and forest land
		1.3.3 Limiting and controlling the contamination and other degradation of soil and rocks caused by human activities
		1.3.4 Prevention and obliteration of negative consequences of mining operations and the extraction of minerals
2. Climate protection and air quality improvements	2.1 Reducing greenhouse gas emissions	2.1.1 Reducing greenhouse gas emissions within the EU ETS by 21% and limiting the increase in emissions outside the EU ETS to 9% by 2020 compared with the 2005 level
	2.2. Reducing the level of air pollution	2.2.1 Improving air quality in areas where air pollution limits are exceeded
		2.2.2 Implementing the national emission ceilings for sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and fine suspended particulates ($PM_{2,5}$)
		2.2.3 Reducing the emissions of heavy metals and persistent organic substances
	2.3 Efficient and environmentally	2.3.1 Ensuring 13% proportion of energy from renewable sources in gross final energy

Thematic area	Strategic objective/ priority	Specific objective
	friendly use of renewable energy sources and higher energy efficiency	consumption by 2020
		2.3.2 Securing a 10% share of energy from renewable sources in transport by 2020, while reducing emissions of NO_x, VOC and $PM_{2.5}$ from transport
		2.3.3 Implementing the commitment to increase energy efficiency by 2020
3. Nature and Landscape Protection	3.1 Protection and strengthening of the ecological stability of the landscape and sustainable landscape management	3.1.1 Increasing the ecological stability of the landscape
		3.1.2 Restoring the landscape water regime
		3.1.3 Limiting and mitigating the impacts of landscape fragmentation
		3.1.4 Maintaining and strengthening the non-productive functions of the agricultural landscape and forests
	3.2 Conservation of natural and landscape values	3.2.1 Ensuring the protection and care for the most valuable parts of nature and landscape
		3.2.2 Halting the decline of native species and natural habitats
		3.2.3 Limiting the negative impact of invasive species and taking effective measures to regulate them
	3.3. Improving the quality of the environment in settlements	3.3.1 Improving the functional status of greenery in settlements
		3.3.2 Strengthening the regeneration of brownfields with a positive impact on the quality of the environment in settlements
		3.3.3. Improving the rainwater management in settlements.
4. A safe environment	4.1 Risk prevention	4.1.1 Preventing the sources of anthropogenic risk
	4.2 Mitigating the impacts of risks, including emergencies and crisis situations	4.2.1 Mitigating the impacts of anthropogenic risks
		4.2.2 Mitigating the impacts of natural hazards
		4.2.3 Mitigating climate change impacts and adaptation
		4.2.4 Remediation of contaminated sites, including old environmental burdens, and repair of environmental harm

Under these specific objectives, particular measures have been set for their achievement or tools that support the implementation of those measures and the achievement of the objectives.

V. The strategy and implementation part

1. Conservation and sustainable use of resources

The issue of sustainability of the management and consumption of resources has been given great attention in recent years and is the subject of a number of international activities and documents. This is a cross-cutting issue that extends to all priority areas of the SEP, as resources include not only all natural resources (raw materials, water, wind, soil, solar, geothermal energy, territory etc.), but also food or waste. The chapter focused on the protection and sustainable use of resources is dedicated to some of them, namely water, waste, soil and the rock environment, other resources are covered in the subsequent chapters.

Indicators
1.0.1 Development of energy intensity
1.0.2 Material intensity of GDP

1.1 Protecting water and improving its status

The primary objective of Directive 2000/60/EC establishing a framework for Community action in the field of water policy (Water Framework Directive) is to achieve at least good status of all surface waters and groundwaters and non-deterioration of their condition, which is to be achieved through appropriate measures proposed in the river basin management plans. In addition, objectives must be met in other directives on water, or related to water, such as the nitrates directive, the bathing water directive and others. Protection of the environment against the adverse effects of discharge of wastewater in urban areas is set out Council Directive 91/271/EEC on urban wastewater treatment.

National River Basin Management Plans pursuant to Section 24 par. 4 of the Water Act set out the objectives for the protection and improvement of the status of surface water and groundwater and aquatic ecosystems, to reduce the adverse effects of floods and droughts, and for surface and groundwater management, and sustainable use of the waters to ensure water services, and for improving water conditions and for protecting the ecological stability of the landscape. They also contain summaries of programmes with measures to achieve those objectives and set out a strategy for their financing. These summaries include in particular measures to prevent and control pollution from point sources, including measures aimed at reducing the extent of the mixing zones (e.g. the construction of sewers and wastewater treatment plants) and measures to ensure appropriate hydromorphological conditions for bodies of water, allowing the achievement of a good ecological status and good ecological potential (e.g. revitalisation and clearing of watercourses)

The implementation of the Water Framework Directive is supported by cooperation within the International Commission for the protection of the Elbe River, the International Commission for the protection of the Danube River, the International Commission for the protection of the Oder River from pollution, and the implementation of the UN-ECE Convention on the protection and use of frontier watercourses and international lakes and the Protocol on water and health.

Objectives:

!!! *1.1.1 Achieving at least good ecological status or potential and good chemical status of surface water bodies, achieving good chemical and quantitative status of groundwater bodies and ensuring water protection in protected areas defined according to the Water Framework Directive*

Implementation:

1.1 Protecting water and improving its status				
1.1.1 Achieving at least good ecological status or potential and good chemical status of surface water bodies, achieving good chemical and quantitative status of groundwater bodies and ensuring water protection in protected areas defined according to the Water Framework Directive				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
1.1.1.1.	To implement and update the river basin management plans in accordance with Section 24 of the Water Act	MoA, MoE – divided competency	---	Continuously
1.1.1.2.	To identify projects aimed at improving the current level of water pollution based on evaluation of the results of monitoring and assessment of the status of water bodies	MoE, MoA – divided competency	---	Continuously
1.1.1.3.	To reduce the pollution of surface water and groundwater from agricultural sources, on the basis of monitoring to determine the areas and activities in each river basin, which require priority attention and to apply the locally specific measures in those areas.	MoA	MoE	Continuously
1.1.1.4.	To correct negative human interventions by restoring natural stream channels with a favourable impact on aquatic and water-bound ecosystems and preferably focus on those sections of the streams that form bio-corridors and streams in settlements	MoE	MoA	Continuously
1.1.1.5.	To support the construction and reconstruction of WWTPs in municipalities of up to 2000 population equivalent with existing sewerage systems in accordance with Articles 7 and 2(9) of Council Directive 91/271/EEC	MoA, MoE – divided competency	---	Continuously
1.1.1.6.	To support the completion of the implementation of measures aimed at fulfilling the requirements of Council Directive 91/271/EEC on urban wastewater treatment	MoA, MoE – divided competency	---	Continuously
1.1.1.7.	To ensure the protection (protected areas of natural accumulation of water- CHOPAV), search and implementation of surface water and groundwater sources for supplying the population, and to limit risks to groundwater resources as a result of increasing gravel quarrying in the floodplains of streams	MoE, MoA – divided competency	---	Continuously
1.1.N.1	To increase the rate of charges under Section 88 of the Water Act for abstracting groundwater so that it at least matches the level of average prices for the abstraction of surface	MoE	MoA	2017

	water, while minimising the social impacts			
1.1.N.2	To ensure the implementation of Programmes on monitoring the surface water and groundwater to evaluate all measures carried out under the Framework Directive as a fundamental tool for evaluating their effectiveness	MoE, MoA – divided competency	---	Continuously

Indicators
1.1.1 The status of surface water bodies
1.1.2 The status of groundwater bodies
1.1.4. The urban wastewater treatment
1.1.5. Restoration of natural stream channels
1.1.6. Specific water protection in protected areas
3.1.3 Landscape fragmentation

Resources and financing:

The foreseen financial resources and requirements of the implementation of the measures are defined in the approved national river basin management plans for the period 2015-2021, or in the Concept of the Migration Permeability of Watercourses. The main sources are the Operational Programme Environment 2014-2020 (OPE 2014-2020), the Rural Development Programme 2014-2020 (RDP 2014-2020), programmes of the Ministry of Agriculture, the National Environment Programme and the State Environmental Fund and own resources of the owners of the water management infrastructure and of watercourse administrators.

1.2 Waste prevention, ensuring maximum waste recovery and limiting its negative impact on the environment. Supporting the use of waste as a substitute of natural resources

A prerequisite for fulfilling the requirements of EU legislation is compliance with the waste treatment hierarchy[23]. A persistent problem of the Czech Republic is landfilling as the most common method of waste disposal. In 2014, 48.27% of the total amount of municipal waste was stored in landfills (D1, D5, D12), landfilling continues to be the most common way of municipal waste disposal, even though the share of landfilled municipal waste is slightly decreasing.

In the waste management hierarchy, waste prevention is one of the most important approaches. The main tools include increasing environmental awareness among the population in order to prevent artificially incited consumption of products, which subsequently produces waste.

[23]In the context of waste management, the following hierarchy must be followed of ways to prevent and dispose of waste:
a) waste prevention,
b) preparation for reuse,
c) waste recycling,
d) other recovery of waste, for example energy recovery,
e) waste disposal.

The reduction of waste production is focused on the use of the latest available techniques, on maximum reuse of waste within the production process as a replacement of feedstock, on support of non-waste technologies in order to limit the production of waste as much as possible mainly in the manufacturing processes.

An increase in the material and then energy recovery of waste is to achieve the highest possible degree of reuse, material recovery, energy recovery and another application of the waste generated. The aim is to achieve such recovery of waste, which will burden as little as possible the environment as a whole. In particular, this means replacing natural materials and raw materials with waste, or replacing primary energy resources. To attain the above objectives, it is necessary not only to encourage the recovery of waste, but also to give priority to such a design of products, which consumes as little material as possible while allowing maximum recovery of waste generated from the products.

Circular economy is becoming one of the main priorities of the European Commission. The European Commission, after a series of previous documents that contained some partial aspects of the circular economy (Roadmap to a Resource-Efficient Europe, the Waste Thematic Strategy), has introduced a new package on the circular economy, wich includes the communication Closing the loop – an EU action plan for the Circular Economy[24] and a proposal for the revision of the legislation on waste and packaging management. From the perspective of the Commission, in the case of circular economy this is a change from the current linear model (take - make - use – dispose) to the circular model where the potential waste is returned back into the economic process and so closes the loop. The Czech Republic generally supports the strategic direction towards strengthening the principles of the circular economy and the promotion of using waste as a resource.

In fulfilling the objectives and measures set out below, account needs to be taken also of the Recommendations of the OECD Council for material flows and resource productivity, adopted in 2004 and 2008.

The waste management also includes transboundary shipments of waste from the Czech Republic and to the Czech Republic (i.e. across its borders). Transboundary shipments are regulated by EU legislation and are permitted in an administrative procedure so as to minimise their risks and impacts on the environment. The rules for transboundary shipments of waste are laid down in European Parliament and Council Regulation No 1013/2006 on shipments of waste, as amended, which is binding and directly applicable in all EU Member States. The Czech Republic is also a party to the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, which governs the movement of hazardous wastes across national borders with a view to the wastes removal and use at the global level.

[24]Source: EC COM/2015/0614 final. http://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1453384154337&uri=CELEX:52015DC0614

Objectives:

!!! *1.2.1 Reducing the share of waste disposed by landfilling*

!!! *1.2.2 Increasing the share of material and energy recovery of waste*

!!! *1.2.3 Waste prevention*

Implementation:

1.2 Waste prevention, ensuring maximum waste recovery and limiting its negative impact on the environment. Supporting the use of waste as a substitute of natural resources				
#	**Measures and tools**	**Respon sibility**	**Co-responsiblity**	**Timeframe**
1.2.0.1.	To pursue the waste management hierarchy and to minimise the financial burden of proper waste management on the residents	MoE	---	Continuously
1.2.N.1	To support in products the internalisation of externalities associated with the treatment of waste generated from them (take-back systems, extended responsibility of manufacturers, information campaigns, product life cycle assessments, etc.).	MoE	MIT	Continuously

1.2.1 Reducing the share of waste disposed by landfilling				
1.2.1.1.	To reduce by 2020 the amount of biodegradable municipal waste deposited to landfills to 35% of the total amount of biodegradable municipal waste produced in 1995 (in line with Directive 1999/31/EC)	MoE	---	2020
1.2.1.N.1	To set the charges for waste disposal at landfills, so that the costs of this, from the perspective of environmental protection the least appropriate method of waste treatment, are at least levelled with the costs of a more suitable method (i.e. energy recovery) and in accordance with the waste hierarchy	MoE	---	2018

1.2.2 Increasing the share of material and energy recovery of waste				
1.2.2.1	By 2020, to increase at least to 50% of the weight the overall level of preparation for reuse and recycling at least for waste from materials such as paper, metal, plastic and glass, originating from households, and, where appropriate, the waste of different origin, if such waste streams are similar to waste from households.	MoE	MIT, regions, municipalities	2020

1.2.2.2	To increase by 2020 the material recovery of packaging waste up to 70%, the target rate of total packaging recovery in 2020 is 80%	MoE	MIT	2020
1.2.2.3	To ensure that by 2020 at least 70% of the weight of the construction and demolition waste will be prepared for reuse and will be recycled or used for other types of its material recovery, including backfilling in which materials are replaced, in accordance with the applicable legislation, with construction and demolition waste of the category Other, with the exception of materials occurring in nature (earths and stone).	MoE	MRD, MIT, MoT	2020
1.2.2.4	To reach the level of collection, recovery, recycling and preparation for re-use of waste electrical and electronic equipment according to the objectives of Directive 2012/19/EU on waste electrical and electronic equipment.	MoE	MIT	Continuously
1.2.2.5	To re-use and recover selected car wrecks at least in 95% of the average weight of all the selected vehicles accepted for the calendar year and to re-use and materially recover at least 85% of the average weight of all the selected vehicles accepted for the calendar year	MoE	MIT	Continuously
1.2.2.6	To collect by 26 September 2016 at least 45% of batteries and accumulators placed on the market in the given year. To achieve high recycling efficiency of processes of recycling waste batteries and accumulators in line with Directive 2006/66/EC	MoE	---	2016
1.2.2.7	To increase the share of energy recovery of waste, in particular the municipal waste, while respecting the waste hierarchy	MoE	MIT, regions, municipalities	2020
1.2.2.8	To draw up rules and ensure the conditions for the recovery of the various waste streams and for selected methods of waste recovery and disposal, in particular following the EU regulations, in order to protect the environment and human health	MoE	MIT	Continuously

1.2.3 Waste prevention				
1.2.3.1	To prepare a new law on waste, built with an emphasis on strict compliance with environmental and technical standards of the EU, the principles of competition and the principles of extended producer responsibility	MoE	MIT	2016
1.2.3.2	To ensure effective monitoring of transboundary movements of wastes by strengthening inspection activities	MoE	The Customs Administration, the Czech Environmental Inspectorate (CEI)	Continuously
1.2.3.3	To periodically check and evaluate the management of waste and the fulfilment of	MoE	CEI	Continuously

	obligations of the waste producers and persons authorised in waste management			
1.2.3.4	To support the development and generation of easily repairable, recyclable and materially recoverable products	MIT	MoE	2020
1.2.3.5	To reduce the content of hazardous substances in products which become hazardous waste at the end of their life cycle	MIT	MoE, MoH	2020
1.2.3.6	To strive to minimise the quantity of packaging used	MoE	---	2020

Indicators
1.2.1 Total waste generation
1.2.2 Municipal waste generation and treatment
1.2.3 Waste treatment structure
1.2.5. The take-back of products
1.2.6 Packaging waste generation and recycling

Resources and financing:

The financial requirements and the implementation of specific measures and instruments in this area are addressed as part of the implementation of the Waste Management Plan of the Czech Republic for the period 2015-2024, the Waste Prevention Programme and the Secondary Raw Materials Policy. The main sources are in particular the OPE 2014-2020 and OP Enterprise and Innovation for Competitiveness (OP EIC).

1.3 Protection and sustainable use of soil and of the rock environment

In recent years, the annual losses of agricultural land according to the data of the State Administration of Land Surveying and Cadastre (ČÚZK) are about 5 000 ha/year, 14 ha per day. By increasing the efficiency of the legislative and economic instruments for the protection of the agricultural land fund (ALF) and the use of brownfields it is necessary to strive to reduce the losses of farmland and to reduce the area interventions into the rock environment. The slowdown of the erosion process contributing to the soil degradation will require the application of the system of organisational, agri-technical, biotechnology and technical measures. Soil erosion is a natural process influenced in the case of water erosion, which predominates in the Czech Republic, by the factor of the erosion efficiency of rain, the factor of the gradient and length of the slopes, the factor of susceptibility to erosion of the soil, the factor of the protective influence of the vegetation cover, and the factor of effectiveness of anti-erosion measures. One of the main causes of the quantity of accelerated soil erosion is the inappropriate growing of unsuitable crops on areas with potentially high erosion vulnerability. In this context, an amendment was adopted to Act No 334/1992 on the protection of the agricultural land fund, which, with effect from 1.4.2015, covers in detail the protection of agricultural land against erosion. To follow it up, the relevant implementing decrees are being prepared.

An alarming negative factor is the contamination of the soil and the rock environment with harmful substances, primarily caused by human activity. The Czech Republic keeps record of some inputs that directly affect the quality of farmland and consequently of rocks, such as

industrial and calcium fertilisers, plant protection products, sludge from wastewater treatment plants, extracted sediments from watercourses, ponds and reservoirs. These inputs need to be monitored and regulated so that their impact on the soil does not damage the soil and its properties, and as a result, does not disturb water retention in soil and the countryside and does not increase the harmful substances such as inorganic risk elements and organic foreign substances in the soil and the rock environment, and subsequently in watercourses or groundwater. In the case of damage to the soil and rock environment, their functions must be restored through protective measures, such as revitalisation (chemical, physical and biological measures leading to the recovery of land), renaturation (returning the land to its original state), reconstruction (e.g. after landslides) and reclamation of land, soil and rock after their contamination e.g. with crude oil. The aim is to reduce the negative effects of contaminated sites on the environment and human health, soil and rock.

Soil protection at European level is not yet the subject of a binding EU legislation; it is covered only in the Thematic Strategy for Soil Protection from 2006, similar legislative situation is in the protection of the rock environment. The Czech Republic promotes a comprehensive and effective approach to soil protection at EU level, while respecting the subsidiarity principle.

The use of local mineral resources and water is a real condition of keeping our society in operation. In particular, in the field of fuel-energy mineral resources, the emphasis on appropriate self-sufficiency of the Czech Republic corresponding to its possibilities is an expression of the State not resigning on ensuring the supply of electricity and heat for the population and the production sphere, and of commitment to the responsibility of the State for safety in this area. Ensuring the lowest negative environmental impact during and after mining is the fulfilment of the main objective for the protection and sustainable use of the rock environment. An integral part of a modern approach to reclamation of areas after mining must be an increase in the share of natural areas and the application of reclamation practices using succession.

Objectives:

!!!	*1.3.1*	*Reducing the permanent take of agricultural land*
!!	*1.3.2*	*Reducing the erosion risk for agricultural and forest land*
!!	*1.3.3*	*Limiting and controlling contamination and other degradation of soil and rocks caused by human activities*
!	*1.3.4*	*Prevention and obliteration of negative consequences of mining operations and the extraction of minerals*

Implementation:

1.3 Protection and sustainable use of soil and of the rock environment				
1.3.1 Reducing the permanent take of agricultural land				
#	**Measures and tools**	**Respon sibility**	**Co-responsiblity**	**Timeframe**
1.3.1.1	To promote the use of brownfields	MIT	MRD, MoE, MoA, MoT, Ministry of Defence (MoD)	Continuously
1.3.1.N.1	To maintain the current levels of contributions	MoE	MoA	Continuously

	per hectare for excluding land from the agricultural land fund with no exceptions (i.e. the amount of the basic dues per hectare will change only when changing the official prices of agricultural land lots).			

1.3.2 Reducing the erosion risk for agricultural and forest land				
1.3.2.1	To promote and extend the application of the set of mainly agri-technical, bio-technical and organisational measures to slow down soil erosion and to prevent it; to evaluate the set and to complement it as needed	MoE	MoA	Continuously
1.3.2.N.1	To cover farmland management by legislation in order to reduce its erosion exposure (reducing the size of land blocks and stricter criteria for their definition, higher responsibility of owners and users of land for damage caused).	MoA	MoE	Continuously
1.3.2.N.2	To maintain the current proportion of State owned forests with preference of environmentally more friendly forms of management while respecting competitiveness and to ensure increased support for non-productive functions of forests and to take into account those functions more in decision-making	MoA	MoE	Continuously
1.3.2.N.3	In specially protected areas and for selected specially protected species to ensure the highest possible State ownership of the land according to the priorities of nature conservation in order to reduce the financial costs of harm and to unify the care and management	MoE	MoA	Continuously
1.3.2.N.4	To strengthen the enforcement of the liability of land owners for performing the obligations resulting from the legislation on the environmental compartments	MoE	MoA, CEI	Continuously

1.3.3 Limiting and controlling the contamination and other degradation of soil and rocks caused by human activities				
1.3.3.1	To increase the efficiency of verification and regulation in the field of soil protection	MoE, CEI	MoA	Continuously
1.3.3.2	The practical application of the new limits for hazardous substances in soils	MoE, CEI	MoA	2016
1.3.3.3	To support the development of new procedures for decontamination	Technology Agency of the Czech Republic (TA CR) SRI Section of the	MoE, MoA, MoH,	Continuously

		Office of the Government (OG), Council for Research, Development and Innovation (CRDI)		
1.3.3.4	To remediate anthropogenic anomalies of hazardous substances in soils, bed sediments and the rock environment, groundwater and surface waters.	MoE	MoA, MoH	Continuously
1.3.3.5	To prepare a national soil protection programme and to start its implementation	MoE	MoA	2020

1.3.4 Prevention and remediation of negative consequences of mining operations and the extraction of minerals				
1.3.4.1	To reduce the extent of landscapes disturbed by the extraction of minerals, including the promotion of fully exploiting the already open deposits if such intent is not inconsistent with environmental protection	MoE	MIT	Continuously
1.3.4.2	To minimise the negative impacts of mining by using near-natural reclamation procedures (and by preserving the spontaneously created natural values in the affected territories)	MoE	MIT MRD	Continuously
1.3.4.3	To revitalise the territory affected by extraction of minerals, especially the black and brown coal, uranium and other raw materials by leaving parts of the areas (sufficient in terms of the ecological functions) to spontaneous or controlled succession	MoE	MIT, MRD	Continuously
1.3.4.4	To promote efficient use of mineral and secondary raw materials	MIT	MoE	2020
1.3.4.N.1	To create legislative and methodological conditions for a wider application of near-natural methods of reclamation of the territories affected by mining	MoE	MIT, MoA	Continuously
1.3.4.N.1	To promote research, development and use of environmentally sound technologies and practices in the mining, transport and processing of raw materials and in replacing primary sources with secondary sources	MIT, SRI Section of the OG, CRDI, TA CR	MoE	2020

Indicators
1.3.1. Soil erosion
1.3.2 Application of WWTP sludge on agricultural land
1.3.3 Consumption of mineral fertilisers and plant protection products
1.3.4 Contaminated sites
1.3.5 Reclamation after mining and quarrying
3.1.1a Land take and development of the use of the agricultural land fund
3.1.1b Ecological stability of the landscape
3.3.2 Brownfields

Resources and financing:
Financial support and the support for the regeneration of brownfields is implemented through the OP EIC under the subsidy programme Properties, and the Programme supporting the regeneration and business use of brownfields. Another source is the Integrated Regional Operational Programme (IROP), if conditions are met, under its support of establishing and developing social enterprises.
Support for sustainable agriculture and soil conservation is implemented mainly through the Rural Development Programme or under the cross-compliance check, and in particular as part of the so-called agri-environment-climate measures. Then through the OPE 2014-2020, the Landscape Care Programme and the programme "Support for the recovery of natural landscape functions".
Measures in the area of mineral resources are implemented and financially covered within the framework of administrative and approval processes and legislative conditions of mining activities. They are also supported under the "Programme addressing environmental damage occurring before the privatisation of the lignite mining companies in the Ústí nad Labem and Karlovy Vary Regions", and the Moravian-Silesian Region Revitalisation Programme.
Specific measures in support of resource efficiency are further specified, implemented and financially secured within the implementation of the Raw Material Policy, the Secondary Raw Materials Policy, the "Action plan to promote higher self-sufficiency of the Czech Republic in the raw material resources by substitution of primary sources with secondary raw materials" and partly also in the Waste Management Plan of the Czech Republic 2015-2024.

2. Climate protection and air quality improvements

2.1 Reducing greenhouse gas emissions

Anthropogenic emissions of the main greenhouse gases according to the United Nations Framework Convention on Climate Change (carbon dioxide, methane, nitrous oxide, fluorinated greenhouse gases) are tracked and published in the National Inventory System of Greenhouse Gases of the Czech Republic.

Through the climate and energy package adopted in December 2008, the EU has committed to cutting greenhouse gas emissions by 2020 by at least 20% in comparison with 1990. For the Czech Republic, a partial commitment arises from the package to reduce emissions by 21% compared to 2005 in the industrial and energy facilities, involved in the European system of greenhouse gas emission trading (EU ETS), and also a commitment to reduce the

emissions increase in the other sectors of the economy (outside the EU ETS) to 9% compared to 2005 as part of a shared effort to reduce greenhouse gas emissions. Those commitments are followed up with the climate and energy EU framework up to 2030 with the goal of at least 40% reduction in greenhouse gas emissions compared to 1990. In 2015, a climate conference took place in Paris, where the Contracting Parties to the UN Framework Convention on Climate Change approved the Paris Agreement with the aim to keep the rise in global average temperature at a significantly lower value than 2 °C, and to step up the efforts to achieve an increase of 1.5 °C against pre-industrial levels.

The problem of the Czech Republic and of other new EU Member States remains to be the relatively high specific greenhouse gas emissions per capita. The second sub-goal of the SEP in the area of reducing greenhouse gas emissions is, therefore, to reduce the emissions per capita by 2020 to at least the average of the EU-27 in 2005. This objective would, according to the draft Climate Protection Policy of the Czech Republic, mean a reduction of CO_{2ekv} emissions per capita by 25% by 2020 compared to 2005.

In accordance with the draft Climate Protection Policy of the Czech Republic and with Government Decree No 192 of 9 March 2016 on the Analysis of legislation feasibility in the context of reducing the dependence on fossil fuels in the conditions of the Czech Republic, a bill is being prepared on reducing the dependence on fossil fuels, so-called "Anti-fossil Act", containing the intent of the long-term objective to reduce greenhouse gas emissions by 2050 by at least 80% against 1990.

An important factor for reducing greenhouse gas emissions is the support for renewable energy sources and energy saving. Support for measures to increase energy efficiency also through the introduction of more energy-efficient technologies leads to energy savings which help to reduce the dependence of States on energy imports.

Objectives:

!! *2.1.1 Reducing greenhouse gas emissions within the EU ETS by 21% and limiting the increase in emissions outside the EU ETS to 9% by 2020 compared with the 2005 level*

Implementation:

2.1 Reducing greenhouse gas emissions				
#	**Measures and tools**	**Responsibility**	**Co-responsiblity**	**Timeframe**
2.1.N.1	To establish a regular evaluation of the relevant policies and measures to reduce greenhouse gas emissions according to a uniform methodology	MoE	Members of the Inter-ministerial Working Group on climate protection issues	2018

2.1.1 Reducing greenhouse gas emissions within the EU ETS by 21% and limiting the increase in emissions outside the EU ETS to 9% by 2020 compared with the 2005 level				
2.1.1.1	To ensure the continuation of the existing and the preparation of new programmes aimed at reducing greenhouse gas emissions	MoE	MIT, MoA	Continuously
2.1.1.2	To analyse alternatives and to propose a tax on emissions outside the EU ETS (based on an analysis to possibly introduce a carbon tax in accordance with the results of the task of the National Emissions Reduction Programme)	MoF (Ministry of Finance)	MoE, MIT	2016 (analysis); 2018 (possible implementation based on the outputs of the analysis)
2.1.1.3	To draw up a technical (methodological) regulation for public transport development planning in Regions, including the organisation of integrated transport systems and infrastructure, to increase the availability and convenience of public transport and of alternative modes of transport	MoT	MoE, MRD, local and regional authorities	2019
2.1.1.4	To support measures to increase the share of low-emission freight transport, to encourage the development of logistics and organisation of transport on the basis of the co-modality principle (using the optimal mode of transport alone or in combination), to promote public transport terminals for multimodal transport with a possible link to logistics centres	MoT	MoE	2020
2.1.1.5	To reduce methane emissions from the production of waste, particularly by limiting landfilling, by reducing the proportion of the biodegradable component of waste and by a higher use of wastes from agriculture	MoE	MoA	2020

2.1.1.6	To increase the efficiency of the existing energy sources, to reduce the share of fossil fuels in the production of electricity and heat, to increase the share of RES in gross final energy consumption and to increase energy recovery of waste	MIT	---	Continuously
2.1.1.N.1	To effectively use the funds from the sale of emission allowances and from flexible mechanisms of the Kyoto Protocol and Decision of the EP and of the Council No 406/2009/EC	MoE	MIT	Continuously
2.1.1.N.2	To actively participate in setting the rules for the European emission trading system for the next period	MoE	---	Continuously

Indicators
2.1.1 Aggregated greenhouse gas emissions

Resources and financing:
The implementation and financing of measures to reduce greenhouse gas emissions is ensured through the European emission trading system for the sectors under the EU ETS and the New Green Savings Programme, the "EFEKT, the national programme for the promotion of energy savings and utilisation of renewable energy sources", the OPE, OP EIC, the RDP and the IROP for non-ETS sectors.
The measures and instruments in this area are further developed and implemented in the draft Climate Protection Policy of the Czech Republic and at the same time there is a significant overlap with the implementation of the sectoral strategic documents - the State Energy Concept, the Waste Management Plan for 2015-2024, the Transport Policy 2014-2020 with an outlook to 2050, or the Public Transport Concept, and the Freight Transport Concept under preparation.

2.2. Reducing the level of air pollution

At present, the Czech Republic has problems with exceeding the air pollution limits in terms of protection of human health, and partly with exceeding the pollution limits for the protection of ecosystems and vegetation that are set by the European and national legislation (i.e. Directive 2008/50/EC – on ambient air quality and cleaner air for Europe - and Act No 201/2012 on air protection, as amended, and its implementing regulations). The most problematic exceedances, from the point of view of the negative impacts on human health, concern the limit values for suspended particulate matter PM_{10} and the annual emission limit for benzo(a)pyrene. Another problem is to comply with the limit value established for 2015 by Directive 2008/50/EC for suspended particles $PM_{2.5}$. Suspended particles have an impact on human health depending on their size, chemical composition and shape. Substances with carcinogenic or mutagenic effects such as heavy metals and polycyclic aromatic hydrocarbons (e.g. benzo(a)pyrene) are often bound to their surface, thereby increasing their potential hazards for human health. A wide-spread problem both in the Czech Republic and at the European level is the exceedance of tropospheric ozone limit values laid down for the protection of human health and the protection of ecosystems and vegetation. Ground-level ozone is formed only in secondary reactions of precursors which are mainly VOCs and NO_x.

The main sources of the above pollutants (dust, benzo(a)pyrene) are mainly transportation (re-suspension, attrition, exhaust emissions), home heating (obsolete solid fuel combustion

sources) and industrial sources (metallurgy, including coking plants, the energy sector and diverse technological sources). In addition to direct emissions, particles get into the air also by so-called re-suspension (re-stiring). However, a significant portion of suspended particles is formed in the atmosphere secondarily, i.e. from precursors (primarily NO_x, SO_2, NH_3 and VOCs). The main source of emissions of precursors of secondary particles is the public and industrial power generation, transport, home heating and processing of manure, including emissions from the use of fertilisers.

Measures that will reduce the actual formation of harmful effects are highly important, without a doubt one of the most current issues of the quality of life in urban agglomerations are the negative impacts of transport (exhaust gases, emissions of greenhouse gases, dust particles and noise). The Commission has defined its strategy in the area of the so-called clean mobility in the White Paper: Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system.

The objectives for reducing the emissions of pollutants set at the EU level in the Thematic Strategy on Air Pollution (2005) were confirmed in the 7th Environment Action Programme (2013). They were used as a basis for drawing up a summary of legislative documents, published in December 2013 as a so-called Clean Air Policy Package, including, inter alia, the directive on the restriction of national emissions of pollutants, which will replace the existing Directive 2001/81/EC on national emission ceilings and will lay down emission-reduction targets for 2020 and 2030. In November 2015, Directive of the European Parliament and of the Council No 2015/2193 on the limitation of emissions of certain pollutants into the air from medium combustion plants was adopted.

In view of the long-range transboundary transmission of air pollutants, emphasis will be put on fulfilling the obligations taken from the agreements concluded under the UN Economic Commission for Europe - Convention on long-range-transboundary air pollution and its protocols aimed at emissions of SO_x, NO_x, VOCs, ammonia, heavy metals and persistent organic pollutants, and in particular the emission ceilings for 2020 for SO_2, NO_x, VOCs, NH_3 and newly $PM_{2.5}$ laid down in the revised Gothenburg Protocol on the limitation of acidification, eutrophication and ground-level ozone of the already mentioned Convention on long-range transboundary air pollution (CLRTAP).

In order to ensure the fulfilment of objectives that will be set for the Czech Republic, attention will be concentrated on the key sectors that have a significant share in emissions of the tracked pollutants, with an emphasis on the application of the best available techniques.

Objectives:

!!! *2.2.1 Improving air quality in areas where air pollution limits are exceeded*

!! *2.2.2. Meeting the national emission ceilings for emissions of sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and fine suspended particles ($PM_{2.5}$).*

! *2.2.3 Reducing the emissions of heavy metals and persistent organic substances*

Implementation:

2.2. Reducing the level of air pollution				
#	**Measures and tools**	**Responsibility**	**Co-responsiblity**	**Timeframe**
2.2.N.1	To include the conditions of air protection in the public procurement of municipalities and Regions	MoE	Regions, municipalities	Continuously
2.2.N.2	To promote awareness of the options to use subsidies for reducing the emissions of air pollutants, and for implementing measures to improve air quality	MoE	---	Continuously

2.2.1 Improving air quality in areas where air pollution limits are exceeded				
2.2.2 Meeting the national emission ceilings for sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and fine suspended particulates ($PM_{2,5}$)				
2.2.3 Reducing the emissions of heavy metals and persistent organic substances				
2.2.1.1	By 2020, to reduce the emissions of $PM_{2.5}$ and other pollutants (in particular polycyclic aromatic hydrocarbons) by replacing combustion sources in homes and to ensure their proper operation and effective checks	MoE	MIT, municipalities	2020
2.2.1.2	To take into account traffic problems in the transport development plans of Regions and municipalities for attaining the limit values, for example by construction of bypasses and establishing low emission zones	MoT, local and regional authorities	MoE	2020
2.2.1.3	To increase the percentage of vehicles with alternative propulsion in the sector of public and private transport through the National Action Plan for Clean Mobility	MIT	MoT, MRD, MoE	2020
2.2.1.4	By 2020 to reduce the emissions of NO_x and $PM_{2.5}$ from the road transport sector by renewing the vehicle fleet of the Czech Republic	MIT	MoT, MoE, MRD	2020
2.2.1.5	To replace the car fleet of the public administration with alternatively powered vehicles	MoE	Local and regional authorities	Continuously
2.2.1.6	By 2020, to reduce emissions of SO_2 and NO_x by applying the best available techniques in the public energy sector	MIT	MoE	2020
2.2.1.7	By 2020, to reduce the emissions of NH_3 by 18% (compared to 2005) through the application of measures in the agricultural sector	MoA	MoE	2020

2.2.1.8	By 2020, to further reduce emissions of pollutants (dust, NO_x, SO_2, VOCs, CO), emitted from other stationary sources, on the basis of voluntary agreements negotiated between operators and the MoE in areas with persistently poor air quality (e.g. by using the best available techniques (BAT) and measures beyond the BAT	MoE	MoA, Regions and municipalities	2020
2.2.1.9	To harmonise national and regional policies in the energy sector, industry, transport, spatial planning and environmental protection in order to improve air quality	MoE	MIT, MoT, MoA	2020
2.2.1.10	To effectively cooperate with neighbouring countries with a view to eliminating transboundary transfers of air pollutants and improving air quality in border regions	MoE	Local and regional authorities	2020
2.2.1.11	To implement the National Emission Reduction Programme of the Czech Republic (NERP)	MoE	Central bodies of state administration - responsible for measures from the NERP	2019
2.2.1.12	To facilitate support for implementation of measures arising from air quality improvement programmes drawn up for zones and agglomerations	MoE	Local and regional authorities, MoT, MRD, MIT, MoA	2020
2.2.1.13	To reduce the increase of emissions by reducing the intensity of motorised road transport (support for public transport, for non-motorised transport, etc.)	MoT, municipalities		Continuously
2.2.1.N.1	To implement in practice the Air Protection Act and its implementing regulations and the amended Act on integrated prevention, which constitutes a broader legal framework for the authorisation of major industrial facilities and also contains rules for the application of BAT	MoE, regional authorities, municipalities	---	2020
2.2.1.N.2	To ensure long-term operation of the national network of air pollution monitoring in relation to the requirements of the European and national legislation on air protection	MoE	MoH, MoF	2020
2.2.1.N.3	Following the adoption of the new Air Protection Act to draw up new programmes to improve air quality for zones and agglomerations where limit values are being exceeded	MoE	Regional authorities and municipalities	2016
2.2.1.N.4	To update the programmes on improving air quality at three-year intervals	MoE	---	2019
2.2.1.N.5	To provide quality information on pollution levels for the purpose of decision-making under the Air Protection Act	MoE	---	Continuously
2.2.1.N.6	To increase awareness among the public and operators of the relevant industrial activities of the issue of BAT, developments in this area and the issues of applicability	MoE	MIT, MoA	Continuously

2.2.1.N.7	To draw up a new National Emission Reduction Programme of the Czech Republic based on the new legislation and to update it in four-year intervals	MoE	---	2019
2.2.1.N.8	To promote the dissemination of information on the adverse effects of combustion of low quality fuels on air quality and human health and on the possibilities of environmentally friendly heating	MoE	MoH	Continuously

Indicators
2.2.1 Emissions of SO_2, NO_x, NH_3, VOCs and $PM_{2.5}$
2.2.2. The proportion of the territory with exceeded limit values
2.2.3 Emissions of heavy metals and POPs

Resources and financing:

The implementation and the financing resources of measures and instruments in the field of air protection is further developed in the Mid-term Strategy to Improve Air Quality up to 2020, or in the National Emissions Reduction Programme and programmes improving air quality for zones and agglomerations, and within the Transport Sector Strategy 2014-2020 or the National Action Plan for Clean Mobility. Major sources of financing of these measures, in addition to the State and local budgets, are the OPE, RDP, OP Transport (OPT), IROP and OP EIC, the New Green Savings, the EFEKT Programme, LIFE.

2.3 Efficient and environmentally friendly use of renewable energy sources and higher energy efficiency

This priority puts emphasis on efficient and environmentally friendly use of renewable energy sources which are the only ones to be considered inexhaustible. Increasing the application of renewable energy sources in practice is necessary both for progressive elimination of dependence on fossil fuels and to strengthen energy security of the Czech Republic. The significant renewable sources in the Czech Republic are mainly energy obtained from waste biomass, photovoltaic and thermo-solar systems, wind and small hydro power plants.

The basic strategic document in the energy sector is the State Energy Concept, defining the strategy and the priorities and objectives, including the definition of instruments for their achievement. The National Action Plan of the Czech Republic for Renewable Energy determines the shares of energy from the particular types of renewable sources for 2015-2020 and also the basic statistical parameters for their support. The specific method of support is then addressed in the annually issued Price Decisions of the Energy Regulatory Office and for the transport sector in the "Multiannual programme of support for further application of sustainable biofuels in the transport sector for the period 2015-2020" and in the National Action Plan for Clean Mobility.

With regard to the proper fulfilment of its EU commitments, the Czech Republic established its indicative national target at 50.67 PJ (14.08 TWh) of new savings in the final energy consumption by 2020. The specific way of achieving that goal is contained in the updated 3rd National Action Plan for Energy Efficiency of the Czech Republic.

Objectives:

!! *2.3.1 Ensuring 13% share of energy from renewable sources in gross final energy consumption by 2020*

!! *2.3.2 Ensuring 10% share of energy from renewable sources in transport by 2020, and concurrently reducing emissions of NO_x, VOCs and $PM_{2.5}$ from transport*

!! *2.3.3 Implementing the commitment to increase energy efficiency by 2020*

Implementation:

2.3 Efficient and environmentally friendly use of renewable energy sources				
2.3.1 Ensuring 13% share of energy from renewable sources in gross final energy consumption by 2020				
#	**Measures and tools**	**Responsibility**	**Co-responsiblity**	**Timeframe**
2.3.1.1	To determine the sustainable potential of biomass production (phytomass, dendromass, waste) by 2020 or 2030	MoA	MoE, MIT	2020
2.3.1.2	To ensure a sustainable potential of biomass (including biogas) for efficient energy use without compromising food security of the Czech Republic	MoA	MoE	Continuously

2.3.2 Ensuring 10% share of energy from renewable sources in transport by 2020, and concurrently reducing emissions of NO_x, VOCs and PM_5 from transport				
2.3.2.1	By replacing fossil fuels with renewable energy sources in the transport sector to reduce CO_2 emissions by at least 3.5% before 31.12.2017, and at least by 6% before 31.12.2020	MoE	MoT, MIT	2017, 2020
2.3.2.2	To ensure a gradually increasing share of biofuels meeting the sustainability criteria in the total consumption of fuel, with an emphasis on the development of high-percentage biofuel mixtures and pure biofuels	MIT	MoE, MoA, MoF, MoT	2020
2.3.2.3	To support the implementation of pilot projects for the production of advanced biofuels	MIT	MoE, MoA	Continuously
2.3.3 Implementing the commitment to increase energy efficiency by 2020				
2.3.3.1	To support an increase in the share of highly efficient cogeneration of heat and electricity and efficient systems of thermal energy supply	MIT	---	Continuously
2.3.3.2	To take advantage of the best available techniques (BAT) for reducing energy intensity in new sources and to support their application in the existing sources	MoE	MIT	Continuously

2.3.3.3	To promote measures leading to energy savings on heating by means of a total or partial insulation of family houses and apartment buildings as part of refurbishments and in new buildings, by replacing conventional energy sources with renewable sources, by installing heating sources that use renewable energy sources and to promote the reduction of energy consumption by improving the thermal-technical properties of the building envelopes	MIT, MoE, MRD	---	2020
2.3.3.4	To expand the system of energy labelling, to increase the share of energy-saving appliances - preparation of legislation amendment drafts	MIT	---	Continuously
2.3.3.5	To increase the proportion of energy-saving public lighting	MIT	MoE	Continuously
2.3.3.6	To improve the energy performance of buildings through the introduction of mandatory energy standards for new buildings by 2020, to promote the introduction of energy management processes	MIT	---	2020
2.3.3.N.1	To promote research aimed at reducing the energy intensity of technologies, or at the technological procedures and facilities reducing the emissions of pollutants into the air (potential BATs)	SRI Section of the OG, CRDI, Grant Agency of the CR (GA CR), Technology Agency of the CR (TA CR)	MIT, MoE, MoA	Continuously

Indicators
2.3.1 Utilisation of Renewable Energy Resources
2.3.2. Consumption of energy from renewable energy sources in transport
1.0.1 Development of energy intensity

Resources and financing

Implementation of the measures and instruments and their specific forms, including the provision of financing, is ensured under the National Action Plan for Promoting Renewable Energy Sources, the National Action Plan for Energy Efficiency, and the "Multiannual programme of support for further application of sustainable biofuels in the transport sector". The National Action Plan for Clean Mobility also has a synergetic effect. In addition to aid under the Act on the supported kinds of energy and under the co-generation support, the major sources of funding are the OPE, OP EIC, IROP, New Green Savings, the EFEKT Programme.

3. Nature and Landscape Protection

3.1 Protecting and strengthening the ecological functions of the landscape

As a result of the current trend of the long-term unsustainable exploitation of the various components of the landscape, its natural functions are deteriorating on the whole.

The most important phenomena having a negative impact on the ecological stability of the landscape include its growing fragmentation related to the development of settlements, transport and other infrastructure (including fragmentation of river streams), reduced retention ability of the landscape, sudden and significant changes in the use of the landscape, wasteful use of natural resources, the intensive method of certain sectors of agricultural and in some cases of forest management. As a result of significant interference and damage to ecosystems and disruption of their functional links, the long-term and natural links and relations are, in many cases, undermined within the populations of particular species, between the species and between organisms and their natural external environment. Therefore, it is necessary to safeguard the essential ecological functions of the landscape, both by retaining the existing ecologically stable areas and by promoting the expansion and functional interlinking of such areas in the countryside and by promoting the recovery of ecosystems.

The rapidly falling passability of the landscape and rivers weakens the populations of various species in terms of their development and resilience, reduces the potential for their further maintenance and in many cases, it has led in the past to the disappearance of native species from the territory of the Czech Republic. Deteriorating habitat conditions and the shrinking or disappearance of natural habitats causes degradation of ecosystems, biodiversity decline and its gradual unification in favour of invasive and more adaptable species, and that in many cases also due to the set protection of certain species of animals. These phenomena significantly disturb the natural regenerative ability of ecosystems and of the entire landscape as well as their potential to withstand the increasing frequency of extreme weather events. The landscape's ability to slow down and accumulate surface water run-off is adversely affected, in particular, by inappropriate management on agricultural land and an increase in built-up areas. The loss of the natural morphology of stream channels due to modifications, especially straightening, paving and piping of small watercourses, and degradation of river floodplains carries with it a decline in the diversity of aquatic and water-bound ecosystems. The rapid surface water runoff results in soil erosion, land drainage reduces the landscape's natural ability to retain water. Insufficient water retention in the landscape affects all ecosystems as well as human needs, and augments the negative manifestations of climate change. Therefore, it is necessary to strive to restore the natural water regime of the landscape, which requires a comprehensive approach using anti-erosion, rehabilitation and near-natural flood protection measures and involving a modification of the farming systems in the landscape.

Ecosystems provide people with a wide range of services that directly or indirectly contribute in a significant way to maintaining and improving the quality of life. One of the ways to express the value of natural components of the environment or the value of the natural processes and phenomena in relation to the environment where they take place or occur, is to assign, through a defined procedure, an economic (financial) equivalent to the so-called ecosystem services that are mediated by those processes and phenomena.

The ecological functions of the landscape can be strengthened through appropriately configured and optimised legislative, economic and administrative-organisational measures that will support the natural function of the landscape and the conservation of the ecosystem services. An appropriate subsidy policy has a significant potential for strengthening the non-productive functions of the landscape. For the upcoming period, the support needs to be set so

as to deliver maximum effects also in terms of landscape stability and the conservation of its biodiversity.

As the issue is cross-cutting in many cases, it is necessary to ensure cooperation of all ministries and entities concerned. In particular, ensuring close cooperation between the Ministries of the Environment, Agriculture, Regional Development, Culture and regional and local authorities, particularly in the territorial planning process, is one of the prerequisites for sustainable use of the landscape, in accordance with the European Landscape Convention. An integral part of the measures to conserve and restore the ecological functions of the landscape and support its sustainable use is the need to increase the general awareness of the importance of the ecological functions of the landscape and to promote an active and responsible participation of the public in the protection, management and planning of the landscape and to strengthen the awareness that the landscape is a common cultural and natural heritage and the basis of the inhabitants' identity.

In order to meet those needs, the protection of biodiversity and of ecological functions of the landscape must be integrated into national strategic management. The ways to achieve that integration are further specified in the National Biodiversity Strategy of the Czech Republic for 2016-2025.

Objectives:

!!! *3.1.1 Increasing the ecological stability of the landscape*

!!! *3.1.2 Restoring the landscape water regime*

!!! *3.1.3 Limiting and mitigating the impacts of landscape fragmentation*

!! *3.1.4 Maintaining and strengthening the non-productive functions of the agricultural landscape and forests*

Implementation:

3.1 Protection and strengthening of the ecological stability of the landscape and sustainable landscape management				
#	Measures and tools	Responsibility	Co-responsiblity	Timeframe
3.1.N.1.1	To optimise the legislative instruments on nature and landscape protection by modifying the regulations on TSES in relation to legislation concerning territorial planning and land consolidation	MoE	MRD	Continuously
3.1.N.1.2	To optimise the legislative instruments on nature and landscape protection by introducing legislation on landscape protection and permeability for migration, and by strengthening the methodological support for its protection	MoE	MRD, MoT	Continuously
3.1.N.1.3	To optimise the legislative instruments on nature and landscape protection by setting the conditions of protecting significant landscape features and the limits for the use of their territory	MoE	---	Continuously
3.1.N.1.4	To optimise the legislative instruments on nature and landscape protection by modifying the concept of special species protection with an emphasis on the protection of biotopes and by introducing the protection of natural habitats	MoE	---	Continuously

3.1.N.1.5	To optimise the legislative instruments on nature and landscape protection by a review and comprehensive legislation on legal-economic and other instruments in the field of nature protection (compensation for damage, injury, exchange and purchase of land, corrective measures, etc.)	MoE	---	Continuously
3.1.N.2	To ensure funds for biodiversity conservation and improvement of the landscape status (e.g. revitalising, near-natural flood and erosion protection measures, more near-natural and alternative forms of forest management, implementation of rescue programmes and the suppression of non-native species)	MoE	MoF, MoA	Continuously
3.1.N.3	To launch a comprehensive monitoring of the development of the landscape using quantitative and qualitative monitoring of the status of each landscape component and the dynamics of changes in the use of the landscape so that it is possible to evaluate the effect of different influences on the functional use of the landscape and the interrelationship of those influences, and so evaluate the status of the landscape as a whole	MoE	---	Continuously
3.1.N.4	To ensure the monitoring of relevant data for evaluating the changes in nature and landscape, leading to proposals of measures and to evaluations of the effectiveness of the measures to attain the objectives of strategic and policy documents, in particular the SEP	MoE	---	Continuously
3.1.N.6.1	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, particularly the protection of species and habitats and the conditions for their conservation	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
3.1.N.6.2	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, particularly environmentally more friendly forms of farming, and the sustainability of agricultural, fishing and forest management	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
3.1.N.6.3	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular on non-native species, their influence on biodiversity and the economy and public health, and the design of appropriate measures of technical and other solutions to ensure the permeability of migration barriers	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoT, MoA	Continuously
3.1.N.6.4	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular in evaluating the impact of settlement greenery on local climate and runoff conditions	SRI Section of the OG, CRDI, TA CR,	MoA	Continuously

		GA CR, MoE		
3.1.N.6.5	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular evaluation of the fragmentation of populations, the effects of landscape fragmentation and optimisation of the methods of ensuring landscape permeability and population connectivity	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA, MoT	Continuously
3.1.N.6.6	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular the methodology for ecosystem services	SRI Section of the OG, CRDI, TA CR, GA CR, MoE		Continuously
3.1.N.7	To encourage appropriate forms of public involvement in landscape protection, management and planning and in decision-making on the use of landscape within the meaning of the European Landscape Convention	MoE	MRD, local and regional authorities	Continuously
3.1.N.8	To create conditions for the introduction of a system of evaluating ecosystem services at the national level, in a link to this issue at the EU level	MoE	MoF, MoA	2020

3.1.1 Increasing the ecological stability of the landscape				
3.1.1.1	To improve the conditions for implementing the Territorial System of Ecological Stability (TSES)	MoE	MRD, MoA	2016
3.1.1.2	To improve the functioning of the territorial system of ecological stability, to increase the proportion of the functional and stable constituent parts, and in their implementation to adequately benefit from succession processes	MoE	MoA	Continuously
3.1.1.3	To promote the protection of significant landscape elements, in particular with regard to the maintenance and improvement of their stabilising functions, and to evaluate its significance for forests in terms of the interests of general nature and landscape conservation	MoE	MRD, MoA	Continuously
3.1.1.4	To promote the preservation and extension of near-natural landscape structures performing the interaction and stabilising ecosystem functions in the landscape	MoE	MoA	Continuously
3.1.1.N.1	To ensure land resources for the implementation of measures to recover the water regime of the landscape and for implementing the TSES	MoE	MoA, MRD	Continuously

3.1.2 Restoring the landscape water regime				
3.1.2.1	To implement revitalising and nature-like flood measures in watercourses and floodplains	MoE	MoA	Continuously

3.1.2.2	To implement measures to restore the natural water regime of peat bogs and moorlands	MoE	---	Continuously
3.1.2.3	To implement anti-erosion measures in the landscape	MoA	MoE	Continuously
3.1.2.4	To support spontaneous renaturation of watercourses and floodplains	MoE	MoA	Continuously
3.1.2.N.1	To enhance education and public and administration awareness of the complex and positive effects of the measures to recover the water regime of the landscape, and to actively strengthen the position of the public and to promote its involvement in water planning	MoE	MEYS, MoA	Continuously

3.1.3 Limiting and mitigating the impacts of landscape fragmentation				
3.1.3.1	To ensure territorial protection of the interlinked system of migration-significant territories and long-distance migration corridors in spatial planning	MoE	MoA, MRD, MoT	Continuously
3.1.3.2	To ensure landscape permeability as part of the complex land consolidation and as part of farming	MoA	MoE	2020
3.1.3.3	As a priority to strengthen the capacity of the existing transport corridors before building concurrent roads with similar transport capacity serving the same territory To plan, design and implement transport corridors and structures with regard to the need to ensure the connectivity of wildlife populations and to ensure their adequate migration permeability	MoT	MoE	2020
3.1.3.4	In the construction and reconstruction of transport structures, to use technical and other solutions ensuring functional permeability for animals and making passable the existing structures in areas with significant fragmentation influence	MoT	MoE	2020
3.1.3.5	To implement systemic measures to ensure migration passability of watercourses for fish and other water-bound organisms (especially constructing fish ladders, removing unnecessary migration barriers, ensuring downstream fish migration, restoring the connection of floodplain habitats with watercourses, etc.	MoE, MoA – divided competency	---	Continuously
3.1.3.N.1	To ensure structured financial resources for ensuring the permeability of migration barriers, in particular transport structures, and for drawing up migration studies	MoE	MoT	Continuously

3.1.4 Maintaining and strengthening the non-productive functions of the agricultural landscape and forests				
3.1.4.1	To improve the targeting, flexibility and efficiency of agri-environment-climate measures within the Rural Development Programme in terms of their contribution to the improvement of ecological stability of the landscape and biodiversity protection, to expand them with programmes on arable land, especially for targeted support of endangered	MoA	MoE	Continuously

	species of the agricultural landscape, and to ensure their coherence with other nature protection instruments			
3.1.4.2	To implement legislative-administrative and financial support for the development and spatial expansion of sustainable methods of agricultural, fishing and forest management	MoA	MoE	2020
3.1.4.3	To increase the differentiation of farming methods on the agricultural land fund (ALF) and to improve the species- and spatial composition of forests	MoA	MoE, MoD	Continuously
3.1.4.4	To restore wetland habitats and promote their tolerance by economic operators, to restrict drainage of the still undrained commercial land and to optimise the drainage methods with regard to improving water retention in the landscape	MoE	MoA	Continuously
3.1.4.N.1	To implement the National Forest Programme (NFP) also after 2013 as a tool for sustainable management of forests	MoA	MoE	Continuously
3.1.4.N.2	To maintain in national legislation the State supervision of forests in terms of environmental protection	MoE	MoA, MoD	Continuously
3.1.4.N.3	To support forest certification under the PEFC and FSC systems and the cascade use of wood as tools to promote sustainable management of forests	MoA, MoE – divided competency	---	Continuously

Indicators
1.1.5. Restoration of natural stream channels
1.1.6. Specific water protection in protected areas
3.1.1a Land grab and development of the use of the agricultural land fund
3.1.1b Ecological stability of the landscape
3.1.3 Landscape fragmentation
3.1.4 Implementation of agri-environment-climate measures and organic farming
3.1.5 Shares of PEFC and FSC certified forests
3.1.6 The amount of dead wood
3.2.3 Species composition of forests

Resources and financing:

The implementation and execution of measures takes place in particular in the form of legislative amendments and adjustments to the settings or conditions of providing funding from the existing subsidies. The European grant programmes in this area include the OPE 2014-2020, OPT, IROP, RDP 2014-2020, and the national Landscape Care Programme, the programme "Support for recovery of the natural functions of the landscape" and the National Environment Programme (NEP). For the area of research and development, the tools are implemented through the funding of the TA CR programmes – Beta and Epsilon.

3.2 Conservation of natural and landscape values

On a European scale, the Czech Republic ranks among the territories with a relatively high richness of species of flora and fauna and natural habitats which are an essential component of ecosystems. This fact is given mainly by the geographical location on the boundary line of the Hercynian, Carpathian, Polonian and Pannonian biogeographical sub-province, by the variety of geological substrates and historical evolution of the landscape. It is estimated that there are currently more than 35,000 animal species and over 3,000 species of vascular plants in the territory of the Czech Republic. The diversity and number of plant and animal species is, however, constantly evolving and changing with time. On one hand, species are emerging, in particular as a result of an undesirable expansion of non-native, often invasive organisms, but also as a result of natural changes in the occurence of thermophilic species due to the changing climate. On the other hand, scientific studies confirm a strong threat to biological diversity and species extinction on a global scale with losses 100 times up to 1,000 times faster than what would have been the natural decline rate. The situation is similar in the case of the Czech Republic and about a third of the species occurring in the Czech Republic must be now assessed as in danger of eradication or extinction.

A number of natural habitats is also threatened, in particular those whose character was conditioned by traditional farming methods (pastures, steppe lawns, high-light forests maintained by sprout management), and the intensive utilisation of the landscape or, on the contrary, a farming decline in some areas causes their gradual degradation. Intensification of the landscape use continues to threaten the remnants of primeval forests and near-natural forests and other similar habitats such as peat bogs. The vanishing habitats, however, surprisingly include those requiring a certain level of disruption by natural factors (e.g. river pools) and by human activities (habitats requiring disruption of the soil surface, of which many can be found only in areas used by the military or in spaces non-recultivated after mining and quarrying). The basic prerequisite for ensuring a favourable conservation status of species and habitats is the status of the landscape and its functions, in particular conditioned by environmentally sound farming and other use of the landscape (see 3.1.). The status of a number of species and habitats, however, is such that it is necessary to pay them individual attention, and to take measures to improve their status.

Protection of areas with a fair amount of protected and native species of flora and fauna, with preserved natural biotopes and functioning natural processes, or aesthetically valuable landscape is largely ensured through protected areas (including Natura 2000), which represent the most valuable parts of the natural and landscape heritage in the Czech Republic. Although the system of protected areas is the backbone of nature protection in the Czech Republic, the striving for a careful use of the landscape as a whole is equally important. It is the only way to satisfy the demands of the natural continuation of natural processes necessary not only for the presence of all organisms in nature, but also for sustainable functioning of the society. Therefore, it is necessary to pay attention to maintaining the ecosystem links and functions of the landscape (e.g. connectivity threatened by the growing fragmentation of the landscape) as well as to the protection and care of specific territories with a significantly high level of biodiversity, such as (in addition to the specially protected areas) the former military zones and training grounds, territories affected by extraction of minerals, etc.

The protection of species and habitats and entire ecosystems, of links between them and their sustainable use is also the obligation of the Czech Republic arising from international conventions and EU law. The fulfilment of these commitments is in line with the priorities of the Czech Republic in the area of nature and landscape conservation.

A very specific area of nature and landscape protection is the issue of geographically non-native, mainly invasive plant and animal species. On a global scale, biological invasions are considered one of the most important factors (along with biotope loss and degradation), threatening the original biodiversity. In the Czech Republic, there is a number of invasive species which seriously threaten native species and natural habitats (e.g. Reynoutria, Giant Hogweed, the American species of crayfish, raccoon, mink) and at the same time a number of non-native species of plants and animals are used or newly introduced that pose a risk or whose characteristics are not sufficiently known. It is important, therefore, to limit the use of unexamined species and at the same time take measures to assess and manage risks and to address the current biological invasions. It is needed to reflect the newly adopted EU legislation in the field of invasive species, to create conditions for its implementation and to appropriately adapt the overall approach to alien species in the Czech Republic, including the legislation on their use and regulation.

Objectives:

3.2.1 Ensuring the protection and care for the most valuable parts of nature and landscape

3.2.2 Halting the decline of native species and natural habitats

3.2.3 Limiting the negative impact of invasive species and taking effective measures to regulate them

Implementation:

3.2 Conservation of natural and landscape values				
3.2.1 Ensuring the protection and care for the most valuable parts of nature and landscape				
#	**Measures and tools**	**Respon sibility**	**Co-responsiblity**	**Timeframe**
3.2.1.1	To ensure adequate care for the subject of protection in all specially protected areas in accordance with their objectives of protection, and with the approved plans of care, including adequate financial resources	MoE	MoA	Continuously
3.2.1.2	To protect sites of Community importance (SCIs) and bird areas (BAs) and care for them in accordance with the accepted summaries of recommended measures, as part of that to review the proposed degrees of specific territorial protection for all Natura 2000 SCIs in the Czech Republic	MoE	MoA	Continuously
3.2.1.3	To ensure representative records of the most valuable parts of nature and landscape in the system of the specially protected areas	MoE	---	Continuously
3.2.1.N.1	To increase the effectiveness of economic instruments in order to support the achievement of the objectives of protection of the specially protected areas, Natura 2000 sites and to ensure the protection of specially protected species and to condition the support (e.g. agri-environment-climate measures) by the fulfilment of those objectives	MoE	MoA, MoF	Continuously

3.2.1.N.2	To ensure a functional and effective system of continuous monitoring of the status of the objects of protection of the specially protected areas, SCIs and BAs taking into account the fulfilment of the objectives of the protection of each area and the effectiveness of their protection and care carried out, the status of the populations of rare and endangered species and their habitats, with regard to the effectiveness of their protection and the implementation of the care for them.	MoE	---	Continuously

3.2.2 Halting the decline of indigenous species and natural habitats				
3.2.2.1	To ensure the protection of specially protected species of plants and animals, to keep the status of their habitats, and to strengthen the protection and sustainable use of genetic resources of animals, plants and micro-organisms	MoE	MoA, MoD	Continuously
3.2.2.2	To ensure the protection and sustainable use of genetic resources of animals, plants and micro-organisms	MoE, MoA – divided competency	---	Continuously
3.2.2.3	To implement rescue programmes for selected specially protected (most endangered) species, and the concepts (care programmes) for the management of populations of other selected species; in the international context to optimise the ex-situ protection of endangered species (zoological and botanical gardens)	MoE	---	Continuously
3.2.2.4	To mitigate the negative effects of human activities (measures to eliminate the wounding and killing of animals, care for handicapped animals, etc.).	MoE	MoA, MoT, MIT	Continuously
3.2.2.5	To review the appropriate protection and care of natural habitats in terms of representativeness and uniqueness, and to ensure proper management or restoration of rare and vanishing habitat types (sandbanks, moors, disturbed habitats) and as part of that to review the list of specially protected species of animals and plants	MoE	MoA, MoD	Continuously
3.2.2.6	To promote effective measures to regulate the number of animal species with regard to the balanced structure of communities	MoE		Continuously

3.2.3 Limiting the negative impact of invasive species and taking effective measures to regulate them				
3.2.3.1	To design and implement comprehensive and systemic measures to reduce the negative impact of species having adverse impacts on biodiversity or economic production (prevention including risk assessment, monitoring, timely responses, eradication or long-term regulation).	MoE	MoA, MIT	2016

3.2.3.2	To rectify the level of use of species with adverse impacts on biodiversity or economic production and of species with unexamined characteristics on land owned by the State, and on the other territory to support restrictions on their use and regulation in the context of the principles of good agricultural practices, forest management and water management practices	MoA	MoE, MoD	Continuously
3.2.3.3	To limit the risk of introduction and spread of alien invasive species through trade and transport	MoE	MoA, the Customs Administration	Continuously
3.2.3.4	To create and implement programmes to suppress (eradicate, regulate) selected species with adverse impacts on biodiversity or economic production, or in selected territories	MoE	MoA, MoD	Continuously
3.2.3.N.1	To create a single information system on alien species (to unify information on nature protection and the phytosanitary and veterinary field) and to link it to international databases	MoE	MoA	Continuously
3.2.3.N.2	To create and ensure monitoring of alien species in order to supplement and link the existing systems in the phytosanitary and veterinary field	MoE	MoA	Continuously
3.2.3.N.3	To optimise the legislative instruments of nature and landscape protection by optimising the legislation related to alien species of organisms (in coordination with the development in the EU) with an emphasis on removing inconsistencies, linking the procedure in the field of nature protection with the phytosanitary and veterinary legislation, and addressing sources and vectors in the area of trade and transport	MoE	---	Continuously

Indicators
3.2.4 Special protection areas in the Czech Republic
3.2.5 Area of the sites on the national Natura 2000 list
3.2.1 Abundance of native endangered species in the Czech Republic
3.2.2 The status of animal and plant species of European importance
3.2.6. The status of natural habitat types of European importance
3.2.7 Invasive species

Resources and financing:

The measures and instruments are implemented and funded through legislative action. Any costs incurred in the actual implementation are reimbursed through the MoE and MoA as part of compensation for farming difficulties, and then through grant programmes OPE 2014-2020, the Program of Landscape Management, the Landscape Natural Function Restoration Program, the "Sub-programme of inalienable State-owned assets in the specially protected areas", the NEP, RDP 2014-2020, OP Fisheries.

3.3. Improving the quality of the environment in settlements

Settlements represent a specific part of the landscape that can include primarily built-up areas including public spaces and public green areas, industrial and logistics complexes, recreational buildings, but also the transport-technical infrastructure - the network of roads, motorways and railways, navigation channels, artificial water reservoirs, areas significantly changed and devastated by mining and other human activities, etc.

The landscape of settlements, especially the urban landscape, is strongly influenced by man, it has specific characteristics and it fulfils specific demands of the population. Yet even in such a landscape it is needed to maintain and enhance ecological functions. Ecological functions of the landscape of settlements, bound mainly to greenery areas, are a prerequisite for a healthy environment of the inhabitants. In the landscape of settlements, building and technical elements prevail over the natural elements and significantly affect all components of ecosystems. The biggest problems of the landscape of settlements include adverse microclimate (higher average temperature – the heat island effect), unbalanced water balance, fast surface run-off (more paved surfaces), polluted water and its disposal (sewer systems, the issue of relief chambers), degraded air quality (high content of dust particles, emission of harmful substances)

The requirements of the population to ensure a quality environment can be fulfilled also by strengthening the ecological functions of the landscape of settlements, in particular of the areas of gardens and parks and green areas in general, taking into account the specific requirements on their functional use and their form. A suitably structured system of areas of gardens, parks and other green elements in settlements is unsubstitutable in performing more functions at the same time. It positively affects the microclimate (regulates humidity, captures dust particles), contributes significantly to the ecological stability and biodiversity of the environment, is a space where natural processes can take place, has a positive effect on the psychological well-being of people (is an aesthetic value, reduces noise burden).

Therefore, it is necessary to improve the status of greenery in settlements, i.e. to preserve and conceptually create spatial and functional conditions for ecological processes while meeting the functional and aesthetic demands of the population. In the interest of improving the quality of life of the population, it is necessary to significantly improve the coordination of the developing areas of housing, community amenities, infrastructure, transport, greenery system, services, production and trade, culture, and recreation. The quality of life in settlements can be improved by increasing the overall variability of the urban territory with an emphasis on the establishment, maintenance and revitalisation of gardens, parks and other green areas, or their vegetation elements, and by including natural or near-natural elements in the structure of the greenery system. A big issue is the improvement of water management, both of drinking and rain water. With regard to the minimal area reserves for new green areas in existing built-up areas of most settlements, it is necessary to protect and enhance the quality and functional efficiency of gardens, parks and other existing greenery.

Objectives:

!!! *3.3.1 Improving the functional status of greenery in settlements*

!! *3.3.2 Strengthening the regeneration of brownfields with a positive impact on the quality of the environment in settlements*

!! *3.3.3 Improving the rainwater management in settlements*

Implementation:

3.3. Improving the quality of the environment in settlements				
#	**Measures and tools**	**Responsibility**	**Co-responsiblity**	**Timeframe**
3.3.N.1	To optimise the conditions of grant programmes for support and regeneration of housing in relation to the protection of greenery and animals in settlements, and for appropriate management of rainwater	MoE, MRD	MoF	Continuously

3.3.1 Improving the functional status of greenery in settlements				
3.3.1.1	To create conditions for maintaining and defining new greenery areas and elements as components of a functional and structured system of urban greenery in settlements as part of territorial planning, so that the basic condition for the performance of its functions is met	MRD	MoE, local and regional authorities	Continuously
3.3.1.2	To increase the biological value of greenery in settlements by supporting the application of plant species suitable for the respective habitat (e.g. indigenous tree species, the introduction of multiple-species lawns in public parks), revitalisation of existing and implementation of functional links among the existing green areas, and by measures to ensure the conditions for the existence of wild animals in settlements (implementation of elements to support nesting of birds, reptiles, etc.)	MoE		Continuously
3.3.1.3	To support near-natural processes and methods in the revitalisation and establishment of green areas	MoE	---	Continuously
3.3.1.4	To promote constructional-architectural solutions of buildings that suitably reduce the demands on ground coverage (e.g. underground carparks, multi-story parking garages, etc.).	MRD	MIT, MoC	Continuously
3.3.1.N.1	To optimise the methodological support for territorial planning and nature and landscape protection in relation to the requirements on the functions of the urban greenery system.	MoE, MRD (divided responsibility)		2018

3.3.2 Strengthening the regeneration of brownfields with a positive impact on the quality of the environment in settlements[25]				
3.3.2.1	To support the revitalisation (regeneration) of brownfields in the built-up areas of settlements with regard to the complex needs of territorial development and the requirements for quality of the environment	MIT	MRD, MoE	Continuously
3.3.2.2	To implement functional areas or elements of greenery within each of the supported projects on revitalisation (regeneration) of brownfields in connection to the urban structure of settlements	MIT	MoE, MRD, local and regional authorities	Continuously
3.3.2.3	Supporting construction in brownfields	MIT	MRD	Continuously
3.3.2.N.1	To monitor and evaluate the effectiveness of the Act on the ALF protection in relation to the use of lower-quality soil and brownfields for implementing investment projects	MoE	MoA, MIT	Continuously
3.3.2.N.2	To monitor and assess the status of brownfields in particular in terms of their number, type, size structure, property relations and the ecological status	MIT	MoE, MRD, MoA	Continuously
3.3.2.N.3	To update the National Brownfield Regeneration Strategy	MIT	MRD, MoE, MoA, MoT	2017

3.3.3. Improving the rainwater management in settlements				
3.3.3.1	To support the conversion of existing impermeable surfaces to permeable (lay-by or parking areas, too wide or unused roads, paved front yards, courtyards)	MoE	MRD	Continuously
3.3.3.2	To support, in the implementation of newly built hard surfaces, suitable disposal of rainwater (infiltration, accumulation or evaporation of rain water - permeable paving using grassed paving blocks, grassed joints or porous materials, grass-covered roofs, etc.)	MoE	MRD	Continuously
3.3.3.3	To increase the share of green areas which include appropriate retention measures (infiltration contour furrows, grooves or pits, retention trenches, green roofs, etc.)	MoE	MRD, MoA	Continuously
3.3.3.4	To promote measures leading to the capture and subsequent use of rainwater and non-potable water on site (tanks, underground sumps)	MoE	MRD, MoA	Continuously
3.3.3.5	To support revitalisation of watercourses in settlements	MoE	MRD, MoA	Continuously

[25]The forthcoming update of the National Brownfield Regeneration Strategy, prepared by the Czechinvest agency and governed by the MIT, will review and determine the appropriate settings of responsibilities for each of the measures under objective 3.3.2. That strategy will complement in a comprehensive way other necessary measures in the area of brownfields, which are not set out in the SEP.

Indicators
3.3.1 Greenery in settlements
3.3.2 Brownfields
3.1.2 Retention ability of the landscape

Resources and financing:

The measures and instruments are implemented as part of legislation amendments and of public administration performance without increased financial demands. They are also implemented through the setting and the terms of providing funds from the grant programmes OPE, IROP, RDP and OP EIC, and under the "Programme of support for regeneration and business use of brownfields" and the NEP.

4. A safe environment

4.1 Risk prevention

The major sources of risks of anthropogenic origin include chemical substances, sources of ionising radiation and biological agents, which are most often the carrier of the risk or the cause of serious accidents.

In order to prevent contaminated sites and to prevent environmental harm, it is key to keep continuous records of or to remove contaminated sites, which leads to an easier use of brownfields after the contamination is removed. Monitoring of exposure and the effect of pollutants from rehabilitated environmental burdens on human health, and monitoring of environmental compartments related to the decontaminated site is directly linked to that objective.

At the same time it is necessary to fulfil the provisions of multilateral environmental treaties aimed at the protection of health and the environment from harmful effects of chemical substances, such as the Stockholm Convention on persistent organic pollutants and the Rotterdam Convention on the prior informed consent procedure in international trade in certain hazardous chemicals and pesticides, which the Czech Republic is a contracting party to, and continually apply best practices of international organisations such as the UN, OECD, UNEP or WHO. The Czech Republic will also take steps to ratify the Minamata Convention on Mercury.

The establishment of and compliance with the rules for safe management of hazardous waste and its storage is intended, as far as possible, to limit the negative impact of hazardous waste on the environment and human health, and to allow the removal or minimisation of the properties that make waste hazardous, and give priority to the use of hazardous waste before its disposal or storage.

Ensuring safe transport and handling of hazardous waste is to limit the risks resulting from the transport of hazardous waste, caused both by the handling itself during transport, and by the risk of leakage of the transported waste during transportation or in an accident. The Czech Republic will implement the Basel Convention on the control of transboundary movements of hazardous wastes and their disposal, and its Strategic Plan for the period 2011-2020.

Restriction of illegal hazardous waste management, in particular by streamlining the verifications of compliance with the obligations imposed by law, is required to ensure a high

level of environmental protection and to identify the actual management of hazardous wastes and their impact on the environment.

In the area of reducing the risks of dangerous chemical substances and preparations, the Czech Republic has reached the level required by the EU legislation, which lays down the requirements for the protection of health and the environment from the negative effects of hazardous chemical substances and mixtures.

In accordance with the EU policy, the important areas are prevention of major accidents caused by selected hazardous chemical substances and mixtures and limitation of the consequences of such accidents for humans and the environment. Due to the large number of objects with dangerous activities that can cause industrial accident with transboundary effects, it is important that the Czech Republic is involved in the implementation of the UNECE Convention on the transboundary effects of industrial accidents.

The use of genetically modified organisms (GMOs) and genetic products in the Czech Republic is regulated by legislation so as to ensure the protection of human and animal health, the environment and biological diversity. GMOs and genetic products can be used only on the basis of authorisation under that legislation. The Czech Republic will also ensure the implementation of international rules, layed down in the Cartagena Protocol on Biosafety.

An important factor that has an adverse effect on human health and on ecosystems is noise. The most signifiant source of noise has clearly shown to be road transport. As a result of the increasing intensity of road traffic, noise is becoming one of the major environmental problems.

The Czech Republic will continue to implement measures to eliminate the consumption of controlled substances that deplete the ozone layer, in accordance with the objectives of the Montreal Protocol on substances that deplete the ozone layer, and European Parliament and Council Regulation (EC) No 1005/2009 on substances that deplete the ozone layer. In doing that it will ensure that the ozone-depleting substances are not replaced with substances contributing to climate change.

Objectives:

!! *4.1.1 Preventing the sources of anthropogenic risk*

Implementation:

4.1 Risk prevention				
4.1.1 Preventing the sources of anthropogenic risk				
4.1.1.1	To expand the monitoring of pollution of soil and crops by particularly dangerous substances – PCB, dioxins, heavy metals, polycyclic aromatic hydrocarbons etc. in areas with potential risks (old environmental burdens, accidental pollution)	MoE	MoA	Continuously
4.1.1.2	To lay down rules for the safe management of hazardous wastes in order to limit as much as possible the negative impact of hazardous waste on the environment and human health	MoE	MoH	Continuously
4.1.1.3	More effective control of movements of hazardous wastes and implementation of the obligations of waste producers involved in the movement of hazardous waste (e.g. efficient	MoE	CEI	2017

	computerisation of selected reporting and recording obligations)			
4.1.1.4	Evaluation of substances under the Community action plan	MoE	MIT	Continuously
4.1.1.5	To reduce the risks of dangerous chemicals by making their production, import and use subject to authorisation	MoE	MIT	Continuously
4.1.1.6	To streamline the organisational and technical measures to reduce the likelihood of serious accidents caused by hazardous chemicals	MoE	MIT	Continuously
4.1.1.7	To implement a system of placement of hazardous objects and facilities in adequate distances from residential areas	MoE	MRD	Continuously
4.1.1.8	To streamline the decision-making process on the management of GMOs, based on a scientific risk assessment, at both national and EU level, and at the same time to ensure public information and participation	MoE	MoA, MoH	2017
4.1.1.9	To limit the negative impact of exposure to noise on human health and ecosystems	MoH	MoE, MRD, MoT	Continuously
4.1.1.10	To recover and destroy controlled ozone-depleting substances (ODS) using binding technology	MoE	MIT	Continuously
4.1.1.11	To check for leaks of ODS from refrigeration equipment and to encourage replacement of old technology containing the controlled substances with new technology containing substances that have zero ozone-depleting potential (ODP) and at the same time the least possible global warming potential (GWP)	MoE	MIT	Continuously
4.1.1.12	To ensure replacement of halon extinguishers and fire protection systems that fall into the category of the so-called critical use according to Commission Regulation (EU) No 744/2010 amending European Parliament and Council Regulation (EC) No 1005/2009 on substances that deplete the ozone layer, with regard to the critical uses of halons	MoE	MoT, MoD, MoH, MIT	Continuously
4.1.1.13	To map sites with potential leakage of risk inorganic or organic substances, toxic metals into the environment from mines, heaps and dumping hoppers (and or methane from underground mines in populated areas) and to evaluate the health risks	MoE	MIT, Czech Mining Authority, MoH	Continuously
4.1.2.N.1	To support research and development in the areas of recognition and evaluation of anthropogenic influences on each of the environmental compartments with a focus on reducing the environmental burden, in particular in the use of natural resources, and on eliminating and preventing the negative effects of human activity on the environment and human health	SRI Section of the OG, CRDI, GA CR, TA CR, MoE	MoH	Continuously

Indicators
4.1.1. Genetically modified organisms and products
4.1.2. Noise pollution
1.2.3 Waste management structure

Resources and financing:
The measures and instruments are implemented as part of the normal exercise of State administration, and in connection with the implementation of commitments and the EU legislation. Measures for the F-gases are implemented using the funds of the National Environment Programme.

4.2 Mitigating the impacts of risks, including emergencies and crisis situations

Natural hazards such as floods, flash floods, prolonged drought, extreme weather phenomena are natural processes that can be, in some cases, affected by human activity, however, they can not be effectively prevented. A rational approach is to deepen the knowledge of these natural processes, define the zones that may be vulnerable to varying degrees of natural hazards, and to regulate human activity in such areas so that, in the event of threatening phenomena, the loss of human lives is minimised, the impacts on human health and the environment as well as the loss of property are reduced. It is key to map and categorise areas at risk of natural hazards, to monitor selected areas at risk, to draft legislative measures to regulate activities in the affected areas, and to support the implementation of measures that mitigate those natural hazards.

The flood risk reduction is covered at the international level by European Parliament and Council Directive 2007/60/EC on the assessment and management of flood risks. That directive, which has been integrated into national legislation in 2010, sets the course leading to a reduction of the flood risk and mitigation of flood effects on human health, the environment, cultural heritage and economic activity. The primary tools for achieving the objectives of that Directive are the Flood Risk Management Plans with proposals of concrete measures.

The main threats of crisis situations (disasters) are the threats of natural origin (in particular, extensive flooding, extreme torrential floods, prolonged drought, extreme weather phenomena, landslides, natural fires, the spread of invasive plants and animals) as well as threats caused by human activity (in particular, extensive leaks of hazardous substances, serious industrial accidents, terrorism and disruption of critical infrastructure functionality).

To prevent and reduce the risk of and to mitigate the effects of emergencies caused by natural disasters, severe accidents, terrorist acts and disrupted functionality of critical infrastructure are the main objectives of the so-called environmental safety which is currently viewed as a condition where the probability of a crisis situation arising from the disruption of the environment is still acceptable. In order to preserve environmental safety, the main task is to complete the system of specific legislative, technical, organisational and information measures reducing the risk of crisis situations (disasters) and their negative effects. Emphasis must be placed on the system of prevention, mitigation and mainly adaptation measures that are the most efficient and economically the most effective and require a single legal basis.

Human activity increasingly affects the self-regulatory capacity of ecosystems, thereby reducing their ability to deal with further environmental changes both of natural and

anthropogenic origin. Natural disasters usually arise out of human control, yet in many cases, people can affect their progress, whether positively by long-term systematic preparation and planning or, on the contrary, their underestimation may contribute to negative consequences. It turns out that crisis situations in the human environment may not arise only as a result of individual adverse phenomena and events, but also of their combinations.

The issue of reducing the risk of disasters of anthropogenic and natural origin has long been addressed by the United Nations under the International Strategy for Disaster Reduction. In 2015, new governing documents have been adopted for the following 15-year period - the Sendai Declaration and the Sendai Framework for Disaster Risk Reduction 2015-2030, which have been joined by the Czech Republic.

In the area of climate protection, it is necessary to adopt measures that will help to effectively adapt to the impacts of climate change. In terms of the negative impacts of climate change, the greatest threat for the Czech Republic is the increased incidence of extreme meteorological and hydrological situations. The Czech landscape is not yet ready for the existing and future fluctuations of precipitations and the increasingly frequent drought. A priority task will be to implement adaptation measures in the context of water management and to set the optimal relationship of the water regime and the landscape structure.

Even if adaptation measures are taken and implemented, in particular at local and regional level, the expected impacts of climate change will affect almost all areas of human activity (water management, agriculture, forestry, fisheries, health, industry, energy, tourism, social policy, etc.). In this context, it is therefore necessary to coordinate the activities and exchange knowledge and experience at the EU level. From the economic perspective, the adoption of effective adaptation measures is desirable in general because the adjustment costs in many cases are lower than the potential damage caused by inactivity.

In the Czech Republic, the definition and implementation of adaptation measures requires a comprehensive approach and coordination of activities of all the relevant ministries and bodies. This comprehensive approach has been ensured since 2015 through the Strategy of Adaptation to Climate Change in the Czech Republic, and the forthcoming Action Plan.

An alarming negative factor is the contamination of the soil and the rock environment with harmful substances, primarily caused by human activity. The aim is to reduce the negative effects of contaminated sites on the environment and human health, soil and rocks, or to remove contaminated sites including old environmental burdens created before privatisation, sites left after the Soviet army, sites burdened with ammunition from World War II, and to prevent environmental damage or to remedy it.

Objectives:

!	*4.2.1 Mitigating the impacts of anthropogenic risks*
!!!	*4.2.2 Mitigating the impacts of natural hazards*
!!!	*4.2.3 Mitigating climate change impacts and adaptation*
!!	*4.2.4 Remediation of contaminated sites, including old environmental burdens, and repair of environmental harm*

Implementation:

4.2 Mitigating the impacts of risks, including emergencies and crisis situations				
4.2.1 Mitigating the impacts of anthropogenic risks				
#	**Measures and tools**	**Respon sibility**	**Co-responsiblity**	**Timeframe**
4.2.1.1	To increase the safety of the environment against the consequences of crisis situations (disasters) caused by anthropogenic sources of risk (leakage of dangerous chemicals from a stationary facility, terrorism with serious impacts on the environment)	MoE	MoD, MIT, MoT, MoA	Continuously
4.2.1.2	In the context of environmental safety to reduce the risk of the emergence and the negative impact of crisis situations (disasters) of anthropogenic origin	MoE	MIT, MoA, MoT, MoI	Continuously
4.2.1.N.1	To maintain the degree of legal protection for the environment also in addressing economic damage	MoE	---	Continuously
4.2.2 Mitigating the impacts of natural hazards				
4.2.2.1	To monitor selected areas at risk and to identify and monitor regularly the environmental risk sources	MoE	State Office for Nuclear Safety (SONS), MRD, MoA	Continuously
4.2.2.2	To propose regulation of activities in the areas at risk	MoE	MRD, SONS	Continuously
4.2.2.3	To implement Flood Risk Management Plans	MoE	MoA	Continuously
4.2.2.4	To improve early-warning systems	MoE	MoI	Continuously
4.2.2.5	To increase the safety of the environment against the effects of crisis situations caused by natural sources of risks (flooding, flash floods, heavy rainfall, long-term drought, extreme wind)	MoE	MoI, MoA	Continuously
4.2.2.6	To reduce the negative impacts of crisis situations (disasters) of natural origin	MoE	MIT, MoA, MoT	Continuously
4.2.2.N.1	To support the development of tools and technologies to identify, monitor, predict, prevent and mitigate natural risks and to monitor their impact	SRI Section of the OG, CRDI, TA CR, MoE		Continuously
4.2.3 Mitigating climate change impacts and adaptation				
4.2.3.1	To implement measures to stabilise the water regime in the landscape also by strengthening the organic fraction of soil, to strengthen and effectively use water resources and to protect	MoE	MoA	Continuously

	water resources, to deal with extreme hydrological situations – floods and long-term drought			
4.2.3.2	To seek to stabilise the water regime in the landscape in order to prevent the risk of floods and long-term drought through the implementation of near-natural flood protection measures	MoE	MoA	Continuously
4.2.3.3	To carefully use the territory and to sustainably manage soil (protection against erosion and degradation, increasing the share of organic matter in soil, increasing water retention in the landscape, preserving soil fertility), to introduce new technology, to diversify agriculture, etc.	MoE	MoA	Continuously
4.2.3.4	To implement measures to adapt to the negative manifestations of climate change also in agriculture, forestry, biodiversity, energy and industry, air, public health, the urbanised landscapes, transport and tourism, etc.	MoE	MoA, MIT, MoH, MoT, MRD	Continuously
4.2.3.5	To support the reconstruction and expansion of water treatment plants and water mains to secure quality drinking water for all citizens	MoA, MoE – divided competency		Continuously
4.2.3.N.1	To provide more funding to research and development in the field of climate change scenarios, identification and monitoring of its impact, the definition and monitoring of the risk areas	SRI Section of the OG, CRDI, GA CR, TA CR, MoE		Continuously
4.2.3.N.2	In accordance with the Strategy of Adaptation to Climate Change in the Czech Republic, to introduce regular evaluations of the already implemented climate change adaptation measures and to identify new adaptation activities	MoE	MoA, MoT, MoI, MIT, MRD, MoC, MoH, MoD, MEYS, Regions	Continuously

4.2.4 Remediation of contaminated sites, including old environmental burdens, and remediation of environmental damage				
4.2.4.1	To implement a national inventory of contaminated sites in the Czech Republic	MoE	---	Continuously
4.2.4.2	To establish and adhere to priorities in the removal of contaminated sites	MoE	---	Continuously
4.2.4.3	To ensure continuous records of environmental damage in the territory of the Czech Republic and their update	MoE	CEI	Continuously
4.2.4.4	To draw up risk analyses on contaminated sites with priority A (the current contamination) and P (potential contamination), including an assessment of health risks	MoE	MoH, CEI, MoF	Continuously
4.2.4.5	To remove old environmental burdens created prior to privatisation and resulting from the activities of the Soviet army in the Czech Republic	MoE	MoF	Continuously

4.2.4.6	To monitor the exposure and the effect of pollutants from rehabilitated environmental burdens on human health, and to monitor the environmental compartments related to the decontaminated site.	MoE	MoH, SONS	Continuously
4.2.4.7	To define and apply preventive measures to avoid the creation of contaminated sites and environmental damage cases	MoE	---	Continuously

Indicators
4.2.1 Drought
4.2.2 Floods
4.2.3 Slope instability
4.2.4 Fires
1.3.4 Contaminated sites

Resources and financing:

The measures and instruments will be implemented and funded as part of the normal exercise of State administration (geological service, hydrometeorological service, etc.), and under the Strategy of Environmental Security 2015-2020, the Radon Programme of the Czech Republic 2010-2019, in the context of flood risk management plans and territorial planning, the Strategy of Adaptation to Climate Change in the Czech Republic and its follow-up Action Plan. Major sources of finance in this area are the OPE 2014-2020, and the NEP.

In the case of contaminated sites and old environmental burdens, the public funding will be provided from the OPE 2014-2020, NEP, the MoE program for repairing damage after natural disasters, and from the MoF as part of financing environmental public contracts. The measures in this area are further developed in the applicable methodological guidelines and manuals.

VI. Cross-cutting instruments for implementing the environmental policy

In the early days of influencing the status of the environment by policies, the tools that were virtually exclusively applied were normative (also called administrative), based on the enforcement powers of State administration bodies. Other tools began to be gradually applied with regard to the finding that the normative instruments do not cover all possibilities of advancing the principles of environmental protection. The set used today consists of complementary instruments, listed in the 7th Environmental Action Programme – a general action programme of the EU up to 2020: legal requirements (measures that impose obligations and verify their implementation), technology transfer, market-based instruments, research, measures concerning environmental liability, "green" public contracts, voluntary instruments and agreements, information tools, the involvement of stakeholders, and more.

Listed below are the types of instruments that will be used the most to implement the SEP objectives and measures.

Normative (administrative and legal) instruments represent mainly the imposing of obligations in the form of various commands, prohibitions and restrictions which mean for the addressees the obligation to refrain from something, to tolerate something or to do something in order to protect the environment. These obligations are either laid down by law directly or can be imposed on the basis of the law in a normative or individual act of the competent environmental protection authority.

The administrative and legal instruments also include various permits, consents, or opinions issued by the environmental protection authorities, which are either a prerequisite for a specific activity marked by the law with certain conditions, if any, for its implementation (this is usually an authorisation), or a condition for the issuance of a permit (usually consent or opinion), or they serve as a representation required for the issue of a decision. The administrative and legal instruments also include standards (which express different kinds of requirements for maintaining a certain necessary or at least still bearable and achievable status of the environment), categorisation of the objects of protection and sources of threats to the environment, checking and supervision, legal liability (liability for losses of the environment and tort liability) and enforcement of decisions.

Economic and market-based instruments - these include the so-called negative stimulation tools – fees, penalties, or taxes – and positive stimulation tools, i.e. various forms of aid. Currently, in terms of aids, the Czech Republic uses a whole range of options, both from the domestic resources (SEF CR, ministerial programmes), as well as from foreign sources including the EU (eg. the Cohesion Fund, the structural funds, the European Agricultural and Rural Development Fund, the LIFE programme). The resources for the provision of aid from domestic public sources are significantly limited. Market-based instruments cannot be understood as narrowly defined tools in specific areas, but must be seen from a broader perspective of the context of the three pillars of sustainable development – the economic, environmental and social. In this context, it is necessary to take into account, in particular, the issue of reforming harmful subsidies.

Information tools – to support the exercise of State administration, for effective monitoring, evaluation and publication of information about the status of the environment, there is the Single Environmental Information System, which is made up of sub-agenda and integration information systems. Based on the automated work with information through those electronic systems it is possible to effectively analyse and evaluate the development of the

environmental compartments, better understand their mutual ties and empirically support other environmental policy instruments, or to participate in the achievement of the environmental policy objectives.

The Single Environmental Information System (JISZP) is built in the Ministry on the basis of the so-called "Competence Act" and represents the source of information for correct and effective decision-making and application of the environmental policy instruments, for supplying correct and timely information about the environment, and for satisfying the broad information requirements of public administration and the public itself. The access to that information is described in the MoE Information Strategy for 2011-2014, serving as a basis for creating the methodologies of information support for the State environmental policy.

In connection with building and consolidating the JISZP it is necessary to support linking the JISZP to European environmental information systems, or using the services of those systems. In particular, this concerns those systems and services that are formed on the basis of the GMES programme and SEIS. Another one is INSPIRE as one of the important initiatives of the Commission aimed at creating the European spatial data infrastructure, which is anchored in Directive 2007/2/EC.

Monitoring and the preparation of evaluation reports - an essential part of operating in the EU and being involved in international structures is also the collection of information, regular reporting of the required information and its exchange and regular evaluations.

Voluntary instruments are activities of business and other entities that seek to reduce the negative environmental impact of their activities, and are introduced and implemented by those entities on the basis of their free (voluntary) decision and go beyond the requirements of the applicable legislation.

The basic principles of voluntary instruments are:

- voluntariness - no legislation requires their application;
- prevention - they focus on removing the causes of environmental problems, not their consequences (damage repair);
- a systematic approach - a deliberate focus on those areas and activities of the organisation that have a negative impact on the environment.

The use of voluntary instruments (or voluntary environmental activities) at the corporate level is therefore of great importance both for the company itself and for the society as a whole. The preventive focus of voluntary instruments leads to environmental recovery and so greatly contributes to the implementation of sustainable production and consumption, or sustainable development. Other benefits that appear at the corporate level include an increasing competitiveness, better image or operational cost savings. In the Czech Republic, the following voluntary instruments are currently in use: labelling of environmentally friendly products, the introduction of environmental management systems (EMAS, ISO 14001), cleaner production, green public procurement, and voluntary agreements. These include life cycle assessment or eco-design.

Programming instruments (sometimes also referred to as conceptual), in the broad sense **strategic planning tools** such as, in particular, strategies, policies, concepts, programmes and plans, are crucial parts of the application of the State Environmental Policy. A necessary condition of their effectiveness is the consistency of the proposed targets and their integral part is often the strategic environmental assessment (SEA). As part of those instruments, it is also usually proposed to change or create other types of instruments, including the method of their application. An example of this type of instrument is the very SEP CR, but also the Strategic Framework for Sustainable Development of the Czech Republic. At the level of

municipalities, the most significant voluntary programming instrument is the Local Agenda 21.

Institutional instruments govern the functioning of public administration institutions in the area of market monitoring, security, risk reduction, etc. Those instruments should be effective, coordinated and verifiable by the public, i.e. space for corruption should be limited to the lowest possible level. Public administration institutions should set the example in applying the principles of environmental policy (e.g., in the environmentally sound public contracts).

Research, development and innovation should, through their outputs, contribute to the reduction of the detrimental impacts of human activities on the environment, ensure remediation and elimination of the damage caused and monitoring of changes in the quality of the environment. New technologies represent a significant potential for protection and improvement of the environment and sustainable development. The SEP mentions several R&D instruments or identified areas in which it is important to implement science and research activities so that the set objectives and priorities are attained in a satisfactory manner. Further specified needs or other areas are the subject of other strategic materials of the MoE or of other relevant ministries that focus on a specific area of interest. The fundamental document for the area of research, development and innovation and their development is the National Policy for Research, Development and Innovation for 2016-2020. With regard to the specific needs of the environment, the main objectives of that national policy and other strategic documents serve as a basis for creating a comprehensive R&D&I Concept of the MoE.

Environmental education and awareness is a long-term preventive tool in the environment sector, aiming to reduce future environmental damage caused by lack of knowledge or information, and the resulting incompetent decisions, e.g. at the level of companies, authorities or other institutions. An important role is played in this area by the development of competences needed for environmentally responsible action, i.e. action or conduct which is most favourable, in the given situation and with the given options, for the current and future status of the environment. Environmentally responsible behaviour is understood as responsible personal, civic and professional conduct in areas dealing with nature, the landscape, natural resources, consumer behavior and active influence on one's surroundings with the use of democratic processes and legal resources.

The development of environmental knowledge, skills and attitudes is ultimately a prerequisite for increasing the competitiveness of the Czech Republic, because Czech enterprises and businesses need a sufficient number of human resources (for so-called green jobs[26]), so that they can in the future respond flexibly to the introduction of environmentally friendly technologies and eco-innovation in industry and construction. It is also an assumption that employees will bring additional resources to businesses in the form of energy savings, resources.

An important prerequisite for a respectful attitude of the public to their environment is a quality method of providing information and advice in the field of the environment and its

[26]"GREEN JOBS" are defined as employment opportunities in agriculture, industry, research and development, services and administration, which significantly contribute to the protection and restoration of the environment. In particular, these are work positions, whose purpose is to protect and restore ecosystems and biodiversity, reduce consumption of energy, water and other resources through improved efficiency, savings, to reduce emissions of carbon dioxide and other greenhouse gases as well as to prevent and minimise all types of waste and pollution.

compartments (air, water, soil, etc.). This requires the development of principles which are part of the Aarhus Convention (published under No 124/2004 in the Collection of International Treaties) and Act No 123/1998 on the right to environmental information, as amended.

Implementation:

Cross-cutting instruments for implementing the environmental policy				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
N.N.1	To improve the legal enforceability of legislation relating to the environmental compartments	MoE	---	Continuously
N.N.2	To assess and remove inconsistency and redundancy in legislation whose application affects areas of the environment and management of resources	MoE	MIT	Continuously
N.N.3	To increase the demands on the applicability and use of methodologies certified by State administration bodies	MoE	---	Continuously
N.N.4	To update measures to strengthen the competitiveness and business development in the Czech Republic from the perspective of environmental protection legislation, together with a progress report on their implementation	MoE	MIT	2017, 2019
N.E.1	To optimise the setting of aid in the field of the environment (RDP, operational programmes, national programmes, etc.) in order to strengthen the positive synergy effects in the environment and eliminate the negative effects and also to promote awareness of the possibilities to use such aid	MoE	MoF, MRD, MoA	Continuously
N.E.2	To introduce an assessment of possible negative environmental impacts into the process of preparing new aid (e.g. subsidy programmes, tax benefits) based on a methodology prepared by the MoE, and thereby prevent the unwanted introduction of aid with significant negative environmental impacts	MoE (design), central state administration bodies (assessment)	---	2020
N.E.3	To regularly analyse the effects of the fees in the specific environmental legislation and, if necessary, to propose its amendment with regard to achieving the SEP objectives	MoE	---	Continuously
N.I.1	To develop the JISZP based on the declared SEP objectives and priorities	MoE	MoH	Continuously
N.I.2	To coordinate the activities leading towards building and using the COPERNICUS systems for the needs of environment management	MoE	MEYS, MoT	Continuously
N.M.1	To revise and update the existing system of obtaining relevant analytical data for the purposes of evaluating changes in the field of the environment, in particular nature and landscape	MoE	---	Continuously
N.M.2	To supplement the system of appropriate indicators for monitoring the status of the environment and evaluating the SEP, and to create criteria for evaluating the prevention and mitigation of the environmental consequences of crisis situations	MoE	---	Continuously

N.D.1	To encourage the conclusion of voluntary agreements with major polluters and other interest groups for the purpose of reducing environmental impacts beyond the legislative requirements	MoE	---	Continuously
N.D.2	To promote the involvement of the public in the care for the natural environment and landscape and their protection, including voluntary work organised under the law on volunteer service	MoE	MoC	Continuously
N.D.3	To take advantage of the National Cleaner Production Programme for the dissemination of information on the options of applying eco-efficient measures in enterprises and on aid for the implementation of specific projects	MoE	MIT	Continuously
N.D.4	To promote the application of modern environmental management tools in enterprises and other organisations, in particular by implementing the National EMAS Programme	MoE	---	Continuously
N.D.5	To support the expansion of products with lower environmental impacts, in particular through the National Programme of Environmental Labelling, and the Rules for the Application of Environmental Requirements in Public Procurement and Purchases by State Administration and Self-governments	MoE	MRD	Continuously
N.D.6	To increase the number of municipalities that apply Local Agenda 21 and to increase the level of implementation of the LA21 process in such municipalities	MoE	---	Continuously
N.IN.1	To provide the necessary methodological support and training of State administration in the area of environmental inspection and enforcement	MoE, MoI	---	Continuously
N.IN.2	To improve methodological support for the performance of State administration, to improve the activities of authorised persons and State organisations and public administration in relation to environmental protection, or nature and landscape protection, including suitable farming in floodplains, environmental management of watercourses, the definition and implementation of TSES and defining, protecting and managing the system of urban greenery	MoE	Local and regional authorities, MRD, MoA, MoC	Continuously
N.V.1	To support research and analysis aimed at the cost-effectiveness of policies, and so minimising the costs of achieving the SEP objectives	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
N.EVVO.1	To promote environmental education and awareness among civil servants	MoE	MoI	Continuously
N.EVVO.2	To support the increase in environmental literacy throughout the society, in all of the major target groups	MoE, MEYS, MoI		Continuously
N.EVVO.3	To increase environmental awareness by promoting systematic awareness-raising, education and eco-consultancy	MoE	---	Continuously
N.EVVO.5	To perform and accomplish the tasks arising for the Czech Republic from the “Convention on access to information, public participation in	MoE	---	Continuously

	decision-making and access to justice in environmental matters" (the so-called Aarhus Convention)			

VII. Cross-cutting tools of international cooperation

Effective environmental protection requires a comprehensive and coordinated transboundary approach. In the context of the ongoing globalisation, the importance of international cooperation is constantly increasing as the only effective way to address global and regional but also national environmental problems. International cooperation in the field of the environment has been characterised in recent years by high dynamics, reflecting in the growing number of emerging international institutions and concluded multilateral and bilateral agreements or their amendments.

By entering the EU, the Czech Republic has gained the opportunity to engage more intensively in dialogue at the international level and to participate in addressing the existing environmental problems and sustainable development, in particular in the framework of the United Nations (UN), the Organisation for Economic Cooperation and Development (OECD), the Council of Europe (COE), the United Nations Educational, Scientific and Cultural Organisation (UNESCO), multilateral and bilateral environmental agreements, and foreign development cooperation.

Implementation:

Cross-cutting tools of international cooperation				
#	**Measures and tools**	**Respon sibility**	**Co-responsiblity**	**Timeframe**
N.EU.1	To fulfil the obligations arising from the existing EU environmental legislation; in the proceedings brought against the Czech Republic for failure to fulfil obligations under that legislation (so-called EU Pilot and infringement proceedings) to ensure effective communication between the parties concerned and to find suitable solutions aimed at terminating the proceedings and preventing the initiation of proceedings against the Czech Republic before the Court of Justice of the EU	MoE	---	Continuously
N.EU.2	To take an active part in discussing new legislative, non-legislative and strategic EU documents at all levels of the EU structures with an impact on the environment in order to promote the interests of the Czech Republic	MoE	---	Continuously
N.EU.3	To play an active role in the European institutions - e.g. the European Environment Agency (EEA), the network of inspectors of IMPEL (Implementation and Enforcement of Environmental Law)	MoE	---	Continuously
N.MEZ.1	To participate actively in cooperation and activities of international intergovernmental organisations and global and regional programmes concerned with environmental protection (UNEP, HLPF, UNECE, ISDR, UN, OECD, GEF, GCF, etc.) and apply standards in national conditions and meet commitments accepted as part of Czech membership in those international organisations.	MoE	---	2020
N.MEZ.2	To pursue rationalisation and streamlining of international governance of sustainable development and environment in the context of the Agenda 2030 implementation both in relation to proposals of establishing new international institutions and, in	MoE	Ministry of Foreign Affairs (MFA)	2020

	particular, in relation to the internal reforms of the existing international organisations			
N.MEZ.3	Taking into account the EU and national priorities in the field of rationalisation and higher efficiency of international governance, to engage in the negotiation on establishing new international organisations and initiatives relevant for the Czech Republic, dealing with environmental protection and sustainable development including the landscape, and periodically assess the benefits of the existing memberships in international organisations	MoE	Ministry of Foreign Affairs (MFA)	2020
N.MULTI.1	To fulfil the obligations arising from multilateral environmental agreements already ratified, and actively participate in their further development at the international level	MoE	---	2020
N.MULTI.2	To engage in the negotiations of new environmental treaties relevant for the Czech Republic, and to create conditions for their ratification at national level (e.g. the Minamata Convention on Mercury, the Paris Agreement under the United Nations Framework Convention on Climate Change)	MoE	MoA, MoT, MIT, MoH, MFA	Continuously
N.MULTI.3	To evaluate the implementation of the relevant provisions of the United Nations Convention to Combat Desertification in countries seriously affected by drought with regard to tackling soil erosion	MoE	MoA	2020
N.BIL.1	To develop bilateral cooperation with the neighbouring countries of the Czech Republic and strive to improve the environment in cross-border areas, especially in the quality of air, water, and nature and landscape protection, and to fulfil the obligations arising from the already ratified bilateral agreements in all areas of the environment	MoE	---	Continuously
N.BIL.2	To develop bilateral cooperation with selected partner countries, focusing on the protection of all environment compartments with an emphasis on the dissemination of modern environmental technologies	MoE	MIT	2020
N.BIL.3	To support the process of EU enlargement and provide experience to candidate countries through bilateral cooperation and implementation of twinning projects (EU funds)	MoE	---	2020
N.BIL.4	In accordance with the existing Concept of International Development Cooperation of the Czech Republic for the period 2010-2017 and Agenda 2030 for Sustainable Development to promote the environment as the key issue within the international development cooperation	MoE	Ministry of Foreign Affairs (MFA)	Continuously
N.BIL.5	To collaborate on broader transfer of experience from the Czech Republic to the countries of the Western Balkans, to the region of South-Eastern and Eastern Europe, the Caucasus and Central Asia, with a priority emphasis on the States of the Eastern Partnership, in accordance with the priorities of Czech foreign policy	MoE	Ministry of Foreign Affairs (MFA)	2020
N.BIL.6	To facilitate the involvement of Czech firms in the international programmes of the World Bank and the European Bank for Reconstruction and Development	MoF	MoE	2020

VIII. Indicators

1. Conservation and sustainable use of resources

Name of the indicator	**1.0.1 Development of energy intensity**
Indicator definition	*The indicator represents the amount of energy that is required to maintain a certain volume of production, transport or services. It corresponds to the demands of the national economy on energy consumption. It is built as the share of the consumption of primary energy sources in the GDP of the Czech Republic.* *The indicator is assessed on the basis of data of the CZSO and MIT.*

Name of the indicator	**1.0.2 Material Intensity of the GDP**
Indicator definition	*The indicator evaluates the development of effectiveness with which materials entering the economic system are transformed into economic output.* *The data sources for assessing the indicator are CZSO and the Environment Centre of the Charles University.*

1.1 Protecting water and improving its status

Name of the indicator	**1.1.1 The status of surface water bodies**
Indicator definition	*The assessment of the status of water bodies is performed by a synthesis of individual indicators monitored, using the principle one-out, all-out (i.e. in the event that any of the monitored indicators of any assessment component exceed the limit value, the evaluation of the entire body is classified as noncompliant, or achieves the value of the worst monitored indicator). This assessment meets the requirements of the Water Framework Directive and is carried out in six-year intervals as part of the evaluation of planning periods.* *Article 2 "Definitions" of the European Parliament and Council Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy (the Water Framework Directive) point 24: "Good surface water chemical status" means the chemical status required to meet the environmental objectives for surface waters specified in Article 4(1)(a), i.e. such chemical status of a body of surface water in which concentrations of pollutants do not exceed the environmental quality standards established in Annex IX, under Article 16(7) and under other relevant Community legislation setting environmental quality standards at Community level.* *Ecological status is an expression of the quality, structure and functioning of aquatic ecosystems associated with surface waters and consists of the biological and physical-chemical component. For heavily modified and artificial bodies of water, which include in the Czech Republic also all bodies of water of the lake category, the assessment concerns ecological potential, not ecological status.* *The data are sourced from the monitoring programmes in representative profiles (Data source: T. G. Masaryk Water Research Institute, public research institution (VÚV T.G.M.), from source documents of the River Basin state enterprises).*

Name of the indicator	**1.1.2 The status of groundwater bodies**

Indicator definition	*The assessment of the status of water bodies is performed by a synthesis of individual indicators monitored, using the principle one-out, all-out (i.e. in the event that any of the monitored indicators of any assessment component exceed the limit value, the evaluation of the entire body is classified as noncompliant, or achieves the value of the worst monitored indicator). This assessment meets the requirements of the Water Framework Directive and is carried out in six-year intervals as part of the evaluation of planning periods.* *Article 2 "Definitions" of the Framework Water Directive, points 25 and 26: "Good groundwater chemical status" is the chemical status of a body of groundwater, which meets all the conditions set out in table 2.3.2 of Annex V. "Quantitative status" is an expression of the degree to which a body of groundwater is affected by direct and indirect abstractions.* *The data are sourced from the monitoring programmes in representative profiles. (Data source: T. G. Masaryk Water Research Institute, public research institution (VÚV T.G.M.), from source documents of the River Basin state enterprises).*

Name of the indicator	**1.1.4. The urban wastewater treatment**
Indicator definition	*The indicator will assess the number of agglomerations, divided according to population equivalent and according to the status of implementing the requirements on the construction of sewerage network and wastewater treatment, and, where appropriate, the status of implementing the requirements arising from Council Directive 91/271/EEC will be provided.* *Data will be obtained from the Selected Data of the Property Register (VÚME) and the Selected Data of the Operational Register (VÚPE)-MoA*

Name of the indicator	**1.1.5. Restoration of natural stream channels**
Indicator definition	*Number of kilometers of the restored river network with a favourable impact on aquatic and water-bound ecosystems, localised on water bodies of surface water.* *The indicator is assessed on the basis of data of the River Basin state enterprises, the Nature Conservation Agency, National Parks Administrations and the SEF.* *National Indicator Codebook – MS2014 +: 46505 – Length of revitalised watercourses*

Name of the indicator	**1.1.6. Specific water protection in protected areas**
Indicator definition	*The indicator will assess specific water protection according to the types of protected areas:* • *In territories reserved for the abstraction of water for human consumption (evaluation of the status of bodies of surface water and groundwater intended for human consumption according to the number of bodies used for abstraction of drinking water and the number of bodies with exceeded working objectives, EQS and indicators for drinking water according to the law),* • *in the bathing areas and swimming pools in the wild (assessing the status of categories resulting from the relevant legislation),* • *in vulnerable areas (the number and size of vulnerable areas according to the applicable Government Order, the implementation of the objectives of vulnerable areas is assessed in regular four-year intervals),* • *in areas designated for the protection of habitats or species and in*

	protected areas (Natura 2000, specially protected areas) *The indicator is assessed on the basis of data of the MoE, MoA, VÚV T.G.M., CHMI and the National Institute of Public Health* *National Indicator Codebook 2014 - MS2014+ - indicator 94412 (Proportion of agricultural land under the obligation of farming that supports the improvement of water management (priority area 4B - Better water management, including the management of fertilisers and pesticides)*

1.2 Waste prevention, ensuring its maximum recovery and limiting its negative impact on the environment. Supporting the use of waste as a substitute of natural resources

Name of the indicator	**1.2.1 Total waste generation**
Indicator definition	*The indicator indicates the development of total waste generation in the Czech Republic, expressing the proportion of total production of hazardous waste in total waste generation. The indicator is an essential indicator ($I.1_v$ and $I.1_n$) for monitoring the development of waste management. It refers to the total quantity of waste produced and recorded in the Czech Republic according to Act No 185/2001 on waste and to implementing regulations, as amended. Other basic indicators and indicators of the development of waste management are related to this indicator.* *The indicator is assessed on the basis of data from the Information System of Waste Management and the CZSO data*

Name of the indicator	**1.2.2 Municipal waste generation and treatment**
Indicator definition	*The indicator evaluates the production of municipal waste for the categories of mixed municipal waste, and municipal waste other than mixed municipal waste. Furthermore, it evaluates the structure of municipal waste management by categories, with an emphasis on categories D1, D5 and D12 concerning landfilling.* *The indicator is assessed on the basis of data from the Information System of Waste Management and the CZSO data.*

Name of the indicator	**1.2.3. Waste management structure**
Indicator definition	*Based on the SEP objective "Increasing material and energy recovery of waste", the indicator evaluates the shares of waste management methods, incl. hazardous waste, for the following categories: material recovery, energy recovery, incineration, landfilling and other waste disposal methods.* *The indicator is assessed on the basis of data from the Information System of Waste Management and the CZSO data.*

Name of the indicator	**1.2.5. The take-back of products**
Indicator definition	*This indicator evaluates the level of the take-back of waste from selected products according to Act No 185/2001 on waste. Attention is devoted mainly to the electrical equipment, batteries and tyres. Emphasis is placed on evaluating the success in implementing the take-back objectives for particular product groups.* *The indicator is assessed on the basis of data from the Information System of Waste Management and the CZSO data.*

Name of the indicator	1.2.6 Packaging waste generation and recycling
Indicator definition	*This indicator focuses on the total yield of separate collection in comparison to the legal rate of recycling in the Czech Republic. The development of waste production and management is evaluated in the categories of paper and cardboard, plastics, glass, metals and wood.* *The indicator is assessed on the basis of data from the Information System of Waste Management and the CZSO data.*

1.3 Protection and sustainable use of the soil and rock environment

Name of the indicator	1.3.1. Soil erosion
Indicator definition	*The indicator is expressed as the share of area potentially at risk of water and wind erosion in the total area of agricultural land.* *The evaluation will use data provided by the Research Institute for Soil and Water Conservation (VÚMOP) (maps of potential threat to agricultural land by water and wind erosion, and shares of agricultural land according to the different categories of potential threat).*

Name of the indicator	1.3.2 Application of WWTP sludge on agricultural land
Indicator definition	*The indicator assesses the content of allowable nutrients in agricultural soil and the amount of risk elements and substances in soil and sludge from wastewater treatment plants.* *The indicator is assessed on the basis of data obtained from monitoring conducted by the Central Institute for Supervising and Testing in Agriculture as part of the agri-chemical testing of agricultural soils, basal soil monitoring and monitoring of WWTP sludge intended for application on agricultural land.*

Name of the indicator	1.3.3 Consumption of mineral fertilisers and plant protection products
Indicator definition	*The indicator will include both the total consumption of mineral fertilisers and plant protection products and their division by type. It will be expressed in a development chart separately for the mineral fertilisers and plant protection products. It will also include a development chart for the consumption of calcareous materials.* *The indicator is assessed on the basis of MoA and VÚMOP data.*

Name of the indicator	1.3.5 Reclamation after mining and quarrying
Indicator definition	*The indicator will be designed as the development of the area with mining manifestations by the stage of reclamation: reclamation not started yet, reclamation started, reclamation completed since the start of the mining, reclamation completed in a given year. In the reclamations, to monitor separately the share of areas left to succession or controlled succession (or to monitor the share of each type of reclamation), in accordance with the indicators of the proposed Raw-material Policy and the MoE project on creating a methodology for using successions in the reclaimed areas. The evaluation will include the amount of funding spent on reclamation after mining and quarrying, both by mining organisations and from the State budget.* *The indicator is assessed on the basis of data of the CGS.*

2. Climate protection and air quality improvements

2.1 Reducing greenhouse gas emissions

Name of the indicator	**2.1.1 Aggregated greenhouse gas emissions**
Indicator definition	*The indicator is divided into two parts:* • *it expresses the total annual greenhouse gas emissions expressed in Mt CO_2 eq. The indicator can be evaluated according to the emissions from various sectors within the NFR classification (Nomenclature for Reporting, a standardised format used in the EU) and emissions of the particular greenhouse gases (CO_2, CH_4, N_2O, and substances with an increased radiation absorption effect containing fluorine HFCs, PFCs and SF_6 - so-called F-gases).* • *It expresses the development of CO_2 emissions in the EU ETS and outside the EU ETS and therefore the implementation of the EU obligation* *The indicator is assessed on the basis of CHMI data.*

2.2. Reducing the level of air pollution

Name of the indicator	**2.2.1 Emissions of SO_2, NO_x, NH_3, VOCs and $PM_{2.5}$**
Indicator definition	*The indicator compares the development of emissions of the particular pollutants since 2000 in kt.year^{-1} (year 2000 = 100). At the same time, the indicator evaluates the fulfilment of national emission ceilings for the year 2020.* *The local heating will also be reported, based on monitoring according to National Indicator Codebook 2014 – MS2014+ - indicators 36120 (emissions of PM_{10}) and 36130 (emissions of $PM_{2.5}$ precursors). (CHMI data)*

Name of the indicator	**2.2.2. The proportion of the territory with exceeded target values**
Indicator definition	*The indicator evaluates the share of the territory with exceeded target values for PM_{10}, $PM_{2.5}$, with exceedances of target values for B(a)P and O_3. It will also evaluate exceedances in zones and agglomerations. Furthermore, it will evaluate the proportion of the population of the Czech Republic living in the zones and agglomerations in areas with excessive concentrations of PM_{10}, $PM_{2.5}$, B(a)P and O_3.* *The indicator is assessed on the basis of CHMI data.* *At the same time, reporting will include indicators of the National Indicator Codebook 2014 — MS2014+ - 36002 (the proportion of population living in territories with exceedances in the moving five-year average) and 36100 (exposure of the population to excessive concentrations of PM_{10}) (CHMI data)*

Name of the indicator	**2.2.3 Emissions of heavy metals and POPs**
Indicator definition	*The indicator evaluates the development of emissions of heavy metals and persistent organic compounds from the year 2000 in kt/year, index (year 2000 = 100).* *The indicator is assessed on the basis of CHMI data.*

2.3 Efficient and environmentally friendly use of renewable energy sources

Name of the indicator	2.3.1 Utilisation of Renewable Energy Resources
Indicator definition	*The indicator will evaluate the development of the share of energy production from RES in the gross final energy consumption. The evaluation will also include the development of the production of energy from renewable sources, their structure and the proportion of each source.* *The indicator is assessed on the basis of MIT data.*

Name of the indicator	2.3.2. Consumption of energy from renewable energy sources in transport
Indicator definition	*The indicator shows the share of renewable energy consumed in transport in the total consumption of energy in transport. It also provides aggregated data on the production, imports, exports, stocks and gross domestic consumption of biofuels in transport.* *The indicator is assessed on the basis of MIT data.*

3. Nature and Landscape Protection

The monitoring of a number of phenomena and changes requires data sets that are not yet available and appropriate indicators that are not yet created, and therefore the presently monitored data have limited explanatory power.

3.1 Protection and strengthening of the ecological stability of the landscape and sustainable landscape management

Name of the indicator	3.1.1a Land take and development of the use of the agricultural land fund and forest land
Indicator definition	*The indicator is focused on monitoring the development of land use and the take of both the agricultural land fund (ALF) and the land intended to fulfil forest functions (LIFFF).* *The indicator is based on land registration data from the real estate cadastre managed by the State Administration of Land Surveying and Cadastre, and from the public agricultural land registry LPIS. And also on data of the Transport Research Centre (CDV) which monitors the take of ALF and LIFFF by transport infrastructure.*

Name of the indicator	3.1.1b Ecological stability of the landscape
Indicator definition	*The indicator monitors the development of the ecological stability of the landscape, using regularly updated layers of biotope mapping (data of the NCA CR).* *Furthermore, the indicator includes evaluation according to the Consolidated Layer of Ecosystems which tracks the representation of wetlands, near-natural ecosystems, etc.*

Name of the indicator	3.1.2 Retention ability of the landscape
Indicator definition	*The retention indicator will be constructed on the basis of the final version of the National Action Plan for Climate Change Adaptation (expected to be approved in 2017) and will include a sub-indicator of surface runoff in built-up areas. The indicator will make use of the soil moisture measurement network that is used to*

	monitor drought. *The indicator is assessed on the basis of CHMI data.*

Name of the indicator	**3.1.3 Landscape fragmentation**
Indicator definition	*The indicator will contain information relating to landscape fragmentation by traffic and fragmentation of river systems. The landscape fragmentation by transport infrastructure is assessed according to the UAT methodology (Unfragmented Areas by Traffic), based on which the territory unfragmented by traffic will be defined. Fragmentation of watercourses means the damming of streams with cross obstacles such as weirs or dam reservoirs.* *Data will be added on the measures implemented to reduce the fragmentation of the landscape, divided to measures on transport structures and other measures in the landscape.* *The indicator is assessed on the basis of the data of Evernia, NCA CR, and the River Basin state enterprises.* *National Indicator Codebook 2014 - MS2014+ - indicator 45800 (level of landscape fragmentation), 46010 (ensuring the migration passability of the river network), 46301 (number of newly passable migration barriers for animals)*

Name of the indicator	**3.1.4 Implementation of agri-environment-climate measures and organic farming**
Indicator definition	*The indicator evaluates agri-environment-climate measures and organic farming measures applied in the Rural Development Programme 2014-2020, and the volume of financial resources that were spent on those measures.* *It evaluates the total area of anti-erosion measures and organically farmed land, the total area of measures implemented as part of land consolidation and the generally supported area of farmland, contributing to biodiversity, better water management, better soil management and prevention of soil erosion. It also assesses the share of agricultural and forest land under the obligation of farming that supports biodiversity, improving land and water management and preventing erosion.* *The indicator is assessed on the basis of MoA data.* *National Indicator Codebook 2014 - MS2014+ - indicators 93004, 94100, 94101, 94102, 94103, 94410, 94411, 94412, 94413, 94414*

Name of the indicator	**3.1.5 Shares of PEFC and FSC certified forests**
Indicator definition	*The indicator evaluates the share of forests managed according to the criteria of PEFC and FSC in the total area of forests of the Czech Republic (monitored separately for each certification system).* *The indicator is assessed on the basis of FSC and PEFC data.*

Name of the indicator	**3.1.6 The amount of dead wood**
Indicator definition	*The indicator gives an indication of the amount of dead wood matter in forests. Dead wood is wood which is left in the forest stands to spontaneous decay.* *Data obtained on the basis of results of the National Forest Inventory (Forest Management Institute - FMI, MoA)*

3.2 Conservation of natural and landscape values

Name of the indicator	3.2.1 Abundance of native endangered species in the Czech Republic
Indicator definition	*An aggregate indicator created on the basis of data from Red Lists, can be assembled for each group that has been evaluated repeatedly. The categories of Red Lists generally include the category of extinct species, several degrees of vulnerability (three as a standard: critically endangered, endangered and vulnerable), and additional categories covering species for which data are lacking, and species of least concern. In the Czech Republic, the Red Lists drawn up to date cover vascular plants, bryophytes, fungi, lichens, invertebrates and vertebrates*[27]*.* *Data based on the planned update of the red lists, carried out by NCA CR*

Name of the indicator	3.2.2 The status of animal and plant species of European importance
Indicator definition	*The share of animal and plant species of European importance in the territory of the State according to the quality of their status in 4 monitored categories: favourable, less favorable, unfavorable, unknown. The indicator will be an aggregate value for all species of flora and fauna of European importance in the territory of the State, drawn up based on the results of the so-called assessment reports for the Commission. The indicator will be aggregate and will be composed of sub-indicators for the groups of insects, other invertebrates, fish, amphibians and reptiles, mammals.* *The indicator is assessed on the basis of NCA CR data.* *National Indicator Codebook 2014 - MS2014+ - indicator 45400 (the status of the species of European importance and habitat types of European importance)*

Name of the indicator	3.2.3 Species composition of forests
Indicator definition	*The indicator will assess the development of the proportion of deciduous trees and coniferous forests, including their species composition.* *The indicator is assessed on the basis of FMI data.*

Name of the indicator	3.2.4 Specially protected areas in the Czech Republic
Indicator definition	*The indicator represents the share of the sum of the areas of national parks, protected landscape areas, national nature reserves, nature reserves, national nature monuments and nature monuments in the total area of the Czech Republic (some of the specially protected areas overlap, the indicator will therefore not be constructed as a simple sum of the areas). The landscape conservation zones will also be included. The result is the evaluation of the development of the structure in these specially protected areas.* *The indicator is assessed on the basis of NCA CR data.* *National Indicator Codebook 2014 - MS2014+ - indicator 45401 (total area of Natura 2000 sites and specially protected areas)*

[27] *The evaluation of the indicator does not match, due to unavailable data, the definition of the indicator according to the current version of SEP CR 2012-2020. Current Red Lists of animals have not been issued to date, the third list has already been issued for plants in 2012.*

Name of the indicator	3.2.5 Area of the sites on the national Natura 2000 list
Indicator definition	*Natura 2000 is a system of protected areas, created by EU Member States in their territories according to uniform principles. It consists of bird areas (BAs) and sites of Community importance (SCIs). The indicator assesses the development of the area of bird areas and of sites of European importance.* *The indicator is assessed on the basis of NCA CR data.*

Name of the indicator	3.2.6. The status of natural habitat types of European importance
Indicator definition	*The indicator concerns the proportion of natural habitat types of European importance within the territory of the State according to the quality of their status in the categories of favorable, less favorable, unfavorable, and unknown. The aggregate value is drawn from the results of the assessment reports for the European Commission.* *The indicator is assessed on the basis of NCA CR data.* *National Indicator Codebook 2014 - MS2014+ - indicator 45400 (the status of the species of European importance and habitat types of European importance)*

Name of the indicator	3.2.7 Invasive species
Indicator definition	*The indicator expresses the total number of invasive plant and animal species, the percentage of dangerous invasive species, including the proportion of species that are the subject of intervention. At the same time it assesses the funds spent on interventions against invasive species.* *Data will be collected from NCA CR on alien species (specialist publications) and invasive species of European significance on the basis of the final version of systematic monitoring in accordance with Regulation of the EP and of the Council No 1143/2014 and Council Regulation No 708/2007* *National Indicator Codebook 2014 - MS2014+ - indicators 42100 (number of non-native species of plants), 45101 (number of measures to limit the non-native species (including mapping and monitoring)), 45102 (area of the territory where measures have been implemented (including mapping and monitoring) against alien species)*

3.3. Improving the quality of the environment in settlements

Name of the indicator	3.3.1 Greenery in settlements
Indicator definition	*The indicator assesses the area of greenery in settlements. It will monitor the share of natural areas within the territory of municipalities and the area of greenery in settlements.* *The indicator is assessed on the basis of data from ZABAGED (the Basic Geographical Data Base of the Czech Republic) and remote sensing (MoE).* *National Indicator Codebook 2014 - MS2014+ - indicators 45000 (share of natural areas increasing the ecological stability of the built-up area of municipalities), 45412 (number of areas and elements of urban greenery with enhanced eco-stabilising functions)*

Name of the indicator	3.3.2 Brownfields
Indicator	*The indicator assesses the number of brownfields in the Czech Republic including their area. Attention is also paid to the proportion of revitalised brownfields with*

definition	*regard to their total number.* *Data will be obtained from the National Database of Brownfields, which was created by Czechinvest in cooperation with regional authorities and its use has been compulsory since 2015 in implementing the support from OP EIC. Data will also be obtained from the MoE, MoA and MRD based on the resulting settings of the monitoring of the Updated National Brownfield Regeneration Strategy.* *National Indicator Codebook 2014 - MS2014+ - indicator 46601 (Expanded, renovated or newly built capacities without a grab of the agricultural land fund)*

4. A safe environment

4.1 Risk prevention

Name of the indicator	**4.1.1. Genetically modified organisms and products**
Indicator definition	*The indicator assesses the number of entities that have been granted a permit, or which have become authorised to use genetically modified organisms and genetic products. The only GM crop grown in the Czech Republic is maize. The indicator assesses the status and development of the areas of GM maize throughout the territory of the Czech Republic and in each Region.* *The indicator is assessed on the basis of MoE and MoA data.*

Name of the indicator	**4.1.2. Noise pollution**
Indicator definition	*The indicator is dedicated to the noise burden on the population.* *The evaluation makes use of strategic noise maps of the Ministry of Health. On their basis, the Ministry of Transport draws up action plans for major roads, major railway lines and major airports, or city councils draw up action plans for each agglomeration.* *The indicator is assessed on the basis of the data of the National Reference Laboratory for Municipal Noise (NRL), which coordinates the generation of strategic noise maps for MoH.*

4.2 Mitigating the impacts of risks, including emergencies and crisis situations

Name of the indicator	**4.2.1 Floods**
Indicator definition	*The indicator assesses the monitoring of the area of flood plains and their changes over time, the scope of the territory actually affected by real floods and also the number of people living in flood plains or territories affected by real floods. It will also evaluate the financial aspects of both flood protection measures and flood damage (including the removal of the consequences of the damage) according to the types of floods.* *The indicator is evaluated based on data of the CHMI, the River Basin state enterprises, T.G. Masaryk Water Research Institute, the Czech Insurance Association, MoE/ SEF (OPE).*

Name of the indicator	**4.2.2 Drought**
Indicator	*The indicator assesses the rainfall, air temperature and soil moisture based on data of the station network of climatological stations managed by CHMI. The indicator*

definition	*will be further evaluated according to the average standardised water level of shallow wells; the average standardised spring discharge; repletion of dams and reservoirs with one-year regime of compensation in individual months including the definition of deviation from the dispatching volume; number of profiles according to the m-day flow rates where the Q_{355d} and Q_{364d} were in deficit, including the duration (number of days) of the deficit. Furthermore, the effects of drought on vegetation, forestry and agriculture will be evaluated.* *The indicator is assessed on the basis of data of the CHMI, VÚV T.G.M., SEF and NCA CR.*

Name of the indicator	**4.2.3 Slope instability**
Indicator definition	*The indicator evaluates the number and area of slope-unstable objects causing landslides in particular in connection with extreme rainfall incidents, geological structure and morphology of the slope with a predisposition to instability. It also evaluates the funds spent on prevention of landslides and rock collapse mainly under the OPE.* *The indicator is assessed on the basis of data of the CGS.* *National Indicator Codebook 2014 - MS2014+ - indicators 44301, 44311.*

Name of the indicator	**4.2.4 Fires**
Indicator definition	*The indicator assesses the development of the number of fires in the Czech Republic, divided according to their location to open space (forests, meadows, gardens and other clear spaces); buildings and structures; and vehicles. The indicator also assesses the total damage (in CZK) and the damage to human life (the number of casualties, the number of persons injured). The evaluation mainly builds on the achievement of critical values of relevant meteorological elements and their combinations.* *The indicator is assessed on the basis of the Fire Rescue Service and CHMI data.*

Name of the indicator	**1.3.4 Contaminated sites**
Indicator definition	*The indicator is focused on the number of contaminated sites in the Czech Republic. Attention is also paid to the funding intended to reduce the number of contaminated sites, both in projects supported from OPE and in MoF projects.* *The indicator is assessed on the basis of data of MoE (SEKM (contaminated sites registration system) databases, territorial analysis source documents, the OPE funding spent), MoF or the Land Registry Office and CENIA (national inventory of contaminated sites).* *National Indicator Codebook 2014 - MS2014+ - indicators 41101, 41102, 41110, 44100, 44101.*

An overview of SEP indicators and links to the SEP objectives

Identification of the SEP indicator	Name of the indicator	Link to the SEP objectives
1.0.1	Development of energy intensity	2.3.3 (+ Thematic Area 1)
1.0.2	Material intensity of the GDP	1.3.4 (+ Thematic Area 1)
1.1.1	The status of surface water bodies	1.1.1
1.1.2	The status of groundwater bodies	1.1.1
1.1.4	The urban wastewater treatment	1.1.1
1.1.5	Restoration of natural stream channels	1.1.1 3.1.2
1.1.6	Specific water protection in protected areas	1.1.1 3.1.2
1.2.1	Total waste generation	1.2.3
1.2.2	Municipal waste generation and treatment	1.2.1 1.2.2 1.2.3
1.2.3	Waste management structure	1.2.1 1.2.2 4.1.1
1.2.5	The take-back of products	1.2.2
1.2.6	Packaging waste generation and recycling	1.2.2 1.2.3
1.3.1	Soil erosion	1.3.2
1.3.2	Application of WWTP sludge on agricultural land	1.3.3
1.3.3	Consumption of mineral fertilisers and plant protection products	1.3.3
1.3.4	Contaminated sites	4.2.4
1.3.5	Reclamation after mining and quarrying	1.3.4
2.1.1	Aggregated greenhouse gas emissions	2.1.1
2.2.1	Emissions of SO_3, NO_x, $NH_{2,5}$, VOCs and $PM_{2.5}$	2.2.1 2.2.2 2.2.3
2.2.2	The proportion of the territory with exceeded target values	2.2.1 2.2.2 2.2.3
2.2.3	Emissions of heavy metals and POPs	2.2.1 2.2.2 2.2.3
2.3.1	Utilisation of Renewable Energy Resources	2.3.1
2.3.2	Consumption of energy from renewable energy sources in transport	2.3.2
3.1.1a	Land take and development of the use of the agricultural land fund and forest land	1.3.1 3.1.3 3.3.2
3.1.1b	Ecological stability of the landscape	3.1.1 3.1.2 3.1.4 3.3.2
3.1.2	Retention ability of the landscape	3.1.4 3.3.3 4.2.2 4.2.3

3.1.3	Landscape fragmentation	1.1.1 3.1.3
3.1.4	Implementation of agri-environment-climate measures and organic farming	3.1.4
3.1.5	Shares of PEFC and FSC certified forests	3.1.4
3.1.6	The amount of dead wood	3.1.4
3.2.1	Abundance of native endangered species in the Czech Republic	3.2.2
3.2.2	The status of animal and plant species of European importance	3.2.2
3.2.3	Species composition of forests	3.1.4
3.2.4	Specially protected areas in the Czech Republic	3.2.1
3.2.5	Area of the sites on the national Natura 2000 list	3.2.1
3.2.6	The status of natural habitat types of European importance	3.2.2
3.2.7	Invasive species	3.2.3
3.3.1	Greenery in settlements	3.3.1
3.3.2	Brownfields	1.3.1 3.3.2
4.1.1	Genetically modified organisms and products	4.1.1
4.1.2	Noise pollution	4.1.1
4.2.1	Drought	4.2.2 4.2.3
4.2.2	Floods	4.2.2 4.2.3
4.2.3	Slope instability	4.2.2 4.2.3
4.2.4	Fires	4.2.2 4.2.3

IX. Evaluation

The SEP is continuously evaluated based on current developments in the Czech Republic and in line with the new challenges and obligations arising from the membership of the Czech Republic in the EU, in international organisations and multilateral environmental agreements.

The SEP evaluation is based, in principle, on two processes:

1. Regular monitoring of the proposed indicators, i.e. the status and developments in each priority area of the SEP. Those indicators are also published in the annual Environmental Report.
2. The implementation of each specific measure is evaluated, with the first evaluations carried out in 2015 as part of the mid-term evaluation of the SEP. Information on the implementation of the particular SEP measures and instruments will be part of the final evaluation in 2020.

The SEP objectives and priorities are evaluated through indicators referred to in section Indicators. All of those indicators are used primarily to monitor the SEP objectives. The source of data for those indicators are partially the sources of the Czech Statistical Office or other departments of State statistical services of ministries, but also data from ministerial information systems, or from research organisations.

The data collection and evaluation of each indicator is carried out by the MoE organisation CENIA, the Czech Environmental Information Agency. The SEP evaluation is coordinated by the relevant body of the MoE[28], which will also regularly collect implementation data from the bodies responsible for the defined measures and instruments in order to ensure effective and proper implementation and to eliminate implementation risks in time.

The results of the ongoing monitoring and evaluation activities will be regularly communicated to all bodies responsible for the individual SEP measures, in particular the central State administration authorities, as part of the coordination of the SEP implementation by the MoE.

[28]Independent unit of environmental policy and strategies

X. SEP links to other national strategic documents

Strategic Framework for Sustainable Development of the Czech Republic (2010)																														
Responsible body	Name of the document	**State Environmental Policy**																												
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment			
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoE	National Biodiversity Strategy of the Czech Republic for 2016-2025	x					x	o	x								x	x	x	Z	Z	Z	x	x	x	x					
MoE	State Nature Conservation and Landscape Protection Programme of the Czech Republic	x				x	Z	o									Z	Z	x	Z	Z	Z	x	x	x				o		
MoE	Mid-term strategy (by 2020) to improve air quality in the Czech Republic						o				x	Z	o		x	x															
MoE	National Emission Reduction Programme of the Czech Republic										x	x	o	o	x	x															
MoE	Air quality improvement programmes						x				x	x																			
MoE	The National Programme to Abate Climate Change Impacts in the Czech Republic		o							Z	x			x	x	x											Z	x		x	
MoE	Waste Management Plan of the Czech Republic 2015-2024		Z	Z	Z																										

Strategic Framework for Sustainable Development of the Czech Republic (2010)																															
Responsible body	Name of the document	**State Environmental Policy**																													
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment				
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoE	Waste Prevention Programme of the Czech Republic				Z																										
MoA	National River Basin Management Plans (for the Elbe, Oder and Danube river basins)	Z					x											x									Z		Z		
MoE	Flood Risk Management Plans (the Elbe, the Oder, the Danube river basin districts)																										Z		Z		
MoA	Preparation for the implementation of measures to mitigate the negative impact of drought and lack of water	x																x									Z		x	Z	
MoE	The concept of flood protection in the Czech Republic, using technical and near-natural measures																										Z		Z	x	
MoE	Strategy for Climate Change Adaptation in the Czech Republic	x					x					o		x		x	x	x	X	x		x	x	x	x	x	Z		x	Z	

Strategic Framework for Sustainable Development of the Czech Republic (2010)																																
Responsible body	Name of the document	**State Environmental Policy**																														
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment				
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoE	The State program of environmental education and awareness and environmental consultancy in the Czech Republic	x	x	x	x	x	x	x		x	x	x		x	x	x	x	x	X	x	x	x	x	x	x	x	x	o	o	o	x	
MoE	Updated National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs) for 2012-2017												Z														x				x
MoE	The Strategy of Environmental Security 2015-2020, with an outlook to 2030																										Z	Z	Z	x	
MoT	Transport Policy of the Czech Republic for 2014–2020, with an outlook to 2050											x			x	x											x				
MoT	Transport sector strategies, phase 2										x	x							x								x				
MIT	National action plan for clean mobility										o	x															o				

Strategic Framework for Sustainable Development of the Czech Republic (2010)																															
Responsible body	Name of the document	**State Environmental Policy**																													
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment				
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoT	The action plan for the development of intelligent transport systems (ITS) in the Czech Republic by 2020 (outlook to 2050)										o	x																x			
MRD	The concept of the State tourism policy in the Czech Republic for 2014-2020																			o	x										
MRD	The policy of architecture and construction culture of the Czech Republic					x										o	x		x					x	x	o					
MRD	Spatial Development Policy of the Czech Republic, as amended by Update No 1					x			x		x			x			x	x	x	x	x	x		x	x				x	x	
MRD	Regional development strategy of the Czech Republic for 2014-2020 & its action plan	x	x	x	x					x				x		x		x	x	x			x	x	x	x	x		x	x	x
MRD	Principles of the urban policy of the Czech Republic			x	x	o				x	x	x				x								x	x		x				

Strategic Framework for Sustainable Development of the Czech Republic (2010)																															
Responsible body	Name of the document	**State Environmental Policy**																													
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		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MRD	The housing concept of the Czech Republic up to 2020 (revised)					x										Z								o	x	o					
MIT	National Action Plan of the Czech Republic for Energy from Renewable Sources 2010-2020													Z	Z						o	o								
MIT	National Action Plan for Energy Efficiency of the Czech Republic III (2014–2020)															Z														
MIT	Raw Material Policy			x	x				x	x											x									
MIT	Secondary Raw Materials Policy of the Czech Republic			x	x				x				o																	
MIT	Action plan to support increasing self-sufficiency of the Czech Republic in raw material resources by substituting primary sources with secondary raw materials			x	x				x				o																	
MIT	State Energy Policy of the Czech Republic			x					x			x	x	x	x	x			x											

Strategic Framework for Sustainable Development of the Czech Republic (2010)																														
Responsible body	Name of the document	**State Environmental Policy**																												
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment			
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MIT	National action plan for the development of nuclear energy in the Czech Republic									x																		x	x		o
MIT	National Brownfield Regeneration Strategy	o				x		o	o								o								x		x				x
MoA	Action Plan for Biomass in the Czech Republic for 2012–2020		x	x			x					x		Z	x	x			o	o											
MoA	Action Plan for the Development of Organic Farming in the years 2011–2015						o												o	x											
MoA	Multiannual programme of support for further utilization of sustainable biofuels in the transport sector for the period 2015-2020														Z																
MoA	Concept of the Water Management Policy of the Ministry of Agriculture until 2015	x																x									x		x	x	

Strategic Framework for Sustainable Development of the Czech Republic (2010)																															
Responsible body	Name of the document	**State Environmental Policy**																													
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment				
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoA	National action plan to reduce the use of pesticides in the Czech Republic	x						x														o				o				
MoA	National Forest Programme up to 2013						x										o			x	x		x						x	x	
MoA	State forestry policy principles						x													x							o		o		
MoA	Multi-annual national strategic plan for aquaculture	x																x	x			x	x							x	
MoA	Strategy of the Ministry of Agriculture with a view to 2030	o				x	x	x		o				x	x			x	x	x	x	o	x		o	o				x	
SONS	Radon programme																										o		x		
MLSA	Social Inclusion Strategy 2014-2020										o	o	o			o															
Office of the Government	The National Policy for Research, Development and Innovation in the Czech Republic for the period 2016-2020	o	o	o	o	o	o	x	x	o	o	o	o	o	o	x	x	x	x	x	o	o	o	o	o	o	o	x	x	x	o
Office of the Government	National Research and Innovation Strategy for Smart Specialisation of the Czech Republic							o	o							o															

Strategic Framework for Sustainable Development of the Czech Republic (2010)																															
Responsible body	Name of the document	**State Environmental Policy**																													
		1. Conservation and sustainable use of resources								2. Climate protection and air quality improvements							3. Nature and Landscape Protection										4. A safe environment				
		1.1 Water	1.2 Waste			1.3 The soil and the rock environment				2.1 GHG emissions	2.2 Air			2.3 RES and energy efficiency			3.1 Ecological functions of the landscape				3.2 Natural landscape values			3.3 Settlements			4.1 Risk prevention	4.2 Hazard impact mitigation			
		1.1.1	1.2.1	1.2.2	1.2.3	1.3.1	1.3.2	1.3.3	1.3.4	2.1.1	2.2.1	2.2.2	2.2.3	2.3.1	2.3.2	2.3.3	3.1.1	3.1.2	3.1.3	3.1.4	3.2.1	3.2.2	3.2.3	3.3.1	3.3.2	3.3.3	4.1.1	4.2.1	4.2.2	4.2.3	4.2.4
MoC	State Cultural Policy for 2015-2020 (with an outlook to 2025)																o			o	x										
Ministry of Foreign Affairs (MFA)	The Czech Republic's Security Strategy 2015																										x	x	x	x	

Legend: x – relevant links; o - marginal (e.g. only thematic) relevance; Z - crucial relevance

List of Abbreviations and Technical Terms:

Acquis communautaire	Summary of the legislation of the European Communities (the European Union has no legal personality)
Agenda 21	Action programme for the 21st century, a document of the United Nations Conference on Environment and Development in Rio de Janeiro, 1992
NCA CR	Nature Conservation Agency of the Czech Republic
B(a)P	benzo(a)pyrene
BAT	Best Available Technique
	The most effective technology and its use in designing, constructing, operating, maintaining and removal of installations at the end of their life cycle, which can be used in the industrial sector under economically and technically acceptable conditions
BDMW	biodegradable municipal waste
brownfields	previously built-up, unused or underused industrial areas
CAFE	The Clean Air For Europe
	a program of the European Community
CBC Phare	Cross-Border Co-operation Phare
	a cross-border cooperation programme
CBD	
	Convention on Biological Diversity
CENIA	CENIA, Czech Environmental Information Agency
CITES	Convention on International Trade with Endangered Species of Wild Fauna and Flora
CFC	halogenated hydrocarbons
CLARINET	Contaminated Land Rehabilitation Network for Environmental Technologies
	a European network of experts on the decontamination of soil and groundwater
CLRTAP	Convention on Long-Range Transboundary Air Pollution
CMS	Convention on the Conservation of Migratory Species of Wild Animals
CBA	cost-benefit analysis
CO_2	carbon dioxide
CEI	Czech Environmental Inspectorate
WWTP	Wastewater Treatment Plant
CR	Czech Republic
CDC	Czech Dental Chamber
CZSO	Czech Statistical Office
EBRD	European Bank for Renewal and Development
EC	European Community
ECE	Economic Commission for Europe
	United Nations Economic Commission for Europe

ecolabelling	labelling of environmentally friendly products
EEA	European Environmental Agency
EEC	European Economic Community
EECONET	European Ecological Network
EHAPE	Environmental Health Action Plan for Europe
UNECE, UN ECE	United Nations Economic Commission for Europe
EEC	The European Economic Community
EIA	Environmental Impact Assessment
EIONET	The European Information and Observation Network
EMAS	Eco-Management and Audit Scheme (introducing a system of corporate management and audit in terms of environmental protection)
EMEP	Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe
EMS	Environmental management system
PE	Population equivalent
EP	The European Parliament
OECD EPR	Environmental Performance Review (evaluating the effectiveness of the environmental protection system)
ERDF	European Regional Development Fund
EC	European Communities
Espoo Convention	Convention on Environmental Impact Assessment in a Transboundary Context
EFP	eco-friendly product
EU	European Union
EUR	Currency of the European Union
EURATOM	The European Atomic Energy Community
EUROSTAT	Statistical Office of the European Union
EUSIS	The European Soil Information System
GERD	Gross Domestic Expenditure on R&D GERD is a basic summary indicator of financial input into science and research, used in international comparisons.
GHG, GHGs	greenhouse gases
GMOs	Genetically modified organisms
HCFCs	Hydrochlorofluorocarbons

GDP	Gross Domestic Product
GNI	gross national income
PLA	Protected Landscape Area
CHLÚ	protected deposit area
CHOPAV	Protected Area of Natural Accumulation of Water
IEA	International Energy Agency
ICRP	The International Commission for Radiation Protection
IFOAM	International federation of organic agriculture movements
INTERREG	support programme of the European Union funds
IPP	integrated product policy
IPPC	Integrated Pollution Prevention and Control
ISDR	International Strategy for Disaster Risk Reduction
IPR	Integrated Pollution Register
ISO	International Organization for Standardization
ISPA	Instrument for Structural Policies for Pre-Accession
IUCN	International Union for Conservation of Nature and Natural Resources The World Conservation Union, formerly - International Union for Conservation of Nature and Natural Resources
LCA	life-cycle assessment (of a product)
LIFE	support programme of the European Union funds
life-cycle-thinking	Thinking of the life cycle of a product
IAEA	The International Atomic Energy Agency
LA21	Local Agenda 21
MoT	Ministry of Transport
MEAs	multilateral environmental agreements
MoC	Ministry of Culture
IMF	The International Monetary Fund
MRD	Ministry of Regional Development
MIT	Ministry of Industry and Trade
MLSA	Ministry of Labour and Social Affairs
MEYS	Ministry of Education, Youth and Sport
MoI	Ministry of Interior
MoH	Ministry of Health
MoA	Ministry of Agriculture
MoE	Ministry of the Environment
NATURA 2000	The European system of protected areas

NEHAP	National Environmental Health Action Plan of the Czech Republic
NH3	ammonia
Ni-Cd	containing nickel and cadmium
NGO	Non-governmental non-profit organisation
NO_x	Mixture of various nitrogen oxides
NO_2	Nitrogen dioxide
NPK fertiliser	A combined fertiliser containing nitrogen, phosphorus and kalium
NEP	The National Environment Programme
OECD	Organization for Economic Cooperation and Development
OP	operational programme
UN	United Nations
RES	Renewable Energy Sources
PES	Primary energy sources
PAH	Polyaromatic hydrocarbons, syn. polycyclic aromatic hydrocarbons
PCB	Polychlorinated Biphenyls
PCT	Polychlorinated Terphenyls
PHARE	The program of EU aid to candidate countries of Central and Eastern Europe to meet the conditions for EU accession
POPs	Persistent Organic Pollutants
PM_{10}	Dust particles smaller than 10 microns
PRTR	Pollution release and transport register
LIPFF	Land intended to perform forest functions
PVC	Polyvinylchloride
REACH	Registration, evaluation and autorization of chemicals
retail	The creation of wholesale and retail networks for priority purchase and sale of environment-friendly products
REZZO	The register of emissions and sources of air pollution
SEA	Strategic environmental assessment
SEVESO II	Directive for the prevention of major industrial accidents
OEB	Old environmental burden
SO_2	sulphur dioxide
SO_x	Mixture of various sulphur oxides
SEP	State Environmental Policy of the Czech Republic
SMW	solid municipal waste
DCPES	Domestic consumption of primary energy sources
Sustainable development	Meeting the current needs of society without limiting the options of future generations to meet their needs. Development that is to harmonise the

	economic, social and environmental points of view.
UNCED	The United Nations Conference on Environment and Development
UN CSD	United Nations Commission for Sustainable Development
UNDP	The United Nations Development Programme
UN FCCC	The United Nations Framework Convention on Climate Change
UN-ECE	Economic Commission for Europe of the United Nations
UNEP	United Nations Environmental Programme
TSES	The territorial system of ecological stability
SRI Section of the OG, Council for Research, Development and Innovation (CRDI)	Office of the Government – Section for science, research and innovation, and the Council for Research, Development and Innovation
R&D	Research and Development
VOC, VOCs	Volatile Organic Compounds
VŠE	University of Economics in Prague
ALF	agricultural land fund
E	Environment
7th EAP	7th general environment action programme of the Union up to 2020

XI. A summary of the SEP measures and instruments

1. Conservation and sustainable use of resources				
1.1 Protecting water and improving its status				
1.1.1 Achieving at least good ecological status or potential and good chemical status of surface water bodies, achieving good chemical and quantitative status of groundwater bodies and ensuring water protection in protected areas defined according to the Water Framework Directive				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
1.1.1.1.	To implement and update the river basin management plans in accordance with Section 24 of the Water Act	MoA, MoE – divided competency	---	Continuously
1.1.1.2.	To identify projects aimed at improving the current level of water pollution based on evaluation of the results of monitoring and assessment of the status of water bodies	MoE, MoA – divided competency	---	Continuously
1.1.1.3.	To reduce the pollution of surface water and groundwater from agricultural sources, on the basis of monitoring to determine the areas and activities in each river basin, which require priority attention and to apply the locally specific measures in those areas.	MoA	MoE	Continuously
1.1.1.4.	To correct negative human interventions by restoring natural stream channels with a favourable impact on aquatic and water-bound ecosystems and preferably focus on those sections of the streams that form bio-corridors and streams in settlements	MoE	MoA	Continuously
1.1.1.5.	To support the construction and reconstruction of WWTPs in municipalities of up to 2000 population equivalent with existing sewerage systems in accordance with Articles 7 and 2(9) of Council Directive 91/271/EEC	MoA, MoE – divided competency	---	Continuously
1.1.1.6.	To support the completion of the implementation of measures aimed at fulfilling the requirements of Council Directive 91/271/EEC on urban wastewater treatment	MoA, MoE – divided competency	---	Continuously
1.1.1.7.	To ensure the protection (protected areas of natural accumulation of water- CHOPAV), search and implementation of surface water and groundwater sources for supplying the population, and to limit risks to groundwater resources as a result of increasing gravel quarrying in the floodplains of streams	MoE, MoA – divided competency	---	Continuously
1.1.N.1	To increase the rate of charges under Section 88 of the Water Act for abstracting groundwater so that it at least matches the level of average prices for the abstraction of surface water, while minimising the social impacts	MoE	MoA	2017

1.1.N.2	To ensure the implementation of Programmes on monitoring the surface water and groundwater to evaluate all measures carried out under the Framework Directive as a fundamental tool for evaluating their effectiveness	MoE, MoA – divided competency	---	Continuously

1.2 Waste prevention, ensuring maximum waste recovery and limiting its negative impact on the environment. Supporting the use of waste as a substitute of natural resources				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
1.2.0.1.	To pursue the waste management hierarchy and to minimise the financial burden of proper waste management on the residents	MoE	---	Continuously
1.2.N.1	To support in products the internalisation of externalities associated with the treatment of waste generated from them (take-back systems, extended responsibility of manufacturers, information campaigns, product life cycle assessments, etc.).	MoE	MIT	Continuously

1.2.1 Reducing the share of waste disposed by landfilling				
1.2.1.1.	To reduce by 2020 the amount of biodegradable municipal waste deposited to landfills to 35% of the total amount of biodegradable municipal waste produced in 1995 (in line with Directive 1999/31/EC)	MoE	---	2020
1.2.1.N.1	To set the charges for waste disposal at landfills, so that the costs of this, from the perspective of environmental protection the least appropriate method of waste treatment, are at least levelled with the costs of a more suitable method (i.e. energy recovery) and in accordance with the waste hierarchy	MoE	---	2018

1.2.2 Increasing the share of material and energy recovery of waste				
1.2.2.1	By 2020, to increase at least to 50% of the weight the overall level of preparation for reuse and recycling at least for waste from materials such as paper, metal, plastic and glass, originating from households, and, where appropriate, the waste of different origin, if such waste streams are similar to waste from households.	MoE	MIT, regions, municipalities	2020
1.2.2.2	To increase by 2020 the material recovery of packaging waste up to 70%, the target rate of total packaging recovery in 2020 is 80%	MoE	MIT	2020
1.2.2.3	To ensure that by 2020 at least 70% of the weight of the construction and demolition waste will be prepared for reuse and will be recycled or used for other types of its material recovery, including backfilling in which materials are	MoE	MIT, MRD, MoT	2020

	replaced, in accordance with the applicable legislation, with construction and demolition waste of the category Other, with the exception of materials occurring in nature (earths and stone).			
1.2.2.4	To reach the level of collection, recovery, recycling and preparation for re-use of waste electrical and electronic equipment according to the objectives of Directive 2012/19/EU on waste electrical and electronic equipment.	MoE	MIT	Continuously
1.2.2.5	To re-use and recover selected car wrecks at least in 95% of the average weight of all the selected vehicles accepted for the calendar year and to re-use and materially recover at least 85% of the average weight of all the selected vehicles accepted for the calendar year	MoE	MIT	Continuously
1.2.2.6	To collect by 26 September 2016 at least 45% of batteries and accumulators placed on the market in the given year. To achieve high recycling efficiency of processes of recycling waste batteries and accumulators in line with Directive 2006/66/EC	MoE	---	2016
1.2.2.7	To increase the share of energy recovery of waste, in particular the municipal waste, while respecting the waste hierarchy	MoE	MIT, regions, municipalities	2020
1.2.2.8	To draw up rules and ensure the conditions for the recovery of the various waste streams and for selected methods of waste recovery and disposal, in particular following the EU regulations, in order to protect the environment and human health	MoE	MIT	Continuously

1.2.3 Waste prevention				
1.2.3.1	To prepare a new law on waste, built with an emphasis on strict compliance with environmental and technical standards of the EU, the principles of competition and the principles of extended producer responsibility	MoE	MIT	2016
1.2.3.2	To ensure effective monitoring of transboundary movements of wastes by strengthening inspection activities	MoE	The Customs Administration, the Czech Environmental Inspectorate (CEI)	Continuously
1.2.3.3	To periodically check and evaluate the management of waste and the fulfilment of obligations of the waste producers and persons authorised in waste management	MoE	CEI	Continuously

1.2.3.4	To support the development and generation of easily repairable, recyclable and materially recoverable products	MIT	MoE	2020
1.2.3.5	To reduce the content of hazardous substances in products which become hazardous waste at the end of their life cycle	MIT	MoE, MoH	2020
1.2.3.6	To strive to minimise the quantity of packaging used	MoE	---	2020

1.3 Protection and sustainable use of soil and of the rock environment				
1.3.1 Reducing the permanent take of agricultural land				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
1.3.1.1	To promote the use of brownfields	MIT	MRD, MoE, MoA, MoD, MoT	Continuously
1.3.1.N.1	To maintain the current levels of contributions per hectare for excluding land from the agricultural land fund with no exceptions (i.e. the amount of the basic dues per hectare will change only when changing the official prices of agricultural land lots).	MoE	MoA	Continuously

1.3.2 Reducing the erosion risk for agricultural and forest land				
1.3.2.1	To promote and extend the application of the set of mainly agri-technical, bio-technical and organisational measures to slow down soil erosion and to prevent it; to evaluate the set and to complement it as needed	MoE	MoA	Continuously
1.3.2.N.1	To cover farmland management by legislation in order to reduce its erosion exposure (reducing the size of land blocks and stricter criteria for their definition, higher responsibility of owners and users of land for damage caused).	MoA	MoE	Continuously
1.3.2.N.2	To maintain the current proportion of State owned forests with preference of environmentally more friendly forms of management while respecting competitiveness and to ensure increased support for non-productive functions of forests and to take into account those functions more in decision-making	MoA	MoE	Continuously
1.3.2.N.3	In specially protected areas and for selected specially protected species to ensure the highest possible State ownership of the land according to the priorities of nature conservation in order to reduce the financial costs of harm and to unify the care and management	MoE	MoA	Continuously

1.3.2.N.4	To strengthen the enforcement of the liability of land owners for performing the obligations resulting from the legislation on the environmental compartments	MoE	MoA, CEI	Continuously

1.3.3 Limiting and controlling the contamination and other degradation of soil and rocks caused by human activities				
1.3.3.1	To increase the efficiency of verification and regulation in the field of soil protection	MoE, CEI	MoA	Continuously
1.3.3.2	The practical application of the new limits for hazardous substances in soils	MoE, CEI	MoA	2016
1.3.3.3	To support the development of new procedures for decontamination	Technology Agency of the Czech Republic (TA CR) SRI Section of the OG, Council for Research, Development and Innovation (CRDI)	MoE, MoA, MoH,	Continuously
1.3.3.4	To remediate anthropogenic anomalies of hazardous substances in soils, bed sediments and the rock environment, groundwater and surface waters.	MoE	MoA, MoH	Continuously
1.3.3.5	To prepare a national soil protection programme and to start its implementation	MoE	MoA	2020

1.3.4 Prevention and remediation of negative consequences of mining operations and the extraction of minerals				
1.3.4.1	To reduce the extent of landscapes disturbed by the extraction of minerals, including the promotion of fully exploiting the already open deposits if such intent is not inconsistent with environmental protection	MoE	MIT	Continuously
1.3.4.2	To minimise the negative impacts of mining by using near-natural reclamation procedures (and by preserving the spontaneously created natural values in the affected territories)	MoE	MIT MRD	Continuously
1.3.4.3	To revitalise the territory affected by extraction of minerals, especially the black and brown coal, uranium and other raw materials by leaving parts of the areas (sufficient in terms of the ecological functions) to spontaneous or controlled succession	MoE	MIT, MRD	Continuously
1.3.4.4	To promote efficient use of mineral and secondary raw materials	MIT	MoE	2020
1.3.4.N.1	To create legislative and methodological conditions for a wider application of near-natural methods of reclamation of the territories affected by mining	MoE	MIT, MoA	Continuously

1.3.4.N.2	To promote research, development and use of environmentally sound technologies and practices in the mining, transport and processing of raw materials and in replacing primary sources with secondary sources	MIT, SRI Section of the OG, CRDI, TA CR	MoE	2020

2. Climate protection and air quality improvements				
2.1 Reducing greenhouse gas emissions				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
2.1.N.1	To establish a regular evaluation of the relevant policies and measures to reduce greenhouse gas emissions according to a uniform methodology	MoE	Members of the Inter-ministerial Working Group on climate protection issues	2018

2.1.1 Reducing greenhouse gas emissions within the EU ETS by 21% and limiting the increase in emissions outside the EU ETS to 9% by 2020 compared with the 2005 level				
2.1.1.1	To ensure the continuation of the existing and the preparation of new programmes aimed at reducing greenhouse gas emissions	MoE	MIT, MoA	Continuously
2.1.1.2	To analyse alternatives and to propose a tax on emissions outside the EU ETS (based on an analysis to possibly introduce a carbon tax in accordance with the results of the task of the National Emissions Reduction Programme)	MoF	MoE, MIT	2016 (analysis); 2018 (possible implementation based on the outputs of the analysis)
2.1.1.3	To draw up a technical (methodological) regulation for public transport development planning in Regions, including the organisation of integrated transport systems and infrastructure, to increase the availability and convenience of public transport and of alternative modes of transport	MoT	MoE, MRD, local and regional authorities	2019
2.1.1.4	To support measures to increase the share of low-emission freight transport, to encourage the development of logistics and organisation of transport on the basis of the co-modality principle (using the optimal mode of transport alone or in combination), to promote public transport terminals for multimodal transport with a possible link to logistics centres	MoT	MoE	2020
2.1.1.5	To reduce methane emissions from the production of waste, particularly by limiting landfilling, by reducing the proportion of the biodegradable component of waste and by a higher use of wastes from agriculture	MoE	MoA	2020

2.1.1.6	To increase the efficiency of the existing energy sources, to reduce the share of fossil fuels in the production of electricity and heat, to increase the share of RES in gross final energy consumption and to increase energy recovery of waste	MIT	---	Continuously
2.1.1.N.1	To effectively use the funds from the sale of emission allowances and from flexible mechanisms of the Kyoto Protocol and Decision of the EP and of the Council No 406/2009/EC	MoE	MIT	Continuously
2.1.1.N.2	To actively participate in setting the rules for the European emission trading system for the next period	MoE	---	Continuously

2.2. Reducing the level of air pollution				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
2.2.N.1	To include the conditions of air protection in the public procurement of municipalities and Regions	MoE	Regions, municipalities	Continuously
2.2.N.2	To promote awareness of the options to use subsidies for reducing the emissions of air pollutants, and for implementing measures to improve air quality	MoE	---	Continuously

2.2.1 Improving air quality in areas where air pollution limits are exceeded				
2.2.2 Meeting the national emission ceilings for sulphur dioxide (SO_2), nitrogen oxides (NO_x), volatile organic compounds (VOCs), ammonia (NH_3) and fine suspended particulates ($PM_{2,5}$)				
2.2.3 Reducing the emissions of heavy metals and persistent organic substances				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
2.2.1.1	By 2020, to reduce the emissions of $PM_{2.5}$ and other pollutants (in particular polycyclic aromatic hydrocarbons) by replacing combustion sources in homes and to ensure their proper operation and effective checks	MoE	MIT, municipalities	2020
2.2.1.2	To take into account traffic problems in the transport development plans of Regions and municipalities for attaining the limit values, for example by construction of bypasses and establishing low emission zones	MoT, territorial self-administration	MoE	2020
2.2.1.3	To increase the percentage of vehicles with alternative propulsion in the sector of public and private transport through the National Action Plan for Clean Mobility	MIT	MoT, MRD, MoE	2020
2.2.1.4	By 2020 to reduce the emissions of NO_x and $PM_{2.5}$ from the road transport sector by renewing the vehicle fleet of the Czech Republic	MIT	MoT, MoE, MRD	2020

2.2.1.5	To replace the car fleet of the public administration with alternatively powered vehicles	MoE	Local and regional authorities	Continuously
2.2.1.6	By 2020, to reduce emissions of SO_2 and NO_x by applying the best available techniques in the public energy sector	MIT	MoE	2020
2.2.1.7	By 2020, to reduce the emissions of NH_3 by 18% (compared to 2005) through the application of measures in the agricultural sector	MoA	MoE	2020
2.2.1.8	By 2020, to further reduce emissions of pollutants (dust, NO_x, SO_2, VOCs, CO), emitted from other stationary sources, on the basis of voluntary agreements negotiated between operators and the MoE in areas with persistently poor air quality (e.g. by using the best available techniques (BAT) and measures beyond the BAT)	MoE	MoA, Regions and municipalities	2020
2.2.1.9	To harmonise national and regional policies in the energy sector, industry, transport, spatial planning and environmental protection in order to improve air quality	MoE	MIT, MoT, MoA	2020
2.2.1.10	To effectively cooperate with neighbouring countries with a view to eliminating transboundary transfers of air pollutants and improving air quality in border regions	MoE	Local and regional authorities	2020
2.2.1.11	To implement the National Emission Reduction Programme of the Czech Republic (NERP)	MoE	Central bodies of state administration - responsible for measures from the NERP	2019
2.2.1.12	To facilitate support for implementation of measures arising from air quality improvement programmes drawn up for zones and agglomerations	MoE	Local and regional authorities, MoT, MRD, MIT, MoA	2020
2.2.1.13	To reduce the increase of emissions by reducing the intensity of motorised road transport (support for public transport, for non-motorised transport, etc.)	MoT, Regions, municipalities		Continuously
2.2.1.N.1	To implement in practice the Air Protection Act and its implementing regulations and the amended Act on integrated prevention, which constitutes a broader legal framework for the authorisation of major industrial facilities and also contains rules for the application of BAT	MoE, regional authorities, municipalities	---	2020
2.2.1.N.2	To ensure long-term operation of the national network of air pollution monitoring in relation to the requirements of the European and national legislation on air protection	MoE	MoH, MoF	2020

2.2.1.N.3	Following the adoption of the new Air Protection Act to draw up new programmes to improve air quality for zones and agglomerations where limit values are being exceeded	MoE	Regional authorities and municipalities	2016
2.2.1.N.4	To update the programmes on improving air quality at three-year intervals	MoE	---	2019
2.2.1.N.5	To provide quality information on pollution levels for the purpose of decision-making under the Air Protection Act	MoE	---	Continuously
2.2.1.N.6	To increase awareness among the public and operators of the relevant industrial activities of the issue of BAT, developments in this area and the issues of applicability	MoE	MIT, MoA	Continuously
2.2.1.N.7	To draw up a new National Emission Reduction Programme of the Czech Republic based on the new legislation and to update it in four-year intervals	MoE	---	2019
2.2.1.N.8	To promote the dissemination of information on the adverse effects of combustion of low quality fuels on air quality and human health and on the possibilities of environmentally friendly heating	MoE	MoH	Continuously

2.3 Efficient and environmentally friendly use of renewable energy sources				
2.3.1 Ensuring 13% share of energy from renewable sources in gross final energy consumption by 2020				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
2.3.1.1	To determine the sustainable potential of biomass production (phytomass, dendromass, waste) by 2020 or 2030	MoA	MoE, MIT	2020
2.3.1.2	To ensure a sustainable potential of biomass (including biogas) for efficient energy use without compromising food security of the Czech Republic	MoA	MoE	Continuously

2.3.2 Ensuring 10% share of energy from renewable sources in transport by 2020, and concurrently reducing emissions of NO_x, VOCs and PM_5 from transport				
2.3.2.1	By replacing fossil fuels with renewable energy sources in the transport sector to reduce CO_2 emissions by at least 3.5% before 31.12.2017, and at least by 6% before 31.12.2020	MoE	MoT, MIT	2017, 2020
2.3.2.2	To ensure a gradually increasing share of biofuels meeting the sustainability criteria in the total consumption of fuel, with an emphasis on the development of high-percentage biofuel mixtures and pure biofuels	MIT	MoE, MoA, MoF, MoT	2020
2.3.2.3	To support the implementation of pilot projects for the production of advanced biofuels	MIT	MoE, MoA	Continuously

2.3.3 Implementing the commitment to increase energy efficiency by 2020				
2.3.3.1	To support an increase in the share of highly efficient cogeneration of heat and electricity and efficient systems of thermal energy supply	MIT	---	Continuously
2.3.3.2	To take advantage of the best available techniques (BAT) for reducing energy intensity in new sources and to support their application in the existing sources	MoE	MIT	Continuously
2.3.3.3	To promote measures leading to energy savings on heating by means of a total or partial insulation of family houses and apartment buildings as part of refurbishments and in new buildings, by replacing conventional energy sources with renewable sources, by installing heating sources that use renewable energy sources and to promote the reduction of energy consumption by improving the thermal-technical properties of the building envelopes	MIT, MoE, MRD	---	2020
2.3.3.4	To expand the system of energy labelling, to increase the share of energy-saving appliances - preparation of legislation amendment drafts	MIT	---	Continuously
2.3.3.5	To increase the proportion of energy-saving public lighting	MIT	MoE	Continuously
2.3.3.6	To improve the energy performance of buildings through the introduction of mandatory energy standards for new buildings by 2020, to promote the introduction of energy management processes	MIT	---	2020
2.3.3.N.1	To promote research aimed at reducing the energy intensity of technologies, or at the technological procedures and facilities reducing the emissions of pollutants into the air (potential BATs)	SRI Section of the OG, CRDI, Grant Agency of the CR (GA CR), Technology Agency of the CR (TA CR)	MIT, MoE, MoA	Continuously

3. Nature and Landscape Protection				
3.1 Protection and strengthening of the ecological stability of the landscape and sustainable landscape management				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
3.1.N.1.1	To optimise the legislative instruments on nature and landscape protection by modifying the regulations on TSES in relation to legislation concerning territorial planning and land consolidation	MoE	MRD	Continuously
3.1.N.1.2	To optimise the legislative instruments on nature and landscape protection by introducing legislation on landscape protection and permeability for migration, and by strengthening the methodological support for its protection	MoE	MRD, MoT	Continuously

3.1.N.1.3	To optimise the legislative instruments on nature and landscape protection by setting the conditions of protecting significant landscape features and the limits for the use of their territory	MoE		Continuously
3.1.N.1.4	To optimise the legislative instruments on nature and landscape protection by modifying the concept of special species protection with an emphasis on the protection of biotopes and by introducing the protection of natural habitats	MoE		Continuously
3.1.N.1.5	To optimise the legislative instruments on nature and landscape protection by a review and comprehensive legislation on legal-economic and other instruments in the field of nature protection (compensation for damage, injury, exchange and purchase of land, corrective measures, etc.)	MoE		Continuously
3.1.N.2	To ensure funds for biodiversity conservation and improvement of the landscape status (e.g. revitalising, near-natural flood and erosion protection measures, more near-natural and alternative forms of forest management, implementation of rescue programmes and the suppression of non-native species)	MoE	MoF, MoA	Continuously
3.1.N.3	To launch a comprehensive monitoring of the development of the landscape using quantitative and qualitative monitoring of the status of each landscape component and the dynamics of changes in the use of the landscape so that it is possible to evaluate the effect of different influences on the functional use of the landscape and the interrelationship of those influences, and so evaluate the status of the landscape as a whole	MoE	---	Continuously
3.1.N.4	To ensure the monitoring of relevant data for evaluating the changes in nature and landscape, leading to proposals of measures and to evaluations of the effectiveness of the measures to attain the objectives of strategic and policy documents, in particular the SEP	MoE	---	Continuously
3.1.N.6.1	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, particularly the protection of species and habitats and the conditions for their conservation	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
3.1.N.6.2	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, particularly environmentally more friendly forms of farming, and the sustainability of agricultural, fishing and forest management	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
3.1.N.6.3	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular on non-native species, their influence on biodiversity and the economy and public health, and the design of appropriate measures of technical and other solutions to ensure the permeability of migration barriers	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoT, MoA	Continuously

3.1.N.6.4	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular in evaluating the impact of settlement greenery on local climate and runoff conditions	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
3.1.N.6.5	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular evaluation of the fragmentation of populations, the effects of landscape fragmentation and optimisation of the methods of ensuring landscape permeability and population connectivity	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA, MoT	Continuously
3.1.N.6.6	To support research on biodiversity, ecosystem services and functions and the possibilities of their protection, in particular the methodology for ecosystem services	SRI Section of the OG, CRDI, TA CR, GA CR, MoE		Continuously
3.1.N.7	To encourage appropriate forms of public involvement in landscape protection, management and planning and in decision-making on the use of landscape within the meaning of the European Landscape Convention	MoE	MRD, local and regional authorities	Continuously
3.1.N.8	To create conditions for the introduction of a system of evaluating ecosystem services at the national level, in a link to this issue at the EU level	MoE	MoF, MoA	2020

3.1.1 Increasing the ecological stability of the landscape				
3.1.1.1	To improve the conditions for implementing the Territorial System of Ecological Stability (TSES)	MoE	MRD, MoA	2016
3.1.1.2	To improve the functioning of the territorial system of ecological stability, to increase the proportion of the functional and stable constituent parts, and in their implementation to adequately benefit from succession processes	MoE	MoA	Continuously
3.1.1.3	To promote the protection of significant landscape elements, in particular with regard to the maintenance and improvement of their stabilising functions, and to evaluate its significance for forests in terms of the interests of general nature and landscape conservation	MoE	MRD, MoA	Continuously
3.1.1.4	To promote the preservation and extension of near-natural landscape structures performing the interaction and stabilising ecosystem functions in the landscape	MoE	MoA	Continuously
3.1.1.N.1	To ensure land resources for the implementation of measures to recover the water regime of the landscape and for implementing the TSES	MoE	MoA, MRD	Continuously

3.1.2 Restoring the landscape water regime				
3.1.2.1	To implement revitalising and nature-like flood measures in watercourses and floodplains	MoE	MoA	Continuously
3.1.2.2	To implement measures to restore the natural water regime of peat bogs and moorlands	MoE	---	Continuously

3.1.2.3	To implement anti-erosion measures in the landscape	MoA	MoE	Continuously
3.1.2.4	To support spontaneous renaturation of watercourses and floodplains	MoE	MoA	Continuously
3.1.2.N.1	To enhance education and public and administration awareness of the complex and positive effects of the measures to recover the water regime of the landscape, and to actively strengthen the position of the public and to promote its involvement in water planning	MoE	MEYS, MoA	Continuously

3.1.3 Limiting and mitigating the impacts of landscape fragmentation				
3.1.3.1	To ensure territorial protection of the interlinked system of migration-significant territories and long-distance migration corridors in spatial planning	MoE	MoA, MRD, MoT	Continuously
3.1.3.2	To ensure landscape permeability as part of the complex land consolidation and as part of farming	MoA	MoE	2020
3.1.3.3	As a priority to strengthen the capacity of the existing transport corridors before building concurrent roads with similar transport capacity serving the same territory To plan, design and implement transport corridors and structures with regard to the need to ensure the connectivity of wildlife populations and to ensure their adequate migration permeability	MoT	MoE	2020
3.1.3.4	In the construction and reconstruction of transport structures, to use technical and other solutions ensuring functional permeability for animals and making passable the existing structures in areas with significant fragmentation influence	MoT	MoE	2020
3.1.3.5	To implement system measures to ensure migration passability of watercourses for fish and other water-bound organisms (especially constructing fish ladders, removing unnecessary migration barriers, ensuring downstream fish migration, restoring links between floodplain habitats with watercourses, etc.	MoE, MoA – divided competency	---	Continuously
3.1.3.N.1	To ensure structured financial resources for ensuring the permeability of migration barriers, in particular transport structures, and for drawing up migration studies	MoE	MoT	Continuously

3.1.4 Maintaining and strengthening the non-productive functions of the agricultural landscape and forests				
3.1.4.1	To improve the targeting, flexibility and efficiency of agri-environment-climate measures within the Rural Development Programme in terms of their contribution to the improvement of ecological stability of the landscape and biodiversity protection, to expand them with programmes on arable land, especially for targeted support of endangered species of the agricultural landscape, and to ensure their coherence with other nature protection instruments	MoA	MoE	Continuously

3.1.4.2	To implement legislative-administrative and financial support for the development and spatial expansion of sustainable methods of agricultural, fishing and forest management	MoA	MoE	2020
3.1.4.3	To increase the differentiation of farming methods on the agricultural land fund (ALF) and to improve the species- and spatial composition of forests	MoA	MoE, MoD	Continuously
3.1.4.4	To restore wetland habitats and promote their tolerance by economic operators, to restrict drainage of the still undrained commercial land and to optimise the drainage methods with regard to improving water retention in the landscape	MoE	MoA	Continuously
3.1.4.N.1	To implement the National Forestry Programme (NFP) also after 2013 as a tool for sustainable management of forests	MoA	MoE	Continuously
3.1.4.N.2	To maintain in national legislation the State supervision of forests in terms of environmental protection	MoE	MoA, MoD	Continuously
3.1.4.N.3	To support forest certification under the PEFC and FSC systems and the cascade use of wood as tools to promote sustainable management of forests	MoA, MoE – divided competency	---	Continuously

3.2 Conservation of natural and landscape values				
3.2.1 Ensuring the protection and care for the most valuable parts of nature and landscape				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
3.2.1.1	To ensure adequate care for the subject of protection in all specially protected areas in accordance with their objectives of protection, and with the approved plans of care, including adequate financial resources	MoE	MoA	Continuously
3.2.1.2	To protect sites of Community importance (SCIs) and bird areas (BAs) and care for them in accordance with the accepted summaries of recommended measures, as part of that to review the proposed degrees of specific territorial protection for all Natura 2000 SCIs in the Czech Republic	MoE	MoA	Continuously
3.2.1.3	To ensure representative records of the most valuable parts of nature and landscape in the system of the specially protected areas	MoE	---	Continuously
3.2.1.N.1	To increase the effectiveness of economic instruments in order to support the achievement of the objectives of protection of the specially protected areas, Natura 2000 sites and to ensure the protection of specially protected species and to condition the support (e.g. agri-environment-climate measures) by the fulfilment of those objectives	MoE	MoA, MoF	Continuously

3.2.1.N.2	To ensure a functional and effective system of continuous monitoring of the status of the objects of protection of the specially protected areas, SCIs and BAs taking into account the fulfilment of the objectives of the protection of each area and the effectiveness of their protection and care carried out, the status of the populations of rare and endangered species and their habitats, with regard to the effectiveness of their protection and the implementation of the care for them.	MoE	---	Continuously

3.2.2 Halting the decline of indigenous species and natural habitats				
3.2.2.1	To ensure the protection of specially protected species of plants and animals, to keep the status of their habitats, and to strengthen the protection and sustainable use of genetic resources of animals, plants and micro-organisms	MoE	MoA, MoD	Continuously
3.2.2.2	To ensure the protection and sustainable use of genetic resources of animals, plants and micro-organisms	MoE, MoA – divided competency	---	Continuously
3.2.2.3	To implement rescue programmes for selected specially protected (most endangered) species, and the concepts (care programmes) for the management of populations of other selected species; in the international context to optimise the ex-situ protection of endangered species (zoological and botanical gardens)	MoE	---	Continuously
3.2.2.4	To mitigate the negative effects of human activities (measures to eliminate the wounding and killing of animals, care for handicapped animals, etc.).	MoE	MoA, MoT, MIT	Continuously
3.2.2.5	To review the appropriate protection and care of natural habitats in terms of representativeness and uniqueness, and to ensure proper management or restoration of rare and vanishing habitat types (sandbanks, moors, disturbed habitats) and as part of that to review the list of specially protected species of animals and plants	MoE	MoA, MoD	Continuously
3.2.2.6	To promote effective measures to regulate the number of animal species with regard to the balanced structure of communities	MoE		Continuously

3.2.3 Limiting the negative impact of invasive species and taking effective measures to regulate them				
3.2.3.1	To design and implement comprehensive and systemic measures to reduce the negative impact of species having adverse impacts on biodiversity or economic production (prevention including risk assessment, monitoring, timely responses, eradication or long-term regulation).	MoE	MoA, MIT	2015

3.2.3.2	To rectify the level of use of species with adverse impacts on biodiversity or economic production and of species with unexamined characteristics on land owned by the State, and on the other territory to support restrictions on their use and regulation in the context of the principles of good agricultural practices, forest management and water management practices	MoA	MoE, MoD	Continuously
3.2.3.3	To limit the risk of introduction and spread of alien invasive species through trade and transport	MoE	MoA, the Customs Administration	Continuously
3.2.3.4	To create and implement programmes to suppress (eradicate, regulate) selected species with adverse impacts on biodiversity or economic production, or in selected territories	MoE	MoA, MoD	Continuously, deadline: 2015
3.2.3.N.1	To create a single information system on alien species (to unify information on nature protection and the phytosanitary and veterinary field) and to link it to international databases	MoE	MoA	Continuously
3.2.3.N.2	To create and ensure monitoring of alien species in order to supplement and link the existing systems in the phytosanitary and veterinary field	MoE	MoA	Continuously
3.2.3.N.3	To optimise the legislative instruments of nature and landscape protection by optimising the legislation related to alien species of organisms (in coordination with the development in the EU) with an emphasis on removing inconsistencies, linking the procedure in the field of nature protection with the phytosanitary and veterinary legislation, and addressing sources and vectors in the area of trade and transport	MoE	---	Continuously

3.3. Improving the quality of the environment in settlements				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
3.3.N.1	To optimise the conditions of grant programmes for support and regeneration of housing in relation to the protection of greenery and animals in settlements, and for appropriate management of rainwater	MoE, MRD	MoF	Continuously

3.3.1 Improving the functional status of greenery in settlements				
3.3.1.1	To create conditions for maintaining and defining new greenery areas and elements as components of a functional and structured system of urban greenery in settlements as part of territorial planning, so that the basic condition for the performance of its functions is met	MRD	MoE, local and regional authorities	Continuously
3.3.1.2	To increase the biological value of greenery in settlements by supporting the application of plant species suitable for the respective habitat (e.g. indigenous tree species, the introduction of	MoE		Continuously

	multiple-species lawns in public parks), revitalisation of existing and implementation of functional links among the existing green areas, and by measures to ensure the conditions for the existence of wild animals in settlements (implementation of elements to support nesting of birds, reptiles, etc.)			
3.3.1.3	To support near-natural processes and methods in the revitalisation and establishment of green areas	MoE	---	Continuously
3.3.1.4	To promote constructional-architectural solutions of buildings that suitably reduce the demands on ground coverage (e.g. underground carparks, multi-story parking garages, etc.).	MRD	MIT, MoC	Continuously
3.3.1.N.1	To optimise the methodological support for territorial planning and nature and landscape protection in relation to the requirements on the functions of the urban greenery system.	MoE, MRD (divided responsibility)		2018

3.3.2 Strengthening the regeneration of brownfields with a positive impact on the quality of the environment in settlements[29]				
3.3.2.1	To support the revitalisation (regeneration) of brownfields in the built-up areas of settlements with regard to the complex needs of territorial development and the requirements for quality of the environment	MIT	MRD, MoE	Continuously
3.3.2.2	To implement functional areas or elements of greenery within each of the supported projects on revitalisation (regeneration) of brownfields in connection to the urban structure of settlements	MIT	MoE, MRD, local and regional authorities	Continuously
3.3.2.3	Supporting construction in brownfields	MIT	MRD	Continuously
3.3.2.N.1	To monitor and evaluate the effectiveness of the Act on the ALF protection in relation to the use of lower-quality soil and brownfields for implementing investment projects	MoE	MoA, MIT	Continuously
3.3.2.N.2	To monitor and assess the status of brownfields in particular in terms of their number, type, size structure, property relations and the ecological status	MIT	MoE, MRD, MoA	Continuously
3.3.2.N.3	To update the National Brownfield Regeneration Strategy	MIT	MRD, MoE, MoA, MoT	2017

3.3.3. Improving the rainwater management in settlements				
3.3.3.1	To support the conversion of existing impermeable surfaces to permeable (lay-by or parking areas, too wide or unused roads, paved front yards, courtyards)	MoE	MRD	Continuously

[29]The forthcoming update of the National Brownfield Regeneration Strategy, prepared by the Czechinvest agency and governed by the MIT, will review and determine the appropriate settings of responsibilities for each of the measures under objective 3.3.2. That strategy will complement in a comprehensive way other necessary measures in the area of brownfields, which are not set out in the SEP.

3.3.3.2	To support, in the implementation of newly built hard surfaces, suitable disposal of rainwater (infiltration, accumulation or evaporation of rain water - permeable paving using grassed paving blocks, grassed joints or porous materials, grass-covered roofs, etc.)	MoE	MRD	Continuously
3.3.3.3	To increase the share of green areas which include appropriate retention measures (infiltration contour furrows, grooves or pits, retention trenches, green roofs, etc.)	MoE	MRD, MoA	Continuously
3.3.3.4	To promote measures leading to the capture and subsequent use of rainwater and non-potable water on site (tanks, underground sumps)	MoE	MRD, MoA	Continuously
3.3.3.5	To support revitalisation of watercourses in settlements	MoE	MRD, MoA	Continuously

4. A safe environment				
4.1 Risk prevention				
4.1.1 Preventing the anthropogenic risks				
4.1.1.1	To expand the monitoring of pollution of soil and crops by particularly dangerous substances – PCB, dioxins, heavy metals, polycyclic aromatic hydrocarbons etc. in areas with potential risks (old environmental burdens, accidental pollution)	MoE	MoA	Continuously
4.1.1.2	To lay down rules for the safe management of hazardous wastes in order to limit as much as possible the negative impact of hazardous waste on the environment and human health	MoE	MoH	Continuously
4.1.1.3	More effective control of movements of hazardous wastes and implementation of the obligations of waste producers involved in the movement of hazardous waste (e.g. efficient computerisation of selected reporting and recording obligations)	MoE	CEI	2017
4.1.1.4	Evaluation of substances under the Community action plan	MoE	MIT	Continuously
4.1.1.5	To reduce the risks of dangerous chemicals by making their production, import and use subject to authorisation	MoE	MIT	Continuously
4.1.1.6	To streamline the organisational and technical measures to reduce the likelihood of serious accidents caused by hazardous chemicals	MoE	MIT	Continuously
4.1.1.7	To implement a system of placement of hazardous objects and facilities in adequate distances from residential areas	MoE	MRD	Continuously
4.1.1.8	To streamline the decision-making process on the management of GMOs, based on a scientific risk assessment, at both national and EU level, and at the same time to ensure public information and participation	MoE	MoA, MoH	2017
4.1.1.9	To limit the negative impact of exposure to noise on human health and ecosystems	MoH	MoE, MRD, MoT	Continuously
4.1.1.10	To recover and destroy controlled ozone-depleting substances (ODS) using binding technology	MoE	MIT	Continuously
4.1.1.11	To check for leaks of ODS from refrigeration equipment and to encourage replacement of old	MoE	MIT	Continuously

	technology containing the controlled substances with new technology containing substances that have zero ozone-depleting potential (ODP) and at the same time the least possible global warming potential (GWP)			
4.1.1.12	To ensure replacement of halon extinguishers and fire protection systems that fall into the category of the so-called critical use according to Commission Regulation (EU) No 744/2010 amending European Parliament and Council Regulation (EC) No 1005/2009 on substances that deplete the ozone layer, with regard to the critical uses of halons	MoE	MoT, MoD, MoH, MIT	Continuously
4.1.1.13	To map sites with potential leakage of risk inorganic or organic substances, toxic metals into the environment from mines, heaps and dumping hoppers (and or methane from underground mines in populated areas) and to evaluate the health risks	MoE	MIT, Czech Mining Authority, MoH	Continuously
4.1.2.N.1	To support research and development in the areas of recognition and evaluation of anthropogenic influences on each of the environmental compartments with a focus on reducing the environmental burden, in particular in the use of natural resources, and on eliminating and preventing the negative effects of human activity on the environment and human health	SRI Section of the OG, CRDI, GA CR, TA CR, MoE	MoH	Continuously

4.2 Mitigating the impacts of risks, including emergencies and crisis situations				
4.2.1 Mitigating the impacts of anthropogenic risks				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
4.2.1.1	To increase the safety of the environment against the consequences of crisis situations (disasters) caused by anthropogenic sources of risk (leakage of dangerous chemicals from a stationary facility, terrorism with serious impacts on the environment)	MoE	MoD, MIT, MoT, MoA	Continuously
4.2.1.2	In the context of environmental safety to reduce the risk of the emergence and the negative impact of crisis situations (disasters) of anthropogenic origin	MoE	MIT, MoA, MoT, MoI	Continuously
4.2.1.N.1	To maintain the degree of legal protection for the environment also in addressing economic damage	MoE	---	Continuously

4.2.2 Mitigating the impacts of natural hazards				
4.2.2.1	To monitor selected areas at risk and to identify and monitor regularly the environmental risk sources	MoE	State Office for Nuclear Safety (SONS), MRD, MoA	Continuously
4.2.2.2	To propose regulation of activities in the areas at risk	MoE	MRD, SONS	Continuously

4.2.2.3	To implement Flood Risk Management Plans	MoE	MoA	Continuously
4.2.2.4	To improve early-warning systems	MoE	MoI	Continuously
4.2.2.5	To increase the safety of the environment against the effects of crisis situations caused by natural sources of risks (flooding, flash floods, heavy rainfall, long-term drought, extreme wind)	MoE	MoI, MoA	Continuously
4.2.2.6	To reduce the negative impacts of crisis situations (disasters) of natural origin	MoE	MIT, MoA, MoT	Continuously
4.2.2.N.1	To support the development of tools and technologies to identify, monitor, predict, prevent and mitigate natural risks and to monitor their impact	SRI Section of the OG, CRDI, TA CR, MoE		Continuously

4.2.3 Mitigating climate change impacts and adaptation				
4.2.3.1	To implement measures to stabilise the water regime in the landscape also by strengthening the organic fraction of soil, to strengthen and effectively use water resources and to protect water resources, to deal with extreme hydrological situations – floods and long-term drought	MoE	MoA	Continuously
4.2.3.2	To seek to stabilise the water regime in the landscape in order to prevent the risk of floods and long-term drought through the implementation of near-natural flood protection measures	MoE	MoA	Continuously
4.2.3.3	To carefully use the territory and to sustainably manage soil (protection against erosion and degradation, increasing the share of organic matter in soil, increasing water retention in the landscape, preserving soil fertility), to introduce new technology, to diversify agriculture, etc.	MoE	MoA	Continuously
4.2.3.4	To implement measures to adapt to the negative manifestations of climate change also in agriculture, forestry, biodiversity, energy and industry, air, public health, the urbanised landscapes, transport and tourism, etc.	MoE	MoA, MIT, MoH, MoT, MRD	Continuously
4.2.3.5	To support the reconstruction and expansion of water treatment plants and water mains to secure quality drinking water for all citizens	MoA, MoE – divided competency		Continuously
4.2.3.N.1	To provide more funding to research and development in the field of climate change scenarios, identification and monitoring of its impact, the definition and monitoring of the risk areas	SRI Section of the OG, CRDI, GA CR, TA CR, MoE		Continuously
4.2.3.N.2	In accordance with the Strategy of Adaptation to Climate Change in the Czech Republic, to introduce regular evaluations of the already implemented climate change adaptation measures and to identify new adaptation activities	MoE	MoA, MoT, MoI, MIT, MRD, MoC, MoH, MoD, MEYS, Regions	Continuously

4.2.4 Remediation of contaminated sites, including old environmental burdens, and remediation of environmental damage

4.2.4.1	To implement a national inventory of contaminated sites in the Czech Republic	MoE	---	Continuously
4.2.4.2	To establish and adhere to priorities in the removal of contaminated sites	MoE	---	Continuously
4.2.4.3	To ensure continuous records of environmental damage in the territory of the Czech Republic and their update	MoE	CEI	Continuously
4.2.4.4	To draw up risk analyses on contaminated sites with priority A (the current contamination) and P (potential contamination), including an assessment of health risks	MoE	MoH, CEI, MoF	2015
4.2.4.5	To remove old environmental burdens created prior to privatisation and resulting from the activities of the Soviet army in the Czech Republic	MoE	MoF	Continuously
4.2.4.6	To monitor the exposure and the effect of pollutants from rehabilitated environmental burdens on human health, and to monitor the environmental compartments related to the decontaminated site.	MoE	MoH, SONS	Continuously
4.2.4.7	To define and apply preventive measures to avoid the creation of contaminated sites and environmental damage cases	MoE	---	Continuously

Cross-cutting instruments for implementing the environmental policy				
#	**Measures and tools**	**Responsibility**	**Co-responsibility**	**Timeframe**
N.N.1	To improve the legal enforceability of legislation relating to the environmental compartments	MoE	---	Continuously
N.N.2	To assess and remove inconsistency and redundancy in legislation whose application affects areas of the environment and management of resources	MoE	MIT	Continuously
N.N.3	To increase the demands on the applicability and use of methodologies certified by State administration bodies	MoE	---	Continuously
N.N.4	To update measures to strengthen the competitiveness and business development in the Czech Republic from the perspective of environmental protection legislation, together with a progress report on their implementation	MoE	MIT	2017, 2019
N.E.1	To optimise the setting of support in the field of the environment (RDP, operational programmes, national programmes, etc.) in order to strengthen the positive synergy effects in the environment and eliminate the negative effects	MoE	MoF, MRD, MoA	Continuously
N.E.2	To introduce an assessment of possible negative environmental impacts into the process of preparing new aid (e.g. subsidy programmes, tax benefits) based on a methodology prepared by the MoE, and thereby prevent the unwanted introduction of aid with significant negative environmental impacts	MoE (design), central state administration bodies (assessment)	---	2020

N.E.3	To regularly analyse the effects of the fees in the specific environmental legislation and, if necessary, to propose its amendment with regard to achieving the SEP objectives	MoE	---	Continuously
N.I.1	To develop the JISZP based on the declared SEP objectives and priorities	MoE	MoH	Continuously
N.I.2	To coordinate the activities leading towards building and using the COPERNICUS systems for the needs of environment management	MoE	MEYS, MoT	Continuously
N.M.1	To revise and update the existing system of obtaining relevant analytical data for the purposes of evaluating changes in the field of the environment, in particular nature and landscape	MoE	---	Continuously
N.M.2	To supplement the system of appropriate indicators for monitoring the status of the environment and evaluating the SEP, and to create criteria for evaluating the prevention and mitigation of the environmental consequences of crisis situations	MoE	---	Continuously
N.D.1	To encourage the conclusion of voluntary agreements with major polluters and other interest groups for the purpose of reducing environmental impacts beyond the legislative requirements	MoE	---	Continuously
N.D.2	To promote the involvement of the public in the care for the natural environment and landscape and their protection, including voluntary work organised under the law on volunteer service	MoE	MoC	Continuously
N.D.3	To take advantage of the National Cleaner Production Programme for the dissemination of information on the options of applying eco-efficient measures in enterprises and on aid for the implementation of specific projects	MoE	MIT	Continuously
N.D.4	To promote the application of modern environmental management tools in enterprises and other organisations, in particular by implementing the National EMAS Programme	MoE	---	Continuously
N.D.5	To support the expansion of products with lower environmental impacts, in particular through the National Programme of Environmental Labelling, and the Rules for the Application of Environmental Requirements in Public Procurement and Purchases by State Administration and Self-governments	MoE	MRD	Continuously
N.D.6	To increase the number of municipalities that apply Local Agenda 21 and to increase the level of implementation of the LA21 process in such municipalities	MoE	---	Continuously
N.IN.1	To provide the necessary methodological support and training of State administration in the area of environmental inspection and enforcement	MoE, MoI	---	Continuously

N.IN.2	To improve the methodological support for the performance of State administration, to improve the activities of authorised persons and State organisations and public administration in relation to environmental protection, or nature and landscape protection, including suitable farming in floodplains, environmental management of watercourses, the definition and implementation of TSES and defining, protecting and managing the system of urban greenery	MoE	Local and regional authorities, MRD, MoC	Continuously
N.V.1	To support research and analysis aimed at the cost-effectiveness of policies, and so minimising the costs of achieving the SEP objectives	SRI Section of the OG, CRDI, TA CR, GA CR, MoE	MoA	Continuously
N.EVVO.1	To promote environmental education and awareness among civil servants	MoE	MoI	Continuously
N.EVVO.2	To support the increase in environmental literacy throughout the society, in all of the major target groups	MoE, MEYS, MoI		Continuously
N.EVVO.3	To increase environmental awareness by promoting systematic awareness-raising, education and eco-consultancy	MoE	---	Continuously
N.EVVO.5	To perform and accomplish the tasks arising for the Czech Republic from the "Convention on access to information, public participation in decision-making and access to justice in environmental matters" (the so-called Aarhus Convention)	MoE	---	Continuously

Cross-cutting tools of international cooperation				
N.EU.1	To fulfil the obligations arising from the existing EU environmental legislation; in the proceedings brought against the Czech Republic for failure to fulfil obligations under that legislation (so-called EU Pilot and infringement proceedings) to ensure effective communication between the parties concerned and to find suitable solutions aimed at terminating the proceedings and preventing the initiation of proceedings against the Czech Republic before the Court of Justice of the EU	MoE	---	Continuously
N.EU.2	To take an active part in discussing new legislative, non-legislative and strategic EU documents at all levels of the EU structures with an impact on the environment in order to promote the interests of the Czech Republic	MoE	---	Continuously
N.EU.3	To play an active role in the European institutions - e.g. the European Environment Agency (EEA), the network of inspectors of IMPEL (Implementation and Enforcement of Environmental Law)	MoE	---	Continuously
N.MEZ.1	To participate actively in cooperation and activities of international intergovernmental organisations and global and regional programmes concerned with environmental protection (UNEP, HLPF, UNECE, ISDR, UN, OECD, GEF, GCF, etc.) and apply standards in	MoE	---	2020

	national conditions and meet commitments accepted as part of Czech membership in those international organisations.			
N.MEZ.2	To pursue rationalisation and streamlining of international governance of sustainable development and environment in the context of the Agenda 2030 implementation both in relation to proposals of establishing new international institutions and, in particular, in relation to the internal reforms of the existing international organisations	MoE	Ministry of Foreign Affairs (MFA)	2020
N.MEZ.3	Taking into account the EU and national priorities in the field of rationalisation and higher efficiency of international governance, to engage in the negotiation on establishing new international organisations and initiatives relevant for the Czech Republic, dealing with environmental protection and sustainable development including the landscape, and periodically assess the benefits of the existing memberships in international organisations	MoE	Ministry of Foreign Affairs (MFA)	2020
N.MULTI.1	To fulfil the obligations arising from multilateral environmental agreements already ratified, and actively participate in their further development at the international level	MoE	---	2020
N.MULTI.2	To engage in the negotiations of new environmental treaties relevant for the Czech Republic, and to create conditions for their ratification at national level (e.g. the Minamata Convention on Mercury, the Paris Agreement under the United Nations Framework Convention on Climate Change)	MoE	MoA, MoT, MIT, MoH, MFA	Continuously
N.MULTI.3	To evaluate the implementation of the relevant provisions of the United Nations Convention to Combat Desertification in countries seriously affected by drought with regard to tackling soil erosion	MoE	MoA	2020
N.BIL.1	To develop bilateral cooperation with the neighbouring countries of the Czech Republic and strive to improve the environment in cross-border areas, especially in the quality of air, water, and nature and landscape protection, and to fulfil the obligations arising from the already ratified bilateral agreements in all areas of the environment	MoE	---	Continuously
N.BIL.2	To develop bilateral cooperation with selected partner countries, focusing on the protection of all environment compartments with an emphasis on the dissemination of modern environmental technologies	MoE	MIT	2020
N.BIL.3	To support the process of EU enlargement and provide experience to candidate countries through bilateral cooperation and implementation of twinning projects (EU funds)	MoE	---	2020
N.BIL.4	In accordance with the existing Concept of International Development Cooperation of the Czech Republic for the period 2010-2017 and Agenda 2030 for Sustainable Development to promote the environment as the key issue within the international development	MoE	Ministry of Foreign Affairs (MFA)	Continuously

	cooperation			
N.BIL.5	To collaborate on broader transfer of experience from the Czech Republic to the countries of the Western Balkans, to the region of South-Eastern and Eastern Europe, the Caucasus and Central Asia, with a priority emphasis on the States of the Eastern Partnership, in accordance with the priorities of Czech foreign policy	MoE	Ministry of Foreign Affairs (MFA)	2020
N.BIL.6	To facilitate the involvement of Czech firms in the international programmes of the World Bank and the European Bank for Reconstruction and Development	MoF	MoE	2020