

Submitted by: Ministry of the Environment

# **National Action Plan for Adaptation to Climate Change**

Implementation document Strategy for Adaptation to Climate Change in the Czech Republic

*1st update for the period 2021–2025*

**Prepared by**

Ministry of the Environment in interdepartmental cooperation with the use of climatological data from the Czech Hydrometeorological Institute

**The authors would like to thank** the members of the thematic working groups, contact persons and cooperating organizations for the background data and constructive comments provided during the preparation of this document.

**Cooperating organizations:**

Ministry of Transport Ministry  
of Finance Ministry of Culture  
Ministry of Defense  
Ministry of Labor and Social Affairs Ministry of Regional  
Development Ministry of Industry and Trade Ministry of  
Justice  
Ministry of Education, Youth and Sports Ministry of the Interior  
Ministry of Foreign Affairs Ministry of Health Ministry of  
Agriculture

AK ČR - Association of Regions of the Czech Republic  
AOPK ČR - Agency for Nature Conservation and Landscape Protection of the  
Czech Republic CENIA - Czech Environmental Information Agency  
COŽP UK - Centre for Environmental Issues, Charles University CZECHGLOBE - Institute of Global Change Research, Czech  
Academy of Sciences  
ČBK - Czech Bishops' Conference ČGS - Czech  
Geological Survey  
ČHMÚ - Czech Hydrometeorological Institute  
ČMZRB - Czech-Moravian Guarantee and Development Bank ČVUT - Czech  
Technical University in Prague  
ČZU - Czech University of Life Sciences  
GR HZS ČR - General Directorate of the Fire Rescue Service of the Czech Republic LDO Příbryslav - Forest  
Cooperative of the Municipalities of Příbryslav  
LČR - Lesy ČR, s.p.  
NPÚ - National Heritage Institute  
NS MAS - National Network of Local Action Groups Povodí Moravy, s.p.  
Vltava River Basin Authority  
SFŽP - State Environmental Fund of the Czech Republic SMO ČR -  
Association of Towns and Municipalities of the Czech Republic  
SOVAK ČR - Association of Water Supply and Sewerage Companies of the Czech Republic  
SPÚ - State Land Office  
SVOL - Association of Municipal and Private Forest Owners in the Czech Republic SZÚ - State  
Health Institute  
ŠPB - Chance for Buildings, z.s.p.o.  
ÚHÚL - Institute for Forest Management, v. v. i VLS - Military Forests and  
Estates of the Czech Republic, s.p.  
VÚKOZ - Silva Tarouca Research Institute for Landscape and Ornamental Horticulture, v. v. i VÚLHM - Research Institute of Forest  
Management and Game Management, v. v. i  
VÚMOP - Research Institute for Land Improvement and Protection, v. v. i  
VÚV T.G.M - T. G. Masaryk Water Research Institute, v.v.i. Green Circle



## **RESOLUTION OF THE GOVERNMENT OF THE CZECH REPUBLIC**

of 13 September 2021 No. 785

**on updating the Strategy for Adaptation to Climate Change in the Czech Republic and the National Action Plan for Adaptation to Climate Change**

**The**

### **I. approves**

1. the Strategy for Adaptation to Climate Change in the Czech Republic (hereinafter referred to as the "Strategy")  
- 1st update for the period 2021–2030, contained in Part III/a of document No. 985/21;
2. the National Action Plan for Adaptation to Climate Change (hereinafter referred to as the "Action Plan") - 1st update for the period 2021–2025, contained in Part III/b of document No. 985/21;

### **II. instructs**

1. the Minister of the Environment
  - a) to ensure the coordination of climate change adaptation at the national level and, to this end, to apply the requirement to increase human resources in accordance with point I/1 of this resolution when preparing the draft state budget,
  - b) to submit to the government by November 30, 2025, a draft of the second update of the Action Plan for the period 2026–2030,
  - c) 30. November 2029 submit to the government proposal 2. update Strategy and proposal 3. update of the Action Plan for the next period,
2. Minister of the Environment in cooperation with other members of the government
  - a) ensure the preparation of the 2nd and 3rd updates of the Action Plan and the 2nd update of the Strategy for the next period,
  - b) submit a report to the government on the Czech Republic's adaptation to climate change every five years, starting in March 2025,
3. to members of the government, heads of other central administrative authorities, the President of the Czech Academy of Sciences, and the President of the Technology Agency of the Czech Republic
  - a) within their remit, implement the tasks contained in the Action Plan in accordance with the Strategy,
  - b) cooperate with the Ministry of the Environment in preparing the 2nd and 3rd updates of the Action Plan and the 2nd update of the Strategy for the next period, in particular by providing cooperation and ensuring the necessary background information and economic analyses,
  - c) to cooperate with the Ministry of the Environment in implementing the Strategy, in particular in the following areas:

- ca) defining requirements for research, monitoring and information systems using, to the greatest extent possible, data monitored with support from the state budget and data from European Union programs,
- cb) ensuring the collection and inter-ministerial sharing of data necessary for monitoring the impacts of climate change and for monitoring adaptation to climate change,
- cc) providing information support on the possibilities of using European Union financial mechanisms for adaptation to climate change,
- cd) preparing and promoting proposed legislative changes,
- d) ensure that, each year from 2021 to 2030, the budgets of the chapters under their control include the financial resources and human resources necessary to coordinate and fulfill the tasks arising from the Strategy and Action Plan and to provide expert support for climate change adaptation at the national level within their remit,
- 4. 1. the Deputy Prime Minister and Minister of the Interior, in cooperation with the Minister of the Environment, to ensure the publication of this resolution in the Government Gazette for regional and municipal authorities;

### **III. recommends**

- 1. regional governors and the Mayor of Prague
- a) to cooperate with the Ministry of the Environment in implementing the Strategy, particularly in the areas of coordinating the preparation of adaptation measures, ensuring publicity, and providing information on measures implemented to contribute to adaptation to climate change,
- 2. regional governors, the mayor of the capital city of Prague, and mayors of municipalities with extended powers
- a) to conduct studies on the vulnerability, impacts, and sources of risks related to climate change and to take the results into account in regional or local adaptation strategies or other relevant strategic or development documents of regions and municipalities,
- b) to join the Covenant of Mayors.

#### **To be implemented by:**

members of the government,  
heads of other central administrative authorities, the President of the Czech Academy of Sciences,  
the President of the Technology Agency of the Czech Republic

#### **For information:**

regional governors,  
mayor of the capital city of Prague, mayors of municipalities with extended powers

JUDr. Alena Schillerová, Ph.D., in her official capacity  
Deputy Prime Minister and Minister of Finance

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## SUMMARY

The National Action Plan on Adaptation to Climate Change (hereinafter also referred to as the "**Action Plan**") is an implementation document of the Strategy for Adaptation to Climate Change in the Czech Republic (hereinafter also referred to as the "**National Adaptation Strategy**" or simply the "Strategy").

The main objective of the Action Plan, in line with the National Adaptation Strategy and the updated EU Strategy for Adaptation to Climate Change (2021), is to increase the Czech Republic's preparedness for climate change through proposed measures and tasks, i.e. to mitigate the impacts of climate change by adapting to this change as much as possible, maintaining good living conditions and preserving and, where possible, improving the economic potential for future generations.

**The Action Plan identifies links to measures and tasks already included and implemented in approved sectoral strategies and proposes new tasks where necessary.** The Action Plan elaborates on the measures set out in the strategy in the form of specific tasks, assigning responsibility, deadlines, the relevance of the measures to individual manifestations of climate change, and sources of funding.

**The Action Plan elaborates on the framework of 108 adaptation measures** set out in Annex 1 of the National Adaptation Strategy **into a set of 322 tasks.** The relevance of each adaptation measure to the specific objectives and cross-cutting instruments and measures of the National Adaptation Strategy is indicated. The number of specific measures and tasks assigned to them may seem relatively high, but this is due to the truly broad inter-ministerial overlap of the impacts of climate change and the need to adapt to these changes, as well as the fact that the vast majority of measures (more than 80%) are already included in other strategic documents of national importance.

Adaptation to climate change is a multidisciplinary activity, with the use of natural resources by agriculture, forestry, and water management, as well as the massive development of settlement and transport infrastructure, having the greatest impact on the ability to cope with climate change.

One of the objectives of the document is to highlight the issue of climate change adaptation at the level of state and public institutions, among the general public, the business community, and other entities, i.e., to increase awareness and involvement of stakeholders in the adaptation process.

The document was developed through broad inter-ministerial cooperation involving leading scientific institutions and non-governmental organizations.

List of specific objectives (hereinafter also referred to as "SO") contained in the action plan:

|     | Specific objective  | Relevant manifestations of climate change  |
|-----|---|--|
| SC1 | Ecological stability and the provision of ecosystem services in the <b>agricultural landscape</b> are ensured, with an emphasis on limiting land degradation and land take and strengthening the natural water regime.  | <ul style="list-style-type: none"> <li>• Long-term drought;</li> <li>• Floods and flash floods;</li> <li>• Heavy rainfall;</li> <li>• Rising temperatures;</li> <li>• Extremely high temperatures;</li> <li>• Extreme wind;</li> <li>• Vegetation fires</li> </ul> |
| SC2 | Ecological stability and the provision of <b>forest</b> ecosystem services are ensured, with an emphasis on preventing soil degradation and strengthening the natural water regime  | <ul style="list-style-type: none"> <li>• Long-term drought;</li> <li>• Floods and flash floods;</li> <li>• Heavy rainfall;</li> <li>• Rising temperatures;</li> <li>• Extremely high temperatures;</li> <li>• Extreme wind;</li> <li>• Vegetation fires</li> </ul> |
| SC3 | Ecological stability and the provision of ecosystem services <b>by water and water-related ecosystems</b> are ensured, with an emphasis on strengthening the natural water regime of the landscape and taking into account the needs of human society and the sustainable use of water. | <ul style="list-style-type: none"> <li>• Long-term drought;</li> <li>• Floods and flash floods;</li> <li>• Rising temperatures;</li> <li>• Extremely high temperatures;</li> </ul>   |
| SC4 | <b>The resilience of human settlements, including their public and green infrastructure</b> , is significantly strengthened, with an emphasis on protecting human health.   | <ul style="list-style-type: none"> <li>• Long-term drought;</li> <li>• Floods and flash floods;</li> <li>• Heavy rainfall;</li> <li>• Rising temperatures;</li> <li>• Extremely high temperatures;</li> <li>• Extreme wind;</li> </ul>                             |
| SC5 | High effectiveness of <b>early warning systems</b> and responsible <b>response by the population</b>  | <ul style="list-style-type: none"> <li>• Long-term drought;</li> <li>• Floods and flash floods;</li> <li>• Heavy rainfall;</li> <li>• Extremely high temperatures;</li> <li>• Extreme wind;</li> <li>• Vegetation fires</li> </ul>                                 |

## 1.1 Strategy for adapting to climate change in the Czech Republic

The basic starting point for the National Action Plan for Adaptation to Climate Change is **the Strategy for Adaptation to Climate Change in the Czech Republic**.

The key analytical inputs for updating the action plan were:

- [Update of the Comprehensive Study of the Impacts, Vulnerability and Sources of Risks Related to Climate Change in the Czech Republic from 2015](#) (team led by the Czech Hydrometeorological Institute, 2019);
- [Evaluation of the implementation of the NAP for adaptation to climate change](#) (CENIA and Department 150, 2019);
- [Assessment of the vulnerability of the Czech Republic to climate change as of 2017](#) (CENIA, 2019)

Given the risk of implementing individual sectoral adaptation measures without assessing their impact on the vulnerability of other sectors, it was necessary to take a comprehensive approach to the preparation of both documents in order to ensure the coordination of adaptation measures across sectors. They are therefore **structured according to the manifestations of climate change**, due to the significant cross-sectoral overlaps of individual manifestations of climate change and the need for inter-ministerial cooperation in preventing or addressing its negative impacts. This division of chapters, measures, and indicators allows for a comprehensive view of climate change adaptation—that is, across the entire spectrum of problems, but also the opportunities that this change brings. Many measures thus have multiple benefits—i.e., adaptation to multiple manifestations of climate change.

The analytical section of [the National Adaptation Strategy](#) provides a clear summary of observed and expected climate developments worldwide and in the Czech Republic, summarizes the analyses of risks, vulnerabilities, and impacts of climate change in the Czech Republic, broken down by the main manifestations of climate change in the Czech Republic and priority areas of interest (economic and environmental sectors) in relation to the expected impacts of climate change, puts into context the economic instruments for adaptation to climate change, financial costs related to adaptation, legislative measures to ensure adaptation, institutional and human resource requirements for adaptation, areas of education, training and awareness-raising, research, development and innovation in terms of adaptation, and evaluation of the implementation of the existing action plan. Furthermore, the strategy formulates basic principles of adaptation, a vision and goals for adaptation by 2030 with an outlook to 2050 in **the proposal section**, and summarizes principles and prerequisites for successful adaptation, management and implementation tools, and the strategy implementation cycle (including the already established system for implementation, monitoring, evaluation, and updating) and a communication strategy, including public involvement through the National Network of Local Action Groups, the Union of Towns and Municipalities of the Czech Republic, the Association of Regions of the Czech Republic, and the National Network of Healthy Cities. Currently, this cooperation is set up within the Adaptation Platform – Interministerial Working Group on Climate Change, which was established in 2016. **The annexes** include a framework of adaptation measures for 2021–2025 (in line with the action plan), the interlinkages between adaptation objectives and sectoral and other strategies of the Czech Republic, examples of good practice, a detailed list of relevant legislation, an overview of reference documents and information sources, and a table of terms and explanations.

The strategic objective of the national adaptation strategy is, in line with the EU Adaptation Strategy, **to increase the Czech Republic's preparedness for climate change** through the proposed measures and tasks – **to reduce the vulnerability and increase the resilience of human society and ecosystems to climate change and thus limit its negative impacts**.



Climate change is a significant factor contributing to the increasing frequency and complexity of threats and the resulting risks, which directly or indirectly affect the health and lives of the population, the environment, and property, and requires a high level of responsiveness from the crisis management system in the Czech Republic. For this reason, **the Threat Analysis for the Czech Republic** was approved by Government Resolution No. 369/2016. In view of the ever-increasing number and intensity of natural and anthropogenic emergencies and the severity of their consequences, an integrated approach aimed at reducing the negative impacts of these phenomena is becoming increasingly important.

The threat analysis for the Czech Republic identified six types of serious natural hazards with unacceptable risk, for which a state of emergency may be declared in accordance with Act No. 240/2000 Coll., on crisis management and on amendments to certain acts: long-term drought, extremely high temperatures, flash floods, heavy rainfall, extreme winds, and floods. These natural hazards can also contribute significantly to triggering or increasing the severity of anthropogenic emergencies. For all types of serious hazards, measures must be taken to eliminate their risks.

## **1.2 National Action Plan for Adaptation to Climate Change**

**The most important principles of climate change adaptation in the Czech Republic** are an integrated approach to assessing the synergy of adaptation and mitigation measures, as well as assessing the suitability of proposed measures for individual components of the environment, economy, and social sphere, solutions with multiple benefits (so-called *win-win* solutions) and low negative impacts in terms of risks or costs (so-called *low-regret* options), identification of opportunities associated with the adaptation process, prevention of inappropriate adaptations, and finally, building a knowledge base and providing objective information for decision-making processes at all levels.

Where possible, adaptation measures should be implemented in line with measures to reduce emissions and increase their reductions (mitigation measures). Positive synergies and interactions between adaptation and mitigation are possible and desirable (e.g., in landscape management).

Inappropriate adaptation measures are those that do not increase the resilience of ecosystems or increase their vulnerability, are environmentally unbalanced, financially inefficient, or conflict with the objectives of other policies.

The updated action plan is **the result of broad inter-ministerial and interdisciplinary cooperation** with the direct involvement of more than 170 experts from public, scientific, and non-profit institutions who were nominated to six thematic working groups (hereinafter also referred to as "TPS") divided according to the main manifestations of climate change in the Czech Republic (TPS 1–4) and cross-cutting themes (TPS 5–6):

TPS 1 – Long-term drought

TPS 2 – Floods and flash floods TPS 3 – Rising temperatures

TPS 4 – Extreme weather events and vegetation fires TPS 5 – Economic instruments

TPS 6 – Monitoring and evaluation

The TPS began their work in January 2019. Initially, coordination meetings were held in person, but due to the state of emergency and COVID-19, they have been held via videoconference since spring 2020.

video conferences. A number of bilateral video conferences with individual ministries were also held.

The action plan identifies links to measures and tasks already included and implemented in approved sectoral strategies, and proposes new tasks where necessary. The document breaks down the measures set out in the strategy into specific tasks, assigning responsibility, deadlines, relevance to individual manifestations of climate change, and sources of funding.

In line with the strategy, the action plan is divided into **five specific objectives and cross-cutting tools and measures**, which are further divided into a set of **108 adaptation measures** (including 15 cross-cutting measures), under which a total of **322 tasks** fall. The number of specific measures and tasks assigned to them may seem relatively high, but this is due to the truly broad inter-ministerial overlap of the impacts of climate change and the need to adapt to these changes, as well as the fact that the vast majority of measures (more than 80%) are already included in other strategic documents of national importance.

**A prerequisite for the implementation of the strategy and action plan is shared responsibility for their implementation across all sectors** and the participatory involvement of public administration, local government, and public service providers at all levels, including local and regional.

## **2 INTEGRATED APPROACH TO ADAPTATION**

Adaptation to climate change is an integral part of sustainable development and disaster risk reduction policies. The manifestations of climate change vary in terms of space, time and intensity, and their impacts will affect all areas of the economy, people's lives and the environment according to their degree of vulnerability (adaptation capacity).

The action plan sets out tasks to be implemented at the level of central government bodies or organizations under their control. Ultimately, however, adaptation measures will be implemented mainly at the local and regional levels, so that, taking into account the principle of subsidiarity, the action plan provides a framework for the activities and cooperation of all relevant actors.

The priority measures contained in the adaptation strategy are based on several principles, in particular the precautionary principle and the "no regret" principle, which are meaningful and promise success across the entire range of expected climate change scenarios. These measures should also be largely flexible, modifiable, or reversible.

Some adaptation measures are already included in sectoral policies and strategies, such as regional and spatial development, transport, agriculture, forestry, energy, etc. However, adaptation measures implemented only in relation to individual sectors may have a direct or indirect negative impact on other areas. These pressures can then lead to more intense and serious conflicts between demands for resource use (e.g., land use, water use). In order to avoid such conflicts and, conversely, to promote the maximum use of synergies with the implementation of other measures, approaches that cut across a range of sectors and areas of activity should be pursued as a matter of priority. These are therefore approaches that are both horizontally and vertically integrated. An integrated approach to adaptation aims not only to implement measures to reduce the vulnerability of specific sectors and systems to various manifestations of climate change, but also takes into account the natural interaction between individual sectors and systems.

An integrated approach to adaptation can be implemented, for example, through ecosystem or landscape measures, or within formal or informal planning procedures (spatial plans and regulatory plans, river basin plans, spatial studies – especially landscape studies, land consolidation, regional development plans, landscape plans, etc.). shared responsibility for the functioning and sustainable management of water ecosystems, understanding and ensuring sustainable management of the landscape water regime, etc.

As part of the implementation of the National Action Plan for Adaptation to Climate Change and the tasks proposed therein, it is also necessary to take into account the commitments arising from membership of the European Union and international conventions (in particular the Bern Convention, the Convention on Biological Diversity, the Bonn Convention, the Ramsar Convention, the Carpathian Convention, the European Landscape Convention, the Convention on the Protection of the World Cultural and Natural Heritage, the Convention for the Protection of the Architectural Heritage of Europe, the Convention on the Protection of the Archaeological Heritage of Europe (revised), etc.). This mainly involves applying strategic environmental assessment (SEA) to relevant policy strategies and plans, if required by applicable legislation, or environmental impact assessment (EIA) or an equivalent assessment of the impact of the project on the objects of protection of specially protected areas and the conservation objectives of these areas and on Natura 2000 sites in the event of a significant impact on their conservation objectives and integrity in accordance with the requirements of Directives 92/43/EEC and 2009/147/EC (see Chapter 5), or an appropriate assessment of the potential impact of the measures on the status of the water body concerned (deterioration of the status of the water body or failure to achieve good status of the water body) in accordance with the requirements of Directive 2000/60/EC.

Regardless of how different these integrated approaches to reducing system vulnerability may be, it appears that the most successful ones are those that integrate methods and knowledge from different fields. The involvement of all actors (e.g., through third-party participation) and the integration of administrative bodies and entities operating at different levels should be a natural part of all adaptation projects. Climate change adaptation measures should be implemented within existing structures, processes, and institutions. The implementation of these measures is a long-term process that will rely on timely information and open communication with all stakeholders. Integrated approaches also open up the possibility of reviewing tools used in the past to see whether they are suitable for implementing adaptation measures or need to be adapted (e.g., decision support systems or formal processes used in planning procedures).

A strategic approach is needed to ensure coherence across different economic and environmental sectors in relation to the expected impacts of climate change, so that timely and effective adaptation measures can be taken. The National Adaptation Strategy puts the adaptation measures proposed in various strategic sectoral documents into context and supplements the adaptation measures in **the main areas of impact in the Czech Republic (sectors)** for which no such measures have been developed.

#### Main areas affected by climate change in the Czech Republic

1. Forestry
2. Agriculture
3. Water regime in the landscape and water management
4. Biodiversity and ecosystem services
5. Health and hygiene
6. Urbanized landscape
7. Tourism
8. Industry and energy
9. Transport
10. Cultural heritage
11. Safe environment

The nature and severity of climate change impacts depend not only on the manifestations of climate change itself, but also on the exposure, vulnerability, and resilience of natural and anthropogenic systems, which simultaneously influence each other. Climate change manifestations can be interdependent, and their intensity and duration are irregular and difficult to predict. To ensure a systemic approach to addressing adaptation issues, the action plan is structured according to **the main manifestations of climate change in the Czech Republic**, within which the key sectors affected by a given manifestation of climate change are identified and the main impacts, vulnerabilities, and risks are described.

#### Main manifestations of climate change in the Czech Republic

1. Long-term drought
2. Floods and flash floods
3. Heavy precipitation
4. Rising temperatures
5. Extremely high temperatures
6. Extreme wind
7. Vegetation fires

## 4 RESEARCH, DEVELOPMENT AND INNOVATION

The basis for the successful planning and implementation of adaptation measures is sufficient relevant and accurately substantiated information. The basic strategic document at the national level setting out the main directions in the field of research, development and innovation is **the National Research, Development and Innovation Policy of the Czech Republic 2021+**, which defines the needs in the field of departmental research, including global climate change and adaptation to it. The Ministry of the Environment's Research and Development Concept for 2016-2025 is in line with this policy.

**In accordance with the Strategy for Adaptation to Climate Change in the Czech Republic, research, development, and innovation in the field of climate change adaptation should focus on several basic research areas, and the results obtained should be consistently reflected in relevant strategies at the national and international levels, in particular:**

- modeling the impacts of climate change on social and economic systems and developing adaptation measures and mechanisms,
- modeling the impacts of climate change on water regimes, ecosystems, and agroecosystems
- monitoring and researching climate extremes, including their impacts on society in a regional, national, and global context,
- methods, technologies and materials aimed at reducing society's vulnerability and increasing its resilience to climate extremes and natural hazards,
- environmental safety,
- estimates of the number of people affected by climate variability based on climate model simulations (regional, national level),
- economic analysis and evaluation of the benefits of adaptation measures in selected sectors of the economy and the development and application of methods for selecting the optimal combination of these measures,
- analysis and evaluation of negative external effects related to climate change and their internalization when designing appropriate measures,
- Issues related to ecosystem services (methodology, evaluation system).

Research, development, and innovation in the above areas should be carried out by all relevant ministries in accordance with their competences, in cooperation with the Research, Development, and Innovation Council and the Technology Agency of the Czech Republic, within the framework of Act No. 130/2002 Coll. on support for research, development, and innovation, as amended.

In addition to general guidelines, the table of adaptation measures proposes a number of tasks aimed at producing analyses, studies and research, which are followed by further parts of the tasks (**the nature of the task is indicated by "V"**). The ministries responsible for the specific areas and sectors are responsible for the individual tasks. Applied research activities and international grant programs can also serve as a source of such knowledge and, in particular, proposals for optimal procedures.

## 5 EDUCATION, TRAINING, AND AWARENESS

Given that climate change affects the lives of every individual to some extent, everyone can contribute and implement adaptation measures within their means and capabilities (e.g., water conservation). We therefore consider environmental education, training and awareness (EVVO) and environmental consulting (EP) to be important tools for successful adaptation to climate change. This area is comprehensively covered by the strategic document State program environmental education, training and awareness

and environmental consulting for 2016–2025, adopted by the government in Resolution No. 652 of July 20, 2016<sup>1</sup> (hereinafter referred to as the State Program).

Climate change is one of the key topics of the State Program, and the document thus responds in a very timely and deliberate manner to documents dealing with climate change adopted at the national and international levels. It is based on the assumption that climate change is a new topic from the perspective of the long-term development of EVVO and EP (not only in the Czech Republic), which has only gradually emerged in recent years. It is not yet an integral part of our understanding of the natural, social, and economic conditions of life on Earth and in the contemporary world, nor is it sufficiently integrated into the education system. This means that the topic and its conception in the EVVO and EP systems differ significantly from the view of older and socially accepted topics, such as nature conservation. It is therefore necessary to focus on incorporating this topic into the EVVO and EP systems at a level and with a sense of urgency that reflects the fact that climate change is considered the greatest global threat of our time, through the appropriate didactic use of scientific knowledge and the development of methodologies and programs aimed at all target groups.

Another system is the Agricultural Knowledge and Innovation System (AKIS), an education and advisory system of the Ministry of Agriculture, which aims to transfer knowledge and practices for the implementation of agricultural and forestry measures to mitigate the impacts of climate change and the effects of drought.

#### **Setting objectives and specific targets**

*(according to the State Program, Objective 5.5. - Climate in Context)*

**The main objective** is to ensure that EVVO and EP are available to enable all target groups to understand the causes of climate change and its negative impacts in the Czech Republic, Europe and the world, and to have awareness and knowledge of international climate protection negotiations and the competence to adopt and implement mitigation (reducing greenhouse gas emissions, in particular by moving away from the use of fossil fuels) and adaptation measures (adapting to the impacts of climate change, in particular responding to extreme weather events).

#### **Relevant specific objectives are:**

- Support the creation, provision, and long-term sustainability of educational programs and information resources necessary for understanding the causes and impacts/manifestations of climate change.
- Support educational programs and awareness campaigns focused on the implementation of adaptation measures in the landscape and in built-up areas (especially in the area of flood prevention measures and preparation for dry and hot periods, rainwater harvesting and use, night cooling and daytime shading, building green infrastructure in municipalities, caring for greenery around buildings, etc.). Motivate schools to incorporate these topics into school curricula and to engage in dialogue within the local community and region.

**Special attention** should be paid to programs focused on the impacts of climate change in the Czech Republic, such as changes in our ecosystems, e.g., changes in the water balance in the landscape, changes in the distribution and behavior of certain animal and plant species. Systematically develop educational and awareness-raising tools that make it easier for both children and adults to perceive and understand, using examples of individuals, communities, or

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<sup>1</sup> Ministry of the Environment [http://www.mzp.cz/cz/statni\\_program\\_evvo\\_ep\\_2016\\_2025](http://www.mzp.cz/cz/statni_program_evvo_ep_2016_2025)

regions affected by climate change – exhibitions, visual records, publications, etc. Present resilience at the community level as a productive concept involving participatory discussion of mitigation and adaptation measures at the local level and develop advice in this area so that it is available to communities. It is recommended to support the creation of interactive tools, such as simulation games or e-learning, which will enable target groups to prepare for changes and situations in the near future.

The table of measures in the Action Plan lists specific tasks in the area of education, awareness-raising and public information in relevant measures relating to specific objectives (**task type marked "I"**). A separate section of the table is devoted to this area, listing cross-cutting measures from the Adaptation Strategy and assigning them to responsible parties, co-responsible parties, deadlines, financial requirements, and resources.

## 6 ADAPTATION MEASURE

All adaptation measures resulting from the implementation of the action plan must be carried out in accordance with the applicable legislation, must undergo the standard approval process, and must take into account the objects of protection of specially protected areas and the objectives of the protection of these areas. In order to ensure compliance with the obligations arising from Community legislation, the objectives of the protection of Natura 2000 sites shall be taken into account when implementing the measures. Where Natura 2000 sites are affected, priority will be given to solutions for specific projects implemented under individual measures that will not have a negative impact on the objects of protection and, where the nature of the measures allows, will support the occurrence of objects of protection in the sites concerned (examples include the restoration of small water reservoirs or the revitalization of watercourses in a manner consistent with the requirements of the conservation objective linked to the habitat type concerned; the choice of a suitable location for the measure, taking into account the occurrence of conservation objectives in the area, etc.). When preparing measures of a conceptual nature, solutions will be chosen that eliminate impacts on the protected features of Natura 2000 sites (e.g., by choosing a special procedure in the case of Natura 2000 sites that excludes the possibility of deterioration of forest natural habitats and species biotopes). When implementing plans or preparing concepts related to this material that could, individually or in combination with others, have a significant impact on the favorable status of the protected object or the integrity of a site of European importance or a bird area, the objective of preventing or eliminating impacts on Natura 2000 sites will be pursued and the procedure under Sections 45h and 45i of Act No. 114/1992 Coll.

**A detailed table of adaptation measures and tasks**, including the relevant tools, managers, deadlines, and financial requirements, is provided in **Annex 1**.



### Financial requirements and sources of financing

All tasks defined within individual measures were economically evaluated by relevant experts from the Ministry of the Environment and other ministries. In some cases, more precise economic quantification of financial requirements was limited mainly by the general or framework formulation of individual tasks, the implementation of which is subject to the discretion of individual ministries and affected groups. For the most part, these are also tasks of a restrictive nature, which are to be subsequently adjusted by legislative measures, which will determine the scope of their implementation. Therefore, part of the costs were assessed on the basis of expert estimates by relevant employees, based on experience and similar projects in the area concerned. Some of the tasks are also expected to be carried out as part of the current agenda of the individual managers and co-managers. For the above reasons, it is not possible at this stage to aggregate the financial requirements of the individual tasks, and the individual amounts indicated should be considered as indicative costs subject to the manner and scope of their actual implementation, which will be the responsibility of the individual managers. However, the table shows that **the financial requirements for the implementation of individual measures will be in the order of tens of billions of CZK**. The dynamic development of climate change will also have a significant impact on the estimated costs.

**The total amount of funds related to measures under the National Action Plan on Adaptation to Climate Change for the period 2021–2025 (i.e., five years) is CZK 139 billion**, of which almost 40% (CZK 52 billion) comes from EU funding. National resources (totaling CZK 86.5 billion) have already been allocated to the measures in question at a rate of 46%, **meaning that the total requirement for new national resources is CZK 46 billion**. It should be emphasized that these amounts are estimates for a period of five years, with average annual costs totaling CZK 27 billion, of which CZK 10 billion comes from EU sources and CZK 17 billion from national sources. **In terms of requirements for new national resources, the measures represent a cost of approximately CZK 9 billion per year.**

These amounts are within the range of estimates of the financial costs of adaptation from expert studies, such as the renowned IPCC (2007) and Stern (2006), which predict higher adaptation costs of 3 to 5% of annual GDP, which in the case of the Czech Republic would correspond to CZK 170 to 280 billion of the Czech Republic's GDP in 2020. However, these comparisons with international studies, as well as the National Action Plan's own cost estimates, should be viewed with caution, given methodological shortcomings and, in particular, the fact that many programs and sources of funding have not yet been determined for the period in question and, in many cases, the estimates are based on expert opinion. Some of the tasks are also expected to be carried out as part of the current agenda of individual managers and co-managers without the need for additional costs.

**The costs of adaptation must also be understood in the context that otherwise the impacts of climate change on human health and the economy will increase, and it is generally accepted in expert circles that the costs of inaction in the long term exceed the costs of adaptation.** The adaptation measures in the National Action Plan are also part of other strategic government documents, and **the aim of the expenditure is not always solely to adapt to the impacts of climate change, but may also pursue other objectives such as supporting research and development, economic competitiveness, etc.**

The impacts of climate change are an area of high uncertainty with global consequences, however

**Any failure to manage the uncertainties associated with climate change and other uncertainties would have serious**

**consequences in terms of adaptation** – the World Bank has therefore proposed new decision-making mechanisms for environments of high uncertainty (World Bank, 2014).

**On the other hand, it should be borne in mind that, despite their costs, adaptation measures will reduce the costs of addressing negative impacts many times over in the event of inaction or ensure sustainable profits from economic activities (e.g. in forestry and agriculture), whose revenues would otherwise decline due to negative impacts, or may enhance the sustainability of the management of natural and cultural heritage types threatened by climate change (including garden art and cultural landscapes).** If no action is taken to adapt to climate change, the costs for the EU as a whole are estimated to range from EUR 100 billion per year in 2020 to EUR 250 billion in 2050 (EU Adaptation Strategy, 2013). The social impacts of climate change are also important—if we do not take further adaptation measures, heat waves could cause an additional 26,000 deaths per year in the EU by the 2020s, rising to 89,000 deaths per year by the 2050s (EU Adaptation Strategy, 2013).

Some costs can be financed through activities that are carried out regardless of climate change, such as maintenance or periodic replacement, and many costs can be spread over a longer period exceeding the time frame of the Action Plan.

**In order to implement individual measures, it is necessary to secure their financing in the budgets of the individual ministries** that will bear the largest share of the financial costs. Given that it is currently impossible to determine the financial burden on individual chapters of the state budget with sufficient accuracy in advance, it is necessary to place emphasis on allocating adequate financial resources during the preparation and implementation of the state budget, and also, in particular, on ensuring flexible sources of financing for individual tasks or ensuring their ongoing financing from the state budget. The action plan will be implemented within the economic possibilities of the state budget and the human resources of individual ministries.

In cooperation with all the ministries concerned, the costs of implementing the measures have been quantified or expertly estimated. Based on the data provided and discussions with the individual ministries concerned, it appears that **a significant part of the measures will be implemented within the existing human resources and current expenditure from the budget chapters (i.e., the state budget).** These measures are marked with **the financial requirement symbol "X"** in the table. In addition to these measures, which do not require an increase in budgetary resources or have an impact on the state budget, other measures were also evaluated whose implementation is expected to increase current costs.

#### **Economic instruments and possibilities for their use**

Some costs can be covered by **existing or future EU financial instruments or national subsidies**, and, as in other European countries, some **participation from the public and the business sector** is to be expected in their own interest. In addition, adaptation measures will be supported by several **EU funds and international financial institutions**, such as the European Investment Bank and the European Bank for Reconstruction and Development (EU Adaptation Strategy, 2021). Existing economic instruments include **taxes, fees, and other similar monetary payments, financial support, or other specific economic instruments such as emissions trading.**

Existing economic instruments are used to support the implementation of the action plan, with subsidies, grant programs, and support being the most widely used. Some grant programs

already exist and are commonly used for the implementation of adaptation measures. These include, in particular, **the Program for the Restoration of Natural Landscape Functions, the Landscape Management Program, and the Flood Prevention Program III**, through which financial resources for adaptation measures are provided from the state budget. These programs are complemented by program interventions (e.g., **OPŽP, IROP, OPTAK, OPST, SP SZP**, etc.), which draw funds for supported measures from EU funds (in particular **the European Regional Development Fund and the Cohesion Fund**). Among the Community instruments (financed directly from the EU budget), the **Horizon Europe and LIFE** programs are particularly noteworthy. The adaptation of buildings in the housing sector is supported by the **New Green Savings** program. **The Modernization Fund** also contributes marginally to adaptation objectives.

**A new source of funding for adaptation measures is the National Recovery Plan (NRP)** from the EU's Recovery and Resilience Facility (RRF), which is intended to help Member States address the economic and social impacts of the coronavirus pandemic. The NPO must allocate at least 37% of investments to climate measures (mitigation and adaptation), with adaptation measures playing a significant role.

**In addition to using existing economic instruments, there is also the possibility of using promising economic instruments such as insurance and payments for ecosystem services.** A **CO<sub>2</sub> tax** could also be an important financial instrument. A CO<sub>2</sub> tax also places energy producers from sources with high CO<sub>2</sub> emissions at an economic disadvantage and allows the revenue from this tax to be allocated, for example, to specific adaptation measures or support that further reduces CO<sub>2</sub> emissions. However, the introduction of such a tax must respect the competitiveness of businesses and minimize the impact on the standard of living of end users. At the same time, it is necessary to discuss the financing of possible measures to mitigate social impacts, support the necessary modernization of sources in terms of emission loads, and adapt to the consequences of increased greenhouse gas emissions. A CO<sub>2</sub> tax is also recommended by the World Bank as a tool for combating and adapting to climate change (Carbon pricing, Competitiveness and Carbon Leakage: Theory, Evidence and Policy Design, Grzegorz Peszko, the World Bank, 9 Nov 2015). Given that energy taxes are harmonized at EU level, it is necessary to wait for the planned revision of the Energy Directive and, if necessary, introduce taxes of this type in accordance with its amended wording. Other possible non-economic instruments that could be used to support the measures in question include **legislative measures, sanctions, and the use of voluntary instruments** (e.g., voluntary agreements).

**Appendix No. 1 - Detailed table of adaptation measures and tasks**

Detailed table of adaptation measures and tasks, including relevant tools, managers, deadlines, links to approved strategies at national level and financial requirements

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| Target code (SC)<br>Measure (o) Task<br>(xx) | Relevant objective<br>s ** | Relationship to climate change manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Task type<br>*** | Manager  | Co-manager | Deadline, checkpoints | Financial requirements until 2025<br>****  | Existing financial resources and economic instruments | Potential and new economic instruments | EU resources until 2025<br>(in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources<br>(in millions of CZK) |
|--|----------------------------|---|--|------------------|--|------------|-----------------------|--|---|--|---|---|---|
| SC1  |                            |   | Ecological stability and the provision of ecosystem services in the agricultural landscape are ensured, with an emphasis on limiting soil degradation and land take and strengthening the natural water regime   |                  |  |            |                       |  |   |  |   |   |   |
| o1_1   | 1                          | SU, PO, ZT, ET, VS                              | Legislative, financial, and material support for land consolidation with regard to climate change  |                  |  |            |                       |  |   |  |   |   |   |
| 1_1.1  |                            |   | Increase the use of eco-stabilization elements in plans for shared facilities.   | L, E             | Ministry of Agriculture, Ministry of the Environment | SPÚ        | L: 2021 E: ongoing    | cannot be estimated  | SR (Ministry of Agriculture chapter)                  | -                                      |   |   |   |
| 1_1.2  |                            |   | Strengthen the legislative instrument and ensure sufficient financial resources for the purchase or property settlement of land for the implementation of joint facilities with eco-stabilization and erosion control functions and for the restoration of the natural water regime of the landscape.  | L, E             | Ministry of Agriculture, Ministry of the Environment | SPÚ        | 2                     | Cannot be estimated  | OPŽP, SR (Ministry of Agriculture chapter)            | OPŽP 21+                               |   |   |   |
| 1_1.3  |                            |   | When implementing elements of the plan for shared facilities, prioritize investments in measures leading to increased landscape adaptation.<br>When implementing investments in the development of the road network, give priority to solutions that do not require the creation of impermeable paved areas.   | O                | MZe  | SPÚ        | ongoing               | X  | -   | -                                      | 0   | 0   | 0   |
| o1_2   | 1                          | SU, PO, ZT, ET, VS                              | Organizational support for land consolidation  |                  |  |            |                       |  |   |  |   |   |   |
| 1_2.1  |                            |   | Strengthen the activity of river basin administrators, municipalities, and regions in land consolidation proposals (PÚ) to secure land for the implementation of adaptation measures (especially the revitalization of watercourses and floodplains, water reservoirs, etc.).  | M, O             | MZe  | SPÚ, MŽP   | ongoing               | X  | -   | -                                      | 0   | 0   | 0   |
| 1_2.2  |                            |   | Motivate owners and economic operators to take an interest in initiating and participating in the PÚ process, raise awareness of the results of proposals for plans for shared facilities in the PÚ, and motivate them to implement organizational and agrotechnical measures.   | I, M, O          | MZe  | SPÚ        | ongoing               | Ministry of Agriculture national resources CZK 175 million, PRV not yet determined | services to forest owners                             | RDP                                    |   | 175   | 0   |
| 1_2.3  |                            |   | Priority should be given to comprehensive land consolidation (KoPÚ) in areas threatened by the effects of climate change, in source areas of watercourses and groundwater collectors and in the vicinity of regulated watercourses, targeting primarily areas threatened by water and wind erosion, unforested areas with a high risk of accelerated runoff. | O, M             | MZe  | SPÚ        | ongoing               | X  | -   | -                                      | 0   | 0   | 0   |

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| 1_2.4                                  |                        |                                     | Include measures implemented under the KoPÚ in the LPIS land register, including consideration in erosion risk calculations, ensure that layers are updated on an ongoing basis.  | O             | MZe                     | SPÚ                                     | on an ongoing basis   | X  | -   | -                                      | 0   | 0   | 0   |
|--|------------------------|-------------------------------------|---|---------------|-------------------------|---|-----------------------|--|---|--|---|---|---|
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                 | Co-manager                              | Deadline, checkpoints | Financial requirements until 2025 ****             | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025<br>(in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources<br>(in millions of CZK) |
| o1_3                                   | 1                      | SU, PO, ZT, ET, EV, VS, PV          | <b>Implementation of comprehensive land consolidation with regard to increasing retention capacity and ecological stability of the landscape</b>  |               |                         |   |                       |  |   |  |   |   |   |
| 1_3.1                                  |                        |                                     | Combine technical and nature-based measures within shared facilities to increase the water retention capacity of the landscape, with an emphasis on nature-based measures.  | M, O          | MZe                     | MŽP, SPÚ                                | M: 2023 O: ongoing    | X  | -   | -                                      | 0   | 0   | 0   |
| 1_3.2                                  |                        |                                     | Support the purchase of agricultural land by farmers, in particular through the Support and Guarantee Fund for Farmers and Foresters (PGRLF), with preference given to residents in the area where the land is located and support balanced by their commitment to farm in a certain way. | L, E          | Ministry of Agriculture |   | ongoing               | Cannot be estimated                                | PGRLF   | -                                      | 0   |   |   |
| o1_4                                   | 1                      | SU, ZT, ET, EV, VS                  | <b>Research into mitigating and preventing the potential impacts of climate change on the agricultural sector</b>   |               |                         |   |                       |  |   |  |   |   |   |
| 1_4.1                                  |                        |                                     | Develop and promote agricultural crop cultivation systems and the selection of suitable varieties and breeds that are resistant to the anticipated impacts of climate change, including combined systems (e.g., agroforestry, regenerative farming, etc.).                                | V, M, I       | MoA                     |   | ongoing               | X  | research programs                               | -                                      | 0   | 0   | 0   |
| 1_4.2                                  |                        |                                     | Ensure continuity of research in the field of conservation and sustainable use of genetic resources important for nutrition and agriculture.  | V, M          | Ministry of Agriculture | Ministry of Education, Youth and Sports | ongoing               | CZK 60 million for research related to task 1_13.4 | research programs                               | -                                      | 0   | 60  | 60  |
| 1_4.3                                  |                        |                                     | Ensure support for research and consulting in the field of breeding new varieties of plants and livestock that are resistant to changing climate conditions in the Czech Republic.  | V, M          | Ministry of Agriculture |   | ongoing               | X  | research programs                               | -                                      | 0   | 0   | 0   |
| 1_4.4                                  |                        |                                     | Increased support for research into erosion control (soil protection) technologies and their implementation in practice.  | E             | Ministry of Agriculture |   | ongoing               | X  | research programs                               | -                                      | 0   | 0   | 0   |
| 1_4.5                                  |                        |                                     | Support for research into organic farming and its expected potential for greater resilience to the impacts of climate change.   | V             | Ministry of Agriculture |   | ongoing               | X  | research programs                               | -                                      | 0   | 0   | 0   |
| o1_5                                   | 1                      | SU, PO, ZT, ET, EV, VS, PV          | <b>Measures to reduce water and wind erosion of agricultural land</b>   |               |                         |   |                       |  |   |  |   |   |   |

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|  |                        |                                  |   |               |  |                         |                       |   |   |  |  |   |  |
|--|------------------------|----------------------------------|---|---------------|--|-------------------------|-----------------------|---|---|--|--|---|--|
| 1_5.1  |                        |                                  | Support the implementation of technical erosion control measures (terraces, ditches, swales, infiltration strips, sedimentation strips, grassed valleys, protective embankments, remediation of erosion gullies and ravines, protective reservoirs, field roads with erosion control functions) to a sufficient extent depending on the erosion risk of the area concerned.   | E, M          | MZe  | MoE                     | ongoing, KT: 2023     | MZe: cannot be estimated; SPÚ: 3000 million CZK | RDP, state budget                               | SP SZP, NPO, state budget              | 1,200  | 1,800   |  |
| Target code (SC)<br>Measure (o) of task (xx) | Relevant objectives ** | Relevance to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager  | Co-manager              | Deadline, checkpoints | Financial requirements until 2025 ****          | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 1_5.2  |                        |                                  | Support the implementation of vegetation elements with erosion control functions to a sufficient extent depending on the erosion risk of the area concerned. Give preference in supported projects to a combination of contouring techniques "contouring" with tree planting.   | E, M          | MoE  | Ministry of Agriculture | ongoing, KT: 2023     | Cannot be separated from 1_11.1                 | OPŽP, POPFK, PPK                                | OPŽP 21+                               | =  | =   | =  |
| 1_5.3  |                        |                                  | Reduce the area of a single crop on land blocks, optimize farming methods depending on the shape and size, taking into account local conditions and erosion risk. Continue to monitor and evaluate these parameters for the purposes of possible further optimization.  | E, M          | MoA  |                         | Ongoing, KT: 2023     | X   | -   | -                                      | 0  | 0   | 0  |
| 1_5.4  |                        |                                  | Update CAP instrument settings to strengthen soil protection, increase soil fertility, and protect and promote biodiversity agricultural landscapes.  | L, E          | Ministry of Agriculture                              |                         | Ongoing, KT: 2023     | X   | -   | -                                      | 0  | 0   | 0  |
| 1_5.5  |                        |                                  | Modernize the monitoring of suspended solids in watercourses by expanding the network of automated sampling stations in order to achieve more accurate balancing of suspended soil particles in the Czech Republic.   | E             | MoE (CHMI)   | Ministry of Agriculture | ongoing               | 30 million CZK                                  | OPŽP  | OPŽP 21+                               | 30   | 0   | 0  |
| 1_5.6  |                        |                                  | Continuously update and improve the supporting methodological tool "Erosion Calculator".  | M, V          | MZe  | MoE                     | Ongoing               | X   | research programs                               | -                                      | 0  | 0   | 0  |
| 1_5.7  |                        |                                  | Update the soil survey methodology for agricultural land owners, including the creation of model lease agreements for basic categories of lessors.  | M, V          | Ministry of Agriculture                              |                         | 2023                  | X   | research programs                               | -                                      | 0  | 0   | 0  |
| 1_5.8  |                        |                                  | Define, set conditions and procedures for balancing organic matter in soil and ensure monitoring of organic matter balance and carbon movement in the soil profile. Evaluate trends in soil organic matter content using the results of the Comprehensive Soil Survey. Legally introduce these soil organic matter balancing procedures as an obligation for farmers, either through national legislation or as a condition for subsidies, and subsequently introduce monitoring and follow up on compliance. | V, M, E, L    | MZe  | MoE                     | ongoing, KT: 2023     | 20 million total (4 million per year)           | research programs                               | -                                      | 0  | 20  | 20   |
| 1_5.9  |                        |                                  | Ensure maximum support for access to all information in the field of soil protection that can be provided, and update and refine information in the field of soil protection.   | V, I          | Ministry of Agriculture, Ministry of the Environment |                         | In: 2023 to: ongoing  | I: X  | research programs                               | -                                      | 0  | 0   | 0  |
| 1_5.10                                       |                        |                                  | Ensure the streamlining of agricultural soil erosion monitoring.  | L, O          | Ministry of Agriculture                              | SPÚ, MZP                | 2023                  | X   | -   | -                                      | 0  | 0   | 0  |

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|  |                        |                                     |  |               |                         |                         |                                       |   |  |  |   |   |   |
|--|------------------------|-------------------------------------|--|---------------|-------------------------|-------------------------|---------------------------------------|---|--|--|---|---|---|
| 1_5.11                                 |                        |                                     | Identify and prepare model farms, include them in the demonstration farm system, and use them for training and education in the field of soil protection measures.   | V, O          | Ministry of Agriculture |                         | 2023                                  | X   | research programs  | SP SZP (linked to AKIS)  | 0   | 0   | 0   |
| 1_5.12                                 |                        |                                     | Amend the Act on the Protection of Agricultural Land to set conditions for the retention and creation of selected landscape features serving to protect soil in agricultural land fund without the need for expropriation.   | L             | MŽP                     |                         | L: 2021 E: ongoing                    | X   | -  | -  | 0   | 0   | 0   |
| 1_5.13                                 |                        |                                     | Develop and ensure compliance with the principles of good agricultural practice in in terms of protecting water reservoirs and watercourses.   | M, E          | Ministry of Agriculture | MoE                     | 2023                                  | X   | -  | -  | 0   | 0   | 0   |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br><i>(measures are shown in bold)</i>   | Task type *** | Manager                 | Co-manager              | Deadline, checkpoints                 | Financial requirements until 2025<br>****   | Existing financial resources and economic tools                | Potential and new economic instruments                           | EU resources until 2025<br>(in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources<br>(in millions of CZK) |
| 1_5.14                                 |                        |                                     | In areas threatened by wind erosion, ensure the creation or reconstruction of a functional system of windbreaks  | M, E, O, L    | MŽP                     | Ministry of Agriculture | M: 2024 E: ongoing O: ongoing L: 2024 | cannot be separated from 1_5.1  | -  | -  | =   | =   | =   |
| o1_6                                   | 1                      | SU, PO, ZT, ET, EV, VS, PV          | Maintaining and increasing the water-holding capacity of soil  |               |                         |                         |                                       |   |  |  |   |   |   |
| 1_6.1                                  |                        |                                     | Using available tools, reduce soil compaction, improve soil structure, increase the proportion of organic matter in the soil by promoting the use of organic matter sources, specifically manure, compost, and the inclusion of multi-species cover crops (research, education, subsidies to ensure compost application, legislative changes, etc.). | E, I, L       | MoA                     | MoE                     | ongoing                               | Cannot be specified given the current state of CAP preparation.                       | PRV  | SP SZP - AEKO Intercrops, DZES and eco-schemes , Organic farming |   | 0   | 0   |
| o1_7                                   | 1                      | SU, ZT,                             | Stable support and promotion of organic farming with an emphasis on non-production and adaptation functions  |               |                         |                         |                                       |   |  |  |   |   |   |
| 1_7.1                                  |                        |                                     | Ensure the evaluation of a comparison between organic farming and conventional farming in terms of adaptation to climate change.   | V             | Ministry of Agriculture | MoE                     | 2025                                  | Cannot be specified due to the current state of CAP preparations.                     | SZP (monitoring M11 Organic farming)                           | SP SZP   |   | 0   | 0   |
| 1_7.2                                  |                        |                                     | Support research into new methods and substances of natural origin to promote plant growth (biofertilizers, biostimulants, biopesticides).   | V             | Ministry of Agriculture |                         | ongoing                               | Total CZK 10 million (new requests for support from ČTPEZ approx. CZK 2 million/year) | ZEMĚ program, support for the Czech Technology Platform for EZ | -  | 0   | 10.0  | 10  |
| 1_7.3                                  |                        |                                     | Legislate easier and faster options for placing plant biostimulants and pesticides on the market (registration process).   | L             | Ministry of Agriculture |                         | Ongoing                               | X   | -  | -  | 0   | 0   | 0   |



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|   |                        |                                     |  |               |                         |            |                       |   |  |  |  |   |  |
|---|------------------------|-------------------------------------|--|---------------|-------------------------|------------|-----------------------|---|--|--|--|---|--|
| 1_7.4                                     |                        |                                     | Increase support for the competitiveness of organic farmers, particularly in the processing and marketing of organic products. Support stable demand for local organic food through a mandatory percentage of organic food in public and school catering.  | E, L          | Ministry of Agriculture |            | ongoing, KT: 2023     | marketing campaign SZIF 30 million/year   | CAP SZIF marketing campaign to promote organic consumption | (information missing)                  | (information missing)                        | 15  |  |
| Target code (SC)<br>Measure (o) Task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager                 | Co-manager | Deadline, checkpoints | Financial requirements until 2025 ****  | Current financial resources and economic instruments       | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o1_8                                      | 1                      | SU, ZT, ET, EV, VS, PV              | <b>Construction of new and modernization of existing irrigation systems</b>  |               |                         |            |                       |   |  |  |  |   |  |
| 1_8.1                                     |                        |                                     | Support the construction of new and modernization of existing irrigation systems based on the principle of economical and efficient irrigation (without adversely affecting the soil).   | E, M          | Ministry of Agriculture |            | ongoing               | Cannot be estimated   | SR, chapter MZe  | -                                      | 0  | 600   | 0  |
| 1_8.2                                     |                        |                                     | Examine the possibilities of revising legislation concerning land improvement systems, particularly with regard to ownership and competence issues.  | L             | Ministry of Agriculture | SPÚ        | 2023                  | X   | -  | -                                      | 0  | 0   | 0  |
| 1_8.3                                     |                        |                                     | Support the maintenance, restoration, and construction of small water reservoirs for irrigation and water retention or accumulation in the agricultural landscape.   | E             | Ministry of Agriculture |            | ongoing               | CZK 2,500 million, already included in 3_4.1  | SR, chapter MZe (program 129 390)                          | -                                      | 0  | =   | =  |
| o1_9                                      | 1                      | SU, PO, ZT, ET, EV, VS, PV          | <b>Minimization of the impact of improperly designed drainage systems on accelerated water runoff from the landscape</b>   |               |                         |            |                       |   |  |  |  |   |  |
| 1_9.1                                     |                        |                                     | Continue implementing projects enabling the reconstruction/optimization of selected irrigation and drainage systems (e.g., by modifying drainage systems to regulated runoff systems, replacing sporadic drainage) in relation to production. Focus intensively on the removal of improperly designed or unnecessary drainage systems through the revitalization and renaturation of watercourses. | E, O          | MZe                     | MoE        | ongoing               | Ministry of Agriculture: CZK 600 million (apparently already included in 1_8.1); SPÚ: CZK 100 million (in 2021, the current subsidy title expires – CZK 20 million; Ministry of the Environment: CZK 100 million (OPŽP) | SR, Ministry of Agriculture chapter, OPŽP                  | OPŽP 21+                               | 10   | 10  | cannot be quantified   |
| 1_9.2                                     |                        |                                     | Prepare a general plan for drainage structures as a methodological and factual overview and method for evaluating data sources in connection with agricultural drainage structures. Complete the Information System for Land Improvement Structures (ISMS), which will provide specific detailed documentation.  | V, M          | Ministry of Agriculture |            | ongoing, KT: 2025     | Cannot be estimated   | SR   | -                                      |  |   |  |

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|  |                        |                                     |   |               |                         |                         |                       |   |   |   |  |   |  |
|--|------------------------|-------------------------------------|---|---------------|-------------------------|-------------------------|-----------------------|---|---|---|--|---|--|
| o1_10                                  | 1                      | SU, ET, EV, PV                      | Application of technological procedures reducing unproductive evaporation, maximizing the efficiency of soil moisture utilization   |               |                         |                         |                       |   |   |   |  |   |  |
| 1_10.1                                 |                        |                                     | Expand and support technological processes in agricultural production that reduce unproductive evaporation and increase the efficiency of soil moisture use (e.g., drip irrigation, vegetable foils, stubble cultivation, multiple intercrops, stubble sowing). | M, I, V, E    | MZe                     |                         | ongoing               | (information missing)   | (information missing)   | (information missing)                                   | (information missing)                        | (information missing)                           | (information missing)  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager                 | Co-manager              | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools   | Potential and new economic instruments                  | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o1_11                                  | 1                      | SU, ZT                              | Support for farming systems and landscape management contributing to climate change resilience  |               |                         |                         |                       |   |   |   |  |   |  |
| 1_11.1                                 |                        |                                     | Support measures to increase the share of highly diverse landscape features on agricultural land, in line with the Biodiversity Strategy to 2030.   | M, E          | MŽP                     | Ministry of Agriculture | ongoing, KT: 2023     | MoE: OP2P 1 CZK 500 million 300 million NPO and CZK 500 million from national programs; Ministry of Agriculture (information missing) | Ministry of the Environment: OP2P, POPFK, PPK; Ministry of Agriculture: PRV (payments for landscape features) | OP2P 21+, NPO, SP SZP (payments for landscape features) | 1,8  | 50  | 3  |
| 1_11.2                                 |                        |                                     | Within the AEKO, prepare a farm planning system to strengthen ecosystem functions in the programming period after 2027.   | M, O          | MZe                     | MoE                     | 2023                  | X   | -   | SP SZP, AKIS, support consulting                        |  |   |  |
| 1_11.3                                 |                        |                                     | Create conditions for the application of agroforestry as a method of agricultural land use that improves the natural functions of the agricultural landscape and support it within the CAP.   | V, E, L       | MoA                     | MoE                     | 2023                  | X   | research programs   | SP SZP - Agroforestry                                   |  | 0   | 0  |
| o1_12                                  | 1                      | SU, ZT,                             | Support for adaptation to climate change under the Strategic Plan for the Common Agricultural Policy  |               |                         |                         |                       |   |   |   |  |   |  |
| 1_12.1                                 |                        |                                     | Take into account the evaluation of elements included by national legislation in ecologically focused areas (EFAs) in the CAP and set mandatory percentages of landscape features and non-productive areas in CAP instruments.                                  | L             | Ministry of Agriculture |                         | ongoing, KT: 2023     | X   | -   | -   | 0  | 0   | 0  |
| 1_12.2                                 |                        |                                     | As part of the CAP review, extend the crop diversification requirement to include compliance with basic crop rotation principles and promote the enhancement of the diversity of cultivated plants.   | M             | Ministry of Agriculture |                         | 2023                  | X   | -   | -   | 0  | 0   | 0  |
| o1_13                                  | 1                      | SU, PO, ZT, ET, EV, VS, PV          | Ensuring the economic sustainability of agricultural management in the landscape and its productive function  |               |                         |                         |                       |   |   |   |  |   |  |

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|--|------------------------|-------------------------------------|--|---------------|-------------------------|-----------------------------|-----------------------|---|---|--|--|---|--|
| 1_13.1                                 |                        |                                     | Increase the share of crops and livestock production to preserve and diversify the productive function of the agricultural landscape while supporting other ecosystem functions, i.e. support the cultivation of fodder crops, catch crops, and permanent crops used for erosion control; supporting livestock production with an emphasis on its sustainability, including the search for alternative production systems in changing climatic conditions (e.g., silvopastoral systems). Optimizing the ratio of plant and animal production with an emphasis on sustainability. | O, E          | MoA                     |                             | 2030                  | Cannot be specified due to the current state of CAP preparations.                               | (no information available)  | (information missing)                  | (information missing)                        |   |  |
| 1_13.2                                 |                        |                                     | Comprehensive support for key commodities combining food security and strengthening other ecosystem services.  | O, E          | Ministry of Agriculture |                             | ongoing               | (information missing)   | (information missing)   | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are highlighted in bold)   | Task type *** | Manager                 | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools                                       | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 1_13.3                                 |                        |                                     | Transition to maximum optimization of nutrient and water use through support for new agrotechnical methods and precision agriculture – with the aim of stabilizing production while reducing the use of agrochemicals and agrotechnical interventions, including investment support.   | O, E          | Ministry of Agriculture |                             | 2027                  | (information missing)   | (information missing)   | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| 1_13.4                                 |                        |                                     | Ensure long-term and stable support for the conservation and sustainable use of plant, animal and microorganism genetic resources for food and agriculture. Ensure the availability of suitable crops, varieties and breeds for expected climatic conditions through the conservation and sustainable use of genetic resources important for food and agriculture, while promoting the application of modern biotechnologies (including new breeding techniques). Provide related education and awareness-raising.   | O, E, I       | MoA                     |                             | ongoing               | CZK 400 million (CZK 80 million per year), related research (CZK 60 million) is listed in 1_4.2 | National subsidy program 6 according to the Principles of the Ministry of Agriculture | -                                      | 0  | 40  | 40   |
| <b>o1_14</b>                           | 1                      | SU, ZT, ET, EV                      | <b>Diversification of agricultural activities</b>  |               |                         |                             |                       |   |   |  |  |   |  |
| 1_14.1                                 |                        |                                     | Prioritize small agricultural enterprises in the provision of agricultural support.  | E             | Ministry of Agriculture |                             | ongoing               | X   | -   | -                                      | 0  | 0   | 0  |
| 1_14.2                                 |                        |                                     | Support the diversification of agricultural activities (production for non-food purposes, wood, organic production, agritourism, etc.).  | E             | Ministry of Agriculture |                             | ongoing               | CZK 300 million (call in 2021)  | RDP   | SP SZP                                 | 148  | 151   | 0  |
| 1_14.3                                 |                        |                                     | Delimit areas of arable land in floodplains that are subject to flooding during high flows (Q5 - Q20), establish appropriate management methods and provide financial incentives for agricultural operators in floodplains to apply appropriate management practices.  | V, M, E       | Ministry of Agriculture | Ministry of the Environment | 2023                  | (information missing)   | (information missing)   | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| <b>o1_15</b>                           | 1 (4, 5)               | SU, ET, EV, PO, PV                  | <b>Development of the availability of an early warning system for extreme weather events for farmers</b>   |               |                         |                             |                       |   |   |  |  |   |  |
| 1_15.                                  |                        |                                     | Develop principles for comprehensive risk management and prevention of the negative impacts of climate change.   | V             | Ministry of Agriculture | TA CR, MoES                 | 2023                  | Ministry of Agriculture: X; Ministry of Education, Youth and Sports: cannot be estimated        | research programs   | -                                      |  |   |  |

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| 1_15.2                                 |                        |                                     | Develop new and improve existing methods of drought monitoring and forecasting for the purposes of early warning of extreme weather events for farmers.  | V, M          | Ministry of Agriculture | MoE, SPU, TA ČR, Ministry of Education | 2023                  | Ministry of Agriculture; X; Ministry of Education, Youth and Sports; cannot be estimated | research programs                                    | -                                      |  |   |  |   |
| o1_16                                  | 1                      | ZT, ET, EV                          | <b>Support for the management system of harmful organisms in agricultural crops</b>  |               |                         |  |                       |  |  |  |  |   |  |   |
| 1_16.1                                 |                        |                                     | Focus research and, using international phytosanitary standards, plant health monitoring on the early detection of the introduction of new harmful organisms or changes in the harmfulness of native species in connection with climate change.  | V, O, M       | Ministry of Agriculture |  | 2023                  | X  | research programs                                    | -                                      |  | 0   | 0  | 0 |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager                 | Co-manager                             | Deadline, checkpoints | Financial requirements until 2025 ****   | Current financial resources and economic instruments | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |   |
| 1_16.2                                 |                        |                                     | Focus the national system for analyzing the risks of harmful organisms to agricultural crops on the risks associated with the harmfulness of these organisms in the context of climate change.   | O, M          | Ministry of Agriculture |  | 2023                  | X  | -  | -                                      |  | 0   | 0  | 0 |
| 1_16.3                                 |                        |                                     | Develop, using international phytosanitary standards, and implement in the widest possible practice methods of integrated management of harmful organisms of agricultural crops with the aim of preventing the introduction of non-native species, and, in the case of already introduced species and native species with increased harmfulness, to limit their spread and impact in the Czech Republic, including the creation of warning systems for the harmful occurrence of new and native harmful organisms. | O, M          | Ministry of Agriculture |  | 2023                  | X  | -  | -                                      |  | 0   | 0  | 0 |
| 1_16.4                                 |                        |                                     | Ensure timely publication of cases of new harmful organisms and changes in the harmfulness of existing species.  | O, I          | Ministry of Agriculture |  | ongoing               | X  | -  | -                                      |  | 0   | 0  | 0 |
| SC2                                    |                        |                                     | <b>Ecological stability and the provision of forest ecosystem services are ensured, with an emphasis on preventing soil degradation and strengthening the natural water regime.</b>  |               |                         |  |                       |  |  |  |  |   |  |   |
| o2_1                                   | 2                      | SU, ZT, ET, EV, VS, PV              | <b>Achieving game populations sustainable for the natural regeneration of a wide range of tree species.</b>  |               |                         |  |                       |  |  |  |  |   |  |   |
| 2_1.1                                  |                        |                                     | Within the framework of hunting legislation, create conditions for achieving sustainable populations of hoofed game, also in relation to strengthening the ecological stability of forest stands. Derive hunting quotas from the condition of forest ecosystems and ensure their enforceability.   | M, L          | MZe                     | MŽP                                    | M: 2023<br>L: 2022    | X  | -  | -                                      |  | 0   | 0  | 0 |
| o2_2                                   | 2                      | SU, ZT, ET, EV, VS, PV              | <b>Support for farming methods with permanent soil cover with long or continuous renewal periods</b>   |               |                         |  |                       |  |  |  |  |   |  |   |

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| 2_2                                    |                        |                                     | Establish and maintain a network of comparative (demonstration) plots in various habitat conditions for testing non-clear-cut management methods, ensure regular monitoring of these plots and evaluation of results. Within the framework of regional forest development plans (OPRL), identify suitable sites for the establishment of demonstration sites in cooperation with forest owners and managers, including research entities, and ensure their registration and monitoring. | E, O          | MoA                     | MoE, MoD, MoES, KPR         | ongoing               | CZK 2.5 million   | functional tasks MZe                            | -  | 0  | 2   | 0  |
| 2_2.2                                  |                        |                                     | Develop and implement a system of awareness raising, education and motivation (including financial) for forest owners to make wider use of non-clear-cutting management methods.  | V, E, I       | Ministry of Agriculture | MoE                         | V, I, ongoing E: 2025 | (information missing)   | (information missing)                           | AKIS, education and advisory system of the Ministry of Agriculture   | (information missing)                        | (information missing)                           | (information missing)  |
| 2_2.3                                  |                        |                                     | Create equal conditions in forestry legislation for the application of non-clear-cutting management methods as a prerequisite for increasing species and spatial diversity in forests.  | L             | Ministry of Agriculture | Ministry of the Environment | 2026                  | X   | -   | -  | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>   | Task type *** | Manager                 | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools | Potential and new economic instruments   | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o2_3                                   | 2                      | SU, ZT, ET, EV, VS, PV              | <b>Preference and ensuring natural forest regeneration</b>  |               |                         |                             |                       |   |   |  |  |   |  |
| 2_3.1                                  |                        |                                     | Support natural forest regeneration in non-state forests with regard to the target tree species composition, with the exception of genetically unsuitable stands. Amend Government Regulation No. 30/2014 Coll.   | E, M          | MZe                     | MoE                         | ongoing               | contributions according to Government Regulation No. 30/2014 Coll. calculated in 2_4.1+ new support included in task 2_4.11 | Government Regulation No. 30/2014 Coll.         | amendment to Government Regulation No. 30/2014 Coll. Programme Adaptation of forest ecosystems to climate change | 0  | =   | =  |
| o2_4                                   | 2                      | SU, ZT, ET, EV, VS, PV              | <b>Increasing the ecological stability of forest stands and their resistance to biotic and abiotic harmful factors by selecting appropriate species and spatial composition</b>   |               |                         |                             |                       |   |   |  |  |   |  |

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| 2                                      |                        |                                     | Encourage forest owners to improve the condition of forest ecosystems during their restoration after bark beetle infestation, including support for natural regeneration and the use of preparatory trees.                            | E, M          | Ministry of Agriculture, Ministry of the Environment |                             | ongoing               | Ministry of Agriculture: approx. 18 124 million CZK (8,540 million CZK by 2023 from the NPO or SR, followed by 5,660 million CZK in 2024 and 2025 from the SR, if the NPO does not work out, everything will come from the SR); Ministry of the Environment: approx. CZK 50 million per year | Government Regulation No. 30/2014 Coll.; OPŽP, PPK, POPFK                  | NPO (until 2023), amendment to Government Regulation No. 30/2014 Coll., PRV   | for the Ministry of Agriculture, amount not yet determined          | 10,945  |  |
| 2_4.2                                  |                        |                                     | Methodologically adjust (OPRL) the size of clear cutting with regard to vegetation type and management method.  | M             | Ministry of Agriculture                              |                             | ongoing KT: 2025      | X  | -  | -   |   | 0   | 0  |
| 2_4.3                                  |                        |                                     | Provide financial incentives to non-state forest owners to increase the proportion of meliorative and stabilizing tree species (MZD) when ensuring young forest stands.   | E             | Ministry of Agriculture                              | Ministry of the Environment | ongoing               | Ministry of Agriculture the financing of this task is part of the financing of task 2_4.1; MZP: 1300 million CZK   | Government Regulation No. 30/2014 Coll.; Ministry of the Environment: OPŽP | NPO (until 2023), amendment to Government Regulation No. 30/2014 Coll., PRV; OPŽP 21+   | on behalf of the Ministry of Agriculture, volume not yet determined | =   | =  |
| 2_4.4                                  |                        |                                     | Revise the recommended target species composition to reflect changing climatic conditions and correspond to the current state of knowledge of forest cultivation in changing conditions.  | V, M          | MoA  | MoE                         | ongoing KT: 2025      | X  | research programs  | -   |   | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager  | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 ****   | Existing financial resources and economic instruments                      | Potential and new economic instruments  | EU resources until 2025 (in millions of CZK)                        | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 2_4.5                                  |                        |                                     | Methodologically and financially support the conversion and restructuring of spruce stands, including younger age classes, in endangered habitats.  | E, M          | MZe  | MoE                         | ongoing KT: 2025      | MoA contributions according to Government Regulation No. 30/2014 Coll. calculated in 2_4.1+ new support included in task 2_4.11  | Government Regulation No. 30/2014 Coll.                                    | Ministry of Agriculture: amendment to Government Regulation No. 30/2014 Coll., PRV, program Adaptation of forest ecosystems to climate change | on behalf of the Ministry of Agriculture, volume not yet determined | =   | =  |
| 2_4.6                                  |                        |                                     | Methodically standardize the use of geographically non-native tree species to a maximum of 20% of the stand composition, which do not behave invasively and do not crossbreed with native species (especially larch and Douglas fir). | M             | MoE  | Ministry of Agriculture     | ongoing               | X  | -  | -   |   | 0   | 0  |
| 2_4.7                                  |                        |                                     | Preparation of a risk analysis of the use of geographically non-native tree species and possibilities for implementing the results into forest management.  | V             | Ministry of the Environment                          | Ministry of Agriculture     | 2023                  | X  | research programs  | -   |   | 0   | 0  |

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| 2_4.8                                  |                        |                                     | Methodically adjust the reduction of rotation periods for selected short-lived tree species and individual commercial stands.   | M             | Ministry of Agriculture |                     | ongoing KT: 2025      | x                                      | -   | -   |  | 0   | 0  | 0        |
| 2_4.9                                  |                        |                                     | The founders should formulate guidelines for entities managing state-owned forests that reflect the adaptation measures adopted and set stricter conditions for forest management than for other forest owners, with an emphasis on society-wide demand for the fulfillment of public interests and on environmental quality. | O, M          | MZe                     | MoE, MoD, MoES, Mol | ongoing KT: 2025      | x                                      | -   | -   |  | 0   | 0  | 0        |
| 2_4.10                                 |                        |                                     | Ensure methodological guidance for relevant state administration bodies to support the adopted adaptation measures.   | M             | Ministry of Agriculture | MoE, MoD, MoES, KPR | ongoing KT: 2025      | x                                      | -   | -   |  | 0   | 0  | 0        |
| 2_4.11                                 |                        |                                     | Encourage forest owners to create diverse species compositions consisting of more than two sufficiently represented tree species (in addition to MZD, others such as larch, pine, succession tree species, etc.).   | E             | Ministry of Agriculture |                     | ongoing               | CZK 28,000 million (from 2022)         | -   | Programme Adaptation of forest ecosystems to climate change |  | 0   | 28,000   | 28,000.0 |
| o2_5                                   | 2                      | SU, PO, ZT, ET, EV, VS              | Identification of risk areas for priority implementation of adaptation measures in forest ecosystems  |               |                         |                     |                       |  |   |   |  |   |  |          |
| 2_5.1                                  |                        |                                     | Define areas of forest soils threatened by acidification and nutrient degradation, moisture deficiency, eutrophication, and erosion.  | V             | Ministry of Agriculture | MoE                 | 2023                  | x                                      | research programs                               | -   |  | 0   | 0  | 0        |
| 2_5.2                                  |                        |                                     | Develop a methodology for inventorying carbon bound in forest soils and determine the impact of management practices on its quantity.   | V             | Ministry of Agriculture | MoE                 | 2024                  | x                                      | research programs                               | -   |  | 0   | 0  | 0        |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br><i>(measures are shown in bold)</i>  | Task type *** | Manager                 | Co-manager          | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments                      | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |          |
| 2_5.3                                  |                        |                                     | Develop a soil property monitoring project to monitor the quantity and character of humus, pH, sorption saturation, base/Al ratio, C/N ratio, physical properties, and follow-up research and monitoring of the condition and relationships of the root system and mycorrhiza, soil biota.                                    | V             | MoA                     | MoE                 | 2023                  | x                                      | research programs                               | -   |  | 0   | 0  | 0        |
| 2_5.4                                  |                        |                                     | Evaluate the impact of chemical soil improvement on the physical, chemical, and biological properties of the soil environment and the health of forest stands, and establish recommendations for the use of chemical soil improvement as part of adaptation measures.   | V             | Ministry of Agriculture | MoE                 | 2023                  | x                                      | research programs                               | -   |  | 0   | 0  | 0        |
| 2_5.5                                  |                        |                                     | Evaluate the influence of tree species composition, structure, and health of forest stands on forest microclimate, temperature regime, and water cycle in the landscape.  | V, M          | Ministry of Agriculture | MŽP                 | V: 2022<br>M: 2023    | x                                      | research programs                               | -   |  | 0   | 0  | 0        |
| o2_6                                   | 2                      | SU, PO, ZT, ET, EV, VS              | Development of good practice guidelines (BMP) for forest owners and professional forest managers  |               |                         |                     |                       |  |   |   |  |   |  |          |

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| 2_6.1                                  |                        |                                     | Develop good practice guidelines for forest owners and professional forest managers with regard to the adaptation measures mentioned (in particular, reducing biomass and nutrient extraction, minimizing clear-cutting, adjusting species composition in favor of deciduous and deep-rooted trees, and choosing environmentally friendly technologies). | M, V, O       | MZe   | MoE                         | 2021                       | X   | research programs                               | -   | 0  | 0   | 0  |
| 2_6.2                                  |                        |                                     | Embed good practice principles in the OPRL.  | M, O          | MZe   |                             | ongoing                    | X   | -   | -   | 0  | 0   | 0  |
| 2_6.3                                  |                        |                                     | Methodically and financially motivate owners to adhere to good practice principles. In the case of state forests, ensure compliance with good practice through the founder's mandate.  | O, M, E       | Ministry of Agriculture, Ministry of the Environment, Ministry of Defense |                             | Ongoing M: 2022<br>E: 2026 | Ministry of Agriculture specified in task 2_4.11  | -   | MoA: Programme Adaptation of forest ecosystems to climate change                            | 0  | =   | =  |
| o2_7                                   | 2                      | SU, ZT, ET, EV, VS                  | <b>Protection of the gene pool of domestic forest tree species threatened by climate change</b>  |               |   |                             |                            |   |   |   |  |   |  |
| 2_7.1                                  |                        |                                     | Focus on the rescue and strengthening of genetic resources of native spruce ecotypes, especially from lower altitudes.   | V, M, O       | Ministry of Agriculture   | Ministry of the Environment | ongoing                    | X   | research programs                               | -   | 0  | 0   | 0  |
| 2_7.2                                  |                        |                                     | Focus on identifying, mapping, and propagating ecotypes of beech, ash, and other tree species from dry habitats.   | V, M, O       | Ministry of Agriculture   | Ministry of the Environment | ongoing                    | X   | research programs                               | -   | 0  | 0   | 0  |
| 2_7.3                                  |                        |                                     | Prepare conditions for wider forestry use of currently minor thermophilic oak species found in the Czech Republic.   | V, M, O       | Ministry of Agriculture   | Ministry of the Environment | ongoing                    | X   | research programs                               | -   | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager   | Co-manager                  | Deadline, checkpoints      | Financial requirements until 2025 ****            | Existing financial resources and economic tools | Potential and new economic instruments  | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o2_8                                   | 2                      | SU, ZT                              | <b>Ensuring sufficient biomass as an energy source, taking into account the need to maintain sufficient organic matter in the soil</b>   |               |   |                             |                            |   |   |   |  |   |  |
| 2_8.1                                  |                        |                                     | Increasing the biodiversity and ecological stability of forest ecosystems while maintaining their production function by leaving forest harvesting residues (non-coarse wood) to decay in forest stands – leaving trees to die naturally and dead wood volume determined by the proportion of management interventions carried out.                      | L, E          | MZe   | MŽP                         | L: 2023<br>E: 2026         | Ministry of Agriculture: specified in task 2_4.11 | -   | Ministry of Agriculture Programme for the adaptation of forest ecosystems to climate change | 0  | =   | =  |
| 2_8.2                                  |                        |                                     | Update the methodology of the Ministry of the Environment and the State Forestry Administration (2009) for determining the sustainable level of harvesting residues from forest stands. Reflect the results in the framework guidelines when updating the OPRL.  | M             | Ministry of Agriculture   | Ministry of the Environment | ongoing KT: 2025           | X   | -   | -   | 0  | 0   | 0  |



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| 2_8.3                                  |                        |                                     | Revise the program to support woodchipping and leaving logging residues on site for non-state forest owners (following the updated methodology for determining the sustainable level of logging residue removal from forest stands) in connection with task 2_8.2.  | E             | MoA  | MoE        | ongoing               | MoA contributions according to Government Regulation No. 30/2014 Coll. calculated in 2_4.1+ new support included in task 2_4.11 | Ministry of Agriculture: Government Regulation No. 30/2014 Coll. | Ministry of Agriculture: amendment to Government Regulation No. 30/2014 Coll., program Adaptation of forest ecosystems to climate change | 0  | =   | =  |
| o2_9                                   | 2                      | SU, ZT, ET, EV, VS                  | <b>Support for the system of managing biotic harmful agents of forest and ornamental trees</b>  |               |  |            |                       |   |  |  |  |   |  |
| 2_9.1                                  |                        |                                     | Strengthen monitoring of the main harmful agents in stands threatened by drought, especially spruce, oak, beech, and pine.  | V             | Ministry of Agriculture                              | MoE        | ongoing KT: 2024      | X   | research programs  | -  | 0  | 0   | 0  |
| 2_9.2                                  |                        |                                     | Support research and monitoring of biotic harmful agents of forest and ornamental trees and the identification of transformers (using international phytosanitary standards).   | V, M, O       | Ministry of Agriculture                              | MoE        | ongoing KT: 2024      | X   | research programs  | -  | 0  | 0   | 0  |
| 2_9.3                                  |                        |                                     | Develop, using international phytosanitary standards, and implement in the widest possible practice methods of integrated management of transformers and other significant biotic harmful agents of forest and ornamental trees with the aim of preventing their introduction and, in the case of already introduced agents, limiting their spread and impact in the Czech Republic. When establishing seed orchards, record information on tolerant/resistant tree species of taxa damaged by transformers; protect selected phenotypically resistant trees in situ. | O, M          | MoA  | MoE        | ongoing KT: 2024      | X   | -  | -  | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>   | Task type *** | Manager  | Co-manager | Deadline, checkpoints | Financial requirements until 2025 ****  | Current financial resources and economic instruments             | Potential and new economic instruments   | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 2_9.4                                  |                        |                                     | Ensure adequate public education and awareness among end users of planting material and forest and ornamental tree seedlings. To this end, streamline cooperation between the Ministry of Agriculture and the Ministry of the Environment, relevant state administration bodies, research and operators in the field of biotic pest risk management.  | I, O          | Ministry of Agriculture, Ministry of the Environment |            | ongoing               | X   | -  | -  | 0  | 0   | 0  |
| o2_10                                  | 2                      | SU, ZT                              | <b>Creating conditions for the effective and sustainable use of forest tree genetic resources</b>   |               |  |            |                       |   |  |  |  |   |  |
| 2_10.1                                 |                        |                                     | Development of established functional systems for the collection, recording, and control of forest reproductive material in the Czech Republic, including economic incentives for forest owners to participate in the National Program for the Protection and Reproduction of Forest Genetic Resources.   | V, M, O, E    | Ministry of Agriculture                              |            | ongoing               | CZK 115 million, of which national resources approx. CZK 90 million (approx. CZK 18 million/year)                               | NP for the protection and reproduction of forest tree gene pools | -  | 25   | 90  | 0  |

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|  |                     |  |   |                  |  |            |                       |  |   |  |  |   |  |
|--|---------------------|--|---|------------------|--|------------|-----------------------|--|---|--|--|---|--|
| o2_11                                  | 2                   | SU, ZT                                 | Securing the registration of forest tree genetic resources  |                  |  |            |                       |  |   |  |  |   |  |
| 2_11.1                                 |                     |  | Support for the registration of forest tree reproductive material with reference to relevant legislation and policy documents (National Program for the Protection and Reproduction of Forest Tree Genetic Resources).  | O                | Ministry of Agriculture                              |            | ongoing               | x  | -   | -                                      |  | 0   | 0  |
| 2_11.2                                 |                     |  | Operation of an information database of forest tree genetic resources in the Czech Republic.  | O                | Ministry of Agriculture                              |            | ongoing               | x  | -   | -                                      |  | 0   | 0  |
| o2_12                                  | 2                   | SU, PO, PV                             | Revision of forestry improvement measures, torrent control and forest road construction with a focus on the protection and restoration of the natural water regime in forests   |                  |  |            |                       |  |   |  |  |   |  |
| 2_12.1                                 |                     |  | When providing public funds for forestry improvement measures (including torrent control) and for the construction and reconstruction of forest roads, respect the protection and restoration of the natural water regime in forests.   | E                | Ministry of Agriculture                              |            | ongoing               | x  | -   | -                                      |  | 0   | 0  |
| o2_13                                  | 2                   | SU, VS, PV                             | Minimization of technical drainage of forest land using natural and nature-friendly methods   |                  |  |            |                       |  |   |  |  |   |  |
| 2_13.1                                 |                     |  | Revise the existing forest soil drainage system to restore the natural water regime. Use natural and nature-based methods to achieve this. Maintain technical drainage only in exceptional cases where the restoration of the natural water regime would cause irreversible damage to related infrastructure (road network, buildings, etc.).                                 | O, E, M          | MZe  | MoE        | ongoing KT: 2025      | x  | -   | -                                      |  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant targets ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br>(measures are listed in bold)   | Type of task *** | Manager  | Co-manager | Deadline, checkpoints | Financial requirements until 2025 ****   | Existing financial resources and economic tools                                   | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o2_14                                  | 2                   | SU, PO, ZT, EV, VS, PV                 | Implementation of measures for water retention in forests   |                  |  |            |                       |  |   |  |  |   |  |
| 2                                      |                     |  | Motivate forest owners to protect wetlands and natural watercourses, increase water retention in forests, and slow down water runoff. Support the restoration and creation of wetlands and ponds, the revitalization and renaturation of watercourses and peat bogs, and the restoration and construction of small water reservoirs, polders, and torrent control structures. | M, E, O          | Ministry of Agriculture, Ministry of the Environment |            | ongoing               | MZe: approx. 500 million CZK (300 million CZK from the NPO by 2023 and 200 million from the SR); MZP: included in other tasks (revitalization, landscape elements) | mandatory expenditure pursuant to Section 35 of Act No. 289/1995 Coll. on forests | NPO (until 2023)                       | 300  | 200   | 200  |

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| o2_15                                  | 2                   | SU, PO, ZT, ET, EV, VS, PV   | Applying procedures and measures during forest harvesting and restoration to prevent or slow down surface runoff of precipitation and soil erosion  |                  |                         |                         |                       |   |  |  |  |   |  |
| 2_15.1                                 |                     |  | Methodically guide and financially motivate forest owners to minimize the risk of forest soil damage in relation to subsequent erosion and disruption of the water regime during logging and timber harvesting.                       | M, E             | MZe                     |                         | ongoing               | MZe contributions according to Government Regulation No. 30/2014 Coll. calculated in 2_4.1+ new support included in task 2_4.11 | Ministry of Agriculture: Government Regulation No. 30/2014 Coll. | Ministry of Agriculture: amendment to Government Regulation No. 30/2014 Coll., program Adaptation of forest ecosystems to climate change | 0  | =   | =  |
| 2_15.2                                 |                     |  | Review and, if necessary, revise the current approach to the further development of the forest road network. Adapt the density and design of structures to the requirement to limit water runoff. Use updated OPRLs for this purpose. | O, M             | MZe                     |                         | ongoing KT: 2025      | X   | -  | -  | 0  | 0   | 0  |
| 2_15.3                                 |                     |  | For newly constructed and reconstructed forest transport infrastructure, implement measures to minimize concentrated runoff.  | E, O, M          | Ministry of Agriculture |                         | ongoing               | Cannot be estimated   | -  | PRV  | volume not yet determined                    | 0   | 0  |
| o2_16                                  | 2                   | SU, PO, ZT, ET, EV, VS, PV   | Stabilization of the area of forest types affected by water and protection of wetlands in forests   |                  |                         |                         |                       |   |  |  |  |   |  |
| 2_16.1                                 |                     |  | Based on a review of forest-typological units, specify the occurrence of water-influenced habitats and determine appropriate management methods in the RSH. Use the results as a basis for possible legislative changes.              | M, O             | MZ                      |                         | ongoing KT: 2025      | X   | -  | -  | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant targets ** | Relationship to manifestations of ZK *   | Updating adaptation measures and tasks<br><i>(measures are listed in bold)</i>  | Type of task *** | Manager                 | Co-manager              | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools                  | Potential and new economic instruments   | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| SC3                                    |                     | Ecological stability and the provision of ecosystem services by water and water-related ecosystems are ensured, with an emphasis on strengthening the natural water regime of the landscape and taking into account the needs of human society and the sustainable use of water. |   |                  |                         |                         |                       |   |  |  |  |   |  |
| o3_1                                   | 3                   | SU, VS   | Legislative regulation of the operating conditions of relief chambers on a unified sewerage system and requirements for the collection and subsequent treatment of relief water.  |                  |                         |                         |                       |   |  |  |  |   |  |
| 3_1.1                                  |                     |  | Establish rules for the protection of water against overflows from relief chambers, including monitoring compliance and setting fees.   | L, E, M, O       | MoE                     | Ministry of Agriculture | 2022                  | X   | -  | -  | 0  | 0   | 0  |
| o3_2                                   | 3                   | SU, PO, ZT, ET, VS   | Comprehensive revitalization of watercourse beds and floodplains and support for spontaneous renaturation   |                  |                         |                         |                       |   |  |  |  |   |  |

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|   |                        |                                     |  |               |  |                             |                                     |  |  |  |  |   |  |
|---|------------------------|-------------------------------------|--|---------------|--|-----------------------------|-------------------------------------|--|--|--|--|---|--|
| 3_2.1                                     |                        |                                     | Ensure the implementation of revitalization and renaturation of watercourses and floodplains in accordance with water planning documents (NPP, PpZPR, PDP) and land consolidation, including the creation of conditions for land acquisition (purchases, exchanges).   | O             | MZe  | Ministry of the Environment | ongoing                             | 9,173.9 million CZK                    | SR, public budgets, own resources of state-owned enterprises Povodí and watercourse administrators | -                                      | cannot be quantified                         | 9,173.9   | cannot be quantified   |
| 3_2.2                                     |                        |                                     | Support comprehensive revitalization and spontaneous renaturation of watercourses and floodplains.   | E             | MoE  | Ministry of Agriculture     | ongoing                             | approx. CZK 1.9 billion                | OPŽP, supplementally POPFK, MaS  | OPŽP 21+, NPO                          | 1,885.0                                      | 15.0  | 0  |
| 3_2.3                                     |                        |                                     | When managing watercourses, where possible, prioritize environmental considerations in order to improve the ecological status of degraded watercourses. Strengthen the agenda for small watercourses in Povodí s.p. organizations in order to improve the ecological status of degraded watercourses and floodplains and restore their natural retention, including the protection of groundwater quantity and quality.  | O             | Ministry of Agriculture                              |                             | ongoing                             | cannot be estimated                    | Ministry of Agriculture chapter, own resources of state-owned river basin organizations            | -                                      |  |   |  |
| 3_2.4                                     |                        |                                     | Create methodological guidelines on the correct procedure under Section 83(m) of the Water Act on flood inspections and flood damage remediation for nature conservation authorities, flood authorities, and river basin managers.   | M             | Ministry of the Environment                          | Ministry of Agriculture     | 2022                                | X                                      | -  | -                                      | 0  | 0   | 0  |
| 3_2.5                                     |                        |                                     | Define and delimit floodplains for the purposes of spatial planning and protection of their ecosystem functions.   | V             | Ministry of Agriculture, Ministry of the Environment | MMR                         | 2023                                | Cannot be estimated                    | TACR, programs to support R&D&I  | -                                      |  |   |  |
| Objective code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager  | Co-manager                  | Deadline, checkpoints               | Financial requirements until 2025 **** | Existing financial resources and economic tools  | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 3_2.6                                     |                        |                                     | Ensure the protection and restoration of the migratory permeability of watercourses for aquatic and water-dependent animals in accordance with the Concept for the Passability of the River Network of the Czech Republic. Where appropriate, give preference to the removal of transverse obstacles over the construction of fish passes. Consider the restoration of the ecological connectivity of watercourses also from the perspective of the sediment regime. | O, E, M       | Ministry of the Environment                          | Ministry of Agriculture     | O: ongoing<br>M: 2023<br>E: ongoing | approx. CZK 370 million                | OPŽP, additionally POPFK   | OPŽP 21+, NPO                          | 350  | 20  | 0  |
| o3_3                                      | 3                      | SU, ZT, ET                          | <b>Preventive protection of water resources – protection zones, protected areas of natural water accumulation (CHOPAV) and areas protected for surface water accumulation</b>  |               |  |                             |                                     |  |  |  |  |   |  |
| 3_3.1                                     |                        |                                     | Ensure purposeful forest management in water source protection zones and CHOPAV to prevent any threat to water source yield (e.g. by clear-cutting or inappropriate extraction technology above the catchment area).   | L             | MŽP  | MŽP                         | MZ                                  | X                                      | -  | -                                      | 0  | 0   | 0  |

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|  |                        |  |   |               |                             |            |                       |  |   |   |  |   |  |                      |
|--|------------------------|--|---|---------------|-----------------------------|------------|-----------------------|--|---|---|--|---|--|----------------------|
| o3_4                                   | 3                      | SU, ZT, ET, VS                                     | Review of water protection areas and activities that could negatively affect water quality and quantity   |               |                             |            |                       |  |   |   |  |   |  |                      |
| 3_4.1                                  |                        |  | As part of effective data sharing by public authorities, continuously update the nationwide OPVZ and OPVN databases.  | O             | Ministry of the Environment |            | continuously          | X                                      | -   |   |  | 0   | 0  |                      |
| o3_5                                   | 3                      | SU, ZT, ET, VS, PV, PO                             | Restoration of the water management function of small water reservoirs that do not fulfill the necessary functions in the area  |               |                             |            |                       |  |   |   |  |   |  |                      |
| 3_5.1                                  |                        |  | Support the restoration of the water management function of small water reservoirs that have lost this function due to poor technical condition or have been used for other purposes, provided that the restoration of the reservoir does not cause the loss of valuable natural habitats and disproportionate damage to the ecological characteristics of the watercourse concerned. | E             | Ministry of Agriculture     |            | ongoing               | CZK 2,500 million                      | SR, public budgets, Ministry of Agriculture chapter (program 129 390)   | -   |  | 0   | 2,500  | cannot be quantified |
| o3_6                                   | 3                      | SU, ZT, ET, PO                                     | Support for the infiltration of surface water into groundwater  |               |                             |            |                       |  |   |   |  |   |  |                      |
| 3_6.1                                  |                        |  | Support widespread flooding in floodplains with potential for infiltration into groundwater.  | E             | MZe                         | MoE        | ongoing               | cannot be estimated                    | SR, programs to support R&D&I, own resources of state-owned enterprises Povodí and watercourse administrators | TACR, Ministry of Agriculture and Ministry of the Environment, OPŽP 21+ |  |   |  |                      |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of climate change * | Update of adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                     | Co-manager | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools   | Potential and new economic instruments                                  | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |                      |
| 3_6.2                                  |                        |  | Support the restoration of soil infiltration capacity with the potential to replenish groundwater.  | E             | MoA                         | MoE        | ongoing               | cannot be estimated                    | SR, programs to support R&D&I, own resources of state-owned enterprises Povodí and watercourse administrators | TACR, Ministry of Agriculture and Ministry of Environment, OPŽP 21+     |  |   |  |                      |
| o3_7                                   | 3                      | SU, PO, ET, VS, PV                                 | Reassessment of the current use of water reservoirs and water management systems and optimisation of their management   |               |                             |            |                       |  |   |   |  |   |  |                      |

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|--|------------------------|-------------------------------------|---|---------------|-------------------------|-----------------------------|-----------------------|--|--|---|--|---|--|
| 3_7                                    |                        |                                     | Reassess the current use of water reservoirs and water management systems and optimize their management, while taking effective measures to prevent the spread of non-native invasive species and reduce excessive eutrophication of water.   | O             | Ministry of Agriculture |                             | ongoing               | cannot be estimated                    | own resources of state-owned enterprises Povodí, programs to support R&D&I, TAČR           |   |  |   |  |
| o3_8                                   | 3 (4)                  | SU, PO                              | Verification of the implementation of new water sources in areas with proven water shortages  |               |                         |                             |                       |  |  |   |  |   |  |
| 3_8.1                                  |                        |                                     | Examine the possible use of suitable sites in areas with water shortages, including sites designated in the General Plan for Protected Areas for Surface Water Accumulation, for the implementation of new water sources (surface water accumulation) based on 1) an analysis of the development of the water balance, taking into account climate change and expected water consumption, and 2) an analysis of the application and potential of nature-based and organizational adaptation measures and their impact on strengthening the water balance in the target areas. | V             | MZe                     | MoE                         | continuous            | cannot be estimated                    | own resources of state-owned enterprises Povodí, programs to support R&D&I, TAČR           |   |  |   |  |
| 3_8.2                                  |                        |                                     | Continue preparations for the implementation of multipurpose water reservoirs with proven effectiveness in relation to climate change adaptation, while respecting other public interests.  | O, E          | Ministry of Agriculture | Ministry of the Environment | ongoing               | CZK 158 million                        | Ministry of Agriculture (program 129 360), own resources of state-owned enterprises Povodí | NPO   | 143 million                                  | 0   | Cannot be determined   |
| Target code (SC) Measure (o) Task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager                 | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools  | Potential and new economic instruments                                    | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o3_9                                   | 3                      | SU, ZT, ET                          | <b>Rational decision-making in the authorisation of water abstraction and discharge</b>   |               |                         |                             |                       |  |  |   |  |   |  |
| 3_9.1                                  |                        |                                     | Prepare methodological guidelines for water authorities on the sustainable use of groundwater resources. Ensure awareness-raising through the presentation and popularization of the results of analyses of the impacts of excessive abstraction on groundwater resources.  | M, I          | MŽP                     |                             | M I: 2023 ongoing     | x                                      | -  | -   | 0  | 0   | 0  |
| 3_9.2                                  |                        |                                     | To offset the amount of the fee for the quantity of groundwater abstracted with the amount of the payment for watercourse and river basin management (for surface water abstracted) in order to limit excessive use of groundwater resources.   | L             | MZe                     | MŽP                         | 2023                  | Cannot be estimated                    | Ministry of Agriculture chapter, Ministry of the Environment chapter budget                | Ministry of Agriculture and Ministry of the Environment chapter, OPŽP 21+ |  |   |  |

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|--|------------------------|--|---|---------------------|-------------------------|-----------------------------|-----------------------|--|--|--|--|---|--|
| 3_9.3                                  |                        |  | Use the system for assessing the prospective hydrological and water management balance within the six-year cycle of river basin plans.  | O                   | Ministry of Agriculture | Ministry of the Environment | ongoing               | cannot be estimated                    | own resources of state-owned enterprises Povodí            |  |  |   |  |
| 3_9.4                                  |                        |  | Government regulation to determine procedures for setting minimum residual flows to ensure the preservation of the ecological functions of watercourses.  | L                   | MŽP                     | Ministry of Agriculture     | 2022                  | X                                      | -  | -                                      | 0  | 0   | 0  |
| 3_9.5                                  |                        |  | Analyze the application of the provisions of the Water Act in order to meet water planning objectives, in particular the provisions of Section 12(3)(a), and propose solutions to bring them into line with the current situation, taking into account the impacts of climate change.   | V, O, M             | MoE                     | Ministry of Agriculture     | 2022                  | Cannot be estimated                    | -  | -                                      |  |   |  |
| o3_10                                  | 3                      | SU, ET, VS                             | <b>Introduction and support of systems for water reuse and systems for recycling water as process water</b>   |                     |                         |                             |                       |  |  |  |  |   |  |
| 3_10.1                                 |                        |  | Develop rules for the reuse of pre-treated wastewater (in households, businesses, urban green space irrigation, etc.).  | E, L, I, O, M, V, S | MZd, MZe, MMR           | MŽP                         | 2023                  | 7.9 million CZK                        | TACR, research programs                                    | -                                      | 0  | 7.9   | 0  |
| 3_10.2                                 |                        |  | Support effective decentralized methods of wastewater disposal and treatment in municipalities with scattered settlements (e.g., domestic wastewater treatment plants, preferably located on municipal land) in areas where centralized treatment or connection would be economically unfeasible, and ensure the proper operation (monitoring, WWTP servicing, etc.) and effective inspections of existing facilities in order to minimize the production of wastewater discharged or transported outside the place of origin. Support is not targeted at locations where these systems could pose a real threat to the quality of drinking water sources. Support is not intended for locations with concentrated development. | E, M                | MoE                     | MPO MZe                     | ongoing               | cannot be estimated                    | NPŽP   | OPŽP 21+                               |  |   |  |
| 3_10.3                                 |                        |  | Develop rules and promote the reuse of greywater and rainwater (decentralized sanitation systems – DESAR).  | E, L, I, O, M, V, S | MZe, MMR                | MŽP Ministry of Health      | 2                     | Cannot be estimated                    | SR (chapters MMR, MZe, MŽP, MZd); NPŽP (program Rainwater) | OPŽP 21+, NZÚ                          |  |   |  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | <b>Update of adaptation measures and tasks</b><br>(measures are highlighted in bold)  | Task type ***       | Manager                 | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools            | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o3_11                                  | 3                      | SU, ZT                                 | <b>Investigate the use of mine workings and quarries for water accumulation or retention</b>  |                     |                         |                             |                       |  |  |  |  |   |  |

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|        |   |                       |  |    |                            |   |         |  |  |   |  |  |  |  |
|--------|---|-----------------------|--|----|----------------------------|---|---------|--|--|---|--|--|--|--|
| 3_11.1 |   |                       | Examine the possibilities of recultivating areas affected by mineral extraction, taking into account climate change and support for the water regime of the landscape.   | V  | MŽP                        | MPO<br>Ministry of<br>Agriculture   | ongoing | Ministry of the<br>Environment:<br>Partially TAČR 3<br>million CZK as part<br>of task PN_4.8 | SR, financial<br>reserves for<br>remediation and<br>reclamation created<br>by organizations<br>authorized to extract<br>exclusive deposits,<br>TAČR    |   |  |  |  |  |
| 3_11.2 |   |                       | Determine the potential of mining works and quarries for water accumulation to ensure a permanent or alternative source of water or water for crisis situations.   | V  | Ministry of<br>Agriculture | Ministry of<br>Industry<br>and<br>Technolo<br>gy,<br>Ministry of<br>the Environm<br>ent | ongoing | Cannot be<br>estimated   | SR, financial<br>reserves for<br>remediation and<br>reclamation created<br>by organizations<br>authorized to extract<br>exclusive deposits<br><br>TAČR |   |  |  |  |  |
| o3_12  | 3 | SU, PO, ZT, ET,<br>VS | <b>Restoration of valley floodplains to natural and controlled flooding</b>  |    |                            |   |         |  |  |   |  |  |  |  |
| 3_12.1 |   |                       | Identify in selected parts of the river basin floodplains that are inappropriately embanked, where flood barriers prevent widespread flooding outside urbanized areas, and analyze the maintenance costs of the barriers in question and the potential damage caused by flooding in these areas and further downstream (including increased flood risks in lower-lying municipalities). Based on the results of the analysis, propose appropriate remedial measures to restore natural flooding. | In | MŽP                        | Ministry of<br>Agriculture  | 2025    | cannot be<br>estimated   | TAČR (PPŽ)   | - |  |  |  |  |



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| Target code (SC)<br>Measure (o) Task<br>(xx) | Relevant objective<br>s ** | Relationship to<br>ZK<br>manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Task<br>type *** | Manager                            | Co-<br>manager  | Deadline,<br>checkpoints    | Financial<br>requirements<br>until 2025<br>****   | Existing financial<br>resources and<br>economic<br>instruments                                      | Potential and new<br>economic<br>instruments | EU resources until<br>2025<br>(in millions of<br>CZK) | National<br>resources<br>by 2025 (in<br>millions of<br>CZK) | Requirements for<br>new national<br>resources<br>(in millions of<br>CZK) |
|--|----------------------------|---|--|------------------|------------------------------------|---|-----------------------------|---|---|--|---|---|--|
| SC4  |                            |   | The resilience of human settlements, including their public and green infrastructure, is significantly strengthened, with an emphasis on protecting human health.  |                  |                                    |   |                             |   |   |  |   |   |  |
| o4_1   | 4                          | SU, ZT, ET,<br>VS                         | Introduction of a decentralized rainwater management system.   |                  |                                    |   |                             |   |   |  |   |   |  |
| 4_1.1  |                            |   | Include the impact of climate change in precipitation data and create regional precipitation time series and updated tables of substitute yield lines that include the effects of climate change.  | V, O             | Ministry of the Environment (CHMI) |   | In: 2023<br>O: 2023 ongoing | 7 million CZK   | TACR (PP2 - PERUN)  | -  | 0   | 7   | 0  |
| 4_1.2  |                            |   | Create methodological guidelines on technical options for flood protection against torrential rainfall, including the implementation of temporary retention areas and emergency surface drainage routes in public spaces.  | M, I             | MŽP                                | MRD, MZ, MPO, ÚNMZ  | 2023                        | 0.5 million CZK   |   | -  | 0   | 0   | 0  |
| 4_1.3  |                            |   | Implement the proposed changes to achieve the strategic objectives of the Study on Rainwater Management in Urban Areas.  | S, L, M, I       | MoE                                | Ministry of Agriculture, Ministry of Regional Development | L: 2023<br>S: 2025          | Cannot be estimated   | -   | -  |   |   |  |
| 4_1.4  |                            |   | Support the implementation of decentralized storage facilities in suitable locations for rainwater management.   | E                | MoE                                |   | 2022 ongoing                | cannot be estimated   | NPŽP (Dešťovka program)   | OPŽP 21+, NZÚ                                |   |   |  |
| 4_1.5  |                            |   | When establishing new and restoring existing urban greenery, promote the infiltration of rainwater from adjacent paved impermeable surfaces (especially sidewalks, roofs, parking lots).   | M, E             | MŽP                                | MMR   | M: 2023 E: ongoing          | cannot be estimated   | OPŽP  | OPŽP 21+                                     |   |   |  |
| 4_1.6  |                            |   | Support the conversion of impermeable paved surfaces (especially sidewalks, parking lots, roofs, etc.) in new construction, building modifications, and repairs of public spaces to permeable surfaces, including modifications to public green spaces and the drainage of rainwater, preferably to areas and vegetation that allow for its safe absorption. | M, E, I, V       | MMR, MŽP                           | ČKA, ČKAIT  | ongoing                     | MMR: 17,440 million CZK (value for the period 2021-2027);<br>MŽP: after 300 million CZK OPŽP and NPŽP | OPŽP, NPŽP (within municipalities in national parks)  | IROP 2021-2027                               | 10,500.0  | 300   | 0  |
| 4_1.7  |                            |   | In areas with limited infiltration capacity within settlements, promote the accumulation of rainwater for further use in buildings and for irrigation.   | E, L             | MoE                                | MMR   | L: 2023 E: ongoing          | cannot be estimated   | OPŽP (Rainwater for Municipalities), NPŽP (Rainwater program Rainwater).                            | OPŽP 21+, NZÚ                                |   |   |  |
| 4_1.8  |                            |   | Harmonize drainage standards for transport areas with standards for rainwater management systems (ČSN 75 9010 and TNV 75 9011).  | M                | MD                                 | MZe, MMR, MPO   | 2                           | 1 million CZK   | Ministry of Transport and Construction in cooperation with the Ministry of Regional Development and | -  | 0   | 1.0   | 1  |

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|  |                        |                                     |   |               |                         |                         |                            |  | the Ministry of Industry and Trade              |  |  |   |  |
| 4_1.9                                  |                        |                                     | Propose a system for the gradual abolition of exemptions from charging rainwater drainage in the Water Supply and Sewerage Act.   | L, E          | Ministry of Agriculture | MŽP                     | 2023                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager                 | Co-manager              | Deadline, checkpoints      | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_2                                   | 4 (3, 5)               | SU, VS, ET, PV                      | <b>Development of a comprehensive concept for drought and water shortage management and for the prevention of emergencies caused by long-term water shortages</b>   |               |                         |                         |                            |  |   |  |  |   |  |
| 4_2.1                                  |                        |                                     | Necessary long-term measures to ensure sufficient water supply and prevent emergencies caused by long-term water shortages to be addressed in river basin plans.  | S             | MoE                     | Ministry of Agriculture | 2021                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_2.2                                  |                        |                                     | Develop and implement a drought early warning system.   | V,O           | MoE                     | Ministry of Agriculture | V: 2023<br>O: 2023 ongoing | 3 million CZK                          | TACR (PP2 - PERUN)                              | -                                      | 0  | 3   | 0  |
| 4_2.3                                  |                        |                                     | Prepare a plan for managing drought and water shortages in the Czech Republic, including a methodology for drought management.  | M             | MoE                     | Ministry of Agriculture | M: 2023                    | 3 million CZK                          | TACR (PP2 - PERUN)                              | -                                      | 0  | 3   | 0  |
| o4_3                                   | 4 (3)                  | SU, ET                              | <b>Introduction of risk analysis and management methods in the drinking water production and distribution process</b>   |               |                         |                         |                            |  |   |  |  |   |  |
| 4_3.1                                  |                        |                                     | Implement preventive measures to ensure the safety of distributed water ( <i>Drinking Water Management Plans</i> ) and introduce risk analysis and management methods in the production and distribution of drinking water.   | O, L          | MZd                     | MZe                     | ongoing                    | Cannot be estimated                    | obligation under Act No. 258/2000 Coll.         | -                                      |  |   |  |
| o4_4                                   | 4                      | SU, ET, VS                          | <b>Taking adaptation measures into account in water supply and sewerage development plans (PRVK)</b>  |               |                         |                         |                            |  |   |  |  |   |  |
| 4_4.1                                  |                        |                                     | In the event of updates to individual PRVKÚK, support solutions that will ensure adequate water sources for drinking water supply during prolonged droughts, the interconnection of water supply systems into water supply networks, and the expansion of the supply network to locations dependent on unreliable water sources, taking into account the expected impacts of climate change and water consumption trends. | M             | MZe                     | MŽP                     | ongoing                    | Cannot be estimated                    | regional budgets                                | -                                      |  |   |  |
| 4_4.2                                  |                        |                                     | In the event of updates to individual PRVKÚK, take into account the principles for rainwater management in order to reduce the amount of rainwater discharged through the unified sewerage system.  | O, M, S       | MZe                     | MŽP                     | O, M, S                    | cannot be estimated                    | regional budgets                                | -                                      |  |   |  |
| o4_5                                   | 4                      | SU                                  | <b>Supplying areas with insufficient water resources by transferring water from another water supply system to overcome long-term drought</b>   |               |                         |                         |                            |  |   |  |  |   |  |

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| 4_5.1                                  |                     |                                     | Assess and update the needs and possibilities for transferring water from areas with surplus water resources to areas with shortages. Based on the assessment, continue to prepare and implement water transfers while respecting other public interests.  | V, O, E       | Ministry of Agriculture     | MoE                         | ongoing   | Cannot be estimated                    | own resources of state-owned enterprises Povodl                             | -                                      | 0  |   |  |
| Target code (SC) measure (o) task (xx) | Relevant targets ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>  | Task type *** | Manager                     | Co-manager                  | Deadline, checkpoints                               | Financial requirements until 2025 **** | Existing financial resources and economic tools                             | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 4_5.2                                  |                     |                                     | Support the construction of drinking water supply pipelines to areas with limited drinking water resources.  | E, O, V       | Ministry of Agriculture     |                             | ongoing   | CZK 5,000 million                      | Ministry of Agriculture subsidy programs (129 400, 129,300, 129,410)        | -                                      | 0  | 5,000.0   | 5,000.0  |
| 4_5.3                                  |                     |                                     | Support the interconnection and strengthening of water supply systems.   | E, O, V       | Ministry of Agriculture     |                             | ongoing   | CZK 5,000 million                      | subsidy programs of the Ministry of Agriculture (129 400, 129,300, 129,410) | -                                      | 0  | 5,000.0   | 5,000.0  |
| o4_6                                   | 4                   | SU                                  | <b>Minimisation of road salting and use of herbicides and pesticides in settlements</b>  |               |                             |                             |   |  |   |  |  |   |  |
| 4_6.1                                  |                     |                                     | Revise Decree No. 104/1997 Coll. so that salting is minimized, especially in residential areas, with the aim of enabling the application of rainwater management measures and reducing environmental risks.  | L             | MD                          |                             | 2025  | X                                      | -   | -                                      | 0  | 0   | 0  |
| o4_7                                   | 4                   | PO, VS                              | <b>Consideration of flood risk in the design and planning of buildings and other projects in areas at risk</b>   |               |                             |                             |   |  |   |  |  |   |  |
| 4_7.1                                  |                     |                                     | Take flood risks into account when locating, designing and approving buildings or building modifications in flood-prone areas (e.g. in the form of conditions for use or parameters for parts of buildings at risk heights, use of individual building protection elements against flooding).                                      | M             | MoE, MoR                    |                             | 2   | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_7.2                                  |                     |                                     | Prepare methodological guidelines on the issue of taking flood risk management plans into account in spatial planning.   | M             | MMR                         | MŽP                         | 2022  | X                                      | chapter MMR   | -                                      | 0  | cannot be quantified separately                 | 0  |
| 4_7.3                                  |                     |                                     | Implement a pilot project by the Ministry of the Environment, Ministry of Regional Development, and Ministry of Agriculture focusing on identifying economic, legislative, and organizational tools that can be applied immediately after a flood with the aim of reducing the number of permanent residents in flood-prone areas. | E, L, M, O, V | Ministry of the Environment | MRD Ministry of Agriculture | V: 2024<br>L: 2025<br>M: 2025<br>O: 2025<br>E: 2025 | (information missing)                  | (information missing)   | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| o4_8                                   | 4                   | PO                                  | <b>Preventive relocation of strategic assets and potentially hazardous substances beyond the reach of possible spill</b>   |               |                             |                             |   |  |   |  |  |   |  |

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| 4_8.1                                  |                        |  | Implement a research project by the Ministry of the Environment, Ministry of Regional Development and, if necessary, Ministry of Agriculture, focusing on finding economic, legislative and organizational tools to ensure the gradual removal of strategic assets, potentially hazardous substances and residential units from flood areas.               | V             | MoE                            | MMR                     | 2024                            | CZK 5 million   | research programs  | -                                      | 0   | 5   | 0   |
|--|------------------------|--|--|---------------|--------------------------------|-------------------------|---------------------------------|---|--|--|---|---|---|
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                        | Co-manager              | Deadline, checkpoints           | Financial requirements until 2025 ****  | Existing financial resources and economic tools                        | Potential and new economic instruments | EU resources until 2025<br>(in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources<br>(in millions of CZK) |
| o4_9                                   | 4                      | PO, SU, ET                             | <b>Priority use of flood protection measures with minimal negative impact on the ecological status of water, nature and the landscape</b>  |               |                                |                         |                                 |   |  |  |   |   |   |
| 4                                      |                        |  | Methodically guide the relevant authorities to examine and prioritize flood protection options that use measures with minimal negative impact on the ecological status of water, nature, and the landscape.  | M             | MoE<br>Ministry of Agriculture | MMR                     | 2022                            | X   | -  | -                                      | 0   | 0   | 0   |
| o4_10                                  | 4                      | PO, SU, ET                             | <b>Ensuring the safe transfer of increased water flows through built-up areas of municipalities using technical measures in combination with nature-based measures</b>   |               |                                |                         |                                 |   |  |  |   |   |   |
| 4_10.1                                 |                        |  | Support the safe transfer of water through built-up areas of municipalities using technical measures (e.g., construction of water reservoirs in river basins) in combination with nature-based measures (e.g., increasing the capacity of river beds through composite profiles – supporting migratory kinetic energy, construction of flood parks, etc.). | E, M, V       | MoE<br>Ministry of Agriculture |                         | V: 2024 E<br>ongoing M:<br>2022 | Ministry of the Environment: OPŽP (nature-based measures CZK 900 million);<br>Ministry of Agriculture: 4568 CZK million (2018-2024) +<br>Investors' own resources CZK 0.869 million | OPŽP, SR (national programmes of the Ministry of Agriculture – PPP II) | OPŽP 21+                               | 900   | 4,568   | 0   |
| o4_11                                  | 4                      | PO, VS                                 | <b>Paying increased attention to protection against flash floods as part of flood risk management plan preparation</b>   |               |                                |                         |                                 |   |  |  |   |   |   |
| 4_11.1                                 |                        |  | Revise the methodology for critical points and their link to flash flood risk assessment on small watercourses, using new data sources.  | V, M          | MŽP                            | Ministry of Agriculture | 2025                            | X   | -  | -                                      | 0   | 0   | 0   |
| o4_12                                  | 4                      | ZT, ET                                 | <b>Planning in the field of risk prevention and urban heat island management</b>   |               |                                |                         |                                 |   |  |  |   |   |   |
| 4_12.1                                 |                        |  | Review the optimal design of regulations setting the proportion of unpaved surfaces or vegetation areas within urbanized areas.  | V, M          | MMR                            | MŽP                     | 2025                            | Estimate: CZK 3 million   | TACR   | -                                      | 0   | 3   | 0   |

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| 4_12.2                                 |                        |                                     | Establish generally applicable urban planning requirements for protection against urban heat islands (or heat stress) and propose ways to take urban heat islands into account through land-use planning tools.  | V, M          | MMR     | MŽP<br>MZd         | 2026                  | estimate CZK 4 million  | TACR  | -                                      | 0  | 4   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager | Joint manager      | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 4_12.3                                 |                        |                                     | Prepare a catalog of inspiring examples of street profile solutions for different street widths, primarily containing examples of profiles with street greenery, infrastructure for pedestrians and cyclists, and a calmed traffic regime (e.g., pedestrian zone, residential zone, 30 km/h zone, one-way street) and taking into account current knowledge in the field of urban heat island. | V, M, I       | MMR     | MD,<br>MŽP,<br>MPO | 2027                  | estimated at CZK 1 million  | MMR or TACR chapter                             | -                                      | 0  | 1   | 0  |
| 4_12.5                                 |                        |                                     | Ensure an optimal indoor climate in healthcare facilities (especially operating rooms and patient rooms) and senior care facilities during periods of extremely high temperatures.   | E, M, O       | MZd     | MPSV               | ongoing               | Cannot be estimated, as it involves modifications to buildings with different owners and operators. | (information missing)                           | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| o4_13                                  | 4                      | SU, ZT, EV                          | <b>Regulation of the densification of settlements at the expense of open spaces and green areas when determining buildable areas</b>   |               |         |                    |                       |   |   |  |  |   |  |
| 4_13.1                                 |                        |                                     | Examine the possibilities of economic and regulatory instruments in spatial planning that support better use of buildable areas and built-up areas in order to control the growth of settlements and assess the feasibility of their introduction into legislation.  | V, M, E, S, I | MMR     | MF,<br>MPO         | 2025                  | X   | SR  | -                                      | 0  | Cannot be quantified separately                 | 0  |
| o4_14                                  | 4                      | SU, ZT, ET, EV, VS, PV              | <b>Planning and development of urban green space and water area systems within urban development in relation to population density and numbers – improving functional quality</b>  |               |         |                    |                       |   |   |  |  |   |  |
| 4_14.1                                 |                        |                                     | Specify requirements for the designation, protection, and development of urban greenery resulting from legal regulations, professional support.  | M             | MŽP     | MMR                | 2023                  | X   | -   | -                                      | 0  | 0   | 0  |
| 4_14.2                                 |                        |                                     | Develop a methodology for defining green infrastructure (including the urban greenery system, watercourse and water area system, landscape permeability, and public spaces) within spatial planning documents and verify its application in various types of areas.  | V, M          | MMR     | MŽP<br>MZe         | 2                     | total budget CZK 1.76 million   | TACR  | -                                      | 0  | 1   | 0  |
| 4_14.3                                 |                        |                                     | Review the adequacy of existing legislation in terms of support for green infrastructure and ecosystem services and, where necessary, propose necessary changes.   | V, M, L       | MMR     | MŽP<br>MZ          | 2025<br>KT: 2023      | X   | SR  | -                                      | 0  | cannot be quantified separately                 | 0  |

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| 4_14.4                                 |                        |  | Support the acquisition of documentation for recording and categorizing green areas and elements of settlements (including water areas and related ecosystems) to serve as a basis for their protection through spatial planning documentation and for their effective management.  | E                | MoE                         |   | 2025                       | CZK 20 million                         | OPŽP  | OPŽP 21+                               | 20   | 0   | 0  |
| 4_14.5                                 |                        |  | Incorporate into Act No. 114/1992 Coll., on nature and landscape protection, the function of trees in relation to climate change.   | L                | Ministry of the Environment |   | 2023                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br>(measures are listed in bold)   | Type of task *** | Manager                     | Co-manager  | Deadline, checkpoints      | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_15                                  | 4                      | SU, ZT, ET, EV, VS                     | Establishment, development and maintenance of urban green space systems with a view to increasing the proportion, quality and functional efficiency of urban green space and water areas, including their interconnection   |                  |                             |   |                            |  |   |  |  |   |  |
| 4_15                                   |                        |  | Prepare a draft comprehensive legal regulation of the conditions for the protection of trees and technical infrastructure, taking into account their functions for society as a whole and the need to adapt the urban environment to climate change.  | L                | Ministry of the Environment | Ministry of Industry and Trade, Ministry of Agriculture, Ministry of Regional Development, MD | 2025                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_15.2                                 |                        |  | Based on the results of a research project on tree valuation prepare a proposal for determining the fee for felling trees when replacement planting is not possible.  | V, M, L          | MoE                         |   | 2025                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_15.3                                 |                        |  | Ensure financial and methodological support for the establishment, development, and sustainable maintenance of urban green space systems in urbanized environments, including rainwater management, the use of nature-based approaches, and the restoration of small water features in settlements.   | M, E, V          | MŽP                         | MMR   | M: 2023 E: ongoing         | 1,200 million CZK                      | OPŽP, NŘŽP                                      | OPŽP 21+                               | 70   | 500   | 0  |
| 4_15.4                                 |                        |  | Standardize activities related to the maintenance of green spaces and the creation of new functional green areas in order to manage quality in relation to economic demands.  | V, M             | MoE                         |   | V: 2024 M: 2024            | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_15.5                                 |                        |  | Research into the use of plant varieties in specific urban environments with regard to climate change and the potential ecological impacts of non-native species.   | In               | Ministry of the Environment |   | 2025                       | X                                      | -   | -                                      | 0  | 0   | 0  |
| 4_15.6                                 |                        |  | Develop a conceptual proposal to motivate investors to implement green areas and elements in settlements on horizontal and vertical structures (including roof gardens) using rainwater or low-pollution wastewater (economic instruments, eco-labelling, etc.). Support the implementation of green roofs on newly constructed and renovated public buildings. | V, O, E          | MoE                         | MMR   | V: 2024 O: 2024 E: ongoing | (information missing)                  | (information missing)                           | (information missing)                  | (information missing)                        | (information missing)                           | (information missing)  |
| 4_15.7                                 |                        |  | Incorporate into Act No. 114/1992 Coll., on nature and landscape protection, the possibility of imposing compensation for environmental damage even in the case of tree felling under the notification regime.  | L                | Ministry of the Environment |   | 2023                       | X                                      | -   | -                                      | 0  | 0   | 0  |

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| <b>o4_16</b>                                   | 4                             | SU, ZT, ET, EV, VS                         | <b>Adaptation of building standards, norms and certifications relating to building structures for new buildings and renovations taking into account the impacts of climate change</b>  |                      |                         |  |                              |  |   |   |   |  |   |
| 4_16.1   |                               |  | Amend the list of individual categories of runoff coefficients for water discharged into the sewerage system in Decree No. 428/2001 Coll. to Act No. 274/2001 Coll. to include green roofs and their properties.   | V, M                 | Ministry of Agriculture | MoE, MoR   | 2022                         | X  | SR  | -   |   | Cannot be quantified separately                        |   |
| 4_16.2   |                               |  | Create a basis for implementing solutions that enable the protection of species dependent on human structures as part of measures related to adapting buildings to climate change.   | M                    | MŽP                     | Ministry of Regional Development   | 2023                         | X  | -   | -   |   |  |   |
| 4_16.3   |                               |  | Take climate change into account when designing transport infrastructure and structures.   | M, O                 | MD                      |  | 2022                         | Cannot be estimated (depending on individual projects) | SFDI, OPD   | -   |   |  |   |
| <b>Target code (SC) measure (o) task (.xx)</b> | <b>Relevant objectives **</b> | <b>Relationship to ZK manifestations *</b> | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>  | <b>Task type ***</b> | <b>Manager</b>          | <b>Co-manager</b>  | <b>Deadline, checkpoints</b> | <b>Financial requirements until 2025 ****</b>          | <b>Current financial resources and economic instruments</b> | <b>Potential and new economic instruments</b> | <b>EU resources until 2025 (in millions of CZK)</b> | <b>National resources by 2025 (in millions of CZK)</b> | <b>Requirements for new national resources (in millions of CZK)</b> |
| <b>o4_17</b>                                   | 4                             | ZT, ET, EV, VS                             | <b>Ensuring a coordinated approach to assessing the vulnerability of buildings</b>   |                      |                         |  |                              |  |   |   |   |  |   |
| 4_17.1   |                               |  | Ensure monitoring, analysis and a database of hydrometeorological phenomena for the purposes of assessing the impact of extreme phenomena on buildings.  | O                    | MoE (CHMI)              | Ministry of Education, Youth and Sports, Academy of Sciences of the Czech Republic | 2022                         | X  | -   | -   |   |  |   |
| 4_17.2   |                               |  | Ensure monitoring and evaluation of the impact of extreme events on buildings.   | O                    | MMR                     |  | Ongoing                      | X  | -   | -   |   |  |   |
| <b>o4_18</b>                                   | 4                             | SU, ZT                                     | <b>Implement programs focused on the public sector that contribute to the adaptation of public buildings to climate change</b>   |                      |                         |  |                              |  |   |   |   |  |   |
| 4_18.1   |                               |  | Implement programmes focused on the public sector, prioritising low-energy, passive standards and technologies in buildings in the context of the Long-Term Renovation Strategy, and incorporate water-efficient standards and technologies in the next update of the renovation strategy. | E                    | MPO, MŽP                |  | 2022 ongoing                 | Cannot be estimated and separated from 4_19.1          | OPŽP, OPPIK   | OPŽP 21+, OPTAK, ModFond (ENERGov program)    | (information missing)                               |  |   |
| 4_18.2   |                               |  | When updating the Long-Term Renovation Strategy, take into account water-efficient solutions in the context of energy savings.   | E, S                 | MPO                     | MŽP  | ongoing                      | X  | -   | -   |   |  |   |
| <b>o4_19</b>                                   | 4                             | SU, ZT                                     | <b>Support programs focused on the residential and commercial sectors that contribute to the adaptation of buildings to climate change</b>   |                      |                         |  |                              |  |   |   |   |  |   |

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| 4_19                                      |                        |  | Support programmes focused on the residential and commercial sectors, giving priority to low-energy, passive standards and technologies in buildings in the context of the Long-Term Renovation Strategy, and incorporate water-efficient standards and technologies when updating the renovation strategy.  | E                | MPO, MZP           |            | 2022 ongoing          | residential sector - NZU 2030 (2021 to 2023 8000 million CZK), NPO 18,500 million CZK, EFEKT 500 million CZK. | Revenues from the sale of emission allowances under the Greenhouse Gas Emissions Trading Act; OPPIK; residential sector - NZU program, EFEKT awareness program | ModFond - ENERGA program, OPTAK (information missing in numerical columns) | 19   | 8   |  |
| Objective code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br><i>(measures are listed in bold)</i>   | Type of task *** | Manager            | Co-manager | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools  | Potential and new economic instruments                                     | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_20                                     | 4                      | ET                                     | Construction solutions leading to a reduction in heat stress for the population  |                  |                    |            |                       |   |  |  |  |   |  |
| 4_20.1                                    |                        |  | Within the legislation under the jurisdiction of the Ministry of Health, add a requirement to meet indoor environment quality parameters – long-term maintenance of CO2 concentrations (below 1500 ppm), including a methodology for measuring them.   | L                | Ministry of Health |            | 2                     | X   | within the methodological and legislative activities of the SZÚ and the Ministry of Health   | -  |  |   |  |
| 4_20.2                                    |                        |  | Review the need to amend legislation to ensure that buildings are adapted to the effects of climate change, in particular with regard to the need to reduce summer overheating, ensure adequate ventilation, protect building technology systems from flooding, and streamline the monitoring of compliance with existing energy efficiency requirements under the Energy Management Act. In doing so, take into account measures that are also mitigating (e.g., fixed and mobile external shading elements). | M, V             | MMR                | MPO        | 2                     | X   | SR   | -  |  | Cannot be quantified separately                 |  |
| 4_20.3                                    |                        |  | Adjust the methodology for assessing indoor air temperature increases in summer by updating the input values for the calculation to take into account the expected climate change in the Czech Republic.   | M                | MZd                |            | 2023                  | X   | -  | -  |  |   |  |
| o4_21                                     | 4                      | ZT, ET                                 | Support for technologies using renewable energy sources for cooling and air conditioning in buildings  |                  |                    |            |                       |   |  |  |  |   |  |



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| 4_21.1                                 |                        |                                  | Promote innovations and technologies using renewable energy sources and the highly efficient air conditioning capabilities of trees for cooling and air conditioning buildings. Take climate impact into account in technical requirements, in particular avoid the use of greenhouse gases for air conditioning.                            | I             | MoE, MoI   |                                    | ongoing               | X  | -  | -                                      | 0  | 0   | 0  |
| o4_22                                  | 4                      | SU, PO, ET                       | <b>Introduction of responsible management tools to support adaptation to climate change by reducing the ecological footprint of settlements resulting from growing demands on built-up areas, transport, food, water, heating, and services</b>  |               |  |                                    |                       |  |  |  |  |   |  |
| 4_22.1                                 |                        |                                  | Develop responsible urban management structures with significant public involvement in the adaptation of urbanized areas to climate change - promote awareness and appropriate forms of public participation in responsible urban management.  | I             | MoE, MoR   | Ministry of the Interior           | ongoing               | X  | -  | -                                      | 0  | 0   | 0  |
| 4_22.2                                 |                        |                                  | Ensure the limitation of excessive irreversible land take for non-agricultural purposes due to urbanisation.   | V, L          | Ministry of the Environment                          | MR                                 | V: 2023<br>L: 2023    | X  | -  | -                                      | 0  | 0   | 0  |
| 4_22.3                                 |                        |                                  | Ensure conditions for the declaration of heritage zones as one of the tools for protecting the historical cultural landscape and an important element for ensuring landscape diversity and preventing the emergence of contiguous built-up agglomerations.   | M, O, E       | MK   | NPÚ                                | ongoing               | X  | SR   | -                                      | 0  | 0   | 0  |
| 4_22.4                                 |                        |                                  | Update the methodological guidelines "Evaluation of the effective use of built-up areas and evaluation of the need to define buildable areas areas".   | M             | MMR  | MŽP                                | 2021                  | CZK  | MMR chapter  | -                                      | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relevance to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>  | Task type *** | Manager  | Co-manager                         | Deadline, checkpoints | Financial requirements until 2025 ****     | Current financial resources and economic instruments | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_23                                  | 4                      | ZT, ET, PO, VS                   | <b>Ensuring diagnosis and treatment of diseases spreading in the Czech Republic in connection with climate change and strengthening prevention</b>   |               |  |                                    |                       |  |  |  |  |   |  |
| 4_23                                   |                        |                                  | Conduct comprehensive research into the cycle of diseases in the zoonotic sphere. Ensure high-quality diagnosis and treatment of zoonoses and newly emerging infections and significantly strengthen prevention. Support research into new vaccines against infectious diseases. Regularly inform the public about the risks of zoonoses.    | V, I          | Ministry of Health (State Veterinary Administration) |                                    | ongoing               | estimated activities of SZU CZK 3 million  | SR (SZU budget)                                      | -                                      | 0  | 0   | 0  |
| 4_23.2                                 |                        |                                  | Review current pathogen monitoring systems in terms of their sensitivity to climate-sensitive pathogens.   | V             | Ministry of Health                                   |                                    | 2025                  | SZU activity estimate CZK 3 million        | SR (SZU budget)                                      | -                                      | 0  | 0   | 0  |
| 4_23.3                                 |                        |                                  | Define and specify risk areas, seasons, and population groups susceptible to infectious and non-infectious risk factors and, if necessary, develop a warning system for the activity level of reservoir animals and infection vectors (similar to the system for ticks or mosquitoes in flooded areas areas), including awareness campaigns. | V, I          | Ministry of Health                                   | Ministry of the Environment (CHMI) | ongoing               | (information missing)                      | SR (SZU budget)                                      | -                                      | 0  | (information missing)                           | (information missing)  |
| 4_23.4                                 |                        |                                  | Ensure monitoring of the occurrence of medically significant infection carriers (insects) in new hatcheries.   | V             | Ministry of Health                                   |                                    | ongoing               | Estimate of SZU activities CZK 1.5 million | SR (SZU budget)                                      | -                                      | 0  | 0   | 0  |
| 4_23.5                                 |                        |                                  | Continuously assess the risks of infectious diseases imported by immigrants from areas affected by climate change.   | V             | Ministry of Health                                   |                                    | Ongoing               | (information missing)                      | SR (SZU budget)                                      | -                                      | 0  | (information missing)                           | (information missing)  |

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| 4_23.6                                 |                     |  | Ensure adequate medical infrastructure for emergency situations associated with the occurrence of epidemics or situations requiring increased intake of medicines and medical devices.  | O                | MZd                |  | 2025                  | X                                      | -   | -                                      |  | 0   | 0  | 0 |
| 4_23.7                                 |                     |  | Establish an effective early warning system to eliminate the risk of health consequences of emergencies, especially extreme weather events.   | O, I             | Ministry of Health | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic), Ministry of the Environment (Czech Hydrometeorological Institute) | 2025                  | X                                      | -   | -                                      |  | 0   | 0  | 0 |
| 4_23.8                                 |                     |  | Provide information support for decision-making and resolution of exceptional situations with potential health risks.   | I                | Ministry of Health |  | ongoing               | X                                      | SR (SZU budget)                                     | -                                      |  | 0   |  |   |
| 4_23.9                                 |                     |  | Educate healthcare professionals and members of the basic components of the integrated rescue system (IRS) about the risks arising from exceptional (emergency) situations with a potential threat to health.   | I                | Ministry of Health | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic)  | ongoing               | X                                      | -   | -                                      |  | 0   | 0  | 0 |
| Target code (SC) measure (o) task (xx) | Relevant targets ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br><i>(measures are listed in bold)</i>  | Type of task *** | Manager            | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools     | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |   |
| o4_24                                  | 4                   | SU, PO, ET, EV, VS, PV                 | Integration of sustainable tourism development and climate change adaptation into the formulation and implementation of strategies and plans based on them  |                  |                    |  |                       |  |   | -                                      |  |   |  |   |
| 4_24.1                                 |                     |  | Take into account the issues of sustainable tourism development, reducing the impact of tourism, and adapting to climate change in the Czech Republic's Tourism Development Strategy 2021-2030 and the tourism marketing strategy Destination Czech Republic 2021-2025.                   | O                | MMR                |  | ongoing               | Cannot be estimated                    | chapter MMR and budget of the CzechTourism agency m | -                                      |  |   |  |   |
| o4_25                                  | 4                   | SU, PO, ET, EV, VS, PV                 | Setting up tourism stimulus measures with climate change in mind  |                  |                    |  |                       |  |   | -                                      |  |   |  |   |
| 4_25.1                                 |                     |  | Include the issue of supporting sustainable forms of tourism, monitoring and evaluating the impact of tourism, mitigating the impact of tourism, and adapting tourism offerings to climate change in subsidy programs financed from European and national funds for the period 2021-2027. | O, E             | MMR                |  | ongoing               | Cannot be estimated                    | EU funds, SR (e.g. MMR, MK, MPO, MZP, MZE, MD)      | national subsidy titles after 2021     |  |   |  |   |

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| 4_25.2                                 |                        |                                     | Setting up the promotion of cultural, historical, and natural heritage in relation to the limits and development of visitor numbers at a given destination. Intensifying the promotion of sustainable forms of tourism and supporting the development and promotion of sustainable tourism products.   | I, O          | MMR                         | MŽP, MK, MPO, MD, Ministry of Health  | ongoing               | cannot be estimated                    | MMR chapter, budget of the CzechTourism agency, chapter of the Ministry of the Environment (AOPK) and Ministry of Culture (NPU) | -                                      |  |   |  |   |
| o4_26                                  | 4                      | SU, PO, ET, EV, VS, PV              | Promotion and support of interdisciplinary cooperation in tourism at all levels of management, networks and information exchange, development of destination management  |               |                             |   |                       |  |   | -                                      |  |   |  |   |
| 4_26.1                                 |                        |                                     | Develop interdepartmental and interdisciplinary cooperation through permanent and ad hoc coordination platforms aimed at supporting sustainable tourism development, including reducing the impact of tourism and adapting tourism to climate change.  | O             | MMR                         | Ministry of the Environment, Ministry of Culture, Ministry of Industry and Trade, Ministry of Transport, Ministry of Agriculture, Ministry of Labor | ongoing               | X                                      | MMR chapter, CzechTourism Agency budget, MŽP (AOPK) and MK (NPU) chapter  | -                                      |  | 0   | 0  | 0 |
| o4_27                                  | 4                      | PO, ET, EV, VS, PV                  | Solutions for protecting monuments from the negative effects of climate change   |               |                             |   |                       |  |   |  |  |   |  |   |
| 4_27.1                                 |                        |                                     | Ensure the stability of vegetation by supporting the gradual restoration of castle parks (including their protective zones) and vegetation elements of the composed landscape through the introduction of multi-phase, long-term supported projects within the framework of subsidy programs.  | E             | MoE                         | Ministry of Culture, Ministry of Regional Development   | ongoing               | X                                      | -   | -                                      |  | 0   | 0  | 0 |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager                     | Co-manager  | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools   | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |   |
| o4_28                                  | 4                      | SU, PO, ET, EV, VS, PV              | <b>Stimulation of interdisciplinary research into the impact of climate change on tourism and the impact of tourism on climate change</b>  |               |                             |   |                       |  |   | -                                      |  |   |  |   |
| 4_28.1                                 |                        |                                     | Develop an interdisciplinary research project on the impact of climate change on tourism (based on the Adaptation Strategy and Comprehensive Impact Study).  | M             | MMR                         | MŽP   | 2025                  | 1 million CZK                          | SR (e.g. TAČR, chapters MMR, MŽP)   | -                                      |  | 0   | 1  | 0 |
| 4_28.2                                 |                        |                                     | From a long-term perspective and from the point of view of sustainable tourism development in mountain resorts in the context of climate change, prepare an analysis of the possibilities for finding the most environmentally friendly method of snowmaking, including the issue of the use of additives and the possibilities of accumulating melted snow and rainwater in reservoirs for use in snowmaking. | V             | Ministry of the Environment |   | 2025                  | Cannot be estimated                    | TAČR  | -                                      |  |   |  |   |

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|--|------------------------|-------------------------------------|---|---------------|--|---|-------------------------------|--|---|--|--|---|--|
| o4_29                                  | 4                      | ET, EV                              | <b>Adoption of recommendations or regulations on the systematic planting and selection of trees at appropriate distances along roads and railways</b>   |               |  |   |                               |  |   |  |  |   |  |
| 4_29.1                                 |                        |                                     | Review options and prepare a proposal for a set of economic instruments for the purchase of roadside land and land along roads for the restoration and development of roadside vegetation, increasing its ecological and aesthetic functions.   | V, M, E       | MoE, MoT   | Ministry of Regional Development, Ministry of Agriculture | V: 2024<br>M: 2024 E: ongoing | X                                      | -   | -                                      |  | 0   | 0  |
| 4_29.2                                 |                        |                                     | For the needs of road and railway administrators and nature conservation authorities, develop methodological guidelines for the protection, care, maintenance, and development of accompanying greenery along roads and railways in relation to climate change adaptation (inventory, monitoring, establishment, care, and more).   | M             | Ministry of the Environment, Ministry of Transport |   | 2023                          | X                                      | -   | -                                      |  | 0   | 0  |
| 4_29.3                                 |                        |                                     | Update Technical Conditions No. 99 "Planting and maintenance of roadside vegetation" (1998) with regard to adaptation to climate change.  | L             | MD, MŽP  |   | 2024                          | X                                      | SR  | -                                      |  | 0   | 0  |
| o4_30                                  | 4                      | SU, PO, ET, EV, VS, PV              | <b>Taking climate change into account in updates to transport sector strategies</b>   |               |  |   |                               |  |   |  |  |   |  |
| 4_30.1                                 |                        |                                     | Conduct an economic and environmental assessment of planned measures in water transport to ensure the operability of transport routes from in terms of climate change impacts.  | V             | MD   | Ministry of the Environment                               | 2025                          | X                                      | TACR  | -                                      |  | 0   | 0  |
| 4_30.2                                 |                        |                                     | As part of the update of the Transport Sector Strategies Phase 2, take into account the manifestations of climate change with regard to the principles of integrated approach to climate change adaptation.   | S             | MD   |   | 2025                          | X                                      | SR  | -                                      |  | 0   | 0  |
| 4_30.3                                 |                        |                                     | As part of the draft Freight Transport Concept and the update of the Transport Sector Strategies Phase 2, take into account the need to ensure sufficient capacity of detour routes within the existing infrastructure (especially rail) and connect multimodal terminals with high-quality and fast rail connections between the Czech Republic and European seaports (including maritime container transport) | M             | MD   |   | 2024                          | X                                      | SR  | -                                      |  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br><i>(measures are shown in bold)</i>   | Task type *** | Manager  | Co-manager  | Deadline, checkpoints         | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_31                                  | 4                      | ET                                  | <b>Use of telematic transport systems</b>   |               |  |   |                               |  |   |  |  |   |  |
| 4_31.1                                 |                        |                                     | Take climate change into account when updating the Implementation Plan for the ITS Development Action Plan.   | S             | MD   |   | 20                            | X                                      | SR  | -                                      |  | 0   | 0  |
| o4_32                                  | 4                      | ET                                  | <b>Air conditioning and heating of public transport vehicles with regard to high efficiency and economy</b>   |               |  |   |                               |  |   |  |  |   |  |

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| 4_32.1                                 |                        |                                  | Raise awareness among public transport contractors and operators in order to reduce the risks to human health resulting from excessive cooling or overheating when adapting to climate change, by increasing the efficiency of air conditioning (cooling and heating) while reducing the energy consumption of public transport vehicles.  | I             | MD                          | Ministry of Industry and Trade, Ministry of Health (SZÚ)   | ongoing               | X   | SR   | 0.15                                   | 2  | 0   | 0  |
| o4_33                                  | 4 (3)                  | SU, ET                           | <b>Increasing the efficiency of water resource use in production processes</b>   |               |                             |  |                       |   |  |  |  |   |  |
| 4_33.1                                 |                        |                                  | Promote the circular economy through technological and process innovations – increasing the efficiency of water use in manufacturing.  | V, E          | MoE, Mol                    | Ministry of Agriculture  | V: 2023 E: ongoing    | amount of CZK 1.3 billion from the future OP PAK; in NPO has allocated approximately CZK 1 billion for water-related measures | -  | OP TAK, NPO                            | 2,300  | 0   | 0  |
| 4_33.2                                 |                        |                                  | When planning and authorising (especially with regard to the EIA process) the construction of new large conventional water-cooled power plants and the expansion or modernisation of existing plants of this type, analyse and take into account changes in the water regime and water temperatures of watercourses to be used for cooling. Assess the possibilities for taking this into account in the EIA process and authorisations. | S, L, M       | MoE, Mol                    |  | continuously          | X   | -  | -                                      | 0  | 0   | 0  |
| o4_34                                  | 4 (5)                  | PO, ET, VS, EV                   | <b>Adaptation of current safety measures (crisis and emergency plans) and risk management systems in industrial facilities</b>   |               |                             |  |                       |   |  |  |  |   |  |
| 4_34.1                                 |                        |                                  | Develop methods for identifying hazards and analyzing risks to the environment resulting from large industrial fires and massive releases of substances and materials not covered by legislation on the prevention of major accidents.   | V             | MoE                         | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic)        | 2024                  | 15 million CZK  | SR (research programmes)                             | -                                      | 0  | 15  | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relevance to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager                     | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 ****  | Current financial resources and economic instruments | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 4_34.2                                 |                        |                                  | Develop tools to prevent security risks caused by extreme weather events, their specifications, and innovations in forecasting and warning systems with regard to climate change.  | V             | Ministry of the Environment | Ministry of the Interior, TA ČR, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | 2024                  | 16 million CZK  | TACR, SR (research programs)                         | -                                      | 0  | 16  | 0  |

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| o4_35                                  | 4                      | PO, EV, VS                       | Ensuring energy security in the context of climate change   |               |                             |   |                               |  |   |  |  |   |  |
| 4_35.1                                 |                        |                                  | Create a legislative and non-legislative framework to ensure energy security and resilience, and continuously assess the relevance and adequacy of this framework in relation to possible changes resulting from climate change.  | L, M          | MPO                         |   | Ongoing                       | X                                      | -   | -                                      |  | 0   | 0  |
| 4_35.2                                 |                        |                                  | Assess the impact of disruptions to critical infrastructure elements on environmental safety.   |               | Ministry of the Environment | Ministry of the Interior, TA ČR   | 2024                          | CZK 10 million                         | SR (research programs)                          | -                                      |  | 0   | 10   |
| o4_36                                  | 4 (1, 2)               | PO, SU, ZT                       | Ensuring sufficient biomass as an energy source and supporting energy sources whose production will be environmentally friendly and economically advantageous   |               |                             |   |                               |  |   |  |  |   |  |
| 4_36                                   |                        |                                  | Define energy crops that will be able to adapt to climate change without contributing to the deterioration of soil and water regimes and without requiring high inputs of additional energy, industrial fertilizers, or biocides; support the cultivation of these crops on less fertile soils in areas with natural handicaps (ANC). | V, E          | Ministry of Agriculture     | MoE, Mol  | V: 2024 E: ongoing            | cannot be estimated                    | TACR  | -                                      |  |   |  |
| o4_37                                  | 4                      | ET, VS, PO                       | Stabilization of slope instability sites in emergency condition using stabilization elements  |               |                             |   |                               |  |   |  |  |   |  |
| 4_37.1                                 |                        |                                  | Stabilize slope instability sites in emergency condition using stabilization elements.  | V, O, E       | Ministry of the Environment |   | V: 2024 O: ongoing E: ongoing | X                                      | -   | -                                      |  | 0   | 0  |
| o4_38                                  | 4                      | SU, ET, EV, VS, PV, PO           | Development of methods aimed at reducing the vulnerability of society and increasing resilience to extreme weather events   |               |                             |   |                               |  |   |  |  |   |  |
| 4_38.1                                 |                        |                                  | Develop methods aimed at reducing society's vulnerability and increasing resilience to extreme weather events.  | V, M          | MoE, Mol, MoA               | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic), TA ČR, | 2024                          | 15 million CZK                         | SR (research programs)                          | -                                      |  | 0   | 15.0   |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relevance to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                     | Co-manager  | Deadline, checkpoints         | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o4_39                                  | 4                      | SU, ET, EV, VS, PV, PO           | Support for research, development and innovation in the field of environmental safety   |               |                             |   |                               |  |   |  |  |   |  |

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|--------|---|--|---|------|-----------------------------|---|--------------------|-----------------------|---|---|--|-----------------------|-----------------------|
| 4_39.1 |   |  | Support research, development, and innovation in the field of environmental safety, climate change mitigation, and disaster risk reduction, and incorporate these topics into research programs.  | V, O | MV                          | TA CR, AV CR, relevant ministries and USU   | ongoing            | (information missing) | Security Research Program of the Czech Republic 2021–2026 | - |  | (information missing) | (information missing) |
| SC5    |   | High effectiveness of the early warning system and responsible response of the population has been achieved. |   |      |                             |   |                    |                       |   |   |  |                       |                       |
| o5_1   | 5 | SU, PO, ET, EV, VS, PV   | Ensuring basic organizational and technical measures (prediction, warning, evacuation, rescue work, coordination, etc.)   |      |                             |   |                    |                       |   |   |  |                       |                       |
| 5_1    |   |  | Support the further development of comprehensive systems for monitoring and predicting extreme hydrometeorological phenomena and ensure the best possible use of information from these systems by organizational units and competent institutions. | V, O | MoE MoA                     | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic)                           | Q: 2023 A: ongoing | 15 million CZK        | SR (research programs)                                    | - |  | 0                     | 15                    |
| 5_1.2  |   |  | Establish the organization of information flow. Define technical requirements for end-point measurement devices and data transmission.  | V, O | MoE Ministry of Agriculture | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic)                           | V: 2023 O: ongoing | X                     | -   | - |  | 0                     | 0                     |
| 5_1.3  |   |  | Development of procedures for assessing multiple risks (natural hazards, NATECH).   | V, O | MoE                         | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | V: 2023 O: ongoing | 15 million CZK        | SR (research programs)                                    | - |  | 0                     | 15                    |
| 5_1.4  |   |  | Complete the transition to a digital JSVV infrastructure system in emergency planning zones of nuclear power plants and one region.   | V, O | MV (GR HZS)                 | MoE   | 2025               | 15 million CZK        | SR  | - |  | 0                     | 15.0                  |

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| Target code (SC)<br>Measure (o) Task<br>(xx) | Relevant objectives ** | Relevance to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Task type *** | Manager  | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
|--|------------------------|----------------------------------|--|---------------|--|--|-----------------------|--|---|--|--|---|--|
| o5_2   | 5                      | SU, PO, ET, EV, VS, PV           | Ensuring awareness to increase the preparedness of the population to cope with crisis situations   |               |  |  |                       |  |   |  |  |   |  |
| 5_2.1  |                        |                                  | Respond to current needs in relation to climate change through educational activities and programs.  | O, M          | Ministry of Education + All ministries involved in education according to their areas of expertise | Ministry of Agriculture, Ministry of the Interior, Ministry of Health, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | ongoing               | MV-GR HZS ČR 41.1 million CZK          | SR  | -                                      | 0  | 41  | 17   |
| o5_3   | 5                      | PO, VS                           | Development of early warning systems for the population against flash floods   |               |  |  |                       |  |   |  |  |   |  |
| 5_3.1  |                        |                                  | Develop early warning systems for the population against flash floods.   | V, O          | Ministry of the Environment  | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic)  | V: 2023 O: ongoing    | 10 million CZK                         | SR (research programs)                          | -                                      | 0  | 10  | 0  |
| o5_4   | 5                      | ET,                              | Creation of a warning system for periods of extremely high temperatures  |               |  |  |                       |  |   |  |  |   |  |
| 5_4.1  |                        |                                  | Establishment of methods for assessing the urban climate, particularly heat islands, determination of procedures and proposal of measures to limit the negative impacts of extreme weather events on the population and the environment, particularly in large urban agglomerations. | V             | Ministry of the Environment  | Ministry of the Interior, Ministry of Regional Development   | 2024                  | CZK                                    | SR (research programs)                          | -                                      | 0  | 15  | 0  |



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| 5_4.2                                   |                     |  | Create a forecasting, information, and warning system for periods of extremely high temperatures.  | V, O             | Ministry of the Environment | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | V: 2024<br>O: 2024    | 15 million CZK                         | SR (research programs)                          | -                                      | 0  | 15  | 0  |
|---|---------------------|--|--|------------------|-----------------------------|---|-----------------------|--|---|--|--|---|--|
| Target code (SC) measure (o) task (.xx) | Relevant targets ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks<br>(measures are listed in bold)  | Type of task *** | Manager                     | Co-manager  | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| o5_5                                    | 5                   | SU, PO, ET, EV, VS, PV                 | <b>Strengthening and developing the integrated rescue system (IZS)</b>   |                  |                             |   |                       |  |   |  |  |   |  |
| 5                                       |                     |  | Build regional fire stations and renovate fire stations of selected municipalities, police stations, or emergency medical service stations to improve the storage of emergency equipment and service performance in order to increase the resilience of stations and the preparedness of basic emergency services for climate change.                        | M, E             | MV                          | MV (General Directorate of the Fire and Rescue Service of the Czech Republic)   | ongoing               | 6 billion CZK                          | SR  | none, except EU funds                  | 5,000  | 1   | 0  |
| 5_5.2                                   |                     |  | Purchase the necessary equipment and material resources for the Fire and Rescue Service of the Czech Republic, municipal fire brigades of categories JPO II, III and V, the Police of the Czech Republic and the Emergency Medical Service in order to increase the preparedness of the basic components of the Integrated Rescue System for climate change. | M, E             | MV                          | MV (General Directorate of the Fire and Rescue Service of the Czech Republic)   | ongoing               | CZK 6 billion                          | SR  | none, except EU funds                  | 5,000  | 1   | 0  |
| 5_5.3                                   |                     |  | Ensure the long-term sustainability of funding for the Air Fire Service (LHS) as an important tool for monitoring and fighting fires during periods of prolonged drought.  | E                | Ministry of Agriculture     | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | Ongoing, KT: 2023     | X                                      | -   | -                                      | 0  | 0   | 0  |
| o5_6                                    | 5 (4)               | SU, PO, ET, EV, VS, PV                 | <b>Provision of infrastructure for the Fire Rescue Service of the Czech Republic and municipal volunteer fire brigades</b>   |                  |                             |   |                       |  |   |  |  |   |  |
| 5_6.1                                   |                     |  | Assess risks and the number of emergencies in relation to climate change in individual ORP territories in the Czech Republic.  | M                | MV (GR HZS)                 |   | ongoing               | X                                      | -   | -                                      | 0  | 0   | 0  |
| o5_7                                    | 5                   | PO, ET, EV, VS, PV                     | <b>Development of technical support for emergency calls, information transfer between emergency services and development of the PEGAS radio communication system</b>   |                  |                             |   |                       |  |   |  |  |   |  |

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|--|------------------------|-------------------------------------|---|---------------|---|--|-----------------------|---|---|--|--|---|--|
| 5_7.1                                  |                        |                                     | Introduce a multimedia videoconferencing system at the Fire and Rescue Service of the Czech Republic.   | V, O          | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) |  | 2025                  | 6 million CZK   | SR  | -                                      | 0  | 6   | 6  |
| 5_7.2                                  |                        |                                     | Develop and modernize the Geographic Information System of the Fire Rescue Service of the Czech Republic.   | V, O          | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) |  | 2025                  | 10 million CZK  | EU funds  | -                                      | 10.0   | 0   | 0  |
| 5_7.3                                  |                        |                                     | Increase the capacity and security of the radio network infrastructure of the Fire and Rescue Service of the Czech Republic and cooperation within the Integrated Rescue System.  | V, O          | Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) |  | 2025                  | 220 million CZK   | EU funds  | -                                      | 220  | 0   | 0  |
| 5_7.4                                  |                        |                                     | Annually assess the impact of extraordinary events caused by extreme weather phenomena on the reception of emergency calls, the performance of tasks in operational management, and cooperation between the basic components of the Integrated Rescue System. If negative impacts are identified, propose solutions.  | O             | MV (GR HZS ČR)  | Ministry of the Interior<br>Ministry of Health | ongoing               | X   | -   | -                                      | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager   | Co-manager                                     | Deadline, checkpoints | Financial requirements until 2025 ****  | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| 5_7                                    |                        |                                     | Implement the project to increase the resilience of the PEGAS radio communication network, the project to extend the availability of the PEGAS radio communication network, and further implement the Strategy for Securing and Developing Mobile Communications for Security and Rescue Services with a 10-year outlook, including identified radio spectrum requirements. | E, V          | MV  | MV (GDR HZS ČR)                                | 2025                  | approx. CZK 2,880 million for the Ministry of the Interior – General Directorate of the Fire Rescue Service of the Czech Republic can only be determined after evaluation | SR  | -                                      | 690.0  | 4,000.0   | 0  |
| o5_8                                   | 5                      | SU, PO, ET, EV, VS, PV              | <b>Improvement of forecasting, warning and reporting services and monitoring systems and their harmonisation with EU/global systems</b>   |               |   |  |                       |   |   |  |  |   |  |

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|--------|-------|----------------|--|------|-----------------------------|---|--------------------|--|--|----------|--|----|----|---|
| 5_8.1  |       |                | Improve forecasting, warning and reporting services and monitoring systems and harmonize them with EU/global systems.  | V, O | MoE                         | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic) | V: 2023<br>O: 2023 | CZK 20 million                         | SR (research programs)                 | -        |  | 0  | 20 | 0 |
| o5_9   | 5     | SU, PV         | Analysis and proposal for appropriate legislative amendments in the area of vegetation fire prevention   |      |                             |   |                    |  |  |          |  |    |    |   |
| 5_9.1  |       |                | Propose amendments to regulations in the area of vegetation fire prevention.   | L, O | MV                          | MV (GR HZS ČR)  | 2023               | X                                      | -                                      | -        |  | 0  | 0  | 0 |
| o5_10  | 5 (4) | SU, ET, EV, VS | Monitoring and analysis of the state and regime of the atmosphere, hydrosphere, and lithosphere (especially hazardous slopes) and creation of background materials for preventive measures |      |                             |   |                    |  |  |          |  |    |    |   |
| 5_10.1 |       |                | Monitor and analyze the state and regime of the atmosphere and hydrosphere.  | O    | MoE                         | Ministry of Education, Youth and Sports, Academy of Sciences of the Czech Republic  | ongoing            | CZK 500 million                        | -                                      | OPŽP 21+ |  | 50 | 0  | 0 |
| 5_10.2 |       |                | Monitor the lithosphere, especially at risk slopes, and create documentation for preventive measures.  | O    | Ministry of the Environment |   | ongoing            | (information missing)                  | (information missing)                  | -        |  |    |    |   |
| 5_10.3 |       |                | Ensure monitoring/review of 60 landslides per year.  | O    | Ministry of the Environment |   | ongoing            | (information missing)<br>(information) | (information missing)<br>(information) | -        |  |    |    |   |

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|--|------------------------|-------------------------------------|--|------------------|--------------------------------|--|---|--|---|--|--|---|--|
| PNO                                    |                        |                                     | Cross-cutting tools and measures   |                  |                                |  |   |  |   |  |  |   |  |
| oPN_1                                  | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV          | <b>Development of a system for assessing and evaluating essential ecosystem services and its integration into policy-making and legislation at national and regional level</b>   |                  |                                |  |   |  |   |  |  |   |  |
| PN_1.1                                 |                        |                                     | Create conditions for the application of ecosystem service assessment in decision-making and approval processes.   | V, M, E, S, L, O | Ministry of the Environment    | Ministry of Agriculture, Ministry of the Environment (AOPK ČR), Czech Statistical Office | V: 2024<br>M: 2024<br>E: 2024 S: ongoing L: 2025<br>O: 2024 | x  | -   | -  | 0  | 0   | 0  |
| PN_1.2                                 |                        |                                     | Support research in the field of ecosystem services valuation.   | V                | MoE<br>MoA                     | Czech Statistical Office,  | ongoing   | Czech Institute for Health and Social Research | research programs                               | -  |  |   |  |
| PN_1.3                                 |                        |                                     | In river basins that are key for drinking water supply, determine the value of this commodity as an ecosystem service and compare it with the costs of extensification or greening of agricultural activities. In these river basins, reduce the negative impacts of agricultural activities by combining land purchases, support for organic farming, and stricter rules for activities that threaten water quality, including groundwater. | V, M, E, O,      | MoE,<br>MoA                    |  | V: 2025<br>M: 2025 E: ongoing O: 2025,<br>ongoing           | cannot be estimated                            | research programs                               | SP SZP - Organic farming and management in OPV |  |   |  |
| PN_1.4                                 |                        |                                     | Incorporate the concept of ecosystem services into proposals for new river basin plans.  | O, M             | MoE<br>Ministry of Agriculture |  | M: 2025<br>O: 2025  | x  | -   | -  | 0  | 0   | 0  |
| PN_1.5                                 |                        |                                     | Include ecosystem service concepts in spatial planning.  | V, M             | MMR                            | MoE<br>MZe   | 2021  | see task 4_14.2                                | =   | =  | =  | =   | =  |
| PN_1.6                                 |                        |                                     | Introduction of a definition of ecological damage using ecosystem service concepts and assessments ecosystem services.   | L                | MŽP                            |  | 2025  | x  | -   | -  | 0  | 0   | 0  |

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|--|------------------------|-------------------------------------|---|---------------|-----------------------------|---|-------------------------------|---|---|--|--|---|--|
| oPN_2                                  | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV          | <b>Introduction of green budgeting, i.e. systematic monitoring of state budget expenditure and expenditure from European funds according to purpose in connection with adaptation to the impacts of climate change</b>                            |               |                             |   |                               |   |   |  |  |   |  |
| PN_2.1                                 |                        |                                     | Introduce and develop the principles of climate- and environment-oriented budgeting (green budgeting) in line with European and international initiatives in this area.   | M, O, I, V    | MoE, MoF                    |   | M: 2023<br>O: 2023<br>V: 2026 | Supporting research is part of the PP2 (total financial requirement CZK 150 million – also includes other activities within the research and co-financing by the research consortium) | TACR  | -                                      | 0  | 135   | 0  |
| oPN_3                                  | 1, 2, 3, 5             | SU, PO, ZT, ET, EV, VS, PV          | <b>Rationalization of subsidy management, taking into account the potential benefits and costs of mitigating climate change and eliminating environmentally harmful subsidies</b>   |               |                             |   |                               |   |   |  |  |   |  |
| PN_3.1                                 |                        |                                     | Conduct an analysis of the conditions for granting subsidies in terms of their benefits and costs in relation to adaptation to the impacts of climate change and propose adjustments to them, identifying environmentally harmful subsidy titles. | V             | Ministry of the Environment | Ministry of Finance, Ministry of Agriculture, Ministry of Industry and Trade, Ministry of Transport, Ministry of Regional Development, Ministry of Culture, Ministry of Education, Youth and Sports | 2023                          | see PN_2.1  | TACR  | -                                      | 0  | =   | 0  |
| PN_3.2                                 |                        |                                     | Change the principles of subsidy titles so that recipients in the agriculture and forestry sector receive financial incentives to provide real support biodiversity and landscape conservation in their farming practices.                        | M, O          | MZe                         | MoE   | 2021                          | X   | -   | -                                      | 0  | 0   | 0  |

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| PN_3.3                                    |                        |                                     | Subsidies provided by central government bodies take into account adaptation needs across sectors and environmentally harmful subsidies are being reduced.   | M, O, L          | MF, MŽP, MZe, MPO, MD, MMR, MK, MŠMT |                         | M: 2023 O: ongoing L: 2024   | see PN_2.1  | TACR  | -                                      | 0   | =   | 0   |
|---|------------------------|-------------------------------------|--|------------------|--------------------------------------|-------------------------|------------------------------|---|---|--|---|---|---|
| Target code (SC)<br>Measure (o) Task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Type of task *** | Manager                              | Co-manager              | Deadline, checkpoints        | Financial requirements until 2025 ****  | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025<br>(in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources<br>(in millions of CZK) |
| oPN_4                                     | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV          | <b>Protection and support for the planning, establishment, restoration, and maintenance of green infrastructure providing diverse ecosystem services and mitigating the negative effects of climate change</b>   |                  |                                      |                         |                              |   |   |  |   |   |   |
| PN_4.1                                    |                        |                                     | Ensure systemic financial resources for R&D&I focused on natural landscape functions, ecosystem functions and ecosystem services in a natural, social, economic and ethical context, taking into account current needs related to climate change.  | E, O             | UV (RVVI)                            | MoE                     | ongoing                      | CZK 1,120 million   | TACR (PPŽ)                                      | -                                      | 0   | 1,120   | 0   |
| PN_4.2                                    |                        |                                     | Support the development of ÚSES plans as an important basis for addressing landscape adaptation to climate change within spatial planning.   | E, I             | MoE                                  |                         | E: ongoing I: ongoing        | CZK 50 million  | OPŽP  | OPŽP 21+                               | 50  |   |   |
| PN_4.3                                    |                        |                                     | Support the preparation of landscape studies with an emphasis on adapting the landscape to climate change and strengthening its natural functions. Ensure support for measures proposed under the ÚSK from subsidy programs.   | E, I, M          | MMR, MŽP                             |                         | E ongoing I: ongoing M: 2021 | CZK 100 million from the OPŽP for studies, CZK 100 million from the OPŽP and PPK for implementation | OPŽP, PPK                                       | OPŽP 21+                               | 200   | 100   | 0   |
| PN_4.4                                    |                        |                                     | Preparation of a study to harmonize terminology, characteristics of land types, technical bases, and needs with regard to biodiversity protection, climate change, and related research.   | V, M             | MoE                                  |                         | V: 2023 M: 2024              | X   | -   | -                                      | 0   | 0   | 0   |
| PN_4.5                                    |                        |                                     | Create a comprehensive database of wetland areas in the Czech Republic and identify wetlands or parts thereof suitable for restoration, prioritize wetland restoration of wetland areas and assess the financial costs of restoration.   | V                | Ministry of the Environment          | Ministry of Agriculture | 2024                         | X   | -   | -                                      | 0   | 0   | 0   |
| PN_4.6                                    |                        |                                     | Create a database of regulated sections of watercourses suitable for revitalization, including their categorization in terms of the urgency of achieving an ecologically acceptable state, the potential for achieving good ecological status, and specific interests in fulfilling the ecological functions of the watercourse. | V                | MoE                                  | Ministry of Agriculture | 2024                         | approx. CZK 20 million  | TACR (PPŽ), SR                                  | -                                      | 0   | 20  | 0   |
| PN_4.7                                    |                        |                                     | Propose amendments to legislative conditions with the aim of ensuring effective protection of wetlands.  | L                | MoE                                  | Ministry of Agriculture | 2023                         | X   | -   | -                                      | 0   | 0   | 0   |

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|--|------------------------|--|---|---------------|-----------------------------|---|-------------------------------|---|--|--|--|---|--|---|
| PN_4.8                                 |                        |  | Assess other areas (especially areas affected by mineral extraction, etc.) in terms of the suitability and expediency of leaving them to the forces of nature, also taking into account climate change.   | V             | Ministry of the Environment | Ministry of Agriculture, Ministry of Industry and Trade | 2025                          | Ministry of the Environment: TAČR 3 million CZK | processing and approval of reclamation plans for areas affected by mining activities, TAČR |  |  | 0   | 3  | 0 |
| PN_4.9                                 |                        |  | Evaluate the effectiveness of the current network of protected areas for maintaining biodiversity in the context of climate change and respond with proposals for adequate measures to achieve their conservation objectives.   | V             | MoE                         |   | 2024                          | X   | SR / TAČR  | -                                      |  | 0   | 0  | 0 |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | Update of adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                     | Co-manager  | Deadline, checkpoints         | Financial requirements until 2025 ****          | Existing financial resources and economic tools  | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |   |
| PN_4.10                                |                        |  | Strengthening methodological support and ensuring a systematic approach to protecting the migratory permeability of the landscape for terrestrial animals in the context of green infrastructure.   | O, E, M       | MoE                         | MMR   | M: 2024 E: ongoing O: ongoing | X   | -  | -                                      | 0  | 0   | 0  |   |
| PN_4.11                                |                        |  | Define ecosystems, biotopes, and species most threatened by climate change, propose effective ways to strengthen their protection, and develop a methodology for monitoring their status and ensuring its sustainable financing.  | M             | Ministry of the Environment |   | 2025                          | 80,000 CZK                                      | SR   | -                                      | 0  | 0   | 0  |   |
| PN_4.12                                |                        |  | Prepare a study on the potential of climate change to support biodiversity of species dependent on warm and dry habitats.   | V             | MoE                         |   | 2025                          | 80,000 CZK                                      | SR   | -                                      | 0  | 0   | 0  |   |
| oPN_5                                  | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV             | Implementation of measures against the spread of non-native invasive plant and animal species and their regulation or possible eradication, ensuring active care and cooperation  |               |                             |   |                               |   |  |  |  |   |  |   |
| PN_5.1                                 |                        |  | Prioritize measures to control or eradicate invasive alien species according to the risks of their impacts (both for species included in the EU list and other invasive species, taking into account their local or regional impacts).  | O             | MŽP                         | Ministry of Agriculture                                 | V: 2023 M: 2023               | 120 million CZK                                 | SR   | -                                      | 0  | 120   | 120  |   |
| PN_5.2                                 |                        |  | Create and update methodologies for the regulation or eradication of invasive alien species included in the Union list or other locally spreading non-native species.   | M             | MoE                         |   | 2023                          | 100,000 CZK                                     | SR   | -                                      | 0  | 0.1   | 0  |   |
| PN_5.3                                 |                        |  | Create conditions for the effective implementation of measures against invasive alien species included in the Union list or other locally spreading alien species by landowners, economic operators and relevant state administration bodies, including the provision of effective and specifically targeted financial support. | L, M, E       | L                           |   | L: 2021 M: 2022 E: ongoing    | 1,244 million CZK                               | SR, OPŽP, national programs  | OPŽP 21+                               | 1,044  | 200   | cannot be quantified   |   |
| oPN_6                                  | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV             | Compensation for damage from public funds conditional on the implementation of adaptation measures  |               |                             |   |                               |   |  |  |  |   |  |   |

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|--------|--|--|--|------|-----|-----|---------|---|---|---|--|---|---|---|
| PN_6.1 |  |  | Make compensation from public budgets for damage caused by climate change conditional on the implementation of adaptation measures and the provision of sufficient commercial insurance for the area affected. | M, E | MŽP | MŽP | Ongoing | x | - | - |  | 0 | 0 | 0 |
|--------|--|--|--|------|-----|-----|---------|---|---|---|--|---|---|---|



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|--|------------------------|-------------------------------------|---|---------------|-------------------------|--|-----------------------|--|---|--|--|---|--|
| oPN_7                                  | 1, 3, 5                | SU, PO, ZT, ET, EV, VS, PV          | <b>Taxes, fees, and other similar monetary payments reflecting the negative externalities of economic activity on society and eliminated environmentally harmful tax advantages</b>   |               |                         |  |                       |  |   |  |  |   |  |
| PN_7.1                                 |                        |                                     | Conduct an analysis of environmental taxes and fees from the perspective of supporting adaptation to climate change, with an emphasis on ecosystem solutions and including an assessment of environmentally harmful tax exemptions.   | V, E          | MoE                     | Ministry of Agriculture, Ministry of Industry and Trade, Ministry of Transport, Ministry of Regional Development, MF   | 2025                  | see PN_2.1                             | TAČR  | -                                      | 0  | =   | 0  |
| PN_7.2                                 |                        |                                     | Tax and fee adjustments reflect the need for adaptation measures to mitigate the impacts of climate change, including the reduction of environmentally harmful tax exemptions.  | L, E, S       | MF, MŽP, MZe, MPO, MD   | MMR  | ongoing KT: 2025      | see PN_2.1                             | TAČR  | -                                      | 0  | =   | 0  |
| oPN_8                                  | 1, 2, 3, 5             | SU, PO, ZT, ET, EV, VS, PV          | <b>Effective risk sharing – especially on a market basis with adequate state support</b>  |               |                         |  |                       |  |   |  |  |   |  |
| PN_8.1                                 |                        |                                     | Define the procedure for using data for the purpose of assessing risks related to climate change.   | M, O          | MŽP                     | Ministry of the Interior, Ministry of the Interior (General Directorate of the Fire Rescue Service of the Czech Republic), Ministry of Agriculture, Ministry of Health, Ministry of Industry and Trade, MD | M: 2022 O: ongoing    | X                                      | -   | -                                      | 0  | 0   | 0  |
| PN_8.2                                 |                        |                                     | Examine the possibilities of using risk insurance in connection with the impacts of climate change - availability of commercial insurance, scope of insurance provided by the agricultural and forestry sectors in particular, international comparisons, and examples of desirable practices, e.g., conditionality of adaptation measures. Assess the possibilities of commercial insurance for damages that are regularly compensated by the state. | V, E, (L, O)  | Ministry of Agriculture | Ministry of the Environment, Ministry of Finance   | 2023                  | In: TAČR (PP2 10 million CZK)          | TAČR  | -                                      | 0  | 10  | 0  |
| oPN_9                                  | 1, 2, 3, 5             | SU, PO, ZT, ET, EV, VS, PV          | <b>Ongoing education, training, and awareness-raising in the field of climate change and adaptation</b>   |               |                         |  |                       |  |   |  |  |   |  |
|  |                        |                                     | <b>Awareness raising - Forest management</b>  |               |                         |  |                       |  |   | -                                      |  |   |  |

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|  |                        |  |   |               |                         |                                |   |  |   |   |  |   |  |
|--|------------------------|--|---|---------------|-------------------------|--------------------------------|---|--|---|---|--|---|--|
| PN_9.1                                 |                        |  | The issue of climate change and related adaptation measures into the educational process at all levels of forestry education.   | I             | Ministry of Agriculture | Ministry of Education (NPI ČR) | on an ongoing basis   | X                                      | -   | -   | 0  | 0   | 0  |
| PN_9.2                                 |                        |  | Create a practical educational program focused on climate change and related adaptation measures for teachers at forestry schools and implement forest education programs that address climate change.  | I             | Ministry of Agriculture | MoE                            | ongoing   | X                                      | -   | -   | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | <b>Updating adaptation measures and tasks</b><br>(measures are indicated in bold)   | Task type *** | Manager                 | Co-manager                     | Deadline, checkpoints   | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments      | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| PN_9.3                                 |                        |  | Publish educational materials for forest owners and managers, professional foresters, and state forestry officials on climate change and related adaptation measures.   | I             | MoA                     | MoE                            | ongoing   | X                                      | -   | -   | 0  | 0   | 0  |
| PN_9.4                                 |                        |  | Conduct an awareness campaign explaining to the public the risks of climate change impacts on forests and the need to implement adopted adaptation measures, including balancing the populations of hoofed game in relation to the environment and the interests of landowners, highlight other examples where climate change impacts on forest ecosystems have already been observed, promote existing examples of sustainable forestry. | I             | Ministry of Agriculture | MoE                            | on an ongoing basis in connection with the implementation of task 2_1.1 | X                                      | -   | -   | 0  | 0   | 0  |
|  |                        |  | <b>Education - Agriculture</b>  |               |                         |                                |   |  |   | -   |  |   |  |
| PN_9.5                                 |                        |  | Implement educational activities focused on the impacts of climate change on the agricultural landscape and possible adaptation measures (excursions, seminars, field days, etc.).  | I             | Ministry of Agriculture | MoE                            | ongoing   | X                                      | -   | SP SZP, AKIS, support consulting            | 0  | 0   | 0  |
| PN_9.6                                 |                        |  | Provide expert bioclimatological consulting in relation to climate change (focused on the direct transfer of scientific knowledge into practice when solving specific problems faced by farmers related to the impacts of climate change).  | I             | Ministry of Agriculture | MoE                            | ongoing   | X                                      | -   | SP SZP, AKIS, support for advisory services | 0  | 0   | 0  |
| PN_9.7                                 |                        |  | Expand and improve the methodological support tool "Erosion Control calculator" with new modules related to climate change (including stable elements such as agroforestry).  | I             | Ministry of Agriculture |                                | 2023  | X                                      | -   | -   | 0  | 0   | 0  |
| PN_9.8                                 |                        |  | Ensure training for accredited advisors in the field of land and farmers to work with new tools.  | I             | Ministry of Agriculture |                                | 2023  | X                                      | -   | SP SZP, AKIS, support consulting            | 0  | 0   | 0  |
| PN_9.9                                 |                        |  | Focus agricultural advisory services more on education in the area of non-production functions of agriculture and the importance of agri-environmental and climate measures of the Rural Development Program for biodiversity and ecological stability of the landscape in relation to climate change.  | I             | MoA                     | MoE                            | ongoing   | X                                      | -   | SP SZP, AKIS, support for consulting        | 0  | 0   | 0  |
| PN_9.10                                |                        |  | Identify and prepare model farms, include them in the demonstration farm system, and use them for training and education in the field of soil protection measures.  | I             | Ministry of Agriculture |                                | 2023  | X                                      | -   | -   | 0  | 0   | 0  |
| PN_9.11                                |                        |  | Raise awareness among users (farmers) and state administration about agroforestry systems (seminars, methodologies, publications).  | I             | Ministry of Agriculture |                                | ongoing   | X                                      | -   | SP SZP, AKIS, support consulting            | 0  | 0   | 0  |
|  |                        |  | <b>Awareness raising - Water regime in the landscape and water management</b>   |               |                         |                                |   |  |   | -   |  |   |  |

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| PN_9.12                                |                        |                                     | Raise public awareness of the natural characteristics of the landscape and natural resources in relation to climate change adaptation (retention capacity, functions of natural wetlands, natural development of riverbeds and sediment transport regime of watercourses, groundwater recharge, sustainable management of water resources – groundwater, surface water, rainwater). | I, V          | MoE                                     | MoA   | I ongoing V ongoing                      | X  | -   | -                                      | 0  | 0   | 0  |
|--|------------------------|-------------------------------------|---|---------------|---|---|--|--|---|--|--|---|--|
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)   | Task type *** | Manager                                 | Co-manager  | Deadline, checkpoints                    | Financial requirements until 2025 ****                                   | Existing financial resources and economic instruments | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| PN_9.13                                |                        |                                     | Ensure training and methodological guidance for water management authorities (and generally environmental departments at municipal and regional authorities) so that they support adaptation and revitalization.  | I, O, M, S    | MoE                                     |   | M: 2023 O: ongoing I: ongoing S: ongoing | X  | -   | -                                      | 0  | 0   | 0  |
|  |                        |                                     | <b>Awareness raising - Biodiversity and ecosystem services</b>  |               |   |   |  |  |   | -                                      |  |   |  |
| PN_9.14                                |                        |                                     | Support education and training on biodiversity, ecosystem services and the importance of the ecological functions of natural habitats and landscape features in adapting to climate change, and on the possibilities of outdoor learning in preschool education; prepare (interactive) materials for primary and secondary schools.   | I             | MoE                                     | Ministry of Education, Youth and Sports (NPI ČR)              | ongoing                                  | Ministry of the Environment X; Ministry of Education, Youth and Sports X | -   | -                                      | 0  | 0   | 0  |
| PN_9.15                                |                        |                                     | Prepare educational materials on the importance of biodiversity, ecosystem services, and the importance of the ecological functions of natural habitats and landscape features in adapting to climate change for a network of citizen advice centers and for advisors working with businesses and farmers.  | I             | MoE                                     | Ministry of Agriculture                                       | 2023                                     | X  | -   | -                                      | 0  | 0   | 0  |
| PN_9.16                                |                        |                                     | Raising awareness of the importance of biodiversity and ecosystem services in climate change adaptation to climate change, targeted campaigns on the importance of individual ecosystems.   | I             | Ministry of the Environment             |   | ongoing                                  | X  | -   | -                                      | 0  | 0   | 0  |
| PN_9.17                                |                        |                                     | Quantify selected ecosystem services in a series of pilot projects up to the monetary level and use this data to argue for ecosystem protection. Emphasize the necessity of a healthy landscape for drinking water supply, protection against drought and floods, stabilization of nutrient and carbon flows, stabilization of the water cycle, and distribution of thermal energy. | I             | MoE                                     |   | ongoing                                  | X  | -   | -                                      | 0  | 0   | 0  |
|  |                        |                                     | <b>Education - Tourism</b>  |               |   |   |  |  |   | -                                      |  |   |  |
| PN_9.18                                |                        |                                     | Include the topic of climate change impacts on tourism and possible adaptation measures in framework education programs.  | O             | Ministry of Education, Youth and Sports | Ministry of Regional Development, Ministry of the Environment | 2023                                     | X  | -   | -                                      | 0  | 0   | 0  |

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| PN_9.19                                   |                        |                                  | Ensure promotion and education about the positive impacts of sustainable responsible tourism (taking into account climate, environmental, economic, and social aspects) on the economy, employment, nature conservation, cultural and natural heritage, and cultural identity. As part of the awareness-raising activities, ensure that information is provided on the possible negative impacts of unsustainable tourism. Awareness-raising should be carried out in cooperation with relevant organizations (AOPK ČR, NPU, CzechTourism) and regional partners (certified destination management organizations). | I                | MMR                                     | MŽP, MK   | ongoing               | cannot be estimated                    | MMR chapter, CzechTourism agency budget, MŽP (AOPK) and MK (NPU) chapters | EU funds 2021-2027, national subsidy titles after 2021 |  |   |  |
|---|------------------------|----------------------------------|--|------------------|---|---|-----------------------|--|---|--|--|---|--|
| Objective code (SC) measure (o) task (xx) | Relevant objectives ** | Relevance to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Type of task *** | Manager                                 | Co-manager  | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools                           | Potential and new economic instruments                 | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
|   |                        |                                  | <b>Awareness raising - Urbanized landscape</b>   |                  |   |   |                       |  |   | -  |  |   |  |
| PN_9.20                                   |                        |                                  | Raise public awareness of water management in settlements and its sustainable form in relation to climate change adaptation (water-efficient technologies, rainwater management, water recycling).   | I                | Ministry of the Environment             |   | ongoing               | X                                      | -   | -  | 0  | 0   | 0  |
| PN_9.21                                   |                        |                                  | Raise awareness about introducing light-colored surfaces in settlements (green roofs, light-colored sidewalks, replacing black asphalt) to reduce paved areas and replace them with permeable and semi-permeable surfaces (mitigating overheating, retaining rainwater), about the possibilities of regenerating inner courtyards and their use (last remaining areas for functional greenery and improving the quality of life in built-up areas).  | I                | MD                                      | MD, MPO   | ongoing               | 5 million CZK                          | NPŽP/SFŽP (+ increase in EVVO calls in the NPŽP)                          |  | 0  | 5   | 5  |
| PN_9.22                                   |                        |                                  | Raise awareness of the use of cooling systems based on natural ventilation, low-emission technologies, and energy-efficient or alternative and intelligent cooling systems.  | I                | Ministry of the Environment             | Ministry of Industry and Trade                      | ongoing               | X                                      | -   | -  | 0  | 0   | 0  |
| PN_9.23                                   |                        |                                  | As part of support for Local Agenda 21, emphasize the integration of adaptation at the local level.  | O, I             | MoE                                     |   | O: 2024<br>I: 2024    | X                                      | -   | -  | 0  | 0   | 0  |
|   |                        |                                  | <b>Awareness raising - Preparing for emergency response caused by the impacts of climate change</b>  |                  |   |   |                       |  |   | -  |  |   |  |
| PN_9.24                                   |                        |                                  | Conduct a detailed analysis of the current state of teaching all safety topics in schools. Propose measures to optimize the educational process in the field of safety.  | M                | Ministry of Education, Youth and Sports |   | 2023                  | X                                      | -   | -  | 0  | 0   | 0  |
| PN_9.25                                   |                        |                                  | Introduction of comprehensive safety education with adequate time allocation for the Framework Educational Programmes for Primary Education, the Framework Educational Programmes for Secondary Vocational Education, and the Framework Educational Programmes for Grammar School Education.   | M, O             | Ministry of Education, Youth and Sports | Ministry of the Interior<br>MD<br>MO,<br>MZd,<br>MD | M: 2024               | X                                      | -   | -  | 0  | 0   | 0  |

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|  |                        |                                     |  |               |   |  |                       |  |   |  |  |   |  |
|--|------------------------|-------------------------------------|--|---------------|---|--|-----------------------|--|---|--|--|---|--|
| PN_9.26                                |                        |                                     | Regular testing of pupils' knowledge of safety through the Czech School Inspectorate.  | M, O          | Ministry of Education                     | Ministry of the Interior<br>MD<br>Ministry of Defense,<br>Ministry of Health,<br>Ministry of Transport | M: 2024               | x                                      | -   | -                                      | 0  | 0   | 0  |
|  |                        |                                     | Communication strategy   |               |   |  |                       |  |   | -                                      |  |   |  |
| PN_9.27                                |                        |                                     | Every year, run an info campaign focused on one of the major groups affected by climate change and possible adaptation measures (including a special website, info materials, press conferences, examples of good practices, etc.). Present the topic in a comprehensive and contextual way.   | I             | MoE                                       |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
| PN_9.28                                |                        |                                     | Systematically and actively cooperate with the media on the topic of adaptation to climate change.   | I             | MoE                                       |  | on an ongoing basis   | x                                      | -   | -                                      | 0  | 0   | 0  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to ZK manifestations * | Update of adaptation measures and tasks<br>(measures are shown in bold)  | Task type *** | Manager                                   | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 **** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| PN_9.29                                |                        |                                     | Promote Climate-ADAPT (European Climate Adaptation Platform) – a European information system for the dissemination and exchange of information, data and experience in the field of climate change adaptation.   | I             | MoE                                       |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
| PN_9.30                                |                        |                                     | Raise awareness of climate change adaptation through articles in environmental magazines and periodicals aimed at the general public, at major film festivals, with a particular focus on documentaries, children's films and environmental issues, and through exhibitions where appropriate. | I             | MoE                                       |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
| PN_9.31                                |                        |                                     | In the area of adaptation to climate change, cooperate with researchers and scientists (Czech Academy of Sciences, universities, etc.) and environmental education centers in organizing events for the public (Earth Days, Earth Days, Tree Days, etc.)                                       | O             | Ministry of the Environment               |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
| PN_9.32                                |                        |                                     | As part of the Ministry of the Environment's PR activities, promote key national and international awareness-raising activities on climate change (e.g., Earth Day, World Meteorological Day).   | I             | Ministry of the Environment (CENIA, CHMI) |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
| PN_9.33                                |                        |                                     | Promote opportunities for obtaining financial contributions and subsidies for adaptation measures.   | I             | Ministry of the Environment               |  | ongoing               | x                                      | -   | -                                      | 0  | 0   | 0  |
|  |                        |                                     | Education, training, and awareness-raising in general  |               |   |  |                       |  |   | -                                      |  |   |  |
| PN_9.34                                |                        |                                     | Include the topic of climate change and adaptation options in the framework educational programs for various school levels and vocational training (e.g., agricultural fields), including retraining   | M             | Ministry of Education                     | Ministry of the Environment, Ministry of Agriculture   | 2023                  | x                                      | -   | -                                      | 0  | 0   | 0  |

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|  |                        |  |   |               |   |  |                       |  |  |  |  |   |  |
|--|------------------------|--|---|---------------|---|--|-----------------------|--|--|--|--|---|--|
|  |                        |  |   |               |   | Ministry of Labor and Social Affairs   |                       |  |  |  |  |   |  |
| PN_935                                 |                        |  | Integrate climate change into lifelong learning for professionals in both the private and public sectors, including programs organized by professional associations in the fields of water and forest management, construction, agricultural production, etc.                     | M, I          | Ministry of Education, Youth and Sports     | MMR, MŽP, ČKA, ČKA/IT  | 2023                  | X  | -  | -  | 0  | 0   | 0  |
| PN_936                                 |                        |  | Motivate schools to incorporate adaptation topics into their school curricula and to engage in dialogue within their local communities and regions (e.g., with landowners whose land is suitable for adaptation measures).  | I             | MoE, MoES (NPI ČR), Ministry of Agriculture |  | ongoing               | MoE: CZK 0.5 million CZK per year                                  | NPŽP/SFŽP  | -  | 0  | 2.5   | 0  |
| PN_937                                 |                        |  | Support educational programs and counseling necessary to understand the causes and manifestations of climate change as a specific subject of support within the framework of announced grant procedures in the field of education.  | I             | MoE   |  | ongoing               | CZK 10 million per year  | NPŽP/SFŽP, regular call for proposals EVVO pillars in NPŽP                           | -  | 0  | 5   | 0  |
| PN_938                                 |                        |  | Support educational programs and counseling focused on adaptation and mitigation measures and measures to reduce pollutants, including the impact of various categories of sources on air quality.  | I             | MoE   | Ministry of Agriculture, Ministry of Industry and Trade, Ministry of Transport | ongoing               | 10 million per year; for the residential sector, the EFEKT program | NPŽP/SFŽP, regular call for EVVO pillars in NPŽP; residential sector – EFEKT program | -  | 3  | 5   | 0  |
| Target code (SC) Measure (o) Task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)  | Task type *** | Manager                                     | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 ****                             | Existing financial resources and economic tools                                      | Potential and new economic instruments                       | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| PN_939                                 |                        |  | Support the use of e-learning and other appropriate training programs for public administration that address climate change issues.   | I             | Ministry of the Interior                    | MoE  | ongoing               | X  | -  | -  | 0  | 0   | 0  |
| PN_940                                 |                        |  | Prepare and continuously update an overview of documents from ongoing political negotiations aimed at climate protection – support the translation and adaptation of texts so that they are understandable to the public and usable in EVVO and EP.                               | I             | MoE (CENIA)                                 |  | ongoing               | X  | -  | -  | 0  | 0   | 0  |
| PN_941                                 |                        |  | Through consultation days organized by the National Institute of Public Health and monthly seminars organized by the Society for Epidemiology and Microbiology of the Czech Academy of Sciences, familiarize healthcare professionals with the issue of climate impact on health. | I             | Ministry of Health                          |  | ongoing               |  | SR (SZU budget)  | -  |  |   |  |
| PN_942                                 |                        |  | Support awareness-raising on climate change and adaptation options in public libraries (expanding collections, promoting the topic) and regional museums (supporting the expansion of collections and lecture programs).  | E, I          | MK  | MŽP  | ongoing               | 1 million per year   | NPŽP EVVO, OPŽP  | OPŽP 21+, sponsorship, regional programs, or endowment funds | 2.5  | 2   |  |
| PN_943                                 |                        |  | Support the development of facilities for education on climate change and adaptation options.   | E             | Ministry of the Environment                 |  | ongoing               | CZK 590 million (measure under preparation OPŽP)                   | -  | OPŽP 21+   | 590  | 0   | 0  |

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|   |                         |                                  |  |               |                     |                             |                       |  |   |   |  |   |  |
|---|-------------------------|----------------------------------|--|---------------|---------------------|-----------------------------|-----------------------|--|---|---|--|---|--|
| oPN_10                                    | 1, 3, 5                 | SU, PO, ZT, ET, EV, VS, PV       | Ongoing methodological, educational, and financial support for local governments in developing adaptation strategies and implementing adaptation measures  |               |                     |                             |                       |  |   |   |  |   |  |
| PN_10.1                                   |                         |                                  | Local governments receive methodological, educational and financial support in developing adaptation strategies and implementing adaptation measures.  | M, I, E       | MoE                 | Relevant ministries and ÚSÚ | ongoing               | x  | -   | -   | 0  | 0   | 0  |
| oPN_11                                    | 1, 2, 3, 5              | SU, PO, ZT, ET, EV, VS, PV       | Ensuring and providing sufficient support for research, development and innovation in the field of climate change and adaptation   |               |                     |                             |                       |  |   |   |  |   |  |
| PN_11.1                                   |                         |                                  | Support research and development of new materials and technologies to reduce the risk of climate change impacts and negative technical, economic, and health effects, as well as research on the real effects of various types of adaptation measures. | V, E          | MPO, MŽP, MZe, MŠMT | AV ČR, TA ČR                | ongoing               | Cannot be estimated                                | research programmes, support for large research infrastructures | -   |  |   |  |
| Objective code (SC) measure (o) task (xx) | Relevant objective s ** | Relevance to ZK manifestations * | <b>Update of adaptation measures and tasks</b><br>(measures are shown in bold)   | Task type *** | Manager             | Co-manager                  | Deadline, checkpoints | Financial requirements until 2025 ****             | Current financial resources and economic tools                  | Potential and new economic tools                | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| oPN_12                                    | 1, 3, 5                 | SU, PO, ZT, ET, EV, VS, PV       | The existing knowledge base for mitigating the impacts of climate change is continuously updated and put into practice.  |               |                     |                             |                       |  |   |   |  |   |  |
| PN_12.1                                   |                         |                                  | The existing knowledge base for mitigating the impacts of climate change is continuously updated and put into practice.  | V, O          | MoE                 | Relevant ministries and ÚSÚ | Ongoing               | x  | -   | -   | 0  | 0   | 0  |
| oPN_13                                    | 1, 2, 3, 5              | SU, PO, ZT, ET, EV, VS, PV       | Active and constructive involvement of the Czech Republic in international and EU processes in the field of climate change adaptation  |               |                     |                             |                       |  |   |   |  |   |  |
| PN_13.1                                   |                         |                                  | The Czech Republic will contribute to the implementation of adaptation and mitigation measures in developing countries through international institutions such as the Green Climate Fund, the Adaptation Fund, and the Global Environment Facility.    | E             | MoE                 |                             | ongoing               | total CZK 125 million<br>(CZK 25 million per year) | -   | SR - revenues from emissions allowance auctions | 0  | 125   | 125  |
| oPN_14                                    | 1, 3, 5                 | SU, PO, ZT, ET, EV, VS, PV       | Formulation of national landscape planning priorities as a basis for coordinating the procedures and activities of individual ministries in landscape use  |               |                     |                             |                       |  |   |   |  |   |  |

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| PN_14.1                                |                        |  | Formulate the basic principles of the National Landscape Policy (strategies, declarations, etc.) in the context of public interests.                                      | S                | MŽP                     | Ministry of Regional Development, Ministry of Agriculture, Ministry of Culture, Ministry of Education, Youth and Sports, Ministry of Industry and Trade, Ministry of the Interior, Ministry of Finance, Ministry of Justice MD | 2024                  | X                                     | -   | -                                      | 0  | 0   | 0  |
|--|------------------------|--|---|------------------|-------------------------|--|-----------------------|---------------------------------------|---|--|--|---|--|
| PN_14.2                                |                        |  | Examine the needs and possibilities of introducing hierarchical landscape planning in the context of spatial planning and other established planning processes and tools. | In               | MMR                     | Ministry of the Environment, Ministry of Agriculture, Ministry of Culture, Ministry of Education, Youth and Sports, Ministry of Industry and Trade, MD   | 2026                  | X                                     | -   | -                                      | 0  | 0   | 0  |
| oPN_15                                 | 1, 2, 3, 5             | SU, PO, ZT, ET, EV, VS, PV             | Transition to planning and dimensioning of water management measures in the landscape taking into account the expected climate change                                     |                  |                         |  |                       |                                       |   |  |  |   |  |
| PN_15.1                                |                        |  | When updating technical standards for the design of water management measures in the landscape, take into account the expected development of climate change.             | O, I             | Ministry of Agriculture | MoE, SPU, ČASÚ NMZ   | ongoing               | X                                     | -   | -                                      | 0  | 0   | 0  |
|  |                        |  |   |                  |                         |  |                       |                                       | TOTAL (in millions of CZK)                      |  | 52,570.3                                     | 86,471.1  | 46,451.6   |
|  |                        |  |   |                  |                         |  |                       |                                       |   | Total number of measures               |  | 10  |  |
|  |                        |  |   |                  |                         |  |                       |                                       |   | Total number of tasks                  |  | 322   |  |
| Target code (SC) measure (o) task (xx) | Relevant objectives ** | Relationship to manifestations of ZK * | Updating adaptation measures and tasks (measures are listed in bold)  | Type of task *** | Manager                 | Co-manager   | Deadline, checkpoints | Financial requirements until 2025 *** | Existing financial resources and economic tools | Potential and new economic instruments | EU resources until 2025 (in millions of CZK) | National resources by 2025 (in millions of CZK) | Requirements for new national resources (in millions of CZK) |
| <b>EXPLANATORY NOTES</b>               |                        |  |   |                  |                         |  |                       |                                       |   |  |  |   |  |
| * Climate change indicator code        |                        |  |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | SU                     | drought                                |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | PO                     | floods and flash floods                |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | VS                     | heavy rainfall                         |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | ZT                     | temperature rise                       |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | ET                     | extremely high temperatures            |   |                  |                         |  |                       |                                       |   |  |  |   |  |
|  | EV                     | extreme wind                           |   |                  |                         |  |                       |                                       |   |  |  |   |  |



**Annex No. 1 to the National Action Plan for Adaptation to Climate Change – 1st update for the period 2021–2025**

|                                  |                     |  |  |  |  |  |  |                                  |   |  |  |  |
|----------------------------------|---------------------|--|--|--|--|--|--|----------------------------------|---|--|--|--|
|                                  | PV                  | vegetation fires   |  |  |  |  |  |                                  |   |  |  |  |
| <b>** Specific objectives</b>    |                     |  |  |  |  |  |  |                                  |   |  |  |  |
|                                  | SC1                 | Ecological stability and the provision of ecosystem services in the agricultural landscape are ensured, with an emphasis on limiting land degradation and land take and strengthening the natural water regime.  |  |  |  |  |  |                                  |   |  |  |  |
|                                  | SC2                 | Ecological stability and the provision of ecosystem services in forests are ensured, with an emphasis on preventing soil degradation and strengthening the natural water regime.   |  |  |  |  |  |                                  |   |  |  |  |
|                                  | SC                  | Ecological stability and the provision of ecosystem services by water and water-related ecosystems are ensured, with an emphasis on strengthening the natural water regime of the landscape. and with regard to ensuring the needs of human society and the sustainable use of water |  |  |  |  |  |                                  |   |  |  |  |
|                                  | SC4                 | The resilience of human settlements, including their public and green infrastructure, is significantly strengthened, with an emphasis on protecting human health.  |  |  |  |  |  |                                  |   |  |  |  |
|                                  | SC5                 | High efficiency of early warning systems and responsible response by the population is achieved.   |  |  |  |  |  |                                  |   |  |  |  |
| <b>*** Type of task</b>          |                     |  |  |  |  |  |  | <u>European subsidy programs</u> |   |  |  |  |
|                                  | E                   | Economic   |  |  |  |  |  | OPŽP 2014 - 2020                 | OPŽP 2021 - 2027                                |  |  |  |
|                                  | L                   | legislative  |  |  |  |  |  | RDP 2014–2020                    | SP SZP 2021 - 2027                              |  |  |  |
|                                  | I                   | information  |  |  |  |  |  | IROP 2014–2020                   | IROP 2021 - 2027                                |  |  |  |
|                                  | O                   | organizational   |  |  |  |  |  | OPPIK 2014 - 2020                | OPTAK 2021–2027                                 |  |  |  |
|                                  | M                   | methodological   |  |  |  |  |  |                                  | NPO 2021 - 2025                                 |  |  |  |
|                                  | V                   | scientific and research  |  |  |  |  |  |                                  | ModFond   |  |  |  |
|                                  | S                   | strategic-conceptual   |  |  |  |  |  |                                  |   |  |  |  |
| <b>**** Economic instruments</b> |                     |  |  |  |  |  |  | <u>National programs</u>         |   |  |  |  |
|                                  | Column I            | <b>Financial requirements</b> until 2025 (in millions of CZK, or text) – estimated amount of funds needed to complete the task   |  |  |  |  |  | NPŽP                             | NPŽP  |  |  |  |
|                                  | Column J            | Existing financial <b>resources</b> and economic <b>instruments</b> (text) - existing European and national sources of funding   |  |  |  |  |  | NZÚ                              | NZÚ   |  |  |  |
|                                  | Column K            | <u>Potential and new economic instruments</u> (text) - programmes under preparation/not yet approved and new programmes; existing programmes only if extended to include a new supported activity  |  |  |  |  |  | PPK                              | PPK   |  |  |  |
|                                  |                     |  |  |  |  |  |  | POPFK                            | POPFK   |  |  |  |
|                                  | column L            | EU <b>resources</b> until 2025 (in millions of CZK) – estimated <u>total requirements</u> for European resources   |  |  |  |  |  | PPP II                           | PPP IV  |  |  |  |
|                                  | Column M            | National <b>resources</b> until 2025 (in millions of CZK) – planned <u>total requirements</u> for national resources   |  |  |  |  |  | MaS                              | MaS   |  |  |  |
|                                  | Column N            | Requirements for new national <b>resources</b> (in millions of CZK) - ... of which <u>new</u> requirements for national resources by 2025  |  |  |  |  |  | PRGLF                            | PRGLF   |  |  |  |
|                                  | X                   | Will be met within existing overhead costs   |  |  |  |  |  | PPŽ                              | PPŽ   |  |  |  |
|                                  | Cannot be estimated | At present, it is not possible to accurately determine or estimate the financial costs of implementation.  |  |  |  |  |  |                                  | Management in OPV                               |  |  |  |
|                                  | -                   | The required data has not been identified  |  |  |  |  |  |                                  | Security Research Program of the Czech Republic |  |  |  |
|                                  | =                   | The amount is already included in another task   |  |  |  |  |  |                                  |   |  |  |  |