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## 1. Authors' profile

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Publishing activity:

- Štícha, V., Bílek, L., Dvořák, J.: Předběžná zhodnocení přirozené obnovy na vybraných lokalitách NP Šumava. Coyous 2008, Konference mladých vědeckých pracovníků, ČZU v Praze, ISBN 978-80-213-1778-9, s. 228-237.
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#### Grants and Projects:

- 2007: project manager "Natural restoration of forest ecosystems of mountain areas" (Šumava) GA FLE 2007.
- 2007-2011: co-investigator of the project commissioned by the Ministry of Education and Culture "Management of biodiversity in the Giant Mountains and Šumava", 2B06012.
- 2007: co-investigator of the project within the supplementary activity of the Department of Forestry "Possibilities of using mining technologies in forest stands of LHC Boletice".
- 2008: co-investigator of the project as part of the complementary activity of the Department of Forestry "In-depth analysis of the contribution organization Forest Management of the City of Olomouc".
- 2008: co-investigator of the project within the supplementary activity of the Department of Forestry "Transformation of the organizational structure of LČR in relation to the regional organization of the state".
- 2008: co-investigator of the project as part of the complementary activity of the Department of Forestry "Proposal of the professional education process focusing on the performance of the function of a professional forest manager".
- 2009: co-investigator of the project within the supplementary activity of the Department of Forestry "Analysis of the organization of Forests of the city of Prostějova".
- 2012 - 2014 co-investigator of the TAČR-supported project "Ecologically justified management of forest ecosystems in the Krkonoše National Park according to types of forest development". TA02020873.
- Since 2015, co-investigator of the project supported by NAZV "Assessment of the risk of damage to forest stands by wind: development and calibration of a national predictive model". QJ1520006.
- Since 2015, co-investigator of the project supported by NAZV "Increasing the adaptability of pine management in the conditions of the Czech Republic" QJ1520037.
- Since 2015, co-investigator of the project supported by NAZV "Determining the amount of residual dendromass at a specific workplace - a mining element in a forest group". QJ1520042.
- Since 2017, the project manager Tačr Gama "Electric unloading machine".

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- Since 2018, the researcher of the Excellent Research project at FLD, ČZU: Influence of selected habitat factors on the amount of residual dendromass in spruce stands (*Picea abies* /L./ Karsten)
- Since 2019, the researcher of two excellent research projects at FLD, ČZU: a) Effect of evapotranspiration and storage method on the speed and course of drying of poplar logs (*Populus maximowiczii* × *P. nigra* 'Max 4-5') and willow (*S. caprea* × *S. viminalis*), b) Effects of selected site and stand factors on amount of dendromass in beech (*Fagus sylvatica* L.) forests in Central Europe, also a member of the research team in the NAZV project QK1910347: Design of operational adaptation measures using hydrophilic polymers mitigating the withering of the main economic trees due to drought

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## **2. Scope of the assessment and summary (national/subnational level)**

The risk assessment applies to the geographical borders of the Czech Republic. This is 2.68 million hectares of forests, which represents 34.2% of the total area of forests. The forest plot is officially registered by the Czech cadastral office. The analysis began in 2022 and after more than 15 months, it evaluates the current legislative framework applicable in the Czech Republic.

Based on the analysis of the current legislative frameworks in the Czech Republic, all potential risks affecting the productivity and sustainability of forest stands were assessed. These risks are monitored and regulated. The current composition of forestry stands is moving towards a more natural second composition in order to create a more climate resilient ecosystem.

This analysis presents an overview of the EU legal framework and requirements regarding the sustainability criteria set out in the RED II Directive. These requirements have been met in the Czech Republic, and therefore the risk of unsustainable biomass extraction is low. Based on this analysis, forestry development is in line with the principles of EU and Czech law.

In conclusion, this analysis, based on the available information, determines a low risk of unsustainable forest biomass production in this area of interest.

## **3. Date of the risk assessment**


Date of preparation of the draft: **1.01.2022 – 3.02.2023**

Public consultation period: **13.06.2023 – 4.07.2023**

Date of final approval: **5.07.2023**

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#### **4. Identification of the sourcing area**


The area of the Czech Republic is 78,866 km<sup>2</sup>. The surface of the Czech Republic is dominated by hills and highlands. 67% of the territory lies at an altitude of up to 500 m, 32% in the range of 500–1000 m and about 1% above 1000 m. The average altitude of the entire Czech Republic: 430 m above sea level.

From a physical geographic standpoint, CR lies along the boundary between two mountain systems, with different age, geological and geomorphological development. The western and central parts of CR consist of the Czech uplands, formed at the end of the Palaeozoic, mostly with the character of hilly country, and the central mountains – Šumava, Český les, Krušné Mts., Krkonoše (Giant) Mts., Orlické Mts. and Jeseníky Mts. The Western Carpathians extend into the eastern part of CR; these mountains acquired their present form in the Tertiary – the Beskydy Mts. The area between the two mountain systems consists of a valley zone.

The climate in the Czech Republic is mild and transitional between oceanic and continental. Due to the prevailing westerly air flow and the position towards the Atlantic Ocean, the continental character of the climate rises from west to east. The annual length of sunshine (i.e. the total time when solar radiation falls on the earth's surface without being covered by clouds) is on average 1400 to 1800 hours, in the lowlands up to 2000 hours. The average annual air temperature in the Czech Republic usually ranges from 5.5 to 9 °C, with the warmest areas being the lowlands, the coldest being the mountain areas. The average relative humidity is in the range of 60-80%. The average annual rainfall in the Czech Republic is roughly 600 - 800 mm.

The area of the forest was determined in the third cycle of the National Forest Inventory of the Czech Republic (NIL 3, 2016–2020) corresponds to the area of land in the forest category according to the international definition FRA 2020 (FAO). The forest area in the Czech Republic was estimated at 2,923.2 ± 37,6 thousands of hectares. Forest coverage reaches the level of 37.1 ± 0.5%. The area of forests has been steadily increasing since the second half of the 20th century. In the past, they were greatly changed by forestry activities. That is why there are almost no original forests in the territory of the Czech Republic today. The species composition of the forest is dominated by artificially planted spruce monocultures.

Over 70% of forest stands are coniferous forests (50% spruce and 16% pine), over 27% are deciduous forests, among which beech (9%) and oak (7%) are the most represented. In the first

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two decades of the 21st century, the average clearing time in forests outside national parks is around 115 years. The Forest Act significantly regulates forest management and the performance of forest functions and protects the general use of the forest regardless of who owns it.

The Forestry Act divides forests according to their predominant functions into three categories: protection forests, special purpose forests and economic forests. The classification of forests into the category of forests of protection or special purpose and the removal from this category is decided by the state forest administration body at the proposal of the forest owner or on its own initiative. In addition, special purpose forests are forests classified in this way according to other laws, namely forests in zones of hygienic protection of water sources, in protection zones of mineral water sources, in national parks and nature reserves.


The Institute for Forest Management divides forests in the Czech Republic into 41 natural forest areas, mostly named after mountain ranges or other generally known natural areas, according to geological, climatic, orographic and phytogeographical conditions.

#### 4.1. Sources

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## 5. Forestry industry description


### 5.1. Description of forest management

**Forest legislation is a national competence.** The main regulation governing the management of forests is Act No. 289/1995 Coll., on forests and on the amendment and addition of certain laws (Forest Act), as amended. The purpose of this Act is to determine conditions for the preservation, fending and regeneration of forests as national riches, to enable the fulfilment of all their functions and to support sustainable forest management.

In 2021, the larger part of the forest (70%), was under public ownership (over 53% owned by state and 17% by the municipalities and cities), with about 30% privately owned.

In case of state forests, the rights and duties of the owner of the forest under this Act shall apply to the legal entity which has been entrusted with the management of such forests, unless provided otherwise by this Act. Forest legislation falls mostly under the Ministry of Agriculture, with the Forest Professional Managers looking after supervision.

**The system of care for specially protected areas** of the Czech Republic, i.e. areas that are very important or unique in terms of natural science or aesthetics, is based on Act No. 114/1992 Coll., on the protection of nature and landscape, as amended (hereinafter referred to as the Act), where the conditions are laid down in detail protection of these territories according to their categories. According to § 14 of the Act, specially protected areas in the Czech Republic are divided into 6 categories. Large-scale specially protected areas include national parks (NP) and protected landscape areas (PLA). Small-scale specially protected areas include national nature reserves (NPR), nature reserves (PR), national natural monuments (NPP) and natural monuments (PP). The total area of large-scale specially protected areas currently amounts to 1,257,000 ha, which represents 15.9% of the area of the Czech Republic. Forest ecosystems occupy most of the territory of specially protected areas and are an extremely valuable part of them, which means that almost half of czech forests are being specially protected. Natural forests cover an area of 29.1 thousand ha, which represents 1.1% of the area of all forests in the Czech Republic. The extraction of wood stocks in protected forests and special purpose forests is limited by the performance of protective functions or purposeful management for the benefit of nature protection, in reservations and in the first zones of national parks, wood extraction is almost excluded.

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**The Forest Protection Service** of the Research Institute of Forest Management and Hunting, v. v. i., was established in 1995 as an organizational component of the Forest Protection Department, on the basis of a mandate from the Ministry of Agriculture. The main content of its activity is consulting in the field of forest protection, processing and maintaining an overview of the occurrence of forest harmful agents, processing expert opinions for the need to grant subsidies in accordance with the applicable legislation (especially within the framework of selected operations of the Rural Development Program), testing the biological effectiveness of preparations and other means for forest protection, organization of seminars and training, publication of new findings from the field, international cooperation in forest protection (especially with countries neighbouring the Czech Republic) and other professional activities in the field of forest protection.


**The state of forest health** has been monitored in the Czech Republic since 1986 as part of the international cooperative program of the European Economic Commission at the United Nations, abbreviated as ICP Forests, which represents one of the most important European forest ecosystem control systems.

Except for newly introduced certification schemes of criterias of sustainability, in the Czech Republic, are already in place two certification systems – the FSC (Forest Stewardship Council) system and the PEFC (Programme for the Endorsement of Forest Certification schemes).

**FSC CR** is the Czech representative of the international organization Forest Stewardship Council® (FSC), which created and administers a certification scheme for the certification of forests and wood-based products with a total area of over 231 million ha of forests. 51,500 certificates were awarded in the downstream processing chain. The area of FSC-certified forests in the Czech Republic increased by 11,000 ha during 2021 and amounted to 135,420 ha at the end of the year. There were 15 new certificate holders. In total, there were 9 forest management certificates representing 73 forest owners/managers. In 2021, there were 351 certificates in the downstream processing chain in the Czech Republic.

**PEFC** Czech Republic is an independent organization whose goal is to support sustainable forest management, support the consumption of wood as an ecologically renewable resource, nature protection and sustainable development of society. PEFC Czech Republic is part of the most widespread global forest certification system PEFC, based in Geneva, and represents the national governing body of PEFC in the Czech Republic. Currently, 320 million ha of forests are certified by the PEFC system worldwide, and more than 20,000 processing and trading

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companies hold the consumer chain certificate. In the Czech Republic, 70% of the forest area is certified by the PEFC system, and over 290 companies demonstrate their social responsibility by participating in the PEFC certification of the consumer chain.

**The concept of the state forestry policy until 2035** adopted by the Government of the Czech Republic on February 17, 2020 by Resolution No. 116 represents the strategic document with the aim to achieve sustainable multifunctional forests and forest management that reflects the current and expected needs of society and at the same time reflects the state of forest management. It deals not only with the issue of state-owned forests, but with forest management as a whole. The application document for the Concept of State Forestry Policy until 2035 was adopted by the Government of the Czech Republic on January 25, 2021 by Resolution No. 72. It contains measures that will lead to the implementation of tasks in the coming years. The document is based not only on the Concept adopted by the government, but also follows on from previously adopted documents (Principles of State Forestry Policy, National Forestry Program II, National Action Plan for Adaptation to Climate Change), updates them, develops and specifies some previously imposed tasks; at the same time, it reflects the current state of forestry, the situation on the raw wood market and the current challenges stemming mainly from the bark beetle calamity, including the economic situation in the entire forestry sector.


It contains specific measures leading to the implementation of the Concept, sets out related tasks, demands on the state budget and deadlines for implementation with a short-term time horizon until 2026.

**Measures to achieve the long-term objective A to ensure the balanced full fulfillment of all forest functions for future generations:**

1. To develop sustainable forest management as part of the protection of values, care and use of the landscape.

The goal of the measure is to achieve a state where stable forest ecosystems as part of the landscape permanently and evenly provide ecosystem services to the public in full breadth, including sustainable production.

2. Motivate and financially support forest owners to sustainably manage their forests and provide public services

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The goal of the measure is to positively motivate forest owners to the optimal way of managing their property based on natural conditions and a differentiated approach to forest management and to the preservation and development of services for the whole of society. In the case of forests owned by the state, define the mission and method of management with an emphasis on society-wide demand for the fulfillment of public interests and the quality of the environment.

### 3. Support a positive water and carbon balance of the landscape

The aim of the measure is to contribute to mitigating climate change by using the potential of forestry for a positive water balance and carbon sequestration. To do this, use sustainable and habitat-friendly forest management methods close to nature.


### 4. Adapt the conditions of wildlife to the state and development of forest ecosystems

The aim of the measure is to ensure a balance between the number of ungulates in particular and the state of the forest through effective reduction. In connection with this, take all forestry and hunting measures that will contribute to the fulfillment of the goal, especially in the restoration of forest stands. Project specific measures into the hunting legislation.

**Measures to achieve the long-term objective long-term goal B: with regard to the ongoing climate change, to increase the biodiversity and ecological stability of forest ecosystems while maintaining the production function.**

1. Support increasing the diversity of the species, age and spatial structure of the forest to ensure the long-term stability of the forest, including increasing the proportion of suitable tree species in the forest stands.

The aim of the measure is to support the increase in the diversity of the species, age and spatial structure of the forest to ensure the long-term stability of the forest, including the use of suitable introduced tree species as mixed species in the forest stands. According to current knowledge and on the assumption of ensuring the optimal performance of all functions of the forest, flexibly adjust the rules for the possibility of use, vertical and horizontal transfer of reproductive material and rules for the introduction of geographically non-native tree species. The content of the measures is also the creation of conditions for natural regeneration, the application of different management methods as a prerequisite for increasing the species and spatial diversity of forests and for increasing the infiltration and retention of water in forest ecosystems. The aim of the measure is also the application of economic regulation for forests with a rich structure and the

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equalization of all economic methods and forms (selective or combined economic methods), stumps and medium-sized forests. When reforesting in calamity clearings, use suitable procedures according to the habitat with a combination of natural and artificial regeneration, including two-phase regeneration using preparatory tree species. To preserve the existing proportion of organic matter in forest soils, thereby supporting a positive water and carbon balance of the landscape.

2. Support forest management with the aim of preserving and increasing the biological diversity of forests.

The aim of the measure is to support purposefully differentiated management in the forest leading to the preservation and increase of the biological diversity of forest ecosystems. Among other things, also for the reason that they will better tolerate the ongoing climate change while ensuring adequate production of wood material.


3. Support the retention of a reasonable proportion of rotting wood, logging residues and habitat trees in the forest.

The aim of the measure is to motivate forest owners to leave in the forest an adequate proportion of rotting wood, logging residues and habitat trees, which are carriers of biological diversity and improve the state of forest ecosystems. Regulate the collection of forest logging residues where the condition of forest ecosystems would be threatened. Part of the measures is also the resolution of responsibility for possible damage to the health or life of forest visitors, which must not be at the expense of the forest owner.

## **5.2. Description of volume and use of wood**

The total stock of timber is 701.1 million m<sup>3</sup>. In the last 100 years, the stock has more than doubled. The total average growth rate is 18.2 million m<sup>3</sup>, i.e. 7.1 m<sup>3</sup> per 1 ha of forest land. This also determines the harvesting potential, which according to the current legislation (Forest Act No. 289/1995 Coll.) must not exceed the increment. However, the amount of harvesting has been very above average in the last few years (total of 35.756 m<sup>3</sup> in 2020). The harvesting capacity per hectare corresponds to an average of 227.3 m<sup>3</sup> b.c. for economic forests, 202.4 m<sup>3</sup> b.c. for protection forests and 416 m<sup>3</sup> b.c. for special purpose forests. The total timber stock according to FAO FRA (accessible and navigable forests) in the Czech Republic is 867.9 ± 15.1 million m<sup>3</sup>.

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Although the total stock has been increasing in the long term (last 200 years or so), the occurrence of calamities reduces it in the short term. With more frequent calamities (windstorms, droughts, attacks by the leafcutter), a longer-term stagnation or even decline in the stock is possible.

In 2021 a total of 30.26 million m<sup>3</sup> of raw wood was harvested in the forests of the Czech Republic, which means a decrease of 5.49 million m<sup>3</sup> compared to the previous year. This volume was largely contributed by the processing of random logging in the amount of 26.28 million m<sup>3</sup> of wood. The share of random logging was 86.9 %, and unfavorable initial conditions for planned forest management continue to exist. In terms of the composition of extraction by tree species, the volume of softwood extraction decreased by 5.77 million m<sup>3</sup> compared to 2020 to a total of 28.72 million m<sup>3</sup>. The share of softwood extraction in the total extraction was approximately 95 %. The proportion of hardwood and coniferous wood extraction is mainly determined by the processing of random extractions, especially bark wood.

### 5.3. Description of the wood processing industry


The timber industry processes almost exclusively domestic renewable raw material - raw timber, mostly coniferous and deciduous logs, by cutting them into sawn timber. In total, 9 700 million m<sup>3</sup> of coniferous and broadleaved logs were processed domestically by sawing, of which 5 213 million m<sup>3</sup> of coniferous sawn timber and 145 000 m<sup>3</sup> of broadleaved sawn timber were produced.

The production of coniferous and deciduous sawn timber at domestic sawmills increased by 542 thousand m<sup>3</sup> year-on-year to a total of 5 358 thousand m<sup>3</sup>. Increased demand for sawn timber continued in Europe (both for own consumption in individual countries) and for further export to more distant territories (USA, China, Japan, etc.). A significant increase in the consumption of sawn timber was also seen in the domestic sector (955 thousand m<sup>3</sup> year-on-year), mainly due to an increase in construction activity.

Of the total coniferous sawn timber production of 5 213 thousand m<sup>3</sup>, 3 352 thousand m<sup>3</sup> was exported and 483 thousand m<sup>3</sup> of coniferous sawn timber was imported from abroad to cover domestic consumption of 2 344 thousand m<sup>3</sup>.

The increase in production in the Czech Republic was recorded by a domestic record production of wood pellets for energy purposes of about 500,000 tonnes (from a total of 40 pellet mills in



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the Czech Republic). This is 12.5% more ecological fuel than in 2019. At the same time, 94.5% of the pellets produced had international certification of the highest quality EN plus A1. The Czech Republic exported almost ¾ of the domestic production of pellets to Germany, Austria and Italy. Pellet production has been increasing every year as pellet plants take advantage of the surplus of bark beetle wood in forests and low wood prices. According to the Czech Pellet Cluster, according to the development plans of the main pellet producers in the Czech Republic, pellet production will continue to increase (worth mentioning is the Premium Pellets pellet plant in Golčov Jeníkov, where, after extensive modernisation and greening of production, the production capacity has increased from 27 thousand tonnes of pellets in 2019 to 40 thousand tonnes in 2020) The pellet market (or sales of pellets) exceeded CZK 2 billion in 2020.

Despite the significant increase in domestic consumption of wood - or wood products - the Czech Republic still lags behind in comparison with developed economies; for example, the annual per capita consumption of wood in the USA and Japan is more than 100% higher than in the Czech Republic and the share of wood used in construction is only one quarter of that in neighbouring countries (Germany and Austria).

The total consumption of wood for the production of paper and viscose pulp was 4 491 thousand m<sup>3</sup> of raw coniferous wood, including approximately 2 957 thousand m<sup>3</sup> of coniferous fibre and 1 534 thousand m<sup>3</sup> of coniferous wood chips and particles. In 2020, the pulp and paper industry produced 594 thousand tonnes of pulp, of which 591 thousand tonnes of chemical pulp. The production of paper pulp thus increased by 37 thousand tonnes year-on-year. Paper consumption far exceeds the production capacity of our mills, and since the range of products produced does not match demand, we have to import most of the goods. In 2020, this amounted to 450 thousand tonnes of printing and writing papers and 861 thousand tonnes of wrapping and packaging papers. This is the reason for the significant loss in the foreign trade balance.


#### 5.4. Sources

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Ministry of Agriculture Czech Republic (MZe) (2022). Report on the state of forests and forestry in the Czech republic in 2021. ISBN 978-80-7434-669-9


European Commission, Directorate-General for Energy, Technical assistance for the preparation of guidance for the implementation of the new bioenergy sustainability criteria set out in the revised Renewable Energy Directive : REDIIIBIO : final report, Publications Office, 2021, <https://data.europa.eu/doi/10.2833/592471>

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## **6. Evaluation of the level of risk for each criterion**

### **Evaluation of risk in forest management**


Forest management faces a serious situation dominantly caused by the rapidly changing environmental conditions, which are characterized by weather extremes, especially high temperatures, drought, uneven rainfall, strong winds, etc. Man-altered forests, which were historically changed from originally deciduous and mixed stands to predominantly spruce stands, find it difficult to adapt to these conditions, which causes their widespread death. The consequence of the reduced resistance of forest ecosystems is the development of insect and fungal harmful agents with calamitous impacts on forestry and related sectors. These risks and their handling are defined in the concept of the state forestry policy until 2035 described in chapter 5.

Therefore, state policy creates instructions for the long-term trend of the gradual transformation and restoration of forest stands with low age and species diversity into suitable habitats and stable ecosystems with emphasis on the gradual transformation of monoculture conifer stands into habitats with suitable and more natural deciduous and mixed stands and with subsequent protection of young forest stands against weeding and animal bites.

The National Recovery Plan assumes investment of EUR 591 million to improve the sustainability of the agricultural and forestry landscape in the context of climate change. More than half of this amount (approximately EUR 347 million) will be earmarked for improving the health of forests. The priority will be the renewal of forests, focusing on changing their species, age and spatial composition. Additional investments are targeted at increasing water retention in the forests. This is where the support of various conservative forestry-technical measures is anticipated, i.e. those that will contribute to improving the soil, water and microclimatic conditions, reduce accelerated erosion, lead to modification of the water cycle in forest soil and to the protection and stabilisation of forest watercourses.

### **Evaluation of risk in volume and use of wood**

Large-scale calamitous logging may partially undermine the sustainability of the dendroforestry potential in the Czech forests. In the context of ongoing climate change, a higher frequency of large-scale disturbances of forest stands (windstorms, drought and lycopodorus as a secondary pest) can be expected.

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On the other hand, since 2000, the share of economic forests has been decreasing and the share of forests in the category of special purpose forests has been increasing. This limits the harvesting potential (in the short term, the volume of available timber may be higher due to random harvesting in the protection zones of the first NP zones, but overall it is a limitation of management and therefore a reduction of the harvesting potential).

Also with regard to the objective of increasing nutrients in forest soils by decomposing post-harvest residues, as well as with regard to the objective of preserving biodiversity and ecosystems, which are embedded in national goals, we must count on the requirement to leave a proportional amount of post-harvest residues on logging areas, which will lead to a certain loss of energy use potential of this material.

## **Evaluation of risk in the wood processing industry**

Despite partial progress, the main problem of the timber industry in the Czech Republic remains the insufficient capacity of plants for further cutting of coniferous logs and further processing of sawn timber in the face of a rapid increase in domestic timber harvesting as a result of the continuing bark beetle calamity. This situation may be repeated in future calamities. The alternation between periods of timber surplus and shortage destabilises the market and is liquidating for many smaller processors.


### **6.1. The legality of harvesting operations**

#### **6.1.1. Identification of applicable legislation**

Regulation No 995/2010 imposes an obligation on economic operators (in the Czech Republic represented by owners of land and trees growing on it, if they are subject to harvesting and marketing, and importers from non-EU countries) to establish and maintain a so-called due diligence system. The person responsible under Article 10 of Act No 226/2013 Coll., on the marketing of timber and timber products is the Institute for Forest Management.

In addition to the due diligence system, the forest owner must submit information on the results of its management pursuant to Decree No. 285/2013 Coll. (under Section 40 of the Forest Act, No. 289/1995 Coll.) to the Central Register of the due diligence system, which is also administered by the ÚHÚL. The data of the forest management register (LHE) is submitted to the state forest administration authority of the municipality with extended competence in accordance with Act No. 289/1995 Coll.

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This document must include the following 3 elements (see Article 6 of the Regulation):

- access to information relating to the supply of timber to the market;
- assessing the risks of placing illegally harvested timber or timber products made from such timber on the market;
- mitigation of the identified risk if the identified risk of placing illegally harvested timber or timber products made from such timber on the market is not negligible.

Over two thirds of the forests in the Czech Republic are certified according to PEFC principles and, despite temporary stagnation in 2019, this is increasing. Only approximately 2% of the forested area is certified using the stricter FSC system. The Wood Act has applied in the Czech Republic since 2013, ensuring inspection of the system for monitoring the origin of wood. It thereby helps combat illegal logging in forests outside the EU, including tropical rainforests.

#### **6.1.1.1. Sources**

FSC Centralized National Risk Assessment for Czech Republic. Available: <https://fsc.org/en/document-centre/documents/resource/239>

Regulation (EU) No 995/2010 of the European Parliament and of the Council of 20 October 2010 laying down the obligations of operators who place timber and timber products on the market Text with EEA relevance

Resolution Of The Government Of The Czech Republic of February 17, 2020 No. 116 on the Concept of State Forestry Policy until 2035

Act No. 226/2013 Coll., on the marketing of timber and timber products


Act No. 289/1995 Coll., on Forests and on Amendments to Certain Acts (Forest Act)

Second Voluntary National Review of the 2030 Agenda in the Czech Republic (2021). Available: [https://www.cr2030.cz/strategie/wp-content/uploads/sites/2/2021/07/VNR\\_ENG.pdf](https://www.cr2030.cz/strategie/wp-content/uploads/sites/2/2021/07/VNR_ENG.pdf)

#### **6.1.2. Description of enforcement and monitoring**

The legislation in force in the Czech Republic, its compliance, monitoring and control system can be considered above average, together with the legislation of the Slovak Republic as the most stringent in the EU.

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According to Forest Act, § 54 Offenses of natural persons, legal entities and natural persons running businesses; If a natural, legal or entrepreneurial natural person commits an offense by carrying out harvesting beyond the scope of the approved plan or the protocol on the acceptance of the taken outline, or carries out other harvesting in violation of this law, in particular by carrying out unauthorized harvesting in an amount exceeding 3 m<sup>3</sup> per 1 ha of forest per calendar year, or carries out intentional logging in a forest under 80 years old without the permission of the state forest administration body, a fine of up to CZK 1,000,000 can be imposed.


In the Czech Republic, state administration bodies are responsible for compliance with legislation in the field of forest management, especially in the area of marketing of timber and timber products:

- Ministry of Agriculture
- Regional authorities
- Czech Trade Inspection Authority
- General Directorate of Customs
- Czech Environment Inspection

These authorities check operators and control organisations to ensure that they maintain due diligence systems and that there is no trade in illegally harvested timber. They monitor compliance with traders' obligations in relation to the EUTR. They send information to the Central Due Diligence System Register (CESNaP). They exchange information with other EU Member States on EUTR issues.

A special position in the application of the EUTR rules is that of the "delegated person". This is an organisational unit of the state that has been authorised by the Ministry of Agriculture to carry out professional activities pursuant to Act No 226/2013 Coll. on the marketing of timber and timber products. The authorised person is the Institute for Forest Management Brandýs nad Labem (ÚHÚL).

The Timber Regulation directly requires the competent authorities to check and verify that operators comply with the requirements set out, in particular to prevent illegally harvested timber from entering the EU internal market. Controls of operators are carried out by the CAA, as an authorised person of the MoH, and by regional authorities at the initiative of the authorised person or the CTIA. The control shall determine whether the operator has: introduced illegally harvested timber or timber products into the EU internal market; has a due diligence system in


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place; maintains and regularly evaluates the due diligence system. If necessary, the inspection may also include the examination of samples of goods and supplies from operators. The Czech Trade Inspection Authority carries out inspections of traders as part of its inspection activities.

Another tool for controlling compliance with applicable legislation in the field of logging is forest certification - in the Czech Republic, the PEFC system (70% of forests in the Czech Republic) and FSC (5% of forests in the Czech Republic).

An operator commits an administrative offence by failing to apply a due diligence system or to regularly maintain and evaluate its own due diligence system, by failing to submit the required documents or records of the due diligence system at an inspection or on request, or by submitting incomplete documents or records, by placing illegally harvested timber or timber products made from such timber on the market. The trader commits an administrative offence by failing to provide the information requested during an inspection or on request. The administrative offence is punishable by a fine of up to: CZK 50,000 if the operator fails to submit the required records or documents on the due diligence system upon request, or submits them incompletely upon request; fails to provide the required information upon inspection or upon request (repeatedly up to CZK 100,000); CZK 200 000 if the operator does not use the due diligence system or does not regularly maintain and evaluate its own due diligence system (repeatedly up to CZK 500 000); CZK 3 000 000 if the operator places illegally harvested timber or timber products made from such timber on the EU internal market for the first time (repeatedly up to CZK 5 000 000). An administrative offence is committed repeatedly if one year has not elapsed since the decision imposing a fine for failure to comply with the same obligation became final. Administrative offences committed by an economic operator are dealt with by the regional authority. Fines imposed by the regional authority shall be collected and enforced by the regional authority; the revenue from fines shall be the revenue of the regional budget. Administrative offences of a trader are dealt with by the CTIA. Fines imposed by the CTIA are collected by the inspectorate and are revenue of the state budget. The fine is payable within 30 days of the date on which the decision to impose it becomes final.

**Czech Environment Inspection (CEI)** activities in the forests take place on the basis of a similar legal framework as primarily Act No. 282/1991 Coll., on the Czech Environmental Inspection and its powers in forest protection, Act No. 289/1995 Coll., on forests and on amendments and additions to certain laws (Forest Act), Act No. 149 /2003 Coll., on the circulation of reproductive material of forest trees of forestry important species and artificial hybrids intended for forest restoration and afforestation, and on the amendment of some related

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laws (Act on trade in reproductive material of forest trees), Act No. 114/1992 Coll., on nature and landscape protection, Act No. 255/2012 Coll., on control (control order), Act No. 500/2004 Coll., administrative order, Act No. 250/2016 Coll., on liability for offenses and management about them and internal management acts within the CEI.

Although CEI declares no enhance in an illegal logging last year, we can assume, that there could have been slight increase as the energetic crisis caused a panic of a lot of people, when extremely high costs of electricity and gas made them start looking for a firewood again. These losses still cannot be concedered as a treat to a sustainability of forests. Although, police started using a special mobile app, which can easily help them identify the origin of the wood, when they check a loaded vehicle.

According to the FSC, 2018, forestry legislation in the Czech Republic is assessed as very effective in most of the evaluated parameters.

#### **6.1.2.1. Sources**

Act No. 289/1995 Coll., on Forests and on Amendments to Certain Acts (Forest Act)

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Commission Regulation (EU) No 607/2012 of 6 June 2012 laying down implementing rules for the due diligence system and for the frequency and nature of controls by control organisations.


Commission Regulation (EU) No 1006/2011 amending Annex I to Council Regulation (EEC) No 2658/87 on the tariff and statistical nomenclature and on the Common Customs Tariff

Act No. 226/2013 Coll., on the marketing of timber and timber products, as amended

Decree of the Ministry of Agriculture No. 285/2013 Coll., on the scope and method of submitting information to the central register by economic operators and state administration bodies in the field of marketing of timber and timber products

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## 6.2. Forest regeneration of harvested areas

### 6.2.1. Identification of applicable legislation

In 2021 the area of restored forest stands was 49 790 ha and thus showed a significant increase compared to previous years. Compared to the previous year, the total restored area increased by 9,504 ha. This is the expected consequence of the afforestation of clearings after large-scale haphazard logging. The increase in the area of natural regeneration by 2,496 ha can be positively assessed, despite the fact that the conditions for natural regeneration are considerably worse on the calamity areas. The share of deciduous trees in the total artificial regeneration reached similar relative values of 52.1%. Compared to previous years, however, the share of deciduous trees in artificial forest regeneration shows an increase in absolute values by 3 914 ha, even in the deteriorated conditions of the calamitous clearings.

In the Czech Republic, various state administration bodies are involved in monitoring and enforcing legislation in the field of forestry, particularly in the marketing of timber and timber products. These include the Ministry of Agriculture, regional authorities, the Czech Trade Inspectorate, the General Directorate of Customs and the Czech Environmental Inspectorate. These authorities are responsible for carrying out inspections of operators and inspection organizations to ensure compliance with due diligence systems and to prevent trade in illegally harvested timber. They also monitor traders' obligations under the European Union Timber Regulation (EUTR) and exchange information with other EU Member States on EUTR-related issues. This has been described in more detail in sections 6.1.2 and 6.1.2.1.


According to the Forest Act No. 289/1995 Coll., every forest owner is obliged to take proper care of the forest and one of the basic obligations is to restore the forest (e.g. after planned logging) within 2 years from the creation of a clearing and there is also an obligation to ensure the planted crop - the new generation must be cared for and ensure its successful growth (by means of forest protection or replanting).

The Forest Act (Act No. 289/1995 Coll. on Forests and Amendment of Certain Acts) imposes following obligations on forest owners in relation to restoration:

#### **§ 29 Reproductive material of forest trees**

(1) Reproductive material of forest trees from the same or corresponding natural forest area and from the corresponding height zone determined by the forest vegetation level is used for the


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artificial restoration of the forest and for the afforestation of land declared as land designated for the fulfillment of forest functions.

### **§ 31 Restoration of forest stands**

- (1) The owner of the forest is obliged to restore the forest stands with trees suitable for the habitat and nurture them in a timely and consistent manner in order to improve their condition, increase their resistance and improve the performance of the functions of the forest. In suitable conditions, it is desirable to use natural regeneration; natural regeneration cannot be used in genetically unsuitable stands.
- (2) In the case of intentional toll logging, the size of the clear cut may not exceed 1 ha and its width on exposed farms must not exceed one time and on other sites twice the average height of the harvested stand. The width of bare felling is not limited when clearing plant residues and stands with an area of less than 1 ha. In justified cases, when approving the plan or when preparing the outline, or at the request of the forest owner, the state forest administration body may allow an exception to the specified size or width of clear cutting, namely
  - a. on the economic group of natural pine habitats on sandy soils and on the economic group of natural floodplain habitats up to a size of 2 ha of bare felling without limitation of width,
  - b. on mountain slopes longer than 250 m that are not accessible to traffic, if they are not exposed economic groups, up to a size of 2 ha of bare felling.
- (3) The general regulations on administrative proceedings do not apply to the authorization of this exception.
- (4) In economic groups in exceptionally unfavorable habitats in protective forests, the use of screen fellings and selections is preferentially applied during the regeneration of stands.
- (5) It is forbidden to reduce the rooting of a plant group below seven tenths of full rooting by deliberate harvesting; this does not apply if the lightening is carried out for the benefit of the subsequent growth or for the purpose of strengthening the growth.

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- (6) During forest restoration, it is prohibited, regardless of the ownership boundary, to assign additional clear-cuts to unsecured young stands on the entire area, if the total area of unsecured stands exceeds the size and width specified in paragraph 2. The smallest permissible distance of clear-cuts from clearings and young stands on the entire unsecured area must not be less than the average height of the regenerated vegetation.
- (7) Clearing on forest land must be afforested within two years and forest stands secured on it within seven years of its creation; in justified cases, the state forest administration body may allow a longer period when approving the plan or when preparing the outline or at the request of the forest owner. The general regulations on administrative proceedings do not apply to the authorization of this longer period.
- (8) The Ministry shall determine the details of the definition of economic groups by legal regulation.


### **§ 32 Forest protection**

(1) The owner of the forest is obliged to take such measures to prevent and prevent the impact of harmful agents on the forest, in particular:

- a. to detect and record the occurrence and extent of harmful agents and the damage caused by them, important for the later proof of the measures taken; in case of increased occurrence, immediately inform the locally competent authority of the state forest administration and take the necessary measures;
- b. preventively prevent the development, spread and reproduction of harmful organisms;
- c. implement preventive measures against forest fires in accordance with special regulations.

(5) Forest owners, users of hunting grounds and state forest administration bodies are obliged to ensure that forest stands are not disproportionately damaged by animals.

(6) The owner of the forest is obliged to increase the resistance of the forest and its stability, in particular by appropriate species composition of woody plants and their distribution in the stand, pruning and thinning out in young stands, establishment of reinforcement belts at the edge and

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inside the forest stands, use of suitable methods and procedures of restoration and sequencing of fellings.

### 6.2.2. Risks


On 3 April 2020, the Ministry of Agriculture issued a new measure of a general nature extending the time limits for afforestation of calamity clearings and relaxing the rules for the transfer of planting material throughout the Czech Republic. This measure extends the territorial scope of some of the measures still in force to deal with the calamity situation in forests. From 2 April 2020, it is possible to extend the afforestation of calamitous groves throughout the country for 5 years and to secure them for 10 years. Given the continuing risk of calamities in the country's forests, it is possible that forest regeneration will be delayed in the future. At the same time, forest tree species may be used for planting without regard to the rules of transfer between natural forest areas and forest vegetation stages of the CR, which brings certain risks with regard to the future quality of the forest tree gene pool.

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### 6.3. Biodiversity

#### 6.3.1. Identification of applicable legislation


Until now, the Czech Republic complies with the Convention on Biological Diversity and the EU Biodiversity Strategy to 2020. National implementation is by means of the Nature Conservation Act and the National Biodiversity Strategy of the Czech Republic 2016-2025.

As the European Commission has adopted the new EU Biodiversity Strategy for 2030 and an associated Action Plan (annex), these new tasks need to be implemented in the Czech Republic. The main task of the updated Strategy was to create a basic conceptual framework based on existing legislation and existing instruments that will contribute to improving the overall status and sustainable use of biodiversity. This strategy brings the Pillar one with the aim to strictly protect at least a third of the EU's protected areas - representing 10% of the EU land and 10% of EU sea - including all remaining primary and old-growth forests as well as other carbon rich ecosystems, such as peatlands, grasslands, wetlands, mangroves and seagrass meadows as they store significant carbon stocks.

The Biodiversity Strategy calls on Member States to increase forest quantity, quality and resilience against fires, droughts, pests, diseases and other threats likely to increase with climate change. In 2021, the Commission has published a new EU Forest Strategy and a roadmap for planting at least 3 billion additional trees across the EU by 2030, in full respect of ecological principles. Afforestation, reforestation and tree planting to support biodiversity and ecosystem restoration will also be promoted through the CAP Strategic Plans, and the Cohesion Policy funds. The share of forest areas covered by management plans should also be increased to cover all managed public forests and an increased number of private forests, giving special attention to promoting biodiversity-friendly practices such as closer-to-nature-forestry.

EU Forestry Strategy 2030 calls for better Forest restoration and management as to:

- plant at least 3 billion trees by 2030, maintaining the principle of "right tree in the right place for the right purpose" - planting will have clearly defined criteria and a tree monitoring website (MapMyTree) will be launched;
- strengthen the adaptability of forests and their natural ability to regenerate, i.e. support species and age diversity of the forest (instead of vulnerable contemporaneous

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monocultures), leave a sufficient amount of dead wood in the forest, regulate game conditions and the spread of wild species, create protected areas excluded from production;


- create a legally binding instrument for ecosystem restoration as part of the implementation of the EU's Biodiversity Strategy to 2030 - it will mainly cover ecosystems with the greatest potential for carbon storage and preventing the impact of natural disasters. The European Commission is also counting on investments in this area.

Czech Republic protects the genetic resources of Czech nature. In a situation where many species are rapidly dying out, the climate is changing and yields from traditional crops are declining, steps must be taken to ensure the genetic diversity of the natural environment. As well as protecting biodiversity itself, one of the ways to do this is to preserve plant and animal genetic resources. Here, the Czech Republic has a long-standing tradition. The amount of plant genetic resources in gene banks has been increasing for some time and consisted of 55,000 samples as of 2019. 62,000 animal samples for reproduction have also been preserved. Traditional breeds are also preserved under in vivo conditions by more than 1,000 farms and breeders, with support from the national resource conservation programme.

Rescue and care programs are being implemented to ensure or improve the protection of selected specially protected species of plants and animals, yet the main problem in terms of biodiversity loss is the disturbance of habitats and the related declining status of common species.

The foundation of nature protection in the Czech Republic consists of a system of specially protected areas together with the Natura 2000 system, while efforts to use the landscape as a whole and outside these areas more considerably are no less important. The Czech Republic is therefore devoting attention to the preservation of ecosystem relationships and landscape functions (e.g. migration permeability, which is threatened by increasing landscape fragmentation, and the promotion of the landscape's natural retention capacity).

The Czech Republic's voluntary commitment at the 2019 SDG summit is the aim of planting new trees and caring for them. The Czech Republic has committed to planting 10 million trees by 2025 in addition to its regular reforestation to help reduce the carbon footprint and adapt settlements to climate change.

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The protection of biodiversity is also covered by Act No. 114/1992 Coll., on the Protection of Nature and Landscape. The purpose of the Act is, among other things, to contribute to the protection of the diversity of life forms. In addition, Act No 100/2004 Coll., on the protection of species of wild fauna and flora by regulating trade in them and other measures to protect these species and amending certain acts (Act on Trade in Endangered Species), as amended.

On June 26, 2014, the Ministry of Agriculture, in cooperation with the Ministry of the Environment, announced the first National Program for the Protection and Reproduction of the Gene Pool of Forest Trees for the period 2014-2018 (hereinafter referred to as the "National Program"). From 1 January 2019, it is followed by the National Program for the period 2019–2027. The national program ensures the protection and reproduction of genetic resources of forest trees in accordance with legal regulations, international conventions and agreements and national strategies of the Czech Republic.

The national program regulates the conditions and procedures for the protection and reproduction of genetic resources of forest trees native to the territory of the Czech Republic and completes the legal and organizational framework necessary to ensure the effective and permanent use of genetic resources of forest trees in accordance with the needs of forestry and the principles of sustainable forest management.

Based on § 2j of Act No. 149/2003 Coll., in accordance with the National Program for the period 2019–2027 announced on 1 January 2019, the Ministry of Agriculture issues the document Principles for the provision of subsidies for the protection and reproduction of the gene pool of forest trees for the period 2019 - 2027, which set out the rules for providing and drawing financial support for the maintenance and use of genetic resources of forest trees from national public sources for individual participants of the National Program.


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### 6.3.3. Description of enforcement and monitoring


#### 6.3.3.1. Risks

Biodiversity protection in the Czech Republic is still insufficiently effective. Compared to the main objective (not to deteriorate), the overall state of biodiversity continues to deteriorate and only in some cases is it improving. Biodiversity care is a multidisciplinary activity, with intensive farming and inappropriate use of natural resources having the greatest impact on biodiversity. This trend is similar in neighbouring countries.

The main causes determining the current state of biodiversity are again the increasing intensification of agricultural production and the development of settlement and transport infrastructure. This has led to irreversible changes in the natural environment, i.e. disturbance of its balance, particularly as a result of homogenisation and fragmentation of the landscape, contamination by foreign substances and the conversion of originally natural areas into built-up areas or areas under intensive agricultural cultivation. This not only leads to a loss of biodiversity, but also to a directly related deterioration in the functioning of ecosystems and ecosystem services. Unfortunately, piecemeal improvements in selected environmental components cannot/cannot yet reverse the overall trend. The fundamental key to improving the situation is the involvement of all those whose activities affect biodiversity. A prerequisite for achieving the Strategy and its sub-objectives is therefore a shared responsibility for its implementation accepted across all sectors.

Forest ecosystems are important landscape features and also carriers of biodiversity. Not only the forest environment, formed by characteristic forest stands, but also individual trees (e.g. as species habitats) and standing timber left to decompose gradually are important for biodiversity. The forest as a multifaceted provider of ecosystem services is protected by legislation from damage and destruction. Its effective protection and appropriate restoration remain one of the basic prerequisites for biodiversity conservation. The most important documents for achieving the objective are the National Forestry Programme (NFP), which combines the concept of sustainable forest management with the need to improve the long-term competitiveness of forestry. The measures proposed in the NLP, which were agreed in expert discussions across all




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sectors involved, are still relevant and valid. Another document is the SPOPK (2009) setting out the fundamental frameworks for the use, management and protection of forest ecosystems in protected areas and open countryside. Another important document is the National Programme for the Conservation and Reproduction of the Forest Tree Gene Pool. In the long term, the adoption of the Resolution on General Principles for the Sustainable Conservation of European Forest Biodiversity at the Helsinki Conference in 1993 was crucial. Indicators of forest biodiversity, monitoring and evaluation of forest biodiversity in European countries were proposed. The Czech Republic is a party to the CBD, under which a number of specific tools and methodologies have been developed, and in the current Strategic Plan, the issues of biodiversity conservation in forest ecosystems are addressed in Aichi Targets 5 and 7. Caring for the biodiversity of forest ecosystems has also become part of the EU Biodiversity Strategy for 2020.

In both cases, the aim is to develop nature-oriented forest management in these areas with a preference for natural regeneration of genetically and otherwise valuable stands and approaching the potential natural forest species composition corresponding to the habitats. There is also great potential in common farm forests, where, in addition to improving the species composition of the forest, the presence of a minimum proportion of dead and overgrown trees, whose importance for biodiversity conservation is crucial, should be preserved in the long term. From the point of view of biodiversity, relics of original stands managed in the past are traditional forms of low and medium forest. Restoration or appropriate replacement of these practices can make an important contribution to the conservation of a range of species in certain habitats.

Changes in forest communities and populations - it can be expected that the numerical increase in abiotic pressures and their increasing intensity over time on habitat conditions will cause unpredictable changes in species composition, population density and forest community structure, especially in forests of lower forest vegetation stages. Significant species community changes can also be expected in naturally extreme habitats. The loss of biodiversity at different levels - species, gene and ecosystem - in the area of forest tree species in the Czech Republic is not a loss of species, but a loss of gene and ecosystem diversity in forests. Forest owners have no incentive to protect valuable ecotypes and populations of forest tree species, they do not preferentially use material from the same natural forest area, but due to its scarcity they use more available reproductive material, the use of which is allowed by the rules of transfer given by the current legislation. Impact of invasive species on forest ecosystems - so far, invasive tree

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species are only causing local or regional problems for biodiversity. A more significant impact on habitat native species can be observed for non-woody invasive species. However, with increasing changes in the conditions of a number of natural habitats, the spread of invasive species can be expected to cause behavioural changes in native species, which will be better suited to the changing habitat conditions and vacant habitats. The effects of climate change There is an increasing number of cases of extreme climatic events (prolonged droughts and increasing heat, extreme rainfall, flash floods, wind storms, etc.) which either directly cause visible damage or destruction to the affected forest stands or have an indirect adverse effect on forest ecosystems.

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### 6.3.4. Evaluate the effectiveness of the legal framework for biodiversity

Sufficient quality data on the state of nature and landscape is a prerequisite for the effective work of public administration, which influences the protection of nature and landscape in its decision-making. However, the existing financial resources for condition monitoring currently only cover the needs for habitat mapping, palaeontological sites, caves and basic monitoring of species of European importance. In the current situation, it is difficult to implement a monitoring system for other components of biodiversity or to extend data collection beyond protected areas, where most of the focus is currently directed. This data collection can be based on biodiversity indicators - systematic (transect) monitoring of birds or butterflies (or other groups - pollinators), which are effective indicators of the state of nature as a whole. At the same time, there are not enough nationwide data that would cover the whole country in a representative manner and that

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would be systematically collected to assess changes in the state of the landscape. These data are important for assessing the state of the landscape at the level of the Environmental Report, State Environmental Policy, etc. Grant programmes at national or EU level and EEA/Norway financial mechanisms are important sources of funding for monitoring, but stable funding is a prerequisite for regular monitoring, which project funding cannot guarantee.

**Act No 289/1995 Coll., on Forests and on Amendments to Certain Acts (Forest Act), as amended.**


The forest act is a comprehensive legislation that regulates fundamental forest related activities with the objective to „ensure maintenance of forest resources, protection of forests and its regeneration as national wealth that creates a irreplaceable part of the environment, fulfilment of all its functions and sustainable forest management.

The specific requirements relating to biodiversity relate to:

- a) Conservation of forest trees genetic diversity (in-situ);
- b) Categorisation of forests with protective and special purpose forests (also covering forests with specific biodiversity values and including natural habitats) and requires forest management to fulfil protective and special functions of those areas (Art 36(1));
- c) Defines minimum percentage of „melioration and forest enhancement species - MES“ in forest regeneration as a compulsory indicator of forest management plans (Art 24(1)). The MES species and their share in forest regeneration is defined in the Regional Plans of Forest Development specifically for each „natural forest area“ and individual forest types;
- d) Requires to regenerate forests with site suitable tree species and promotes use of natural regeneration (Art 24(1));
- e) Requires enhancement of forest resilience and stability, in particular by suitable tree species composition and their horizontal structure within forest stands (Art 32(4));
- f) Requires to leave sufficient volume of forest harvest residues and a number of trees and their parts to remain in forest stands and decay (Art 33(3)).

**§ 31 Restoration and education of forest stands (Act No 289/1995 Coll)**


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- (1) The forest owner shall be obliged to renew forest stands with habitat-appropriate tree species and to nurture them in a timely and systematic manner so as to improve their condition, increase their resilience and improve the performance of forest functions. In appropriate conditions, it is desirable to use natural regeneration; natural regeneration may not be used in genetically unsuitable stands.
- (2) In the case of deliberate clearfelling, the size of the clearcut shall not exceed 1 ha and its width shall not exceed one times the average height of the harvested stand on exposed stands and twice the average height of the harvested stand on other sites. The width of the bare cut is not limited when clearing crop residues and stands of less than 1 ha. In justified cases, the State forestry authority may, when approving the plan or drawing up the outline, or at the request of the forest owner, grant an exception to the size or width of the clear-cutting, as follows
  - a. in the management unit of natural pine habitats on sandy soils and in the management unit of natural floodplain habitats, up to 2 ha of clear felling without limitation on the width;
  - b. on mountain slopes inaccessible by transport and longer than 250 m, unless they are exposed farm complexes, up to 2 ha of clear felling.

The authorisation of this exemption is not subject to the general rules on administrative procedures.

- (3) The use of screen cuts and selections is preferred in reforestation in management units on extremely unfavourable habitats in protection forests.
- (4) It shall be prohibited to reduce the stocking rate of a stand group below seven tenths of the full stocking rate by deliberate harvesting; this shall not apply if the thinning is carried out for the benefit of a successor stand or for the purpose of strengthening the stand.
- (5) In reforestation, it is prohibited, irrespective of the ownership boundary, to assign additional clear-cutting to young stands that are not secured over the entire area, if the total area of the unsecured stands would exceed the size and width specified in paragraph 2. The minimum permissible distance between the bare cut and the groves and young stands in the whole area of the unrestored area shall not be less than the average height of the restored stand.
- (6) Hollows on forest land shall be reforested within two years and the forest stands on them secured within seven years of their creation; in justified cases, the State forest administration authority may, when approving the plan or drawing up the outline or at the request of the


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forest owner, allow a longer period. The general rules on administrative proceedings shall not apply to the granting of such a longer period.

- (7) The Ministry shall determine by legal regulation the details of the delimitation of management files.

**The environmental legislation, in particular the Act No. 114 / 1992 on nature and landscape conservation is enforced and monitored by the following state administration bodies:**

- I. **Municipalities with extended competencies:** damages to “significant landscape elements”, excessive damages to plants and animals and their habitats; define and evaluate ecological system of ecological stability;
- II. **Regional authorities:**
  - a. proclaim, monitor and ensure care of natural parks, natural reserves natural monuments and prepare “care plans” for those areas;
  - b. monitor and ensure care of Natura 2000 areas;
  - c. provide “binding opinion” for approval of forest management plans and guidelines;
  - d. monitor and enforce requirements relating to protected and endangered species and invasive species.
- III. **Nature conservation agency / National Parks administration**
  - e. monitor and ensure care of national parks, Landscape protected areas, national nature reserves and national natural monuments, and prepare “care plans” for those areas;
  - f. provide “binding opinion” for approval of forest management plans and guidelines;
  - g. monitor and enforce requirements relating to protected and endangered species and invasive species.

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IV. **Ministry of Environment** is the supreme body of the environment and nature protection, supervises the lower-level state conservation authorities and provides appeal mechanism for their decisions.

V. **Czech Environmental Inspection** controls both the state bodies as well as private natural and legal persons concerning the compliance with the environmental legislation.

Sustainable use of natural resources, including the protection and sustainable use of biodiversity and ecosystems, is a priority of the ODA. However, the trend cannot yet be evaluated as we have only been following the data for a relatively short time, there are year-on-year fluctuations, and the target on which its growth or decline could be predicted is not set at national level.


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## 6.4. Soil quality management


### 6.4.1. Identification of applicable legislation

The use of biomass for energy purposes is a traditional and growing field of economic activity in the Czech Republic over the last 20 years.

In the case of FSC certification, it is possible to take logging residues only on defined sets of forest types, which make up about 35% of the forest land in the Czech Republic. PEFC certification limits the taking of logging residues to locations where habitat conditions allow it and evaluates the indicator of leaving part of the biomass after educational and logging interventions.

In the forestry sector, the use of logging residues for energy purposes is a debated topic. As mentioned above, in 2017, woodchips (and similar materials obtained outside of PUPFL) accounted for 1.3% of gross electricity production. Other forest and wood products are cellulosic leachates with a share of 0.81% and pellets and briquettes with a share of 0.32%. Unlike biomass from RDF, the use of logging residues in the energy sector currently has a huge but localised potential, mainly due to the bark beetle calamity. However, without financial support for their use for energy purposes, it is unlikely that their processing will increase significantly. Although between 2015 and 2017 there was an increase in total extraction of 3.2 million m<sup>3</sup>, the increase in the use of logging residues according to the CSO's qualified estimate was only 0.1 million m<sup>3</sup>. The theoretical potential of unused logging residues is shown by the results of NIL2, where for the period 2011-2015 the volume of lying dead wood in economic forests was found to be 13.3 million m<sup>3</sup> (lower limit 12.5 million m<sup>3</sup> and upper limit 14 million m<sup>3</sup>). For their potential use, the terrain and habitat conditions and the requirements of the different certification schemes need to be taken into account. In the case of FSC certification, harvesting residues can only be taken from defined sets of forest types, which account for about 35 % of the forest cover in the Czech Republic. PEFC certification limits harvesting residues to sites where habitat conditions allow it and evaluates an indicator of retention of part of the biomass after educational and harvesting interventions.

Forest biomass cannot be harvested anywhere. The decisive criteria for selecting suitable sites are primarily natural conditions (fertility, terrain configuration) and economics. For the assessment of the suitability of forest land from the ecological point of view, the Typological System of the Institute of Forestry, 1971 was chosen and Decree No 83 of the Ministry of

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Agriculture of 19 April 1996 on the preparation of regional forest development plans and on the definition of management files was applied. Unsuitable ecological series: extreme, exposed, (enriched, charred), waterlogged, peat. Suitable edaphic categories, edaphic series and forest type groups with forest stands that are not also significantly dependent on the retention of residual matter: - Edaphic series nutritious - category: medium-rich - S (lush); normal - B (rich); rich loose - H (loamy) - Edaphic series acidic - category: normal - K (acidic); loose - I (ilimerised). In terms of forest vegetation stages (LVS), conditions are more favourable in the lower and middle altitudes, in the oak to hemlock stage (LVS 1. - 5.). In the higher grades, in view of the ecological, climatic and terrain conditions, use is not recommended.


In relation to development cooperation, the Czech Republic focused on the reclamation of degraded soils, improvements in forestry planning, and the renewal of local tree ecotypes. Humanitarian aid in the Czech Republic focuses on measures to mitigate the negative impacts of climate change, and to enhance resilience and prevention

#### **6.4.2. Risks and benefits of removing biomass from forest ecosystems**

Residual matter from logging is an important component for humus formation and is a critical source of organic matter and nutrients for maintaining ecosystem stability. Most of the nutrients are in leaves and needles, with somewhat less in branches and bark. Wood (hickory and thick branches) provides the least nutrients. In order not to disturb the formation of sufficient humus and the nutrient cycle, it is not possible to remove residual matter in protective forests, on sites with dry, poor and acidic soil, on steep rocky slopes, on sites threatened by erosion, peat. The use of logging residues should be concentrated mainly on economic forests (according to the Forest Act No 289/1995 Coll.). The collection of energy forest biomass should be seen as an additional effect to the harvesting of hogwood.

On the basis of the restrictive conditions according to the current forestry legislation, forest harvesting residues (FSR) are available in the amount of 813 thousand m<sup>3</sup> /year according to the ÚHÚL project (2009). If we extend the constraints with an ecosystem view based on a set of forest types and target management, the available quantity of LTZ is reduced to 613 thousand m<sup>3</sup> /year. The restrictions resulting from the risk analysis and the requirements of the nature conservation authorities will reduce the resulting available quantity of potentially exploitable LTZ to 504 thousand m<sup>3</sup> /year.




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Looking more closely at the stands, the biomass balance, which includes biomass flows used in harvesting and returning to the cycle when left in the stands, would look like this:

- the average amount of biomass from logging residues in stands is approximately 9 m<sup>3</sup>/ha;
- in relation to the variant, an average of 7 m<sup>3</sup> of biomass is used per hectare of plantations, leaving 2 m<sup>3</sup>/ha on the areas;
- within the biomass balance, the important factor is the carbon flux, the amount of carbon deposited in the biomass and the amount of atmospheric CO<sub>2</sub> sequestered; the average amount of carbon stored is 2.5 t/ha, but in clearings it can be up to 5.8 t/ha; on average 0.3 to 4.7 t C/ha would leave the stands and the amount of carbon remaining in the areas is approximately 0.5 t/ha;
- the mean volume of bound CO<sub>2</sub> is 9 t/ha, but clear-cut mature stands have nearly 21 t/ha bound. The equivalent of about 7 t/ha of bound CO<sub>2</sub> leaves the stand with the harvested timber, and the average volume of bound CO<sub>2</sub> that remains on sites is 2 t/ha or more;
- this implies that with reasonable use of logging residues in the economic forests during the harvesting of humpback whales, a certain amount of material would remain on these sites to decompose.

Stumps and roots are obtained by grubbing the underground parts of trees. This is only common in some forms of forestry in pine and floodplain forests. To a lesser extent, stump clearance is used in deforestation of areas for water reservoirs, roads and buildings, or in full-scale land preparation prior to afforestation. Stump clearance is tolerated only in exceptional cases and this restriction should be enshrined in legislation. It is estimated that up to 1000 ha of stumps are felled annually in the Czech Republic, which, with a stumpage stock of about 50 m<sup>3</sup>/ha, represents an annual source of about 50 000 m<sup>3</sup> of stumpage. However, commercial interest in this material is virtually non-existent. This is because the material is of non-standard dimensions - difficult to transport. It also contains a large proportion of mechanical impurities - soil and stones. Therefore, it is not possible to use conventional mowers to disintegrate the stumps, but only shredders or pulpers can be used. The resulting product is then grit or ground material, which behaves differently than woodchips when burnt, because it is harder for air to pass through such a fraction.

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Cultivation of intensive forest crops on forest land Cultivation of intensive forest crops (on forest land) is only possible in accordance with the Forestry Act, so it must only be an economic forest. The cultivation of clones or very short-lived trees is not allowed here. For these purposes, the land of the floodplain habitats of CHS 19 and partly of the alder wetland habitats of CHS 29 can be used advantageously. Suitable are also alder habitats on waterlogged soils of willow alders - SLT 1G.

### 6.4.3. Sources

Soušek Z. et al. Utilization and cultivation of forest tree biomass for further processing and energy purposes, Úhúl, 2020

Czech Statistical Office. [online]. [cit. 2021-01-15]. [Available from: https://www.czso.cz/](https://www.czso.cz/)

Forest Stewardship Council (FSC). [online]. [cit. 2021-01-15]. [Available from: https://fsc.org/en](https://fsc.org/en)

Programme for the Endorsement of Forest Certification (PEFC) [online]. [cited 2021-01-15]. [Available from: https://www.pefc.org/](https://www.pefc.org/)

Institute of Forest Management (IFLM). [online]. [cit. 2021-01-15]. [Available from: http://www.uhul.cz/](http://www.uhul.cz/)

Decree of the Ministry of Agriculture No. 83/1996 Coll., on the preparation of regional forest development plans and on the definition of management files

Act No. 289/1995 Coll. , on forests and on amending and supplementing certain acts

Act 334/1992, Coll. on the protection of the agricultural land fund


Act No. 156/1998, Coll., on fertilisers

Act No. 326/2004 Coll., on plant health care

### 6.4.4. Description of enforcement and monitoring

The Ministry of the Environment is the central authority for the protection of the agricultural land fund. Soil quantity protection and soil erosion protection are dealt with by municipal authorities of municipalities with extended competence. In the territory of national parks, the authority responsible for the protection of the agricultural soil fund is the national park

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administration, and in the territory of military districts, the district authorities. General protection of soil quality is also dealt with by the Czech Environmental Inspectorate.

Current surveys of forest soils in the Czech Republic are mainly carried out by three departmental institutions within the framework of various programs and projects: Research Institute of Forest Management and Hunting - international forest health monitoring ICP Forests; Institute for Forest Management – typological survey and national forest inventory; Central Agricultural Inspection and Testing Institute - survey of forest nutrition in immission areas.

Ameliorative and strengthening trees prevent the gradual degradation of forest soils, contribute to improving the water regime of forest soils, help to strengthen the forest stand skeleton and thus increase resistance to weather conditions and reduce the susceptibility of stands to calamities caused by pests.

There are a total of 6 884 619 ha of hunting land in the Czech Republic. Of this, 56.7 % is agricultural land, 37.6 % forest land, 1.4 % water area and 4.3 % other land.

#### **6.4.4.1. Sources**

Act No. 289/1995 Coll., on forests and on amendment and supplementation of certain acts


Act 334/1992, Coll. on the protection of the agricultural land fund

Act No. 156/1998, Coll., on fertilisers

Act No. 326/2004 Coll., on plant health care

Research Institute of Forest Management and Hunting, v. v. i. Czech Republic (VÚLHMN). V. Šrámek, V. Fadrhonsová, K. Neudertová Hellebrandová, R. Novotný (2021). Recommended methods of management of logging residues in forest plants with a significant production function from the point of view of the sustainability of the main nutrient balance. Certified methodology. ISBN 978-80-7417-218-2

Ministry of Agriculture. Report on the state of forest and forestry in the Czech Republic in 2020 [online]. [cit. 2021-12-15]. Available from: <https://eagri.cz/public/web/mze/>

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## 6.5. Areas designated by international or national law for nature protection purposes


### 6.5.1. Identification of applicable legislation

The system of care for specially protected areas of the Czech Republic, i.e. areas of natural or aesthetic importance or unique, is based on Act No. 114/1992 Coll., on Nature and Landscape Protection, as amended (hereinafter referred to as the Act), which sets out in detail the conditions for the protection of these areas according to their categories. According to Section 14 of the Act, specially protected areas in the Czech Republic are divided into 6 categories. The large-scale specially protected areas include national parks (NP) and protected landscape areas (PPA). The small-area specially protected areas include national nature reserves (NPR), nature reserves (PR), national nature monuments (NMP) and natural monuments (NP). The total area of large-area specially protected areas currently amounts to 1 254,8 thousand ha, which represents 15,8 % of the area of the Czech Republic.

Natural forests occupy an area of 29.1 thousand ha, which represents only 1.1% of the area of all forests in the Czech Republic. The objectives and principles of care for forest and non-forest ecosystems in the relevant categories of specially protected areas are detailed in the management plans for these areas, or in the principles of care for national parks. These documents for national parks, protected landscape areas, national nature reserves and national natural monuments are drawn up and approved by the Ministry of the Environment. There are four national parks in the Czech Republic, whose territories are characterised by their completely different natural conditions. A significant part of the territory of the national parks of the Czech Republic is occupied by forests (83,5 %). Forests in the territory of the national parks are in the vast majority of cases classified as special purpose forests under Section 8(1)(c) of Act No 289/1995 Coll., on forests, as amended. The objectives and methods of management must be in line with the above-mentioned long-term objective of NP protection, i.e. allowing the spontaneous development of forest ecosystems, their gradual reconstruction with the aim of achieving the natural state of ecosystems and specific care for biodiversity.

Forest management plans prepared for national parks or their territorial parts take into account the objectives and conditions for the protection of the area in the form of specific measures set for individual forest stands. Due to their specific mission, forests in national parks have been progressively covered by forest management plans since 2003 as part of regular renewals, on the basis of the management methodology for structurally rich forests, which has been developed under the expert guarantee of the Ministry of the Environment since 1999.

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The methodology for describing structurally rich forests uses the 'forest development type' as the basic unit for determining the forest status and planning, the lower units being 'stand type' and 'stand type segment'. The amendment to Act No. 114/1992 Coll. on Nature and Landscape Protection, effective from 1 June 2017, stipulated that forests classified in the natural zone are not included in the calculation of the binding provisions of the LHP and no harvesting or educational and cultivation measures are placed in them; in forests of the nature zone, the maximum total amount of harvesting is determined as the sum of harvesting placed in individual stands.


#### **6.5.1.1. Sources**

Act No. 114/1992 Coll., on Nature and Landscape Protection

#### **6.5.2. Description of enforcement and monitoring**

The system of care for specially protected areas of the Czech Republic, i.e. areas of natural or aesthetic importance or unique, is based on Act No. 114/1992 Coll., on Nature and Landscape Protection, as amended (hereinafter referred to as the Act), which sets out in detail the conditions for the protection of these areas according to their categories. According to Section 14 of the Act, specially protected areas in the Czech Republic are divided into 6 categories. The large-scale specially protected areas include national parks (NP) and protected landscape areas (PPA). The small-area specially protected areas include national nature reserves (NPR), nature reserves (PR), national nature monuments (NMP) and natural monuments (NP).

The total area of large-scale specially protected areas currently amounts to 1 254.8 thousand ha, which represents 15.8% of the area of the Czech Republic. Forest ecosystems occupy the majority of the area of specially protected areas and are an extremely valuable part of them. Natural forests occupy an area of 29.1 thousand ha, which represents only 1.1% of the area of all forests in the Czech Republic. The objectives and principles of care for forest and non-forest ecosystems in the respective categories of specially protected areas are detailed in the management plans for these areas, or in the principles of care for national parks. These documents for national parks, protected landscape areas, national nature reserves and national natural monuments are drawn up and approved by the Ministry of the Environment.


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### 6.5.2.1. Sources

Ministry of Agriculture. Report on the state of forest and forestry in the Czech Republic in 2021

Act No. 114/1992 Coll., on Nature and Landscape Protection

Act No. 289/1995 Coll., on Forests and on Amendments to Certain Acts (Forest Act)

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## 6.6. Maintenance of long-term production capacity of forests

### 6.6.1. Identification of applicable legislation


The long-term productivity of forests is regulated by the **Forest Act** (No. 289/1995 Coll.), every forest owner is obliged to take proper care of the forest and to continuously regenerate forests with site suitable species to improve the state of forests, enhance their resilience and fulfilment of forest functions (Article 31(1)).

#### **Requirements of the Forest Act relating to harvesting level:**

- a) A maximum total harvest level shall be defined by the forest management plan and is mandatory. Forest management plan is mandatory for organisations managing state forests and for other forest owners above 50 ha (Art 24 (2, 4)).
- b) For forest owners smaller than 50 ha, a maximum total harvest level is defined by the forest management guidelines (Art 25 (3)). The maximum harvest level is than obligatory for the forest owner that formally accepts the forest management guidelines.
- c) A salvage harvest shall be included in the total maximum harvest. Where the harvest level exceeds the total maximum harvest given by the forest management plan (for example due to a salvage harvest), the forest management plan or guidelines shall be amended and approved by the state forest administration body (Art 33 (1)).
- d) Forest owner smaller than 50 ha managing forests without a forest management plan or forest management guidelines can only conduct harvest with the permission of a professional forest manager. Where the harvest exceeds 3 m<sup>3</sup> / ha in a calendar year, a permission from the state forest administration body shall be applied for (Art 33 (4)).
- e) It is not allowed to conduct final felling in stands younger than 80 years (20 years in case of a coppice forests). It is not allowed to decrease a stand density to 70 % of a full density, except where it is in favour of a next young stand or improving stability of the forest stand (Art 31 (4)).

#### **Requirements of the Forest Act relating to forest regeneration:**

- a) The owner of the forest is obliged to restore the forest stands with trees suitable for the habitat and nurture them in a timely and consistent manner in order to improve their

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condition, increase their resistance and improve the performance of the functions of the forest. In suitable conditions, it is desirable to use natural regeneration; natural regeneration cannot be used in genetically unsuitable stands (Art 31 (1)).

- b) Any clearcut area shall be regenerated within 2 years from the harvest and the successful regeneration (the young stand has sufficient tree species composition; quantity of trees and trees do not need further protection against biotic and abiotic factors) shall be achieved within 7 years of the harvest (Article 31(7)).
- c) During forest regeneration, it is prohibited, regardless of the ownership boundary, to assign additional clear-cuts to unsecured young stands on the entire area, if the total area of unsecured stands exceeds the size and width specified in paragraph 2. The smallest permissible distance of clear-cuts from clearings and young stands on the entire unsecured area must not be less than the average height of the regenerated stand (Article 31(7)).
- d) Forest regeneration shall also comply with the minimum percentage of “melioration and forest enhancement species” that are defined specifically for each forest type and category of forests (the percentage and species are defined in the Regional plans of forest development), (Article 24(1)).

Forest owner shall keep forest management records on conducted harvest and forest regeneration activities (Art 40 (1)) and submit summary data to the state administration body (Article 40 (2)).

#### **6.6.1.1. Sources**

Act No. 289/1995 on forests and on amendments to certain acts (Forest Act)


Act No. 314/2019 Coll., amending Act No. 289/1995 Coll., on Forests and on Amendments and Additions to Certain Acts (Forest Act), as amended, and other related acts

#### **6.6.2. Description of enforcement and monitoring**

Forest management plans are prepared under the Forest Act for 10 years and must be prepared by forest owners with an area of 50 ha to 20 000 ha, and may be prepared by forest owners with an area of less than 50 ha for a period of 10 years. According to the Forestry Act, the locally competent district manager of the Forests of the Czech Republic (state enterprise) performs the activities of a professional forest manager free of charge even for owners of forests with an area

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of up to 50 ha who do not choose their own professional forest manager. Owners of larger non-state forests must arrange this activity themselves with a qualified person.

The forest management plans include maximum harvesting levels, minimum proportions of ameliorative and reinforcing trees if reforestation is carried out. In the event of changes to the conditions, for example, in terms of changes to the provision of forest functions, it is necessary to apply to the authorising body of the State Forest Administration for an amendment to the relevant binding provision.


If conditions change during the validity of the Forest Management Plan or the plan, which cause a change in forest protection or forest functions, the forest owner is obliged to apply to the approving authority of the state forest administration for a change in the relevant binding provision.

A fine of up to CZK 1 000 000 may be imposed if the following conditions are not met:

- 1) the forest owner harvests more timber than approved in the forest management plan or forest management plan;
- 2) the forest owner carries out harvesting that exceeds 3 m<sup>3</sup> per 1 ha of forest per calendar year;
- 3) the owner of the forest carries out logging that is contrary to Act No. 289/1995 Coll;
- 4) a forest owner conducts clear-cutting without a permit in a stand that is less than 80 years old.

#### **6.6.2.1. Sources**

Act No. 289/1995 on forests and on amendments to certain acts (Forest Act). Decree of the Ministry of Agriculture of the Czech Republic No. 84/1996 Coll., on forest management planning

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## 6.7. Guarantee of carbon sequestration parity

Ratification of the Paris Agreement? Yes

Submitted by relevant NDCs? Yes

All Member States have already given assurances in Regulation (EU) 2018/841 on the inclusion of greenhouse gas emissions and removals due to land use, land-use change and forestry in the EU framework. Each Member State for the period 2021-2025 and 2026-2030 shall ensure that emissions do not exceed removals, the relevant calculation being the sum of total emissions and total removals in its territory in all land use accounting categories combined, accounted for in accordance with this Regulation.

### 6.7.1. Sources

Paris Agreement. [online]. [cited 2021-01-15]. Available from: [https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=XXVII-7-d&chapter=27&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en)

The new Distributin Capability (NDC) [online]. [cited 2021-01-15]. Available from:

<https://www4.unfccc.int/sites/NDCStaging/pages/Party.aspx?party=CZE&prototype=1>


### 6.7.2. Identification of applicable legislation

Commission Implementing Regulation (EU) 2018/2066 of 19 December 2018 on the monitoring and reporting of greenhouse gas emissions pursuant to Directive 2003/87/EC of the European Parliament and of the Council and amending Commission Regulation (EU) No 601/2012.

Regulation (EU) 2018/841 of the European Parliament and of the Council of 30 May 2018 on the inclusion of greenhouse gas emissions and removals resulting from land use, land-use change and forestry in the 2030 climate and energy policy framework and amending Regulation (EU) No 525/2013 and Decision No 529/2013/EU.

Regulation (EU) 2018/842 of the European Parliament and of the Council of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet their commitments under the Paris Agreement and amending Regulation (EU) No 525/2013.

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Regulation (EU) No 525/2013 of the European Parliament and of the Council of 21 May 2013 on a mechanism for monitoring and reporting greenhouse gas emissions and for reporting other information at Member State and Union level relating to climate change and repealing Decision No 280/2004/EC.

### 6.7.2.1. Sources

Official Journal of the European Union L 165/80. [online]. [cited 2021-01-15]. Available from: <https://eur-lex.europa.eu/legal-content/CS/TXT/PDF/?uri=CELEX:32018R2066&from=EN>

### 6.7.3. Description of enforcement and monitoring

The second step of the emissions inventory is the actual quantification of GHG emissions and sinks. These are mainly carbon dioxide (CO<sub>2</sub>) that is released or sequestered in ecosystems or in individual carbon sinks. For UNFCCC reporting, these pools are biomass, dead organic matter and soil, while reporting for LULUCF activities under the Kyoto Protocol requires information on changes in five carbon pools (above and below ground biomass, standing wood, fallout, soil). For the second review period of the Kyoto Protocol (2013-2020), a decision has been taken whereby the carbon stock sequestered in wood products is now also reported.

In addition to (CO<sub>2</sub>) emissions and sinks due to carbon stock changes, other GHGs quantified in the LULUCF sector are methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O). These are produced, for example, from biomass burning or as a result of fertilization and drainage of waterlogged soils.


#### 6.7.3.1. Sources

Ministry of Agriculture. Report on the state of forest and forestry in the Czech Republic in 2020 [online]. [cit. 2021-12-15]

### 6.7.4. Assess the effectiveness of the legal framework for ensuring carbon sequestration parity

The Czech Republic signed the Paris Agreement on 22 April 2016. It was ratified and a "nationally determined contribution" to the NDC was submitted on 5 October 2017. Documentation and reporting to the European Commission is annual. The Czech Republic became a party to the Paris Agreement on November 4, 2017 and after 2020, the agreement replaced the previously applicable Kyoto Protocol.

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#### 6.7.4.1. Sources

United Nations (ED.) (2020): United Nations Treaty Collection. [online]. Available from:

[https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=XXVII-7-d&chapter=27&clang=\\_en](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en)

The new Distributin Capability (NDC) Registr. [online].


Available from: <https://www4.unfccc.int/sites/NDCStaging/pages/Party.aspx?party=CZE&prototype=1>

Paris Agreement. [online]. Available from: [https://www.mzp.cz/cz/parizska\\_dohoda](https://www.mzp.cz/cz/parizska_dohoda)

#### 6.8. Summary

No	Criterion	Findings	Score [0/1] <sup>1</sup>	Remarks
1.	The legality of harvesting operations	Yes, this criterion is met	1	
2.	Forest regeneration of harvested areas	Yes, this criterion is met	1	
3.	Biodiversity	Yes, this criterion is met	1	
4.	Soil quality management	Yes, this criterion is met	1	
5.	Areas designated by international or national law for nature protection purposes	Yes, this criterion is met	1	
6.	Maintenance of long-term production capacity of forests	Yes, this criterion is met	1	
7.	Guarantee of carbon sequestration parity	Yes, this criterion is met	1	

<sup>1</sup> Please place “1” if the criterion is met or “0” if does not.

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## 7. Public consultation

Company name	Remarks	Authors' comments	Approved Yes/No
Association for District Heating of the Czech Republic (ADH CR)	<p>The Association for District Heating of the Czech Republic (ADH CR) fully agrees with the proposal for Risk analysis for forest biomass in the Czech Republic at level A (“Risk analysis”) prepared by Ing. Václav Štícha, Ph.D. with support of the Czech Biomass Association (CZ Biom) to simplify processes within the framework of the certification for sustainability criteria of forest biomass, as presented on the webpages of KZR INiG <a href="http://inig.eu">Risk Analysis (inig.eu)</a>. The Risk analysis completely replaces the individual analyses of category B and is a fundamental step in significant reduction of administrative burden for both certified entities and auditors and prevents duplication of documentation (the auditor only refers to the national analysis adopted under the KZR INiG System).</p> <p>ADH CR therefore fully supports the proposal of the Risk analysis submitted by Ing. Václav Štícha, Ph.D., confirming that the forest biomass obtained on the territory of the Czech Republic fully meets the sustainability criteria given by the RED II Directive, and we ask for its rapid adoption within the KZR INiG System.</p>	n.a.	n.a.


## 8. Results

The sustainability of forest production is in the interest of the Czech Republic. All of the potential risks affecting its productivity or sustainability are known, monitored and regulated. Forestry in the country is developing toward the more natural composition of forest cover, which is supposed to bring more climatically durable ecosystems.

According to the above review, the direction of forest management development is consistent with the principles of sustainable development as postulated at the international level.

This Risk Analysis provides an overview of the legal framework and EU requirements regarding the sustainability criteria set out in the Directive which have been met and therefore the risk of

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obtaining biomass is low. Therefore, additional audits are not necessary as sustainable forest management is regulated by law, well monitored and the requirements are enforced. Thus, a positive direction in the development of forest resources in the Czech Republic can be stated

The risk of unsustainable logging in Czech forests is very low. Thus, it can be considered that the biomass obtained in the Czech Republic can be considered as meeting the requirements of the KZR at the Level A.

### **9. Changes compared to the previous edition**

<b>Date</b>	<b>Section</b>	<b>Previous requirement</b>	<b>Current requirement</b>
-	-	-	-