



*Polish Voluntary National Contribution towards achieving the
Global Forest Goals and United Nations Strategic Plan for Forests*

Introduction

In accordance with paragraph 30 of the United Nations Forest Strategic Plan 2017-2030 adopted by the United Nations General Assembly in April 2017¹, Member States may, on a voluntary basis, determine their contribution to global forestry objectives and targets, taking into account national circumstances, strategies, priorities, capacities, levels of development and forestry circumstances. National voluntary contributions may include national actions and targets related to other international commitments related to forests, such as the 2030 Agenda for Sustainable Development², the Sustainable Development Goals³, the Aichi Biodiversity Targets⁴ and measures to combat climate change under the Paris Agreement under the United Nations Framework Convention on Climate Change⁵.

National Conditions

Thanks to the work of many generations of foresters, Poland has one of the richest forests in Europe in terms of biodiversity and timber resources. The number of forests is still growing. According to the data for 2020, the forest area in Poland is over 9.2 million hectares (ha), which is 29.6% of the country's area. Supervision of forest management in Poland, in forests that are owned by the State Treasury of the Republic of Poland, is exercised by the Minister responsible for the environment, but forests that are not owned by the State - by the County governor. Identification of problems and developing proposals to solve them in the field of forestry, forest land protection and hunting, is the main task of the Government Plenipotentiary for Forestry and Hunting.

¹ ECOSOC Resolution 2017/4: United Nations Strategic Plan for Forests 2017–2030 and quadrennial programme of work of the United Nations Forum on Forests for the period 2017–2020 E/RES/2017/4

² Resolution adopted by the General Assembly on 25 September 2015 - Transforming our world: the 2030 Agenda for Sustainable Development. <https://sdgs.un.org/2030agenda>

³ <https://sdgs.un.org/goals>

⁴ <https://www.cbd.int/sp/targets/>

⁵ <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

The vast majority of forests are public (80.7%), of which 7.1 million ha are managed by the State Forests National Forest Holding, established in 1924. The mission of the State Forests is to manage the common national property, i.e. forests, in a way that guarantees their durability, protection and increase of natural resources, taking into account the expectations of society and economy.

Forest management is carried out on the basis of legal regulations, including the Forest Act and its implementing acts, as well as arrangements included in 10-year plans. All forests managed by the State Forests are covered by **Forest Management Plans (FMP)**. **These documents are prepared for each forest district for a period of 10 years.** For forests that are not owned by the State Treasury, simplified plans are created. Forest Management Plans define a detailed method of carrying out sustainable and multifunctional forest management activities on an area of nearly all lands managed by all 430 forest districts. Preparation of a plan is always preceded by a thorough inventorying and assessment of the condition of the forest. Forest features such as structure, structure, age, species composition, health condition, soil and habitat conditions are determined. Forest management objectives and functions of forests in the managed forest district are taken into account in actions planned for implementation. FMP are approved by the Government Plenipotentiary for Forestry and Hunting on behalf of the Minister competent for the environment.

Polish forests are managed in accordance with the principles of sustainable forest management. Polish forests are characterized by exceptional biodiversity on a European scale, good sanitary condition, increasing abundance, increasingly higher average age of stands (increase from 44 to 59 years in all forms of ownership) and a significant amount of dead wood left in them. Sustainable forest management not only reconciles all forest functions, but also ensures that the processes of growth have a visible advantage over the processes of decay, so that they meet the conditions necessary for absorption and accumulation of CO₂.

In Poland, the number of stands in older age classes is increasing. According to the Report on the State of the Forests (RoSF 2020)⁶, in 1967 the timber resource of stands aged 101 to 120 years was just over 50 million m³, and in 2019 it exceeded 150 million m³. For example, in age class V (i.e., 81-100 years old), their resource was about 150 million m³ in 1967 and currently exceeds 400 million m³. According to the results of the 2016-2020 Large Area Forest Inventory, the average forest stock in Poland is 287 m³/ha, including 290 m³/ha in forests managed by the State Forests, while in private forests - 257 m³/ha.

Wood is the Polish richness- fully ecological and completely renewable. Since 1990, the consumption of wood in Poland as a raw material underpinning the entire forestry and timber sector has increased 2.5 times. Forestry sector together with wood sector are an important part of economy in our country, contributing to the achievement of sustainable development in the region, taking into account social,

⁶ <https://www.lasy.gov.pl/pl/informacje/publikacje/informacje-statystyczne-i-raporty/raport-o-stanie-lasow/raport-o-lasach-2020.pdf/view>

economic and environmental aspects. In Poland, together these sectors account for 2.69% of Gross Domestic Product (GDP). The forestry and timber sector in Poland employs over 461 thousand people.

In 2020, 39.6 million m³ of this ecological and renewable raw material were harvested (in the State Forests 38.2 million m³). Due to the sustainable forest management in the last 20 years, i.e. from January 2000 to January 2020, in the forests managed by the State Forests, the gross increase of merchantable timber amounted to 1247 million m³. During this period, 801 million m³ of merchantable timber was harvested, which means that 447 million m³ of gross merchantable timber, corresponding to 36% of the total increment, increased the standing timber resources. The country's forest area and timber resources are gradually increasing. In 2020, according to the data of the Central Statistical Office, their area was 9260 thousand hectares, including 7121 thousand hectares in the State Forests National Forest Holding (Państwowe Gospodarstwo Leśne Lasy Państwowe), and the volume - 2656 million m³ of gross merchantable timber, of which in the State Forests National Forests 2067 million m³, and in private forests 459 million m³. During the last 20 years alone, the standing timber resources have increased by 40%. This is a result of planned, sustainable forest management, in which one of the priorities is to maintain the continuity and sustainability of forests.

Forests in Poland are protected by diverse forms of nature conservation, the vast majority being located in forest areas. Forests in national parks occur on 193.2 thousand ha, i.e. 61.3%. Forest management in national parks is limited only to necessary treatments in the buffer zones. Nature Reserves in Poland, in the number of 1502, cover an amount of 110.8 thousand ha of forest area. According to the state at the end of 2020, on the territory of the State Forests there were documented: 1286 nature reserves with a total area of 124.1 thousand ha, of which more than half of the area was covered by forest reserves (53.0% of the area). In addition, the State Forests identified 126 landscape parks with a total area of 1,314.9 thousand ha, 370 protected landscape areas with a total area of 2,552.2 thousand ha, 11,551 nature monuments, which constitutes one third of all the nature monuments in Poland (34,890), 8,878 ecological sites with an area of 30,421 ha, 43 documentation sites with an area of 897 ha, 170 nature and landscape protected complexes with a total area of 42,846 ha. Moreover, 3990 protection zones around protected species have been created in the State Forests, with a total area of 162,992 ha, of which more than 22% is the area of full-year protection. The zones were established to protect bird sanctuaries (3,500), mammals (6), reptiles (35), insects (22), plants (6), lichens (419) and others (1). In turn, 387 natural objects with a total area of 7022.8 thousand ha, of which 2295.8 thousand ha (32.7%) are forests, were included in protected landscape areas. The total area of national and landscape parks and protected landscape areas increased in 1980-2020 from 3.2% to 31.8% of the administrative area of the country and already amounts to nearly 10 million ha, of which forests cover 3924.3 thousand ha - 39.5% of the total area of the above-mentioned forms of nature protection. Within the program of the network of areas under nature protection in the territory of the European Union - Natura 2000, forest areas in Poland cover a total of 3.3 million ha.

Many forest districts organize spring forest planting actions. In April 2019, the Inauguration of the 1st edition of the "sadziMY" action took place, which is an initiative of the President of the Republic of Poland Andrzej Duda. The Presidential Couple together with thousands of participants took part in the tree planting in Jakubowo Forestry Unit in Rytel Forest District, which was affected by the hurricane in August 2017. The most valuable gene resources of forest-forming species are collected in gene banks created by the State Forests, such as the unique Forest Gene Bank in Kostrzyca, launched in 1996.

It is worth mentioning that the share of natural regeneration in the total regeneration area has been increasing since the beginning of the 1990s. In 1986-1990 this share was 4.2%, in 1991-1995 - 6.5%, in 1996-2010 - 10.5%, and during the last five years - 13.8%.

Poland also carries out a number of scientific and research works in the forestry sector, corresponding to the challenges faced by forests in the modern world. These include projects such as monitoring of adaptation processes to environmental changes caused by fire against the background of artificial and natural forest regeneration in the forest and natural regeneration of forest in Myszyniec Forest District, or natural-economic monitoring of natural and artificial renewal of forest in Pisz Forest District after hurricane in 2002.

International aspects and initiatives of Polish Forest Policy

In recent years, Poland has been implementing the objectives set in international initiatives, as well as actively participating in their promotion. Polish international forestry policy implements existing global environmental and development goals, such as the 2030 Agenda and its Sustainable Development Goals, the Aichi Biodiversity Targets of the Convention on Biological Diversity, the targets of the Paris Agreement on Climate Change, the Global Forest Goals of the United Nations Strategic Plan For Forests 2030, and all further development goals related to forestry at the international level. During the United Nations Climate Change Conference COP24 in Katowice (Poland), one of these was the announcement of the Ministerial Declaration "Forests for Climate" on conserving and enhancing carbon stocks in sinks and reservoirs of greenhouse gases until 2050 and emphasizing the multifunctional role of forests. It was one of the factors that increased the visibility of forests in the global climate talks. Poland also supports the latest declarations and commitments resulting from its joining the Glasgow Declaration of Leaders, adopted at COP26 in 2021.

In a further way, Poland also pursues forest protection objectives through **development cooperation**. For example, "Forests and Biodiversity" is indicated in the government's strategy "Multiannual Development Cooperation Programme 2021-2030 Solidarity for Development" as one of the thematic sub-priorities: "Forests, due to their ability to absorb greenhouse gases, are crucial in the fight against the impact of human activities on climate change. Within the framework of Polish aid we will undertake activities demonstrating the benefits of sustainable forest management and socially responsible forest management, in particular information and education on afforestation and biodiversity. We will prevent

environmental degradation and strive to repair or reduce the damage that has already occurred. We will protect forests and forest ecosystems currently vulnerable to deforestation, land degradation and wildfires. We will place emphasis on maintaining natural balance and restoring degraded ecosystems and protecting biodiversity. We believe that in this regard it is necessary to combine the activities of public and local administration, non-governmental organizations, scientific institutions, local communities and individual citizens.”⁷

Activities related to the implementation of sustainable forest management in achieving the Global Forest Goals⁸

- 1.** Increasing forest cover in Poland is a constant element of the Polish forestry policy and is carried out on the basis of the **National Programme for the Augmentation of Forest Cover**. The National Programme for Expanding of Forest Cover (NPEFC) was prepared by Department of Research and Spatial Information System of the Forest Research Institute in 1993. It was approved by the Council of Ministers of the Republic of Poland on 23rd June 1995. The Programme assumptions indicated the need to increase the forest cover in the country **to 30% by 2020 and 33% by 2050**. The National Programme for Expanding of Forest Cover is a strategic study. It is an instrument of forest policy in the field of shaping the natural space of the country and contains general guidelines for drawing up regional spatial management plans in the field of increasing forest cover. The methodological assumptions and criteria for setting afforestation preferences adopted in the NPEFC may be helpful in developing original regional and local solutions. In 2021, in view of the end of the NPEFC implementation period, the Forest Research Institute, commissioned by the Ministry of Climate and Environment, has made an expert study including an assessment of the implementation of its assumptions and proposals for further objectives in the field of shaping the country's forest area. The expertise will be used in decision-making processes regarding forestry and rural development policies, as well as in the preparation of projections, information and programs at national and regional levels, including "Information on the condition of forests and the implementation of the NPEFC" which according to the Forest Act is submitted to the Parliament of the Republic of Poland by the Council of Ministers.
- 2. Planting 500 million trees per year** - The forest cover of the country has been increased from about 21% in 1946 to 29.6% in 2020 (according to Statistics Poland). Each year, 800 million tree seedlings are produced, of which an average of 500 million are planted. Estimates indicate that an average of 1000 trees are planted per minute. Seedlings of different tree species are matched to the habitat to achieve vigorous trees of high viability

⁷ <https://www.gov.pl/web/dyplomacja/wieloletni-program-wspolpracy-rozwojowej>

⁸ <https://www.un.org/esa/forests/news/2017/01/six-global-forest-goals/index.html>

and quality. The seedlings go not only to forest districts, but also to municipalities or private entities that have designated their areas for afforestation.

3. Development of scientific basis and methodical solutions supporting the Pilot of "**Carbon Forests Project**" - activities of this type are carried out due to the progressive, negative climate change, to which the high emission of carbon dioxide (CO₂) into the atmosphere mainly contributes. In 2015-2019, forests in Poland absorbed about 30 million tons of CO₂ annually. In 2017-2021, the research service "Development of scientific bases and methodological solutions constituting for the Pilot Development Project entitled "Carbon Forest Project" was carried out by a research consortium led by the Forest Research Institute. The cost of the service was 35 million PLN (~ 8.3 million USD). The project is to contribute to increasing the amount of CO₂ absorbed by the forest ecosystem, mainly forest stands and soil. It aims to indicate the role of forest areas in mitigating the negative effects of climate change. The project assumes integration of many areas of activities: environmental protection - taking additional forestry actions to increase atmospheric carbon sequestration and reduce the release of greenhouse gases into the atmosphere, science - developing modern forest ecosystem carbon balance models for different silviculture and forest management scenarios, economy - encouraging entrepreneurs to purchase carbon credits to finance environmental actions. Foresters' activities include afforestation of land, expansion of the vertical structure of the forest, such as the introduction of new generation under the cover of old trees, the use of various methods of forest restoration and maintenance work that reduce carbon emissions from the soil, the use of species with a greater natural capacity to absorb carbon. An integral part of the project, apart from the mentioned direct activities aimed at reducing carbon dioxide in the atmosphere, is research. Many scientists representing leading universities and research institutes in Poland are involved in the project. In 2018, an estimation of the size of the projected effects of the project for the next 30 years was conducted. According to the preliminary results, the forests within the project will additionally absorb about 1 million tons of CO₂. The estimation was done using the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3) program. Using the model, it is possible to analyse changes in the amount of accumulated carbon in all layers of the forest, including the often overlooked layers of undergrowth, litter or soil. The "Carbon Forest Project" is implemented in multiple ways. Entities or individuals can participate in it by purchasing Carbon Dioxide Units (CDU), which were produced under the project activities. As a result of the joint action of the State Forests and enterprises of various industries involved in the project so far, projects in the field of nature protection, education and active forest access have been successfully implemented. These activities included the purchase of land for afforestation, restoration of forests in post-disaster areas, creation of tourist infrastructure, modernization of educational trails.

4. Development of small retention in mountain and lowland areas - Small water retention facilities are created in the forest areas of the State Forests, thus counteracting the effects of drought and at the same time supporting the preservation of natural habitats and creating new ones. Within the framework of two comprehensive projects of forest and forestry adaptation to climate change implemented in the years 2007-2015, the subject of which is the development of small retention systems and counteracting excessive water erosion, carried out by 160 forest districts, by 2022 an increase in retention of at least 4.2 million m³ will be achieved. The total amount of projects allocated for its implementation is 361 million PLN (~ 86.1 million USD).

5. Species Protection Projects:

5.1 Protection of the European bison (*Bos bonasus*) - In 2017, the implementation of a four-year comprehensive project for the protection of the European bison by the State Forests started. The overarching goal of the project is to take care of the welfare of the population by implementing tasks such as: managing the population of the species by ongoing monitoring of the number and health status of the animals, managing free-ranging herds, including preventive medicine and veterinary services, mitigating conflict situations related to the presence of bison, among others, by renting meadows on the outskirts of the Białowieża National Park, and educating the public on how to deal with encountered animals and farmers about ways to prevent damage. Its other goals are: to increase the number of bison herds in Poland, to spread these animals abroad, to create a gene bank, to improve the health of living bison, and to raise public awareness on the needs and methods of protection of the species. The costs of the project, amounting to over 40 million PLN, are entirely covered by the resources of the State Forests (forest fund). The project "Comprehensive protection of the European bison in Poland" is carried out by the Warsaw University of Life Sciences in cooperation with 25 forest districts and the Białowieża National Park. The project will cover 90% of the free roaming population of the species in 8 provinces and 5 key breeding farms. Additionally, for the stability of the species it is planned to increase the area of free roaming herds by another 2 sites and to reduce tourist pressure on its habitats. Intensive actions are also carried out in order to further spread the bison not only in Poland, but also abroad - in recent years, over 50 individuals found their way to the enclosures in Spain, Czech Republic and Bulgaria. Transport of 15 individuals to France, Switzerland and Romania was realized. Moreover, the promotion of the species and a number of actions aimed at the improvement of its image among local communities are continued. Most of tasks planned for implementation concern active protection of the species. Thanks to this care the European bison population increases by approx. 10% per year. New demonstration enclosures are built and new free roaming herds are created. The costs of activities related to the project implemented by State Forests in 2015 - 2021 amounted to 18 million PLN (~ 4.3 million

USD). Project implementation in National Parks in 2012-2021 (funded by SF) amounted to 4.1 million PLN (~ 1 million USD).

5.2 Protection of Western capercaillie (*Tetrao urogallus*) - State Forests enhance the condition of existing and restored populations of this species, maintaining or creating habitat conditions preferred by this species. For this purpose, they shape the structure of forest stands, modify forest management methods and improve the quality of feeding grounds. The project implementation costs in 2014-2021 amounted to about 9.4 million PLN (~ 2.2 million USD).

5.3 Protection of the Osprey (*Pandion haliaetus*) - Since 2018, a pioneering project entitled "Protection of the Osprey *Pandion haliaetus* in selected SPA (Special Protection Areas) Natura 2000 areas in Poland" has been implemented, co-financed by the LIFE Programme, carried out together with the Eagle Protection Committee. It is of great importance for Polish wildlife, since its population in our country is currently estimated at only 27 pairs. To protect this extremely rare species, 232 arboreal nests and 50 platforms on high voltage line poles have been installed (in cooperation with operators: Enea S.A. and Polish Power System PSE S.A.). The total costs in 2016-2021 incurred for the project amounted to approximately 5.5 million PLN (~\$1.3 million).

5.4 Protection of Black grouse (*Lyrurus tetrix*) - The main objective of the project "Active protection of black grouse on lands under the management of State Forests in Poland" is to preserve the national population of this bird by maintaining breeding sites and creating new ones. The only Black Grouse Breeding Centre in Poland is managed in the Spychowo Forest District, which currently houses about 30 specimens. The cost of the project in the years 2014-2021 was about 12.7 million PLN (~ 3 million USD).

5.5. Protection of the *Colias myrmidone* - Forest Research Institute together with the University of Białystok is implementing a pioneering project commissioned by the General Directorate of State Forests "Forest management for endangered species: protection of the *Colias myrmidone*". The Forest Research Institute together with the University of Białystok are carrying out a pioneering project commissioned by the General Directorate of State Forests titled "Forest management for endangered species: protection of the butterfly *Colias myrmidone* in the Knyszyn Forest". The aim of the project is to create and implement a conservation concept for the extremely endangered daytime butterfly *Colias myrmidone* - a strictly protected species in Poland, listed in Annexes II and IV of the Habitats Directive - in the Knyszyn Forest. This area is currently most probably the only place of its occurrence in Poland and one of the last in the European Union. The functioning of the population of this species in the discussed area is practically entirely dependent on forest management, which creates favourable habitats for it, but on the other hand economic measures aimed at rapid growth and compacting of forest crops

result in the disappearance of the butterfly's habitat. The project includes a number of tasks, such as research and monitoring of metapopulations of the Danube Clouded Yellow butterfly, identification of factors influencing mortality, active protection measures, as well as reintroduction possibilities. Ongoing monitoring of the population after the project is completed is anticipated.

6. Bees return to the forest – Pollinators, vital for the functioning of nature and economy, face a number of threats. The State Forests carry out numerous activities for the benefit of bees in forest districts all over the country. These actions include, among other things, establishment of flower meadows for pollinators (with the area of 528 ha located in the forest district of Lębork), establishment of flower meadows and biodiversity sanctuaries for plants blooming at different dates, or promotion of an old form of forest beekeeping. To this end, the State Forests have installed over 1000 bee-keeping logs and created 104 apiaries. Moreover, it was possible to plant about 30 thousand trees and bushes that are nectar- and pollen-giving for bees. Two biocenotic gardens were also created to educate the public on the protection of bees and other pollinators, and to promote the establishment of refuges conducive to their protection. Another 28 gardens are being realized in Lower Silesia. Foresters have also planted 100 thousand biocenotic trees.

Within the framework of this project, research and monitoring measurements of the state of the forest environment in model hives were also conducted, and all the collected information will be used to carry out beneficial changes for bees. The collected data will be used to prepare a recommendation for an instruction regulating forest management for the protection of Apidae, with particular emphasis on the honey bee (*Apis mellifera*).

7. Promotional Forest Complexes (PFC) are large, compact areas of forest that belong to one or more Forest Districts (the basic administrative unit of the State Forests). Created in the whole country, they show variability of habitat conditions, diversity of forest species composition and its multifunctional character. Within the framework of PFC, foresters promote sustainable forest management, support scientific research and carry out forestry education of the society. They show that it is possible to reach a compromise between the most important tasks of forestry: forest management aimed at, among others, timber production, nature protection, scientific research and broadly understood education. They prove that sustainable, multifunctional forest management counteracts the threats to the forest resulting from the development of civilization. **It is worth emphasizing that the forest promotion complexes are an original, native idea of promoting ecological forestry.**

New forestry technologies are tested and the Forest Service is trained on their territory. Research and experiments are carried out, the results of which are later implemented in the entire State Forests. In this way, the principles of eco-development are disseminated in all forests managed by State Forests. **PFC is also a platform for cooperation** between foresters and society. In the scientific and social councils of each PFC sit representatives of local authorities, scientists, representatives of NGOs, timber industry and local media, as well as people from local communities. The only equivalent in Europe is the Swedish concept of model forest, and outside Europe - a similar, slightly earlier Canadian initiative. The idea of creating PFC has met with recognition among European foresters and scientists. **The total area of 25 PFCs is about 1,274 thousand ha (as of 2018).**