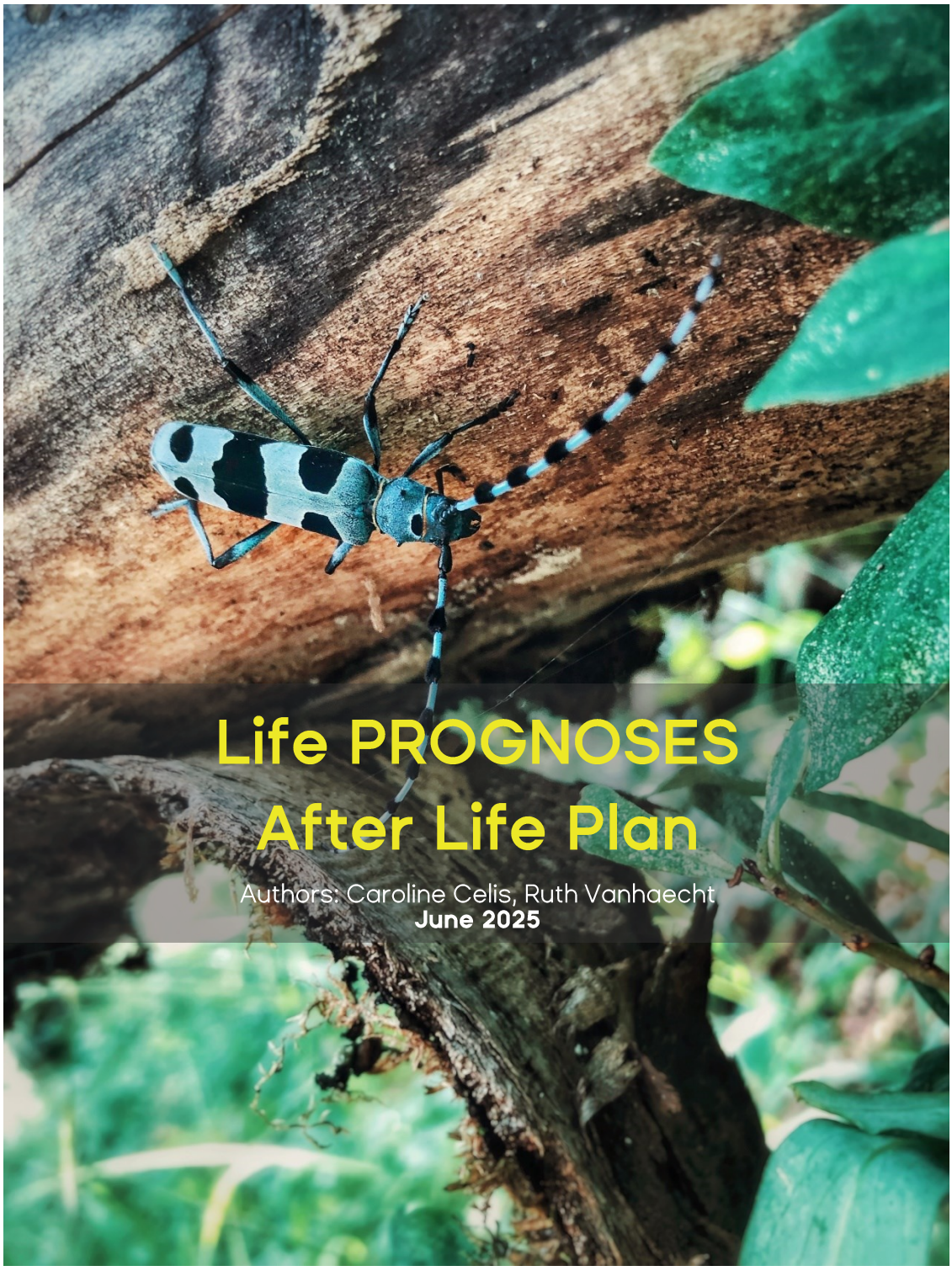


# Life PROGNOSES
# After Life Plan

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Picture: Kalkalpen National Park, Austria. © Maximillian Wögerer.

# Life PROGNOSES Project Summary

**Title**

Life PROGNOSES - Life Protection of Old-Growth forests in Europe: Natural Heritage, Outline, Synthesis and Ecosystem Services

Website: www.lifeprognoses.eu

**Project duration**

January 2021 – June 2025

**Project budget**: € 1.382.855
**Project eligible costs**: € 1.370.853
**European Commission's contribution**: € 794.471

**Co-financed by**

- Federal Ministry for the Environment, Nature Conservation and Nuclear Safety of Germany
- Austrian Ministry of Climate

**Coordinating beneficiary**

Sonian Forest Foundation, Belgium
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**Associated beneficiaries**

- City of Angermünde, Germany (CANG)
- Carpathian Biosphere Reserve, Ukraine (CBRE)
- Czech University of Life Sciences (CZU)
- E.C.O, Austria (ECO)
- INBO, Belgium (INBO)
- Johanneum Research, Austria (JORE)
- Ministry of Natural Resources and Spatial Planning, Slovenia (MESP)
- Abruzzo, Lazio & Molise National Park, Italy (NPAB)
- Kalkalpen National Park, Austria (NPKA)
- Central Balkan National Park, Bulgaria (NPCB)
- Nordwestdeutsche Forstliche Versuchsanstalt (NW-FVA)
- University of Eberswalde, Germany (UNIE)
- University of Ljubljana, Slovenia (UNIL)
- University of Tuscia, Italy (UNITUS)

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# 1. Introduction to the project

## 1.1. Project scope and objectives

The Life Prognoses project is a preparatory project undertaken in the framework of the Life Programme – Sub-programme Nature and Biodiversity. The project was developed and carried out in the knowledge gap that emerged by formulating the objective to strictly protect all old-growth forests in Europe; it was not known what would qualify as an old-growth forest in Europe, nor where these forests could be found once we would have a clear idea of what conditions they had to comply with. Life Prognoses focused on bridging multiple gaps between the policy goals regarding strict protection of old-growth forests and the actual, theoretical capacity to achieve them. In this context, Life Prognoses also focused on capacity building. Public support is a highly important factor for the success rate of policy implementation; nature conservation policies thrive in a supportive environment. The project developed, implemented, and exchanged best practices regarding awareness raising at multiple levels (local, national, European) and for different target groups (local communities, visitors, nature guides, etc.).

The Life PROGNOSES project contributes to the implementation of the EU Biodiversity Strategy for 2030 and the EU Forestry Strategy for 2030. More specifically, the project supports the implementation of strict protection of all European old-growth forests (Directorate-General for Agriculture and Rural Development (European Commission), 2021; Directorate-General for Environment (European Commission), 2020).

Scientific literature is consistent in the fact that primary and old-growth forests in Europe, although occupying a very limited area, are irreplaceable in harbouring biological diversity, stabilising terrestrial carbon storage, regulating hydrological regimes, enabling ecosystem adaptation to disturbances, and providing public health benefits (Barredo et al., 2021). The importance of forest habitats for European biodiversity and their function to remove carbon from the atmosphere, convert CO2 into biomass and create significant carbon sinks is underlined by the European Biodiversity Strategy 2030. The strategy clearly states the crucial demand to define, map, monitor and strictly protect all the EU's remaining primary and old-growth forests. Up to now, the protection of primary and old-growth forests is limited by several shortcomings, which need to be overcome:

1. There was no European-wide standard to assess the status of old-growthness of a forest, and there is no set of broadly acknowledged indicators and thresholds between the forest sector and nature conservation across the EU.

2. As the indicators and thresholds were not agreed upon, there was no homogeneous mapping guideline or map set of primary or old-growth forests available across the EU.
3. Besides these technical limitations of getting a European-wide overview on these important forests, the importance of ecosystem services provided by the old-growth forest ecosystem must be communicated to policymakers and the broad public. Awareness of the importance of old-growth forests had to be strengthened.

The first work package (WP1) deals with the development of criteria and methods to assess and map old-growth forests in Europe. The objective of this thematic work package is the development of a robust methodological approach to assess and map primary and old-growth forests and apply the method in situ on a representative set of old-growth forests in the EU (within the beech forest network). As addressed in the call, this component shall contribute to an EU-wide assessment and mapping of primary and old-growth forests.

The value of ecosystem services of primary and old-growth forests still requires further clarification. The objective of work package 2 (WP2) is to identify and quantify ecosystem services such as carbon storage, biodiversity, micro- and meso-climatic impact, the potential for recreation, and the creation of green jobs (e.g. ecotourism) on a selected set of sites. These methods and results can then be applied and extrapolated to other old-growth forests all over Europe.

There is a need to raise awareness among stakeholders at various levels and in different sectors, on the outstanding value of remaining primary and old-growth forests in Europe, and on the necessary actions to be taken for their conservation. The main target of work package 3 (WP3) is to communicate the values of old-growth forests both to local stakeholders and communities and the wider public. Different audiences are targeted: Local authorities, stakeholders and communities, Policy makers at regional/national/international level and the general public.

The project builds on the UNESCO World Heritage site of ancient and primaeval beech forests of the Carpathians and Other Regions in Europe. This way, the project benefits from the solid network that has already been created and from the strong engagement of landowners, local communities, and authorities to conserve these areas and integrate them into local sustainable development strategies. In general, the Natural World Heritage sites in EU countries overlap with Natura 2000 sites.

The positive attitude towards the Natural World Heritage and the strictly protected forest ecosystems is used to strengthen the protection and recognition of old-growth forests in Europe.

The project contributes to the implementation of the EU Biodiversity Strategy to 2030, to the achievement of the objectives and ambition of the European Green Deal on forest protection and to the better implementation of the Habitats and Birds Directives. All activities account for the existing European policy and legal framework applicable to primary and old-growth forests.

### 1.2.Project realizations

The project successfully realised its objectives: the scientific concepts and tools to advance the identification and mapping of European old-growth forests. The importance of these forests for several ecosystem services is corroborated by the results from the field assessment in old-growth beech forests across all biogeographic regions. Furthermore, this importance was brought to various target groups by many awareness-raising activities organised at the local, national and European levels. More details about the project results and impact can also be found in the scientific domain and awareness-raising domains. Details about the results and impact can be found in the Life PROGNOSES Impact Assessment.

## 2. After Life Plan

The After Life Plan sets out how the beneficiaries plan to continue disseminating and communicating the results of the project after its end, and in particular how they plan both to continue applying the results themselves and to facilitate, encourage and ensure their wider application by others.

The Life Prognoses project is implemented in the context of the Life Programme – sub-programme Nature and Biodiversity, installed for boosting and integrating the implementation of the EU's policy objectives for halting and reversing the loss of wildlife habitats and species across all sectors. For this sub-programme, three specific objectives were formulated.

1. Provide Innovation, Knowledge & Best practices for implementation EU legislation: to develop, demonstrate, promote and stimulate scale up of innovative techniques, methods and approaches (including nature-based solutions and ecosystem approach) for reaching the objectives of the EU legislation and policy on nature and biodiversity,

and to contribute to the knowledge base and to the application of best practices, including through the support of the Natura 2000

2. Create support base for EU legislation: to support the development, implementation, monitoring and enforcement of EU legislation and policy on nature and biodiversity, including by improving governance at all levels, in particular through enhancing capacities of public and private actors and the involvement of civil society, also taking into due consideration the possible contributions provided by citizen science

3. Catalyse deployment of outputs for implementation of EU legislation: to catalyse the large-scale deployment of successful solutions/approaches for implementing EU legislation and policy on nature and biodiversity, by replicating results, integrating related objectives into other policies and into public and private sector practices, mobilising investment and improving access to finance.

The project goals are realised in the context of these broader objectives. We specify the continuation of the project endeavours after the project implementation time in relation to these broader objectives and the project realisations.

## 2.1. Innovation and scientific knowledge

Through the Life PROGNOSES project, scientific insight into European old-growth forests has improved to the benefit of their identification, mapping, and protection. In the wake of the project, the compiled database with sampling data from 11 old-growth forests across the will be subject to further analyses. These analyses will be conducted by the scientific project partners and external researchers who request (and receive) full access to the database. The sound dissemination of the data for use and analysis by other researchers will be guaranteed by the project partner INBO, in consultation with all the partners who delivered data, for the first five years following the project implementation period (see Data Management Plan Life Prognoses). This way, the project partners promote the use of the project data to gain insights regarding old-growth forests and their protection.

Several project partners (INBO, ECO, UNIT, NW-FVA, CZU, CULS) reported a continuation of the analysis of the results that started in the Life Prognoses project. Some of these partners will do so as part of new projects they are participating in.

An important aspect of the continuation of the scientific research on old-growth forest protection is the inclusion of the boreal region. This region was not a part of the Life Prognoses project, as well, because no boreal forests are taken up in the world heritage site 'Ancient and Primaeval Beech Forests of the Carpathians and Other Regions in

Europe." Expanding the database to investigate the characteristics of boreal old-growth is a costly endeavour. Project funds will be essential for its success. It is, however, not at all trivial to the protection of old-growth in Europe.

This project has focused on beech-dominated stands. Other forest compositions will have to be investigated to ensure the method for identifying old-growth is robust. This implies that further research and field sampling are needed, which is costly. The partners UNIL, CZU and NW-FVA are aiming to contribute and find an opportunity to do so with the WILDCARD project.

Now that the mapping approaches in the field and based on remote sensing have been developed, they should be employed by the member states to identify the old-growth forests on their national territory and fill the gaps in the Europe-wide old-growth database (JRC). The partners of Life Prognoses are particularly suited to promote and facilitate the adoption of the mapping methods within their countries. JORE, NW-FVA and ECO will especially take up this role.

| After-Life Action | Timing | Required budget |
|---|---|---|
| Data management via ZENODO according to the DMP | 0-5 years | € |
| Data publications are fully open access via ZENODO | After 5 years | € |
| Analysis of the Life Prognoses data | 0-5 years | €€ |
| Expansion of the datasets and methods to the boreal region | 0-10 years | €€€ |
| Expansion of the datasets and methods to forest types beyond beech-dominated stands | 0-10 years | €€€ |
| Apply the mapping methods locally and nationally to fill the gaps in the JRC old-growth database | 0-5 years | €€ |
| Refinement of the remote sensing approach | 0-5 years | €€ |

## 2.2. Creation of a support base

Work package 3 of the Life Prognoses project was dedicated to the creation of a support base for the protection of old-growth forests in Europe. Many activities and events to raise awareness about old-growth forests, their importance and vulnerability were organised for different target groups. To expand and sustain the support base that has been created in the past four years, it is crucial that awareness-raising continues. SOFO, CANG, NPKA, NPAB, NPCB, and CBRE are committed to continuing to organise them after the project

ends. The development of the activities has been facilitated by the project subsidies, but the organisation requires continued funding. These means are either part of the base funding of the organisation or will come from new projects. CANG is also determined to take the activities that have been developed elsewhere. For this purpose, they aim to find other old-growth forest sites that are willing to cooperate and host such activities.
Also, online awareness-raising will be continued. The partners will keep communicating the results of the project via their social media channels and websites. Furthermore, SOFO will keep the project website, with all project outputs, online until 2029 at least.

| After-Life Action | Timing | Required budget |
|---|---|---|
| Continuation of the organisation of the developed activities and events for local and national target groups | 0-20 years | € € |
| Taking the developed activities elsewhere and/or abroad | 0-20 years | € € € |
| Online awareness-raising | 0-20 years | € |

## 2.3. Catalysation of the deployment of outputs

To ensure the project output, such as the mapping approaches, is used to the benefit of old-growth forest protection, the project scientists commit to a continued involvement as independent experts in the development and facilitation of the EC strategies. Furthermore, the scientific results of the project and the results obtained after further analysis of the database will be communicated during conference presentations and through published scientific articles. UNIL will cooperate with the Slovenian government and regional field teams in their application for European projects to cover the costs of the mapping of old-growth forest and compensation for private owners. CZU will support local NGOs with similar applications for funding. ECO and JORE will work on the national old-growth forest mapping of Austria, especially with remote sensing products and cross-checks. This way, they will also improve the remote sensing algorithm that has been developed during the project implementation period.
Finally, the partners will continue to work on the harmonisation of the mapping approach developed during the project implementation period with the data from already existing monitoring schemes to optimise the assessment of old-growth and avoid double work.

| After-Life Action | Timing | Required budget |
|---|---|---|
| Continued availability as independent experts to the European Commission | 0-20 years | € € |
| Conference participation to share the generated scientific knowledge | 0-20 years | € € € |
| Publications in academic journals of the generated knowledge. | 0-20 years | € |
| Support local organisations and governments for the implementation of the mapping approaches (also by securing EU funding through projects) | 0-10 years | € € |

## 2.4. Additional efforts

The partners commit to continuously strengthening the European network of old-growth forest scientists, national parks, and other stakeholders. On the one hand, this will be done with a view to awareness-raising activities by sharing educational materials and by international collaboration for Erasmus youth exchanges (CANG). Also, for the scientific topics, European collaboration will continue by joint projects and through the UNESCO Beech world heritage series.

| After-Life Action | Timing | Required budget |
|---|---|---|
| Continued collaboration with other European scientists for the benefit of old-growth forest knowledge and protection. | 0-20+ years | € € |
| Continued collaboration with European national parks to the benefit of old-growth forest protection and nature education. | 0-20+years | € € |
| Continued collaboration in joint European projects. | 0-20+ years | € €€ |