Replication and transferability analysis

how the proposed methods of the LIFE Nature project "Ecological network for *Osmoderma eremita* and other species dependent on veteran trees"might be applied in other contexts

This publication was issued in the frame of the project "Ecological network for *Osmoderma eremita* and other species dependent on veteran trees" (LIFE16 NAT/LT/000701) funded by the European Union environmental financial mechanism „LIFE".

Vilnius, 2022

Main project results to replicate and transfer

The Lithuanian Fund for Nature, in partnership with Lithuanian Zoological Garden, Daugavpils University Nature Studies and Environmental Education Centre and Kaunas City Municipality, over the period from 2017 to 2022, has been implementing a project "Ecological network for *Osmoderma eremita* and other species dependent on veteran trees" (LIFE16 NAT/LT/000701) funded by the European Union environmental financial mechanism „LIFE" (hereinafter referred to as LIFE OSMODERMA). This publication summarizes how the methods developed by the project might be replicated and transferred to other contexts.

Picture 1 . Enthomological findings during one of the public events.

According to Regulation (EU) 2021/783 of the European Parliament and of the Council of 29 April 2021:" The Union attaches great importance to the long-term sustainability of the results of projects funded by the LIFE Programme, and to the capacity to secure and maintain those results after project implementation, inter alia by project continuation or by replication or transfer of results"[1]. The replicability and transferability were one of the main Project LIFE Osmoderma goals: Share the knowledge about conservation strategies of the species and practical experience on habitat restoration between the experts and ensure transfer and replicability of demonstrative methods developed by the project. It was planned, that experience acquired during the project will be disseminated via the ambitious publications and presented to specific and well-targeted entities that have an interest in replicating the results of our Project while implementing project actions:

- Methodology of *O.eremita* monitoring methods
- Best Practice Guidelines
- Guidelines for Veteran Trees and Deadwood management
- Methodology for Rearing and Breeding the Hermit Beetle (*Osmoderma*
- *Barnabita*[3])
- Workshop on the importance and management of deadwood
- Final project conference

After implementing all the foreseen actions and reaching the end of the project, the project team has envisaged unexpected spill-over effects of the project and will present them in this paper. A 2017 report states that the greater the replication of project results, the greater the catalytic effect of LIFE[2]. While activities of the LIFE Osmoderma project tackled very specific and direct

[1] Regulation (EU) 2021/783 of the European Parliament and of the Council of 29 April 2021 establishing a Programme for the Environment and Climate Action (LIFE), and repealing Regulation (EU) No 1293/2013
[2] Report on the Mid-term Evaluation of the Programme for Environment and Climate Action (LIFE), 2017.
[3] Name of the species *Osmoderma eremita* and *Osmoderma barnabita* are used as synonims in this context.

problems, the project's impact is partly indirect. The project's main results (see Figure 1) showcased the methodologies which can be subsequently transferred or replicated in other specific contexts. Transferability and replication were accelerated during the project by implementing communication and dissemination activities in addition to knowledge exchange and networking.

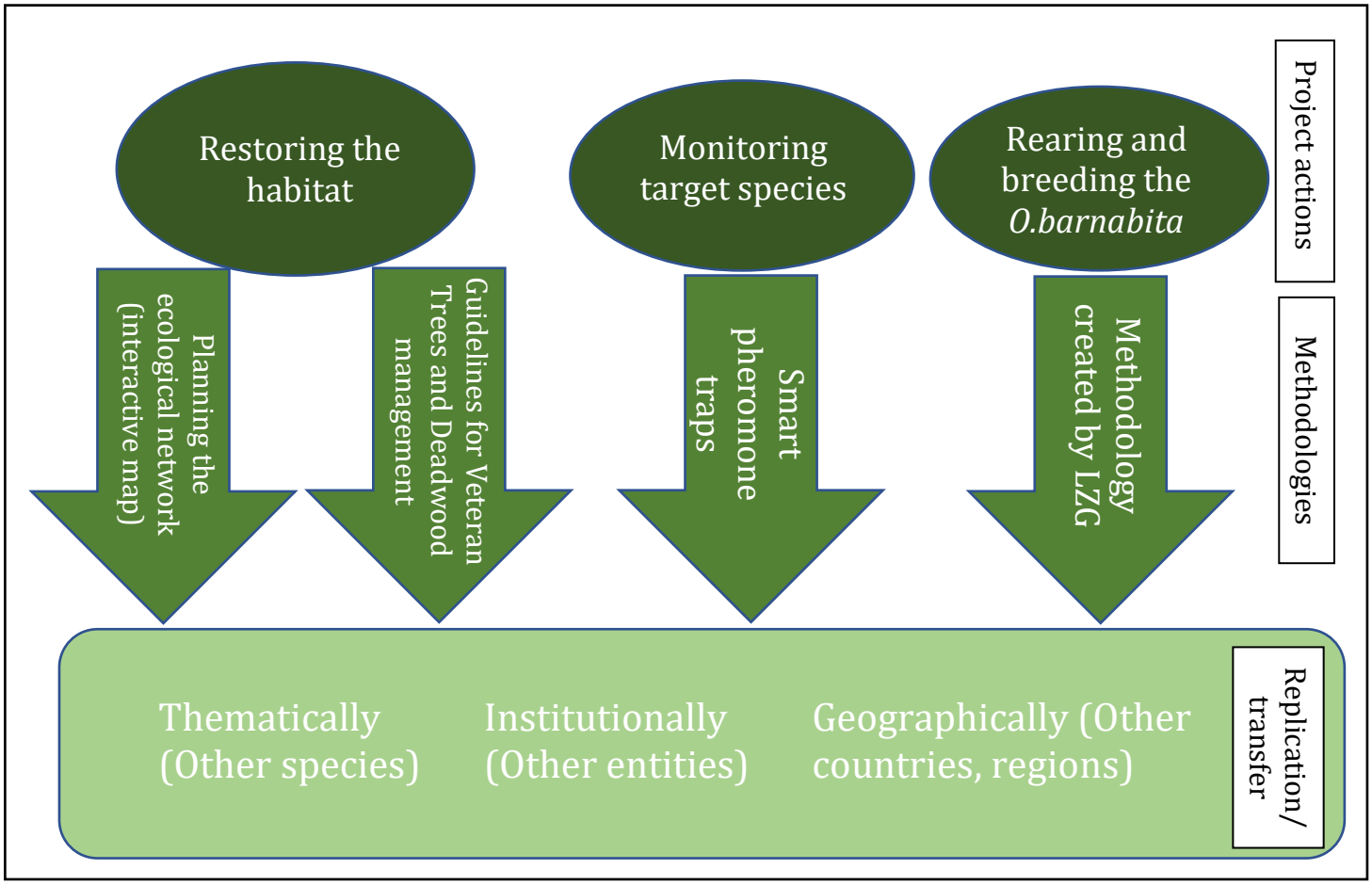

Figure 1. Methodologies and outputs developed during the project to be replicated or transfered.

Project actions could be applied elsewhere not only in similar circumstances for *O.eremita* or other saproxylic thermophilous species but also in developing functional ecological networks for the other species. Results of separate innovative actions (e.g. smart pheromone trap) can be replicated for the same species in the other countries, or adapted for the other species. The experience acquired during the project was presented to specific and well-targeted entities in Lithuania, namely: Directorates of Protected Areas, Municipalities, Forest Enterprises, and Department of Cultural Heritage for the project results to be replicated in the other regions of Lithuania. Also, the project will target entities from the other countries, namely: international experts in the fields of development of ecological corridors, management of veteran trees and deadwood, rearing of O. eremita , restoring its habitats and monitoring, for the project results to be transferred and replicated in the other countries.

Picture 2. Presenting the project's result to the participants of the final conference.

The replicability and transferability enable to multiply the impact of the Project results during its implementation and help to reach out to a wider audience and implement its results in other regions and by different institutions even after the project end. In order to reach a wider audience and encourage replication and transfer, communication and dissemination activities, as well as networking and knowledge exchange, are of particular importance.

Communication and dissemination

Communication and dissemination activities are fundamental in ensuring the replicability and transferability of the Project:

- **Project website and means of social media.** After the project completion, the website and social media accounts will be further managed by LFN. The materials produced during the project are available on the project website https://www.osmoderma.lt/publications. The videos, presentations of the conference and workshop are also available on LFN Youtube channel. These materials will support replication by providing information about the project topics for anyone interested.
- **Scientific publications.** 2 articles are prepared for scientific journals ("Insect Conservation and Diversity" and "The Baltic Journal of Coleopterology") to disseminate the project's findings to a wider entomologist's and naturalist's society.
- **Information and education materials.** 26 informational boards and a nature trail are installed in different project-related areas. Lithuanian zoological garden will continue educational programs for the school children as the breeding of the hermit beetle in captivity will be further ensured.
- **Events.** Several events were held for the visitors and experts at the core project sites. Workshop on the importance and management of deadwood and a Final project conference reached different stakeholders and experts from different countries.

Learning and Networking

An important part of the project was sharing and exchanging of knowledge and experience. Participants of the conference and workshop got the possibility to learn and discuss the topics on the conservation measures of the target species, the implementation and monitoring of conservation management, as well as the principles and functioning of ecological networks and corridors with other experts in Europe.
Learning from existing practice while networking with other projects locally and internationally continued throughout the project's lifetime. This included mainly other LIFE Nature projects (see Figure 2). The project team has also eagerly participated in seminars, conferences, and other events at national and European levels.

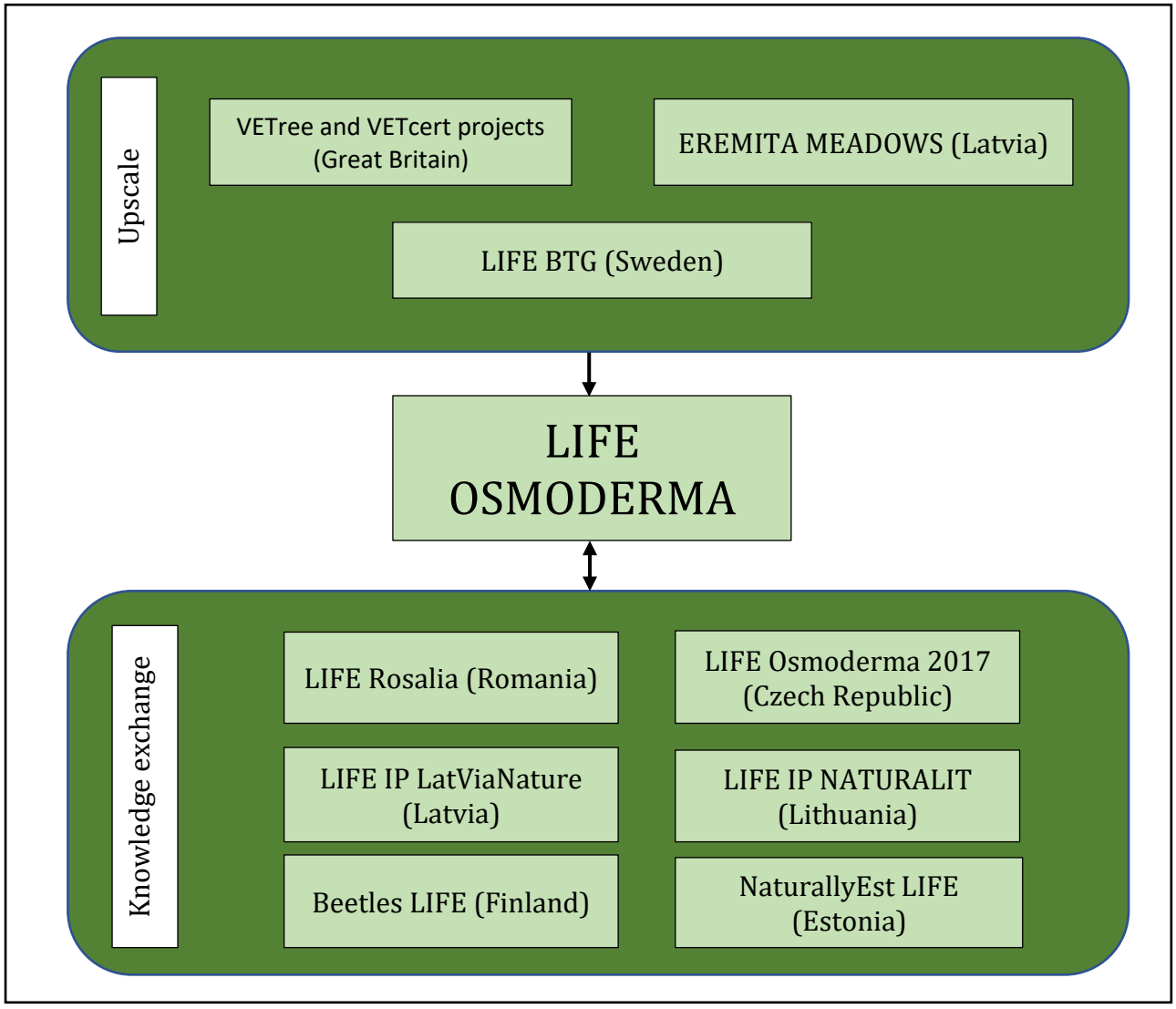

Figure 2. Upscale and knowledge exchange with the EU funded projects.

Sharing the project results and exchanging the knowledge throughout Europe, as well as nationally in Lithuania and Latvia supported local level replication and transferability. Project actions were actively presented during events and workshops, which ensured increased visibility for the project.
Criteria elaborated within the LIFE+ EREMITA MEADOWS (LIFE09 NAT/LV/000240) project were used during the development of the Ecological network plan for Lithuania, ensuring the possibility to plan species conservation measures on the international scale. In addition, during

LIFE EREMITA MEADOWS project, DNA samples were collected in Latvia and analyzed to compare Lithuanian and Latvian metapopulations. During LIFE BTG (LIFE15 NAT/SE/000772), artificial habitats for saproxylic insects, bats, and birds mimicking the conditions of a natural tree cavity were developed. They were used during LIFE OSMODERMA too. Vetree and Vetcert project's experience on arboristic management and tree inventorisation was used as well.

Picture 3. Networking with LIFE BTG project in Sweden.

LIFE Osmoderma shared and exchanged knowledge and experience in conservation actions for increasing the connectivity of favourable habitats with LIFE Rosalia, LIFE IP NATURALIT, LIFE Osmoderma 2017, Beetles LIFE and others. Learning and discussing the topics on the conservation measures of the target species, the implementation and monitoring of conservation management, as well as the principles and functioning of ecological networks and corridors with other experts in Europe enable sharing the methods in other contexts.

Conclusion

The experience acquired during the project was presented to specific and well-targeted entities that have an interest in replicating the results of our project. The possibility of 'copying' project results to other institutions, species, or geographical areas is an important part of the project's success that we aimed while implementing communication and networking actions. Conference and workshop were organized, several publications were issued aiming to disseminate project results and to facilitate exchanges of experience, knowledge and best practices and the replication of project results across the different countries and institutions.

The project methods are easily replicated elsewhere if adjusted to the local context. We are confident that many of the participants in various project's events have gained inspiration, guidance and advice for planning and implementing similar activities in different contexts.