LIFE Lynx

PROJECT Bulletin – 2024

TABLE OF CONTENTS

Message from Coordinator:

ROK ČERNE

AT THE BEGINNING OF THE LIFE LYNX PROJECT, the Dinaric lynx population was on the brink of extinction, primarily due to inbreeding. Through the project, we have not only rescued the population but also successfully established a stepping-stone population in the Alps. To date, we have documented an impressive 18 litters of lynx offspring resulting from our effective translocation efforts. These achievements stand as a testament to our commitment to providing the lynx with a second chance of survival in this part of Europe.

Nevertheless, our mission is ongoing, and our true success will be realized when we facilitate genetic connectivity with other populations, particularly those in other parts of the Alps and the Balkan Peninsula.

By rectifying past mistakes, our project serves as an example of the dedication and perseverance required to breathe new life into a species on the verge of extinction. We remain hopeful that the lynx population will establish vital connections with neighboring populations, ultimately making projects like LIFE Lynx unnecessary in the future.


"Pogumni Maks" – first Slovenian children's book starring real translocated lynx.


Three lynx brothers from the Slovenian Alps monitored with telemetry.

The Lynx Walk upgraded for cyclists.


The FACE conference on Lynx conservation in Celje.

LIFE LYNX PROJECT HIGHLIGHTS FROM 2022-2023


Cooperation with more than 370 hunting organizations from Slovenia, Croatia, Italy, Romania and Slovakia.


Established collaboration with Austrian hunters for lynx conservation.


Josip – a superstar lynx from Velebit.


Final Project Conference in Zadar with 150 participants from 20 countries.

Guidelines for the management of lynx orphans in Croatia.


Emphasizing the results of LIFE Lynx with an additional five lynxes released in the ULyCA2 project.

MARUŠA PROSTOR AND URŠA FLEŽAR

FROM SLOVENIAN FORESTS:

Lynx translocations to the Slovenian Alps and their first reproduction

TO MAINTAIN THE LYNX POPULATION in the Dinaric Mountains and the South-Eastern Alps, the establishment of a connecting population in the Alps was crucial within the framework of the LIFE Lynx project. The Slovenian Julian Alps serve as a corridor, connecting the lynx population between the Dinaric and Alpine regions.

In the Julian Alps, the target areas for lynx reintroduction in 2021 were selected in the Triglav National Park in the North and the Nomenj-Gorjuše hunting club in the South. The successful reintroduction was enabled through effective communication with all the stakeholders who needed to understand, accept, and support the return of the lynx to this area. Particularly successful was the collaboration with hunters, who played a crucial role in the implementation of reintroductions and the subsequent monitoring of introduced lynx and their offspring.

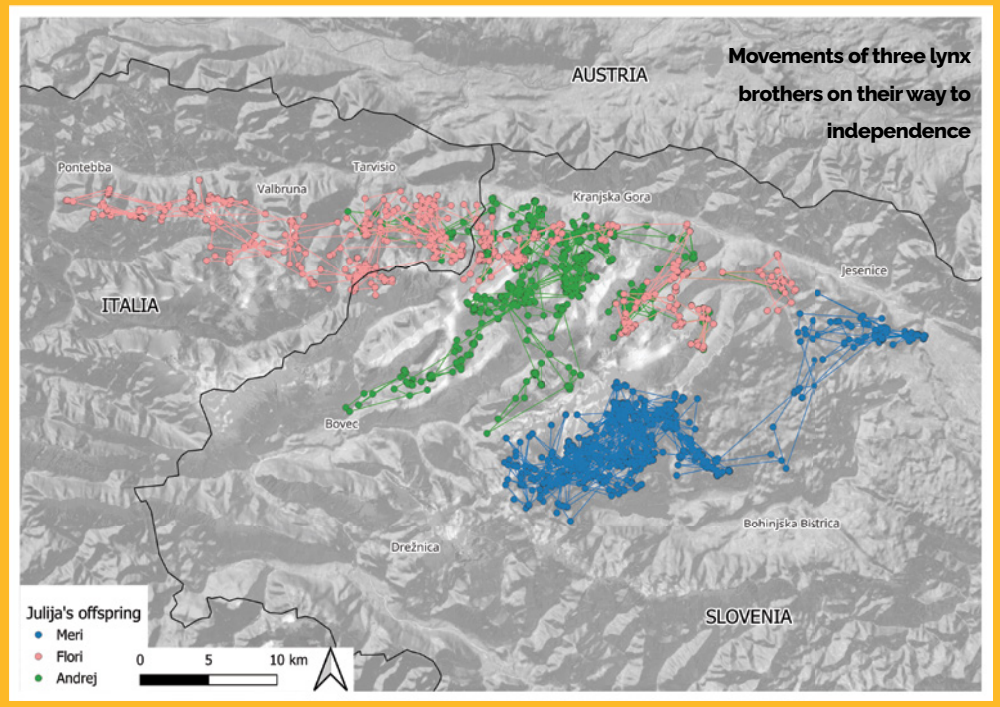
After the successful release of five animals, all hunting areas within the Triglav National Park helped in monitoring the lynx with camera traps and participated in capturing animals for telemetry tracking. This clearly demonstrates that hunters have embraced lynx as an integral part of the forest ecosystem. After two years since their release, the presence of at least four adult lynx has been recorded. Zois, who successfully integrated into the population, was not tracked during 2022, so in 2023, an adult male from Slovakia was released to replace him. Despite the hope for his establishment in the Julian Alps area, he settled in the neighboring Karavanke Mountains.

Release of the lynx Lukaš.

Four successful lynx reproductions have been confirmed in Gorenjska so far. All the females introduced have produced at least one litter. In monitoring the development of the new population, it is important to track where the offspring of the introduced lynx establish their territories. One of the cubs from the first litter of the lynx pair in the southern part of the Julian Alps (Aida and Zois) was genetically identified as an adult lynx in the western part of the Slovenian Julian Alps. Additionally, four cubs from the 2022 litters have been equipped with telemetry collars, and their movements are closely monitored. All the young lynx are successfully hunting and are in the process of establishing their own territories on the fringes of those of their parents.

Lynx Meri, an offspring of two translocated lynxes, jumps back into nature, after being fitted with a telemetry collar.

To strengthen the connecting population created in the Julian Alps through the LIFE Lynx project, an additional five lynxes were released in 2023 as part of the ULyCA2 project in Italy. This will amplify the results of the LIFE Lynx project and help ensure the long-term survival of lynx in the SE Alps. Creating a connected population in this Alpine area can serve as a successful model for additional reintroductions that might be necessary for improving the connectivity of other lynx populations currently isolated in the Alps.



TEODORA SIN AND ANDREI DINU

FROM ROMANIAN FORESTS:

Benefits of the LIFE Lynx for ACDB and Romanian lynx population

ADDRESSING THE LOSS OF BIODIVERSITY, one of the major global challenges of our time, through collaboration and knowledge sharing, can significantly improve the outcomes of conservation projects. LIFE Lynx is an example of such an initiative and we, in Romania, have learned from it.

Collaborating with relevant state authorities and local stakeholders in Romania

In order to successfully monitor our study areas and capture the lynxes needed for reinforcing the Dinaric – SE Alpine population, it was essential to develop a good partnership with RNP ROMSILVA – the National Forest Administration, acting under the authority of the Ministry of Environment, Water and Forestry. We have developed our relationships with local hunters as well and benefited from their knowledge of lynx movements on their hunting grounds. LIFE Lynx has aided in strengthening this active collaboration, contributing to the advancement of lynx conservation initiatives in Romania.

Representatives of ACDB, the Romanian Ministry of Environment, Romsilva and Slovenia Forest Service at a formal reception in Bucharest, Romania.

Representatives of the Romanian, Slovenian and RNP ROMSILVA team together in the field to search for the best capture locations.

Knowledge about monitoring and capturing the Eurasian Lynx (Lynx lynx)

When compared to other large carnivores, lynx received far less attention in Romania. Gathering data through non-systematic monitoring and non-invasive genetic sampling over the past five years ensured a continuous monitoring of reproduction events, the minimum number of animals and sex ratios in several large pilot areas across the Eastern Romanian Carpathians. Moreover, two male lynxes collared and released during the project provided new insights about the movement ecology of the species in this remote landscape. Knowledge sharing in the LIFE Lynx project also played a key role in the success of lynx captures in Romania.

The Eurasian lynx in one of the study areas in Romania.

The 2020 – 2021 Romanian team having dinner after a day of fieldwork. During that season, colleagues from Germany and Italy joined the team.

External visibility and active participation in international lynx conservation initiatives

Much work is currently being done to preserve lynx populations in Europe. Being involved in the LIFE Lynx project has increased our visibility and given us the skills to become an active partner and to share lessons learned in support of lynx conservation and research efforts.

The opportunity to exchange know-how within a multicultural environment

The Romanian team was formed around passionate people, from different socio-ecological and cultural backgrounds, during the LIFE Lynx project. In this multicultural setting, we had the chance to promote Romania's wilderness, our way of life, and ACDB's work while also appreciating the variety of perspectives and life experiences that our colleagues from throughout Europe brought to the table.

We are thankful to have been part of this challenging journey of saving the Dinaric and SE-Alpine lynx population from extinction. As a result of this experience, we have acquired valuable knowledge and skills that will enable us to further enhance lynx conservation efforts in Romania and contribute to ongoing and forthcoming international initiatives in this field.

TRANSLOCATED **LYNX IDENTITY** CARDS

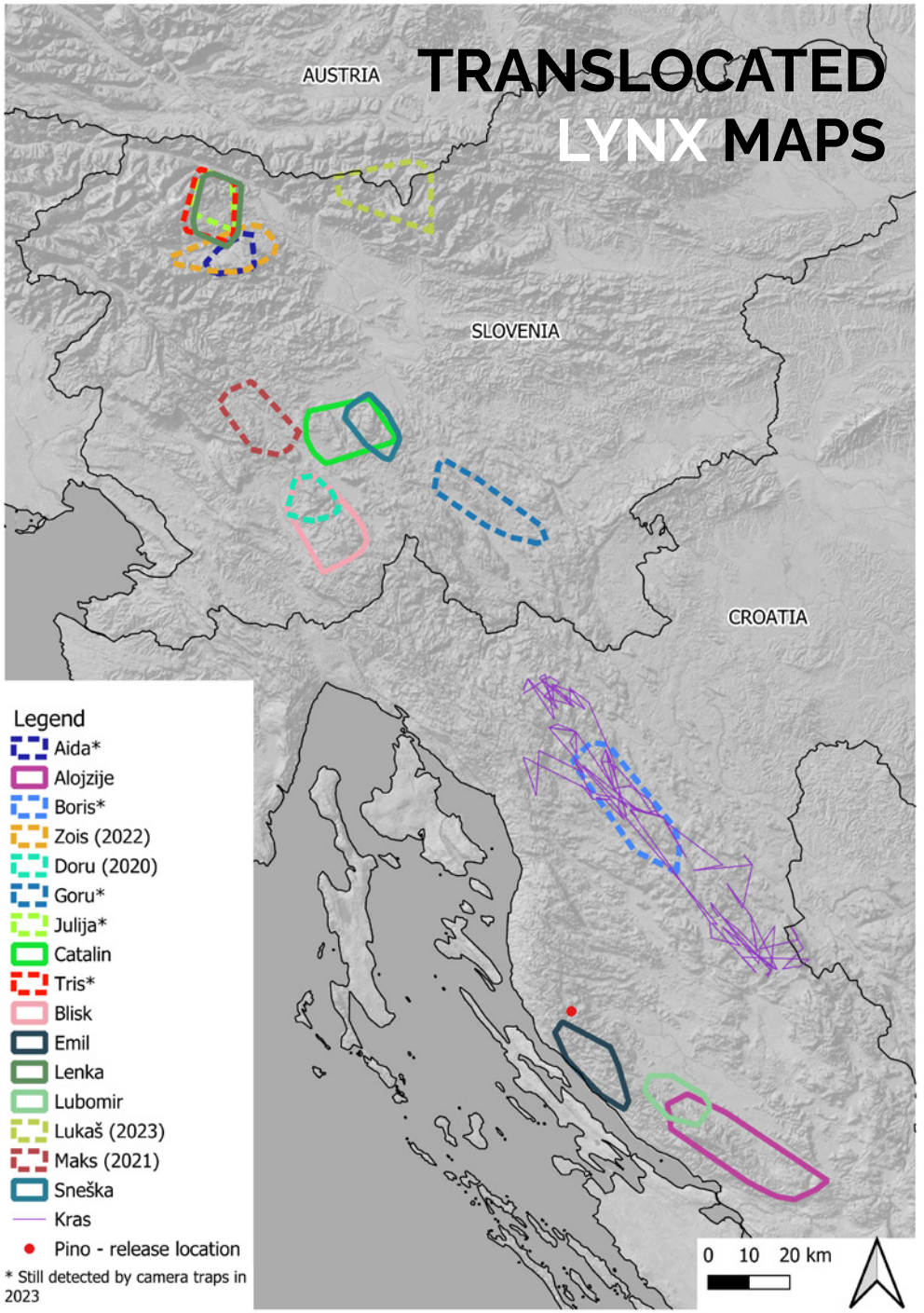
Name	**KRAS**
Age	2 YEARS (2023)
Sex	MALE
Weight	23 KG (2023)
Origin country	ROMANIA
Date of translocation	/
Country of release	CROATIA
Date and location of release	24.3.2023 (PLITVICE)
Territory	NOT YET ESTABLISHED IN 2023

Name	**LUKAŠ**
Age	3-5 YEARS (2023)
Sex	MALE
Weight	24 KG (2023)
Origin country	SLOVAKIA
Date of translocation	/
Country of release	SLOVENIA
Date and location of release	19.4.2023 (JELOVICA)
Territory	NOT YET ESTABLISHED IN 2023

Name	**SNEŠKA**
Age	5 YEARS (2023)
Sex	FEMALE
Weight	17 KG (2023)
Origin country	SLOVAKIA
Date of translocation	/
Country of release	SLOVENIA
Date and location of release	26.4.2023 (SNEŽNIK)
Territory	NOT YET ESTABLISHED IN 2023

LIFE Lynx was the wildest fieldwork experience I have ever had. Learning how to monitor and capture wild carnivores has been a milestone in my career in biology. Furthermore, knowing that the individuals we introduced are thriving feels incredibly rewarding. Such results can only be described as a major team success.

MARCO SENSI, volunteer at ACDB, Romania



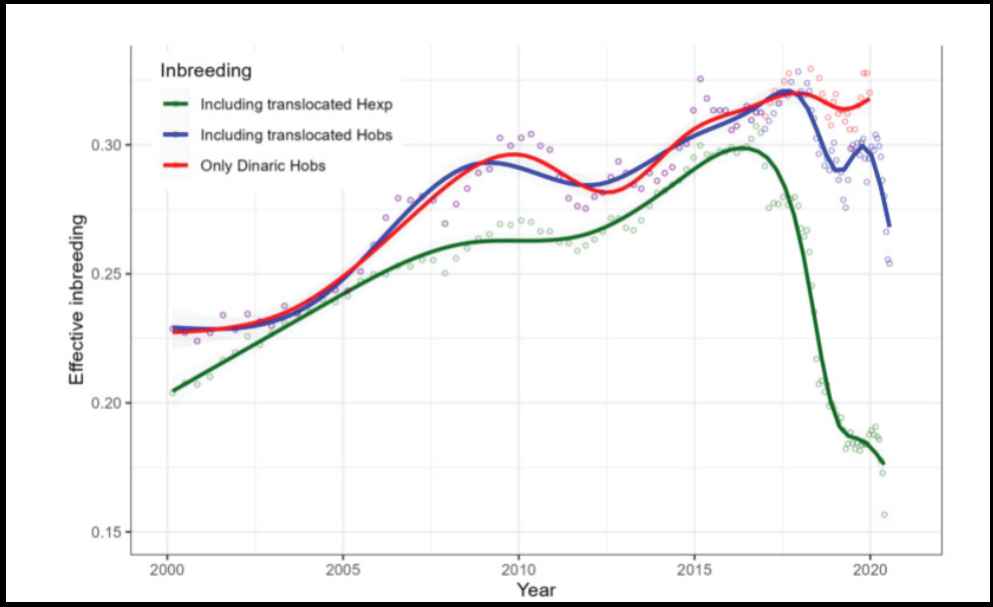
TOMAŽ SKRBINŠEK, MARJETA KONEC

IMPROVING THE GENETIC STATUS OF THE INBRED POPULATION

At the beginning of the project, we made a baseline assessment of the genetic status of the Dinaric lynx population, where inbreeding was at an extremely high level with an inbreeding coefficient of F = 0.32, meaning that, on average, the Dinaric lynx were more inbred than offspring produced by mating between brothers and sisters. During the project, the existing population was reinforced with twelve animals, released in Slovenia and Croatia. Before each animal was translocated, the relatedness with other translocated animals was checked, and this information was used to plan where they were to be released. We monitored reproduction of the translocated animals using noninvasive genetic sampling and we gained genetic profiles from the animals captured for telemetry. This enabled us to monitor the genetic effects of reinforcement and to track the general impact on the population's genetic outlook.

Although it takes time for animals to reproduce and contribute their genes to the population before the effects of the reinforcement can be fully appreciated, the first benefits were already detected. When the translocated animals and their offspring form 15% of the population (which was already practically the case by the end of the project), the level of inbreeding drops to 0.18, and should reach 0.15 when the translocated animals and their offspring form 40% of the population. This is well within the range observed from historic data in the 1980s when the Dinaric lynx population was doing very well. These estimates do not include the six lynx released in the Alps and their offspring, which will bring additional benefits when the animals from the two populations begin to mix and breed.

We can say that the LIFE Lynx project successfully brought the Dinaric lynx back from the brink of a second extinction, but the solution is inherently short-term. The population remains too small to be viable on its own and will need gene flow from other populations. In the short-term this means conservation management with periodic reinforcements, but efforts should be made in the long-term to establish an Alpine–Dinaric metapopulation that could be viable on its own.



Effective inbreeding (Fe) of Dinaric lynx relative to the source population in Slovak Carpathians. Fe calculated using observed heterozygosity, indicating situation without translocations (red line); Fe calculated using observed heterozygosity, including translocated lynx - indicating the current situation (blue line); Fe calculated with translocated lynx using expected heterozygosity, indicating the potential for a rapid inbreeding decrease if the translocated animals continue to successfully reproduce and their offspring form ~40% of the population (green line).

MAGDA SINDIČIĆ

FROM CROATIAN FORESTS:

LIFE Lynx reinforcement of the lynx population in the Dinarides

A DECADE AFTER THE INITIAL SCIENTIFIC CONFIRMATION of the threat posed by inbreeding to the survival of the Dinaric lynx population and a decade since consensus was reached that translocations from Carpathian Mountains are the only viable solution, the first lynx capturing season within the LIFE Lynx project commenced. In February 2019, two males, named Doru and Goru, were captured, assessed and quarantined in Romania. On May 5th, Doru was released in Croatia, in a meadow in Risnjak National Park, the exact spot where the first lynx was observed in Croatia following the 1973 reintroduction in Slovenia. Ten days later, Goru was released in Slovenia, near Loški Potok, and to this day, he remains the most successful in propagating his genes, having fathered at least four litters with seven kittens.

Goru, the most successful translocated lynx.

During the period from 2019 to 2023, 12 lynxes (11 males and one female) were translocated from the Carpathian to the Dinaric Mountains. Translocated animals were caught in Romania (7) and Slovakia (5) and released in Croatia (6) and Slovenia (6). Release locations were chosen based on cooperation with local communities, primarily managers of hunting grounds and protected areas, and based on the status of the resident lynxes. Luckily, all animals settled within the distribution area of the Dinaric lynx population, but lynx Pino disappeared immediately after his release. Lynx Doru was tracked for only 9 months after his release, while the telemetry collar of the rehabilitated lynx Maks ceased transmitting a signal 15 months after his release. Over this period, he resided in three different areas, making history as the first recorded lynx to cross the "notorious" Ljubljana – Koper highway and even reached the Slovenian – Austrian border.

The remaining nine translocated lynxes continue to be monitored, either through telemetry collars or camera traps. As of September 2023, there are five translocated males in Croatia. The most recently released lynx, Kras, is still in exploratory movement while others (Boris, Alojzije, Ljubo and Emil) have successfully established their territories.

Lynx Maks, showed what distances a lynx can travel when searching for a territory, and on his way managed to cross the Ljubljana – Koper highway.

Lynx Sneška is the only female lynx translocated to the Dinaric part of the population.

All four translocated lynxes present in the Slovenian Dinarics are regularly monitored, three within their established territories (Goru, Catalin and Blisk) while the most recently released, the female Sneška, is still in exploratory movement. As we approach the final months of the LIFE Lynx project implementation, the results presented instill hope that international cooperation, drawn upon expertise from various backgrounds and engaging key interest groups, stands as a successful formula for securing the future of the Eurasian lynx in Europe.

Most of the 18 translocated lynxes successfully integrated into the Dinaric-SE Alpine lynx population. Between 2019 and 2023, we recorded, in total. 17 lynx litters within the territories of Goru, Catalin, Blisk, Aida, Zois, Julija, Tris, Lenka, Alojzije, Boris and Emil. However, some of the lynxes (Doru, Maks and Pino) did not manage to be included into the population. Pino's telemetry collar was found three years after his release, cut and obviously removed from the animal's neck by a human and the Croatia LIFE Lynx team is working with the police to reduce the likelihood of this happening in the future.

For many years, the lynx population in the Dinaric region has been threatened with extinction. It is humanity's duty to help every plant and animal species whose survival is at risk, so I believe that the international project "LIFE Lynx" is extremely valuable and important. I am convinced that, by the end of this project, we will prevent the extinction of lynxes due to inbreeding and, through the long-term monitoring of individual lynx, we will have much more valuable information for the long-term survival of the species.

ANA BUTORAC, forester from Croatia

PAOLO MOLINARI

FROM ITALIAN FORESTS:

ULyCA 2 amplifying the results of the LIFE Lynx project

THE LIFE LYNX PROJECT was created to prevent the extinction of the lynx in the Dinaric Mountains and the south-eastern Alps while at the same time strengthening both populations through their connection by the creation of the stepping-stone population. There has been a great deal of action in the field to achieve these objectives, crowned by the most concrete operations of all, the releases of lynxes of Carpathian origin to strengthen the population both from a numerical and genetic point of view. It was a complex project, from a biological, ecological, social, political, logistical and also administrative and financial point of view.

However, during the planning phase of the project, Italy, one of the five participating countries, found itself facing some serious difficulties as one of the partners, the "Raggruppamento Carabinieri Biodiversità" (Italian National Forest Service), was in a phase of radical reorganization and at the time was not able to make such important decisions. With this, it also seemed that the chance to reinforce the lynx in Italy had vanished. However, the Italian partners, driven by the "Italian Lynx Project", did not give up and immediately began looking for solutions to the problem: the ULyCA2 Project (Urgent Lynx Conservation Action) was born - a lynx conservation project in the south-eastern Italian Alps, created to integrate with the LIFE programme and also strengthen the occurrence of Italian lynx.

The project, which was supported by all the competent Italian authorities and organized to operate in full synergy within the framework of LIFE actions, also proved to be complex. One of its great achievements was the involvement of the Italian hunters, the result of many information events where the active role of Slovenian hunters was decisive. The key to the success of ULyCA2 was the involvement of all parties, thanks to the official partnership with WWF on the one hand and with the hunters on the other, working together with the same objectives. In 2023, it was possible to boost the stepping-stone created in the Slovenian Julian Alps within the framework of LIFE Lynx with an additional five lynxes released in the Italian Julian Alps.

Release of lynx Karlo in Tarvisio forests.

Thanks to the excellent collaboration and support of our Romanian, Croatian, and Swiss partners it was possible to release three females and two males into the Tarvisio Forest. Two females were captured and translocated from the Swiss Jura, a pair of lynxes from the Romanian Carpathians and one male lynx from the Croatian Dinaric Mountains. The two Swiss females dispersed to Austria, where unfortunately one of them was illegally killed. With not even a year after the translocations it is too early to evaluate the project. Despite the drawback of losing a female, there is positive news as the offspring of the lynx reintroduced to the Slovenian Alps have reached Italy, and lynxes released in Italy have reached the area of lynxes in the Slovenian Alps. Through the release of eleven lynx in the south-eastern Alps, a stepping-stone population has been created where potentially five female lynx will take part in the next breeding season, making us all the more optimistic for the future of this species in the Alps.

The Italian team releasing lynx Talia.

The presence of the lynx is a further reason to frequent our forests and mountains. I will be looking for him and I dream of being able to meet him to wish him good hunting success.

CLAUDIO ANGELI, hunter, director of Enalcaccia

JAKUB KUBALA ET AL

FROM SLOVAKIAN FORESTS:

Benefits of the LIFE Lynx for the Slovakian lynx population

THE CARPATHIANS have been, and still are, a source for Eurasian lynx (Lynx lynx) reintroduction and reinforcement projects, and constitute a great importance for the international management, and large-scale conservation of lynx in Europe. Capturing and translocating lynxes due to their reintroduction, or reinforcement, requires relevant and systematic research on the source population, with an emphasis on its abundance and trend, as well as its genetic diversity and health status. However, such scientific based data were absent in Slovakia for a long time, and the management and conservation of the lynx was implemented only on the basis of expert estimates. Such estimates are demonstrably not reliable and are often overestimate the population size. Since this situation has not been addressed for a long time, it consequently led to the presentation of vague and misleading information regarding the status and population trend at local and national levels.

In order to answer these and many other key questions, we started to develop systematic lynx monitoring in the Western Carpathians from 2010-2011. The results obtained through our systematic robust monitoring conducted within the LIFE Lynx project, together with other previous projects and surveys, allow us to estimate the average lynx population density in Slovakia at 1.15 (± 0.29) lynx per 100 km2 of suitable habitat, with an overall population size of 323 adult animals. This population size corresponds to 'favorable status' according to the Habitats Directive, nevertheless it does not reach the carrying capacity in some areas/regions due to conflicts with human interests and activities. Based on these results, it is nevertheless possible to claim that the captures and translocations of 8 lynxes for the LIFE Lynx project (nor previous project LIFE Luchs) did not have a negative effect on the viability of the Slovak population at local, regional or national level. Therefore, the LIFE Lynx project helped not only to save the Dinaric - SE Alpine population, but also to better understand the lynx conservation challenges and needs in the Carpathians.

Moreover, the cooperation between the project team and all stakeholders (especially foresters, hunters, nature conservation, livestock breeders and the general local public) within the LIFE Lynx activities and previous projects, particularly in the systematic monitoring and lynx translocations, are excellent examples of collaboration and mutual trust as well as an important precedent for further lynx (and large carnivores) conservation and management at national and international level. Such wide-ranging cooperation with an efficient adaptive approach can reduce the conflicts and ensure the long-term and large-scale survival of the species at the geographic scope of Slovakia and Carpathians, and hence contribute to the conservation of both, the autochthonous and reintroduced populations in Europe.

When I first heard about lynx trapping in 2020, I didn't really believe it was possible. Today, I am proud that I was part of this project and helped to save this endangered species in the Dinaric Mountains, SE Alps and Europe. At the same time, I met a team of great people. Thank you.

ING. MIROSLAV KIAPEŠ, Head of the Klenovec Forest Administration, Gemer Forest Enterprise, Forestry in the Slovak Republic

Tranquillization and health checks during the capture of the adult male lynx Lukáš.

Wide cooperation (foresters, hunters and nature conservation) during the loading of the captured adult female lynx, Sneška, from the capture site to the transport car.

YOUNG LYNX GUARDIANS' ART

We joined the LIFE Lynx project at our school back in 2019. All the objectives of the project are important for me as a teacher to disseminate information about them amongst my pupils, thus shaping their values towards nature and critical thinking.

ANDREJA KERO, Primary School 16 December Mojstrana

A lot of thought and ideas have gone into the idea of creating a cycling route to educate visitors on large carnivores, their habitat, and how to protect them. The Lynx Trail offers an interactive, educational experience and we took great care in making this more than just a bike ride.

MAX RIESE, founder of the GravGrav cycling community

THE PUPILS of the Sodražica Primary School named a lynx Boris and welcomed his arrival to their neighborhood with lynx paintings. They made many of them themselves - it was hard to pick out only two!

ALTHOUGH THE SREČKA KOSOVELA Primary School was not part of the Young Lynx Guardian's programme, they got engaged and produced posters for celebrating International Lynx Day!

AT KOROŠKA BELA Primary School in Jesenice, they transformed the lynx, Julia, into their mascot - can you see that her back legs are longer than her front legs, just like a real lynx?

ABOUT THE PROJECT

Name:
Preventing the extinction of the Dinaric-SE Alpine lynx population through reinforcement and long-term conservation

Acronym
LIFE Lynx

Reference
LIFE16 NAT/SI/000634

Time Frame
1/7/2017 – 31/3/2024

ABOUT THIS BULLETIN ISSUE

Editor: Maja Sever
Publisher: Slovenia Forest Service
Cover photo credit: Goga Iskrić
Graphic design: Mito Gegič

Photo credits: ACDB, DER ANBLICK, Urša Fležar, Ermes Furlani, Melani Glavinić, Miha Krofel, Igor Pičulin, Simon M. Pintar, Maria Prasch, Progetto Lince Italia, Maruša Prostor, Lucia Quindici, Gabriele Ruthofer, Nino Salkić, Vedran Slijepčević, Primož Šenk, TUZVO, Danil Usmanov

ISSN: 2670-5273
Ljubljana, January 2024

ON LINE

www.lifelynx.eu
life.lynx.eu@gmail.com

www.facebook.com/LIFELynx.eu
www.facebook.com/lifelynx.hr

www.instagram.com/life.lynx

COORDINATING BENEFICIARY

ZAVOD za GOZDOVE SLOVENIJE
Slovenia Forest Service

WITH SUPPORT OF EU LIFE FINANCING

LIFE16 NAT/SI/000634

PARTNERS

ACDB · BIOM · IRSNC · Univerza v Ljubljani · VELEUČILIŠTE U KARLOVCU

COFINANCERS

REPUBLIC OF SLOVENIA
MINISTRY OF NATURAL RESOURCES AND SPATIAL PLANNING

MINISTRY OF ENVIRONMENT OF THE SLOVAK REPUBLIC

GOVERNMENT OF THE REPUBLIC OF CROATIA
Office for Cooperation with NGOs

FOND ZA ZAŠTITU OKOLIŠA I ENERGETSKU UČINKOVITOST

WWF

EURONATUR

OTHER LIFE LYNX PROMOTIONAL PUBLICATIONS

https://www.lifelynx.eu/promotional-material/