

PROJECT SLOWOLF

Summary of Results



LAYMAN'S REPORT



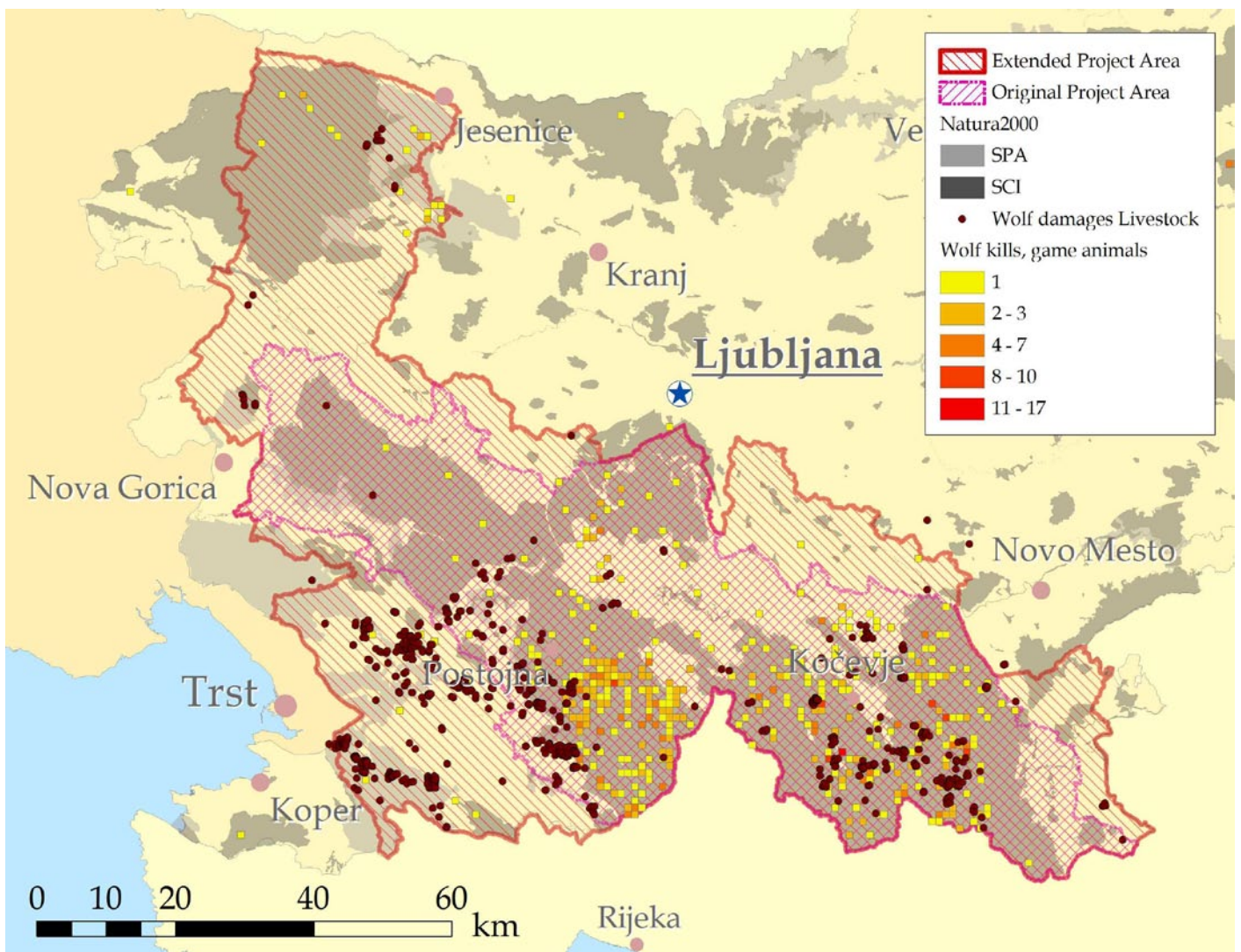
SLOWOLF
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LIFE08 NAT/SLO/000244 SloWolf



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Original and extended project area with different signs of wolf presence used to choose the area.

Introduction

The goal of the project was the long-term conservation of the wolves, their main prey and habitats in Slovenia, and improvement of their coexistence with humans. Wolves are natural predators of wild ungulates living in Slovenian forests. They live in family groups (packs) and require large territories to survive. In Slovenia many important population-specific life history details, for example the average number of animals a pack, territory sizes and the number of packs living in the country, were unknown before the project implementation. The attitudes of people towards wolves vary greatly as well. Certain interest groups, for example hunters and livestock breeders, may come into conflict with wolves because they prey on game species and domestic sheep. At the same time wolves are increasingly perceived as symbols of wild and preserved nature. These conflicting interests, coupled with low population sizes and demanding monitoring of conservation status, make wolf conservation a very complex issue. Continued existence of this species in Slovenia, and its co-existence with humans, depends on a number of intertwined factors. We studied these factors within the project, directly addressed many of the most pressing issues, produced a solid knowledge base, networked the most important interest groups, helped improve the lacking legislature, and by doing that provided a firm foundation for successful conservation and management of this charismatic large carnivore species in the future.



Surveillance of the wolf population conservation status

The survival of wolves in Slovenia depends on a number of factors. Within the SloWolf project we studied these factors and used the acquired knowledge to improve conservation status and management of this charismatic species. We fitted seven wolves (four males and three females) with GPS telemetry collars to study their spatial requirements and behaviour. These data were combined with annual snow tracking in winter and howling surveys in summer. In each howling survey we recorded five to seven litters in the project area. We involved local hunters and other volunteers in intensive snow tracking surveys during winter to obtain information on how wolves use space and how big their packs are, and to collect non-invasive samples for genetic analysis (scats, urine and saliva). The genetic samples were collected year-round, in annual cycles based on wolf biology. Analysis of these samples resulted in a first robust, precise and objective estimate of the wolf population size in Slovenia. Over the three years of intensive population size monitoring, it remained stable and practically did not change at the yearly scale even in the face of high documented wolf mortality. Around 46 wolves (between 42 and 50) in 8 to 11 wolf packs lived in Slovenia in each year of the project. High population turnover (births, mortalities, immigrations, emigrations) caused these numbers to fluctuate considerably within each year (on average between 33 and 46 individuals). Four packs had considerable parts of their territories in Croatia, and they can't be considered completely "Slovenian" for management purposes. After correcting for these border packs (assigning 50% of animals in them to each respective country) it was estimated that the highest yearly number of wolves in Slovenia for the management purposes was around 39 individuals (between 34 and 43).



Wolf snow tracking

The goal of the project was to set-up a science-based, robust population monitoring system, which succeeded with flying colours. This monitoring system has already been adopted by the responsible ministry and is being routinely used after the project.



Found wolf pups from the project radio collared wolf



_ Working with volunteers

To facilitate a better acceptance of wolves and raise conservation awareness we invited hunters and other volunteers to join us in yearly howling and snow-tracking surveys and to help collecting noninvasive genetic samples. Inclusion of volunteers also enabled us to cover a large project area with high intensity fieldwork, a task that would be exceedingly expensive if attempted with professional personnel. In the duration of the project, we included altogether 2429 individual volunteer participations in wolf surveillance activities: 984 people interested in wolf research and conservation were registered in our online volunteer database and regularly invited to educational seminars and to participate in field surveys; 891 volunteers attended educational seminars, 453 took part in winter snow tracking and 245 in summer wolf howling surveys. Besides that, we included 108 hunting clubs with over 5000 members in year-round collection of noninvasive genetic samples. Summer howling surveys were done for three consecutive years, and with so many volunteers we were able to monitor an area of up to 3384 km² in single day. In three consecutive winters we organized 65 snow-tracking sessions, and checked more than 2230 km of forest roads for wolf tracks. We followed 171 km of wolf tracks and collected 185 genetic samples. The huge interest and the sheer number of involved volunteers exceeded all our expectations.



Hunters and other volunteers participated in project snow tracking

Managing the threats - Wolf prey

Wolves in Slovenia mainly feed on natural prey - red deer, roe deer, wild boar and other smaller mammals. These wildlife species are also managed as game species. During the project a set of recommendations have been prepared for the management of large game species, which take into account the presence of wolves - their needs and impacts on the prey species. These recommendations were already implemented in the annual wildlife management plans for 2013.



Managing the threats - Damages to livestock

Damages caused by wolves present one of the biggest challenges for wolf conservation in Slovenia and elsewhere in Europe and the world. Within the best practice demonstration action we donated high electric fences and sheep guarding dogs to eight sheep farmers with flocks of 30-800 sheep and documented wolf attacks in the past. Already in the first two years these protection measures were in use, the compensations for wolf attacks paid to those farmers were nearly 200,000€ less than if damages remained at the previous levels, which comes close to covering the entire Slovenian co-funding contribution to the project. The key to success was the correct and consistent use of the protective measures.



Setting up donated high electric fences.

As a support to this activity, two brochures about the use of electric fences and livestock guarding dogs for damage prevention were produced and distributed to farmers, agricultural advisors and hunters in the project area. Five targeted workshops for farmers were carried out. During these local workshops participants were informed about the proper care and training of the livestock guarding dogs and correct use of portable electric fences for night enclosures for sheep.



Donated LGD with his flock

_ Educating the educators

Damages to the livestock are one of the most important causes of human-wolf conflict and preventing damages is very important for improving coexistence between wolves and agriculture. However over the years, the effective methods to prevent livestock depredations have been forgotten. Agricultural Advisory Service employees work closely with farmers and give advice to farmers about best practice in agriculture. Within the project we've organised two training seminars for the agricultural advisors. Both seminars consisted of theoretical (lectures) and practical (field trip) parts and provided in-depth information on effective ways of preventing wolf damages.

Dissemination and awareness raising

The aim was to run a targeted public awareness and education campaign based on knowledge-gap analysis provided by the attitude and knowledge survey. The campaign started with development of the project visual identity and its promotion. SloWolf logo together with LIFE and Natura 2000 logos was used on all promotional, educational and information materials and also on durable goods purchased and used in the project. Campaign started as a promotion of the project goals and activities, and of volunteer participa-

tion in the population monitoring activities. Project T-shirts were produced for promotion purposes and distributed to volunteers (two different motifs for wolf howling surveys and winter snow tracking), farmers and project staff.

A comprehensive brochure “Wolves in Slovenia” was prepared in and widely distributed at different project events to general public, hunters, schools (children, youth, teachers, students), farmers, project volunteers, libraries and other interested parties.

Four issues of the annual project bulletin “Volčja sled” (“Wolf Track”) containing short articles about project activities and upcoming events were produced. In each issue several of the project team members expressed their views about the wolf and how they feel working for the project. In the last issue we used the opportunity to

thank all the people involved in the project activities for their work and the important role they played in successful implementation of the project. The bulletin was distributed to the libraries in the wolf presence area and to the key interest groups (hunters, farmers, decision-makers, foresters etc.) within project area.

We designed and printed a project poster (two different motifs) containing facts about wolves and the main project messages. Posters were distributed to school teachers and children at the seminar for schools, and to hunters and general public from the wolf presence area during the documentary movie showings and public presentations of the project results. We additionally designed and printed two larger (100 cm x 200 cm) posters with summarized contents of the brochure. These posters were used at various project events.

Educational film about wolves and main project activities was produced in the final year of the project. The film covers key information on wolf biology and management complexities associated with this species. It was produced in 500 copies on DVD, and we distributed ~400 copies to project partners, libraries, media (all main public and private TV media companies) and interested individuals. The movie was shown at six public film evenings open for the general public, and as a part of lectures for hunters.

We organized a seminar about wolves for biology teachers. Teachers were actively engaged in learning about the proposed classroom activities, and they had the opportunity to discuss the didactic value of the materials in a school setting. At the end of the seminar the teachers received the educational tool kit containing a teacher’s handbook with worksheets for students and assessment sheets, a PowerPoint presentation about wolves, the educational film about wolves and the posters about wolves and the project. They also received all these materials in the electronic form on USB memory sticks. In addition, we also organized workshops for high school students. Around 400 high



Annual project bulletin “Wolf Track”



Biology students during preparation for workshops about large carnivores

school students participated and evaluated prepared educational materials. For that purpose, we prepared questionnaires where we assessed the students' knowledge and attitudes toward large carnivores of Slovenia. In January 2014 the teaching materials were also presented at an educational conference organized by the Faculty of Education, University of Ljubljana.



A notice board about wolves in Slovenia and about the project was installed at the educational trail in Mašun (a popular tourist destination in the wolf range in Dinaric Mountains).

_ Public acceptance of wolves

Biology and population monitoring is not everything - many other factors need to be taken into account for successful conservation of wolves. Their survival is threatened by negative public attitudes, primarily as a consequence of damages that wolves cause to livestock and other domestic animals. Public attitudes are also affected by prejudices about wolves and fear of wolves, which originate in a poor understanding of the species' biology. Our study of public attitudes showed that the vast majority of inhabitants in the wolf areas support wolf conservation and wish for a better coexistence. At the same time, many are still afraid of wolves. The truth is that wolves are not dangerous to humans and will in most cases avoid us at any cost. A rabid wolf would represent a deviation from normal behaviour, but rabies in wolves has not yet been documented in Slovenia.

_ Working with media

Lack of public interest and negative public attitudes toward wolves can present a potential threat for their conservation. Informed public on the other hand functions as a competent stakeholder that can equally participate in the decision-making process. During the project we directed considerable effort towards transparent communication with different media. We prepared 23 press releases, 10 short statements, organized two press conferences and participated in two others. Each press release and conference resulted in a high number of posts and articles in the electronic and printed media. Within its four year duration the project accumulated 361 internet media posts, 140 articles in printed media, 22 radio and 32 TV clips published in international, national and local media, as well as several television and radio interviews with representatives of the project team. This drew considerable positive media attention to wolves and wolf conservation issues, and we managed to provide the interested public with correct information about the wolf-caused damages and wolf population size, the two issues which were often the sources of conflict. Since knowledge affects fear and attitudes, we believe that well informed public is already forming more positive attitudes toward wolves, and has a better understanding of the wolf role in the ecosystem and the complex nature of wolf management. Most importantly, the public is starting to recognize the importance of wolf-human coexistence for wolf conservation in the long run.

Stakeholder involvement and improvement of wolf management

One of the important achievements of the project was the preparation of the first Action Plan for the Conservation of Wolves in Slovenia. The Action Plan was prepared by 57 participants from 21 governmental and non-governmental organizations with very different backgrounds and agendas. The Slovenian government officially accepted the action plan in February 2013. At the end of the project we revised the plan, and included considerable knowledge and experiences acquired during the implementation of the project. The Action Plan will ensure that the activities initiated in the project will continue after its conclusion, thus improving wolf population management and its coexistence with people on a long-term basis.

After-Life

After LIFE conservation plan is a way of ensuring that the results of the project will continue to be used for wolf conservation after the end of the project, and that the activities started during the project will become a regular practice in the national wolf management.

Project steering group, based on the results of the project, and in cooperation with the authorities, has prepared the After LIFE Wolf Population Conservation Plan.

Actions which will be carried out or continued after the end of the project:

- Implementation of surveillance of wolf population conservation status as set up in the project, including the use of the wolf monitoring portal (portal.volkovi.si).
- Periodic training of inspectors for recognition and evaluation of large carnivore damages to agriculture.
- Individual counselling of farmers about the wolf damage prevention.
- Involvement of volunteers in the wolf population monitoring activities.
- Maintaining the project web page www.volkovi.si as the main wolf conservation portal in the country.
- Maintaining the project Facebook page (Projekt SloWolf).
- Continuous periodic revisions of wolf population action plan.

Conclusion

The comprehensive, interdisciplinary, four-year LIFE+ project on wolves in Slovenia provided not only new knowledge and experiences, but also practical solutions and improvements that are already having considerable effect on wolf conservation and management. Today we know much more about the wolf, its habitat and its relation to other animal species and humans than ever before. And importantly, we are for the first time solving issues that have been at the core of wolf-human coexistence problems for decades. The project brought together a large number of Slovenian and foreign wolf experts



and managers, as well as other key participants - hunters, livestock breeders, volunteers and journalists - creating a support network that will be essential for future of wolf conservation in our landscapes. We are proud to have participated as partners in the project, and sure that its legacy will continue to improve the outlook for wolves and nature conservation in our country for many years to come.

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Project title: Conservation and surveillance of conservation status of wolf (*Canis lupus*) population in Slovenia

Acronym: SloWolf

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Coordinating beneficiary: University of Ljubljana

Associated beneficiaries: Slovenian Forest Service and Dinaricum Society

Project manager:

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European Commission - 70.92% (721,850 €)

Ministry of Agriculture and the Environment - 23.58% (240,000 €)

Project beneficiaries - 5.5% (55,923 €)

www.volkovi.si



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