

LIFE with bears

LIFE DINALP BEAR project bulletin 2019



LIFE
DINALP
BEAR



LIFE13 NAT/SI/000550

- ▶ The importance of protecting human property
- ▶ Maintaining bear-proof protection measures
- ▶ Project through the eyes of media
- ▶ Considering brown bear in spatial planning
- ▶ The educational role of Scouts organizations

Dear Readers,

After five years of the project, we are still alive and kicking. In this last issue of our project Bulletin we are presenting the activities from the previous few months, and also summing up the results. We are eager to see the good practices from the project to be continued, so we have prepared some recommendations for the future work regarding maintaining and increasing the tolerance for coexistence with brown bears.

Behind the results, activities, measures taken, reports written lay the motivation and passion of the whole project team. These five years have given us the opportunity to share knowledge, discuss doubts, resolve problems and celebrate success. We shaped and adapted to each other, established a good level of communication and I can safely say that the project made an impact on everyone taking part in it. Let us hope that our work also made an impact for the bears. So, in their name, thank you, LIFE DINALP BEAR project team, and thank you, our readers, for accompanying us in all our efforts!

May the road rise up to meet you!

Bojana Lavrič

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Proper handling for maintaining bear-proofness

Easily accessible food remains often attract bears close to human settlements. On the locations with the most frequent conflict situations, bear access to anthropogenic food remains is being prevented by bear-proof garbage containers and bear-proof compost bins. Even though these preventive measures have proven to be effective, the most important thing for ensuring their bear-proofness is proper and consistent use. In our experience, this can be achieved by awareness raising, constant field controls and personal contact between local public and experts for offering advice.

Furthermore, in 2019, we are even collaborating with local helpers to reach an even larger network of local people, interested in appropriate protection of their organic waste from bear visits. Through awareness raising by local helpers, we can stay in close contact with the local people on each of the five conflict "hot-spots". The main task of local helpers is monthly field control of all implemented measures and reporting to project coordinating beneficiary, Slovenia Forest Service. Besides, their very important role is knowledge transfer in the local environment, which greatly contributes to people's long-term awareness.



Bear-proof garbage containers and compost bins for individual households.



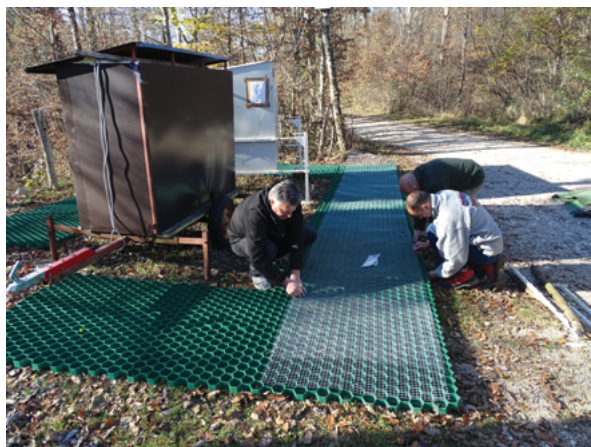
Common bear-proof garbage containers in the municipality.

Are electric-mats an efficient protection measure?

Since Autumn 2018, we have been testing the efficiency and versatility of custom-made electric-mats as an alternative protection measure for beehives against bear-caused damage. An electric-mat contains electric current, which means the bear receives a severe shock when touching the wires, resulting in its avoidance of the protected object due to a psychological barrier.

This protection measure is widely used abroad to prevent bears from entering buildings and food storages. In Slovenia, many beehives have similar features, especially stationary units, so we adapted the electric-mats for outdoor use and set them around a beehive in an area with regular bear presence, thus being potentially at risk. However, no bear approached the vicinity of the protected beehive during our testing period.

An electric-mat is relatively easy to set up and maintain, therefore it is most suitable for protecting stationary beehives, where it represents an alternative measure to a fixed multi-wire electric fence, or for the entrance to the area, which is otherwise protected with an electric fence.



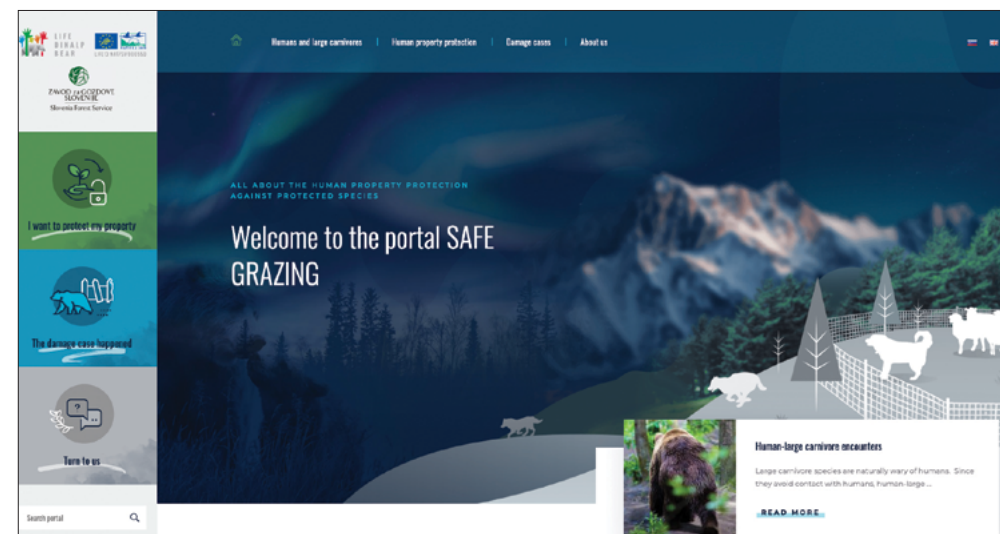
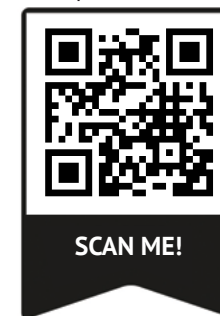
Setting up an electric-mat around a stationary beehive.

»Safe grazing« - the importance of protecting human property

Where endangered species habitats and human-dominated landscapes interlace, damages by large carnivores on unprotected or improperly protected human property may occur. Such events often lead to the emergence of conflict situations, which can lead to decreased human tolerance towards coexistence with large carnivores. The web portal "Safe grazing" has been designed to raise awareness about various human and protected species interactions, to give basic information about protected species and to show the importance and the effective ways of human property protection. Besides the tips about proper behaviour when encountering a bear, information about preventing bears approaching human settlements can also be found on the portal. Then, you can

get acquainted with the procedure about the report on damage cases and the eligibility of co-financing of the prevention measures purchase. Finally, yet importantly, you can always ask for some additional information or advice or share with us your own experience.

Web portal



Portal "Safe grazing" offers a lot of information on protected species, legislative system, damage prevention system, administrative procedures in case of damage cases and effective prevention measures.

Damage prevention in Veneto, Italy

After more than a century of the absence of large carnivores, farmers in many Alpine regions have established breeding practices without the traditional – though once widely used – protection measures against depredations on pastures, for instance, presence of a shepherd and guarding dogs. The return of large carnivores to these areas could, therefore, have a heavy impact in terms of damages to livestock. Protecting livestock from depredation thus is not just a matter of setting up protection equipment, but also of the extra work its use require and sometimes of a drastic change in livestock breeding practices.

In the frame of LIFE DINALP BEAR and LIFE WOLFALPS projects, we distributed 200 electric fences and 7 pairs of “Maremma-Abruzzese” guardian dogs between 2016 and 2018 in Veneto. Besides donating the equipment to the farmers, we provided specialized technicians that advise the farmers on efficient and responsible use and maintenance. We also assured the help of Veneto Provincial Police for transportation and installing of fences in the most inaccessible areas.



Italian Alpine Club volunteers helping to install an electric fence on high-altitude pastures of Asiago plateau.

Importantly, farmers also received help from numerous volunteers, who have joined the project “[Large Carnivores Coexistence](#)”, promoted by the Italian Alpine Club, thanks to an agreement with the Veneto Region. The initiative not only allowed efficient help to the farmers, who are facing the return of large carnivores but also attracted recreational visitors of the mountainous area closer to rural people, which makes it possible for the visitors to get acquainted with the experience of living in the Alpine nature.



LIFE DINALP BEAR technicians during their work - giving support to the farmers.



Temporary electric net, provided by LIFE DINALP BEAR project, for the protection of sheep on the pasture.

Considering brown bear in spatial planning

In the Dinarics, traffic-related mortality represents a big part of brown bear mortality and limits bear expansion into Alps. With the increasing awareness of the dangers of fragmentation, mitigation measures are being used worldwide to increase permeability and allow safe crossing across such structures. For such reason, the LIFE DINALP BEAR project team published a [handbook](#) with guidelines for integrating bear habitat suitability and connectivity to spatial planning. Prepared mainly for different specialists dealing with spatial planning, it explains the problems and offers different mitigation measures that can be used to lessen the impact of road infrastructure on animals or instructs on ways to avoid it altogether. Using the maps created within the same project that show [habitat suitability](#) for bears and [potential corridors](#)

between different habitat patches, spatial planners will now be able to see and avoid critical areas. By including image material, it is easier to point out problematic areas, possible improvements and show habitat suitability maps.

Report



Handbook



Bear mortality due to traffic can be mitigated with appropriate infrastructure such as green bridges.



The Biotechnical faculty of Ljubljana and the Veterinary Faculty of Zagreb organized educational seminars for experts working in spatial planning in Slovenia and Croatia. The participants learned about the importance of considering potential new infrastructure development at all different levels and that animals require time to adapt to new crossing objects before starting to use them regularly.

The educational role of Scouts organizations

Scouts organizations play an educational role in nature conservation and are recognized as an important target group in large carnivore conservation. Therefore, we have organized five educational workshops in Slovenia for leaders of scouts so they will transfer the gained knowledge to other scouts during their own activities.

We also organised a field trip to the brown bear core area in Slovenia. The scouts learnt how to recognize signs of presence of large carnivores and other forest animals, visited a feeding site for wildlife and a cave. Importantly, they learnt about best practice examples for mitigating human-bear conflicts and promoting human-bear coexistence. They were also informed on how to behave properly when visiting bear areas. We believe

that the knowledge gained by the scouts will be passed on to younger generations and contribute to their positive attitudes toward large carnivores and nature conservation.



A group of scout leaders finding signs of presence of large carnivores on an educational excursion.



The scouts were acquainted with the project activities in situ, like visiting a bear-proof compost bin, a protected beehive and a user of a "Bear-friendly" label.

Dipl.ing. Asja Matešić, Teacher of biology and ecology for the 5th to 8th grade, Nikola Tesla Elementary school, Rijeka, Croatia

"The pupils at my school participated at the bear workshop with particular interest. I am convinced that they have retained a lot of information that will influence their attitude towards bears and eventually help our society to decrease human-bear conflicts."



What will LIFE DINALP BEAR be remembered by?

After five years of the [project](#), let us see where it actually made an impact.

Firstly, we have successfully brought together partners from 4 countries that share the same brown bear population and harmonised their management of this large carnivore. The transfer of this joint management proposal into national strategic documents and action plans in these countries is one of the biggest achievements of our project.

The research conducted within the project resulted in thrilling scientific advances in new methods of genetic monitoring, which enabled us to count bears in Slovenia and Croatia quicker and more precisely. Furthermore, our population models help us understand the dynamics of the population, so the management decisions can be solidly scientific-based. GPS-telemetry data enabled us to define the suitable habitat for bears in the project area and to identify the corridors. This knowledge

is being incorporated into infrastructure and spatial planning, transboundary cooperation and other national-scale measures.

Although charismatic to most, bears can be a challenge for people they share the space with. Farmers, livestock breeders, beekeepers and local people were important stakeholders within our project. A new level of collaboration and comprehension has been reached, both via mitigation measures implemented in the field (electric fences, livestock guarding dogs, bear-proof compost bins and garbage bins) and via extensive communication. We have established a tight collaboration with local experts who are crucial for people's acceptance of mitigation measures and for raising interest for these measures among local communities.

The mitigation measures implemented on regional roads, highways and railways for preventing wildlife-vehicle collisions are



The project was shaped also by the enthusiasm and ambition of the project team, who believed all along that our work made a difference for brown bears and people.

beneficial for all. Bear intervention teams, consisting of professionals that help prevent or resolve conflicts between people and brown bears, have been established, trained and equipped during the project.

The projects are often designed and run by umbrella organizations, but the results should be reflected mostly on the local levels. Numerous project presentations and workshops with children, youth and adults helped raise

the level of co-existence, while bear-friendly label made local products more recognisable. Bear watching and other bear-related eco-touristic programmes, promoted by our website <http://www.discoverdinarics.org/>, are becoming a well-established tourism product of Slovenia and Croatia and a chance for locals to recognize the species as an opportunity rather than a nuisance.

Dr. Marija Markeš, Ministry for Environment and Spatial Planning, Head of Nature conservation sector

“The most important value of LIFE projects is that they enrich our knowledge and consciousness about animal and plant species and their habitats. They help us understand and respect the miraculous world of nature, which we are a part of. At the same time, they encourage us to find solutions which prove that there is enough space in this world for both, people and nature.”



Matteo De Crignis, a pupil of the “Giovanni XXIII” Elementary school in Tarvisio, Italy

“To me, the brown bear is a very beautiful animal. So far, I have only seen one at the ZOO; it seemed large and powerful and the idea of meeting him in the Tarvisio forest makes me a little bit scared. However, I have learnt that it is not aggressive and a rare animal, so encountering it is difficult. I would very much like to see what it does in the forest and I hope that when I grow up there will be many in our mountains. I like to draw and paint bears, and maybe one day I will study them, like the biologists of the LIFE project, who told us about them.”



Project through the eyes of media

Mass media are globally an important source of information about nature conservation, especially for an increasingly urban population. The content analysis of how media is portraying the project LIFE DINALP BEAR provides important insights for evaluation of the projects' achievements, while the analysis of how media is portraying brown bears can provide insights into potential strategies for improvement of human-bear coexistence. The preliminary analysis of 3256 media clips about bears that have been published either in printed media or online or broadcasted by

TV or radio stations in the project area and during the project implementation shows that LIFE DINALP BEAR project was overall mentioned in approximately 10% of the media clips. The media on average portrayed the project in a positive way (Figure 1), while the media pieces that mentioned the project have consistently portrayed bears in a more positive way than overall (Figure 2), suggesting that the project LIFE DINALP BEAR was being presented as a solution provider by the local media.

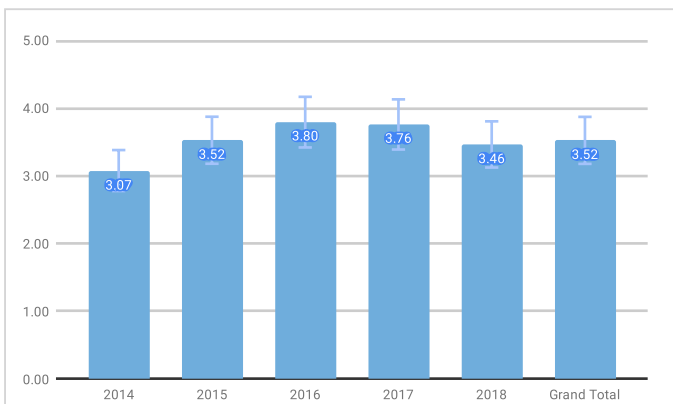


Figure 1: Average score of sentiment about the LIFE DINALP BEAR project in the media clips evaluated on a scale from -5 to +5 (-5 = extremely negative portrayal, 0= neutral portrayal, +5 = extremely positive portrayal).

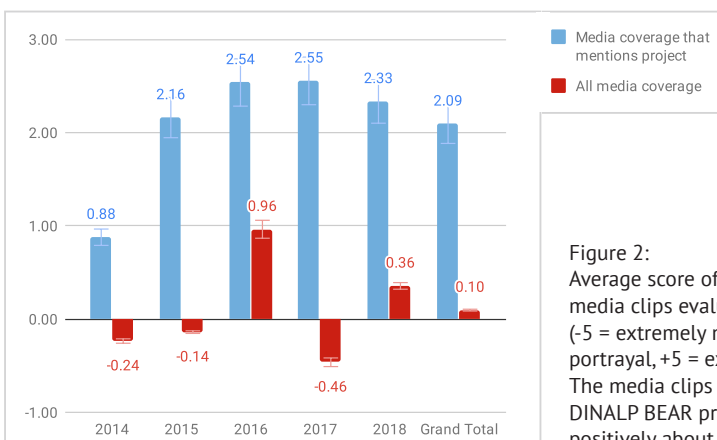


Figure 2: Average score of sentiment about bears in the media clips evaluated on a scale from -5 to +5 (-5 = extremely negative portrayal, 0= neutral portrayal, +5 = extremely positive portrayal). The media clips that have mentioned the LIFE DINALP BEAR project tended to report more positively about bears than overall.

Where can you visit interactive brown bear info points after the project ends?

In order to inform and interact with visitors of bear areas and local inhabitants, eleven interactive info points about bears were developed and set up in frequently visited touristic places and points of interest in Slovenia and Croatia. Of course, you can visit our info points also after the end of the project on the following locations:

Slovenia

- ▶ **ZOO Ljubljana**,
Večna pot 70, 1000 Ljubljana
- ▶ **Slovenian Museum of Natural History**,
Prešernova 20, 1000 Ljubljana
- ▶ **Bearlog Hostel**,
Ljubljanska cesta 4, 1330 Kočevje
- ▶ **Tourist Information Center Lož**,
Lož, Cesta 19. oktobra 49,
1386 Stari trg pri Ložu
- ▶ **INFOCENTER Triglavska roža**,
Ljubljanska cesta 27, 4260 Bled



Info point at the ZOO Ljubljana.



Info point in the Risnjak National Park.

Croatia:

- ▶ **Plitvice Lakes National Park**, Hotel Jezero entrance, Plitvička jezera 53 231
- ▶ **Risnjak National Park**, upravna zgrada, Bijela vodica 48, Crni lug 51 317
- ▶ **Northern Velebit National Park**, Kuća Velebita, Krasno 96, Krasno 53 274
- ▶ **Prirodoslovni muzej Rijeka**, Stalni postav u Kaštelu Zrinskih, Kralja Tomislava 1, Brod na Kupu 51 301
- ▶ **PUO Ravna Gora**, Tifon, Marche restoran on Motorway Rijeka-Zagreb
- ▶ **PUO Vukova Gorica**, INA on Motorway Rijeka-Zagreb

A visit from documentary filmmakers

The LIFE DINALP BEAR project raised attention also outside its project area. Besides having numerous interviews and newspaper articles written about our efforts, we hosted documentary filmmakers from Germany, France and Austria, filming how people coexist with bears in a small country in the middle of Europe.

They compared positive stories created within the project with the stories from other European countries with bear population. Their production aimed to promote human-bear coexistence, damage prevention, education and awareness raising. They also filmed our activities in monitoring and management of the bear population, the involvement of the project team with local communities, our collaboration with hunters and the scientific work. Moreover, they compared beekeeping practices across the

country, contrasting the methods used in the bear core area with those outside.

We are proud that the good practice examples established within the project will be communicated to a wider European audience through a professional documentary.



The main focus of the documentary film is coexistence between human and bears.

Educational activity - the bear in the hands of future generations

During our educational activities, we interact with many people. Their opinion about the brown bear is very variable - some people oppose, others are favourable or indifferent to the presence of bears. However, during numerous meetings at schools, we have found that the real differences emerge from the young generation. Children generally have a more positive perception, deriving mainly from books, cartoons and documentary films, and tend to highlight the positive aspects of the bear. This contrasts with a somewhat more negative attitude of older generations that often perceive bear

as a dangerous predator. As we believe that future generations will contribute greatly to the conservation, our crucial task is to address them correctly and transfer onto them objective information and facts.



Pupils are very interested in learning about the brown bear and enjoy interactive workshops.



The didactic work that Progetto Lince Italia carried out at the schools in Friuli, Italy, turned out very interesting and satisfying.

Brown bear in Carinthia

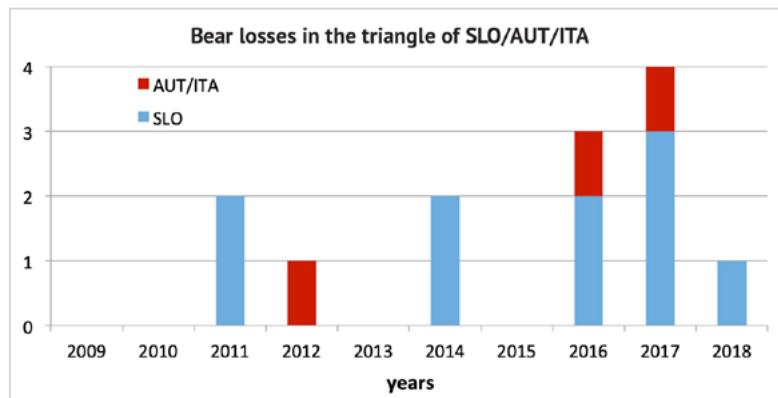
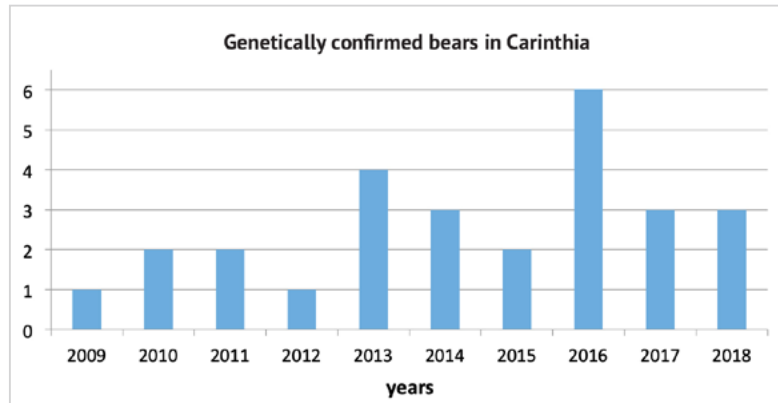
Collected genetic samples allowed us to count bears in Carinthia. There were three individuals roaming the area, all males. Two of them were genetically identified for the first time, probably subadult dispersers from Slovenia. The other bear is a well-known male, the samples of which have been collected in the Carnic Alps since 2008.

The trend of bear numbers in Carinthia during the last ten years was quite positive with a maximum of six bears in 2016. However, there have been also two recorded mortalities; one bear was shot illegally in the past decade, another one killed on the road.

Mortality was also recorded in the neighbouring area: in Italy, a paw print of the bear “Rudolf”, which had caused regular damages in Austria, was found. In Slovenian Alps, two bears were culled within the last ten years, five bears were interventionally removed due to their

conflict behaviour, one was live-captured and the remains of two bears were found by chance in the forest. As long as the losses increase to the same degree as the number of dispersing bears, the bear numbers in Carinthia might not increase.

During the genetic monitoring, performed in Slovenia in 2015, only male bears were detected in Slovenian Alps. However, 16 females were counted in the Prealpine area, which was an important increase from only 5 females detected there in 2007. In 2007, the estimated number of all individuals in this area was from 19 to 23 bears, and in 2015 from 41 to 57.



Recorded bear mortality in the Slovenian Alps and adjacent areas in Austria and Italy from 2009 to 2018.

20 educational workshops carried out in schools

We held 20 educational workshops on brown bear in Primary and Secondary schools in Gorski kotar and Lika area. Over 550 pupils participated in these workshops, which aimed to explain thoroughly specific and interesting facts about brown bears and human-bear coexistence.

During the workshops, the pupils had a chance to hear about the anatomy and ecology of bears, and to see educational videos about bear behaviour. Through open discussions with the students, we offered solutions to potential human-bear conflicts and explained methods of conflict prevention (bear-proof garbage bins, responsible waste disposal, how to behave upon encountering a bear, etc.).

During the interactive part of the workshops, the students inspected closely a telemetric bear collar, camera trap, and skull, fur, paws and tail of a bear. They also tested their skills with making front and rear bear paw casts, which were then put to permanent exhibition in each school.

Finally, education materials (including presentations and all the necessary materials to conduct such workshops) were left to the school teachers as a “bear kit”. The teachers will continue to carry out these workshops as part of their Biology or Nature classes.



Over 550 pupils participated in the workshops, which aim was to increase knowledge about brown bear and provide understanding about coexistence between human and bear for younger generations.

”

Damir Skok, director of the Zagreb ZOO, Croatia

“As well as most of modern ZOOs worldwide, Zagreb Zoological Park’s interest is favourable conservation status of free-living animal populations. Education is one of the powerful ways to pursue that vision and brown bear is a special case in such efforts. We are pleased that the collaboration with LIFE DINALP BEAR project enabled us to get access to their wonderful bear photographs from the photographic contest. We decided to make our own investment to reproduce their entire exhibit in a weather-proof technique, being this our contribution to promoting coexistence of people and bears.”

**Coordinating beneficiary****Associated beneficiaries**

University of Ljubljana



REGIONE DEL VENETO



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**LIFE
DINALP
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Population level management and conservation of brown bears in northern Dinaric Mountains and the Alps

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