

HACKING WILDERNESS FUTURES

*7-10 dec / prototyping workshop, Bucharest
Jan 2018 / testing and scaling, Armeniș*





What brings us together?

1.

We call for a concentrated effort to hack solutions to improve bison rewilding and evolve wildlife monitoring tools, focusing on human wildlife conflict mitigation as key lever for improved connectivity of wild areas.

2.

Join the Bison Hillock team and bison rewilding work in the Southern Carpathians in an interactive workshop to scale innovation in nature conservation at grassroots level, in a unique wilderness area - the largest in Europe.

3.

Create a network of experts in multiple disciplines to work for nature. Creative approaches, linking scientific research, community development, education, designerly practices and digital technologies can be the positive disruption to help people and nature thrive.

Where do we start?

At the heart of an ambitious wilderness conservation initiative:

in the Bison Hillock, where European bison are roaming freely once again after 200 years of absence; The hillock is located in a priority conservation area where WWF is working for wildlife comeback to fuel a new development model; it's the place where many tribes, communities, domains start working together to achieve a greater impact for people and nature.



THE BISON HILLOCK

Located in the Țarcu Mountains, this is the second bison rewilding site in Romania, building on pioneer work done by Vanatori Neaamt Natural Park in the North-Eastern Carpathians.

WWF and Rewilding Europe are working together to create a stable free-roaming population in the Southern Carpathians.

Currently the European bison is a vulnerable species, counting a total of 5.000 individuals, of which 1.600 are living in the wild. *Bison bonasus* Lowland-Caucasian line is classified as endangered on the IUCN Red List.

The Bison Hillock sits within a valley of outstanding natural beauty located in a spectacular 59,000 hectare Natura 2000 area.



The area

The Tarcu Mountains are located in The Southern Carpathians, a mountain chain covering over 1.4 million ha, one of Europe's most valuable areas for maintaining and extending wilderness. It is almost entirely covered by an extensive network of protected areas of different IUCN categories and Natura 2000 sites, having large areas of relatively intact landscapes.

The Tarcu Mountains are interconnected with 5 national and natural parks, together forming one of Europe's last wilderness strongholds. There are few truly wild areas remaining in our highly developed continent, yet they represent an invaluable part

of Europe's natural heritage. Covering a large variety of landscapes and habitats, these areas are sometimes the last refuge for some of Europe's flagship species and most representative landscapes.

In addition to their intrinsic spiritual and landscape qualities, and their important contribution to biodiversity conservation, such areas can offer significant economic, social, cultural and environmental benefits to local communities, landholders and society in general.

Our vision

Digital technologies and the Internet of things have fundamentally changed the ways in which knowledge is acquired and reconstituted the relationship between information and action. Working in and for nature requires adaptation to this new status quo and for naturalists to extend their activities into spacial, infrastructural, social and political aspects as well as technological innovation. The growing complexities of working to address nature conservation challenges creates the need to come together in new ways and get new tribes to work for nature.



A photograph of a bison in a forest. The bison is in the foreground, partially obscured by a tree trunk, looking towards the left. The forest floor is covered in fallen leaves, and the background is filled with more trees and foliage. The lighting is soft, suggesting a forest interior.

Our aim

Our aim during the hackathon (workshop) is to construe improved tools for wildlife monitoring and find fresh solutions to reduce Human Wildlife Conflict.

We invite you to join us in investigating the mechanics of bison rewilding and particularities of this species, building on rules deriving from natural patterns, local stakeholder practices, wildlife monitoring data and hardware advancements.

Themes to hack

*We seek your
wisdom and new
perspectives
to design and
develop technology
enabled solutions
to some of the
most pressing
wilderness
conservation
challenges*

- determinating favourability of habitat, seasonal migrations of bison, feeding and rest areas and design strategies to engage locals to mitigate HWC – deploying best practice (trained dogs including further training, support in cleaning and managing orchards).
- correlating earth observations data with field monitoring data including direct observation, drone, camera trap and sensorial data to better understand vulnerabilities that favour Human Wildlife Conflict.
- innovating with monitoring technologies and methodologies, seeking the most innovative sensor or GPS tracking systems and adapt these new technologies to conservation challenges.

The agenda

***1-3 Dec
Armeniş***

Explore the wild

Bison Hillock field recce - **optional, by appointment**

***7-10 Dec
Bucharest***

Understanding the challenge, team formation - day 1 (pm)

Ideation - day 2

Prototyping - day 3

Validation and next steps - day 4 (am)

@ Modulab / Future Gardens

***16-18 Dec
Armeniş***

Explore the wild

Bison Hillock field recce - **optional, by appointment**

Jan 2018

Community consultations

Field testing and upgrades

Prototypes iterations

Field testing and scaling plan

Join a filed recce



We invite you to choose one of two trips into the wild, exploring the bison rewilding area and nature conservation at its grassroots. You will be guided by naturalists, facilitated by locals.

a. 1-3 December

b. 16-18 December



Wildlife tracking, wilderness guided walks, time spent in a rural community are the ingredients which will help us reconnect with nature and dive into our mission.

Please get in touch ([click to email](#)), if you are available.



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Innovative steps around the world



A person wearing a dark blue WWF t-shirt is holding a small, black, rectangular electronic device with a thin antenna. In the background, another person wearing a green bucket hat and a dark blue shirt is kneeling on a sandy beach, working with a large sea turtle. The scene is set on a sandy beach with some debris visible.


A new community of conservationists, technologists, engineers, data scientists, entrepreneurs and change makers has come to life. Together, WILDLABS.NET share information, ideas, tools and resources to discover and implement technology-enabled solutions to some of the biggest conservation challenges facing our planet.

[Click here to read more!](#)

A close-up photograph of a person's hand, wearing a dark jacket, gently touching the head of a rhinoceros. The rhino's skin is dark, thick, and heavily textured with deep cracks. The background is a blurred, dry, yellowish-brown landscape, likely a savanna or savanna. A semi-transparent white text box is overlaid on the left side of the image.

Sigfox Foundation have been developing a new monitoring and anti-poaching system in Africa, "Now Rhinos Speak". This includes a small GPS-device with an accelerometer that sends the rhinos' positions few times a day.

[*Click here to read more!*](#)



In India, WWF's "Lights for Stripes" project installs solar-powered lights around villages located at the edge of the Sundarbans National Park, a reserve that harbors a population of tigers uniquely adapted to living in mangrove wetlands. The lights deter tigers from straying into these villages, which in turn reduces human-tiger conflict.

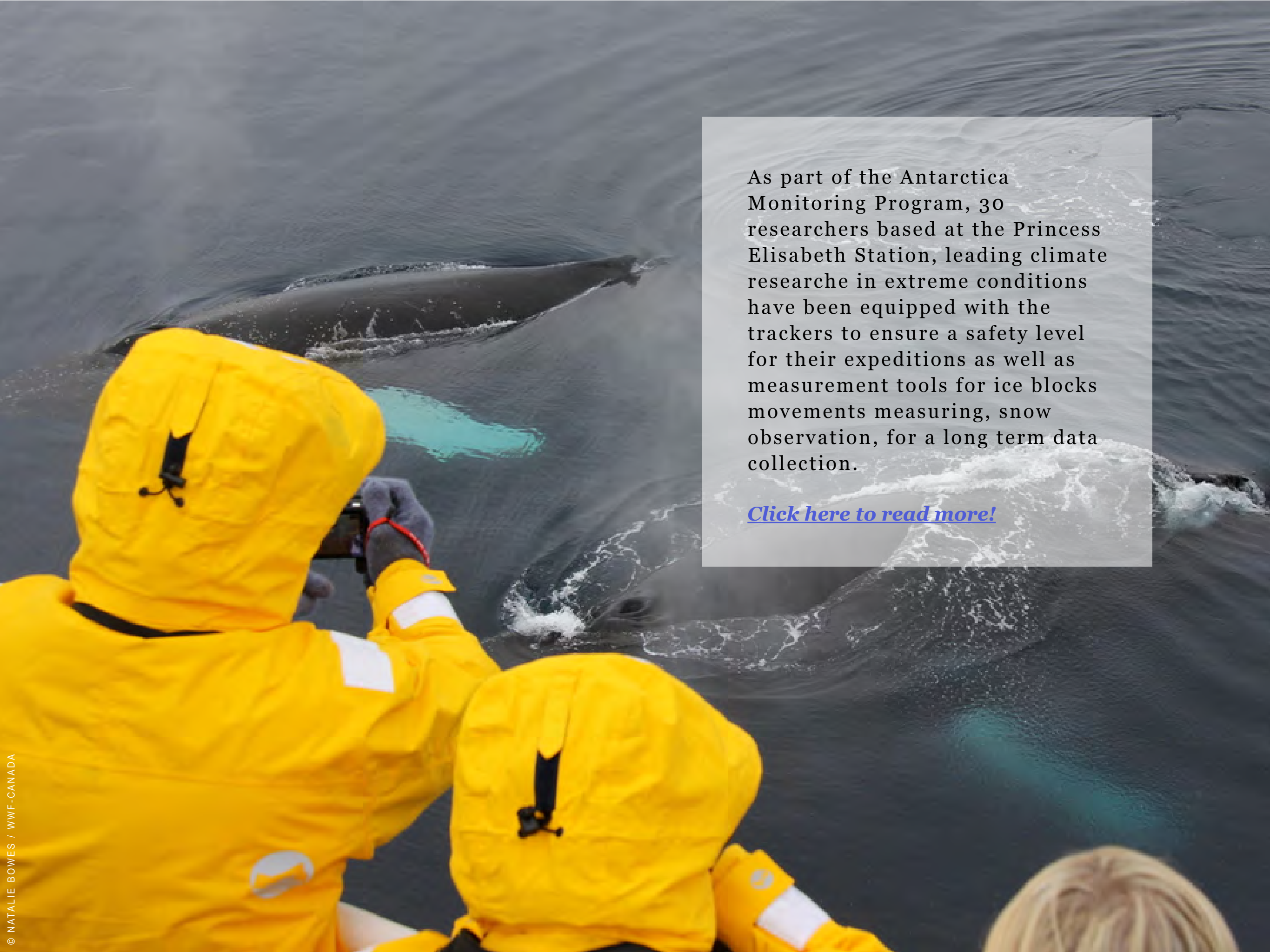
This year, India's first Zoohackathon to find solutions to eradicate wildlife trafficking also took place.

[*Click here to read more!*](#)



WWF is building a small, affordable seismic detection device to alert people, especially farmers, to the sound of an approaching elephant before it reaches their field or community. This preemptive approach to detecting elephants will better protect both elephants and people in places like India and Africa by preventing conflict between humans and elephants.

[*Click here to read more!*](#)

A full-page background image showing a researcher in a bright yellow raincoat and hood, seen from behind, holding a camera to take a photo of a large whale breaching the dark ocean surface. The whale's dark, sleek body is visible above the water, with a splash of white foam at its tail. The water is dark and textured with small waves. The researcher's yellow gear has white reflective stripes and a small circular logo on the sleeve. The overall scene is set in a cold, open ocean environment.

As part of the Antarctica Monitoring Program, 30 researchers based at the Princess Elisabeth Station, leading climate research in extreme conditions have been equipped with the trackers to ensure a safety level for their expeditions as well as measurement tools for ice blocks movements measuring, snow observation, for a long term data collection.

[*Click here to read more!*](#)



Bison rewilding challenges

Sustainable development of wild natural areas are threatened by human wildlife conflict, so it is imperative that conflict is dealt with swiftly and that locals feel that they are involved in the process and are not being ignored.

We strive to resolve their pressure points and conflict areas with wildlife now, in the same pace as we evolve this pioneering bison rewilding approach and ecotourism developments.

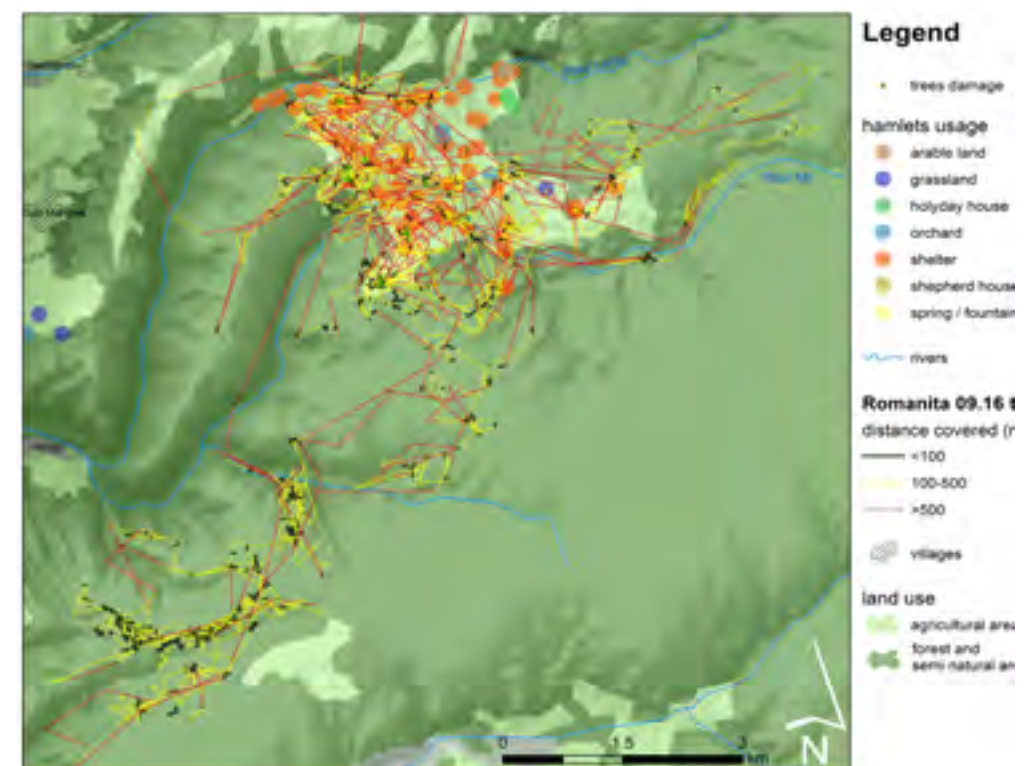
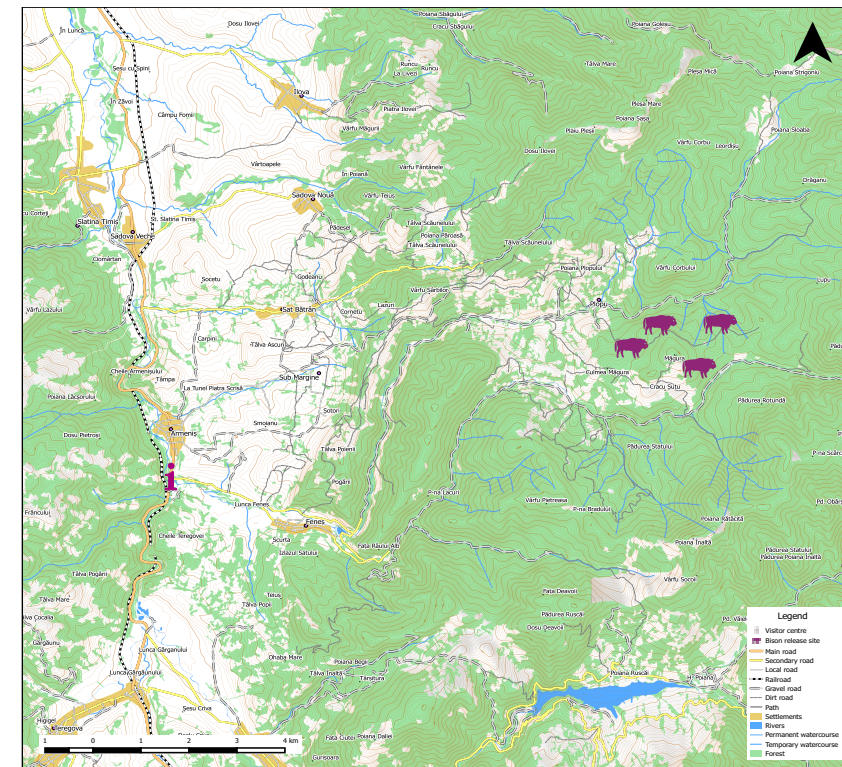
In the case of bison the cold season is the most problematic, some of our bison are lurking around quite close to the local villages and feeding on haystacks and the bark of fruit trees in traditional orchards located on farms or pastures. In the past two winters we have had a few bison coming down for the entire season to the main villages. This is explained by the cold temperatures, rain, snow, food availability and also the personal history of the bison. We have been building solar powered electric fences around those properties up in the mountains. Villagers still work the land of their summer huts.

Tools and insights in our hacking lab

People: biologists, ecologists, locals,
rangers, protected area managers,
engineers, programmers, GIS experts,
makers, thinkers, doers

Data: bison habitat use, climate, GPS collar and wildlife presence data

Gadgets: computers, micro electronics, sensors, cables, tools to put them together, 3D printers, laser cutters, paper, pens and more.





Impact

1.

An innovative interchange between contemporary ingenuity, technology and basic conservation challenges, involving local people will provide **a transferable model** to positively impact many other conservation hotspots nationally. Our work will continue on species such as the wolf, bear or lynx and share results across the WWF network in over 100 countries.

2.

We develop evidence-based, practical solutions that benefit both nature and society. We test and refine the proposed prototypes. We invest in scaling the ideas, with a potential €30,000 seed funding available for the next stage of our hacks and **give birth to new nature-tech startups.**

3.

Slow down the divide between people and wildlife by helping its gatekeepers overcome short-term conflicts. The communities neighbouring or living in protected areas or rewilding areas such as the Bison Hillock will choose to maintain and evolve good practices benefiting wild nature.



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