



# Making nature work again: an interview with Jens-Christian Svenning

In a changing world, leading ecologist and Rewilding Europe Supervisory Board member Jens-Christian Svenning believes rewilding has a critical role to play in scaling up the recovery of wild nature – and the essential benefits it provides.

## Learning from the past

Rewilding. Everyone reading this will have heard the word before, but what does it actually mean? Contrary to what some people might think, the "re" in rewilding doesn't imply returning to some arbitrary point in the past, when European landscapes were grazed by large herds of free-roaming European bison and aurochs, drained by rivers that flowed and flooded freely, and covered in large swathes of untouched wild forest.

What rewilding does involve is learning from the past to shape a future where nature and people can thrive together. By understanding how nature worked in the millions of years before



people changed it, we can identify which natural processes and elements require restoration moving forwards.

"Given the dynamic, functional focus of rewilding, the 're' in rewilding means 'again', rather than 'back'," says Jens-Christian Svenning, a rewilding expert and professor at the Department of Biology at Aarhus University, where he leads the Centre for Ecological Dynamics in a Novel Biosphere (ECONOVO). "By looking at the past, we can learn what steps we need to take now to enable our degraded wild ecosystems to function again – and thereby take care of biodiversity and people more effectively."

### Uncharted territory

Rewilding's focus on restoring functionality lies at the heart of why it is the best approach for enabling nature recovery in the 21<sup>st</sup> century – a time when the influence of man is impacting wild nature like never before, through drivers such as land use, climate change, diminishing bio-abundance, and the ongoing spread of invasive species. This is leading to the emergence of what are known as "novel ecosystems".

"Novel ecosystems are new types of wild nature shaped by ongoing human impact," explains Jens-Christian Svenning. "Such ecosystems don't resemble anything we've seen in recent history, but they are becoming the new normal."

### The importance of megafauna

Given the inevitable emergence of novel ecosystems, the question arises – can we steer their development to ensure positive outcomes for people and wild nature? Jens-Christian Svenning believes the rewilding approach – which includes trophic rewilding – has a key role to play.



Jens-Christian Svenning.



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"Trophic rewilding supports the comeback of wild, large-bodied animals, known as 'megafauna' to promote complex, biodiverse ecosystems," he explains. "These species, which were once widespread in large numbers across the planet, have been widely and disproportionally removed from ecosystems as a result of human activities over the last 50,000 years, and their populations are still declining in many areas. The loss of megafauna can result in simpler ecosystems, which are less functional for biodiversity and are less resilient to external pressures such as climate change, thereby reducing their critical role mitigating climate change via carbon storage."





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## Herbivores to the fore

Restoring abundant populations of large herbivores, such as European bison, wild horses, and wild bovines in Europe, is particularly important. This is why Rewilding Europe is reintroducing and restocking populations of such herbivores in so many of its rewilding landscapes.

"The interactions between these animals and the landscapes they inhabit increases plant diversity, seed dispersal, nutrient cycling, and the range of habitats available to other wildlife species, boosting biodiversity and ecosystem functionality," explains Jens-Christian Svenning.

Large herbivores interact with the landscape in different ways. European bison, for example, will often browse on woody plants and debark trees, while horses graze strongly on coarse grasses. In this way they both help to limit the potential for these different plant groups to dominate landscapes.

"Different megafauna herbivore species have different effects on vegetation and biodiversity, and the larger species have more potential to positively affect biodiversity than smaller ones," explains Jens-Christian Svenning. "When we bring back different types of herbivore in the same landscapes – which are collectively called herbivore 'guilds' – we can amplify their positive impact."

## The unique selling points of rewilding

The restoration of European landscapes, seascapes, and wildlife populations is essential – not only for the inherent value of nature itself – but because such restoration is key if we want to move towards a more liveable, resilient, and prosperous future. According to Jens-Christian Svenning, this is where rewilding has two major advantages.



Jens-Christian Svenning.

"Firstly, trophic rewilding reinstates natural processes linked to megafauna, which we expect to remain effective in novel ecosystems. Secondly, the positive impact of trophic rewilding continues to upscale as megafauna populations naturally grow in size and range. This is where bio-abundance is critical – the more animals you have, the greater their impact."

A case in point is the Southern Carpathians rewilding landscape in Romania, where Rewilding Europe and WWF-Romania began reintroducing European bison in 2014. Today, the free-roaming population here numbers over 200 individuals. As this population continues to grow of its own accord and recolonise new areas, its wide-ranging beneficial impact continues to grow too.

"This example highlights one of the main benefits of rewilding in general, including trophic rewilding," says Jens-Christian Svenning. "You can carry out hands-on traditional conservation to enable restoration and enhance biodiversity, but this demands a lot of ongoing time, effort, and financial investment. Thinking about the big picture, about the large European spaces that need to be restored, this is often an insurmountable challenge. In the long term, it's far more sustainable to rely on natural processes – as rewilding does – to carry out the restoration at meaningful scale. After all, these processes have

worked on their own for millions of years, autonomously, to maintain biodiversity and ecosystem functionality."

## Science and practice in partnership

Jens-Christian Svenning continues to enjoy his role as a member of Rewilding Europe's Supervisory board.

"I'm super happy to be part of the board. I think the rewilding approach should be central to efforts to restore nature and ensure we have resilient, functioning ecosystems on a global scale in the future. The scientific evidence is there to support this. As a scientist myself, I'm thrilled to be working with an organisation that is working to achieve this in the real world. My role at Rewilding Europe is to come as a scientist and input scientific knowledge into discussions and decision-making processes about practical rewilding.

"Rewilding Europe's rewilding landscapes are essential practical showcases. We can talk about rewilding from a theoretical and scientific perspective, to increase our knowledge, and this is essential. But having diverse, real-world examples is equally important as it helps to inform our scientific understanding. It's one thing to read about something, but to see rewilding happening on the ground, and the benefits it can deliver, is critical for changing mindsets, inspiring people, and scaling things up."