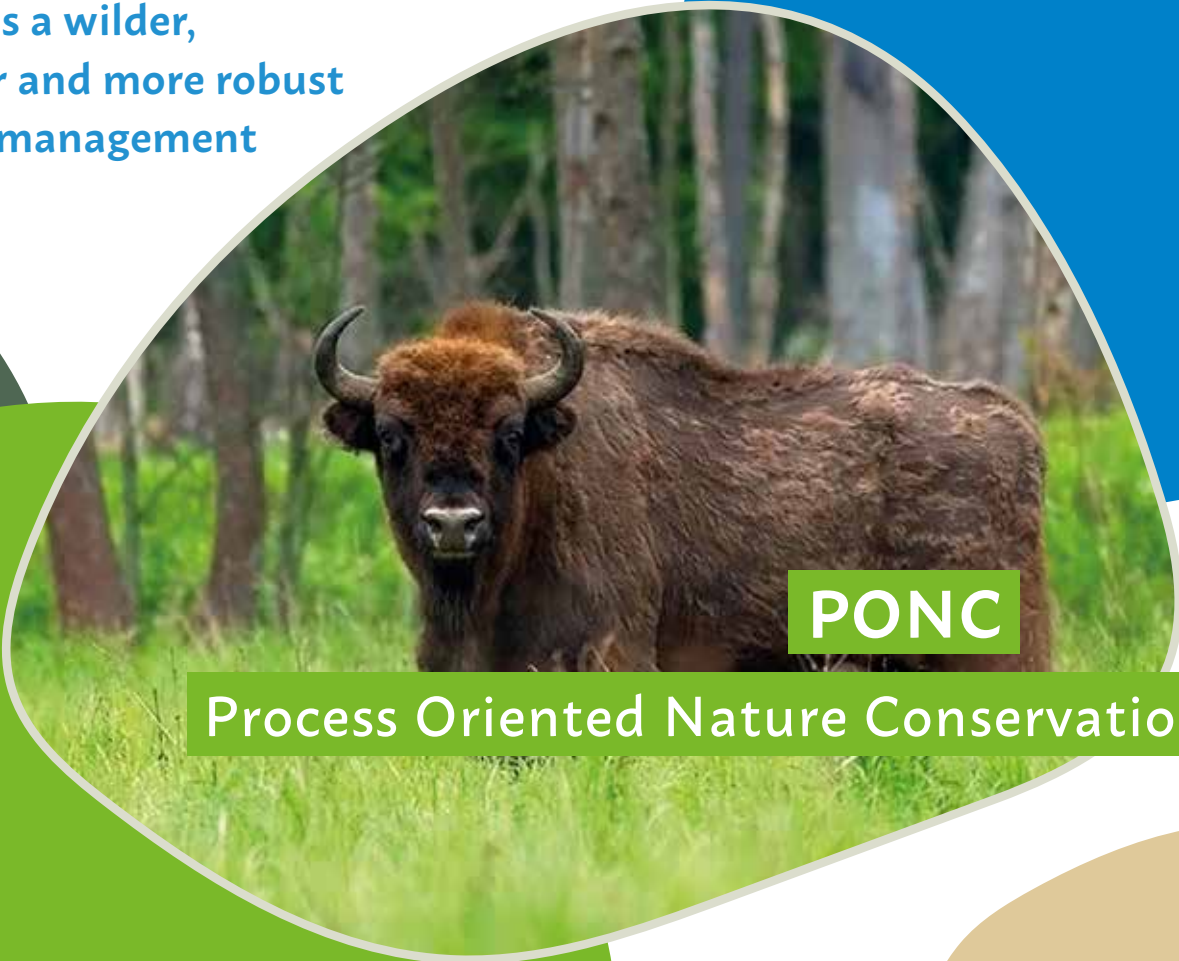


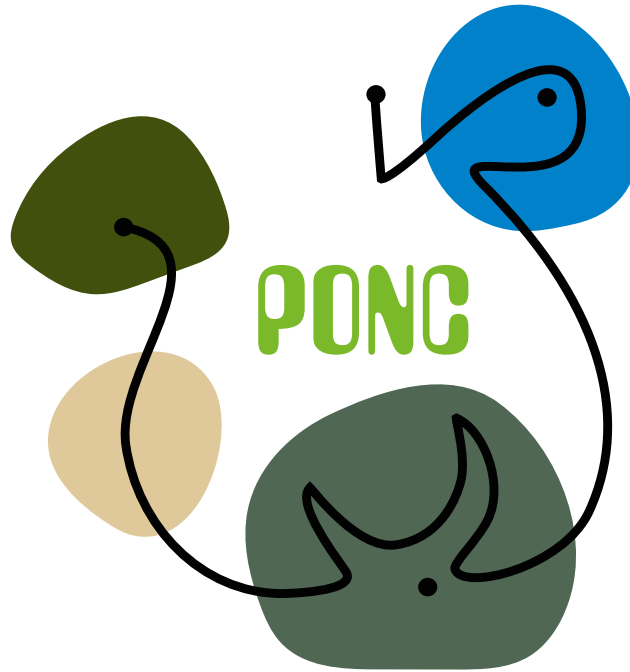
Towards a wilder,  
cheaper and more robust  
nature management



PONC

Process Oriented Nature Conservation






## Process Oriented Nature Conservation

Towards a wilder, cheaper and more robust nature management






In our contemporary European landscape, there is an increasing division between the natural and the man-made landscape (agriculture, industry, habitation, ...). What little is left of fully functioning ecosystems is often secured in nature reserves, under very strict legal protection. And rightly so! But the man-made landscape surrounding these natural areas is increasingly devoid of any natural processes or biodiversity and our actions in the man-made landscape have an ever increasing negative impact on the ecosystems in the adjoining natural areas.

This booklet is part of the Erasmus+ funded project '**Process oriented nature conservation: towards a wilder, cheaper and more robust nature management**' (**PONC**). In this project we want to explore how natural processes can be encouraged back into the man-made landscape, for the good of both nature and humans. We are convinced that new economic models can be developed (and are currently being developed) which are more 'in sync' with nature. We do not want to chase humans out of the landscape, quite the contrary: we believe that natural processes do have a place, also in man-made, utilised landscapes. There should be no conflict between utilising a landscape to feed and provide for us and the vitality of the ecosystem. After all, we are all part of nature and the ecosystem.

During the past years we have studied lots of natural processes, both abiotic (wind, water, fire, ...) and biotic (grazing, predation, scavenging, ...), in different parts of Europe. In this booklet we would like to share what we have learned on our journey, as we believe even in the tiniest spaces and close to humans, there is room for natural processes and the biodiversity they support.





Wood pasture in Romania

# Think new

## Big is beautiful, but small is also sweet

When asked about natural processes, people often question the scale or the current naturalness of the landscape they work in. Of course, natural processes need a minimum scale to function, which is larger for some processes than for others. Often, the larger the scale, the better the process 'works'. But many natural processes can be introduced and encouraged even on a small scale and in any type of landscape. We must break free from our ingrained thinking patterns and start thinking new.





Landscape around Ename, Belgium.



# Mosaic landscape

## Softening the edges between ecosystems

Our modern landscape is very delineated and rigid, even in nature conservation. Ecosystems are, on the other hand, inherently dynamic and have 'softer' edges. These gradients also often have very high biodiversity value. We advocate the softening of edges between ecosystems and between landscape use, for example allowing the development of scrubby woodland edges in grasslands, but also allowing the grazers into the woodlands. We should strive for a mosaic landscape in which ecosystems and land use are intertwined.





The Polders of Kruibeke, Flanders' largest flood plain along the Scheldt river.

# More space for water

## Meandering, natural flooding and wetland dynamics

Water is a key element in our landscape and in our 'man-made landscape' we always seem to have too little or too much of it. Allowing more space for water and retaining it instead of draining it, will support biodiversity and water quality, whilst also helping flood control and drought resilience. A true 'win-win'. This can be done at every scale, from re-meandering small streams to re-installing natural flooding areas along large rivers. An engineered approach can be part of the solution but will only work in a sustainable way when based on natural water dynamics.





Cattle grazing on woodland edges in Sweden.

# Agriwilding

## Removing boundaries between agriculture and nature

Agriculture and nature are rarely seen as compatible, but this does not have to be the case. We must move away from having small islands for nature, in a hostile agro-industrial landscape. We should strive for a more integrated approach, where nature blends into its regenerative agricultural surroundings. Agriwilding is about making agriculture more 'wild', but it is as well about making 'the wild' more agricultural by exploring how farmers can benefit from and contribute to nature conservation. We believe that in healthy ecosystems and on healthy soils, productivity and biodiversity can coexist.







Gotland sheep grazing on Gotland, Sweden.

# Grazing with social herds

## Managing herds by mimicking nature

Grazing is a key natural process in many landscapes, both in nature conservation and in agriculture. But we need to move away from regarding grazing animals as 'natural lawnmowers' and allow the animals to exhibit more of their natural behaviours, both in agriculture and nature conservation. This includes aspects such as allowing social structures to develop within a herd, working with migration (even on a small scale) or having a permanent herd that knows the site instead of constantly shuffling the herd. Managing herds by mimicking nature will increase the beneficial impact of grazing on the vitality of the ecosystem and on biodiversity and will support seed dispersal and natural nutrient cycling.





In agriculture, new economic models directly connecting producers and consumers create support for biodiversity on both sides.

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# Economic sustainability

## Finding new grounds for humans to live off the land

It is becoming more and more obvious in the landscape that our current economic model is worn out, especially when it comes to managing the land. We advocate finding a new approach to land stewardship, in which the local community can live off the land in an economically sustainable way, supporting and supported by vital ecosystems. Humans are part of nature, and we should aim for a model in which nature can include and support humans.





Ravens on a red deer carcass.

# Predators and scavengers

## The circle of life

Vital ecosystems include dead animals, predators, and scavengers. Predators not only kill animals, they also have a major impact on the behaviour of grazing animals and how they use the landscape, supporting the development of a mosaic landscape. Dead animals in turn support a very specific carrion ecosystem that has almost disappeared from the landscape. Scavengers also heavily depend on predators to thrive. The presence of large predators in the landscape will also require protection measures for domesticated animals. These measures are already being successfully implemented in many places.



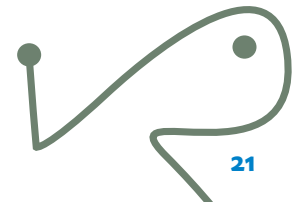


Sand dune restoration In den Brand, Hechtel-Eksel, Belgium.

# The winds of change

## Give way to wind to model the landscape

Wind is a key abiotic natural process in our landscape. The impact of wind, e.g. wind erosion or tree uprooting, is often viewed negatively. Wind is however, a key factor in sand dune or woodland dynamics. Wind also drives nutrient influxes, both negative (e.g. agro-industrial nitrogen influx) and positive (e.g. Sahara dust mineral influx) and half of our plants are dispersed by the wind. In each case, wind should be considered as an important natural process modelling our landscape.







Wood pasture with ancient oaks in Windsor, UK

# Deadwood and hollowing

## Trees gracefully expire

A substantial part of biodiversity in our landscape is associated with dead wood, decay and hollowing trees. Large trees, ancient trees, dead and decaying trees: all of these should be maintained as much as possible, both in woodlands and in open landscapes. Wood can of course be harvested and trees might need to be managed, but this can be done whilst also ensuring that some trees can always go through the natural aging process, which is essential for biodiversity.





Living soil is crucial for resilient ecosystems.

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# Soil

## The foundation of everything

Often ignored, a healthy soil ecosystem is the foundation for a thriving and vital ecosystem above ground. The soil ecosystem cannot be separated from the vegetation and the animals above ground. Many of our current land management practices lead to soil degradation, which has all kinds of adverse effects, both on biodiversity and on economic sustainability. Even though we are only just beginning to understand the complexity of the soil food web, it is clear that supporting the underground ecosystem is essential. Even if patches of bare soil are often viewed negatively, the biodiversity value they provide should not be underestimated.





Domesticated water buffalo is a proxy for the extinct wild European water buffalo, for grazing in wetlands.

© Sabine Wolters

# Proxies

## A functional substitute

As we are looking into natural processes in a man-made landscape, it might not be possible to restore a natural process to its full extent. This might for example be because of scale, because of a (temporary) lack of stakeholder support or because an animal species has gone extinct. In these situations a proxy, or a functional substitute, might be the solution. Think of domesticated grazers as a proxy for wild grazing animals, or ring barking trees as a proxy for drought in a woodland. In each case, some management and compromise will be necessary in a man-made landscape. This should not be seen as a failure, because it is 'unnatural', but as a pragmatic way to introduce and support natural processes in our landscape.





A post-industrial landscape in Emscher Park, Germany, where nature slowly reclaims its place.

# A new landscape

## Back to the future

When discussing natural processes in the landscape, a question that often arises is 'to which era we would like to return?' But this is not about restoring a certain landscape or going back to a specific point in time. We are striving towards a novel approach, rethinking the man-made landscape, inspired by natural processes and the species they support. Biodiversity has evolved with natural processes, and it will thus respond if these processes are allowed to function. We want to enable the highest imaginable vitality in ecosystems, not forgetting to include ourselves, supporting life where we live it.







Agricultural soil lacking vitality and resilience, dried out during a summer heat wave.

© Vilda - Yves Adams

# Resilience and adaptation

## Brace for impact

We live in exciting times, to say the least. The world is changing fast, and unfortunately in many aspects not for the good. Supporting natural processes in our landscapes will be key in adapting to these changes and in making our landscapes and society resilient. Vital ecosystems will not only allow us to survive, they are also essential for biodiversity and to maintain the planet's resilience.





The PONC project team in Bosland



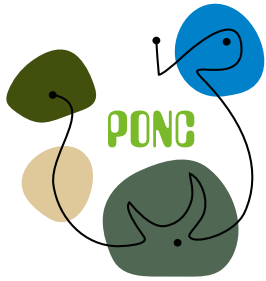


## Be inspired!

This booklet has given an overview of what we have learned on our journey in the world of natural processes. Even though we have very different backgrounds (or maybe just because of that), our discussions have always been very rewarding, and we have all been challenged to question ingrained ideas and to leave our trenches. So now instead of focusing on stumbling blocks, we have gained hope and focus on opportunities. We hope that you can be as inspired as we have been.

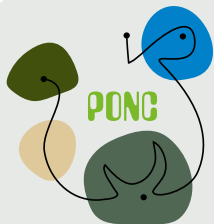
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