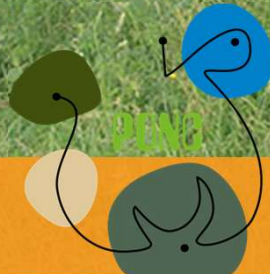


Process Oriented Nature Conservation in manmade landscapes

Leo Linnartz – ARK Rewilding Nederland

June 2023



Co-funded by the
Erasmus+ Programme
of the European Union



PONC = restoring natural processes

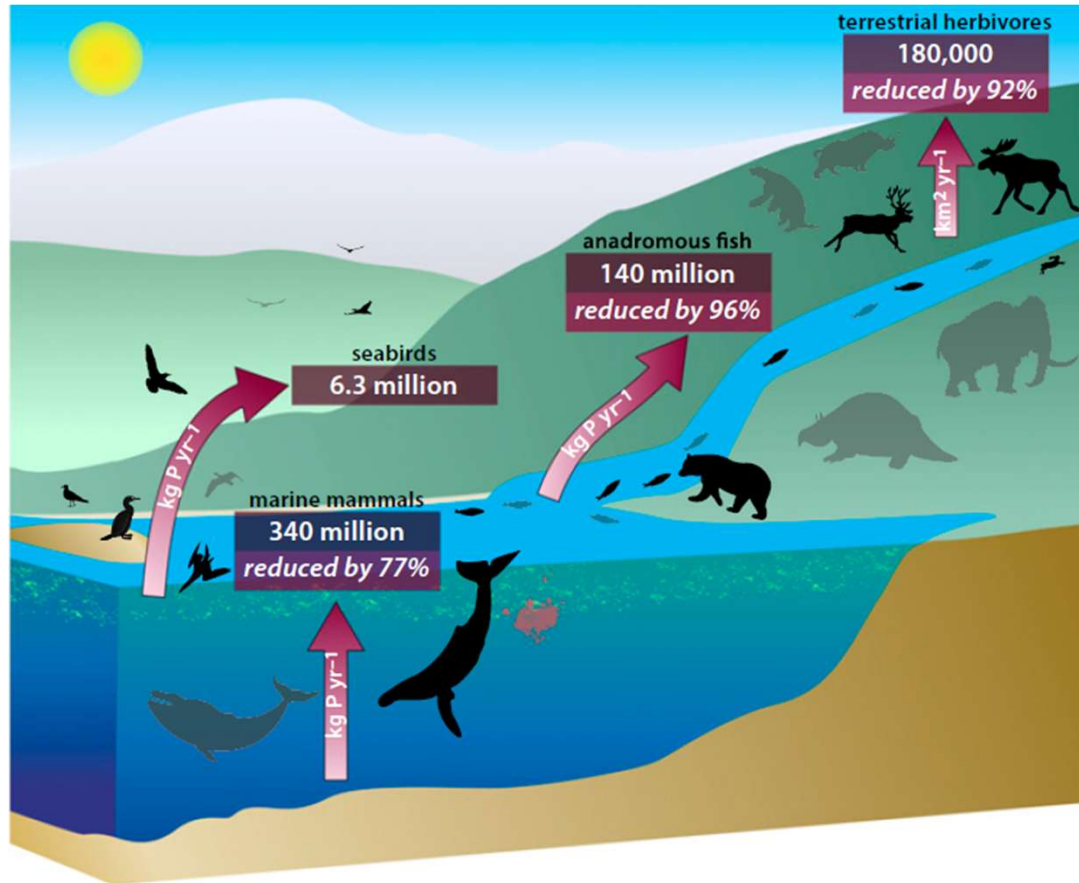


- Biotic
 - Grazing (large, small animals)
 - Predation
 - Migration
 - Beavers/other ecological engineers
 - Scavenging/recycling
 - Burrowing
 - Diseases
 - Soil processes
- Abiotic
 - Fire
 - Storm
 - Meandering
 - Drought
 - Frost



PONC's objective: increase the scale of wildness locally

Restoring the mineral cycle



Doughty et al. 2015



Large scale mineral cycle

Restoring the mineral cycle

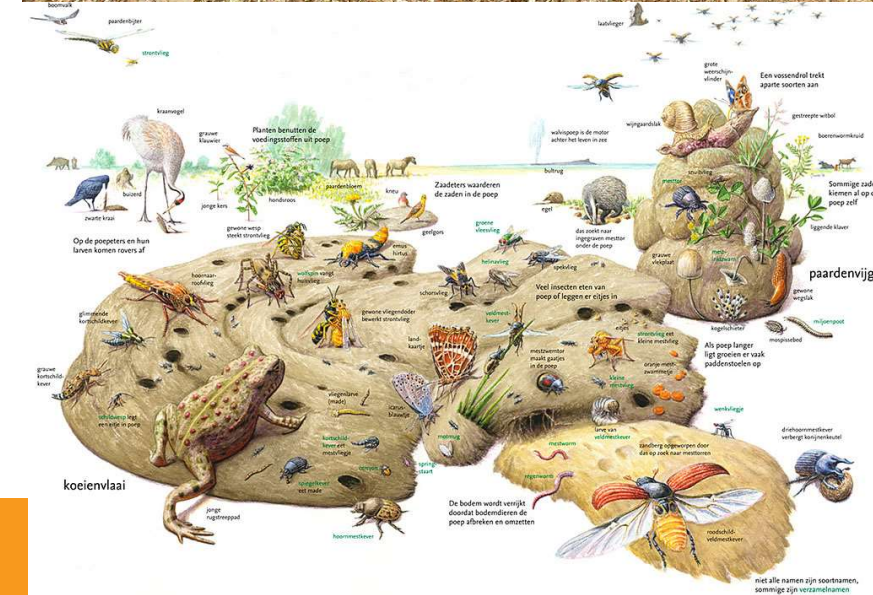
- Rain washes minerals from the higher sandy soil to seepage zones
- Trees, herbivores, predators, etc. provide a return flow and close the mineral cycle
- Manure, dead wood and carcasses are part of that cycle



Landscape scale mineral cycle

Restoring the mineral cycle

- Healthy manure, dead wood and carcasses are part of that cycle



Local scale mineral cycle

Large grazers and their predators are natural processes



Herbivores are essential for biodiversity and the ecosystem

Each herbivore is different

- grazers and browsers
- non-ruminants and ruminants

Species-specific behavior:

- bison wallows
- bovine bull pits
- stallion manure piles
- water buffalo ponds
- etc.



Grazing, browsing, grubbing, rubbing, wallowing,....

Grazers complement each other



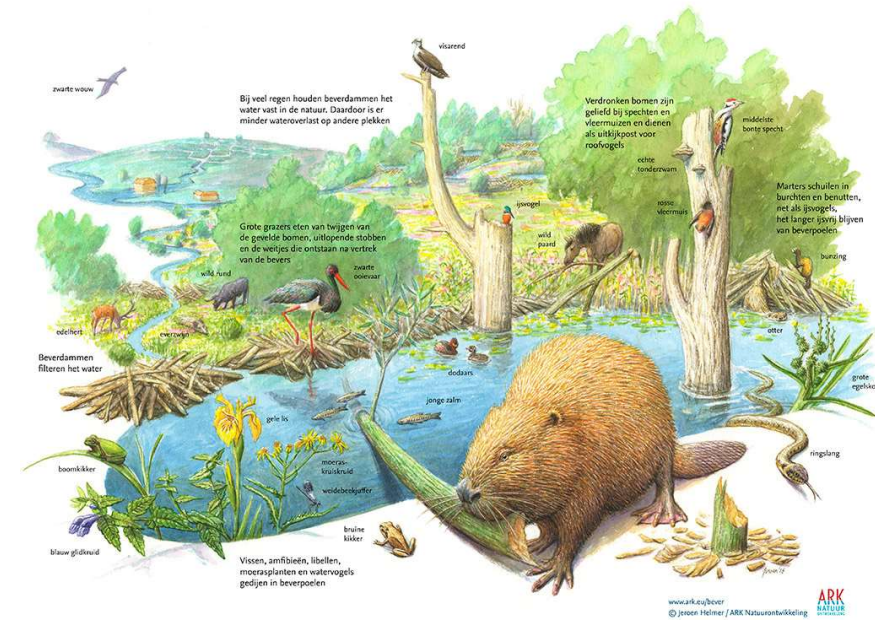
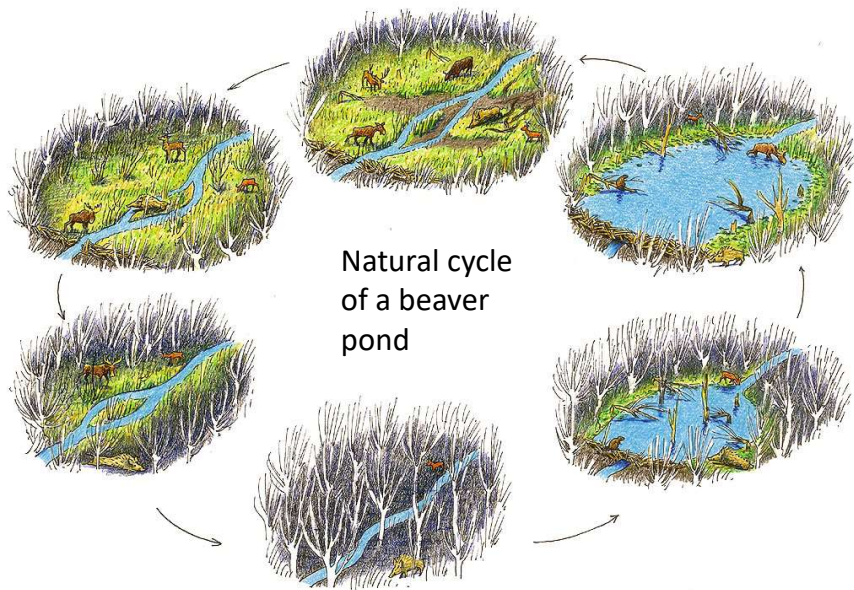
Adding more species, gives a greater carrying capacity

◉ Examples of small scale rewilding



Rewilding in a human dominated landscape

Beaver



Landscape architect and keystone species

Ingendael, 50 ha

- Remeandering of the Geul
- Fallen trees stimulate meandering
- From drained valley to flood plain



Lower Geul valley in South-Limburg

Natural grazing on former farmland

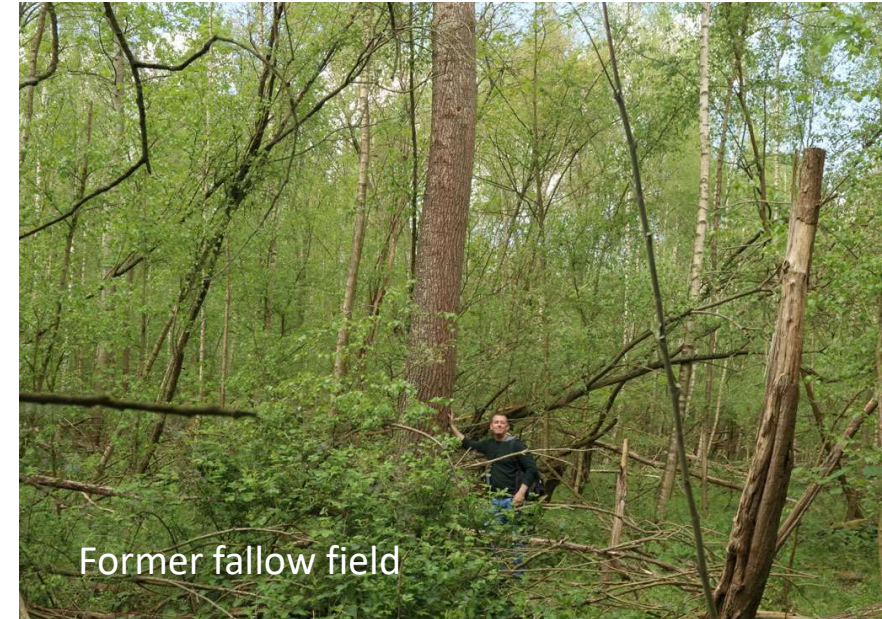
- Pastures and grass-sown fields at the start
- The first hawthorn bushes only after 10 years
- After 25 years large hawthorn bushes, scattered young trees and other shrub species appearing



Ingendaal, 50 ha

Meerssenerbroek

- Dense pioneer forest on former agricultural fields
- Open shrubbery on existing pastures
- However.....



Former fallow field



Former meadow (in the front)
and field (in the back)



Meerssenerbroek, 80 ha

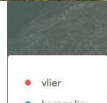
Dense woodland or not?

- Massive germination of woody plants on open soil?
- Direct deployment of large grazers inhibits this
- Result: open shrubbery and forest

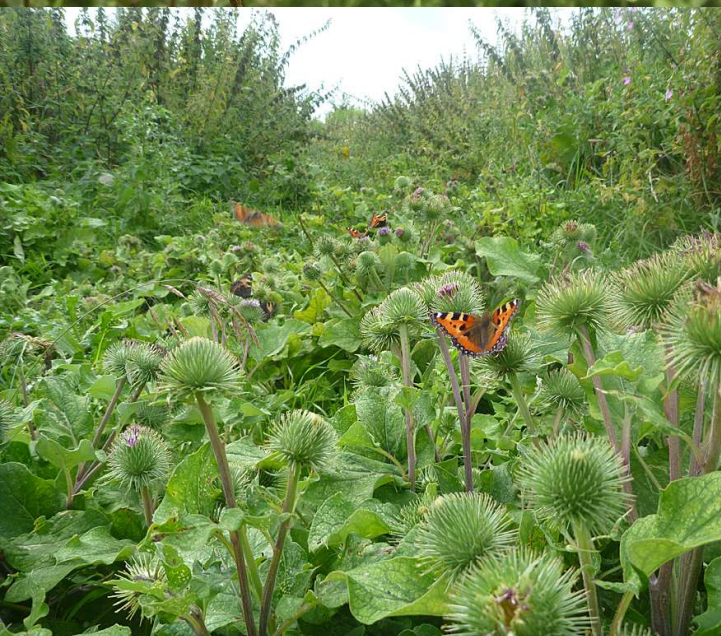
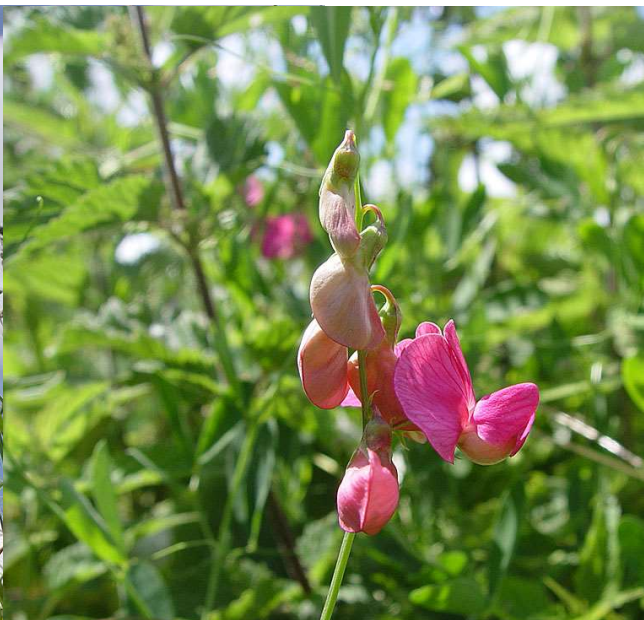


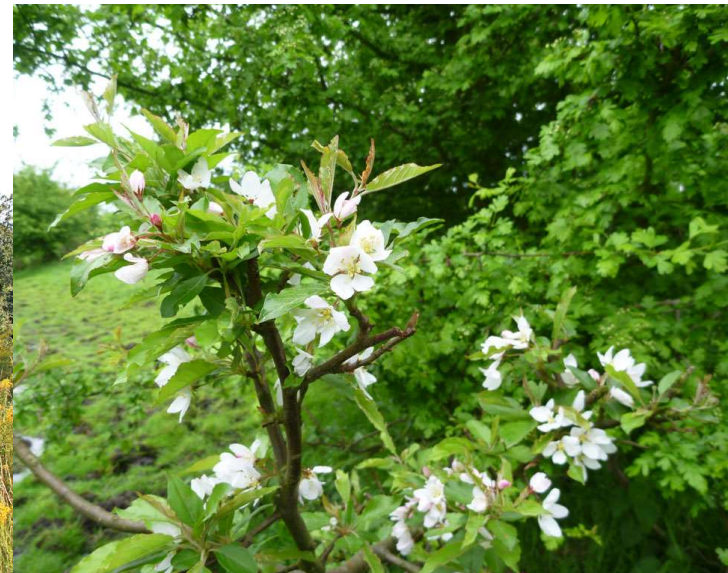
Timing and random circumstances play a big role

de Staart, 28 ha







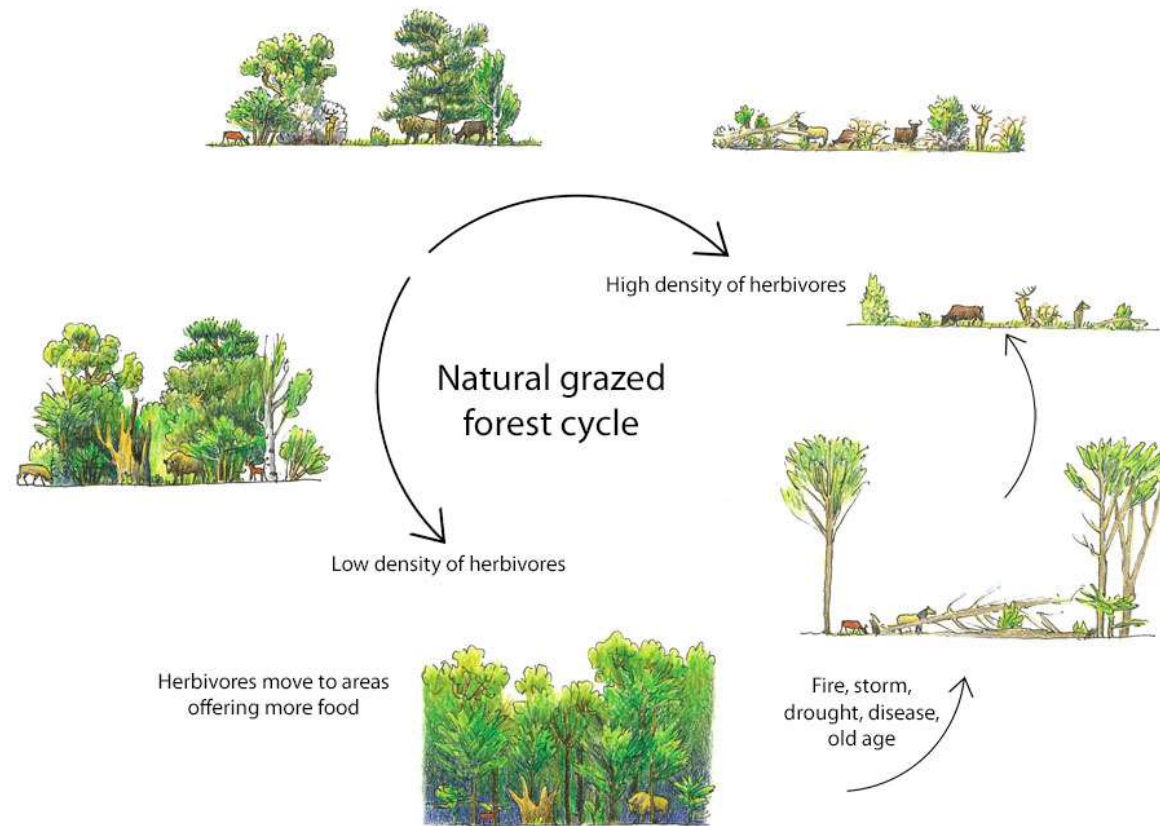


Gorsje van Ooltgensplaat, 5 ha



Bisonbaai: open grazed woodland

Natural grazed woodland cycle



Abiotic processes often start the cycle

Rewilding close to cities



PONC in manmade landscapes



Enjoying nature creates support and challenges

Thanks for your attention



Enjoying the landscape and grazers



You don't mollycoddle nature, you give it space

(Marc Angeloo, 2022)



PONC in manmade landscapes

This used to be Europe



PONC in manmade landscapes

◉ Question:

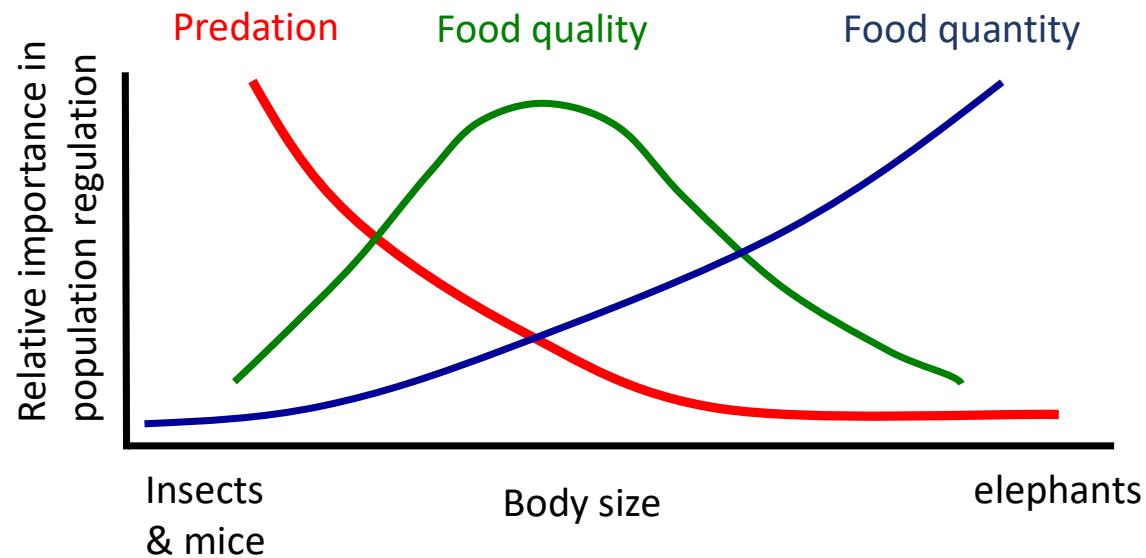
is there space for rewilding in
our manmade landscapes?



PONC in human dominated landscapes

Each herbivore is different

- Bovines and horses stimulate flowers
- Sheep and deer eat them



Hopcraft, Olff & Sinclair (2009) Trends Ecol. Evol.



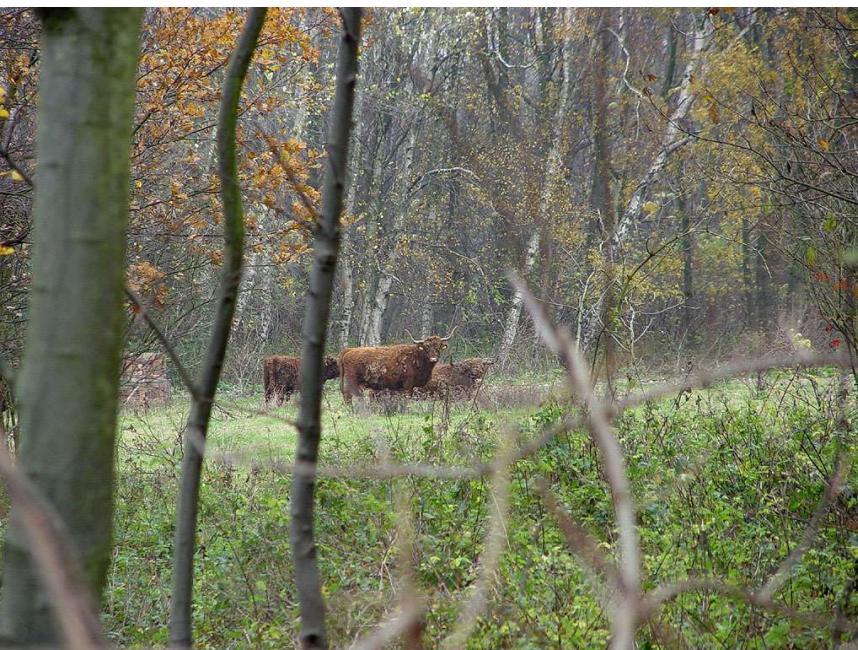
Size matters!

Ruigeplaatbos

- Circa 15 ha
- Grazed from 1999
- Highland cattle
- City park



Rotterdam



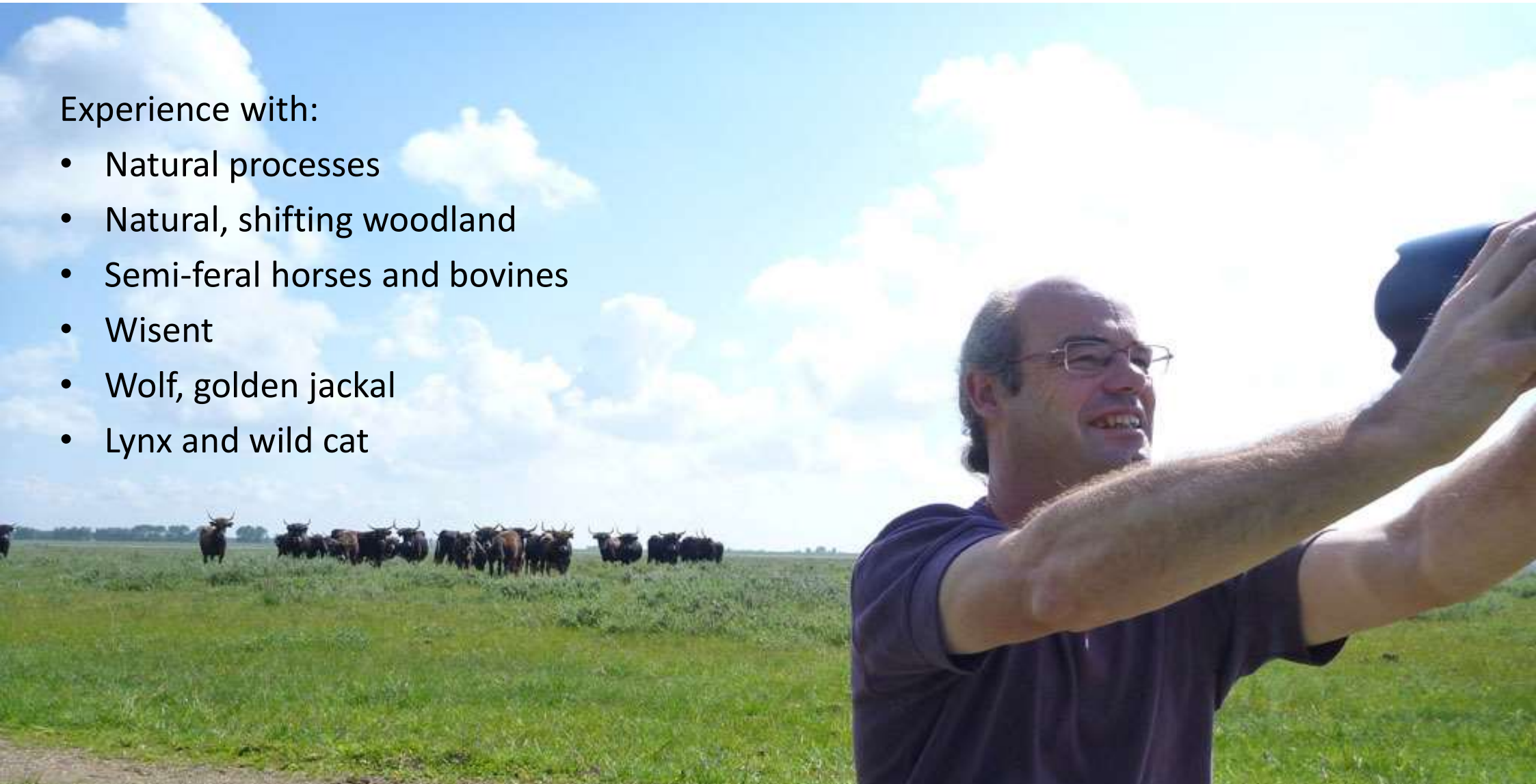
Ruigeplaatbos



Ruigeplaatbos, na 1 winter Hooglander-begrazing

Experience with:

- Natural processes
- Natural, shifting woodland
- Semi-feral horses and bovines
- Wisent
- Wolf, golden jackal
- Lynx and wild cat



Who am I?



Wild nature in Kenya

Rewilding in a manmade landscape



This is also Kenya

Experience creates support

Let people enjoy



Support creates legislation and regulations