

# Grote grazers en natuurherstel: een juridische beschouwing

Symposium 'Natuurlijke Begrazing'  
Kasteel Groeneveld, Baarn, 13 oktober 2022





Arie Trouwborst

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Ripple et al. 2015, Science Advances  
1e1400103

Jeroen Helmer / ARK

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“This is the **biggest** story in the world. It’s like we are all living in the age of the dinosaur extinction, but we can do something about it.”  
— Louie Psihoyos

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**ipbes**  
Science and Policy for People and Nature


**Main Messages**

- Biodiversity is rapidly declining
- Threats are habitat loss, overexploitation, air, land and water pollution, climate change and invasive species
- We know how to protect nature

**'Transformative change'**

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### Ruimte voor natuur & ecosystem-herstel



Our Planet's Fight for Life  
**EDWARD O. WILSON**  
A CALL TO THE POLITICAL LEADERS

UN DECADE ON ECOSYSTEM RESTORATION  
2021-2030

50% PROTECTED AREA  
85% SURVIVING SPECIES

30% in 2030  
(50% in 2050?)

CBD

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### Ecosysteem-herstel: hoe & naar wat?

- Gebieden vergroten & verbinden
- Vervuiling aanpakken
- Ruimte voor dynamiek
- Ontbrekende soorten terug



UN DECADE ON ECOSYSTEM RESTORATION  
2021-2030

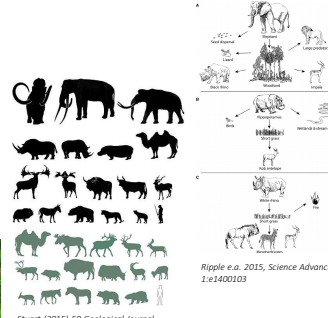
WILDLIFE CONSERVATION IN EUROPE

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### 'Megafauna'

Verhoudingsgewijs:

- groot belang voor ecosystemen
- grote verliezen geleden
- lastig mee samen te leven



Limburg zucht onder de bevers

Stuart (2015) 50 Geological Journal

Ripplé et al. 2015, Science Advances 1.e1400103


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"The nation that forgets its past has no future."

J. Paul Getty Museum

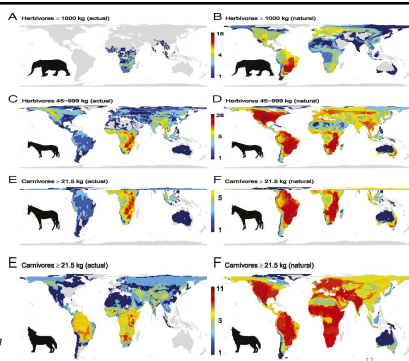
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Oscar Sanisidro



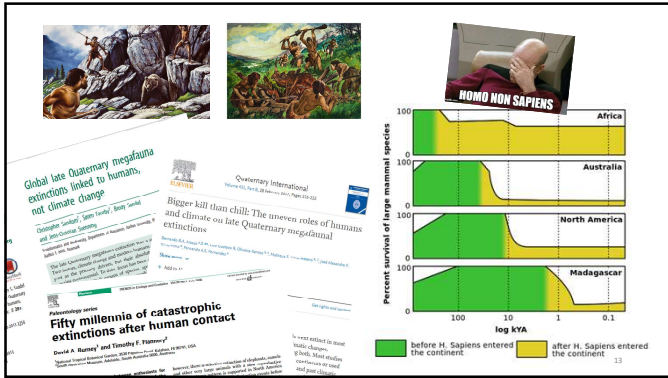
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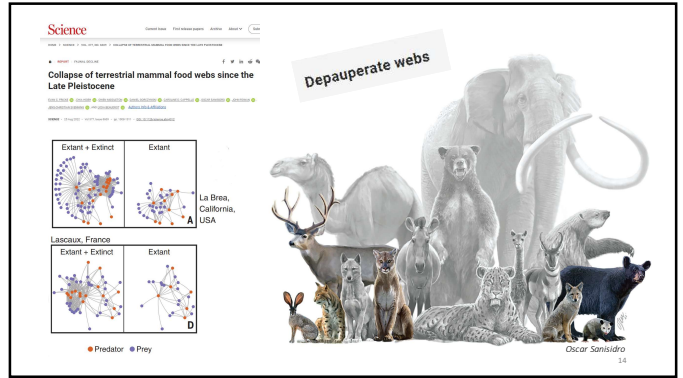
END OF THE MEGAFAUNA

Svenning et al. (2015) 'Science for a wilder Anthropocene: synthesis and future directions for trophic rewilding research' 113 PNAS

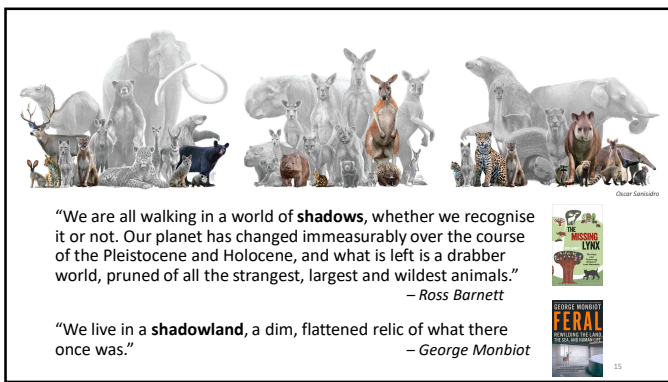
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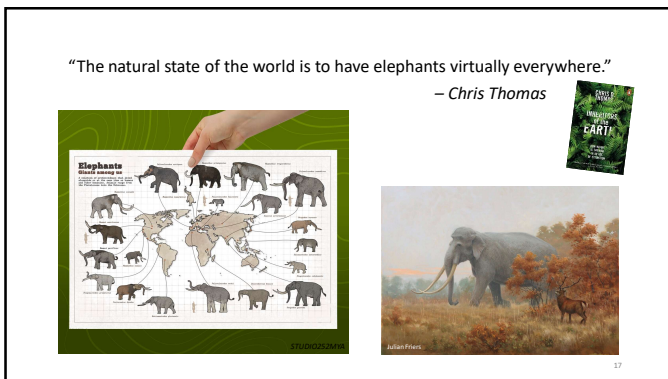
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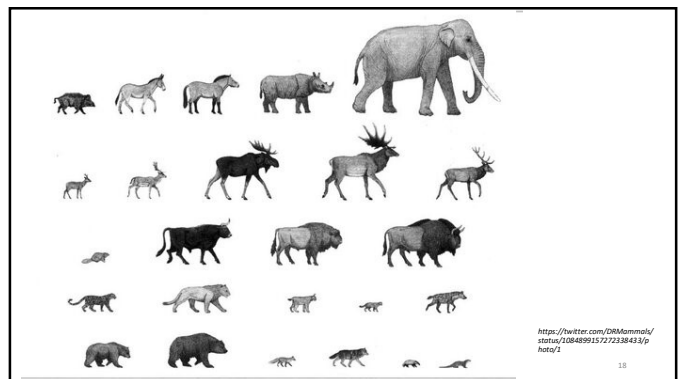
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### Hoe groot zijn de verliezen?

Ontbrekende Europese megafauna:

- >10kg: 39 / 74 (>50%)
- >100kg: 27 / 35 (>75%)
- >1000kg: 8 / 8 (100%)

Overblijvende soorten: beperkte verspreiding en dichtheden

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Common name	Scientific name	Weight	Present in Europe	Glob. cons. stat.
Golden jackal	<i>Canis aureus</i>	10	V	LC
Sardinian dhole	<i>Cynodictum sardous</i>	11	-	EX
Barbary macaque	<i>Macaca sylvanus</i>	12	V	EN
Indian crested porcupine	<i>Hystrix indica</i>	12	V	LC
Dhole	<i>Cuon alpinus</i>	13	-	EN
Eurasian badger	<i>Meles meles</i>	13	V	LC
Iberian lynx	<i>Lynx pardinus</i>	13	V	EN
Caracal	<i>Caracal caracal</i>	14	V	LC
Crested porcupine	<i>Hystrix cristata</i>	16	V	LC
Wolverine	<i>Gulo gulo</i>	17	V	LC
Eurasian lynx	<i>Lynx lynx</i>	18	V	LC
Eurasian beaver	<i>Castor fiber</i>	19	V	LC
(Porcupine sp.)	<i>Hystrix refossa</i>	20	-	EX
European roe deer	<i>Capreolus capreolus</i>	23	V	LC
Northern chamois	<i>Rupicapra rupicapra</i>	26	V	LC
Balearic mountain goat	<i>Myitragus balearicus</i>	26	-	EX
Gottlered gazelle	<i>Gazella subgutturosa</i>	29	V	VU
Saga	<i>Saiga tatarica</i>	29	V	CR
(Cretan dwarf deer sp.)	<i>Candiacervus ropalophorus</i>	30	-	EX
Southern chamois	<i>Rupicapra pyrenaica</i>	30	V	LC
Wolf	<i>Canis lupus</i>	32	V	LC
Wild goat	<i>Capra aegagrus</i>	34	V	NT
Striped hyena	<i>Hyena hyena</i>	42	V	NT
(Cretan deer sp.)	<i>Candiacervus sp. II</i>	43	-	EX

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(Ureus) weasel sp. j	<i>Canis erinus sp. II</i>	43	-	EX
Siberian roe deer	<i>Capreolus pygargus</i>	44	V	LC
Cheetah	<i>Acinonyx jubatus</i>	47	-	VU
Iberian ibex	<i>Capra pyrenaica</i>	50	V	LC
Eastern ibex	<i>Capra cylindricornis</i>	50	V	NT
Leopard	<i>Panthera pardus</i>	55	V	VU
Western ibex	<i>Capra caucasica</i>	55	V	EN
Fallow deer	<i>Dama dama</i>	56	V	LC
Mouflon	<i>Ovis orientalis/gmelini</i>	60	V	NT
Spotted hyena	<i>Crocuta crocuta</i>	63	-	LC
(European tahr sp.)	<i>Hemitragus cedrensis</i>	65	-	EX
(Sardinian deer sp.)	<i>Prasngoceros cacciott</i>	70	-	EX
Persian fallow deer	<i>Dama mesopotamica</i>	73	-	EN
(Cretan deer sp.)	<i>Candiacervus cretenensis</i>	79	-	EX
Alpine ibex	<i>Capra ibex</i>	85	V	LC
Reindeer	<i>Rangifer tarandus</i>	86	V	VU
(European deer sp.)	<i>Haploidescerus mediterraneus</i>	100	-	EX
Wild boar	<i>Sus scrofa</i>	101	V	LC
Moon bear	<i>Ursus thibetanus</i>	105	-	VU
Red deer	<i>Cervus elaphus</i>	131	V	LC
Lion	<i>Panthera leo (incl. P. spelaea)</i>	162	-	VU
Tiger	<i>Panthera tigris</i>	163	-	EN
Brown bear	<i>Ursus arctos</i>	181	V	LC
Scimitar cat	<i>Homotherium latidens</i>	189	-	EX
Onager	<i>Equus hemionus</i>	200	V	NT
Wild horse	<i>Equus ferus / E. przewalskii</i>	200	V	EN
(Cretan deer sp.)	<i>Candiacervus rebyimensis</i>	222	-	EX
(Ovibovine caprine sp.)	<i>Saepella minor</i>	225	-	EX

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(Horse sp.)	<i>Equus avodovi</i>	227	-	EX
(Horse sp.)	<i>Equus hydruntinus</i>	227	-	EX
Muskox	<i>Ovibos moschatus</i>	341	V	LC
Moose	<i>Alces alces</i>	357	V	LC
Cave bear	<i>Ursus spelaeus</i>	390	-	EX
European bison	<i>Bison bonasus</i>	500	V	NT
(Giant deer sp.)	<i>Candiacervus darothenensis</i>	539	-	EX
Giant deer	<i>Megaloceros giganteus</i>	700	-	EX
(Giant deer sp.)	<i>Candiacervus major</i>	708	-	EX
(Antelope sp.)	<i>Spirocerus kiakhienensis</i>	791	-	EX
Steppe bison	<i>Bison priscus</i>	800	-	EX
European water buffalo	<i>Bubalus murrensis</i>	800	-	EX
Dromedary camel	<i>Camelus dromedarius</i>	800	-	EX
(Island dwarf elephant sp.)	<i>Palaeoloxodon tilletensis</i>	809	-	EX
Aurochs	<i>Bos primigenius</i>	900	-	EX
(Island dwarf elephant sp.)	<i>Palaeoloxodon mnaidriensis</i>	1102	-	EX
Hippopotamus	<i>Hippopotamus amphibius</i>	1418	-	VU
Woolly rhinoceros	<i>Coeloceros antiquitatis</i>	2593	-	EX
Narrow-nosed rhinoceros	<i>Stephanorhinus hemitoechus</i>	2943	-	EX
Merec's rhinoceros	<i>Stephanorhinus kirchbergensis</i>	3631	-	EX
Siberian unicorn	<i>Elasmotherium sibiricum</i>	4100	-	EX
Woolly mammoth	<i>Mammuthus primigenius</i>	6000	-	EX
Straight-tusked elephant	<i>Palaeoloxodon antiquus</i>	13000	-	EX

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### Megafauna-herstel

Rewilding, with megafauna, "reinstates the only proven effective long-term mechanisms for generating and maintaining biodiversity."

- *Sensory 2020, One Earth 3(6)*

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### Herstel-scenarios

Table 2. Categorizing species and restoration scenarios.

Species	Ways of restoring	Example
Extant in Europe	Natural (re)colonization	Wolf
Extinct in Europe but surviving elsewhere	Reintroduction / reinforcement	European bison
Extinct in Europe but surviving elsewhere	Reintroduction	Lion
Globally extinct in the originally wild form(s), but surviving in domesticated (and often feral) form	De-extinction – back-breeding / feralization / ecological replacement	Aurochs
Globally extinct	De-extinction – genetic engineering	Cave bear
	Ecological replacement / assisted colonization	Asian elephant

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### 'Shifting baseline syndrome' -> 'natuuramnesie'

"Present-day Europeans are generally oblivious to the absence of rhinoceros and lions in their vineyards." – Chris Thomas

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Original article

Megafauna Rewilding: Addressing Amnesia and Myopia in Biodiversity Law and Policy  
Arie Trouwborst

**ABSTRACT**  
Large mammals (megafauna) are disappearing rapidly from the European landscape. This loss has led to a widespread 'shifting baseline syndrome' (SBS), whereby the background of scientific knowledge regarding the state of ecosystems has been eroded over centuries, resulting in reduced awareness and diversity of megafauna in most continents. The shift in baseline has contributed to a loss of public interest in conservation, and a consequent reduction in political support for conservation. This article discusses the implications of SBS for the restoration of megafauna in Europe. It argues that the restoration of megafauna in Europe is not only a matter of ecological and genetic diversity, but also a matter of collective memory and identity. The article concludes that the restoration of megafauna in Europe is a matter of collective memory and identity, and that the restoration of megafauna in Europe is a matter of collective memory and identity.

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### Rol van het recht

- Positief
- Negatief

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### Juridische obstakels / vraagstukken

- Status paard & rund
- Status wisent
- Veterinaire/sanitaire eisen
- Karkassen
- Aansprakelijkheid
- Grensoverschrijdende kuddes
- Dierenwelzijn, zorgplichten
- (Her)introducties
- ...

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### Herstel-verplichtingen

- Biodiversiteitsverdrag
- Verdrag van Bern
- Biodiversiteitsprotocol Karpatenverdrag
- Habitatrichtlijn
- ...

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### Biodiversiteitsprotocol Karpatenverdrag




- Each party "shall develop and implement policies and strategies in its national territory aiming at the conservation, **restoration** and sustainable use of biological ... diversity in the Carpathians" & "take measures in its national territory with the objective to ensure the long-term conservation, **restoration** and sustainable use of natural habitats in the Carpathians" – Art. 4 & 8(2)
- "**restoration**" = "the return of an ecosystem or habitat to its **original** structure, **natural** composition of species, and **natural** functions" – Art. 3(r)
- "make strong commitments to achieve **transformative** ecosystem restoration" – Decision COP6/5 (2020)



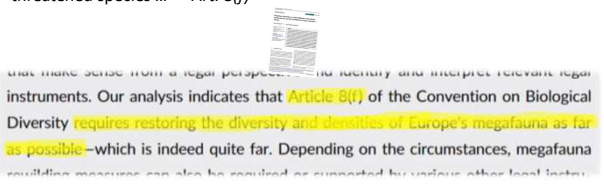
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### Biodiversiteitsverdrag



"Each Contracting Party shall, as far as possible and as appropriate: ... Rehabilitate and restore degraded ecosystems and promote the recovery of threatened species ..." – Art. 8(f)

... that make sense from a legal perspective ... to identify and interpret relevant legal instruments. Our analysis indicates that **Article 8(f)** of the Convention on Biological Diversity **requires restoring the diversity and densities of Europe's megafauna as far as possible**—which is indeed quite far. Depending on the circumstances, megafauna **restoration** measures can also be required or supported by under other legal instruments.

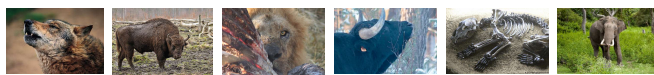


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### Juridische obstakels aanpakken



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