Where is wild?
Mapping results, EC and adjacent countries

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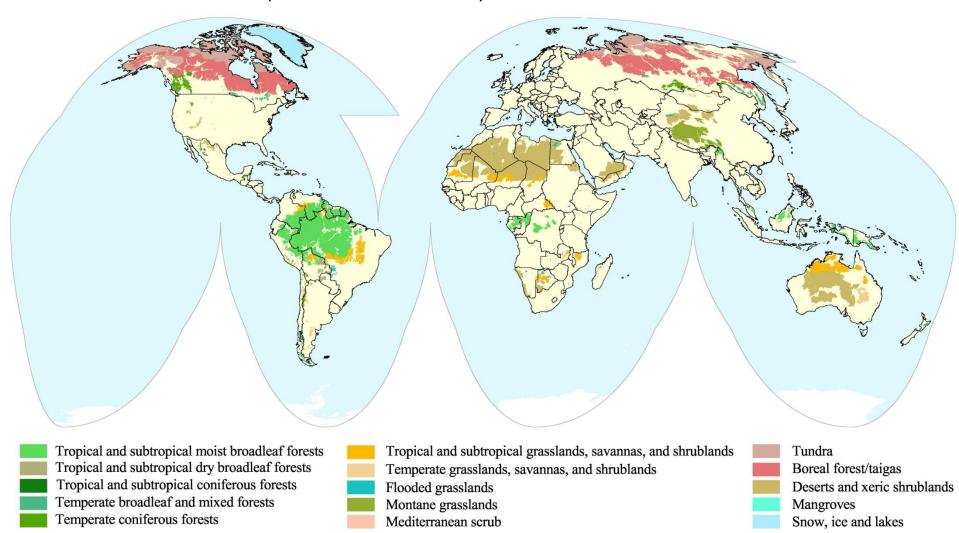
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Outline

- Where is wild?
  - existing maps: global to local
  - mapping wilderness and wild land in Europe
  - a new reconnaissance level map of wilderness in Europe
- Wilderness and Natura 2000
  - a visual and statistical comparison
- Integrating wilderness and habitat areas
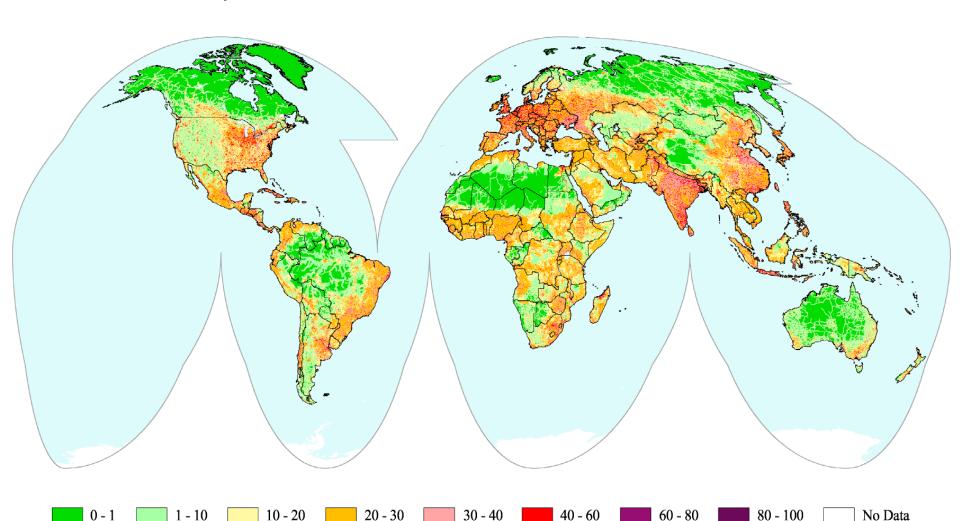- Future work and recommendations
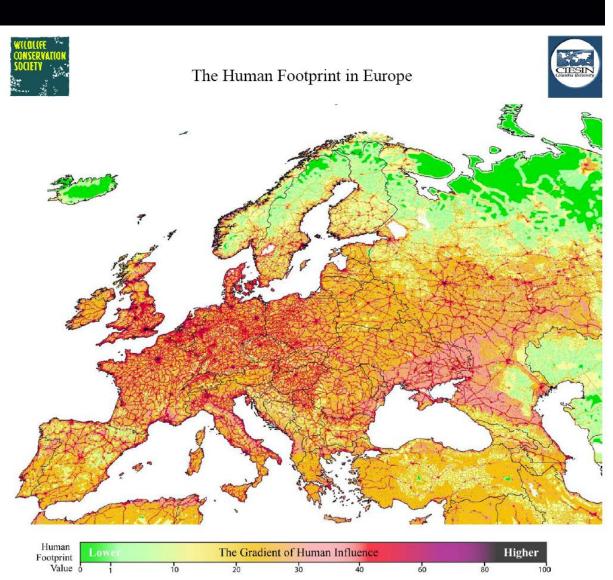
Where is wild?

The Last of the Wild (After WCS/CIESIN)

Tropical and subtropical moist broadleaf forests	Tropical and subtropical grasslands, savannas, and shrublands	Tundra
Tropical and subtropical dry broadleaf forests	Temperate grasslands, savannas, and shrublands	Boreal forest/taigas
Tropical and subtropical coniferous forests	Flooded grasslands	Deserts and xeric shrublands
Temperate broadleaf and mixed forests	Montane grasslands	Mangroves
Temperate coniferous forests	Mediterranean scrub	Snow, ice and lakes

Where is wild?

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The Human Footprint (After WCS/CIESIN)

0 - 1	1 - 10	10 - 20	20 - 30	30 - 40	40 - 60	60 - 80	80 - 100	No Data

Where is wild?
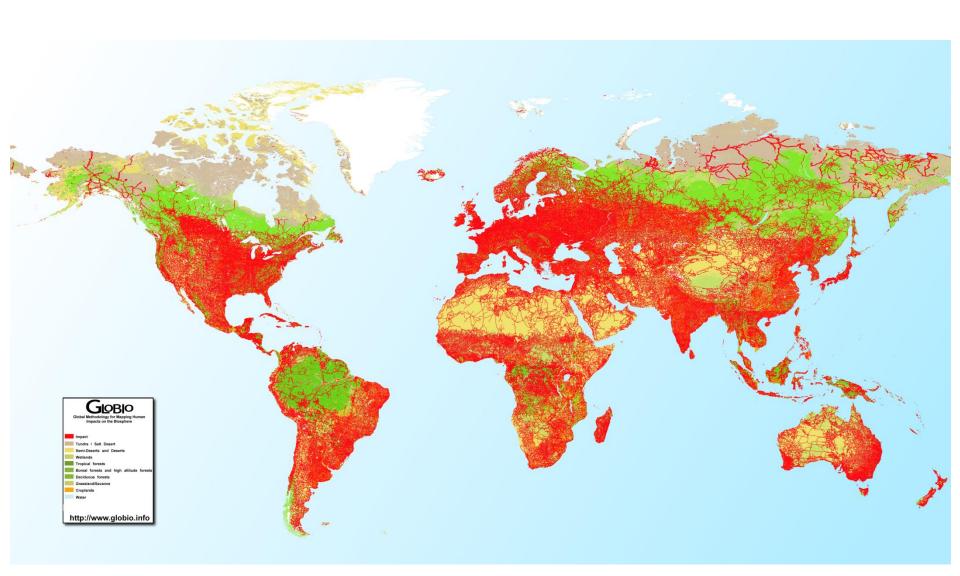
The Human Footprint:
Europe

The Human Footprint in Europe

Where is wild?

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GLOBIO
Global Methodology for Mapping Human
Impacts on the Biosphere

- Impact
- Tundra / Salt Desert
- Semi-Deserts and Deserts
- Wetlands
- Tropical forests
- Boreal forests and high altitude forests
- Deciduous forests
- Grassland/Savanne
- Croplands
- Water

http://www.globio.info

Where is wild?

GLOBIO GEO-3
Analysis:
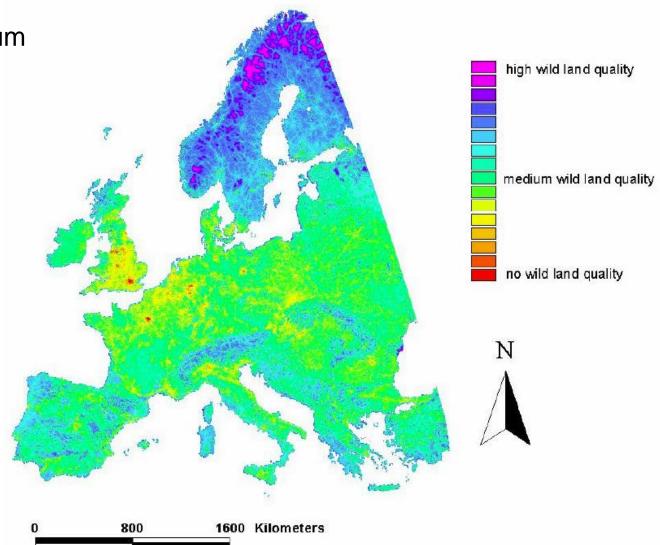
Human impact: Europe

Wilderness continuum

(After Fritz, 2000)

high wild land quality

medium wild land quality

no wild land quality

N

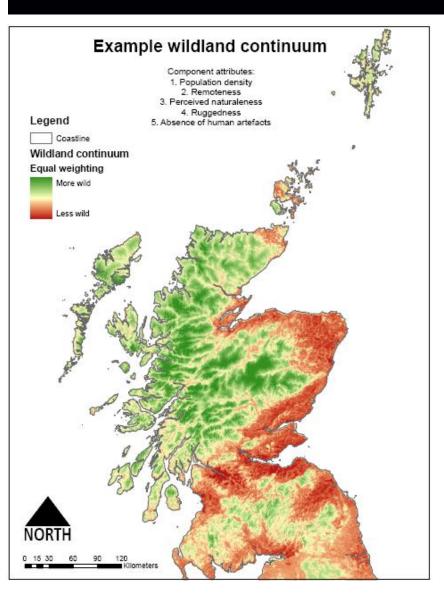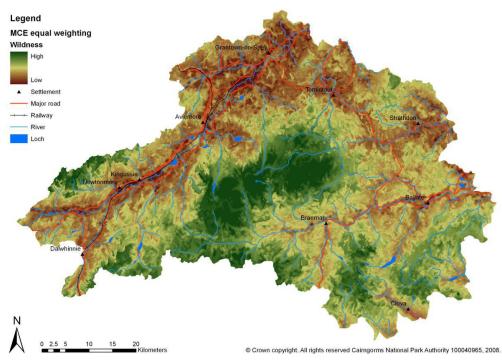0   800   1600   Kilometers

Where is wild?
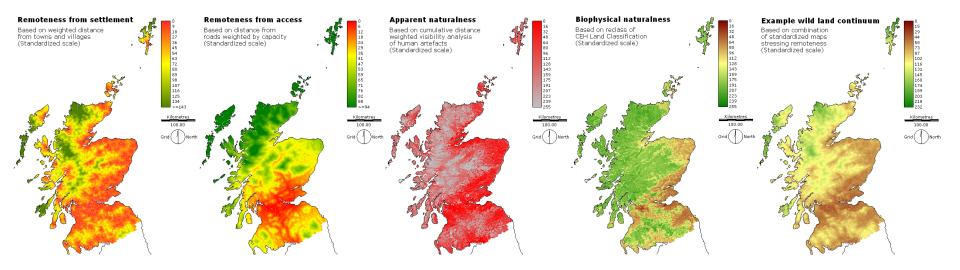
Mapping wilderness in Europe

- Important issues:

  - Distinction between **perceived** wilderness (wild and remote landscapes) and **ecological** wilderness (pristine and natural habitat areas)

  - Spatial scale (data availability, resolution, model development and resulting spatial patterns)

  - Size and location of priority core wild areas

  - Links and connectivity versus fragmentation and isolation (especially for ecological wilderness)

  - Adaptability to a range of local conditions (social, cultural, economic, political, environmental, spatial, etc.)
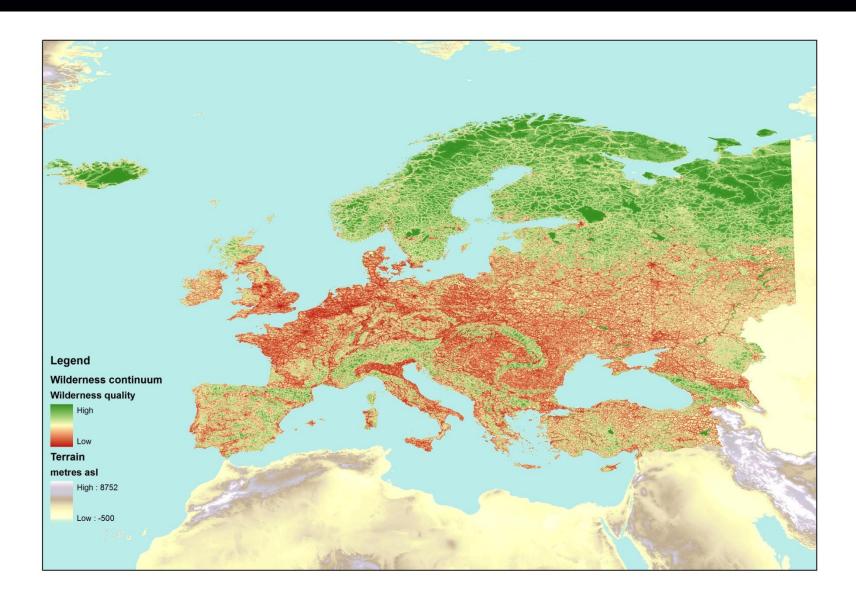
Mapping wilderness

- Spatial combination of wilderness attributes:

  - Remoteness from settlement/population

  - Remoteness from mechanised access

  - Apparent naturalness/lack of modern human artefacts
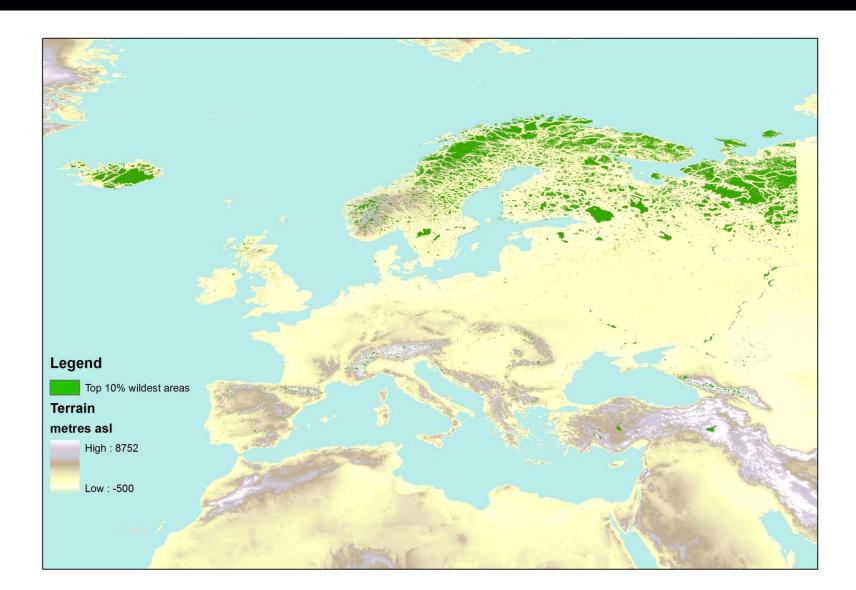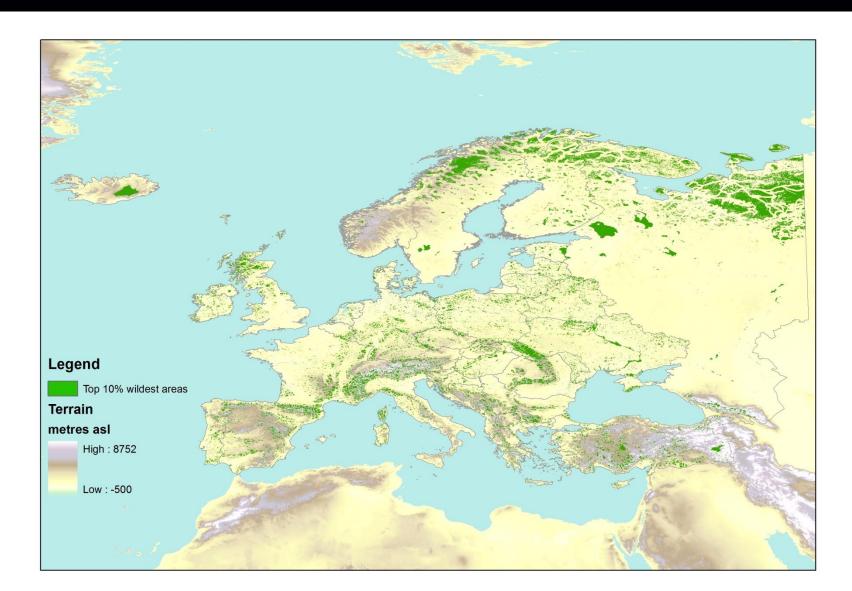
  - Biophysical/ecological naturalness

Remoteness from settlement
Based on weighted distance from towns and villages (Standardized scale)

Remoteness from access
Based on distance from roads weighted by capacity (Standardized scale)

Apparent naturalness
Based on cumulative distance weighted visibility analysis of human artefacts (Standardized scale)

Biophysical naturalness
Based on reclass of CEH Land Classification (Standardized scale)

Example wild land continuum
Based on combination of standardized maps stressing remoteness (Standardized scale)

A new reconnaissance level map for Europe

Top 10% wildest areas
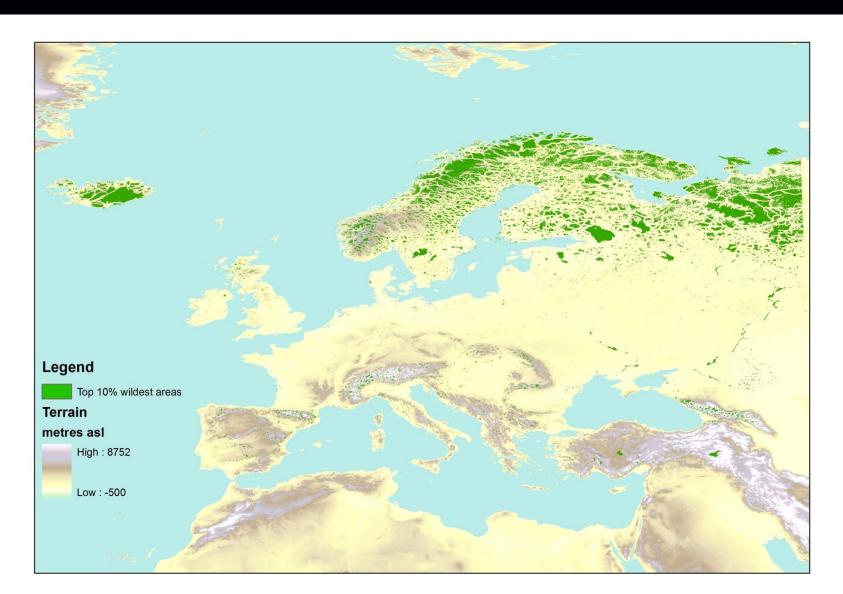
Legend

Top 10% wildest areas

Terrain
metres asl

High : 8752

Low : -500

Legend
- Top 10% wildest areas

Terrain
metres asl
High : 8752
Low : -500

Legend

Top 10% wildest areas

Terrain
metres asl

High : 8752

Low : -500

Natura 2000 network

Legend

- Natura 2000 sites
- Top 10% wildest areas
- Country boundaries

Terrain
metres asl

High : 8752

Low : -500
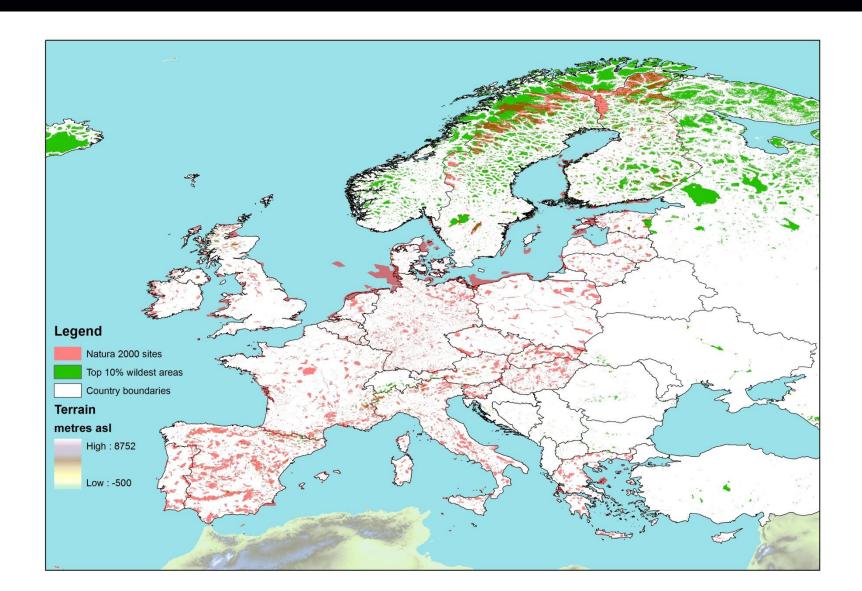
Future work

- Develop new and comprehensive mapping programme

  - Identify core "virgin" wilderness and a continuum of successively less wild areas across Europe

  - Create a country level inventory of core priority areas implemented nationally using a common methodology

  - Integrate with existing habitat network data (e.g. Natura 2000) to identify areas needing further/enhanced protection

Future work

- Policy formulation

  - Protection against further loss of wilderness areas

  - Identify areas for restoration and re-wilding

  - Maximise connectivity of core areas

  - Improve permeability of landscapes for species movement

  - Make spaces available for people and wildlife within and near to urban areas that provide multiple benefits from a range of ecosystem services

  - Wild areas represent a very small proportion of total land use, so not a threat to forestry or conservation interests

Recommendations

1. Need a rigorous yet flexible spatial definition of wilderness (both perceived and ecological) that takes scale and connectivity into account

2. Extend or adapt existing systems to protect and promote wilderness across Europe

3. Create a pan-European wilderness and natural habitat inventory backed by existing agencies with inputs from experienced research organisations