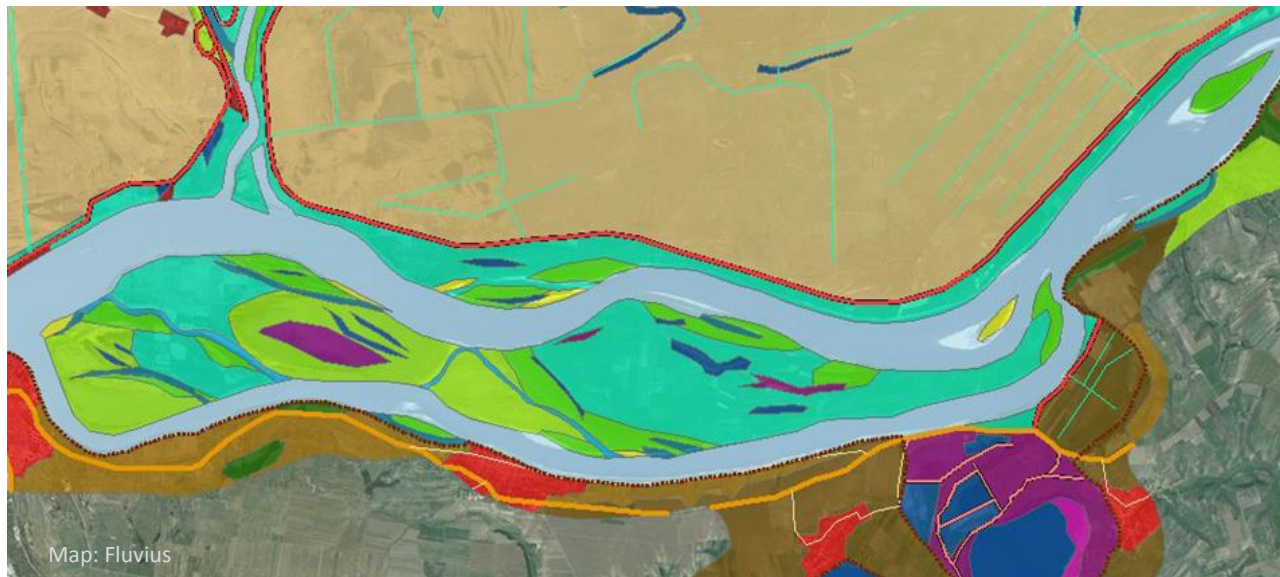


Danube WILDIslands - Definitions & Strategy

by Alexander Zinke, Environment Agency Austria



Looking for answers to simple questions

Where is the wilderness on rivers?

What does IUCN say about wilderness protection?

What is an island?

Is the Danube still wild?

What can be the definition of Danube WILDislands?

What do we look for along the Danube?

What can we get from this assessment?

European river islands



Oulanka NP © Kimmo Salminen



Wilderness in Europe

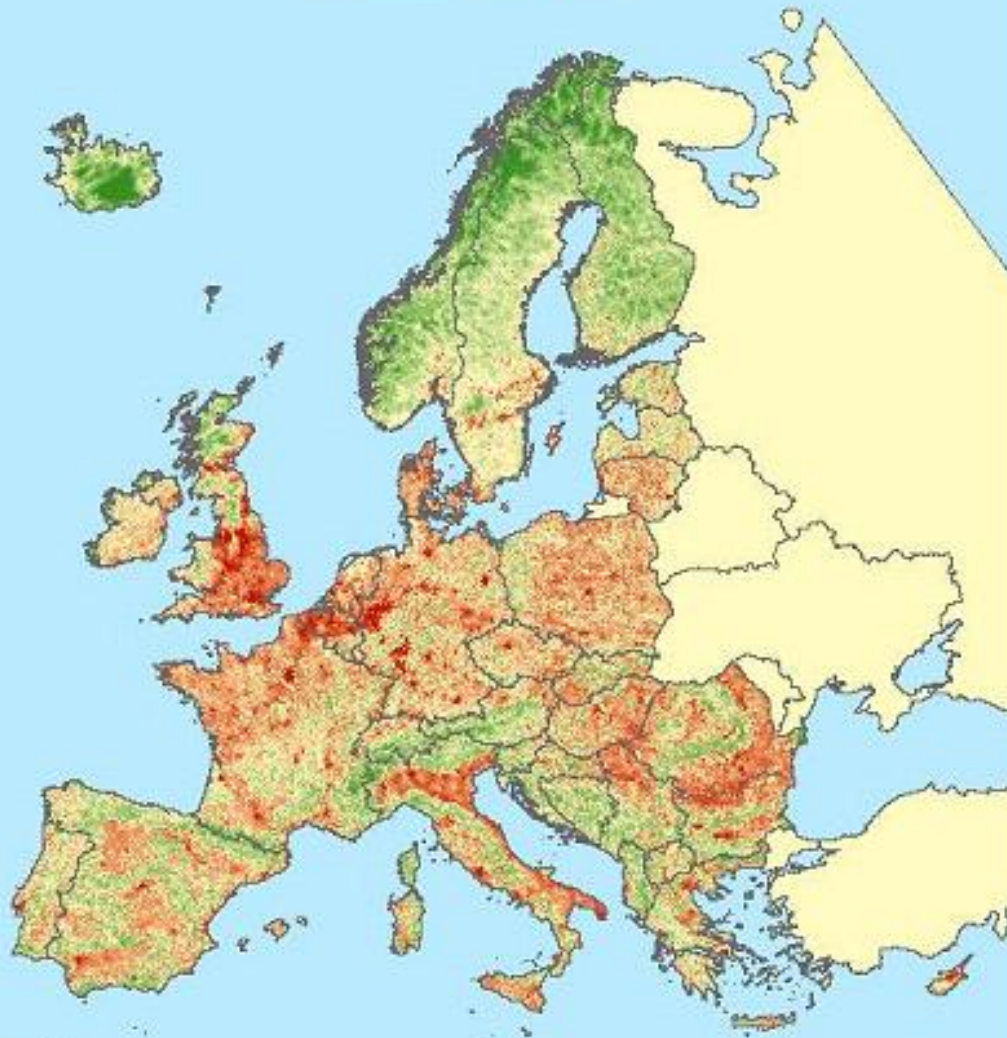
Wilderness Quality Index



„...about 1% of Europe's territory ...can be called wilderness area”

*Ladislav Miko,
EC DG Environment*

Resolution of the **European Parliament** in 2009:
Improve wilderness protection in Europe!



Legend

Country boundaries

Wilderness Quality Index

High

Low

0 150 300 600 900 1,200

Kilometers



Data sources: Copyright ORNL, Landsat 2000/TM/UT-Balliet, LLC; EEA Copenhagen 2007; DLN 2010; ESRI 2010.
Analysis and cartography by Wildland Research Institute (WRI), University of Leeds



Restored river banks



Improving riverine ecology
while maintaining or
improving navigability



Photo: B. Boekhoven, RWS-NL



All photos: via donau



Reconnected side-arms

Down-sized groynes



River landscapes under pressure



Photo. Revital



Photo. AKL / Tichy

Wilderness Specialist Group of IUCN WCPA (World Commission on Protected Areas)

2016 the first-ever
international guidelines
for wilderness managers



Wilderness Protected Areas:

Management guidelines for IUCN Category 1b protected areas

Prepared by the IUCN WCPA Wilderness Specialist Group
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Best Practice Protected Area Guidelines Series No. 25

General principles for wilderness conservation

IUCN PROTECTED AREA DEFINITION

***Ib Wilderness area:** Usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, protected and managed to preserve their natural condition.*

What is wilderness?

This term is used in a variety of ways. It is a biological descriptor, referring to **places that are mainly ecologically intact**. It is a type of protected-area classification.

... wilderness can be defined broadly as a landscape that is biologically and ecologically largely intact (that is, with respect to their ecosystems, species assemblages and ecosystem processes), mostly free of industrial infrastructure, and without significant human interference (Kormos, 2008; Watson, et al., 2009). While these qualities clearly exist on a spectrum, it is nonetheless possible to identify **wild places** around the world where human disturbance remains at a minimum.

Wilderness as a protected area classification

*These Guidelines recognize that political complexities and management challenges may sometimes require an incremental approach to establishing wilderness protected areas. This can involve **starting with smaller and/or less intact protected areas** that may require restoration and building up to larger, more intact areas over time. Thus, Category 1b sites may include large, highly intact areas as well as smaller areas whose wilderness qualities can be improved or whose boundaries may be expanded (...)*

Many laws recognise that there are areas worth protecting under Category 1b that have good potential to achieve wilderness qualities in the future.

Importance of wilderness

- *There is a growing appreciation of the intrinsic value of nature and*
- *increasing understanding about the ecosystem services we all depend on, such as freshwater quality and carbon sequestration*
- *Wilderness is critical to ensuring biodiversity conservation, especially for wide-ranging species, and for a wide range of other essential ecosystem services (e.g. wild relatives of commercial crops)*
- ***wilderness attributes and values** refer to the absence of significant permanent infrastructure or commercial resource extraction and opportunities for experiencing solitude, uncertainty and challenge.*

Where are protected wildernesses?

48 countries have wilderness areas established as IUCN Category 1b sites. They include within the Danube Basin **Austria, Bosnia and Herzegovina, Croatia, Czech Republic, Serbia, Slovakia, Slovenia.**

22 other countries have wilderness areas within protected areas, including **Germany and Ukraine.**

The practice of non-intervention management of biologically intact wild areas with wilderness qualities is more widespread than the actual assignment of areas to Category 1b - often made at a managerial level without a formal designation

Islands as wilderness

For islands, **connectivity** is essential:

Strategic management *is required to ensure maximum connectivity among core wilderness areas, notably in form of corridors and permeable landscapes that give wildlife the ability to move and migrate unhindered*



Photo: Zinke

Steps to assign wilderness status

- Identify the management objectives of the site
- Document the wilderness characteristics
- Consult with relevant partners and stakeholders to agree on wilderness category designation
- Have the governing body of the site make the final decision

What is an island?

Wikipedia: A terrestrial area that rises from the water even during **high** water and is surrounded by (fresh/sea) water.

Definition for the purpose of this DanubeParks study:

- A **terrestrial** area that
- rises from the water even during **mean** water and
- is completely surrounded by fresh water;
- results from **natural hydromorphological processes** in the river;
- is not floating nor a reed bed but **built up by natural river sediments** and fixed on the ground;
- is covered by at least **some higher vegetation** (visibly rooted woody pioneer species).



Is the
Danube
still
wild?



Kopacki Rit – Danube-Drava confluence

Danube at Budapest, Nov 2012. Index-HU



Is the Danube still wild?

With a few exceptions, no natural area in Europe deserves the IUCN label of “wilderness”.

ALL European rivers have been altered and exploited over centuries in their natural character. Even seemingly intact or even “wild” sections of the Danube are in fact altered, i.e. there is no more “wild” Danube.

However, the **Danube** is still subject of impressive hydromorphological dynamics, e.g.

- variation of up to 7m between water levels;
- transport of millions of tons of sediments

as the **key natural factors** forming and changing islands.

Thus, in spite of its overall disturbed character, **the Danube is still subject to intensive natural processes that do establish new and develop existing wild river islands without human interference.**

➤ This will be shown by the WILDIslands Initiative.

Key features *incompatible* with “wild islands”

- Any substantial prevention or alteration of natural hydromorphological processes, notably
 - the impoundment of the river bed by cross-dams
- the “protection” of the island against inundation, erosion and/or sedimentation processes by
 - bank protection (e.g. riprap),
 - groynes
 - lateral structures (guiding walls),
 - cross dikes and / or
 - dikes
- Diverse forms of intensive and extensive land use:
 - Forestry / silviculture and agriculture,
 - any buildings, towers, platforms, visible roads for access and transport, bridges or power lines with their pillars
 - Sand or gravel exploitation, disposal of waste,
 - Intensive recreational activities etc.



First inventory of Danube islands

Definition of wild islands (1)

In general, to sustain the natural development and thus its wild character, islands must

- be **permanently surrounded by water at mean water level**: intact hydromorphological dynamics
 - no higher cross-dams / bottom weirs at the upper or lower end of a side-arm may alter the islands' and ease user access, i.e. undermine;
- be **covered by some vegetation** (at least pioneer and shrub woody species):
 - single and frequently submerged gravel and sand bars are left aside, unless they form an integral part of an **island group**;
- **exist for at least 10 years**:
 - very dynamic ("wild") small gravel bars and sand banks that much alter their location and size over years are hard to inventor and to sustain their protection

First inventory of Danube islands

Definition of wild islands (2)

Further, islands must

- have a **minimum size**:
 - The size of islands basically increases along the Danube river and its hydromorphological reference conditions (river section types). It is difficult to provide thorough thresholds, except by a mean and average size and configuration.

For the purpose of this study, an island's basic size should be **larger than**
0.5 ha along the Upper Danube, though smaller islands on groynes were recorded down to about 0.1 ha;
1 ha along the Middle Danube (Morava river to Iron Gate)
5 ha along the Lower Danube.

Expected results of this work

Overall **DRB map** (point features) with all identified islands

Detailed maps (with countries, showing all polygon features)

Both maps/series can show the listed parameters

Inventory (*long list*) and analysis of inventory results (charts, text)

Pilot islands (*short list*):

Target of 1-3 islands per riparian country (i.e. 20-25 in total)

Extended parameters: land structure classes, landowners

The basic concept will have been developed into a

Tested application and feasibility of pilot islands in all Danube countries

An international **Masterplan** with follow-up project and

A public **Initiative** achieving wider attention from local to intl. level.

Vision: A ***Danube WILDisland Corridor*** from Germany to the Black Sea as a contribution to wilderness protection in Europe

