

# lifelineMDD

## Biosphere Region - Chance for sustainable future



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 **euRONATUR** STIFTUNG

Bad Radkersburg,  
September 6, 2022

Project co-funded by European Union funds (ERDF, IPA), DTP3-308-2.3- lifeline MDD

# The 5-country Biosphere Reserve Mura-Drava-Danube: A historical chance for a joint future

## 1 - Congratulations

2 - Crisis – Biosphere in danger

3 - The Biosphere approach as challenge and chance

4 - Experiences from other regions

5 - Looking forward



### Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia)



# Congratulation to you

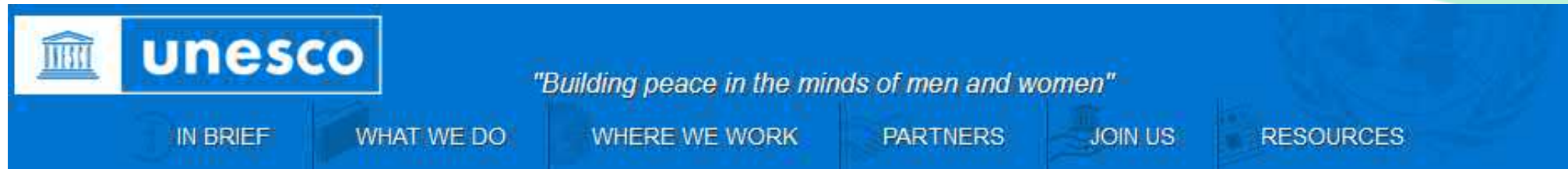
- 1 – inhabitants & stakeholder
- 2 – citizen initiatives,  
NGO & governmental bodies,  
scientists & experts
- 3 – state parties of  
Croatia, Hungary, Serbia, Slovenia & Austria

# A long way from vision to reality

1992-1999 Vision of BR. The conception phase  **EURONATUR** STIFTUNG  
series of workshops and conferences

2000-2021 The development and built-up phase





2012

Mura-Drava-Danube Transboundary Biosphere Reserve, Croatia/Hungary



The Mura River Biosphere Reserve, Slovenia



2018



2017

Backo Podunavlje Biosphere Reserve, Serbia



Lower Mura Valley Biosphere Reserve, Austria



2019

# A long way from vision to reality

1992-1999 Vision of BR. The conception phase  
series of workshops and conferences

≡ **EURONATUR** STIFTUNG

2000-2021 The development and built-up phase



2021 The year of designation

**2022-2031 The implementation phase**



Hungary



Croatia



Serbia



Slovenia



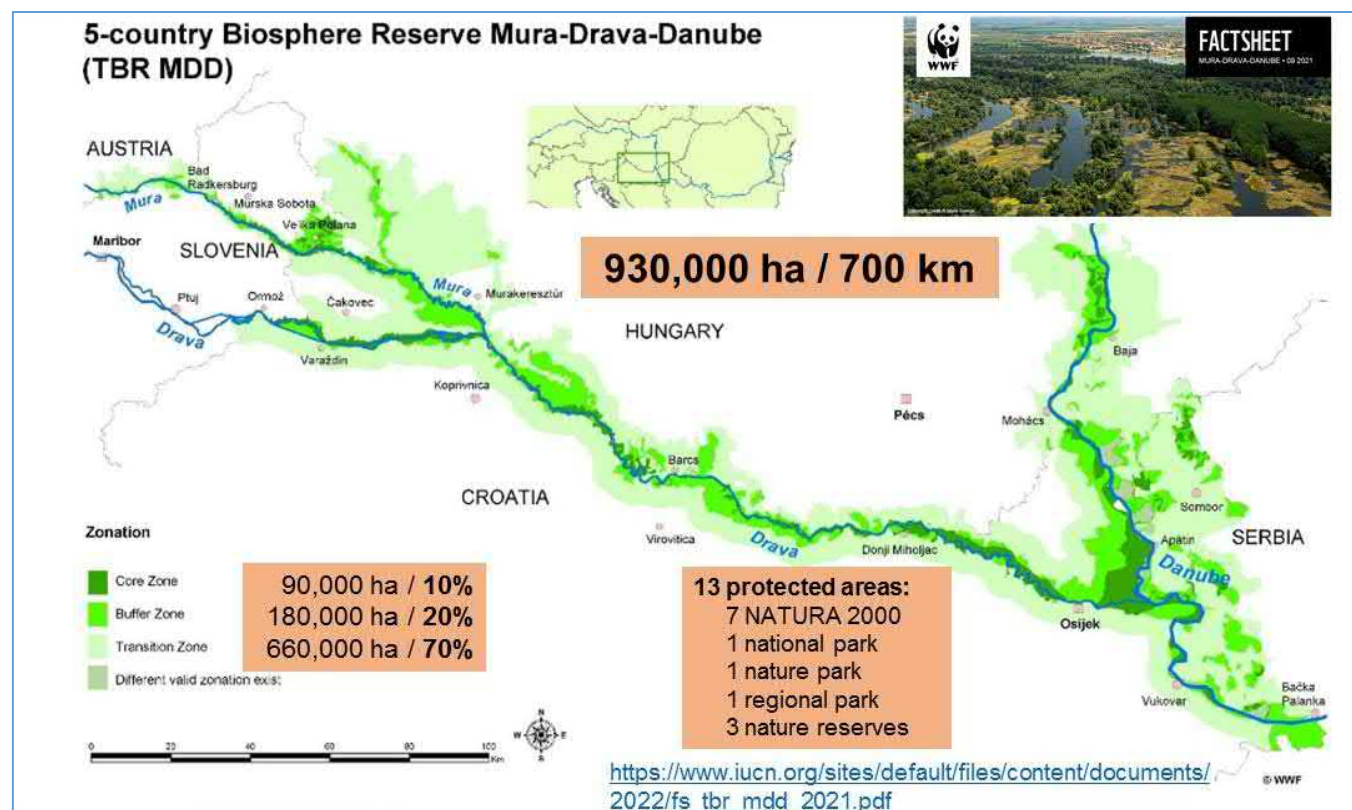
Austria

# Implementation phase

A great challenge with many risks, but also a **great chance...**

Biosphere reserves –  
more than protected area.

**Survival regions** within  
our threatened world



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Biosphere =

„space for life“

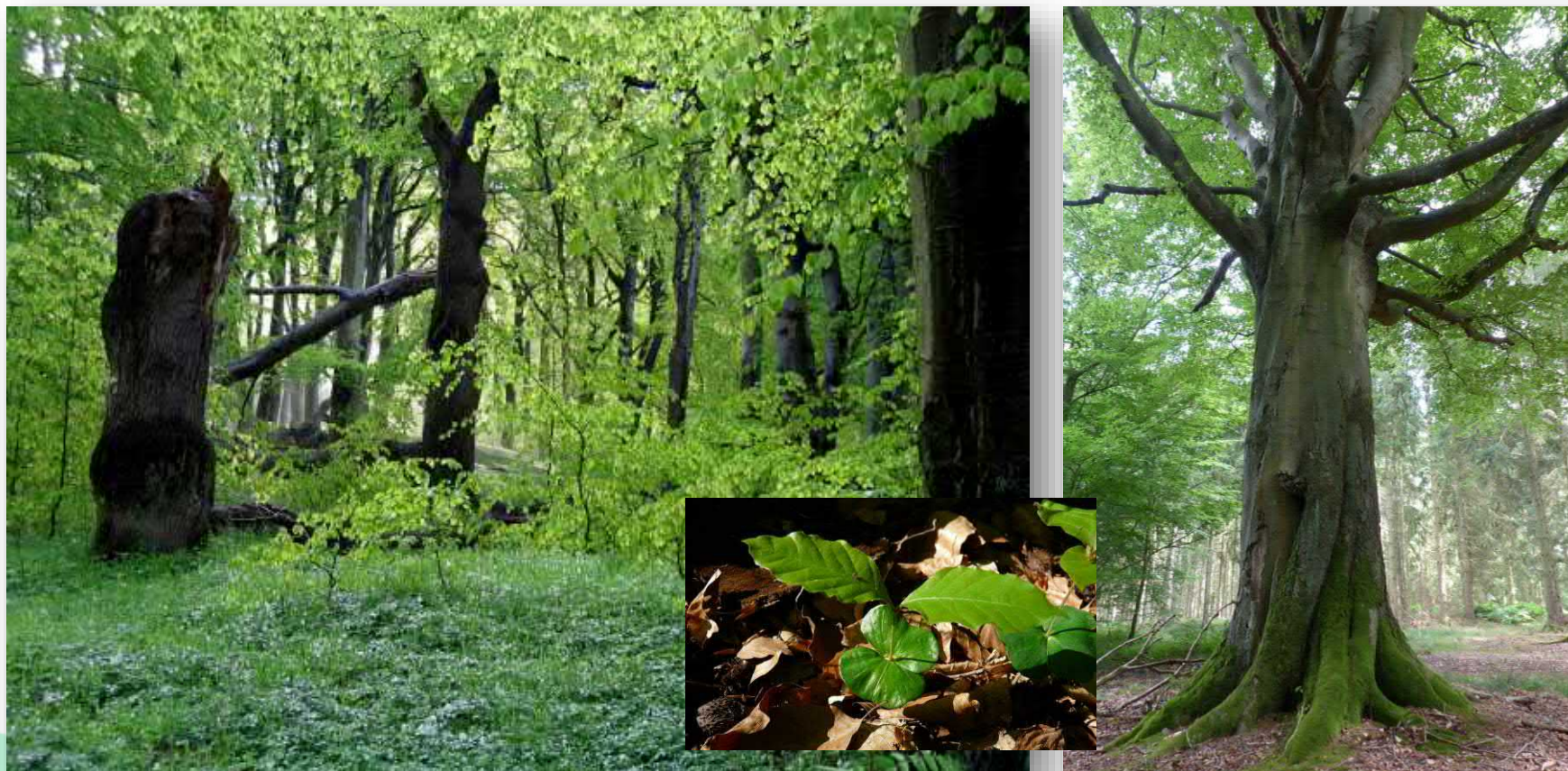


Base of all life

A very thin skin  
around the globe

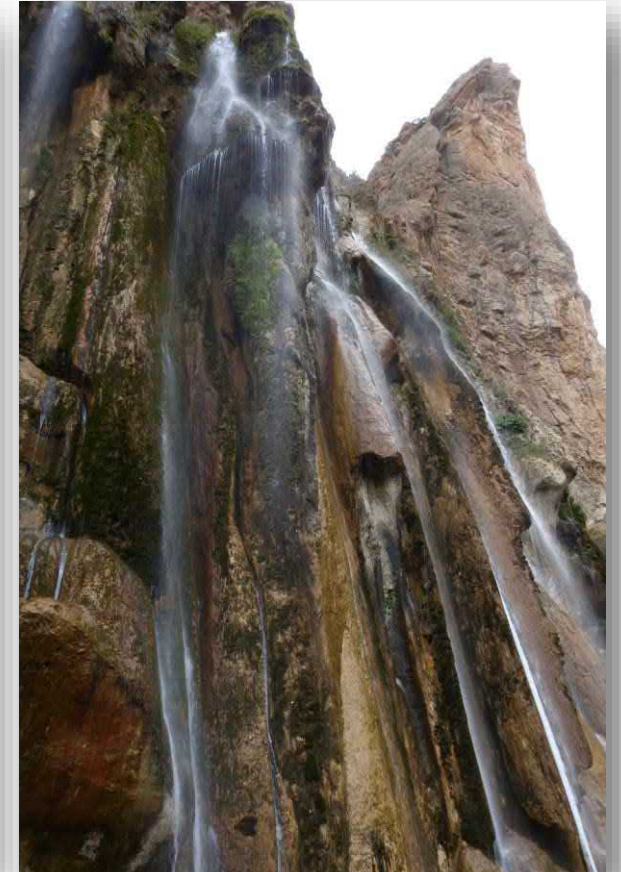
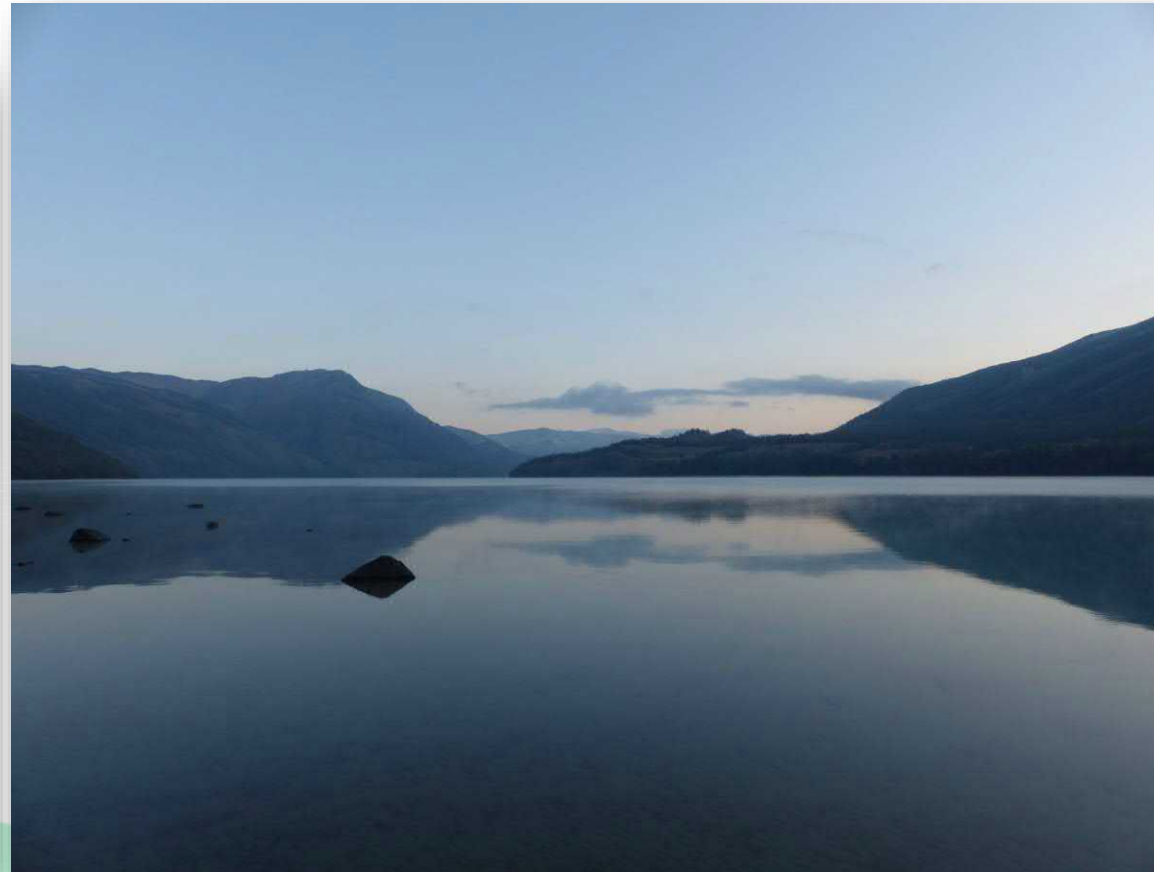
# Biosphere – ongoing processes

Photosynthesis, cycle of energy and nutrients  
cycle of growth and decay



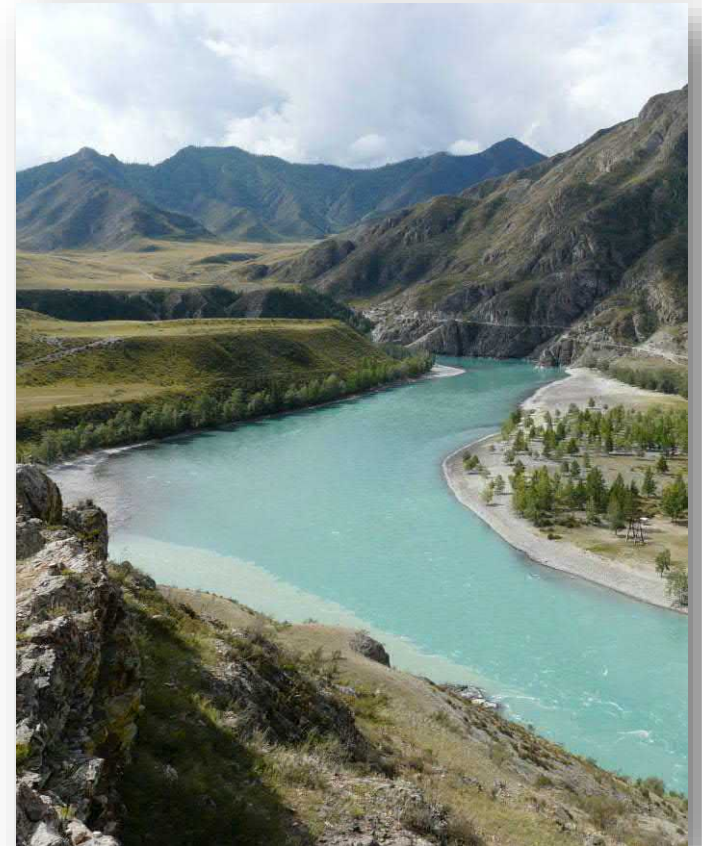
# Biosphere – ongoing processes

Water – base of all life



# Biosphere – ongoing processes

## Rivers – lifelines of landscape



# Biosphere – basic conditions of the ecological house „Earth“

- **Diversity of life/biodiversity** as a result of evolutionary processes
- **Ecosystems functions**  
photosynthesis,  
carbon storage, water cycle,  
cycle of material esp.nutrients,  
cooling of the atmosphere...
- **Increase of fertility** by  
accumulation of **humus**



# Biosphere – basic conditions of the ecological house „Earth“

These conditions could continue  
over thousands and  
thousands of years !

**But...**





... we arrived in **Anthropocene**

New Era of Earth history  
World in change



Urbanisation  
Globalisation  
Digitalisation  
Scientific-technical progress

# Beyond the boundary

# Crisis

Biodiversity loss

Nitrogen cycle

Climate change

Phosphorus cycle

Ocean acidification

Change in land use

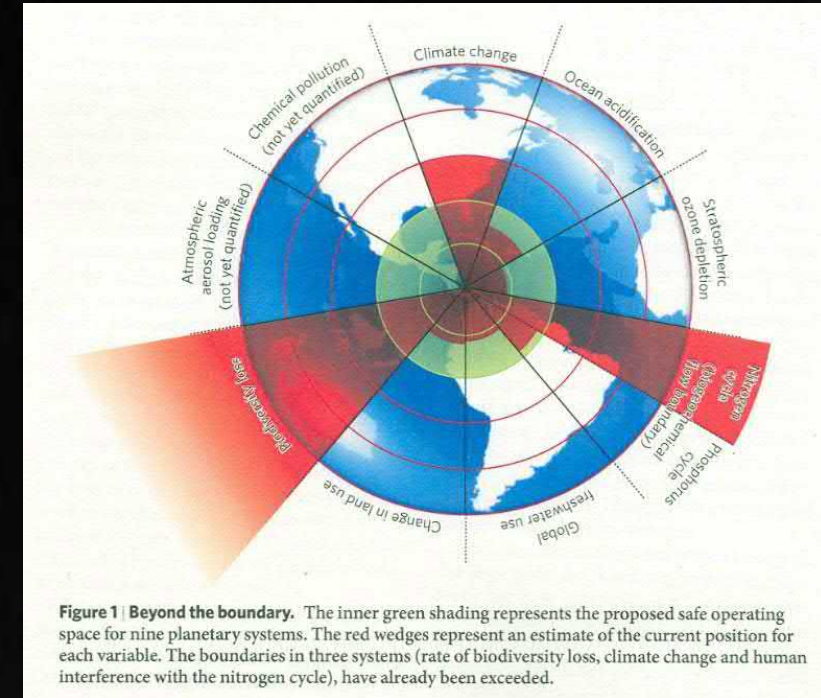
Global freshwater use

Chemical pollution

Ecosystem functions degradation

Soil degradation and humus loss

Pandemics





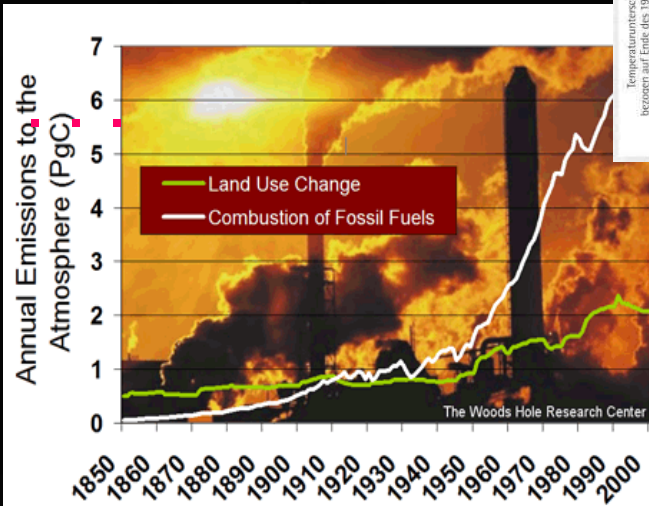
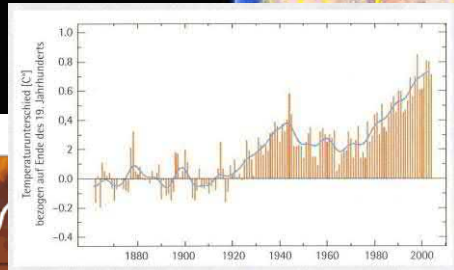
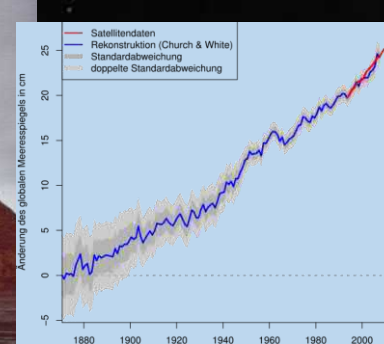
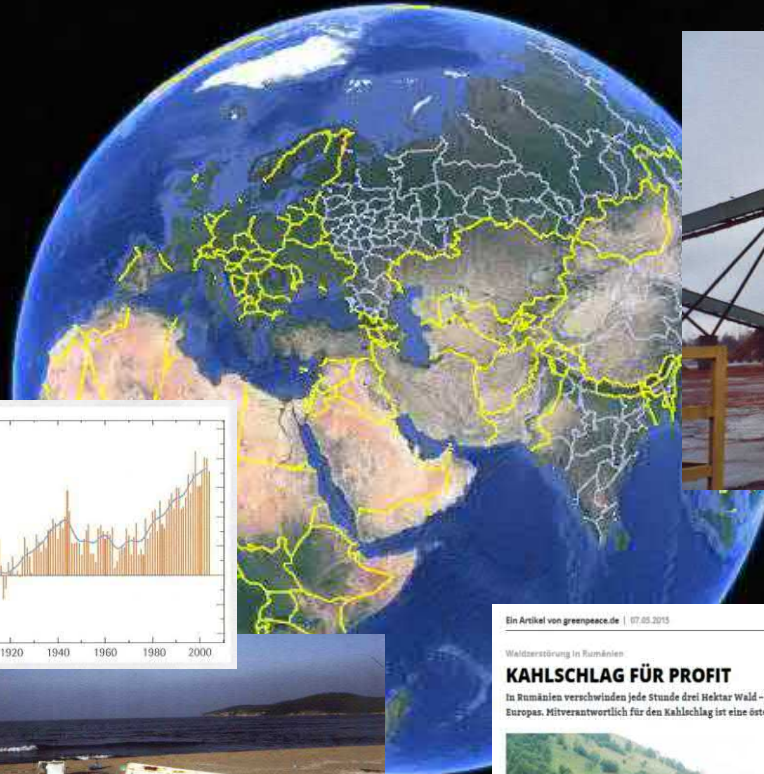
# Reasons:

Burning of fossil fuels

Waste of energy and resources

Industrialization of land-use

# Crisis



# Driving forces:

Compulsion to ongoing growth

Financial speculations

Greed for profit

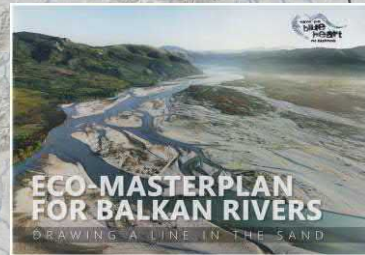
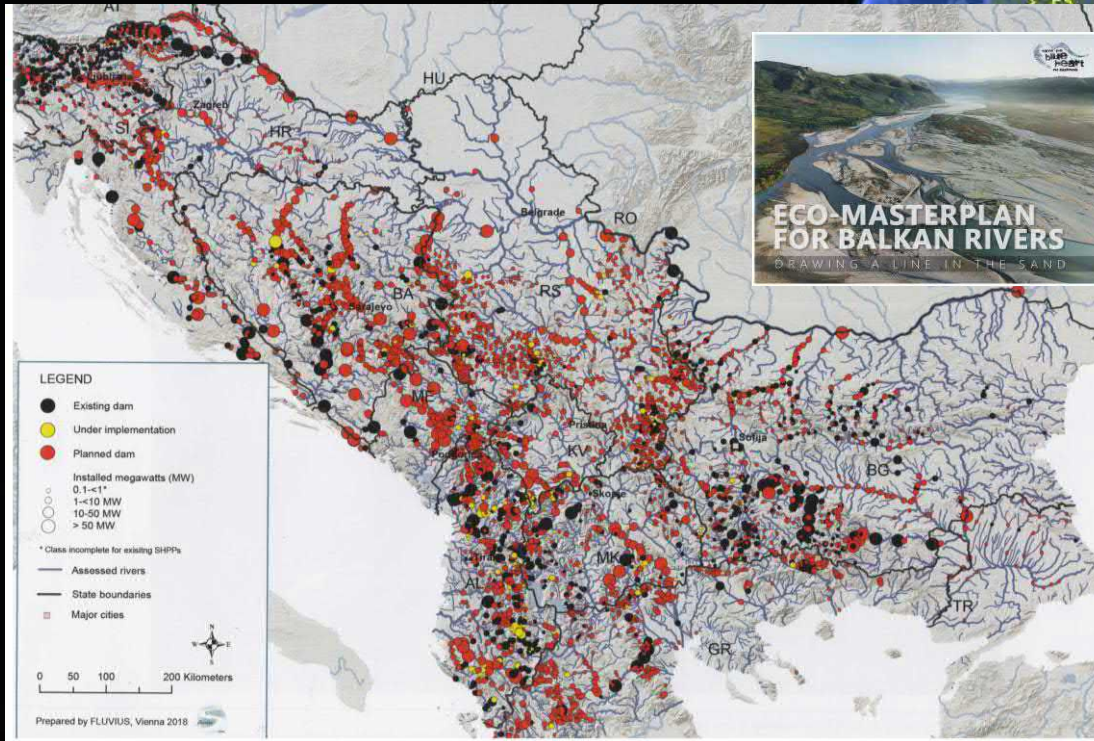
„gold rush“

# Crisis




# Rivers under threat

Hydropower plants in SE-Europe  
(existing, under construction, proposed)



Protest gegen die Zerstörung der Murauen in Slowenien durch neue Wasser-  
kraftwerke.



Sign of hope:  
UNESCO Biosphere Reserves

# The 5-country Biosphere Reserve Mura-Drava-Danube: A historical chance for a joint future

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**3 - The Biosphere approach as challenge and chance**

4 - Experiences from other regions

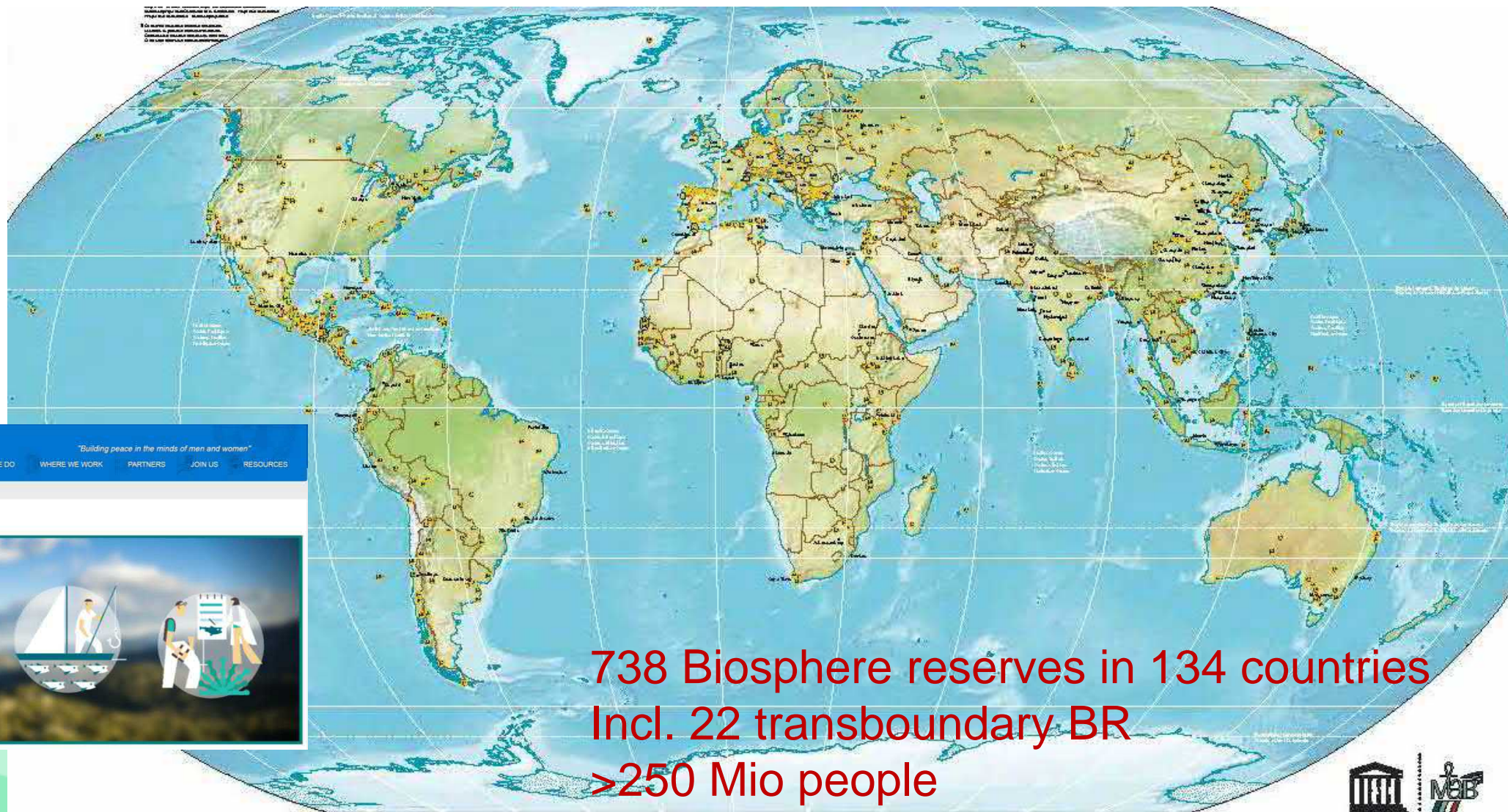
5 - Looking forward



Five-country Biosphere Reserve Mura-Drava-Danube (Austria,  
Croatia, Hungary, Serbia, Slovenia)



# Biosphere reserves – World wide network



UNESCO  
IN BRIEF WHAT WE DO WHERE WE WORK PARTNERS JOIN US RESOURCES  
"Building peace in the minds of men and women"  
Biosphere Reserves  


# Biosphere reserves – World wide network

1970 – UNESCO programme „**Man and Biosphere**“

Model regions for nature conservation and sustainable regional development in harmony of men and nature



Transsilvania (Romania). © D. Dinu

# Biosphere reserves – World wide network

## Management goal: Sustainability

Ecological – social – economic balance  
 Aesthetic dimension – **Cultural task**





# Biosphere reserves – World wide network

## Functions:

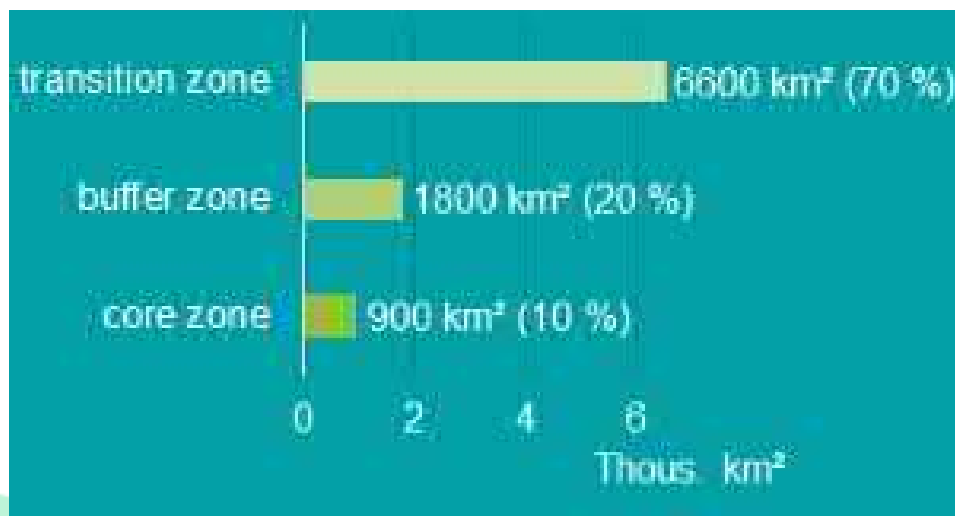
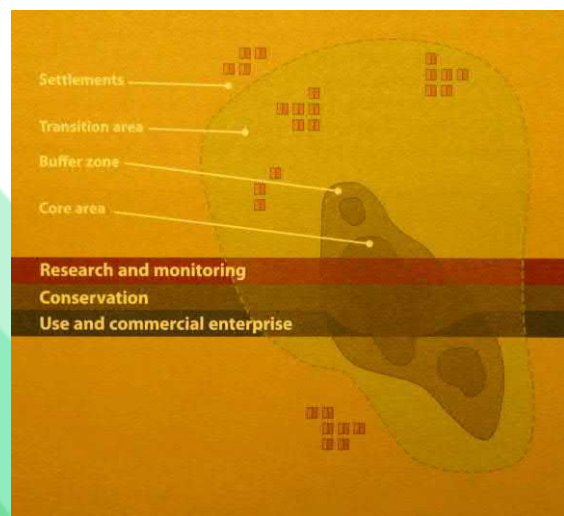
- 1 – **Protection** of natural and cultural values
- 2 – **Development** of models for sustainability
- 3 – **Logistic function:** research, education, public awareness



# Biosphere reserves – World wide network

## Zonation: Key for success

Core zone – buffer zone – transition zone



# Biosphere reserves – World wide network

They are learning areas for sustainable development under diverse ecological, social and economic contexts, touching the lives of more than 250 million people world wide



# Biosphere reserves – World wide network

Biosphere reserves give people home



# Biosphere reserves – World wide network

Transboundary biosphere reserves contribute also to  
peace, understanding, good neighbourhood  
and cooperation



# Biosphere reserves – World wide network

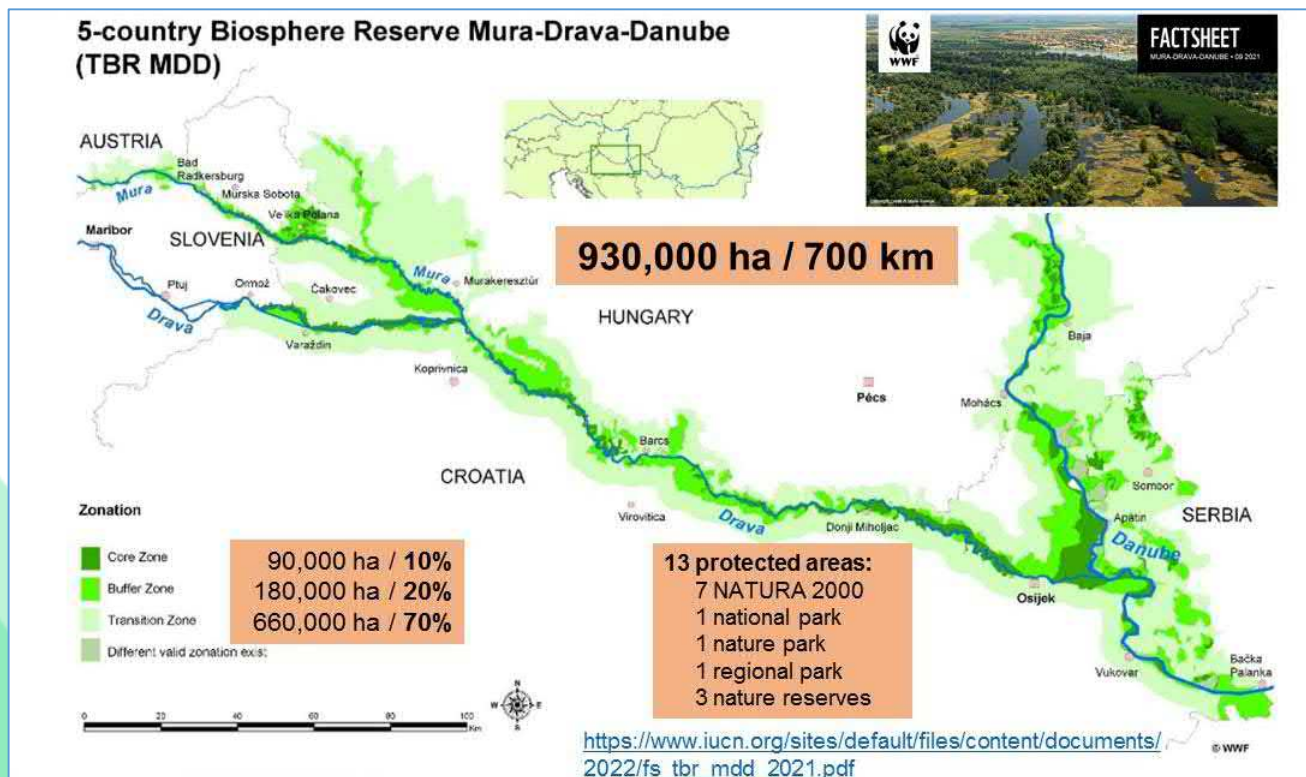
The management of a biosphere reserve is much more difficult as the management of a national park



The image is a screenshot of a UNESCO website page. At the top, the UNESCO logo is on the left, and the motto "Building peace in the minds of men and women" is on the right. Below the motto is a navigation menu with links: IN BRIEF, WHAT WE DO, WHERE WE WORK, PARTNERS, JOIN US, and RESOURCES. A breadcrumb trail reads: Home > Biosphere Reserves > Biosphere reserves in Europe & North America > Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia). The main content area features the year "2021" on the left, followed by the title "Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia)". Below the title is a photograph of a wide river with a sandy bank and dense green trees. A teal banner at the bottom left of the photo reads "World's first 5-country Biosphere Reserve" with a laurel wreath icon. On the right side of the page, there is a vertical column of five national flags: Hungary, Croatia, Serbia, Slovenia, and Austria.

# Biosphere reserves – World wide network

The management of a biosphere reserve is a great challenge and a never ending process



# Biosphere reserves – World wide network

Biosphere reserves are **trend-setting models** for nature conservation and sustainable development in the 21st century:

- for the management of cultural landscapes,
- for the consistent protection of remaining wilderness,
- for the regeneration of degraded ecosystems,
- for reflection, gaining knowledge and nature education,
- for maintaining a livable biosphere.

## What are Biosphere Reserves?



Biosphere reserves are 'learning places for sustainable development'. They are sites for testing interdisciplinary approaches to understanding and managing changes and interactions between social and ecological systems, including conflict prevention and management of biodiversity.

[Read more](#)



# The 5-country Biosphere Reserve Mura-Drava-Danube: A historical chance for a joint future

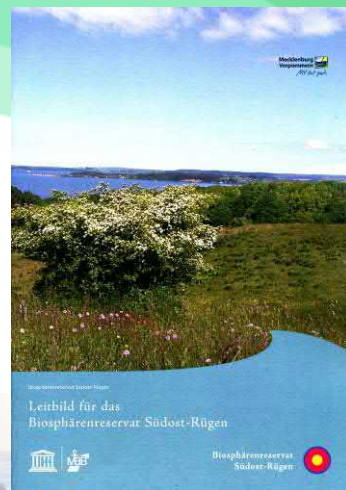
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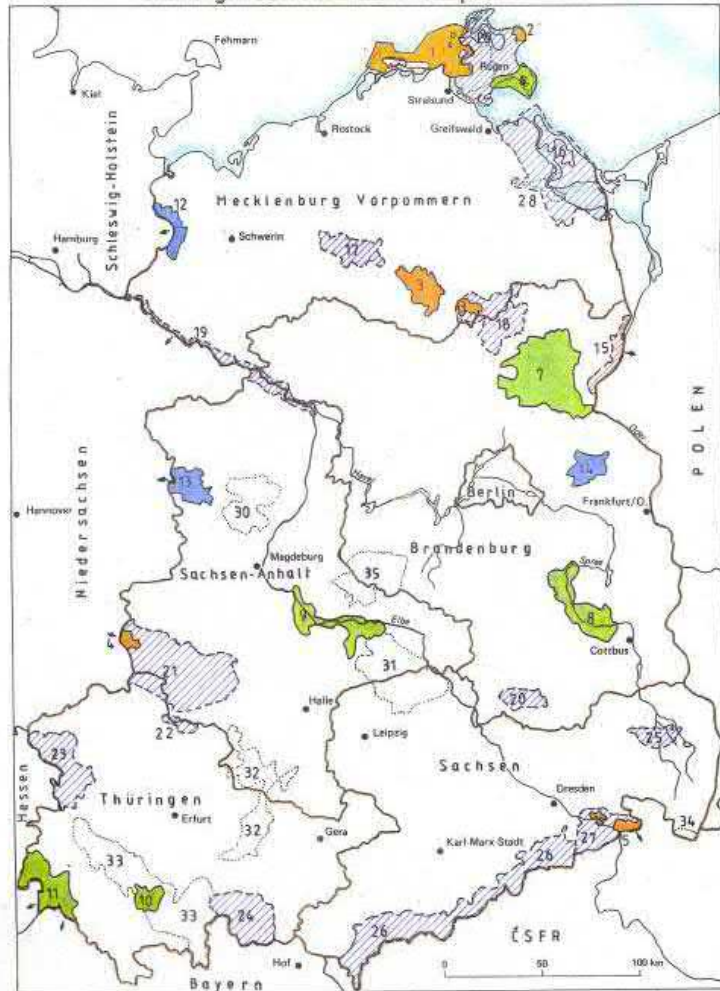
## Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia)



# Biosphere Reserve SE-Rügen, Germany



# „National park program“ of the GDR 1990



5 National parks

6 Biosphere reserves

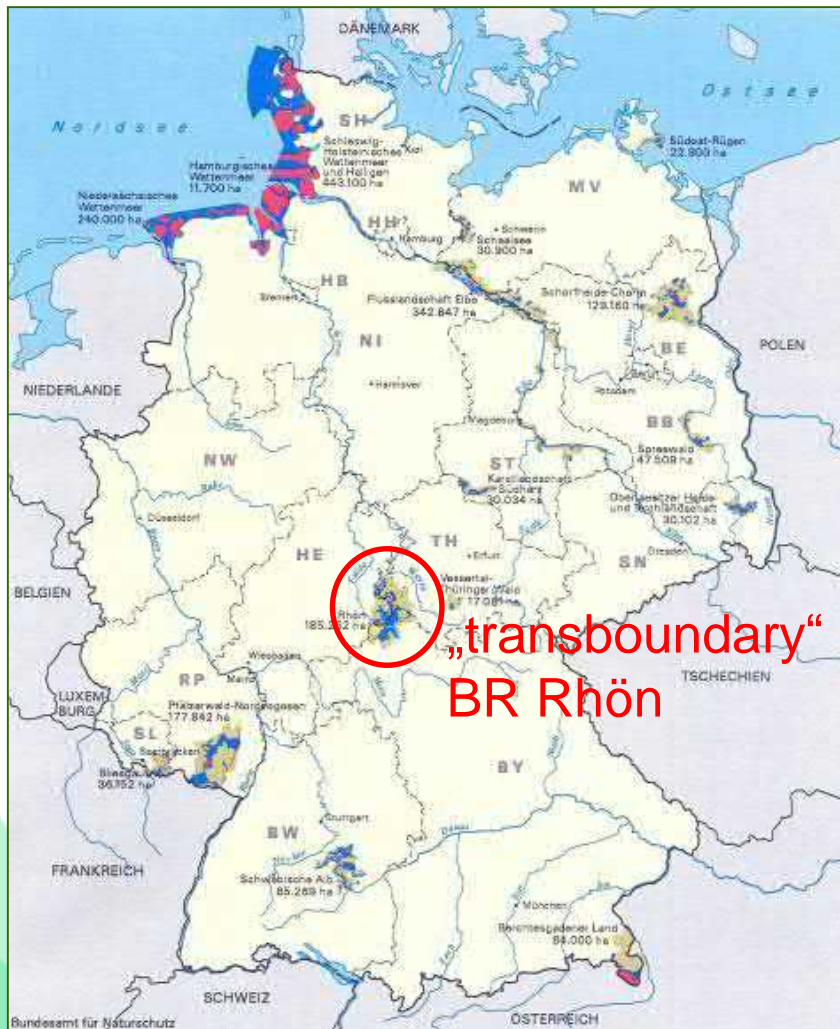
3 Nature parks

Total area: 488.200 ha /  
4,5 %

14 Nature parks  
preliminary protected  
(683.500 ha / 6,3 %)



# Biosphere reserves in Germany



Number: 16

Area: 1,9 Mio ha

incl. 335 Th ha core zones  
667 Th ha marine areas  
Share (terrestrial):  
3,5 % of German territory



# Biosphere reserve Dena in Iran

MSF project for rural development and participation



# “Development of a finally 4-lateral „Biosphere Reserve Great Altai

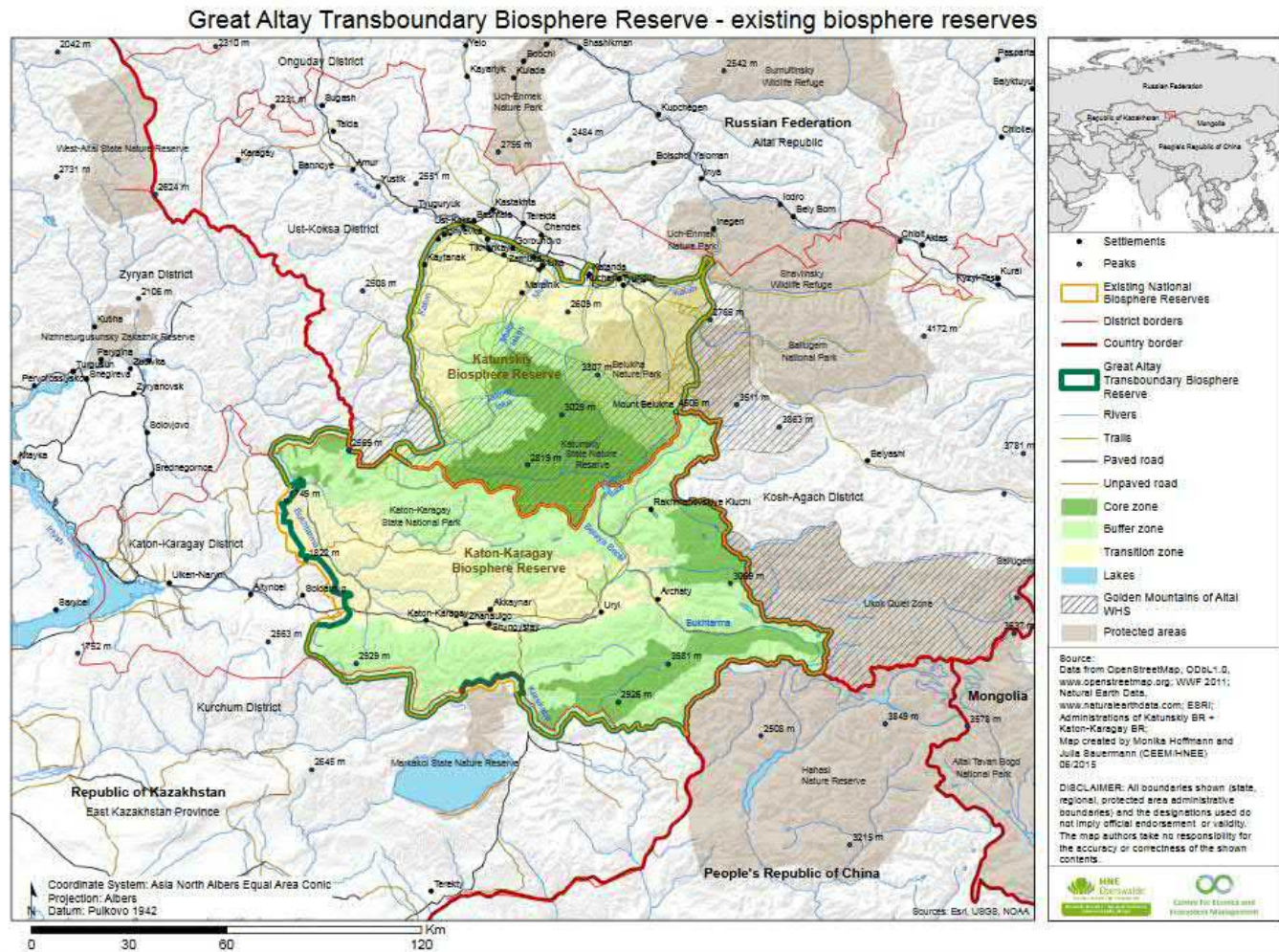



Photo 4: Kick-off meeting in Gorno-Altaiisk (left)



**GREAT ALTAI TRANSBOUNDARY BIOSPHERE RESERVE**

Development of a management plan of the proposed Great Altai Transboundary Biosphere Reserve (Republic of Kazakhstan and Russian Federation)



Editors: Ilonika Hoffmann, Julia Seemann, Anna Wirthner, Anja Wirthner  
 Authors: Ilonika Hoffmann, Julia Seemann, Anna Wirthner, Anja Wirthner

# Transboundary Biosphere reserve

Baekdusan / Changbai Shan (2.744 m)  
(National park 1961, Biosphere reserve 1979)  
196,465 ha (139,680 ha core zone)

China

North Korea

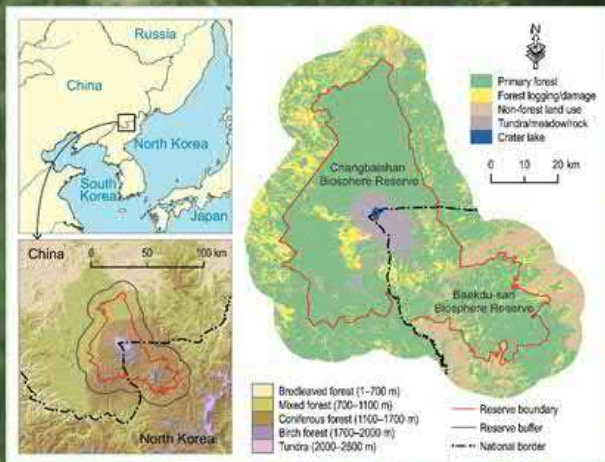


Image © 2005 MDA EarthSat  
Image © 2005 DigitalGlobe

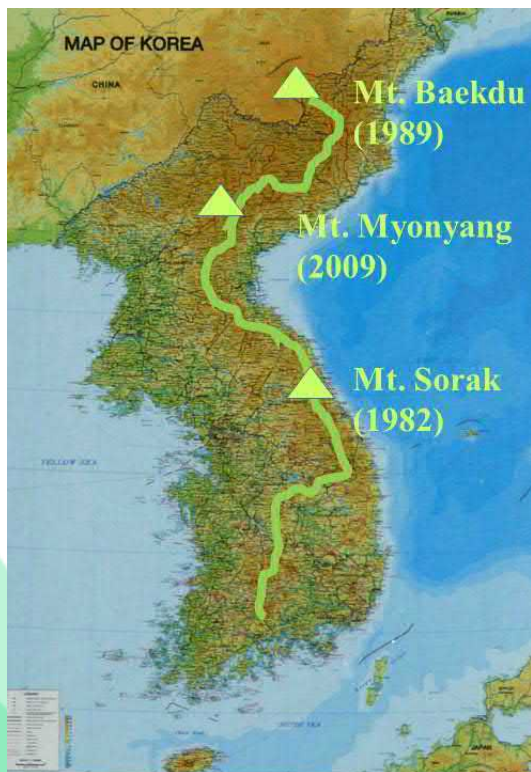
© 2005 Google

Pointer 42°03'36.69" N 128°02'21.36" E elev 1940 m Streaming 100% Eye alt 97.28 km



# Vision of a transboundary Biosphere Reserve „Baekdudaegan“

Joint spiritual and cultural importance & natural value in **Korea**





# 1st Biosphere reserve in Georgia

2022 Kakheti - "Biosphere Reserves as model regions for climate protection and adaptation - capacity development for the establishment of a UNESCO biosphere reserve". MSF project 2018-2021



MEDIA CONTACT  DE EN

UNESCO biosphere  
reserve in Kakheti



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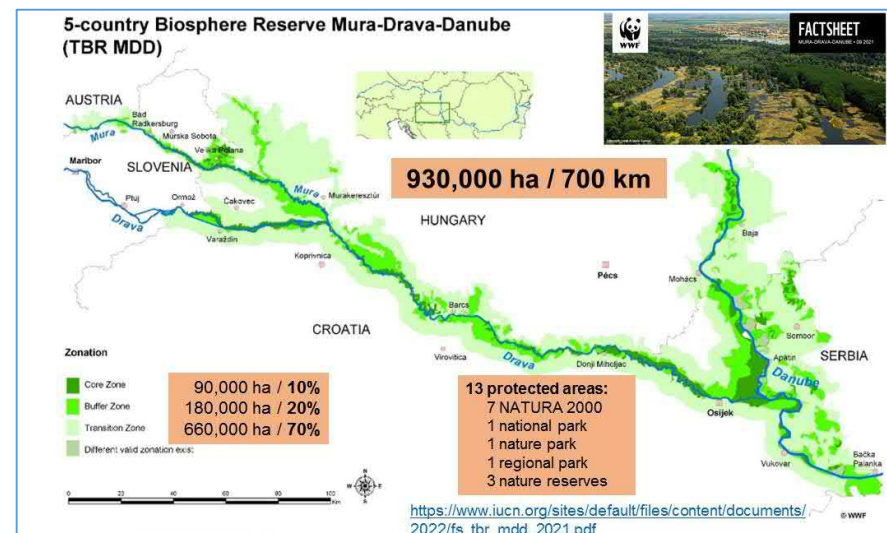


## Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia)



# Looking forward

The designation of the “5-country Biosphere Reserve Drava-Mura-Danube” is a challenge and obligation for further responsible cross-rivers cooperation of governments and administrations, as well especially of civil society and the citizens.

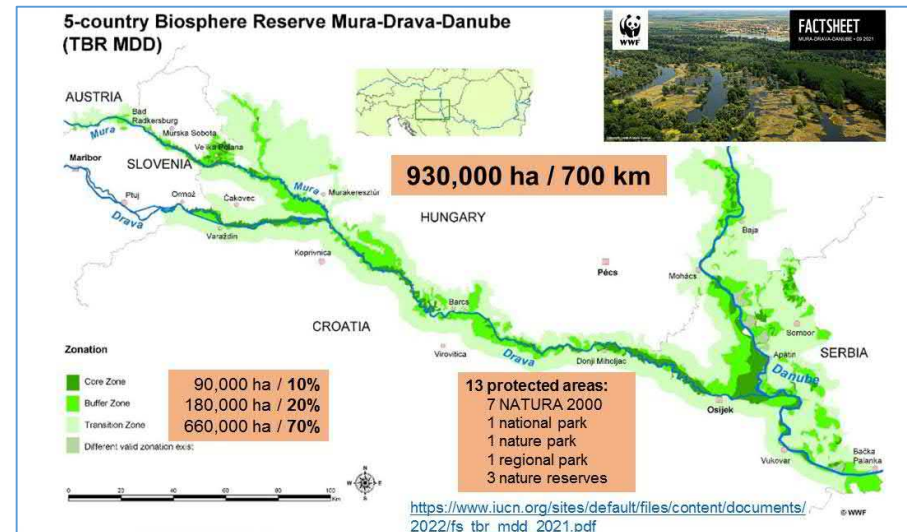


# Looking forward

The implementation of the “5-country Biosphere Reserve Drava-Mura-Danube” is a unique chance for a joint future of people in healthy landscape. It will be successful, if you realize the rivers as connecting bridges instead of separating borders, and if you appreciate and safeguard the river system with their ecosystems as a basis of life.

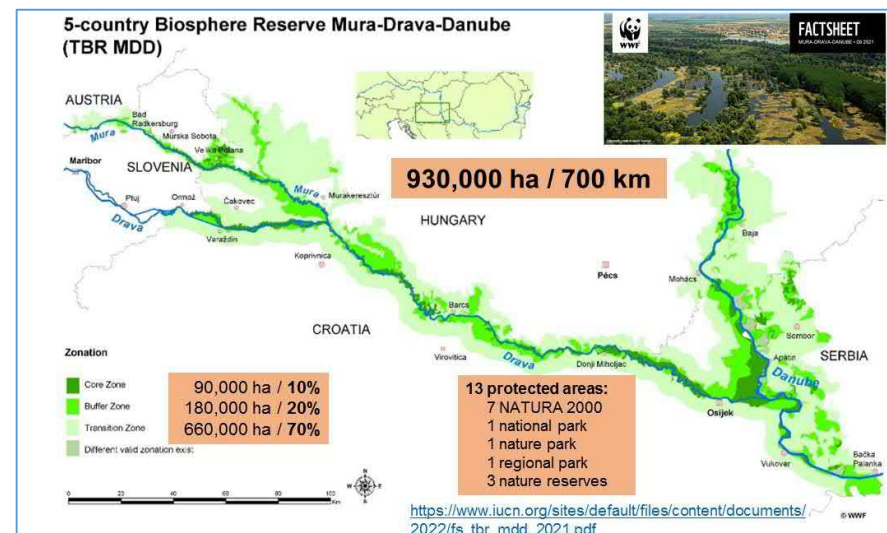
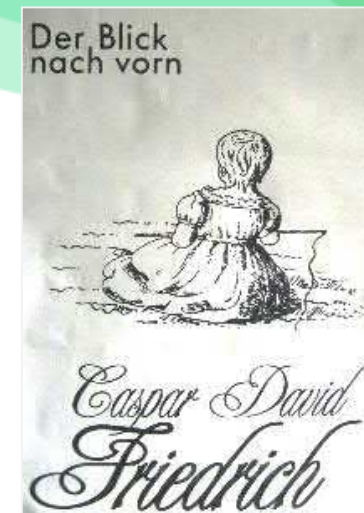


Five-country Biosphere Reserve Mura-Drava-Danube (Austria, Croatia, Hungary, Serbia, Slovenia)



# Looking forward

- Don't be distracted from your goals
- make the unimaginable possible
- If you want it, you can achieve it



Thank you  
very much!



Hans D. Knapp



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