# Restoration potential for the Transboundary UNESCO Biosphere Reserve "Mura-Drava-Danube" (TBR MDD)

Life+ workshop "Side-arms and floodplains along large rivers" 2013, Mohács



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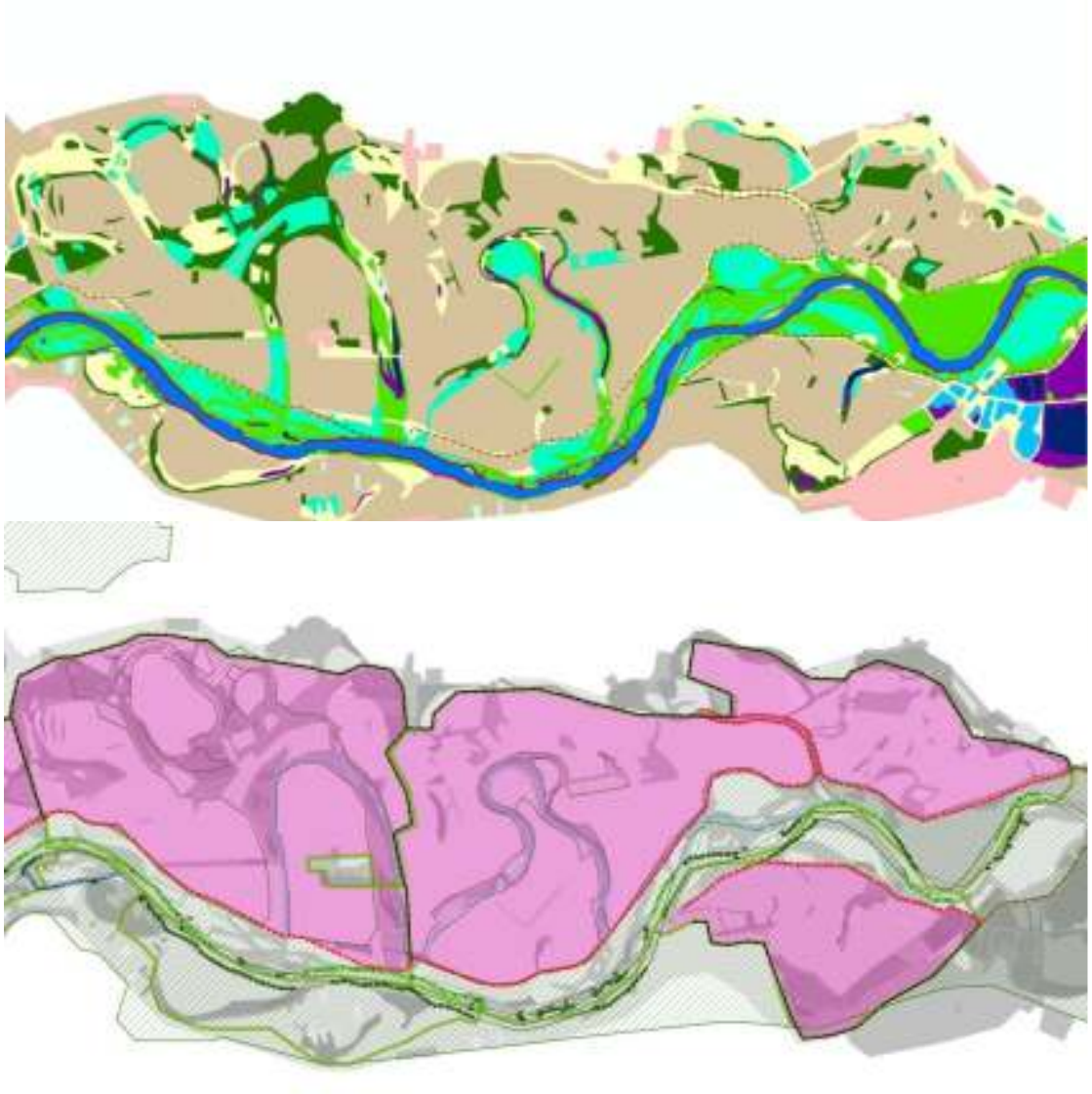
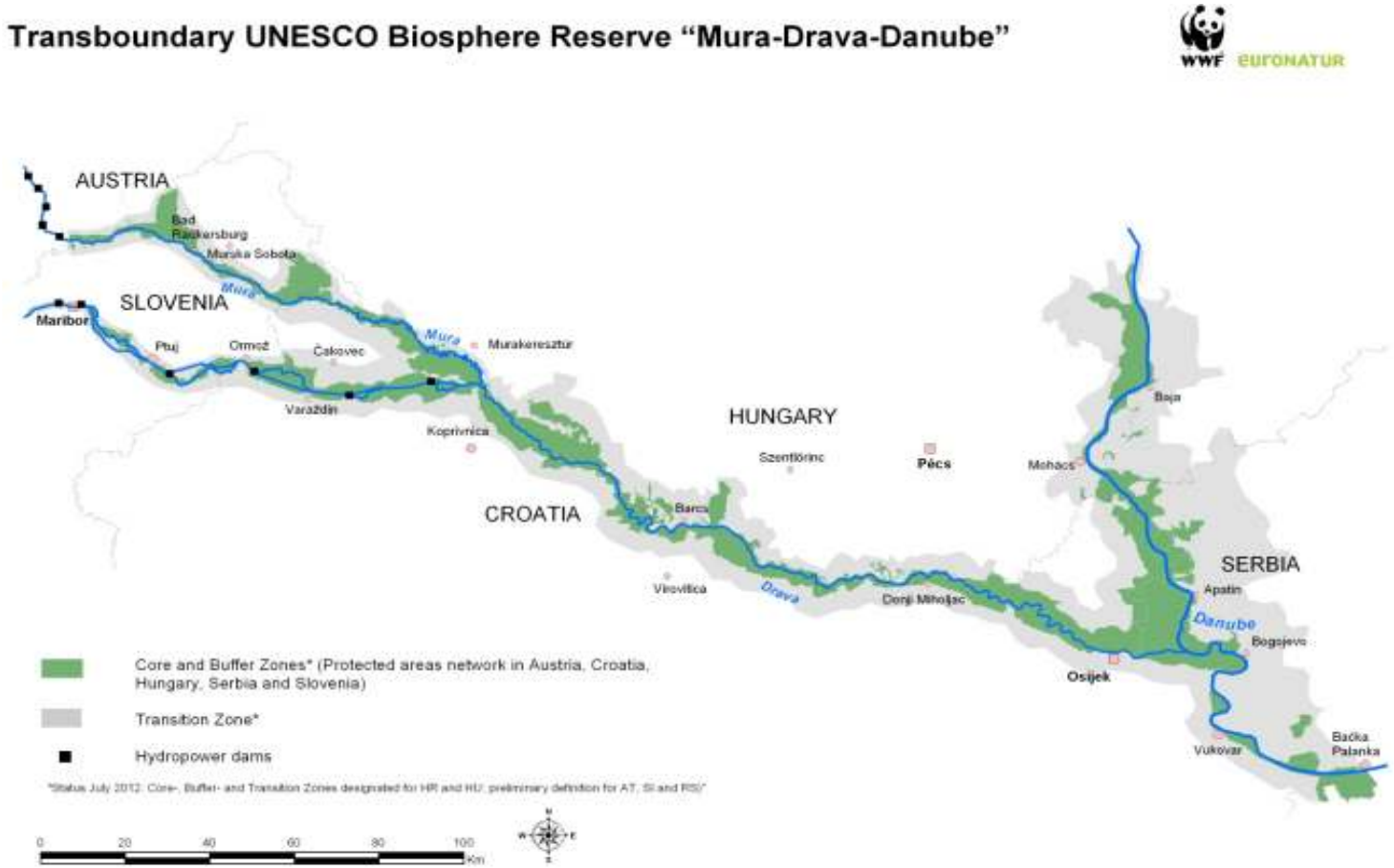
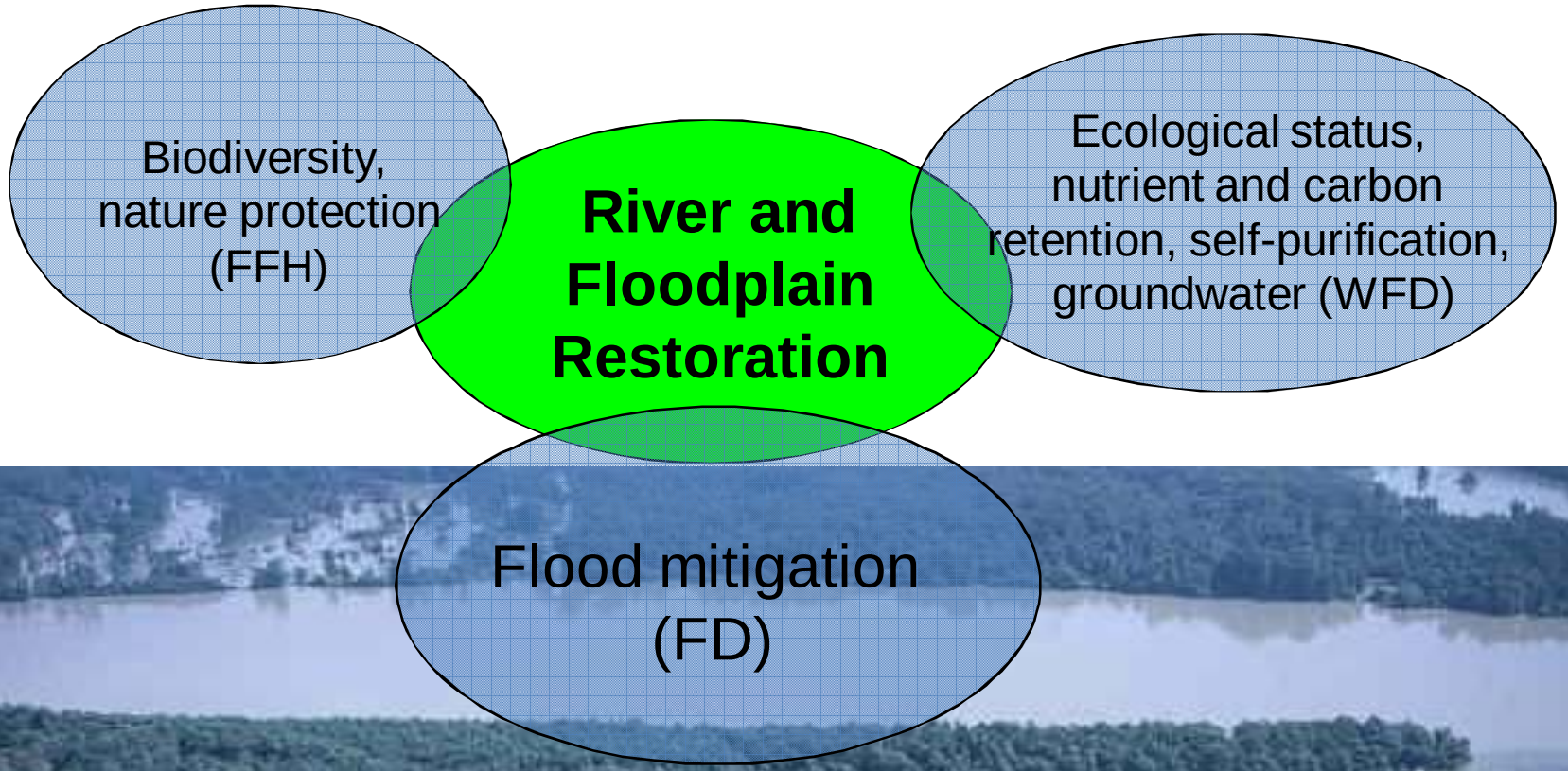


# 1.2. Introduction: The Transboundary UNESCO Biosphere Reserve “Mura-Drava-Danube”

- Austria, Croatia, Hungary, Serbia and Slovenia
- 886,400 ha
- 725 rkm of Mura, Drava and Danube



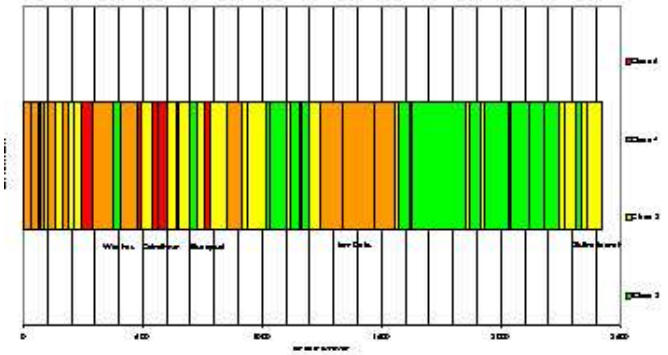
# 1.2. Introduction: Context of river and floodplain restoration




➢**Aim of WWF Study: Vision for long-term restoration potential for the TBR MDD**

# 2.1. Approaches: Hydromorphological River assessment

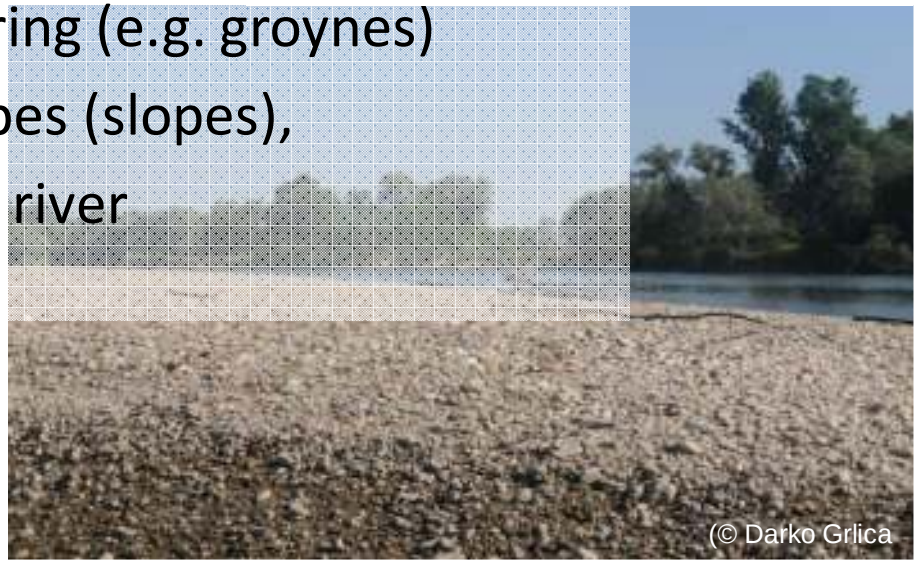
**River assessment:** Hydromorphological assessments, e.g. by CEN EN 14614:2004 and EN 15843:2010 in five classes from near natural (blue) to totally modified (red) -, usage of reference conditions



**1. Assessment of river channel:** Planform, sinuosity, bars, variability of width and depth, substrate, alterations by river engineering (e.g. groynes)

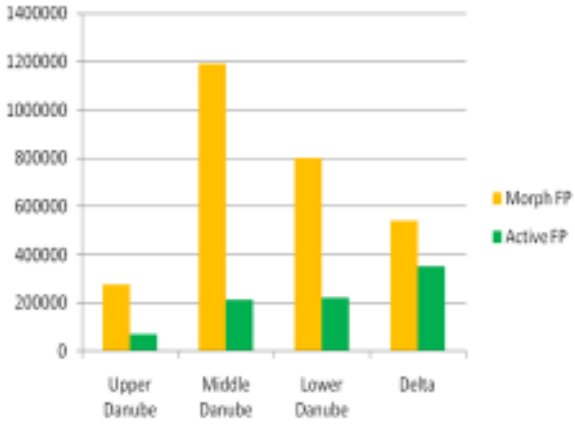
**2. Assessment of river banks:** Bank types (slopes), substrate, riparian zone, alterations by river engineering (e.g. rip-rap)

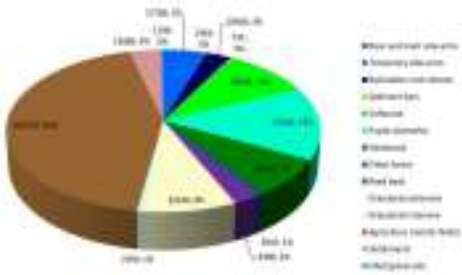
**3. Assessment of side-channels:** Connectivity, habitats



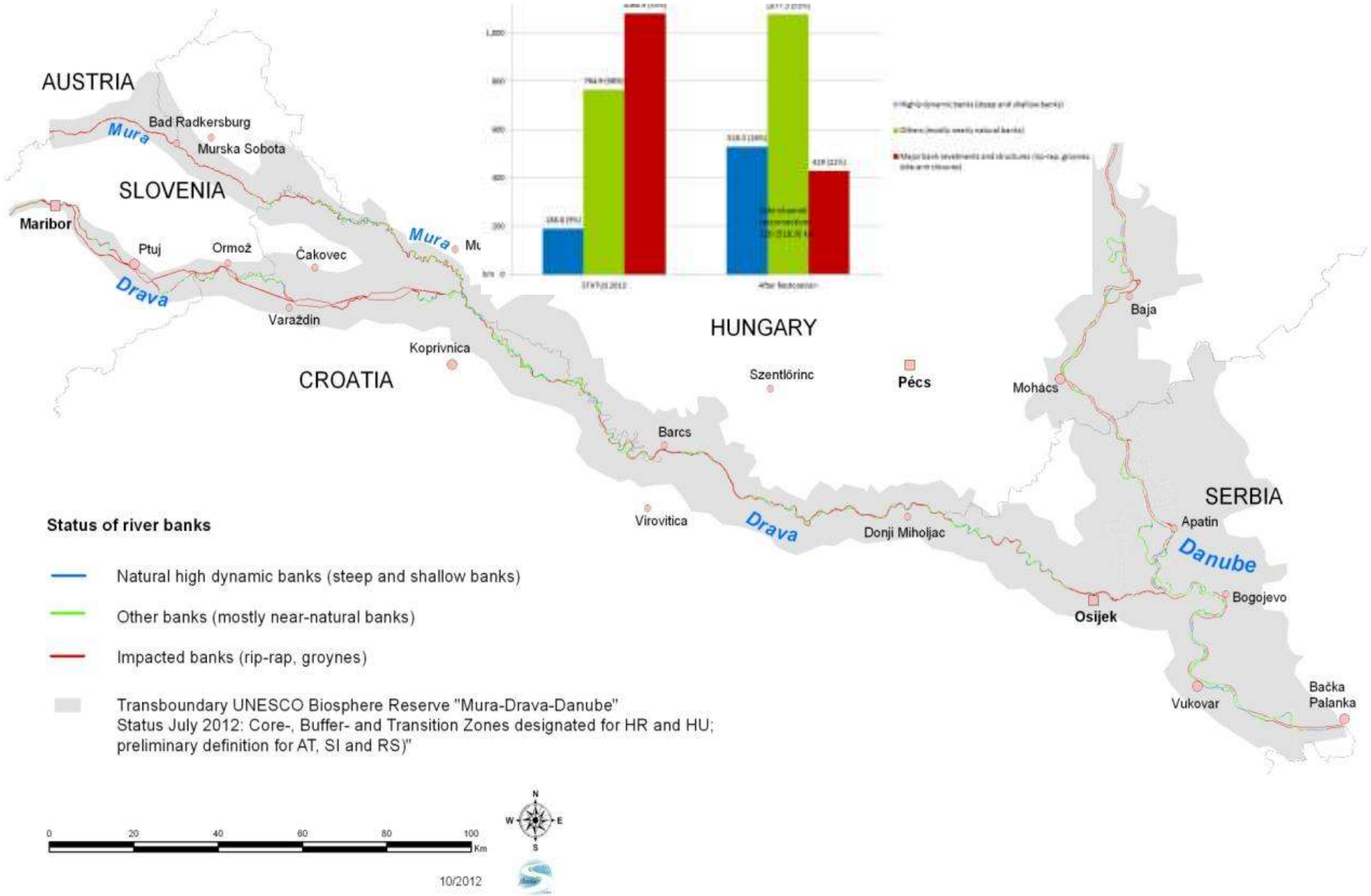
# 2.2. Approaches: Large scale Floodplain assessment

1. **Floodplain delineation:** Significant loss of active floodplains
2. **Floodplain assessment:** Land use/habitats, hydromorphological conditions, coverage of protected areas
3. **Potential sites for floodplain restoration in former floodplain (iterative selection and prioritisation):**
   - Land use (settlements are excluded “no go”)
   - Hydromorphology, lateral connectivity
   - Size, width, length, shape of potential sites, position (tributary confluences, upstream of flood conveyance bottlenecks)
   - Protected areas, bio-corridor

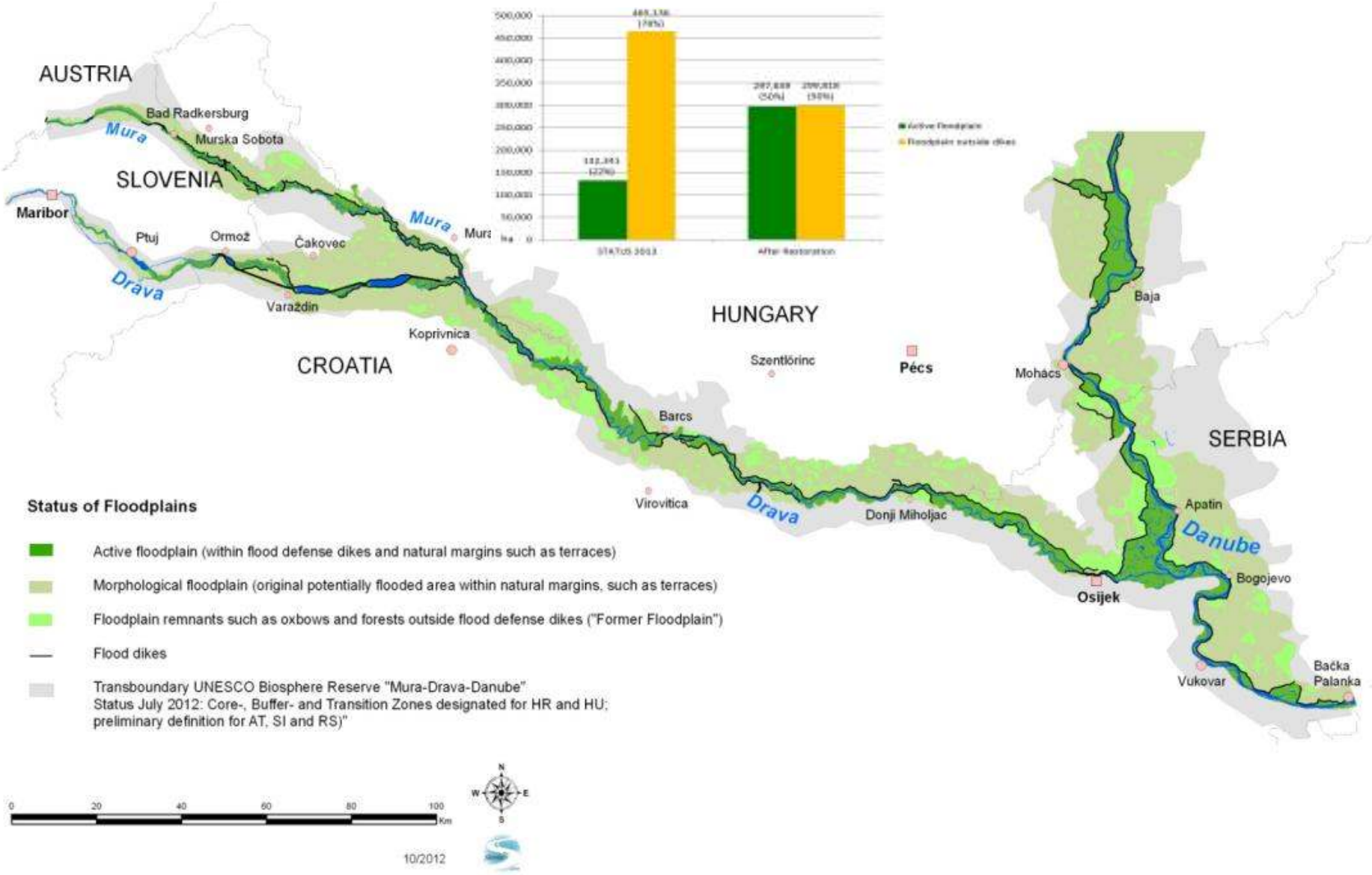


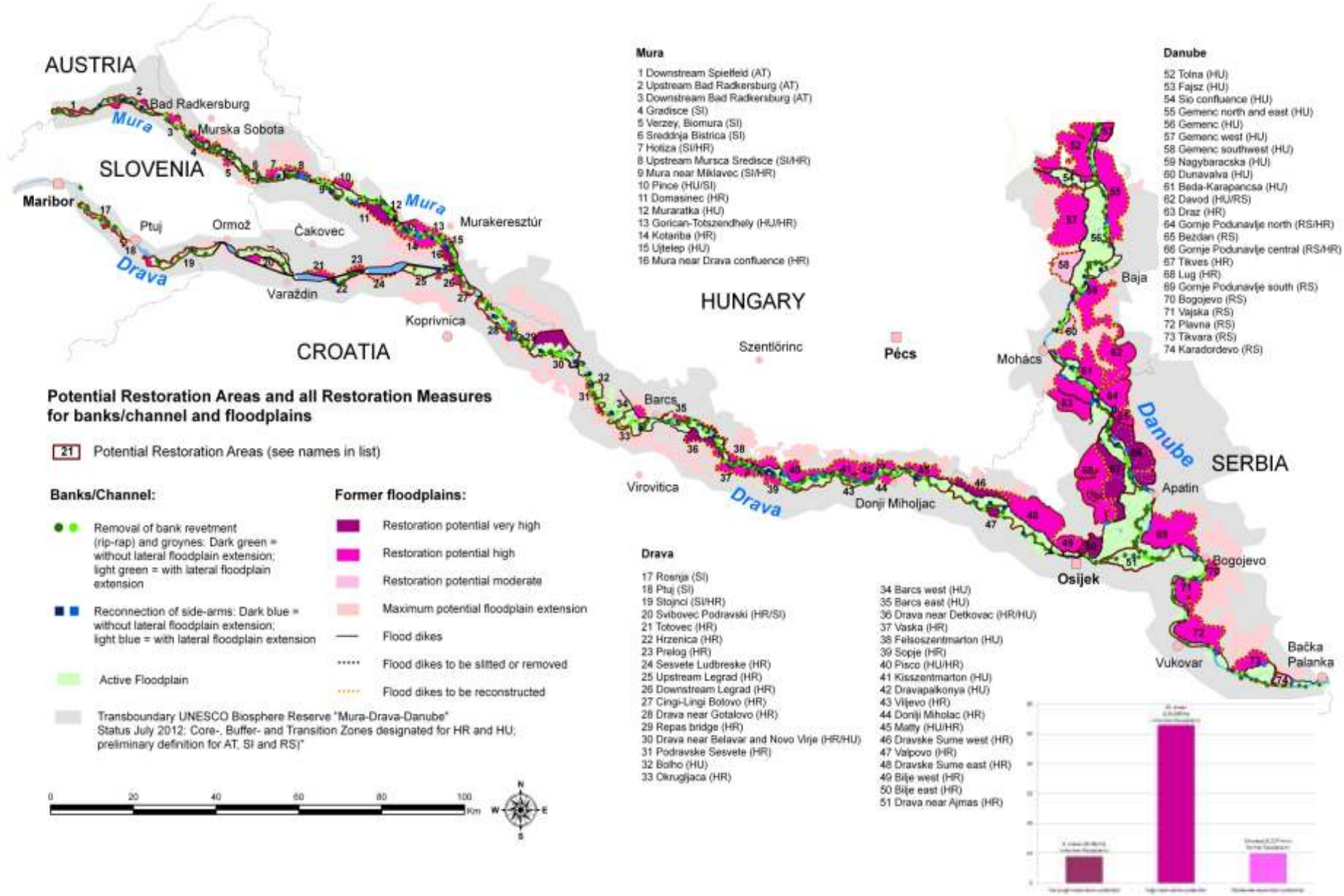
# 3.1. Results: River banks



# 3.2. Results: Floodplains



# 3.3. Results: Restoration Potential



# Examples from Elbe/Germany I

# Examples from Elbe/Germany II