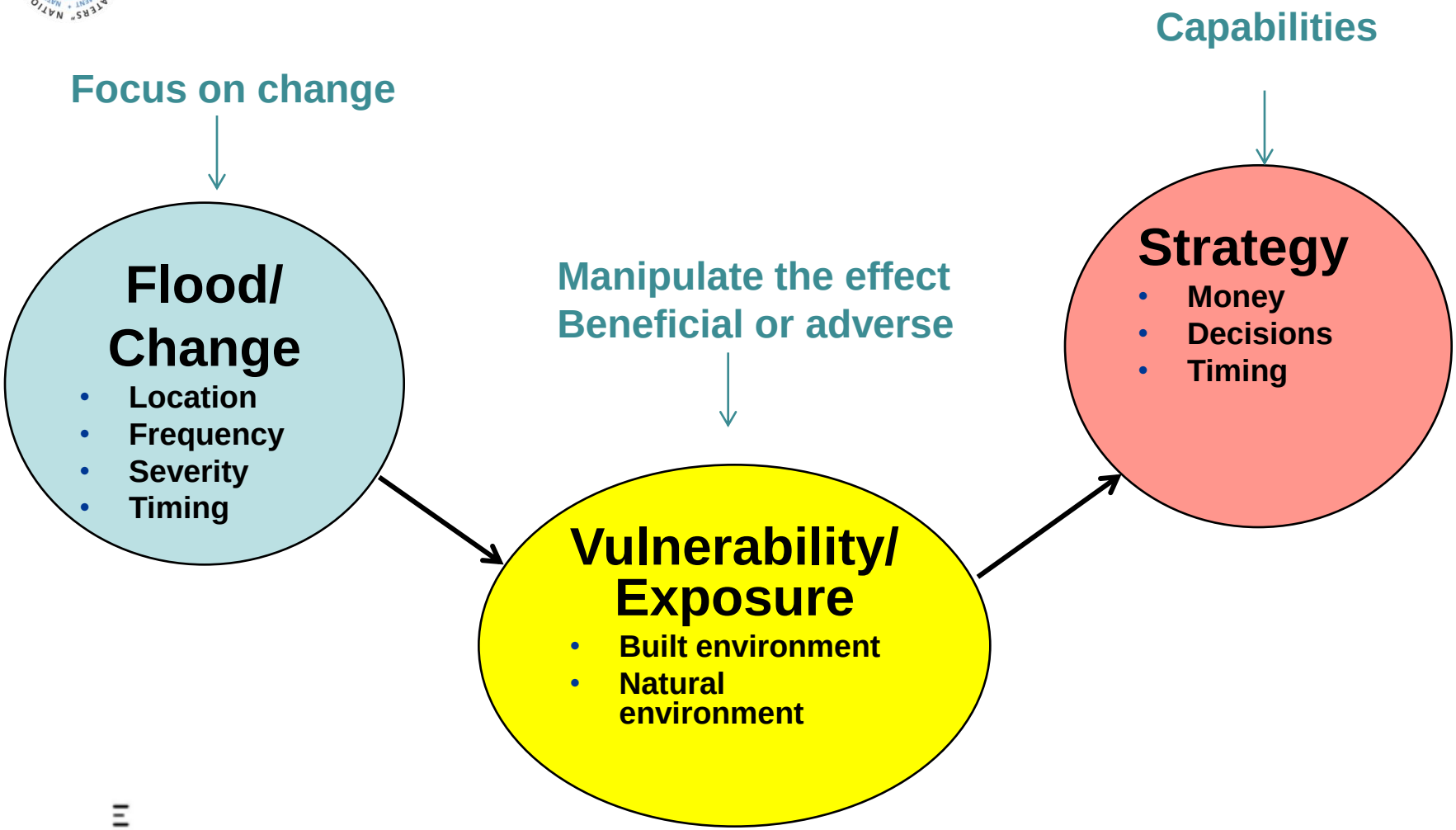

MEWF & WWF's
partnership approach
to managing flood risk
by
nature conservation -
Danube example

Content

- **Addressing floods as a change, turning risks into opportunities**
- **Ecological vs Engineering resilience**
- **Case studies**

Addressing floods



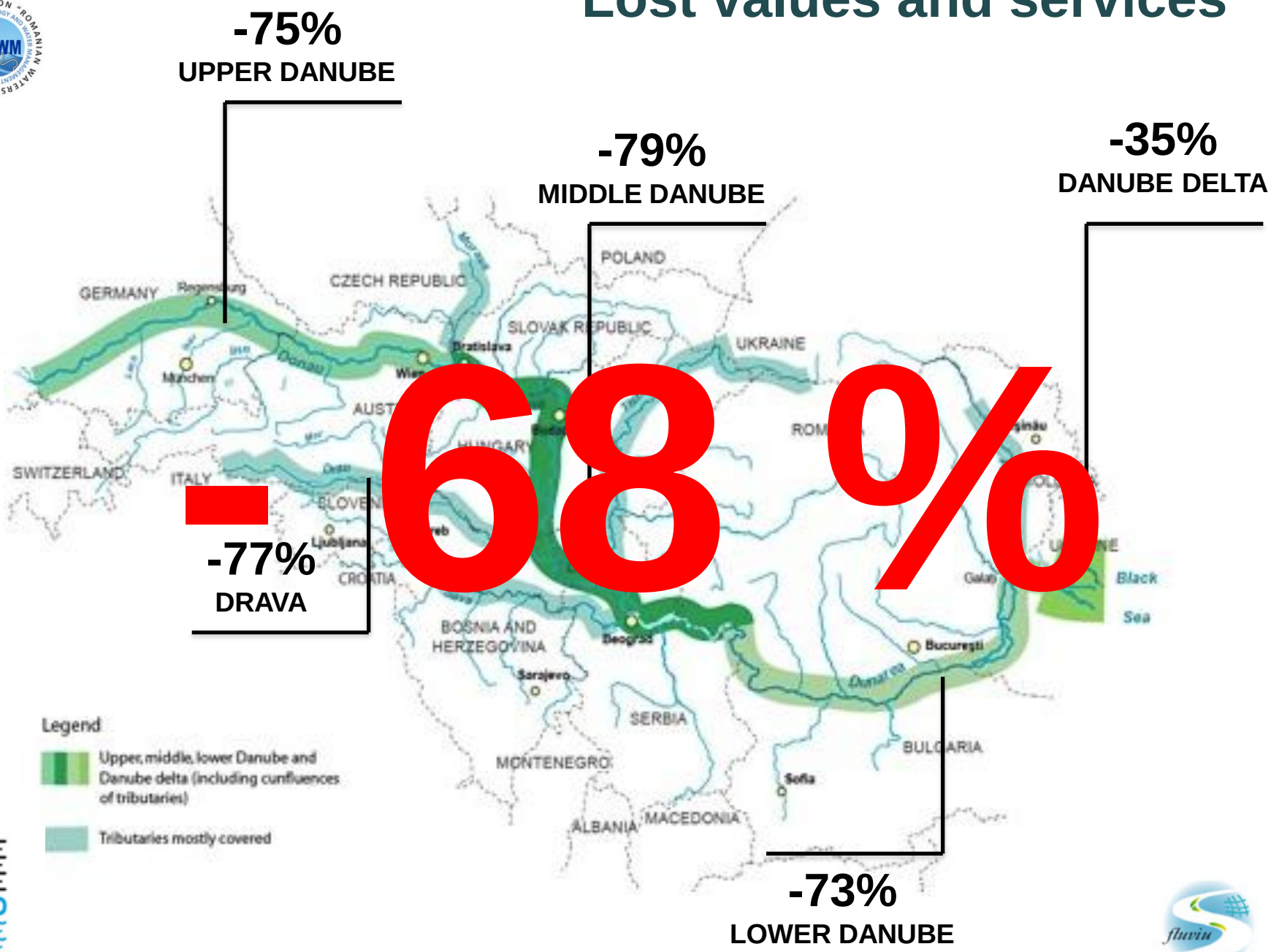
Adapted after Freitag, 2009

Ecological vs Engineering resilience

Engineering Resilience	Ecological Resilience
Seeks stability	Accepts inevitability of change
Resists disturbance	Absorbs and recover from disturbance
Narrow tolerance	Wide tolerance
Efficiency of function	Persistence of function
Redundancy of structure	Redundancy of function
Fail – safe (if fail = catastrophe)	Safe – fail (if fail = no catastrophe)

Adapted after Freitag, 2009

Lost values and services



WWF *for a living planet*

Floodplain restoration areas (implemented, planned, proposed) along the Danube and major tributaries

Legend

Floodplain restoration areas
(0-500 ha, 500-3,000 ha, 3-10.000 ha,
10-25.000 ha, 25-50.000 ha, >50.000 ha):

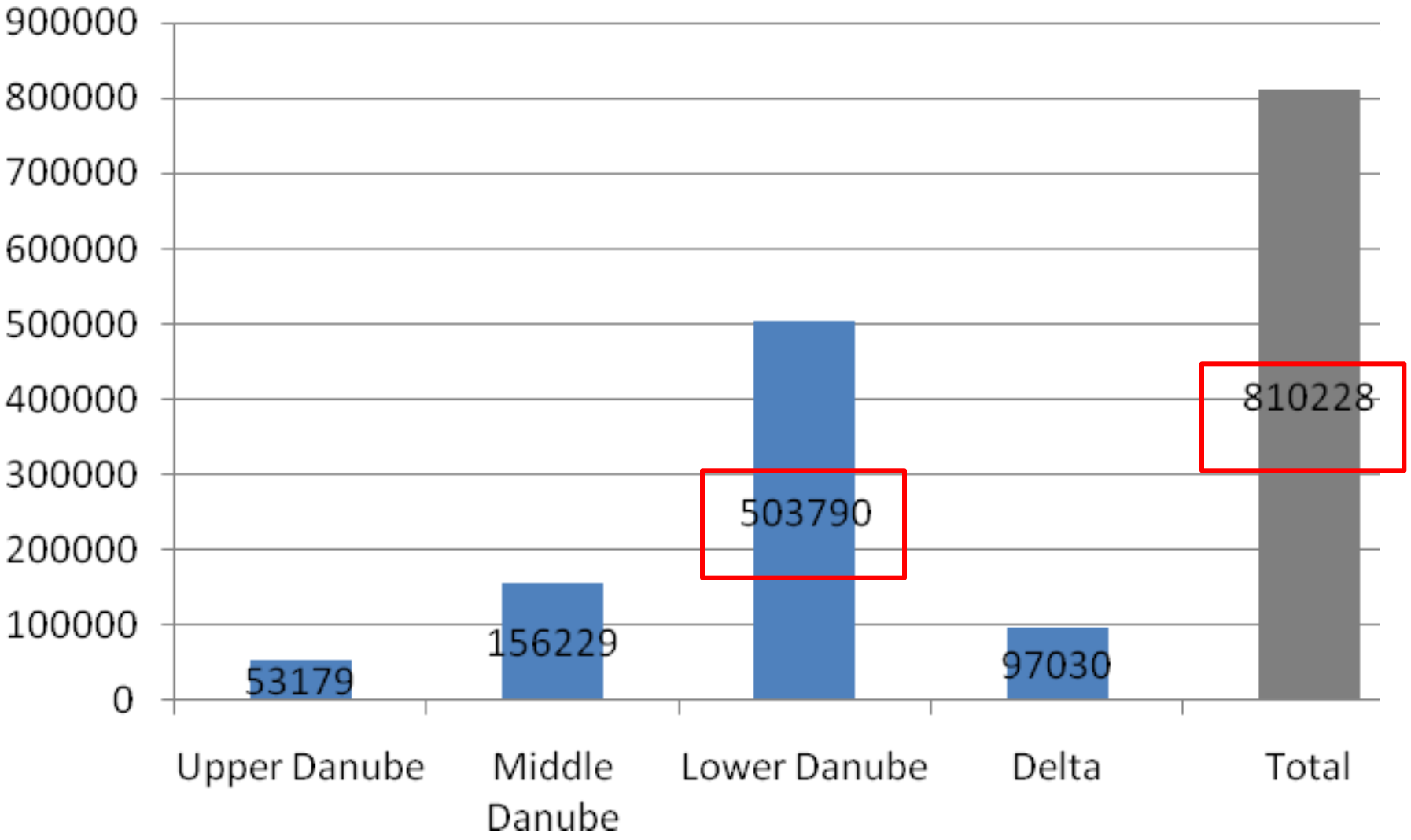
- Already implemented
- Officially planned
- Proposed
- Danube River basin
- Rivers and lakes
- Border
- Metropolis > 1 million inhabitatns
- Other important cities

0 75 150 300 Kilometers

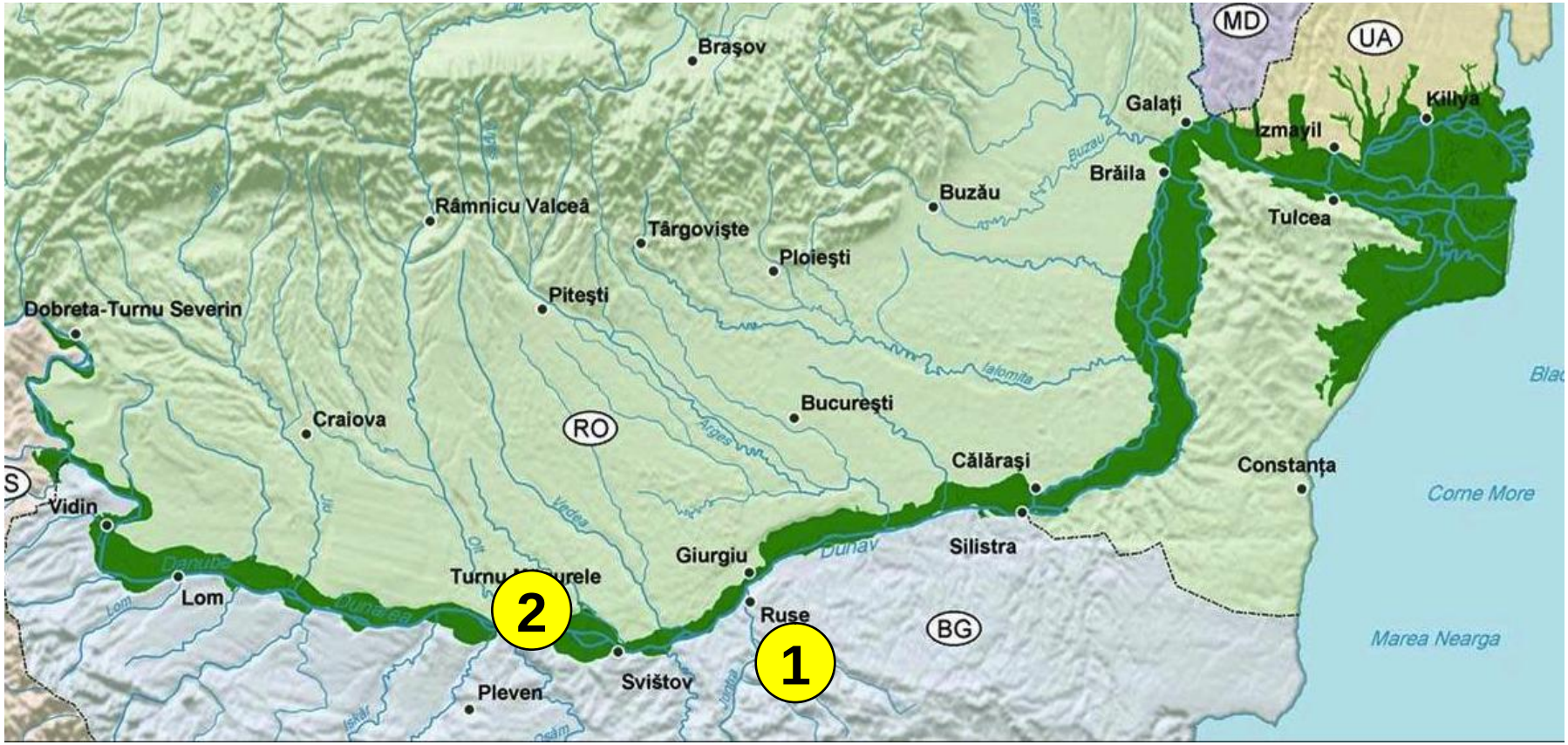
N

Prepared by FLUVIUS, Vienna, February 2010

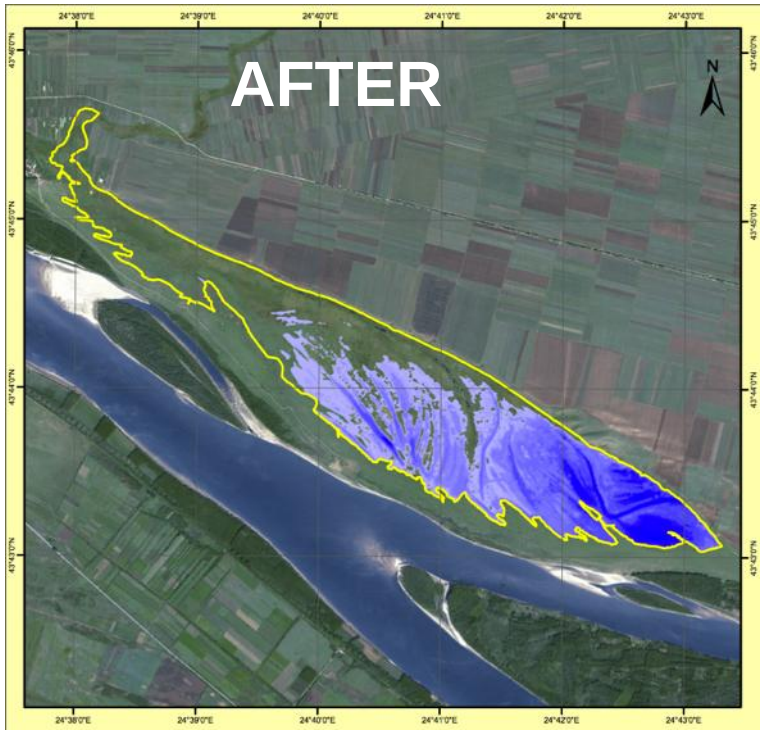
REMAINING VALUES FOR CONSERVATION AND POTENTIAL FOR RESTORATION

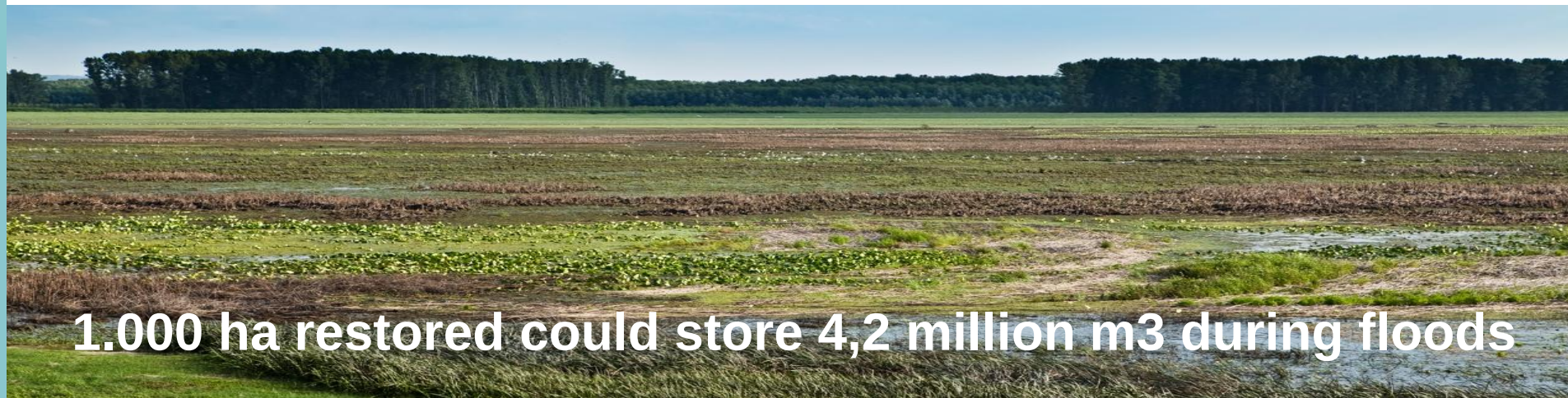


Case studies



Case study: Balta Geraiului RO

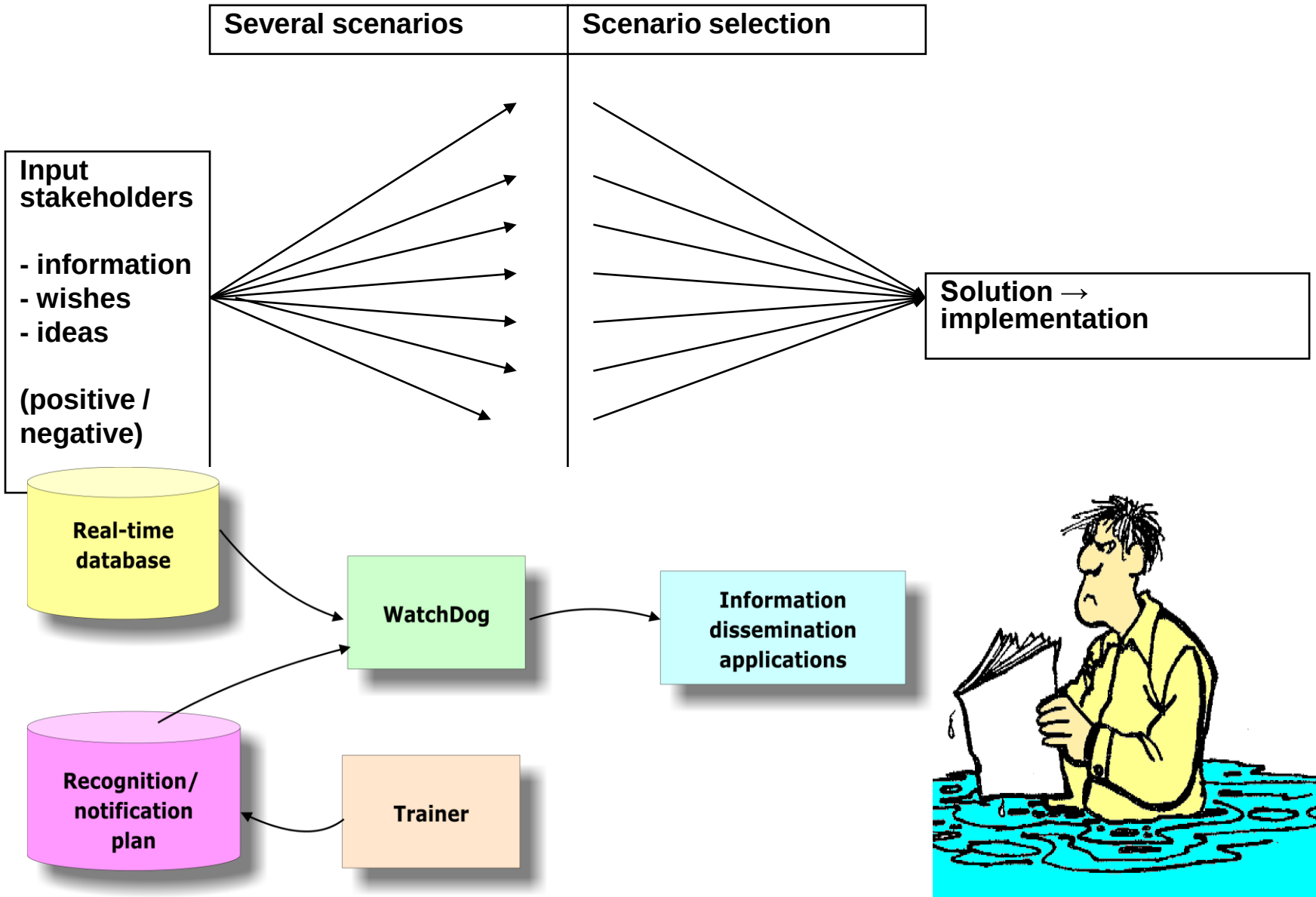




ACTION POINTS / RECOMMENDATIONS

- **Prioritisation** approach as basis for discussions with countries/stakeholders
- Develop national wetlands/floodplain restoration **Action Plans** to support/supported by river management and flood protection regulations timelines
- Implement at least one large scale restoration project per country as blueprint for future efforts
- Consider environmental resource costs and values of ecosystem services in cost-benefit analyses
- **Increase awareness** and participation of the public

Stakeholders meetings



Process proposal

Short list of sites

- Based on ecological & hydro-morphological criteria

Select 1-3 feasible sites (short, medium term)

- Based on land ownership and use

Allocate funds & select cost effective measures

Implementation

ROMANIA - BULGARIA Cross Border Cooperation Programme

Common borders. Common solutions.

Danube WATER Integrated Management

Conclusions

The study provides:

- improved floodplain delineation and definition
- overview of existing & planned plus proposals for additional potential restoration sites
- initial prioritisation approach as basis for discussion

Develop national floodplain restoration Action Plans to support/ supported by river management and flood protection regulations timelines

Strengthen spatial planning as instrument to lower costs and start raising funds for restoring lateral connectivity

Get as much retention volume as possible (special attention on tributary confluences) favorable in floodplains, partially in flood polders

Identify and prepare at least one large pilot restoration site (>3,000 ha) per country by 2015 as blueprint for future efforts