



# WG 2.05 & 2.08: Acceptance of Nature-based Solutions and Their Implementation in Guidelines

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IAHS

# Building Water Security: the role of green infrastructure

## Gray Infrastructure

- ❑ Dams and reservoirs
- ❑ Embankments and dykes
- ❑ Drainage systems
- ❑ .....



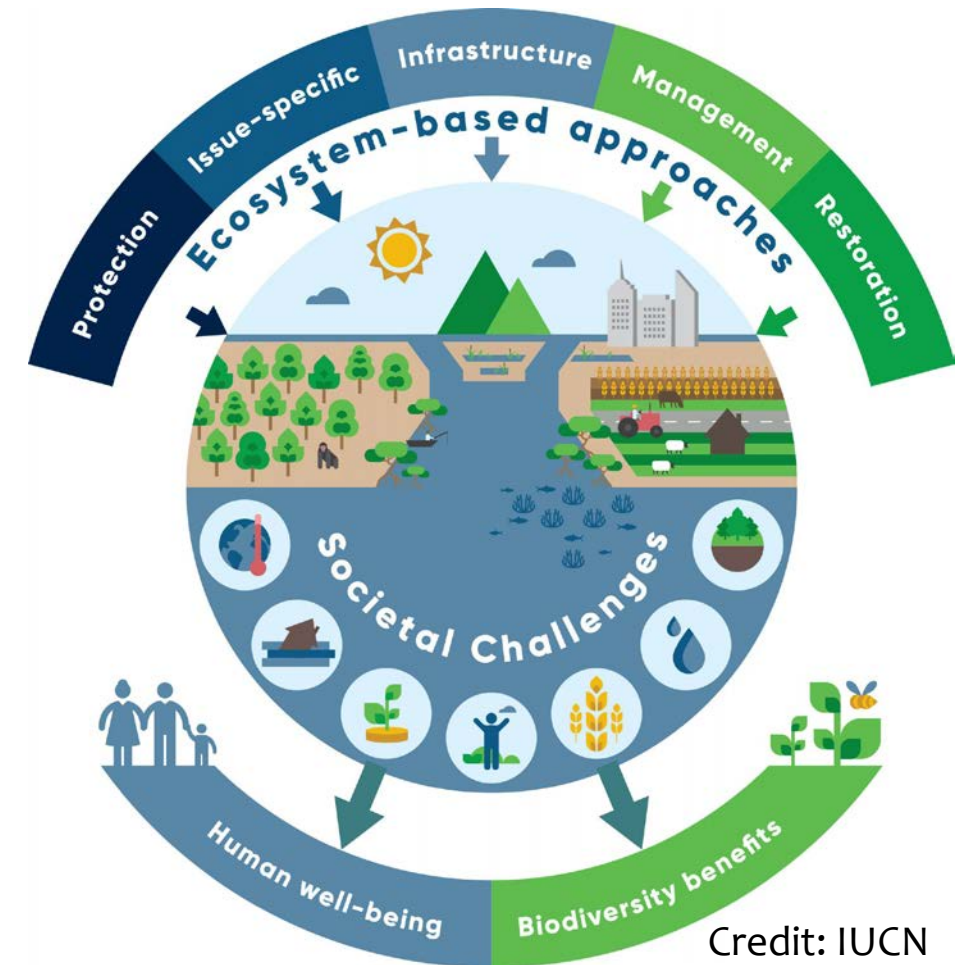
## Green Infrastructure

- Rain garden
- Green roof
- Bioswale
- Forests/wetlands
- .....

# WG: Acceptance of nature-based solutions and their implementation in guidelines

## What is the nature-based solutions (NbS)?

- NbS represents a set of new concepts in engineering, economics, and environmental planning and they provide simultaneous benefits to human and natural systems by maintaining and/or restoring hydrological functions.
- Some NbS are targeted to minimize risks of more than one type of hydro-climatic extremes, such as floods or droughts.
- However, their implementation is mostly not considered in a holistic view, e.g., the background is on flooding only, whilst neglecting droughts.



Credit: IUCN

- (a) enhancement of documentation and standardization related to NbS, GI and hybrid measures,
- (b) development and testing of applicability and social acceptability of specific NBS, GI and hybrid measures in different environments, hydro-meteorological extremes and climate change scenarios,
- (c) environmental modelling and evaluation of effectiveness of different NbS, GI and hybrid measures from the perspective of enhanced disaster risk reduction,
- (d) preparation of the policy brief and guidelines documents with summarizing the impact of NbS, GI and hybrid measures on catchment functioning in terms of response to extreme events (i.e., hydro-meteorological extremes) and maintenance over time. Additionally, perception of different stakeholders will be taken into consideration.



# WG Goals

# GOALS

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## Acceptance of Nature-based Solutions and their implementation in guidelines

- **Short term goal:** Coordinated collection of data from NbS world-wide
  - **Long term goal:** Stakeholder are more aware of the benefits associated to NbS
  - **Ultimate results:** Guidelines have a better foundation in terms of numbers relevant for planning purposes with higher acceptance by stakeholders and people involved in design
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## WORKPLAN

- 2023 – Establish the organization of the WG (including the WG leader, secretariat, members etc.)
  - Hold the first WG symposium
- 2024~2032 – Hold the WG symposium every year in China or other countries.
  - Research on the implementation of Nbs in practice, to study their hydrological behavior with stakeholder involvement
  - Publish the summary report of progress every year
  - Organize workshops at IAHS/IUGG/AGU/EGU
  - Publish special issues and joint papers
- 2032 – Hold summary meeting and publish final report