International Union for Conservation of Nature

Putting the sustainable in sustainable development

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“Nature-based Solutions: opportunities and challenges”

- Daisy Hessenberger
  Nature-based Solutions Support Officer
  Ecosystem Management Programme
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Defining our work

1. Ecosystem restoration approaches
   - ER
   - EE
   - FLR

2. Issue-specific ecosystem-related
   - EbA
   - EbM
   - Eco-DRR
   - CAS

3. Infrastructure-related approaches
   - GI
   - NI

4. Ecosystem-based management
   - EbMgt

5. Ecosystem protection approaches
   - AbC
Societal challenges and SDGs
Nature-based Solutions are...

- Ecosystem Management
- Climate Adaptation
- Disaster Risk Reduction

Sustainable development
Nature-based Solutions are also...
Nature-based Solutions are also...

Hybrid approaches, utilizing a combination of natural and grey infrastructure.
Nature-based Solutions from local to regional scale
Combining our understanding of natural systems with the ingenuity of built infrastructure allows us to maximise the benefits of both to ensure our economies prosper.

The water that flows out of a catchment depends on both climatic variables (e.g., rainfall, temperature etc.) and catchment characteristics (e.g., topography, soils, geology, land cover and land use).

Floors in rivers are naturally regulated. The speed of runoff is determined by catchment characteristics.

The greater slope stability the lower the rivers and the lower the amount of sediment washed downstream. Soil and slope stability is largely a function of catchment characteristics and management practices.

Groundwater is a natural reservoir of water that supplies rivers and streams during dry periods. The amount of rainfall that recharges groundwater is a function of catchment characteristics and management practices.

Rivers and riparian zones provide habitat for different migratory and non-migratory species (e.g., fish, insects, amphibians, reptiles, mammals, birds and plants).

Energy production

Electricity is a cornerstone of economic growth and hydroelectricity remains a major renewable energy option.

Drinking water supply

Sufficient clean water is a basic human need for everyday life and health. Dams and other built infrastructure can ensure supply at times when natural river flows would be insufficient.

Irrigation

Built infrastructure delivers water to fields through irrigation systems essential for growing crops. Globally, 20% of arable lands and irrigated producing 40% of global crop yields.

Reservoir fisheries

If managed carefully, reservoirs can support productive fisheries.

Flood control & protection

Downstream flooding can cause extensive loss of life assessed as damage to built infrastructure, crops and livestock. Dams can mitigate these losses by regulating flood peaks. In doing so, they limit downstream flooding, reduce flood recession, enhance riverine and other ecosystem services and habitat functions.

Nature’s functions and natural solutions can help countries build climate resilience to support actions identified in their national climate plans.

River fisheries

Some fish migrate upstream to spawn. By blocking migration routes, dams may prevent fish spawning and exacerbate capture fisheries.

Floodplain grazing

Livestock grazing on the floodplain and delta areas are reliant on seasonal flooding to sustain pasture.

Flood recession agriculture

Farmers depend both on floodwater to irrigate their crops and on nutrients in floodwater.

Floodplain fisheries

Floodplain habitats support large fisheries by providing nutrients and creating aquatic habitat. Flooding is the most important and biologically productive feature of many river ecosystems.

Estuarian fisheries

Estuaries and near-shore coastal fisheries are dependent on nutrients washed into the sea from rivers. These nutrients effectively fertilise the sea thereby providing food for fish.

Coastal sediment supply

River supply much of the sand washed into the sea which then washes back ashore into beaches. If coastal sediment supply is depleted, beaches may erode.
Towards a Global Standards for Nature-based Solutions
A standard is needed...

Not just to ensure quality, an NbS standard is needed to:

1. Safeguard nature from overexploitation
2. Engage stakeholders
3. Build common language and understanding
4. Increase demand
5. Incentivize positive sustainable change
How to engage

Focal point briefing and input from CEM

Feedback from members and Commissions

September | October | ... | January | February | March

60 day public consultation (i.e. partners) on draft standard 2

... | June | ... | Sept | ............ | Mid-2020

30 day public consultation on draft standard 3

Pilot applications

Final standard goes to Council

Council approval

Official launch of standard at WCC
Current seven criteria

1. Nature and biodiversity
2. Transparency and inclusion
3. Adaptive management, governance & monitoring
4. Trade-offs
5. Land/seascape scale
6. Synergies
7. Mainstreaming

Example full criterion:
Criterion 7: NbS are incorporated into policies and regulations
How to engage

- Promote and take part in IUCN public consultation (Jan-March & June 2019)

- Offer a pilot case study (past or current interventions)

- Email nbsstandard@iucn.org with questions and feedback
Questions for you

• Are you doing something that might be considered an NbS?

• Is there a project of yours that might benefit from a hybrid approach?