



Delivering Nature-based Solutions to Societal Challenges

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Erosion of natural capital impacts economies & livelihoods: e.g. Rubavu, Rw.

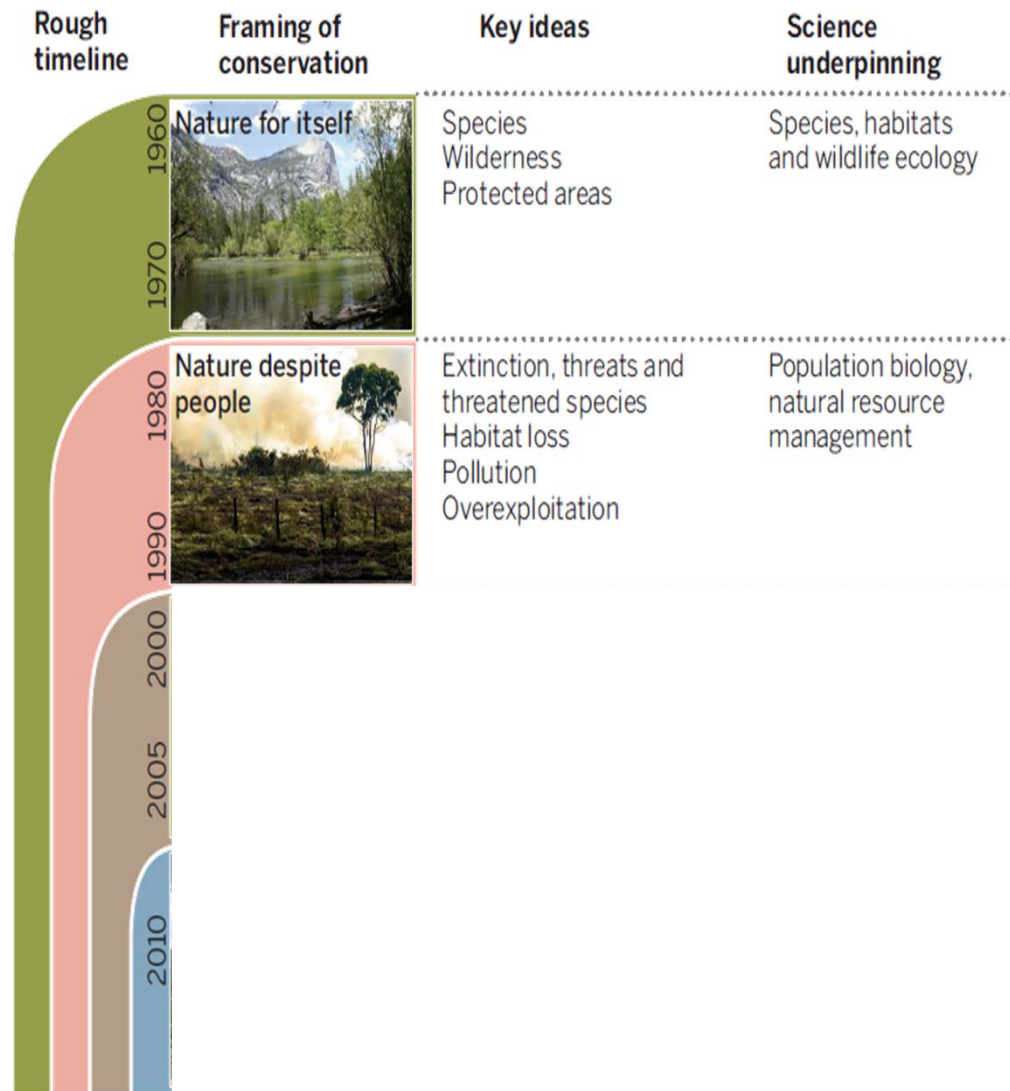


- Municipality of 350,000 people
- The 27,000 ha watershed forest cleared in 80s and 90s
- Turbidity of drinking water 60x the legal limit as direct result
- The local treatment plant cannot operate after heavy rain
- A new run-of-the-river hydro plant lasted 2 years until turbine blades had to be replaced





Changing views on nature



Reference: Mace, 2014, *Science*, 345 (6204)



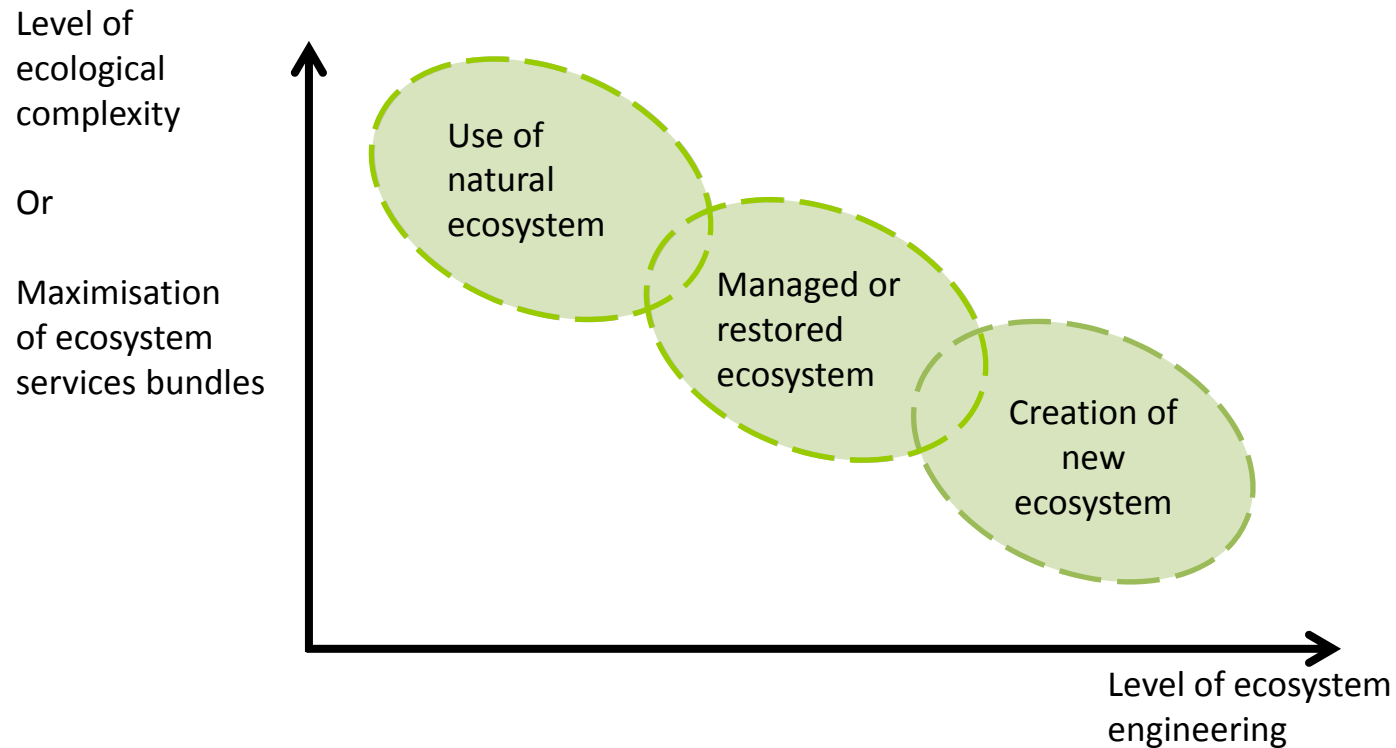
What are Nature-based Solutions?

Actions to protect, manage and restore natural or modified ecosystems, which address societal challenges, effectively and adaptively, providing human well-being and biodiversity benefits.





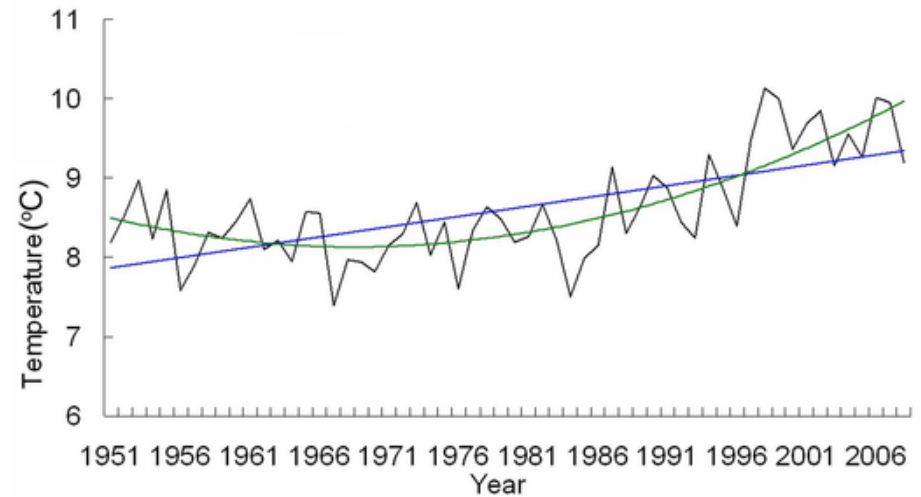
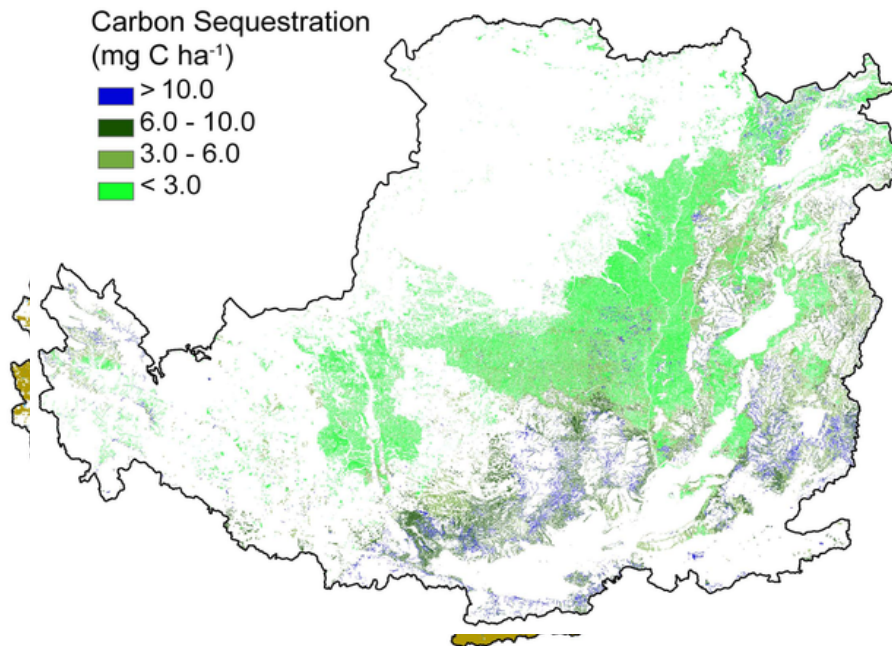
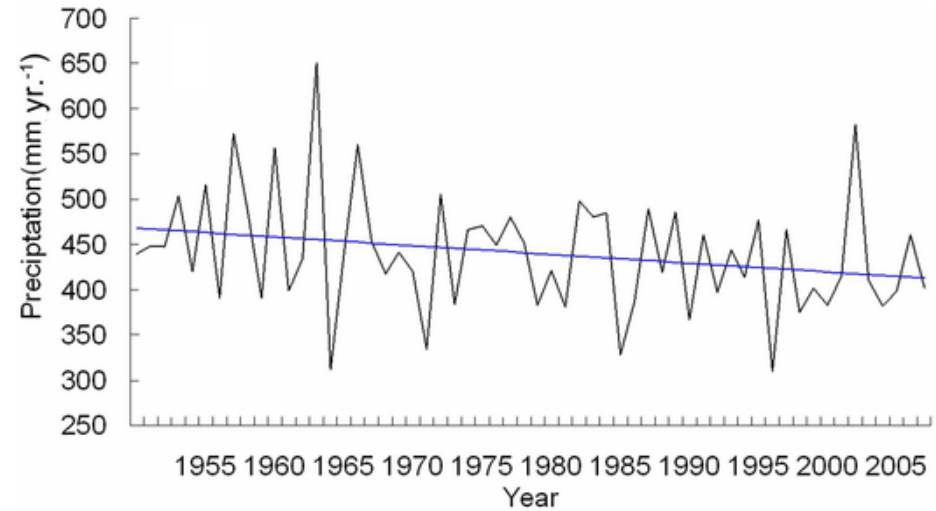
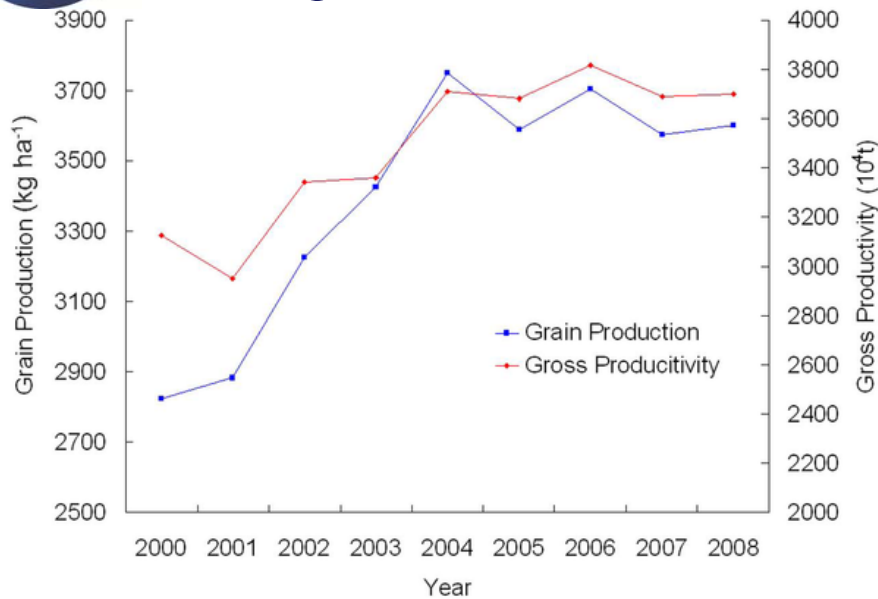
NBS embrace a plurality of responses



Adapted from Balian E., Eggermont H. & Le Roux X. 2014. Outputs of the Strategic Foresight workshop “Nature-Based Solutions in a BiodivERsA context”, Brussels June 11-12 2014. BiodivERsA report, 45 pp.



The potential and challenge of going to scale – e.g. restoration of the Loess plateau



FROM: Lü et al. (2012) A Policy-Driven Large Scale Ecological Restoration: Quantifying Ecosystem Services Changes in the Loess Plateau of China

The need for policy coherence – e.g. flood protection and coastal realignment in Europe

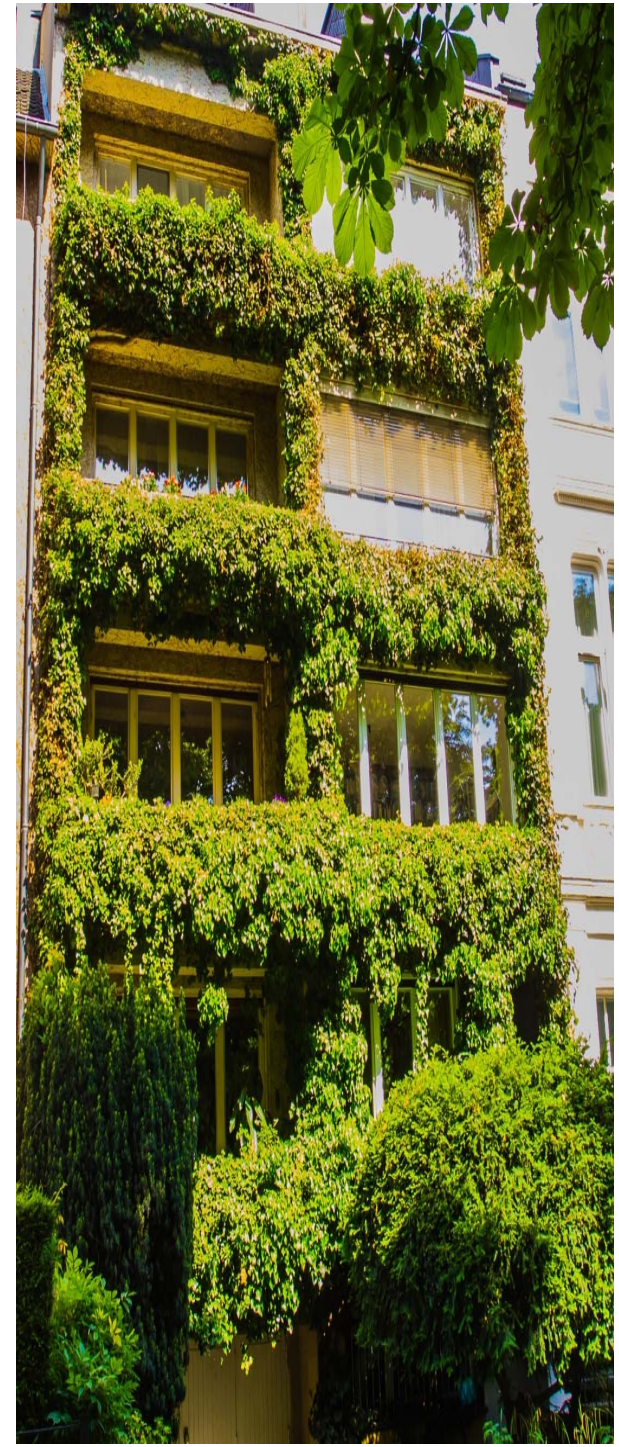
- One third of European coastlines have insufficient protection
- Europe has good examples of NBS:-
 - **UK coastal realignment:** recreating salt marsh, complements built sea walls by naturally absorb wave energy and lowering wave height (18% reduction per 40m)
 - **Netherlands flood prevention:** 100m strip knotted willows reduces the size of 1m high waves by 80%
- Saves construction and maintenance costs
- But ... to move from “pilots” need to strengthen coherence between:- Water Framework Directive; Biodiversity Strategy; Climate Adaptation Strategy; Action Plan for Disaster Risk Reduction





EU Cooperation and Leadership

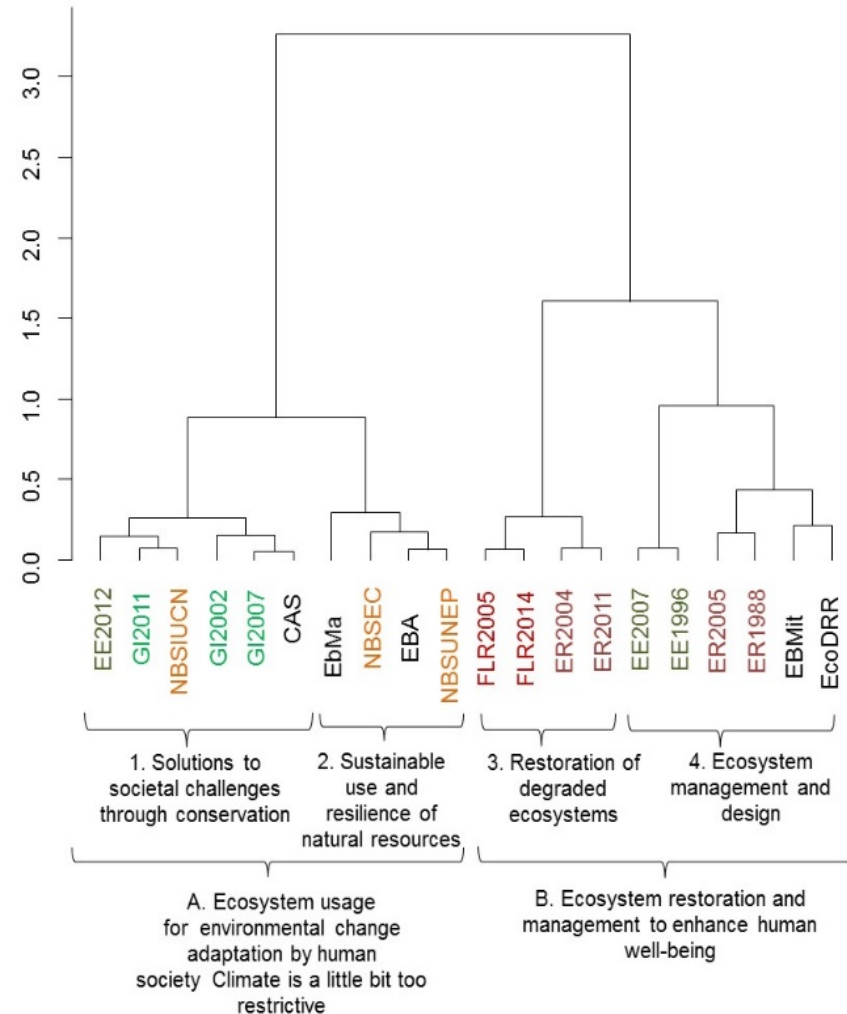
- Europe – is leading the way but currently action is still at the pilot scale – need to scale-up
- Major demand from EU partnership countries for insights and lessons – including urban!
- Horizon 2020 forging strong partnerships to transfer Europe’s knowledge
- Sustained investment in NBS will be based on recognition and practical application of Natural Capital





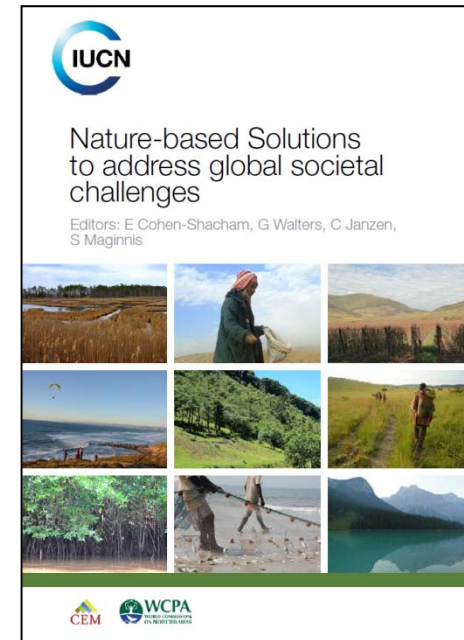
Towards an NBS standard

- Currently there is a large amount of fragmented “solution specific” guidance (REDD+, EbA, ecoDRR)
- There is no single definitive standard that provides decision-makers / investors with the fundamental parameters on which to assess NBS risk and viability
- IUCN has been mandated by its members to work with partners of developing such a standard
- The aim is not to compete or replace existing and specific operational guidance but rather to act as an overarching compliment.



Concluding Thoughts

- **Good news** – NBS is established – climate change alone desperately needs a near term “*bridging mechanism*” and NBS a strong viable candidate
- **The challenge** – NBS is still far from reaching its potential: need to accelerate move from “pilots” to “scaled-up application” and this needs to be rigorously accompanied by scientific research and driven by a robust economic case
- **The bottlenecks**
 - Unaligned (and even incoherent) sectoral policies
 - Understanding of NBS still limited to the environment community



<https://portals.iucn.org/library/node/46191>

https://en.wikipedia.org/wiki/Nature_Based_Solutions