

# Water Challenges in the European Green Deal

Laurence Carvalho, Harm Duel,  
Anna-Stiina Heiskanen, Michiel Blind and Antonio Loporto

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# Green Deal actions

- ***Developing a circular economy*** - for water and nutrients
- ***Protect and restore biodiversity*** – WFD objectives on rivers, lakes and groundwaters, restoration of floodplains and wetlands, restoring ecological flows
- ***Deliver sustainable food production*** – reduce water-use, nutrients, chemicals and anti-microbials
- ***Increase climate resilience*** – especially to floods and water scarcity
- ***Zero pollution action plan*** – one specifically for water



- **Transformative change** needed of the EU's economy for a sustainable future
- Recognising half of global GDP is linked to nature
- Nature based solutions are a promising enabler



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# Nature Based Solutions .....

NBS use natural processes and structures to support nature, society and the economy

Currently NBS are applied at a local scale

- e.g. wetlands for pollution control, floodplain forests for flood defence

Green Deal actions ask for transformations at large scale

- landscape level and water management at whole river-basin scale
- systemic approach needed to support all the Green Deal actions (circular economy, biodiversity, sustainable food production, climate adaptation and zero pollution)



# Increasing evidence-base and tools

Implementation challenges concern up-scaling NBS:

- **Finance** – how are new instruments, such as green bonds and water funds, best implemented
- **Engagement and cooperation** across multiple sectors and stakeholders with local communities and rural land-users often responsible for stewardship
- **Quantifying benefits** – how to value benefits of ecosystem services to nature, society and the economy at larger scales and securing acceptance of these values
- **Social equity** – understanding who benefits from NBS and ensuring equity
- **Evaluating NBS** – what level of up-scaling is needed?
  - Performance of NBS at large scale is unclear e.g. how type, density, location and age of trees affect groundwater recharge
  - How will climate change impact performance of NBS?



# Research & Innovation Needs

Need for living labs and large-scale demonstration projects on how systemic upscaling can be deployed and evaluated

- Evaluate how restoration actions and socio-ecological management enable sustainable, climate-neutral, resilient, inclusive and transformative approaches.
- Address systemic barriers to implementation of NBS at large scale
- Develop tools to support decision making on large-scale NBS implementation



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