



The use of ecosystem-based approaches to climate change adaptation and mitigation: Barriers and success factors

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Overview

Study carried out by:

Ecologic Institute and the Environmental Change Institute

- Introduction
- Methodological steps
- Barriers to implementation of EbA/EbM at project level and ...
- Success factors to overcome these barriers
- Barriers to integration of EbA/EbM into EU policies and national adaptation strategies and ...
- Policy recommendations



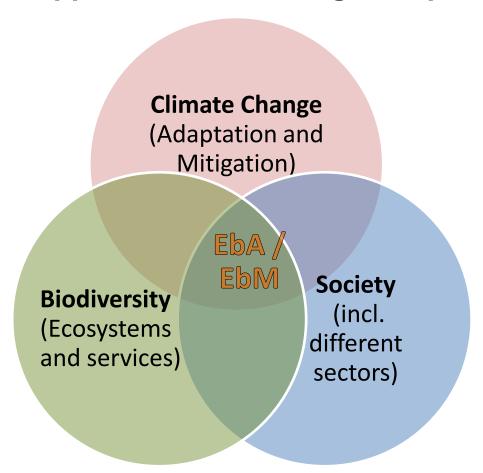




Introduction: EbA and EbM ("working with nature")

- CBD definition: "the **ecosystem approach** is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way"
- Ecosystem approach addresses the crucial links between climate change, biodiversity, ecosystem services and sustainable resource management
- Issues covered in:
 - ▶ i) **Ecosystem-based Adaptation (EbA)**: maintain and increase resilience, reduce vulnerability of ecosystems and people, help to adapt to climate change impacts through the use of biodiversity and ecosystem services
 - ▶ ii) **Ecosystem-based Mitigation (EbM):** enhance carbon sequestration, maintain existing carbon stocks, increase carbon storage through the use of ecosystems

Ecosystem-based approaches delivering multiple objectives



→ Panacea for wide range of environmental and other objectives/policies (?)



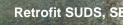
Methodological steps in the project

- Project database (161 projects) assembling parameters on project identification, scope and operation
- **5 in-depth case studies** in BY, NL, SE, CZ, UK for a more detailed assessment of the initiation and implementation of the respective projects, their costs and benefits, and the barriers experienced in the implementation of the project
- Screening and assessment of EU strategies/ policies and selected NAS and interviews with EC officials



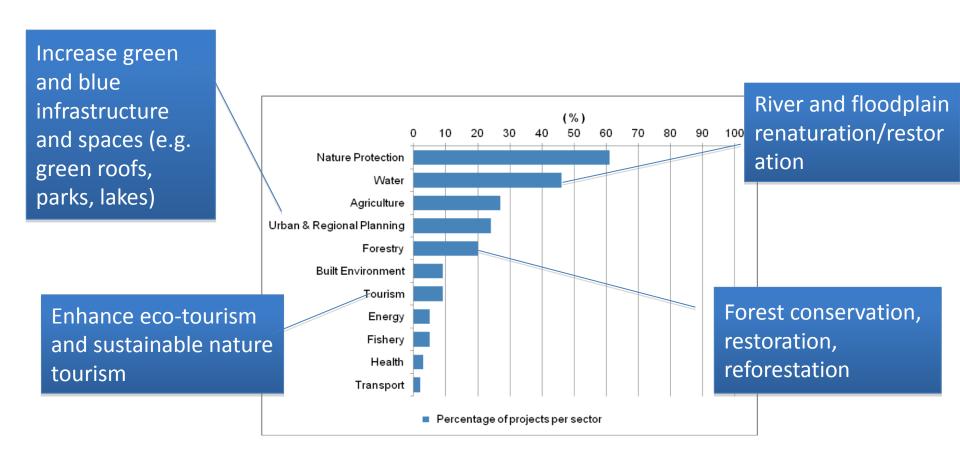








Ecosystem based approaches – addressing various sectors







Barrier typology applied

- Structural or operational (organizational challenges)
- Capacity (technical, human or financial)
- Contextual (political landscape and leadership, priorities of the public)
- Regulatory and legislative (policy interaction, integration and influence)
- Cultural and behavioural (habitual practices, relationships, awareness, perception and socio-economic barriers)

(Based on Burch 2010)





Barriers to implementation at project level

- Lack of financial sufficiency and predictability
- Lack of quantitative data on benefits
- Limits to technical expertise
- Organizational and institutional complexity arising out of the diversity and number of partners that must be engaged in projects
- Antecedent **regulatory or legislative** decisions that inhibit landscapescale decision-making and the creative provision of funds, materials, and expertise
- Limited public awareness about the multiple benefits associated with ecosystem-based approaches

- ✓ Define clearly role and responsibilities of partners
- ✓ Establish suitable project management structures
- ✓ Establish mechanisms for frequent collaboration
- ✓ Embed CC mitigation and adaptation throughout the organisational structure

- ✓ Create early agreement to secure funding
- ✓ Conduct cost-benefit analysis over project lifetime
- ✓ Enhance institutional learning
- ✓ Establish networks to share best practices & lessons learned
- ✓ Selection of experienced staff



- ✓ Strong national mandate for EA matching local capacity building and awareness raising
- ✓ Explore opportunities for enhancing policy consistency and coherence
- ✓ Identify synergies and trade-offs between various policies and their impact on EbA and EbM





Success factor: Stakeholder involvement

- Involving relevant stakeholders from the inception phase onwards
- Involving those people who benefit from the habitats, species, and sites (and the services they provide) and those involved in managing them in decisions about project action;
- Making use of local knowledge, address local needs and seeking a commitment from stakeholders to achieving a shared vision for the relevant area (ownership of the idea);
- Transferring responsibility for delivery of local targets to the local area;
- Encouraging collaboration amongst neighbouring land managers to contribute to action for local priorities.

(Based on Christie and Mudge 2009)





Barriers to integration into policies and strategies

- General lack of awareness and understanding of EbA/EbM
- Lacking understanding about multiple functions and services of ecosystems
- Lack of **human capacity** to pursue ecosystem-based approaches (and to manage involvement of all relevant stakeholders in planning etc.)
- Lacking knowledge and information on costs and benefits
- Political institutional problems (split of competencies between different units at EU and national level)
- Lacking knowledge on funding opportunities (on behalf of MS)
- Lack of **strong policy drivers** behind EbA/EbM at national/regional scale results in low incentives for municipalities to implement





Conclusions

- Useful examples of ecosystem-based approaches to adaptation and mitigation exist
- Examples represent integrated approaches, which can address the objectives of several EU policies simultaneously
- Concept of ecosystem-based approaches has not yet been taken up
 by decision-makers in a meaningful manner
- ▶ Government: central guiding role as motivating actor
- Central role in supporting the EU2020 Biodiversity Strategy, the EU Adaptation strategy, 7th EAP and building Green Infrastructure





Policy recommendations

- Raise awareness about ecosystem-based approaches (nature) and their multiple functions and benefits for climate change mitigation and adaptation and cost-effectiveness among policy makers and public
- Outline opportunities, linkages and synergies to different policy sectors
- Need for cross-sectoral integration of EbA/EbM in climate change strategies, action and planning processes → an improved and more sophisticated integration between environmental and other sectors will be required to tackle climate change
- Clearly outline EbA and EbM actions to be undertaken and establish a monitoring





Policy recommendations

- More research on quantitative data on benefits and CBA
- Highlight existing financing opportunities (including EU funds, national/regional financing possibilities) and explore/enhance in particular private financing (e.g. PPP, carbon markets, CSR, off-setting and compensation)
- Disseminate knowledge and tools on relevant EU websites (e.g. The European Climate Adaptation Platform, DG Clima, DG Env etc.)
- Provide guidance for policy makers on implementation of EbA/EbM (incl. best-practice case studies and information on cost-effectiveness)





What can we expect from such a concept?

- Is the ecosystem-based approach "**too integrated**" for a political environment which is divided in sectors and competencies?
- How can stakeholders be trained to obtain a more holistic view on conservation and environmental protection?
- How should **financing measures** be designed in order to be attractive for applicants of broad and integrated projects (flexibility, requirements, budgets)?
- Are there limits to the adoption and spread of EbA/EbM





Thank you for listening.

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