

Ecosystem-based approaches to adaptation

A win-win formula for sustainable development in a warming world?





What is EbA?

"The use of biodiversity and ecosystem services to help people adapt to the adverse effects of climate change" (CBD 2009)



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What is EbA?

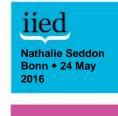
"sustainable management, conservation and restoration of ecosystems, as part of an overall adaptation strategy that takes into account the multiple social, economic and cultural co-benefits for local communities" (CBD 2010)





Examples of EbA

 Conservation of coastal ecosystems to protect against erosion and wave damage

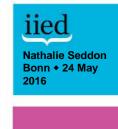






Examples of EbA

 Conservation of catchment forests to secure water supplies and protect communities from soil erosion, mud flows and landslides





Examples of EbA

 Agroforestry and climate-smart agriculture to maintain yield under drier, more variable climates





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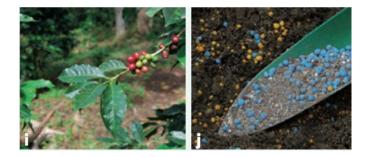
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EbA can be cost-effective

Turks and Caicos Islands reef protection (US\$16.9M) vs. levees, sea walls (US\$223M/yr)



Catskill–Delaware watershed protection (US\$150M) vs. water filtration plant (US\$300M/yr) Maize farmers, Malawi intercropping N-fixing tree (\$) vs. inorganic fertilizers US\$12M/yr



Adapted from Jones et al (2012) Nature Climate Change

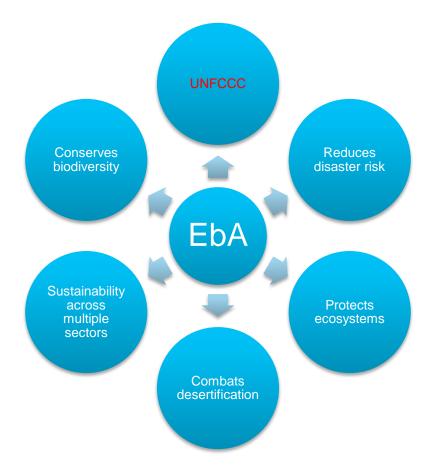
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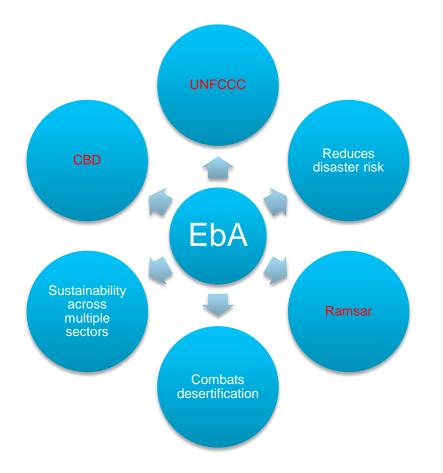
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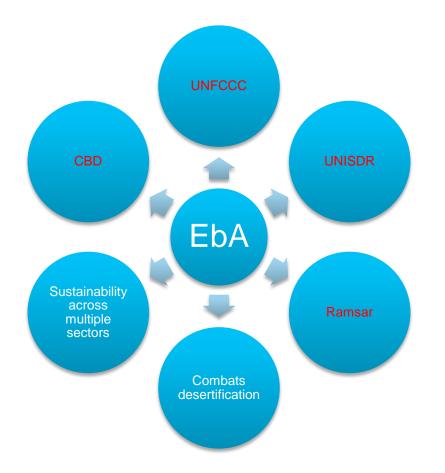
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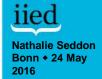
EbA: multiple co-benefits

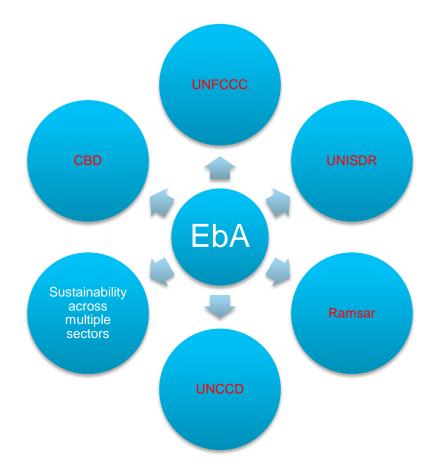


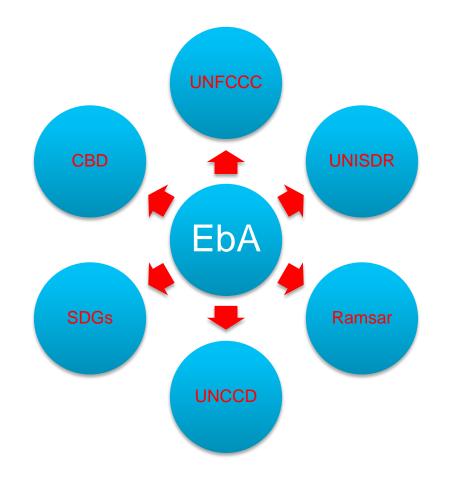












Uptake of EbA by UNFCCC

SBSTA 35 produces Ad-hoc Working Group on document on EbA; COP19: 'ecosystem' Long-term Cooperative Action **UNFCCC COP17 calls** becomes a focal area demands priority consideration for workshop on EbA for Nairobi Work Program be given to EbA 2; workshop on EbA 2008 2009 2010 2011 2012 2013 2014 2015 COP16: natural resource COP 18: NAPs should COP14: community-based management recognised as consider vulnerable groups, adaptation explicitly used; an adaptation action that communities and ecosystems need for EbA discussed increases resilience of COP20: continued socio-economic and ecological technical examination of systems; parties adopt Cancun mitigation opportunities Adaptation Framework enabling with adaptation and sustainable them to formulate and implement development co-benefits National Adaptation Plans (NAPs)

Role of EbA in the Paris Agreement

- "enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change..." (Article 7.1)
- "...on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty" (Article 4.1)



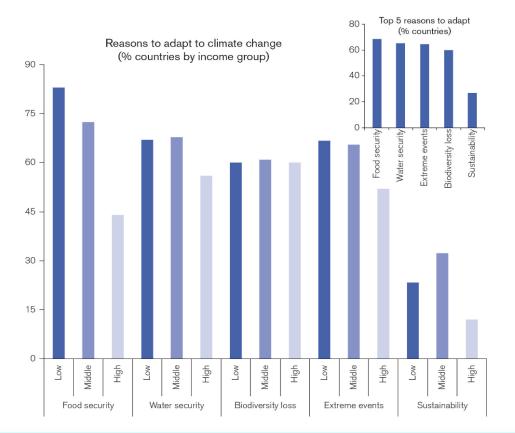
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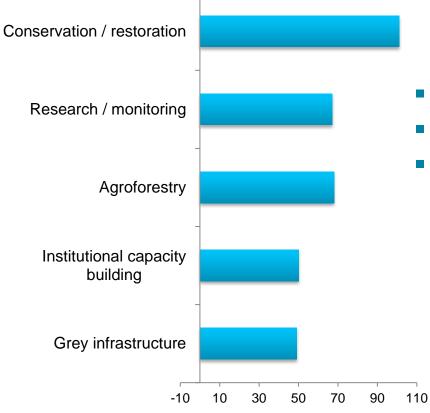
INDCs: Why adapt?

- 64%: loss of biodiversity /ecosystem degradation
- 52%: "biodiversity" is a distinct sector at risk





INDCs: Main approaches to adaptation



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- 1st: conservation/restoration (73%)
- 2nd: agroforestry (49%)
- 5th: grey infrastructure (36%)



INDCs: Role of EbA

- 24 countries (18%) explicitly mention EbA
- Mexico, Seychelles, Lao PDR, Vanuatu, Costa Rica, Myanmar, Bangladesh, Madagascar, Nepal and Vietnam





INDCs: Role of EbA

 Vietnam will "implement EbA through the development of ecosystem services and biodiversity conservation, with a focus on the preservation of genetic resources, species at risk of extinction, and important ecosystems"



ECOSYSTEM-BASED ADAPTATION: A WIN-WIN FORMULA FOR SUSTAINABLE DEVELOPMENT IN A WARMING WORLD?

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INDCs: Role of EbA

 Vanuatu is "developing advocacy and educational programs for all stakeholders at all levels around the value of ecosystem-based adaptation"



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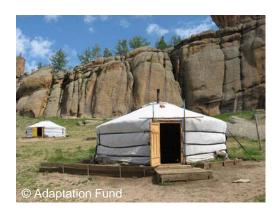
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INDCs: EbA vision

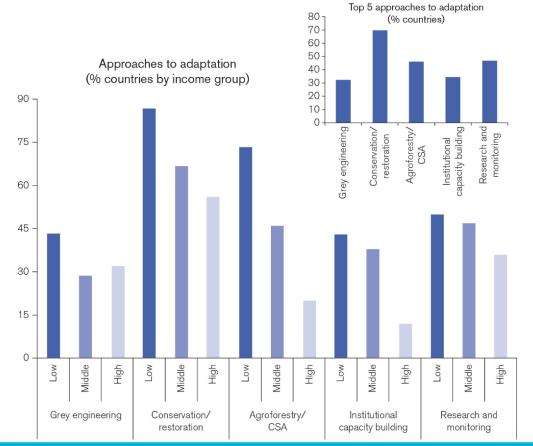
 Mongolia will increase "adaptive capacity to overcome negative impacts of climate change, and to strengthen resilience of ecosystem and socioeconomic sectors"





INDCs: EbA vision

109 nations are engaged in EbA-activities





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EbA targets: measurable and meaningful?

13 INDCs with EbA components had measurable targets, e.g.

- restoration of 35,000 hectares of primary forest areas and mangroves by 2020 (Madagascar)
- zero deforestation by the year 2030 (Mexico)



EbA targets: measurable and meaningful?

Most targets were broad, e.g.

- "protect natural heritage, biodiversity, forestry and fishery resources, through an ecosystem-based adaptation approach" (Morocco)
- "enhance livelihood approach for integrating natural resources management and preservation of sensitive ecosystems" (Yemen)

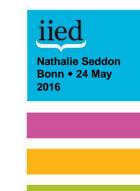
EbA targets: measurable and meaningful?

Are targets meaningful?

- Only 23% nations with EbA components refer to involvement of local communities
- EbA targets rarely based on scientific understanding of resilience
- Few plans are costed limits capacity to access funding
- Many INDCs lack links with national adaptation and biodiversity plans

Embedding EbA in the post-2015 agenda

Governments and key non-state actors should be encouraged formally recognize EbA as a potentially highly cost-effective adaptation approach with the most co-benefits to deliver against international agreements



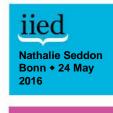
Embedding EbA in the post-2015 agenda

- Parties should be encouraged to:
- research and monitor mitigation, adaptation and other benefits of EbA and build strong evidence for mainstreaming EbA into national plans
- establish measurable and meaningful EbA targets in national plans, and report on progress towards these in the iNDCs

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Embedding EbA in the post-2015 agenda

- Those implementing EbA projects should share learning on what makes EbA ecologically, socially and economically effective
- Leading platforms supporting mitigation strategies should highlight and promote adaptation cobenefits

EbA can help countries deliver on international commitments and achieve sustainable development with limited finance



We need to build capacity so that communities can develop adaptation plans fine-tuned to their socio-ecological needs and access suitable levels of adaptation finance



Acknowledgements

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