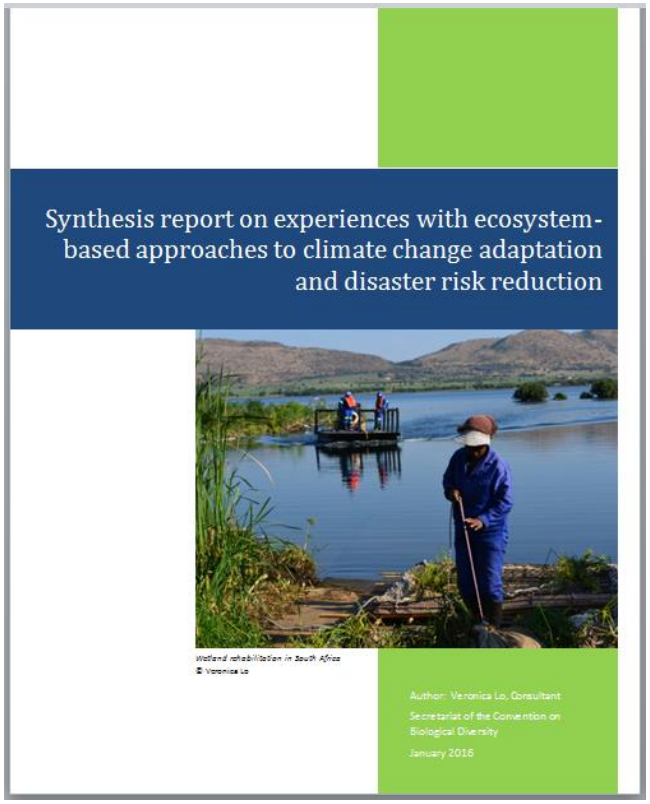
Convention on Biological Diversity

United Nations Decade on Biodiversity

# Experiences with Ecosystem-based Approaches to Climate Change Adaptation and Disaster Risk Reduction


CBD Secretariat
NAP Expo 2016, Bonn

# Synthesis report: Objectives




- Review & compile experiences, activities and targets related to EbA & Eco-DRR
- Analyze and synthesize information on EbA and Eco-DRR
  - Research, theory and practice
  - Challenges & Gaps
  - Opportunities & Lessons Learned
- Includes key findings from technical workshop

# What are EbA and Eco-DRR?

## *Ecosystem-based approaches to climate change adaptation (EbA):*

EbA is “the use of biodiversity and ecosystem services as part of an **overall adaptation strategy to help people** to adapt to the adverse effects of climate change.”

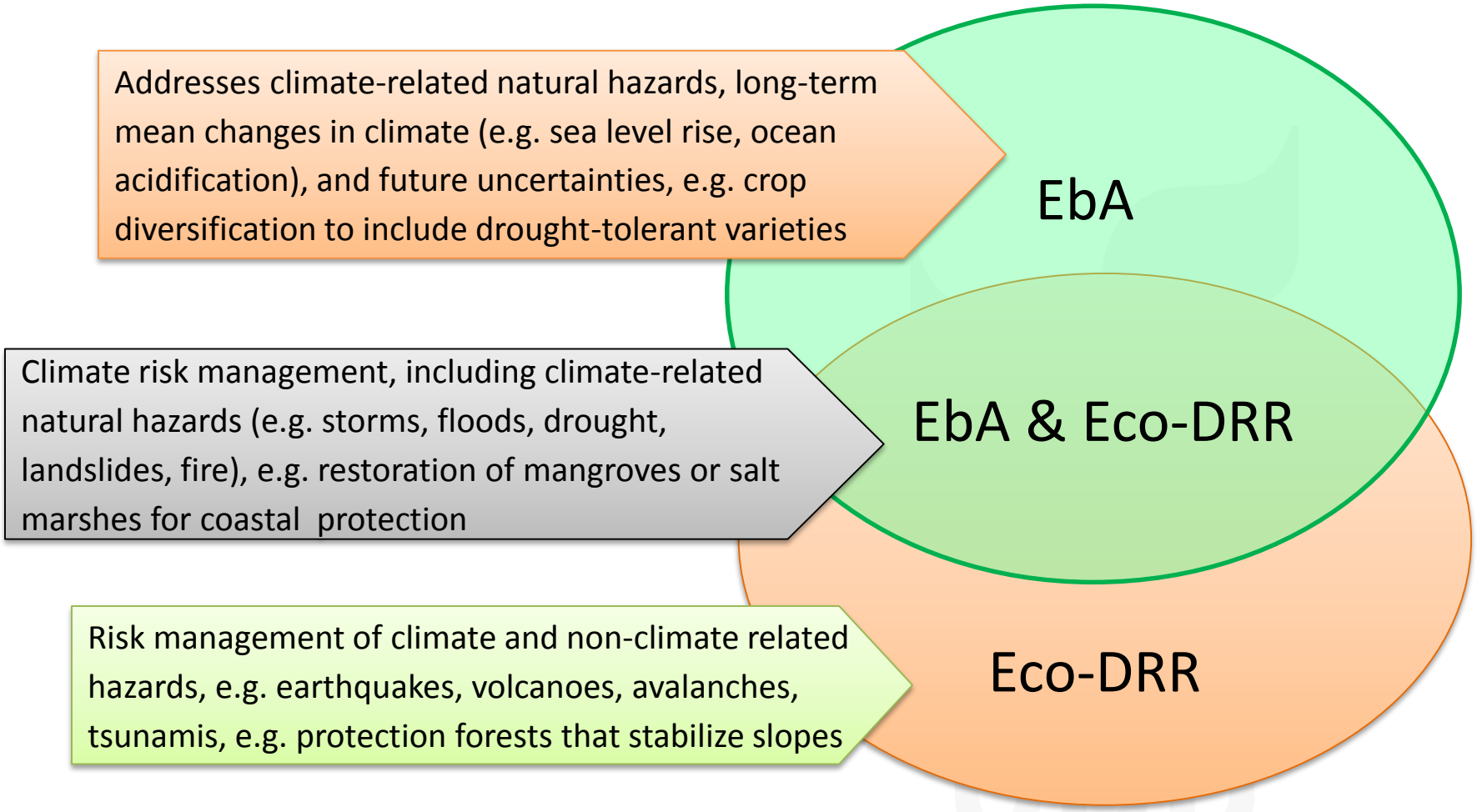
*- CBD 2nd Ad-Hoc Technical Expert Group on Biodiversity and Climate Change*

## *Ecosystem-based approaches to disaster risk reduction (Eco-DRR):*

Eco-DRR is the “sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development.”

*- Estrella and Saalismaa 2013*

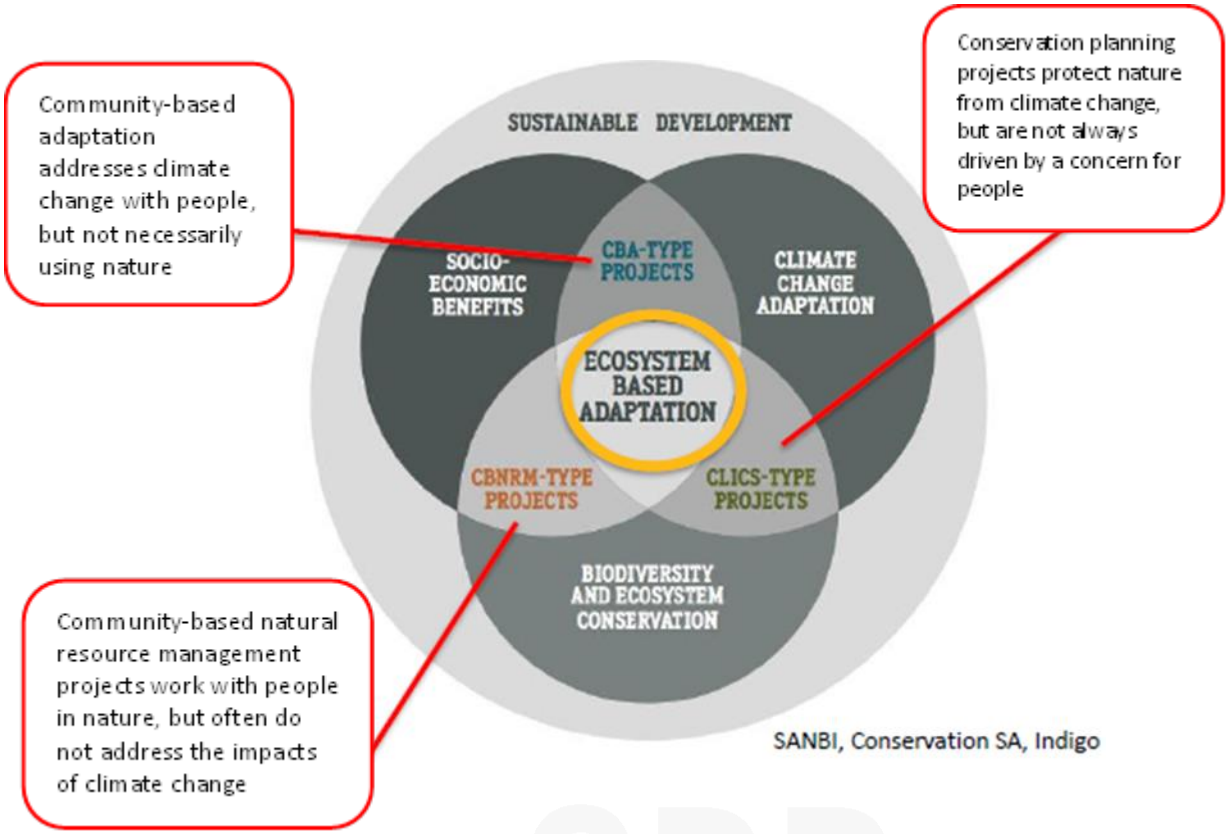
# EbA & Eco-DRR Linkages



United Nations Decade on Biodiversity

# What are EbA and Eco-DRR?

EbA and Eco-DRR **overlap in practice**, and both build upon and utilize approaches that already exist in biodiversity and ecosystem conservation, climate change adaptation and livelihood development.




*(figure adapted from Midgley et al. 2012 and annotated by UNDP)*

# Why EbA & Eco-DRR?

United Nations Decade on Biodiversity

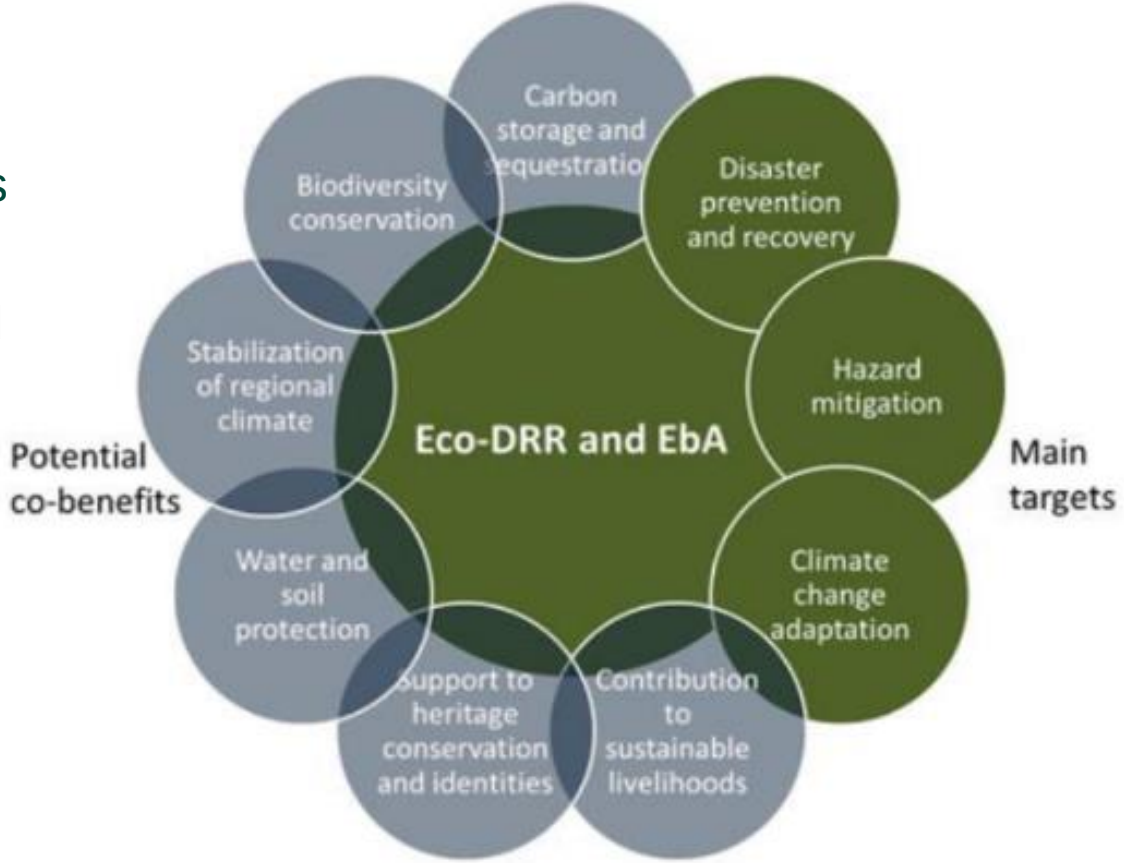
## Multiple Benefits

Eg.:restoration and conservation of mangroves

→ protection from storm surges

→ carbon sequestration

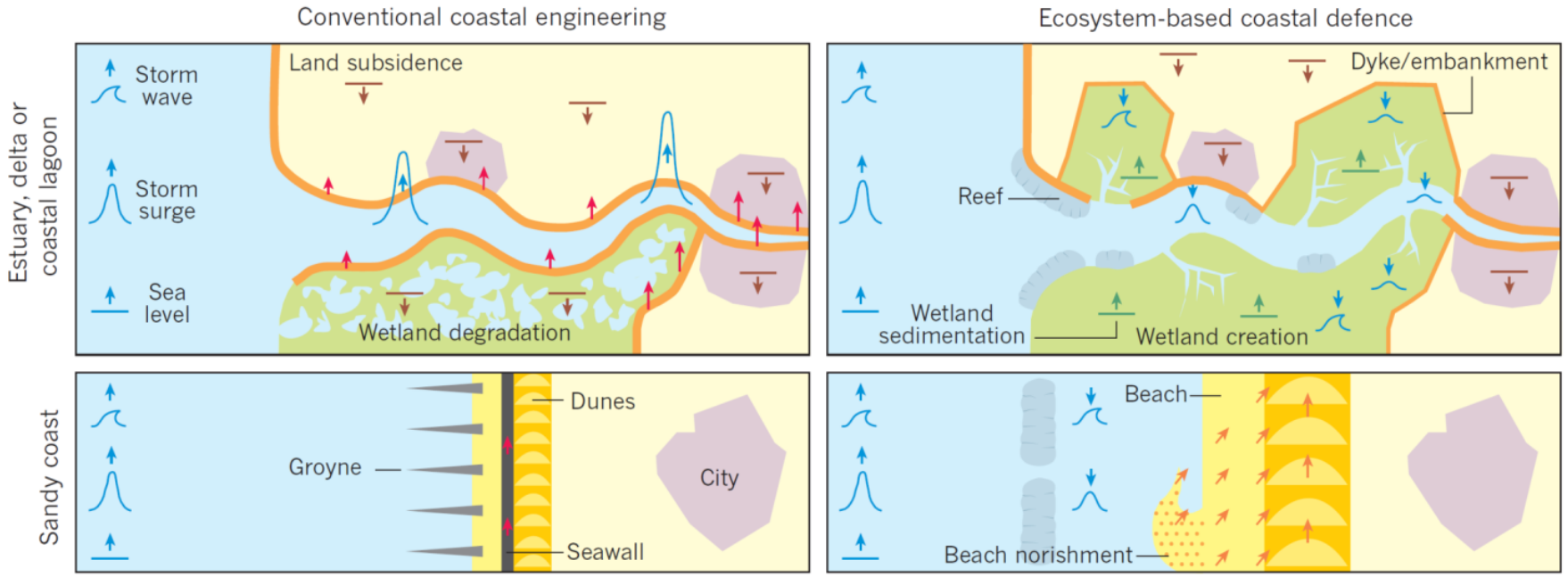
→ community engagement and livelihood opportunities



# Why EbA & Eco-DRR?

United Nations Decade on Biodiversity

## Coastal defense: Conventional vs. Eco- Approaches




*Temmerman et al. 2013*

# Why EbA & Eco-DRR?

United Nations Decade on Biodiversity

- Can deliver on **national, regional and international development priorities and obligations**, e.g. enhancing people's resilience to climate change and disasters, supporting biodiversity, and protecting food, water and livelihood security, especially of vulnerable populations.
- The international policy arena, including the **Sustainable Development Goals (SDGs)**, supports and promotes EbA and eco-DRR:

making cities inclusive, safe, resilient and sustainable


taking urgent action to combat climate change and its impacts


conserve and sustainably use oceans, seas and marine resources


sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss

# Adaptation-related frameworks and decisions

| Framework/Decision | Linkage to EbA/Eco-DRR |
|---|---|
| CBD Decision X/33 | • Implementation of EbA, including sustainable management, conservation and restoration of ecosystems |
| CBD Strategic Plan for Biodiversity 2010-2020 | • **Target 14** - safeguarding and restoration of ecosystems providing essential services; **Target 15** - ecosystem restoration, contributing to mitigation and adaptation |
| UNFCCC Nairobi Work Programme (NWP) on Impacts, Vulnerability and Adaptation to Climate Change | • Information and knowledge to inform and support adaptation policies and practices |
| The Convention on Migratory Species (CMS) Resolution 11.26, "Programme of Work on Climate Change and Migratory Species | • References the impacts of climate change on migratory species, including the impact on habitats and on local communities dependent on ES |

# Eco-DRR-related frameworks and decisions

| Framework | Linkage to EbA/Eco-DRR |
|---|---|
| Sendai Framework for Disaster Risk Reduction 2015-2030 | • Outlines 7 global targets the next 15 years, prioritizing 'ecosystem-based approaches…to build resilience and reduce disaster risk'. |
| UNCCD Advocacy Policy Framework on drought | • Urges Parties to develop and implement national drought management policies. Conservation and restoration of ecosystems can mitigate drought risk and ensure continued provisioning of essential ecosystem services |
| CBD COP 12, Pyeongchang | • Encouraged promotion of EbA and Eco-DRR in decision XII/20 |
| Ramsar Convention COP12, Punta del Este | • Resolution XII.13 on Wetlands and Disaster Risk Reduction emphasizes the 'importance of conserving, restoring and wise use of wetlands for disaster risk reduction' |

# Key Messages

United Nations Decade on Biodiversity

## *Making the Case for EbA & Eco-DRR*

- Recognize that many existing approaches share the same rationale
- Gather evidence from areas where EbA/Eco-DRR are implemented without being labelled as such, e.g. SLM, restoration
- Use tools available in making the economic case for EbA and Eco-DRR, e.g. cost-benefit analysis, cost-effectiveness analysis
- Recent initiatives that use valuation of biodiversity and ecosystem services
  - Wealth Accounting and the Valuation of Ecosystem Services (WAVES), a global partnership that aims to promote sustainable development
  - TEEB and other economic valuation studies have provided evidence that nature provides services that contribute economically to human well-being
  - The Economics of Land Degradation (ELD) Initiative provides a platform for discussion between stakeholders from the policy, science, and private sectors, focused on developing globally relevant data on the economic benefits of land

# Key Messages

## *Integrating EbA and Eco-DRR into Planning and Policy*

- Many countries have already integrated EbA and Eco-DRR into NBSAPs, NAPAs, disaster management plans, development policy, and drought relief policy
- Scale up EbA and Eco-DRR through mainstreaming into policy and practice, at multiple levels of policy making, planning, programming, budgeting, and implementation
- Engagement of IPLCs and practitioners in policy making processes to ensure knowledge and experience feed into policy-making processes
- Capacity building for Eco-DRR/EbA for different stakeholders at different levels needed in order to support mainstreaming efforts

# Key Messages

## *Synergies & Cooperation*

- Cooperation among ecosystems/biodiversity, adaptation, development and disaster reduction communities results in a greater ability to design interventions that deliver multiple benefits
- Strong coordination between focal points for MEAs
- Scale up knowledge-sharing at the local, national, regional and global levels between and across different disciplines, and make use of knowledge-sharing platforms
- Create space and incentives for collaboration and dialogue about trade-offs, establish political commitment to integrated approaches

# Key Messages

## *Synergies & Cooperation: Examples*

**Swaziland: National Climate Change Policy & Sectoral Strategy**

- Recognizes, promotes EbA implementation into NAP and climate change strategy. “By 2015, Swaziland’s climate change response strategies (e.g. NAP) fully incorporate ecosystem-based resilience such as establishing carbon sinks and controlling invasive species.”

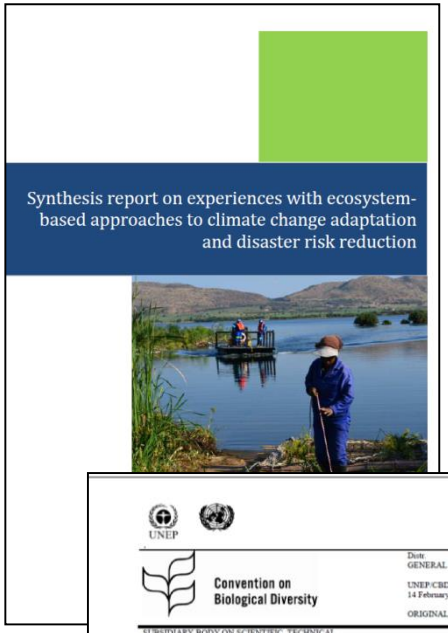
**Mozambique:** mainstreaming adaptation into development frameworks involving activities across different ministries

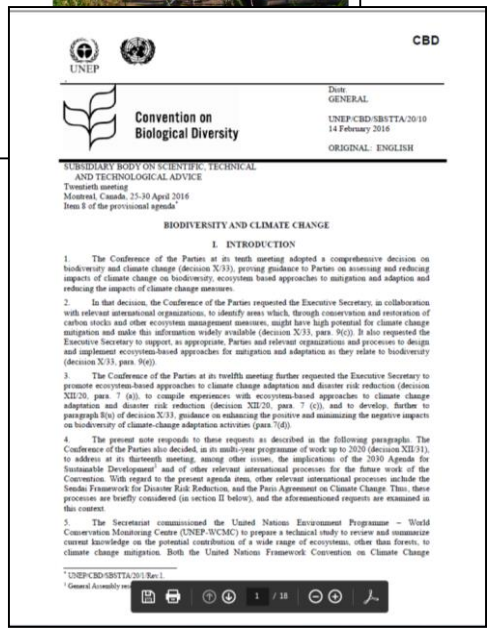
- Construction and maintenance of soil erosion and sand stabilization walls landscaped with vetiver grass and shrubs, which enabled adaptation to erosion induced by sea level rise

**Cambodia: Climate Change Strategic Plan**

- Builds synergies with existing government policies to ensure cohesion between adaptation, greenhouse gas mitigation and low-carbon development strategies
- Covers strategic objectives related to EbA

# More information




- Synthesis Report on Experiences with Ecosystem-Based Approaches to Climate Change Adaptation and Disaster Risk Reduction https://www.cbd.int/doc/meetings/sbstta/sbstta-20/information/sbstta-20-inf-02-en.pdf

- Recommendation XX/10 adopted by SBSTTA to be considered by COP 13 in December 2016 (Cancun, Mexico)

  *Available on SBSTTA 20 page at: https://www.cbd.int/doc/?meeting=sbstta-20*

# Case Study

United Nations Decade on Biodiversity

## Integration of EBA and Eco-DRR in Colombia's NAP

Sabana de Bogotá (BM 2012)

Canal del Dique (BID, CEPAL & DNP 2011)

- 90% emergencies (1998-2012) related to hydro-climatological phenomena
- La Niña caused flooding in 3.5 mil ha, 450 deaths
- NAP objective: reduce risk and socio-economic impacts associated to variability and climate change
- 11 territorial CCA plans developed

# Case Study

United Nations Decade on Biodiversity

## Integration of EBA and Eco-DRR in Colombia's NAP

### EBA and Eco-DRR in Colombia's NAP:

Adaptation measures to mitigate impact of CC on water yield and hydrological regulation capacity of wetlands and high mountain ecosystems

- Modeling of ecological processes to understand CC impacts on water and carbon cycles, involving local communities in data collection
- Wetland rehabilitation and restoration activities in pilot areas to reduce flood risk
- Buffer zones to mitigate extreme events
- Prevention of erosion and sediment control