

Agenda item 4.a.ii

# Innovation: Innovative approaches for adaptation technologies

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### Background:

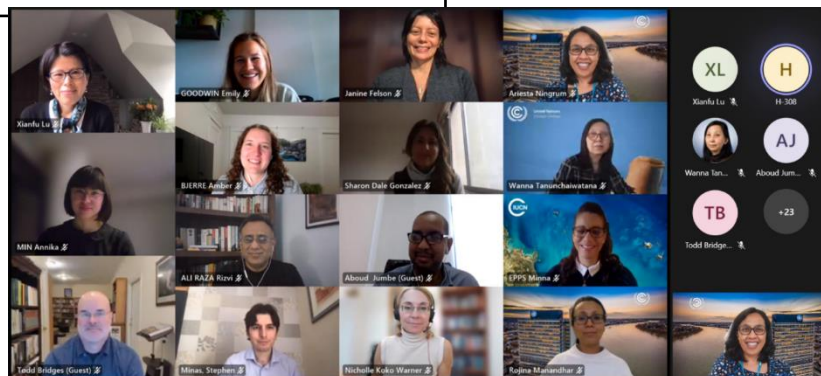
- At TEC22 (April 2021), the TEC discussed and agreed on collaboration with IUCN/FEBA and NWP Expert Group on Oceans.
- Responded to knowledge gaps in implementing innovative adaptation strategies.
- Focus: ***Innovative approaches to strengthening coastal and ocean adaptation***
- Format: A series of Technology Day events, followed by development of a policy brief.



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### Joint event series:

<p>6 Sep 2021</p> <p>Side Event during IUCN World Conservation Congress, Marseille</p>	<p><b>Ecosystems and technology: Innovative approaches to strengthening coastal and ocean adaptation</b></p>
<p>13 Oct 2021</p> <p>Informal SBSTA event in the lead up to COP26</p>	<p><b>National policy, local action: Scaling up integrated approaches to strengthen coastal and ocean adaptation</b></p>
<p>8 Nov 2021</p> <p>Side event at COP26, Glasgow</p>	<p><b>The best of both worlds: Uniting adaptation technologies and nature-based solutions to enhance coastal and ocean resilience</b></p>



### Overview of the policy brief

The policy brief builds on the outcomes of the event series and other expertise from TEC, NWP, IUCN and FEBA to:

- Provide an overview of the value of integrated adaptation solutions and the challenges and opportunities to increasing their uptake and scaling.
- Provide examples of innovative adaptation approaches.
- Identify gaps, challenges, and opportunities.
- Provide recommendations for action and further work.

### Key findings of the policy brief

Innovative climate adaptation approaches that integrate both technology and nature-based solutions offer the potential to be more robust, comprehensive, and cost-effective than either solution alone. However, despite the pressing adaptation needs of coastal and island communities, knowledge, capacity and financing gaps prevent the widespread implementation and mainstreaming of these integrated approaches.

The key findings from this brief include the need to:

- Undertake co-production of localized adaptation solutions
- Collaborate on cross-disciplinary research and mutual learning
- Address the barriers that restrict access to financing
- Foster enabling policy and regulatory frameworks
- Build cross-sectoral partnerships

### Examples of Innovative Approaches

- The U.S. Army Corps of Engineers [Engineering with Nature \(EWN\)](#) initiative uses a collaborative and cost-effective practice to infrastructure development that combines engineering with natural processes to deliver economic, social and environmental benefits in a cost-effective manner. EWN approaches can restore marshland and aquatic habitats, maintain navigation channels, manage flood risk, adapt to sea level rise, restore marshland and aquatic habitats, maintain navigation channels, and protect against hurricanes and other coastal hazards.
- The Netherlands Department of Waterways and Public Works, as part of the Netherlands [Building with Nature \(BwN\)](#) approach, has implemented projects such as [Room for the River](#), which has restored natural floodplains to better manage peak river discharges, and the [Sand Motor](#) initiative, a pilot project for natural coastal protection against storm surges that also provides habitat restoration and recreation and which was designed with heavy stakeholder engagement.

### Gaps, challenges, and opportunities to accelerate the uptake and scaling of innovative approaches

Despite the many potential advantages and benefits of integrating technology and nature-based solutions for adaptation, gaps and challenges persist that hinder widespread implementation of actions. They include single disciplinary approaches to problem-solving, as opposed to interdisciplinary approaches; a lack of investments and funding for green-gray infrastructure, particularly in coastal zones; and lack of wide acceptance of integrated solutions.

- *Transitioning from siloed approaches to transdisciplinary, cross-sectoral, and partnership-driven approaches*
- *From restrictive regulations to supportive policy and regulatory frameworks*
- *From inadequate, project-based funding to sustained, innovative and accessible financing*
- *From lack of evidence-based decision-making to standardized targets and monitoring frameworks*



## Recommendations for actions and further work

- *Recommendations for policymakers including national and local governments:*
  - **Integrated adaptation solutions should be embedded into climate-related policies as well as other sectors, such as agriculture, fisheries, tourism, water security and disaster risk management.**
  - **National policies must be translated for localized adaptation action**, including creating an enabling environment for delivering implementation finance. This includes the careful consideration of synergies and trade-offs between implementation of adaptation actions, social and environmental safeguards, and long-term monitoring, evaluation and learning accompanied by adaptive management.
  - **Governance and technical capacities of relevant national and local management institutions** need to be strengthened to enable the adoption and effective implementation of integrated adaptation solutions.
  - **Policies should prioritize the most vulnerable communities, societal groups and ecosystems.**





## Recommendations for actions and further work

- *Recommendations for public and private finance institutions:*
  - **Public, private and blended finance can play a crucial role in facilitating investment in integrated adaptation solutions** by strengthening enabling conditions, identifying un-met risk mitigation and de-risking needs, providing guarantees and supporting project developers in demonstrating the value of innovative approaches (e.g., through pilot projects).
  - **Private finance institutions can support by engaging early on in risk reduction, commercializing promising integrated adaptation approaches, and taking them to scale.** For example, in the Philippines, the private sector is developing operational business models and recommendations for integrating EbA across different sectors and engaging in strategic dialogues for developing a long-term strategy for private-public partnerships.
  - **The accessibility and sustainability of climate finance, especially for communities most affected by climate change, must be improved.**



## Recommendations for actions and further work

- *Recommendations for non-governmental and community-based organizations:*
  - National and international NGOs and CBOs should seek to **actively pursue meaningful participation of and leadership by local communities and vulnerable groups, including youth, women, and indigenous peoples, at all stages of design, planning, implementation and monitoring of adaptation interventions.**
  - NGOs and CBOs should develop and cultivate partnerships with one another as well as with other diverse stakeholders – ranging from academia to the private sector, practitioners, donors and policymakers – to improve enabling environments, access to funding, knowledge exchange and technology transfer.
  - **Provide resources for informing evidence-based targets and monitoring design alongside creating a data clearinghouse to manage, consolidate, and share collected monitoring data.**



## Recommendations for actions and further work

- *Recommendations for academia and research institutes:*
  - Research focused on diverse adaptation technologies will **help build a robust evidence base on the effectiveness, viability and multiple benefits of integrated adaptation approaches.**
  - **Enhanced collaboration between researchers, academia, and local stakeholders through communities of practice** and diverse project consortia should ensure innovations are inclusive, legitimate, and relevant and consider local needs and conditions – while also translating the most up to date science for policymakers.



## Recommendations for actions and further work

- *Recommendations for practitioners:*
  - Civil engineers, architects, natural resource managers, landscape and habitat restoration experts and other practitioners should engage **in cross-sectoral exchange of knowledge and best approaches through communities of practice and innovative partnerships** such as the [Global Green-Gray Community of Practice](#).
  - It is critical to **meaningfully engage diverse local stakeholders, including local communities, Indigenous peoples, youth, women, and marginalized groups.**



### Consultations on the policy brief

The draft policy brief has been shared for several rounds of consultation with experts, including:

- TEC and RINGO colleagues
- NWP Expert Group on Oceans
- Friends of EbA
- Green-Gray Community of Practice members
- Speakers and panellists of the event series

Additional feedback received on the latest draft version includes:

- Incorporation of new case studies and examples
- Further elaboration by blended finance experts to the sections on financing opportunities, and recommendations for public and private finance institutions
- Incorporation of the new UN definition on NbS as adopted at UNEA 5.2 this month
- Clarification and expansion of the background and narrative

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### TEC consideration:

**Provide guidance** on the draft, with a view for the Taskforce on Innovation and partner organizations finalizing it after TEC 24, with a planned launch at the Ocean Dialogue.



*Thank you!*



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