UN environment programme

Collaboration with the UNEP-CCC

26th Meeting of the
UNFCCC Technology Executive Committee
March 2023
Incheon, Korea

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UN environment programme | copenhagen climate centre

The Climate Technology Progress Report

The ambition of the Report series is to:

- ✓ **provide scientifically credible and policy relevant assessments** of different aspects of tech transfer in key areas;
- ✓ **deliver information** relevant to the UNFCCC process, including to the implementation of the Paris Agreement and the Global Stocktake;
- ✓ inform **country action** on tech transfer and enabling environments;
- ✓ **Bridge between science and practise** through engaging countries in the process, making it a forum for countries to discuss and inform the assessment
- ❖ Aims to develop and present quantifiable indicators to track progress/evolvement

1) What progress is made?
2) What has enabled it?
3) Where are the gaps?
4) Building on this understanding, how do we better enhance climate technology development and transfer?

2022 Report Structure

Part A presents a Feasibility Assessment (FA) which evaluates a range of climate mitigation and adaptation technologies. The FA addresses one of the key questions for decision makers, specifically: what more do we need to do to make this happen?

Part B analyses dimensions of the enabling environment
In 2022, we focused on

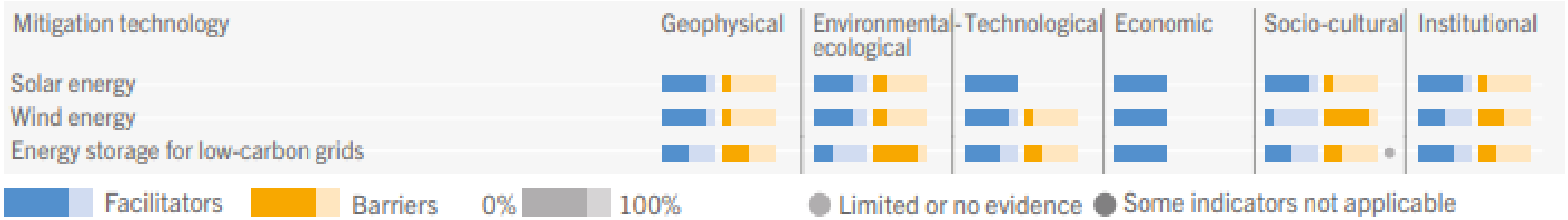
- Governance: Institutions, policies and social dimensions
- Finance

Part C provides case studies and more insights into specific contexts.
In 2022 initial exploration of climate technology transitions in Africa, offering contextual detail, highlighting the key roles of different actors and providing an analysis of progress and climate technology mega-trends in African countries

Chapter 2: Feasibility Assessment

The FA shows identify knowledge gaps and areas where more information and research is needed to understand the implications of certain technologies.

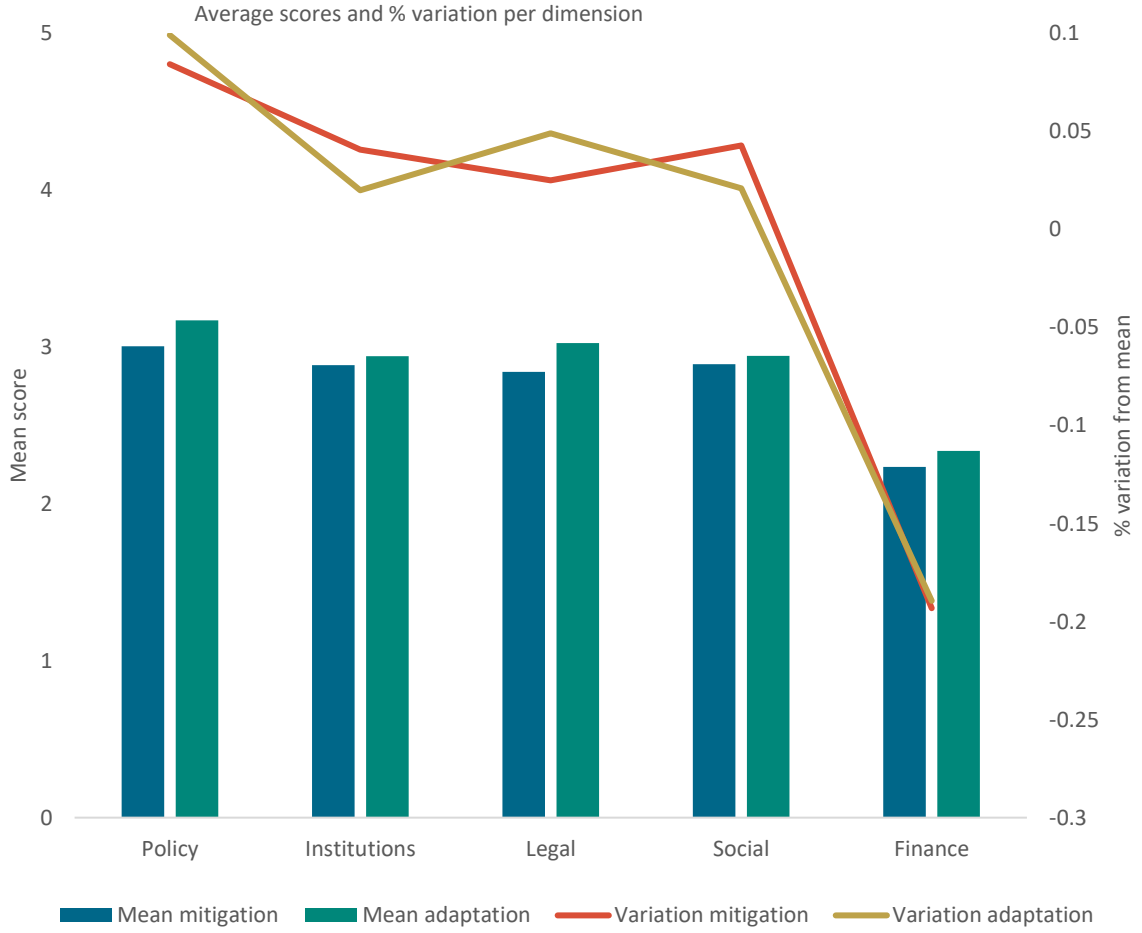
Panel A - Renewable energy mitigation technologies



Source: Based on Figure TS.31 from IPCC (IPCC 2022a)

Chapter 3: Governance

- **Moderate progress has been made in creating enabling environments** for the adaptation and mitigation technologies assessed, with marginally more progress for adaptation technologies
- **Progress is relatively consistent across dimensions** but uneven within each individual dimension of the enabling environment for the adaptation and mitigation technologies assessed.
- **Limited progress is being made in the financial dimension**
- **Limited progress has been made in integration with sustainable development,** including the inclusion and role of women, indigenous peoples and local communities.

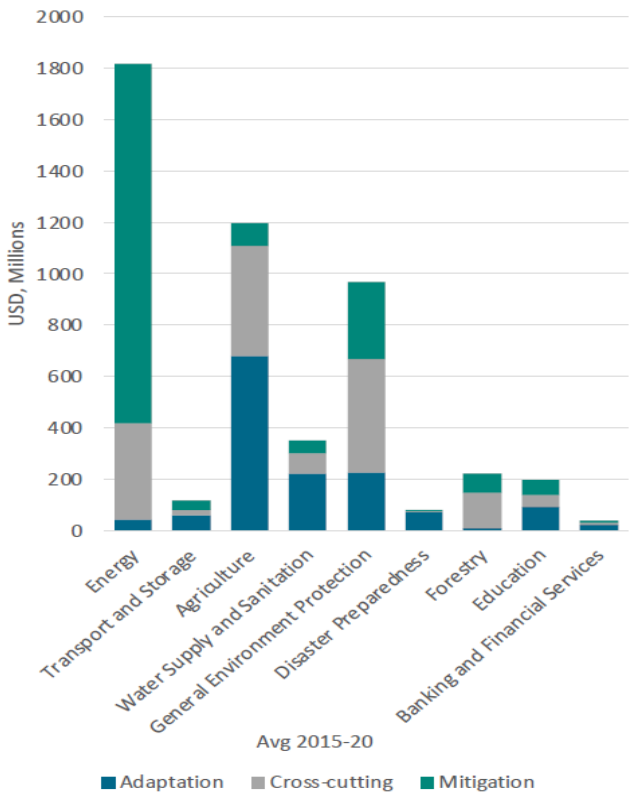


Chapter 3: Finance

Three main challenges to the development and transfer of climate technology to developing countries:

(1) Access to finance
(2) Cost of finance
(3) Support for resourcing the enabling environment

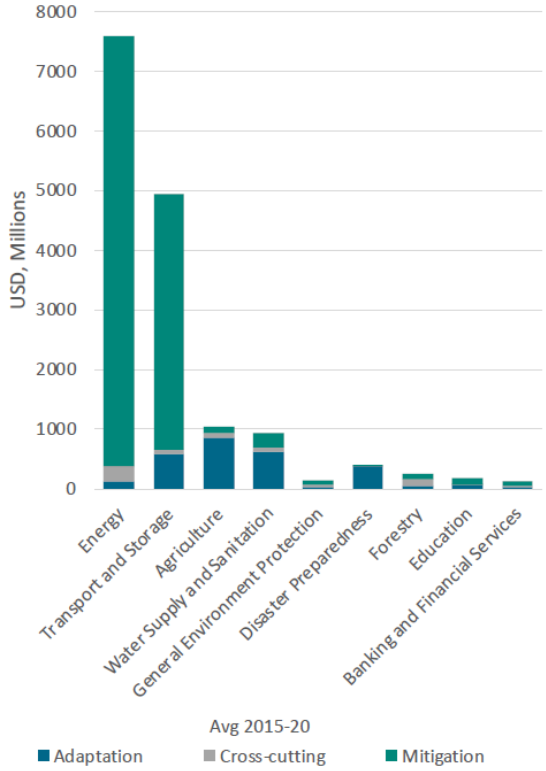
Development finance for climate-technology enabling environment (grants) -sector distribution



Notes: Left hand axis: USD millions. Development finance for climate-technology enabling environment (grants) to different sectors, over the period 2015-2020. Values are 2015-2020 averages. Cross-cutting includes activities that are both marked as mitigation- and adaptation-relevant.

Source: Own analysis based on data from OECD (OECD 2022b)

Development finance for climate-technology procurements and investment (debt) -sector distribution



Notes: Left hand axis: USD millions. Development finance for climate-technology procurements and investments (debt instruments) to different sectors, over the period 2015-2020. Values are 2015-2020 averages. Cross-cutting includes activities that are both marked as mitigation- and adaptation-relevant.

Source: Own analysis based on data from OECD (OECD 2022b)

Chapter 4: Climate Technology Progress in the African context: A snapshot

- **Climate technology development and transfer is progressing at a varied pace across sectors, countries and regions.** Progress is driven by national policies, institutions and actors in concert with international efforts.

- **The availability of data impacts our understanding of technology development and transfer progress.** Data is more available for some sectors, technologies and regions than for others but generally data remains sparse and sporadic. Within mitigation technologies, we see some level of data consistency and availability in some countries, whereas on adaptation technologies, data availability is far less systematic and consistent.

- **Progress is often reflected in the form of pilot projects, demonstrations or initial deployment rather than in the form of scaled up interventions.** Given the varied developmental contexts among countries in Africa, replicability and scalability have yet to become a reality for several technologies and sectors.

- **Nearly 618 technology hubs have been identified and mapped across Africa** including incubators, accelerators, innovation hubs and co-working hubs. The majority of these are concentrated in Kenya, South Africa, Nigeria and Egypt, followed by Tanzania, Ghana, Ivory Coast, Morocco and Tunisia.

2022 report: people involved

11 steering committee members: Heleen de Coninck (Eindhoven University of Technology), Vladimir Hecl (United Nations Framework Convention on Climate Change (UNFCCC)), Mareer Mohamed Husny (TEC), Yacob Mulugetta (University College London (UCL)), Dietram Oppelt (TEC), Minal Pathak (University of Ahmedabad), Mark Radka (United Nations Environment Programme (UNEP), Ambrosio Yobànolo del Real (TEC), Ambuj Sagar (Indian Institute of Technology), Stig Svenningsen (TEC), Sara Traerup (UNEP CCC)

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23 reviewers

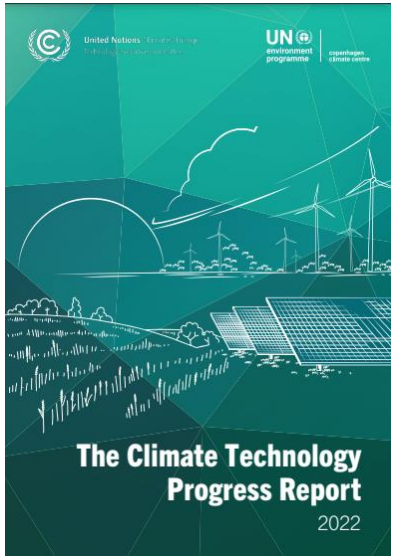
2 editors: Sara Traerup (UNEP CCC), Conrad George (UNEP CCC)

+ UNEP-CCC Coordinating secretariat and comms team, 6 people

Role of the TEC

1. Representation in the Steering Committee (SC) with 4 members. The SC
   - guides the report production by selecting themes and lead authors (as per an agreed process),
   - reviewing and signing off on the report chapters and the executive summary, and
   - providing overall strategic advice.
   - SC members are expected to meet regularly (ca. every 6-8 weeks, online)
   - *TEC member as co-chair?*

2. TEC Members are invited to provide reviews of (parts of) the report. Meanwhile, the TEC members can also recommend other reviewers for the report
3. Jointly launch and present the report at different occasions
4. Co-sign foreword
5. Co-branding




FOREWORD

The need for urgent transformational change to achieve the goals of the Paris agreement has been highlighted by recent UNFCCC, IPCC and WIE reports. Upscaling the implementation of effective development and transfer of climate technologies in response to the climate is more crucial than ever. Technologies are key to sustainable development and the interlinked issues of the triple planetary crisis that humanity currently faces: climate change, pollution and biodiversity loss.

It is essential to understand the processes leading to the successful development and transfer of technology, the gaps and enablers, and the context-dependent conditions that need to be in place. However, the available information is fragmented, often unsystematic and outdated, with a focus that is either too aggregated or too localized.

This 'Climate Technology Progress Report' is produced and published as a collaboration between the UNEP Copenhagen Climate Centre and the UNFCCC Technology Executive Committee (TEC). The report will be regularly updated with regional-level analyses of feasibility, enabling environments and technology progress, and supplemented with detailed case studies to inform national and international action. The aim is to enhance our understanding of the progress being made on technology development and transfer, progress enablement, and the need for gap filling, to assist decision makers in their choices for strategic and catalytic actions and investments, and for Parties to use the report's findings in discussions of technology development and transfer under the UN Climate Convention.

This year's report focuses on establishing an approach for future tracking of progress on technology development and transfer, and subsequently applying this approach using data from Africa. The report shows that the systematic methodology of feasibility assessment provides a reproducible and transparent approach for examining technologies that are feasible to adopt, also identifying knowledge gaps. The report highlights the effectiveness of financial investment on agricultural technologies in Africa; the need to consider subregional variations in the feasibility of energy technologies; and the need to nurture the development of institutional, social and policy capabilities through long-term programmatic activities.

The report also highlights the importance of financial interventions not only to compensate viability gaps for individual transactions, but to help resolve market failure and contribute to market creation for climate technologies; and the important intersection between climate action and development needs where major developmental issues, including access, equitable development, and distributional aspects, need to be addressed alongside the implementation of climate technologies.

Mark Radka, Chief of Energy and Climate Branch, UNEP

Ambrosio Yobánolo del Real, TEC Chair, Chile

Stig Svenningsen, TEC vice-Chair, Norway

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Report time line 2023

1. March – April: consultations with stakeholders, including authors, Steering Committee, target audience
2. 1st May: report outline finalized
3. 1st June: zero draft chapters
4. 1st August: first draft chapters
5. 1st September: second draft chapters
6. 1st October: final chapters
7. 26th October: launch

In parallel: create awareness and promote the report through SoMe content and presenting the report at events. Outreach plan under development

The 2022 report is available at the UNFCCC TEC website and the UNEP-CCC website.

Thank you

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