

# How technology and innovation can help countries in enhancing implementation of NDCs

Latin America and the Caribbean Regional CTCN Forum for NDEs

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## Outline

- I. Setting the context: Innovation in the Paris Agreement
- II. UNFCCC/TEC work on Innovation
- III. Technology in NDCs
- IV. Conclusions and closing remarks



## Paris Agreement – Article 10

- **Para 5:** *Accelerating, encouraging and enabling **innovation** is critical for an effective, long-term global response to climate change and promoting economic growth and sustainable development. Such effort shall be, as appropriate, supported, including by the Technology Mechanism and, through financial means, by the Financial Mechanism of the Convention, for **collaborative approaches to research and development, and facilitating access to technology, in particular for early stages of the technology cycle, to developing country Parties***
- **Para 4:** *A **technology framework** is hereby established to provide overarching guidance to the work of the Technology Mechanism in promoting and facilitating enhanced action on technology development and transfer in order to support the implementation of this Agreement, in pursuit of the long-term vision referred to in paragraph 1 of this Article*

## Technology Framework (TF)

- Elaborated by SBTSA (2016-2018) adopted in Katowice (2018)
- Main purpose: to guide the work of TEC and CTCN
- Five key themes:
  1. Innovation
  2. Implementation
  3. Enabling environment and capacity-building
  4. Collaboration and stakeholders engagement
  5. Support

## Elements of key theme TF Innovation

- Actions and activities to accelerate and scale up innovation:
  - ✓ at **different stages** of the technology cycle
  - ✓ addressing both **adaptation and mitigation** in a balanced manner
  - ✓ Enhancing the effective participation of **developing country** Parties
  - ✓ fostering **sustainable development**
  - ✓ ensuring **gender responsiveness**
- Through 3 broad areas:
  - 1) Collaborative research, development and demonstration (RD&D)
  - 2) Supportive environment for innovation
  - 3) Private sector engagement and public-private partnership

## Activities and actions under TF Innovation

- Improving policy environments and regulatory framework for **National System of Innovation**
- Sharing of information on promoting collaboration with international technology **RD&D partnerships** and initiatives
- Supporting countries to initiate RD&D partnerships and enhancing participation of developing countries
- Promoting **existing innovative technologies** and accelerating the scale-up of **emerging climate technologies**
- Promoting **private sector** engagement
- Promoting **public private partnership**

## Part II: UNFCCC/TEC work on Innovation

### Post Paris: Raising awareness



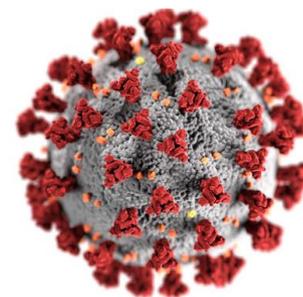
**TEM 2017: thematic session on innovative policies and technologies for urban environments**



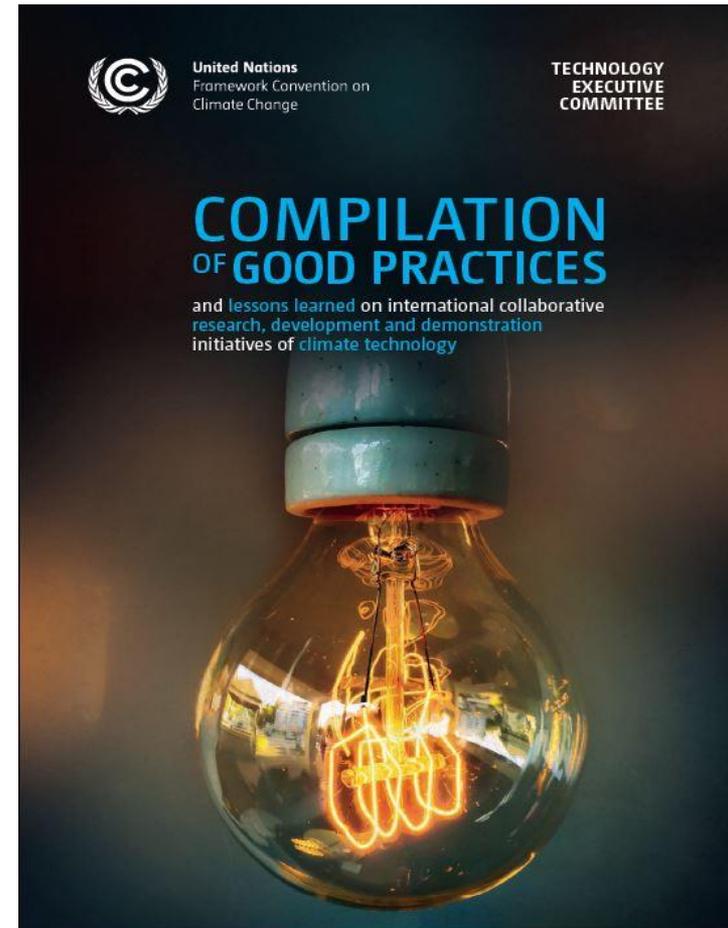
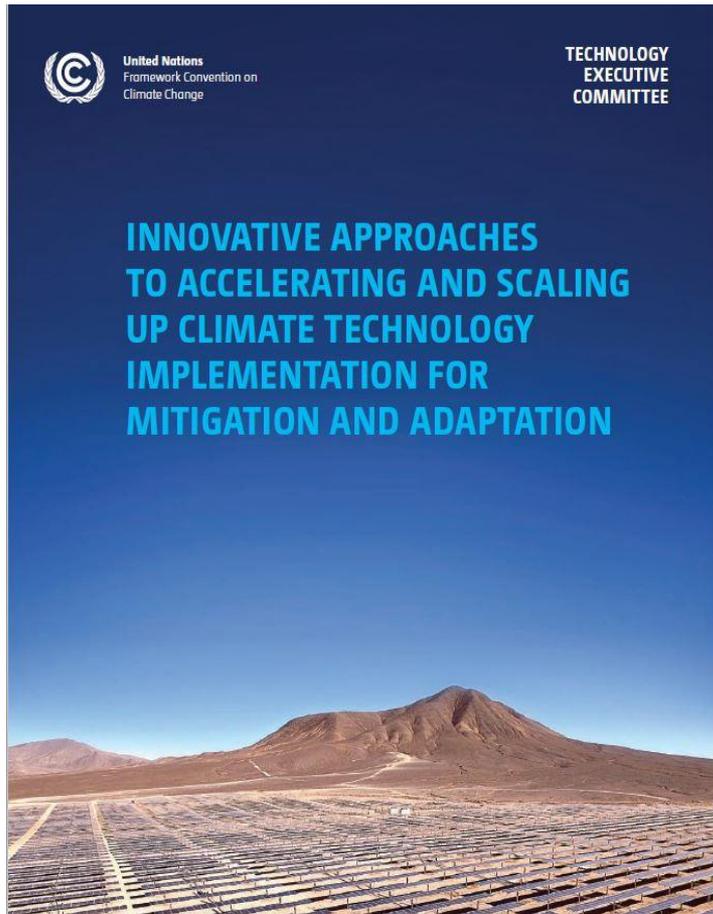
**Special event on innovation: innovation policies and innovative technologies contribution to implement NDCs**



## Post Katowice: Innovation in TEC 2019-2022 workplan



## Policy work on innovative approaches and RD&D





**INNOVATIVE APPROACHES FOR CLIMATE ADAPTATION TECHNOLOGIES**

DEEP-DIVE SESSION AT G-STIC 2020 CONFERENCE

UNFCCC  
TEC  
G-STIC

27 October 2020 | 11:45 – 13:15 CET

# Promote innovation and innovative approaches in technologies



**TECHNOLOGY DAY**

**INNOVATIVE APPROACHES ON ADAPTATION TECHNOLOGIES: CLIMATE SMART AGRICULTURE**

Virtual Event  
30 November 2020, 13:00 – 15:00 CET  
UNFCCC Climate Change Dialogues 2020

UNFCCC  
TEC  
Food and Agriculture Organization of the United Nations  
GACSA GLOBAL ALLIANCE FOR CLIMATE-SMART AGRICULTURE



**TECHNOLOGY MECHANISM**

Fostering innovation to help countries build climate resilience and reduce GHG emissions

Virtual Event  
25 November 2020, 13:00 – 14:30 CET  
UNFCCC Climate Change Dialogues 2020

UNFCCC  
TEC  
CTCN  
CLIMATE TECHNOLOGY CENTRE & NETWORK

## In the pipeline (2021)

- **RD&D Executive summaries** for policymakers, academic and research institutions, international organizations and private sector actors
- Technical paper and thematic dialogue on **emerging climate technologies** in the energy supply sector
- Technology Day thematic session on innovative approaches to **strengthening coastal and ocean adaptation**, in collaboration with IUCN, FEBA and NWP
- Work on **innovative financing and investment options** at different stages of the technology cycle

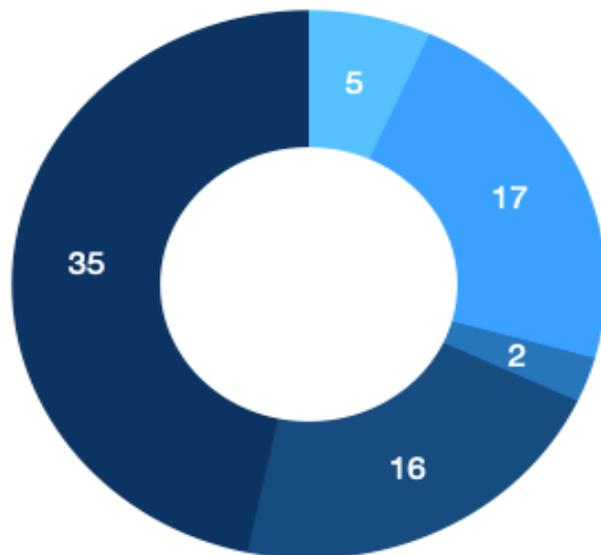


## Synthesis report of NDCs

- Mandate to the UNFCCC secretariat to prepare a NDC synthesis report (1/CP.21, 1/CMA.2) – initial analysis and synthesis report by 28 Feb 2021, covering all NDC submissions as of 31 Dec 2020
- 48 NDCs, representing 75 Parties, accounting for about 40% of the Parties to the Paris Agreement and about 30% of the global GHG emissions in 2017
- NDC synthesis report includes sub-section on technology (document available at TEC22 meeting page:  
<https://unfccc.int/ttclear/tec/meetings.html> )

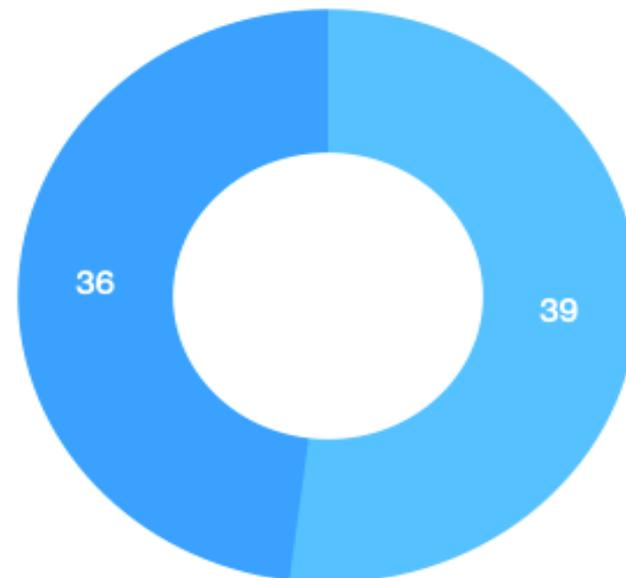
## Regional and country distribution

Figure 1: Parties by Regional Group



- African Group
- Asia and the Pacific Group
- Eastern European Group
- Latin America and the Caribbean Group
- Western Europe and Others Group

Figure 2: Developed and Developing Country Parties



- Developing Country Parties
- Developed Country Parties

## Key findings on Technology components

- Most Parties (43 NDCs ~ 90%) mention technology in their NDCs despite no ICTU provision requiring such information
- Structure and depth of information on technology in NDCs varies significantly
- Most information on technology is with regard to:
  - Technology needs, including TNA, TAP (58%)
  - Specific technology to be deployed (52%)
  - Policy, regulatory and legal aspects (31%)
  - Technology innovation, R&D (25%)
  - Institutional strengthening and co-ordination (10%)
  - Support for technology development and transfer (10%)

## Examples on Innovation and RD&D

<b>Chile</b>	<p>By 2021, Chile will have the promotion tools and mechanisms to focus and articulate processes in Development and Technology Transfer for Climate Change Research Centers, Public Technology Institutes and International Centers, among others</p> <p>By 2022, Chile will have an inventory of Research Centers, R&amp;D initiatives and projects related with mitigation and adaptation, and skills to coordinate Technology Development and Transfer for climate change</p>
<b>Dominican Rep.</b>	<p>Design an inventory system for climate technologies that facilitates the development of local technologies and the adoption of technologies existing worldwide</p>
<b>Maldives</b>	<p>Promote research and development focusing on climate smart agriculture technologies and practices to address challenges facing the sector due to climate variabilities, seasonal changes and extreme events</p>
<b>Rep. of Korea</b>	<p>Significantly scale up R&amp;D investments for core emission reduction technologies, e.g., renewable energy, zero emission vehicles and hydrogen technologies</p>

## Examples on specific technologies to be deployed

<b>Australia</b>	Establish first regional hydrogen export hub to boost the country's hydrogen industry and fund research collaborations and supply chain studies to enable demonstration and deployment
<b>Chile</b>	Increase electric vehicle, including in the areas of private vehicles, commercial vehicles, taxis & buses
<b>Brunei Darussalam</b>	Ensure smooth transition towards a nationwide adoption and use of renewable energy technologies, mainly solar photovoltaic, will be critical
<b>Japan</b>	Increase of energy efficiency in industrial sectors

## Conclusions

- Paris Agreement highlights the importance of the role of innovation in the implementation of action mitigation and adaptation
- Technology framework guides the work of the TEC and CTCN to support countries in the area of innovation and beyond
- Parties through their NDCs recognized the roles technology, innovation and R&D to contribute to stronger, more robust national climate action plans

## Closing remarks

- Collective efforts are needed to foster innovation (including technological innovation) to address climate change, implement the Paris Agreement and enhance ambition:
  - How can stakeholders work together?
  - How can these efforts be supported?
  - What can UNFCCC and Technology Mechanism do to further contribute to these endeavors?

*Thank you!*

*More info: [unfccc.int/ttclear](https://unfccc.int/ttclear)*

