

Brief Summary Report

Regional Technical expert meeting on mitigation for the Asia-Pacific Region

Decentralized solutions for smart energy and water use in the agri-food chain

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Thailand Bangkok



United Nations
Framework Convention on
Climate Change

TEC



CTCN
CLIMATE TECHNOLOGY CENTRE & NETWORK

The secretariat of the **United Nations Framework Convention on Climate Change (UNFCCC)**, the **Technology Executive Committee (TEC)** and the **Climate Technology Center and Network (CTCN)** organized the regional technical expert meeting on mitigation (TEM-M) on 6 September 2019 in Bangkok, Thailand, at the margin of the Asia-Pacific climate week 2019.

The TEM-M was organized in the framework of the **technical examination process on mitigation (TEP-M)**, which aims to identify and facilitate the implementation of activities that present high potential for emission reductions in order to boost climate action before 2020.



The regional TEM-M discussed "**Decentralized solutions for smart energy and water use in the agri-food chain**", how these solutions may contribute to the reductions of GHG emissions and generate sustainable development co-benefits, what actions Parties and non-Parties stakeholders may undertake to facilitate a fast replication and upscale of these technologies.

Around 60 participants, from governments, civil society, private sector, UN agencies and financial institutions, attended the TEM-M.



"We need climate action from all sectors of society and from all around the world. We have the tools, mechanisms, and ambitions - we just need to translate that into action", noted Mr. Ovais Sarmand, Deputy Executive Secretary of the United Nations Framework Convention on Climate Change.

Ms. Dinara Gershinkova, Chair of the Technology Executive Committee, highlighted in her opening remarks that "important progress and positive results have been achieved in the region about decentralized solutions for smart

energy and water use in the agri-food chain that requires further analysis and discussion on their technological, financial and commercial aspects, for them that may be replicated by other countries in the region and scaled up".

"The CTCN has over 500 members around the world who stand ready to support climate technology development and transfer on the frontlines of climate action", emphasized Ms. Jaime Webbe, CTCN Regional Manager for Asia-Pacific.

Three case studies from Nepal, India and Tonga provided an opportunity to learn about existing solutions that can be replicated and scaled-up across the region:

- The Barsha Pump, developed by aQysta, is a water pump powered by water with zero emissions, no electrical components, and low maintenance costs. The pump can be placed in rivers, streams and irrigation canals and is used for both crop and livestock production;
- Claro's solar irrigation, utilizes mobile trolley and mini grids, reducing reliance on diesel pumps and providing secondary benefits for rural electrification. The mobile trolley solution is based on a pay for use model paired with FINtech to deliver cost savings and open new areas to irrigation;
- The Kingdom of Tonga's approach to the circular economy in the agriculture sector aims to bridge the gap between renewable energy commitments (50% penetration by 2020) and what is achievable through wind and solar PV. Making use of agricultural waste to supply energy and fertilizer to farms decreases reliance on imported fuel and increases agricultural production.



The presented case studies provided valuable insight into the challenges and opportunities faced by innovators working directly with local communities in developing countries to address climate change. Drawing upon this hands-on experience participants discussed ideas and suggestions for Parties and non-Party stakeholders to replicate and upscale climate innovations. The main take-aways from the roundtable discussion are listed below.

Key messages

- The Asia-Pacific region is very active in identifying and developing technology solutions that meet the needs of farmers and rural communities while ensuring environmental and social co-benefits. Successful innovative technologies, business cases and financing models exist in the region with high potential for replication and upscaling.
- Non-governmental organisations play a key role in the region in supporting innovative start-up as early adopters of new technologies as they are able to take more risks compared to traditional investors. Yet, policy and financial challenges hinder the transition from demonstration to commercial application, which can be overtaken only with support from governments and financial institutions.
- There is a need for governments to go beyond a wait-and-see approach to new technologies. National, regional and sub-regional governments are expected to introduce policies that support market penetration of new technologies and support their uptake in the long run;
- Innovative financing mechanisms should be designed and introduced to address the limited ability and willingness of rural communities to pay for new technologies and services. Leasing and pay-as-you-go models, for instance, appears to be accepted solutions by users while enabling fast capital recovery for investors and technology developers.
- Specific cultural and social local circumstances and gender considerations should be taken into account along the whole technology cycle, as well as in the definition of business model. That would increase farmers' acceptance of the new technology and accelerate its market penetration. Raising awareness of rural communities on climate and sustainable development implications is also key in this regard.