

APPLICATION OF SCIENCE AND TECHNOLOGY FOR POVERTY REDUCTION

Since 2016, the Republic of Korea and UNOSSC have implemented a demand-driven initiative responding to partner countries through the Republic of Korea-UNOSSC Facility/ Programme for Capacity Development for Poverty Reduction through South-South and Triangular Cooperation in Science and Technology (Phase 2).

The Republic of Korea-UNOSSC Facility (Phase 2) consists of three components: the Knowledge Platform, the Consortium and the Scaled-up Project. The Platform provides development solutions and policy guidance for specific sectoral areas requested by partner countries. The Consortium is focused on implementing an integrated pilot project focused on information and communications technology (ICT) for business and social development of women, entrepreneurship, agriculture, school health, water management and energy/environment. The Platform and Consortium projects are implemented in Cambodia. The Scaled-up Project aims to strengthen capacities for electron beam application and establishment of electron beam facilities for food irradiation and removal of industrial effluents in the environment in 14 countries of the Asia-Pacific region.

The year 2019 saw greater project synergy and ownership created through multi-stakeholder collaboration, particularly by national and local governments, civil society and institutions of the Republic of Korea, and delivery of concrete and meaningful outputs. All three components of the Facility supported capacity-building of civil servants, academia, community leaders, women entrepreneurs and youth towards achieving the use of practical technical solutions and mindset transformation.



Training in safe vegetable planting in Cambodia

ENHANCED INSTITUTIONAL AND HUMAN CAPACITIES

In Cambodia, a technology-based business incubator centre was established within the Ministry of Planning to support new ventures and existing entrepreneurs in harnessing science, technology and innovation in their businesses.

In Indonesia, the Knowledge Platform institutions collaborated and advised the Ministry of Villages, Development of Disadvantaged Regions, and Transmigration to harmonize its indicators on village development. The monitoring process is now managed by Statistics Indonesia. Furthermore, the indicators are used as village development targets for the country's National Medium-Term Development Plan (RPJMN) 2020–2024.



Korea Atomic Energy Research Institute experts' mission to Viet Nam to help in managing wastewater treatment plants

In parallel, the Scaled-up Project entitled Electron Beam Applications for Value Addition to Food and Industrial Products and Degradation of Environmental Pollutants in the Asia-Pacific Region expanded its capacity-building initiatives in agriculture and industrial applications through training and technical workshops at the local and regional levels. Seven new electron beam facilities were established in Thailand and Viet Nam, and 103 new technical jobs in electron beam applications have been created in participating countries since 2017.

GREATER ACCESS TO BASIC SERVICES AND INFRASTRUCTURE

Farmers are better trained to grow crops (chili and moringa) and rear animals (goats, sheep and chickens) in an integrated “smart farming” approach. The project helped to install solar panels and biogas facilities in the pilot villages. The animals provide biogas for energy and manure for fertilizer. To increase access to safe drinking water, gravity-driven membrane filtration systems for clean water resources were installed in selected schools. The toilet and handwashing facilities were installed to improve the health and sanitation of the villagers. In Indonesia, the women entrepreneurs received the Food Production Certificate (Home Industry) from the local government, thereby legalizing them to manufacture home-made food in accordance with the national safety and nutrition standards. The certification increased the visibility and credibility of the women's products. With the achievement of those accepted standards, those home-produced foods are now bought and sold by local supermarkets.

RESULT HIGHLIGHTS



Countries from the Asia-Pacific region received capacity-building support on electron beam applications in agriculture and industrial sectors



Creation of 103 technical jobs in electron beam applications



Exchange of agricultural practices from Indonesia to Mongolia for experimentation, resulting in:

100
%

increase of
sweet pepper
yield

263
%

increase of
tomato yield

Encouraged by the outcomes of the integrated work, the Government of Indonesia has committed to setting up a South-South Centre of Excellence for Village Innovation in Sukabumi, West Java, to share its policy, strategy, know-how and practical experiences regarding sustainable, resilient and inclusive development with other countries of the Global South.

SCALED-UP TECHNICAL COOPERATION ON ELECTRON BEAM APPLICATIONS

The participating countries strengthened South-South and triangular cooperation through joint research and technical exchanges. Technical missions were undertaken to support the strengthening of domestic technical and management capacities pertaining to electron beam applications. For example, the Korea Atomic Energy Research Institute experts' mission to Viet Nam facilitated the Research and Development Centre for Radia-

tion Technology of Viet Nam in managing wastewater treatment plants and wire production plants in the country. Another collaboration took place between Indonesia and Mongolia. Indonesia provided Mongolia with irradiated oligo chitosan and biofertilizer to be used for an experiment in the growth of sweet pepper and tomato plants. The experiment showed that the sweet pepper yield increased 100 per cent while tomato plants achieved a 263 per cent increase in yield.



Students using solar energy-based devices, and farmers practicing greenhouse management in Cambodia

LESSONS LEARNED

- A systematic capacity-building framework is required to offer technical skill sets and know-how for maintenance of installed facilities and assets acquired under the Facility.
- Communication and language constraints were identified as a problem in expanding effective partnerships at local levels. Once those issues were addressed, the partners were able to develop joint initiatives. Therefore, facilitation of good communication is a requirement for success in such a multi-stakeholder project.

WAY FORWARD

- The Facility played a vital role in promoting South-South and triangular cooperation and piloting new approaches in fostering science, technology and innovation partnerships for poverty reduction. It will continue documenting sound practices and supporting the replication of those practices in other countries of the Global South

