

# INTERNATIONAL DAY FOR SOUTH-SOUTH COOPERATION



South-South cooperation is a manifestation of solidarity among peoples and countries of the South that contributes to their national well-being, their national and collective self-reliance and the attainment of internationally agreed development goals, including the 2030 Agenda for Sustainable Development. The International Day for South-South Cooperation celebrated on 12th September, focuses on the

theme **'Solidarity, Equity and Partnership: Unlocking South-South Cooperation to Achieve the SDGs'** for this year. Collaboration across borders and boundaries is essential for countries to find effective solutions to the current development challenges, especially when challenges we are trying to address, such as climate change, has no boundaries.

## TRANSITIONING TO SUSTAINABLE ENERGY USES IN THE AGRO-INDUSTRY IN SRI LANKA UNDER SOUTH-SOUTH COOPERATION PROJECT

The United Nations Development Programme (UNDP) in Sri Lanka, China and Ethiopia is implementing a project with the Governments of Sri Lanka, China and Ethiopia, that aims to transition the Agro-Industry towards using sustainable energy under a South-South Cooperation known as the TSSC project. The project addresses sustainable development challenges related to international cooperation, access to energy for improved service delivery, and sustainable integrated farming practices while supporting Sri Lanka to reach its Greenhouse

Gas (GHG) emission reduction targets by 2030. Along with many other countries, Sri Lanka has made commitments to the Paris Agreement. Despite its low carbon footprint and highly vulnerable status, Sri Lanka has committed to reducing greenhouse gas emissions by 14.5%. The island state also established 2030 targets to achieve 70% renewable energy in electricity generation. Sri Lanka expects to achieve Carbon Neutrality by 2050 and has committed to not increasing the capacity of its coal power plants.

### FRESH, GREEN, AND SUSTAINABLE

Jewelex Agri Kumaragama Pvt Ltd., is a mango orchard in Thanamalwila. Once harvested, the fruits need processing and cold storage for them to remain fresh. Hence, the business requires a consistent electricity supply for its daily operations. Jewelex harvests 3,000-4,000 mangoes each day, 40% of which goes to waste if not stored properly. Every month Jewelex uses 2500Kwh of electricity. UNDP and TSSC invested 7,025,500 rupees for a solar-powered cold room unit, 10kW panels, and a 10kW generator. This investment helps Jewelex save up to 400,000 rupees each month and allows them to store their harvested fruits for up to 15 days.

**"Future farmers should invest in solar energy to make their ventures profitable" - Major General Buweneka Gunarathne (Owner of Jewelex Agri)**



### POWERING SMALL BUSINESSES WITH SUSTAINABLE ENERGY

Somarathne from Madhapola, Nilantha from Nikawala and Sunil from Kanthale are three beneficiaries of TSSC's investment to support small-scale farmers' transition to renewable energy. These farmers from rural and underdeveloped areas of Sri Lanka now use solar sprayers, solar traps, and solar repellents to protect their crops from harmful pests. This is an initiative that saves them a lot of money and effort while having a minimal impact on the environment and their crops. It sets a positive example for their respective local communities and encourages them to make the transition to solar as well.

**"New farmers should familiarize themselves with such new technologies and sustainable energy solutions; it will help increase our yield, and it is the future of farming" - Sunil**



### PADDLING TOWARDS A SUSTAINABLE FUTURE

Kamal Shrimp Farm in Wilathawa, Chilaw is a leading shrimp exporter with a farm that sprawls over 2 acres. The process of raising larvae into shrimp takes roughly 4 to 5 months but is an effort that has a high energy requirement. The shrimp ponds need to be aerated for at least 22 hours a day, which costs the farm over a million rupees each month. UNDP's intervention has provided Kamal Shrimp Farm with the capital to invest in solar aerators. This not only allows the farm to save on costs and increase its profits but also sets the groundwork for transitioning the entire industry towards renewable energy.

**"I have personally seen the benefits of switching to solar energy. At this time, when our country is facing a power crisis, this has been a cost-effective solution. Our savings on electricity have been considerable, which has helped our farm to prosper" - Nimal**

## KEY RESULTS

Energy Data Management System (EDMS) to monitor energy savings and GHG reduction of Solar PV, Biogas and VFD (Variable Frequency Drive) was developed through the project with the support of Sri Lanka Sustainable Energy Authority (SLSEA).

IT equipment distributed among the 05 provinces for data collection and updating EDMS

Five provincial energy plans for the agriculture sector for the Eastern, North Western, Northern, Southern and Uva provinces were completed and will be handed over to the relevant heads of the provinces in 2023

Eight different Renewable Energy Technology Applications were transferred to 233 beneficiaries including 80 women and 200 vulnerable groups.

In collaboration with SLSEA, a renewable energy awarding scheme for the agro industry in Sri Lanka was developed.

### Cost, Energy Savings & GHG Emissions Reduction from Piloted RET Technologies

#### Solar Powered Cold Rooms

- Annual Energy Savings (Electricity): **12,900 kWh**
- Annual Electricity Cost Savings: **LKR 374,000**
- Annual GHG emissions reduction: **7 Tons of CO2 equivalent**

#### Solar Powered Paddle Aerators for Shrimp Farms

- Annual Energy Savings (Electricity): **13,680 kWh**
- Annual Cost Savings: **LKR 397,000**
- Annual GHG emissions reduction: **7.4 Tons of CO2 equivalent**

#### 3 kW Grid-Tied Solar PV System for Milk Chilling Centres

- Annual Energy Savings (Electricity): **12,300 kWh**
- Annual Cost Savings: **LKR 360,000**
- Annual GHG emissions reduction: **6.6 Tons of CO2 equivalent**

#### Solar Powered Automated Green House

- Annual Energy Savings (Electricity): **12,900 kWh**
- Annual Cost Savings: **LKR 374,000**
- Annual GHG emissions reduction: **7 Tons of CO2 equivalent**

#### Biogas Plants with Electricity Generation

- Annual Energy Savings (Electricity): **15,000 kWh**
- Annual Cost Savings: **LKR 436,200**
- Annual GHG emissions reduction: **10.3 Tons of CO2 equivalent**

### SOLAR POWERED SPRAYERS

The project successfully handed over 75 solar-powered sprayers to 75 farmers in the 5 selected provinces (15 farmers in each province) in the year 2022. The solar-powered sprayer supports increasing annual revenue and reducing production costs through the reduction of fuel costs and labour costs while reducing hard labour requirements and GHG emissions. This application was given to 75 beneficiaries including 10 women and vulnerable groups.

### SOLAR POWERED ANIMAL REPELLERS

The project successfully handed over 75 solar animal repellents to 75 farmers in the 5 selected provinces (15 farmers in each province) in the year 2022. The solar animal repellents which were distributed through the project, help farmers minimize crop damage caused by wild animals and reduce the impact on people, animals, and the environment. This intervention benefits 75 farmers in the area including 12 women.

### SOLAR POWERED INSECT TRAPS

The project successfully handed over 75 Solar Insect Traps to 75 farmers in the 5 selected provinces (15 farmers in each province) in the year 2022. The Solar Insect Trap supports increased annual revenue through increased productivity, reduced production cost through the reduction of the cost of pesticides and labour, and reduced GHG emissions. This Application was given to 75 beneficiaries including 14 women and vulnerable groups.

The 'Transitioning to Sustainable Energy Uses (TSSC Project) in the Agro-Industry in Sri Lanka under South-South Cooperation' project, is a joint effort of the United Nations Development Programme (UNDP) in Sri Lanka, China and Ethiopia together with the Governments of Sri Lanka, China and Ethiopia.

