

NEWS

Innovative water management techniques revolutionising paddy cultivation in Lanka

Published 2 weeks ago on 2024/12/17



AWD effectiveness being explained to the Farmers' Organisation



Around 2,500 liters of water are required to produce just one kilo of rice



Around 2,500 liters of water are required to produce just one kilogram of rice, putting immense pressure on Sri Lanka's water resources, especially during droughts, according to a release from the United Nations Development Programme (UNDP). In response, the Green Climate Fund-financed Climate Resilient Integrated Water Management Project (CRIWMP) is tackling this challenge with an innovative solution: Alternate Wetting and Drying (AWD). This



LATEST



NEW: IMC



NEW: IHS Bacl Ther



NEW: APII Gra



project, implemented by the Government of Sri Lanka with technical support from UNDP, is transforming agricultural productivity through integrated water management. Data shows that AWD reduces water usage by up to 27% and increases cropping intensity from 1.2 to 2.1, allowing farmers to cultivate more frequently, boosting harvests, income, and food security.

For centuries, rice has been the backbone of Sri Lankan agriculture, with over one million hectares of paddy fields cultivated annually, accounting for 37% of the country's land. However, as climate change accelerates, managing water resources for paddy farming has become increasingly difficult.

The success of CRIWMP goes beyond technology; it empowers farmers with the knowledge to adopt these innovations. The project has worked closely with farming communities, providing training, tools, and climate advisories to help them implement AWD effectively.

Take, for example, the Palugaswewa Farmer Organization. President R.B.M. Anura Wasanththa shared that before the project, they could only fully cultivate their land during the Maha (major) season and a fraction during the Yala (minor) season. With AWD, however, farmers now use simple tools, like water pipes buried in the soil, to monitor water levels and irrigate only when needed. Agro-meteorological advisories help synchronize irrigation with rain, preserving tank water for critical times.

“Earlier, we used tank water for land preparation without understanding ‘on-farm and off-farm’ water management. We weren’t familiar with agro-meteorological advisories either. Now, thanks to the depth gauge, we can accurately calculate tank water levels and follow advisories to make better use of rainwater, conserving a large portion of the irrigation water in the tank,” says Wasanththa. “It’s like saving money in a bank for us.”

As AWD adoption grew, CRIWMP introduced advanced technologies like the Sensor Light System and the Water Level Arrow Marking System. The former uses solar-powered sensors to monitor water levels, signalling farmers when to irrigate, while the latter uses a floating arrow to indicate water levels, enabling farmers to check them from a distance without entering the field.

These innovations have made farmers, like Wasanththa, feel more confident in managing their water resources, with many referring to themselves as “smart” farmers.

Geethika Wijesundara, the Climate Smart Agriculture Programme Coordinator for CRIWMP, calls this shift a paradigm change for Sri Lanka’s paddy farming. “By adopting AWD, farmers now use just 2.9 to 3 acre-feet of water per acre, allowing water saved to be allocated to other field crops, boosting yields and income.”


Secretary of the Palugaswewa Farmer Organization, Susantha, shared that their adoption of AWD allowed them to fully cultivate their Yala land and use only the necessary amount of water. After the Maha season, they had 240 acre-feet of water left in their tank, and with additional rainfall, they were able to irrigate both paddy and green gram. “We still have 30 acre-feet of water left in the tank for our domestic use!” he says.

AWD’s impact extends beyond water conservation. Methane emissions, a major contributor to global warming, have been reduced by 40% in fields using the system. In Sri Lanka, studies show methane emissions in flooded paddy fields average 570 mg/ha, but with AWD, this has

been reduced to 325 mg/ha. “This has shown us that integrated water management is crucial in paddy farming,” says Dr. Geethika. “If AWD is adopted across Sri Lanka’s paddy fields, we could cut methane emissions by 245,000 tons annually.”


As CRIWMP continues to roll out innovative technologies, the future of Sri Lankan paddy farming looks brighter, more sustainable, and more resilient. Susantha adds, “I never knew paddy fields emit methane. Thanks to CRIWMP, we’ve learned how to reduce our contributions to global warming.”

Taking AWD even further, the project plans to map soil drainage classes in two village irrigation systems to develop the most efficient crop plans for the Yala season. This will ensure paddy is cultivated according to water availability, while introducing higher-value off-season crops to increase smallholders’ resilience and profitability in a changing climate.




Trade with AI-powered signals

Start Earning \$ Daily! in Sri Lanka




Hi! Are you single?



AutoTrade With AI signals

Beginners: Start Earning Dollars Daily! Sri Lanka



Live Football Games For Free!

RELATED TOPICS: #FEATURED

DONT MISS

< A new Speaker to be elected today

UP NEXT

Dr Jagath Wickremeratne appointed new Speaker >

YOU MAY LIKE