Salet's Success: Solar Irrigation Brings Reliable Water to Cambodian Farmers

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In Battambang province, a collaboration between the Nurture Project and EGE Cambodia-Energy Transition is harnessing the power of the sun to provide reliable irrigation to smallholder farmers. The "Nurture Water-Inclusive Solar Irrigation Solution" was piloted in Peam Village, Kdol Tahen Commune, Bavel district. This initiative established a community committee and installed a 60 HP solar pumping station, directly benefiting approximately 160 smallholder farming households, totaling 1,023 individuals (including 303 women and 465 young people). Farmers, now assured of a consistent water supply, are not only maximizing their existing land but also expanding their cultivation areas.

"After receiving and using this solar-powered pumping station, it's incredibly convenient. Firstly, it reduces our budget costs. Secondly, it saves energy and time. Thirdly, it provides reliable water in the canal, which we pump directly into our fields. For farmers like me, it's significantly more cost-effective than using diesel machines."

Hang Salet, a 53 years old farmer in Peam village, Kdol Tahen commune, Bovel district, Battambang province.

For the first rice production season, 125 families registered to use the solar-powered water supply, covering 240 hectares of land. A sustainable fee structure was implemented, with farmers agreeing to pay $75 USD/ha for the first season and $38 USD/ha for the second. Farmers experienced immediate savings, reducing their water pumping costs by 40% compared to the average incurred when using diesel pumps from streams.

Salet vividly recalls the challenges of traditional diesel pumps:

"In the past, we faced numerous difficulties: buying diesel, pipes, spare parts, and dealing with daily maintenance and repairs. The pump was difficult to operate, requiring precise positioning near the water source. It was time-consuming, labor-intensive, and frustrating. Diesel pumps brought us many problems."

The shift to solar irrigation has yielded remarkable results.

"After using the solar water pump system in the first season, my yield per hectare increased from 3.5 tons last year to 5.5 tons this year. On my 5 hectares, my total harvest increased from 19-20 tons in 2023 to 25.3 tons in the first season of 2024. I'm truly enjoying this first harvest season with the solar water pump."

Inspired by the success of the community solar irrigation station, Salet now plans to install a small solar water pump system on his own land. He views the project as a vital model for community development and hopes it will inspire other communities to adopt solar irrigation. He envisions a future where more farmers transition away from costly and polluting diesel engines, embracing the benefits of solar pumps for sustainable and efficient rice farming.

Beyond increased productivity, the project fosters responsible water governance by establishing water management committees, implementing pumping schedules, and creating water usage maps, ensuring equitable distribution and sustainable practices.

Recognizing the success and demand from smallholder farmers and local authorities, the Nurture Project and EGE are committed to expanding the solar irrigation model in Battambang. This expansion will build upon the proven benefits, further contributing to climate-resilient agriculture, food security, and sustainable development in the region.

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