



ESRC DEPLOYS SOLAR MOBILE IRRIGATION SYSTEM IN LOBO, BATANGAS



On July 26, a solar-powered irrigation system was provided to beneficiaries in Brgy. Olo-olo, Lobo, Batangas as a result of a partnership between the Lobo Municipal Agriculture Office, the Lobo Irrigation Services Association, and BatStateU. The Electronic Systems Research Center (ESRC) developed and transferred the system in response to the severe damage caused by Typhoon Salome in 2017, which resulted in a lack of irrigation facilities in the area. The prototype is capable of producing 4.5 cubic meters of water per hour.

Funded by the Department of Science and Technology, the PHP 810,350.40 project, the system is made with stainless steel submersible pump powered by six 100W solar panels, and a linear current booster circuit that allowed the system to function without batteries, making it lighter and more mobile. Additionally, the circuit components, including six easel-like mechanisms that served as panel stands, could be carried in a customized cart.

Modifications to Design

Part of the continuous development of the technology is the modification of its design to enhance its performance further. This version utilizes the same pump and power circuit as the prototype. However, a battery had been included in the new setup to allow for irrigation even during the dark.



The entire solar panel deployment mechanism was also changed; in the prototype, easel-like panel stands had to be manually unfolded one by one by the user. On the contrary, this version employs two hand-operated winches and pulley mechanisms to easily unfold and fold the panels.

Source: Research, Development and Extension Services Office