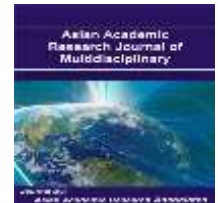




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PORTABLE SOLAR-DRIVEN WATER DESALINATION AND PURIFICATION SYSTEM

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Abstract

This study aimed to innovate a Portable Solar-Driven Water Desalination and Purification System for Barangay Molocaboc, Sagay City, Negros Occidental. It is an island Barangay with no source of fresh potable water. This study sought to determine the functionality of the device in terms of potability, portability, sustainability, and affordability. It also determined the level of user's satisfaction and acceptance of the system.

The researcher used developmental research method in order to have a systematic process of designing, developing and evaluating a project. This methodology ensured that the research output has met the criteria of consistency and effectiveness.

With 292 respondents, the researcher was able to collect data using a validated self-made questionnaires.

After conducting series of tests and refinement of the prototype, results showed that the desalinated water is potable, free from salt and other harmful elements. The Portable Solar-Driven Water Desalination and Purification System was highly accepted by the residents of Barangay Molocaboc.

However, the pool of technical experts who examined and evaluated the device had recommended for further enhancement of its design in order to scale up its functionality and to increase the volume of the desalinated water.

Keywords: Desalination, Potability, Purification, Solar-Driven, Sustainability

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