

## **An Alternative Waste Management System to Swine Operations for Water Pollution Control Programs in the American Pacific**



Institution: Northern Marianas College

Theme: Animal Waste Management

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**Abstract:** The objective of the project is to demonstrate a sustainable swine waste management practice through a dry litter waste system and a portable pen system in the American Pacific (CNMI, Guam and FSM) as the most affordable and practical way to manage waste, conserve water, and resolve water pollution problems.

The vast majority of livestock in Pacific Island countries are owned by small-scale, semi-subsistence farmers. Swine are of particular significance due to their important role in social and cultural ceremonies. Many Pacific Island countries have high livestock densities resulting in livestock waste becoming a serious source of pollution. Without a waste management system, local environmental agencies need to identify means to address the growing problems. Swine are often penned so that waste is concentrated and, when discharged directly to surface and ground water, leads to human health risks, a loss of potential nutrients for crop, or a loss of potential energy via biogas.