



Development of Environmentally Sustainable Methods for Treatment of Domestic Wastewater and Handling of Sewage Sludge on Yap Island



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Inadequate treatment of domestic wastewater (sewage) in the Pacific Islands has been responsible for serious human and environmental health problems due to contamination of water supplies and damage to the natural environment. The reasons for this can often be attributed to poor management and the lack of functional technology. On Yap Island in the Federated States of Micronesia, the treatment being provided at the centralized wastewater treatment plant with over 300 household connections is clearly insufficient with essentially raw wastewater being discharged to the ocean. In addition, the numbers and locations of pit latrines and septic tanks on the main island are not adequately inventoried and the degree of treatment being provided is unknown. Furthermore, excess sludge being produced by the treatment plant is taken and directly used for domestic purposes without prior treatment to meet regulatory standards; thus, improved management of this potential resource is

urgently needed; as would also apply to the sludge yield that would be realized if septic tanks were operated and maintained properly.

Accordingly, the objective of the proposed project is to compile a concise inventory of up-to-date information on the existing pit latrines, septic tanks and wastewater collection and treatment system and sludge handling practices on Yap Island. Furthermore, solutions to existing problems will be developed, including issues pertaining to managerial practices and the need for new and innovative technologies. The findings of this project would assist in identifying and prioritizing areas where further work would be merited to improve the sustainability of wastewater treatment and related practices. Thus, the final technical report would serve as a planning tool to give guidance for potential courses of corrective action on Yap Island and possibly also serve as a guide for other locations in Micronesia.