

**"Project Formulation Survey" Under the
Governmental Commission on the Projects for
ODA Overseas Economic Cooperation in
FY2012**

Summary Report

(Independent State of Samoa)

**Survey on The Okinawa Miyako-jima Model
Adopting Renewable Energy in Samoa**

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This report is a summary of a project formulation survey conducted by the contractor, under the Governmental Commission on the Project for ODA Overseas Economic Cooperation, commissioned by the Ministry of Foreign Affairs of Japan in Fiscal Year 2012. It does not necessarily represent the official views of the Ministry of Foreign Affairs of Japan.

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Survey Documentation

Photos of the Survey



Collection of sand used for Ecological Water Purification System



Experiment of Ecological Water Purification System



Cyclone Disaster (1)



Cyclone Disaster (2)



Measurement of the location of the sluice gate at Vailima intake by GPS



Aggregation Experiment

I. Description of the current situation and development needs of the development issues concerned in Samoa

The independent State of Samoa (hereinafter called "Samoa") has declared "Water Supply" to be one of the most important targets under the vision "For every Samoan to achieve a better quality of life" under its national "Strategy for the Development of Samoa." The Water Supply goals include "Sustainable Water Resource Management," "Access to Reliable, Clean and Affordable Water Supply," and so on, and various efforts are implemented. Among them, one of the most urgent issues is the improvement of water supply systems in the critical areas of Vailima and Vaivase-Uta near the capital of Apia in Samoa. This issue has been reviewed by surveying their water sources, pre-process facilities, water purification, aqueducts, and distribution pipelines.

II. Possible applicability of the SME's products and technologies, and prospects for future business development

The systems and technologies used in this project have been nurtured in Okinawa, an island state with many small islands which have various types of soils such as lime and igneous rocks but lack rich water resources.

Experience and know-how for potable water supply have been obtained in Okinawa through the development of its waterworks industry. The technologies of facility management, such as design, construction, installation and repairing of the equipment, have been accumulated as well. One example is that, through various efforts in Okinawa to enable the sustainable supply of water effectively, unique experience and know-how of water treatment facilities and management in the sub-tropical climate have been developed.

Since Samoa, including neighboring island states, has a climate and topography similar to that of Okinawa, it is considered that there is a high possibility that the proposed systems and technologies would effectively contribute to solving the similar issues in Samoa.

For the purpose of contributing to improving the water supply in the areas near Apia, which are targets in the Water Sector Plans of "Strategy for the Development of Samoa," the survey has reviewed the watershed conservation, the water intake locations, pre-process and purification facilities, and pipelines from the viewpoint of the conservation of the Samoan environment.

It is expected that after the introduction of the systems, they could be spread to other Oceanian island states as well as to the other Samoan regions.

III. Expected development impact and effect on business development of the proposing SME in Samoa through proposed ODA projects

This project aims to achieve the improvement of water supply in the areas near Apia by the improvement of water intake, water treatment and water distribution. It can also realize the secure and stable water supply in the areas. This is consistent with the vision "For every Samoan to achieve a better quality of life" as stated in the "Strategy for the Development of Samoa."

Following this project, the same system is expected to be spread to the Oceanian island states and the other Samoan regions. Furthermore, through the implementation of the project, an interactive and sustainable development of water conservation can be achieved with the effectively shared technologies, knowledge and know-how by building the human networks between Samoa and Okinawa.

IV. Proposals for formulating ODA projects

It is planned that the construction of new facilities as well as the renovation of the existing water supply facilities in the two areas near Apia be carried out, and the conservation method of the water source be introduced. Then, in order to achieve "Sustainable Water Resource Management" and "Access to Reliable, Clean and Affordable Water Supply," the development of the following is proposed utilizing the systems and technologies of Okinawa:

- i) Intake Facilities (Improvement and/or repair of the methods and preventive measure of inflow of sand and rocks)
- ii) Water Treatment Plants (Design, pre-process facilities and ecological purification systems)
- iii) Construction monitoring system of river flooding

Technology training and courses for the staff of the Samoa Water Authority (SWA) are also proposed.