Technical Backstop for Sustainability

National Water Testing Laboratory in the Republic of Marshall Islands

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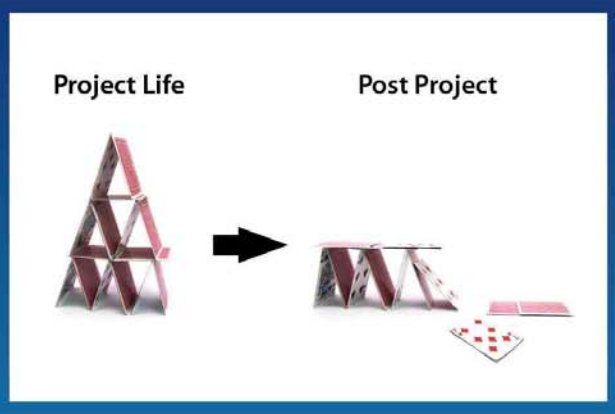
BACKGROUND

There are numerous water supply, sanitation and hygiene projects being delivered globally through development partners and donor agencies. Most of these projects have three to four years to demonstrate tangible benefits. Considerable effort is placed on sustaining project outcomes. But can sustainability be ensured over the life of a short-term project? This presentation uses a case study from the Republic of the Marshall Islands (RMI) to demonstrate how providing a technical backstop at the end of a project lasting just over three and a half years is contributing towards sustainability.



INTRODUCTION

Contamination of drinking water is a significant concern for public health throughout the world and the Pacific region is no different. In order to assist Pacific island countries build their capacity in water quality monitoring, the Applied Geoscience and Technology Division of the Secretariat of the Pacific Community (SPC-SOPAC), the World Health Organization (WHO) and the Institute of Applied Sciences of the University of the South Pacific (IAS-USP) implemented a New Zealand Aid Programme (NZAID) funded *Water Quality Monitoring Capacity Building* project from June 2006 to March 2010.

The project's objective was to build sustainable national capacity for improved water quality testing and data management.

PARTICIPATING COUNTRIES

The *Water Quality Monitoring Capacity Building* project was run in four countries: Cook Islands, Niue, Republic of Marshall Islands and Vanuatu. It provided water testing equipment and in-country training on best laboratory practices and improved data management.

The water testing laboratories supported in the participating countries were:

- Department of Waterworks, Cook Islands
- Department of Health, Niue
- Department of Water Resources, Vanuatu
- Majuro Environmental Protection Agency, Republic of Marshall Islands

CASE EXAMPLE: REPUBLIC OF MARSHALL ISLANDS

The project improved the capacity of the Majuro Environmental Protection Agency's (EPA) water laboratory to produce reliable and accurate results. This was done through an initial needs assessment, various in-country and sub-regional training for laboratory staff, provision of required and appropriate equipment, improving the quality assurance and quality control of laboratory testing, maintaining high level buy-in from EPA management for improved laboratory functions and by helping the laboratory obtain certification by the United States (US) EPA.

Project Benefits to Marshall Islands EPA Water Laboratory

- Upgraded laboratory facilities and new equipment
- Improved quality assurance and quality control procedures
- Confidence in quality of data produced for informed decision making
- Enhanced status and recognition through US EPA certification of laboratory and staff for bacterial testing

Delap area of Majuro Atoll, RMI.

The islands of RMI are mostly low coral limestone and sand. Sources of water include rainwater, groundwater, desalination and importation.

Monitoring and Evaluation

A simple laboratory ranking template was developed as part of the *Water Quality Monitoring Capacity Building* project to benchmark the performance of participating laboratories. The scores for the EPA Majuro laboratory over the project life are shown below. The laboratory improved from rating as "around satisfactory" in 2006 (initial assessment) to "very close to good" at the end of the project.

Key features	Ideal lab	Majuro water laboratory		
		Aug 2006	Mar 2008	Mar 2010
1. Proper lab space	3	2	3	3
2. QA/QC in place	3	1	2.5	2.5
3. Instruments being calibrated	3	0	2	2
4. Basic equipment present	3	2	3	3
5. Reagent supply	3	3	3	3
6. Staff knowledge/training	3	2	3	3
7. Analysis SOPs	3	0	3	3
8. Sample traceability (log-in)	3	2	3	3
9. Data storage	3	2	2	2.5
10. Funding	3	3	3	3
Total	30	17	27.5	28

Score: Poor - 0 Fair - 1 Satisfactory - 2 Good - 3

Ensuring Sustainable Outcomes

SPC-SOPAC and WHO recognised that a technical backstop was needed to ensure the improvements and momentum created by the *Water Quality Monitoring Capacity Building* project was maintained. The very nature of capacity building and the wide range of water quality monitoring issues meant that some areas had not been adequately covered during the life of the project. While the EPA water laboratory staff had improved their skills and capacity they still needed technical advice and guidance for continual improvements.

The SPC-SOPAC and WHO team have therefore remained in contact with the laboratory staff and management to provide technical backstop. This includes advice on testing protocols, guidance on in-house training, mock audits, development of a drinking water quality monitoring regime and general capacity building needs.

The technical backstop and long-term engagement (five years and continuing) with our Marshall Islands counterparts is gradually building sustainability. For example, the certification status for the Majuro laboratory was renewed, after the project life, following an extensive audit in November 2010 by US EPA. At the request of the Majuro EPA, SPC-SOPAC and WHO assisted with a pre-certification mock audit. During the initial US EPA certification audit in 2008 (project life) the Majuro EPA laboratory had *three* certified staff, after the 2010 audit (post project) the laboratory has *five* certified staff.

CONCLUSION

The Marshall Islands example shows the need for technical backstop and long-term engagement with project target groups and beneficiaries in order to gradually build sustainability. There should be greater realisation of some inadequacies of short-term solutions, especially when it comes to the sustainability of outcomes. Development partners and donor agencies should be encouraged to invest in long-term engagement solutions for "true" sustainability.

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