



The Republic of Vanuatu/La République de Vanuatu

Office of the Prime Minister/Bureau du Premier Ministre

**Office of the Government Chief Information Officer (OGCIO)/
Bureau du Chef de Service de l'Information (BCSI)**

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Department of Water Resources Information System Development Requirements

Terms of Reference

Version	Date Created	Authors
1	08/12/2017	Neil Malosu

Department of Water Resources Information System

Location: Port Vila, Vanuatu (SW Pacific) or remote work	Type of appointment: Systems Analyst Consultant Term: 31 of January 2018 to 31 of March 2018 Program Type: Systems Analysis and Requirements Development of Department of Water Resources Information Management System	Duration: 2 months duration, mandated 1 week in Port Vila
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1. Background and Overview

The Department of Water Resources (DoWR) under the auspices of the Ministry of Lands and Natural Resources, was set up to ensure sustainable and equitable access to safe water and sanitation for the people of Vanuatu to support improved public health and promote social and economic development.

2. Purpose

In December 2017, the Vanuatu Department of Water Resources (DoWR) and New Zealand Ministry of Foreign Affairs and Trade (MFAT) signed an agreement for a Water Sector Partnership 2017-2021, Inception Phase. UNICEF also signed an agreement with the same name to support the DoWR.

The initial Inception Phase, lasting up to one year, will: (1) support DoWR to strengthen the WASH evidence base, information management and understanding of the water related risks facing rural ni-Vanuatu. And (2) Support DoWR to operationalise the National Implementation Plan (NIP), and pilot the Capital Assistance Programme (CAP) for funding a limited number of priority water projects. A second phase will be a broader longer term programme of support to strengthen the DoWR's institutional and technical capacity for them to become a high functioning department that effectively implements the NIP to achieve the goal of 100% access to safely managed drinking water by 2030.

Specific program outputs for the initial phase include:

Output 1 – Support DoWR to establish a national water-related information base

1.1 Strengthen information systems and information management capability within DoWR

1.2 Compile and review existing WASH related datasets to support strengthened WASH sector problem analysis

1.3 Support DoWR to establish a water quality monitoring system that has provincial reach

1.4 Continue to strengthen the problem definition through analysis of DWSSP and water quality data to identify water related problems and needs in rural Vanuatu

3. Scope

The DoWR in collaboration with the OGCI and UNICEF is now seeking a Systems Analyst to help in the development of a Systems Requirements Analysis document. The System Analyst will work closely with the DoWR and the OGCI's Application and Database team as well as UNICEF Technical Assistants. The Systems Analyst will develop a Systems Requirements Document that will encompass the following:

1. **System Security:** Business rules will be defined for different user groups, by section and user levels, in regards to functionality allowed within the system.
2. **Water Committee Registration:** The System will register new water committees and store related documents as attachments for the Water Committees. It will also store profile for each Water Committees. An appropriate platform will have to be decided on to securely store files digitally.
3. **Water Works Permit Registration:** The System should be able to register legal water works permits and store them as attachments. Also, locate each permit areas and an automated notifications when expired.
4. **Water Use Permit Registration:** The System should be able to register legal water works permits and store them as attachments. Also, locate each permit areas and an automated notifications when expired.
5. **Hydrology and Hydrogeology Database:** the System should be able to link the existing NIWA hydrology database.
6. **Project Database:** The system should be capable to register new WASH projects, provide type of project, update status, provide analysis and locate each projects. The system should show the project procure materials status, any related documents and show locations of procure materials. Also, be able allow provincial water officers to upload/download projects, attachments and any related documents to the portal.
7. **Water Inventory database:** The system should include existing water systems and allow for the registration of new water inventories, provide scorecards, analysis of water systems and for Outside users, such as NGOs and university students, should be allowed to upload /download data, which will be approved by an administrator.
8. **Complaints Registration:** The System should register all information regarding complaints received by the DoWR concerning any regulated water issues.
9. **Water Quality Database:** The System should be able to input Water data Quality Data, provide analysis, provide scorecards, store attachments and be able to upload/download data's.
10. **Drilling Database:** The System should be able to register new drilling sites or clients, provide specifications and Quotations, produce Reports and Analysis and Calculate costs. The system must also be linked to the Financial Management Information system to record all reconciliation of payments and receipts.
11. **Urban Water Supply Management System:** The system should have a link to the Existing Urban Water Supply Management System.
12. **DoWR Meetings:** The system should be able to schedule dates, time, location of board meetings, and list of attendees. This functionality should be able to replicate similarly to the Microsoft Outlook calendar.
13. **DoWR Documents:** The System should be able to securely store and provide easy retrieval of all documents and general correspondences relating to the operations of the DoWR. Should have the upload option to post the scanned copies of the DoWR documents to a file Archive server and also store standard DoWR documents that could be uploaded to the DoWR Information Management System.
14. **Online DASH BOARD for the DoWR:** This should contain an online mapping module which Will cater for; Water Resources Inventory, Drilling Locations, Hydrology map, Water Quality

sample sites, Urban Water Supply Water systems, DoWR Projects, Water Committees, Drilling Locations, Borehole Sites and DWSSP Sites.

15. **Reports:** The system should be able to provide customized reports and other statistical information to enable the DoWR information officer to produce reliable reports in a timely manner. These reports should be displayed at the front page as a dash board that shows graphs and status of any relevant matters accordingly.
16. **Compatibility:** The system should be able to import data from the Ministry of Health, Vanuatu National Statistics Office, Ministry of Education and other relevant databases.

4. Deliverables, Timing and Level of Effort

Key deliverables and submission times for the assignment are:

1. Submit a Requirements Development Plan for developing that system requirements document; by the end of week 1.
2. Identify and consult with stakeholders having an involvement in work flows and processes defined in section 3 in regards to scope and integrated collected information appropriately into Systems Requirements document.
3. Define business and functional requirements of that system as well as develop UML diagrams (use case diagram, sequence diagram, activity diagram, class diagram, package diagram and others) to document in detail both that system's application and database layer.
4. First draft of systems requirements document including all required documents ready by end of week 4.
5. Provide a short weekly report in soft copy on achievements and obstacles, to DoWR, OGCI and UNICEF, during each month of the contract.
6. Deliver a systems requirements document by the end of week 8.

Outputs by the Analyst will be in English. The consultant will answer to the Applications Manager of the OGCI, the Database officer of DoWR and the UNICEF Program Coordinator.

Timing and Level of Effort

This project is expected to require the services of a suitable expert for 8 weeks.

Travel

It is anticipated that the expert will not have any time for any other clients during that period. GoV will not pay for any flights internationally and nationally. No living allowances will be paid.

5. Qualifications

The individual selected is expected to cover a significant subset of the following capabilities and skills:

- Ten or more years of relevant technical experience in a Systems Analyst role
- Experience designing a Water Information Management System for government administration Possess a master's degree in Information Technology or/and in a business administration field experience. A combination of the two is advantageous.
- Must have a good understanding of IT architecture, IT systems, programming and development skills.
- Have a solid understanding of Unified Modelling Language (UML).

- Excellent writing, analytical, interpersonal and presentation skills.
- Experience in working in a challenging developing country environment.
- High client orientation.
- Ability to work closely with subject matter experts, sectoral policy analysts and civil servants in a wide range of agencies and ministries.
- Experience in a small island developing state (SIDS) environment is desirable.
- Experience in Vanuatu would be a plus.
- Language fluency and excellent writing ability in English is required. French and/or Bislama would be a plus.

There is no restriction on the nationality, citizenship or current residence of the candidate, but permanent or temporary residents of Vanuatu are preferred.

6. How to Apply

Interested Candidates may submit their application, with a cover letter and a Curriculum Vitae to the address provided below Before **January 31st 2018**.

For further informations please contact Mr Neil Malosu on the email address:

nemalosu@vanuatu.gov.vu

Address:

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