



## JOB DESCRIPTION

<b>Job Title:</b>	<b>Water Engineer</b>
<b>Division/Programme and Section/Project (if any):</b>	Disaster & Community Resilience Programme (DCRP), Geoscience, Energy and Maritime Division (GEMD)
<b>Location:</b>	Funafuti, Tuvalu
<b>Reporting to:</b>	Water Resource Assessment and Monitoring Coordinator, Disaster & Community Resilience Programme
<b>Number of Direct Reports:</b>	None
<b>Purpose of Role:</b>	The position will support the design, construction and implementation of water supply systems from groundwater within remote atoll island settings of Tuvalu, and assist with coordination of other project activities of the “Managing Coastal Aquifers Project (referred to as “MCA Project”), and “Managing Water Scarcity through Strengthened Water Resources Management” Project (referred to as “Water Scarcity Project”).
<b>Date:</b>	Feb 2023

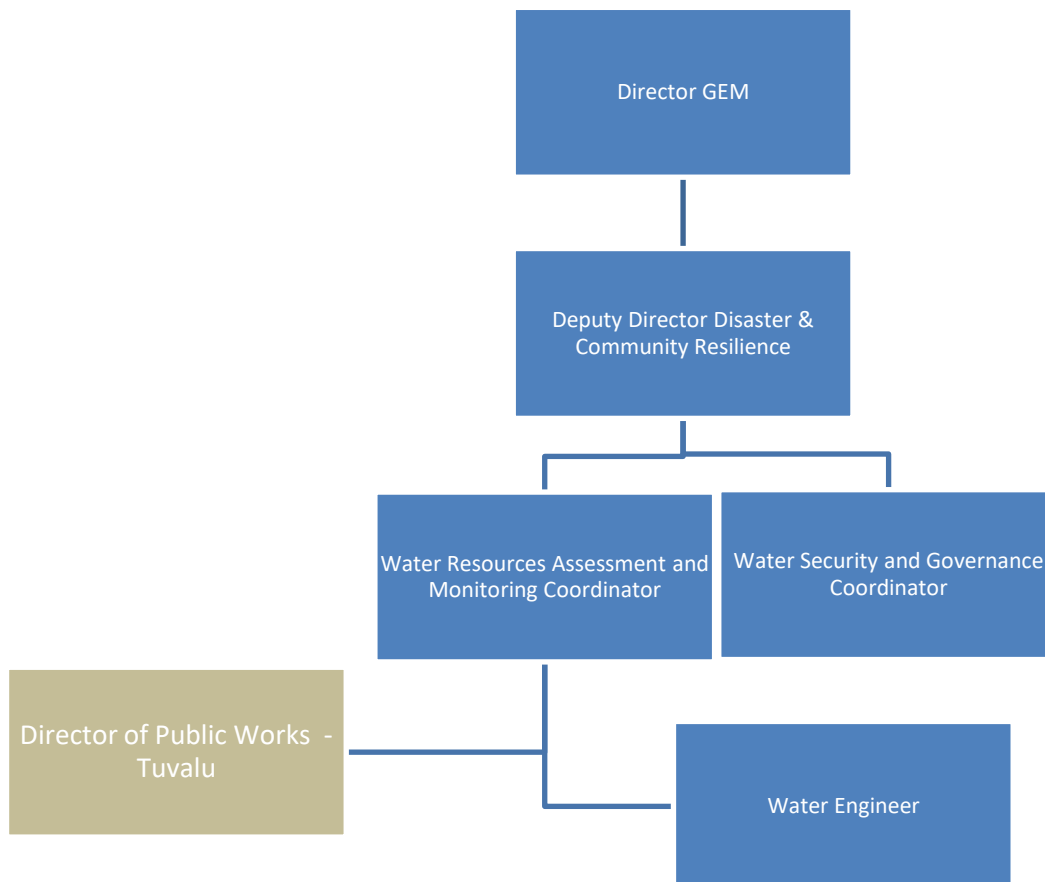
### Organizational Context and Organization Chart

The **Geosciences, Energy and Maritime (GEM)** Division of SPC is comprised of three programmes and one Programming Performance and Systems Unit. The three programmes are: i) Oceans and Maritime (ii) Georesources and Energy; and iii) Disaster and Community Resilience.

The **Disaster and Community Resilience Programme (DCRP)**, which works with SPC’s member countries and territories to support sustainable development outcomes through evidence-based action & partnerships for resilience. In support of this, the DCRP manages a large portfolio of disaster risk reduction, climate change adaptation and water and projects at the regional and sub-regional levels.

Identified projects include the “**Managing Coastal Aquifers Project**” (**MCA Project**), which the DCRP is implementing across, Marshall Islands, Palau and Tuvalu. With the support of the Global Environment Facility (GEF) and in partnership with UNDP the Project is assisting these countries to improving the understanding, use, management and protection of coastal aquifers towards enhanced water security, including in the context of a changing climate. The Project commenced in November 2020.

The “**Managing Water Scarcity through Strengthened Water Resources Management**” **Project** (referred to hereafter as the “**Water Scarcity Project**”), which the DCRP is implementing across eight Pacific countries, including the Cook Islands, Kiribati, Marshall Islands, Nauru, Niue, Tonga, Tokelau and Tuvalu. With the support of the New Zealand Ministry of Foreign Affairs and Trade, the Project is assisting these countries to implement practical measures to build the skills, systems and basic infrastructure to better anticipate, respond to, and withstand the impacts of drought. The Project commenced in July 2020.



The Water Engineer position will provide technical and project management support towards the implementation of specific water supply systems being undertaken by SPC in Tuvalu. The Water Engineer will contribute to the implementation of both the “*Managing Coastal Aquifers Project*” (MCAP), and the “*Water Scarcity Project*” within the Tuvalu context.

The overall objective of the *Managing Coastal Aquifers Project* (MCAP) is to improve the understanding, use, management and protection of coastal aquifers towards enhanced water security in the context of a changing climate.

The key outputs of the MCAP project include:

- Enhanced knowledge of coastal aquifers and enhanced understanding of aquifer vulnerability.
- Improved access to groundwater for enhanced water security.
- Strengthened capacity and monitoring of water resources at the local and national level.
- Coordinated and inclusive approaches at the island-level for coastal aquifer management and protection in place.
- Improved and accessible knowledge systems for decision support in place.
- Knowledge Management and M&E

The *Water Scarcity Project* will provide support to specific water-scarce communities to actively manage resources to improve resilience, to ensure:

- Communities have the infrastructure and capability required to access, collect and store water;
- Communities understand, protect and maintain water resources and infrastructure; and
- Communities are sustainably using water resources and managing risk.

#### Key Result Areas (KRAs):

The position of **Water Engineer** encompasses the following major functions or Key Result Areas:

1. **Capacity building** of engineering staff in the Tuvalu Public Works Department on Funafuti, and island water technicians and operators in the, construction and operation of water supply system on the islands of Vaitupu, and Nanumea.
2. **Technical advice and construction guidance** on the design, construction and operation of water supply systems in Vaitupu, and Nanumea
3. **Communication and advocacy** on appropriate and socially acceptable water supply systems with respect to the construction and operation of the water supply systems
4. **Project management and procurement support** in accordance with SPC and project requirements for the implementation of the water supply systems in Vaitupu, and Nanumea.

*The performance requirements of the Key Result Areas are broadly described below*

<b>Jobholder is accountable for</b>	<b>Jobholder is successful when</b>
<b>KRA#1: Capacity building (20%)</b> <ul style="list-style-type: none"> <li>Strengthen the capacity building of government in water supply system infrastructure design, project management, quality assurance and construction.</li> <li>Support the development of capacity building of outer island communities in the monitoring, operation, and maintenance of water supply systems and related improvements.</li> </ul>	<ul style="list-style-type: none"> <li>Countries capacity to undertake and successfully implement water supply system infrastructure is delivered in a timely efficient and cost effective way.</li> <li>Member country expectations of technical support achieved.</li> <li>Water supply infrastructure and systems implemented have demonstrable improvements in water supply operation and management.</li> </ul>
<b>KRA#2: Technical and construction guidance advice (35%)</b> <ul style="list-style-type: none"> <li>Provide high quality technical advice and support on the design, construction and implementation of a water supply systems and water distribution and management of water resources.</li> <li>Work alongside water project team and Tuvalu PWD to improve water supply designs and updated material specifications, quality control and cost estimation</li> <li>Undertake site visits and have oversight of the construction and quality control of small water supply systems.</li> <li>Support key people within the member countries in implementation of sustainable management of water resources.</li> </ul>	<ul style="list-style-type: none"> <li>Water supply systems are installed to best practice engineering standards and relevant for Tuvalu and island settings.</li> <li>Operation and management of the implemented water supply systems meet demands of community as a drought water supply and ensure protection of the water source.</li> <li>Water supply design, materials and quality control supports efficient and sustainable operation for communities.</li> <li>Quality control of the construction and installation of water supply systems is recorded and reported in line with industry standards of best practice.</li> <li>Government and community members are supported to understand water resource capabilities and operation to ensure operation within its sustainable yield.</li> </ul>
<b>KRA#3: Communicate and advocate (20%)</b> <ul style="list-style-type: none"> <li>Establish, develop and maintain effective and supportive communication and relationships with relevant stakeholders within Tuvalu and SPC staff.</li> <li>Support advocacy and awareness initiatives for the construction and operation of the water supply systems in Vaitupu and Nanumea within Tuvalu Government, operators and island council members, and external clients.</li> <li>Promote industry leading practices on sustainability, environmental and health and safety throughout the project lifecycle.</li> </ul>	<ul style="list-style-type: none"> <li>Awareness and advocacy activities that are effective in explaining to key stakeholders and the general community on the operation and sustainable management of the water supply system and the resource.</li> <li>Technical guidance on appropriate infrastructural designs is available and accessible.</li> <li>Communication strategies are developed and applied which allows for all community members to actively take part in awareness activities and provide a mechanism in which</li> </ul>

	queries and concerns are adequately addressed.
<b>KRA#5: Project management and procurement support (25%)</b> <ul style="list-style-type: none"> <li>Support SPC's project and procurement teams in the procurement of materials and services, the development of contracts and assessment of quotations or proposals for the implementation of small water supply systems in Vaitupu and Nanumea</li> <li>Oversight for the construction of the water supply systems including planning, logistical, and technical support for the implementation of small water supply systems in Vaitupu and Nanumea.</li> <li>Financial and progress reporting on the implementation and monitoring of work.</li> <li>SPC's procurement and financial policies are adhered to.</li> </ul>	<ul style="list-style-type: none"> <li>Materials and services procured in a timely and efficient manner, be fit for purpose and procured in accordance with SPC financial procedures.</li> <li>Financial files are accessible and maintained in accordance with SPC and managers requirements.</li> <li>Reporting on the status and progress made in the implementation of water supply systems, including logistical and technical challenges, and financial summaries provided on a monthly basis.</li> </ul>

The above performance requirements are provided as a guide only. The precise performance measures for this job will need further discussion between the jobholder and supervisor as part of the performance development process.

#### Most Challenging Duties Typically Undertaken (Complexity):

<ul style="list-style-type: none"> <li>Multi-tasking in a complex multi stakeholder environment</li> <li>Coordinating with multiple parties for the provision of goods and services within tight timeframes</li> <li>High workloads requiring prioritization in an often-intense environment for time and attention</li> <li>Working and living in remote island locations with limited access to support</li> <li>Support for cost-effective and structural analysis and improvement of water supply infrastructures</li> </ul>
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#### Functional Relationships & Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
<b>External</b> <ul style="list-style-type: none"> <li>SPC Focal Points including Director of Climate Change, Director of Public Works, National Project Coordinator, Tuvalu, and other relevant Government of Tuvalu representatives</li> <li>Island Council representatives (Kaupule, and Fale Kaupule members)</li> <li>Regional partners and donors</li> <li>Contractors and consultants</li> <li>Suppliers and service providers Private sector</li> </ul>	<ul style="list-style-type: none"> <li>Direct in country liaison</li> <li>Direct on island interaction for consultation, planning and project implementation</li> <li>Logistical management support for construction implementation, shipping and storing of equipment and materials</li> <li>Technical support for construction and operation of water supply implementation</li> <li>Interacting, advising, gaining assistance, resolving minor conflicts, negotiating</li> </ul>
<b>Internal</b> <ul style="list-style-type: none"> <li>SPC Finance, Travel, and Procurement units</li> <li>Water Resource Monitoring and Assessment Coordinator</li> <li>DCRP Procurement officer</li> <li>Water Team members</li> <li>GEM Division and specifically DCRP staff</li> </ul>	<ul style="list-style-type: none"> <li>Progress reporting on water supply implementation, design construction, operation, communication and logistics</li> <li>Supporting and managing procurements</li> <li>Logistical and technical advice for implementation activities</li> </ul>

**Level of Delegation:**

Routine Expenditure Budget: None

Budget Sign off Authority without requiring approval from direct supervisor: None

**Personal Specification:**

*This section is designed to capture the expertise required for the role at the 100% fully effective level. (This does not necessarily reflect what the current position holder has.) This may be a combination of knowledge / experience, qualifications or equivalent level of learning through experience or key skills, attributes or job specific competencies.*

**Qualifications**

Essential:	Desirable:
<ul style="list-style-type: none"> <li>A Master's degree in a relevant field such as Water Engineering, Civil Engineering, or a related field</li> </ul>	

**Knowledge/Experience**

Essential:	Desirable:
<ul style="list-style-type: none"> <li>Minimum of 5 years' experience in design, construction and implementation of civil works. Experience in water supply systems and water distribution and advantage.</li> <li>Minimum of 5 years demonstrated project management and organisational skills experience</li> <li>Demonstrated experience of construction supervision for civil works including contractual and reporting aspects.</li> <li>Demonstrated experience in implementing health and safety, risk management and quality assurance procedures within projects.</li> <li>Knowledge of water and hydraulic engineering, water supply design, operation and maintenance of water supply systems and sustainable water resource management.</li> <li>Demonstrated experience in project management activities, project planning and procurement of key materials and essential equipment within tight timeframes</li> <li>Demonstrated familiarity with GIS, CAD, Microsoft Office suite and other resource and engineering software</li> <li>Demonstrated familiarity with groundwater systems and water supply needs in atoll settings</li> <li>Demonstrated ability to problem solve, provide sound judgement for decisions and be practically orientated</li> <li>Ability to work under minimal supervision in remote locations.</li> <li>Knowledge of Gender Equity and Social Inclusion, (GESI), and People Centred Approaches (PCA) in delivery of projects</li> <li>Current valid driver's license.</li> </ul>	<ul style="list-style-type: none"> <li>Licensed to operate plant equipment eg Backhoe</li> <li>Ability to work well in a team</li> <li>Good working knowledge of water supply challenges across the Pacific</li> <li>Experience in Regional and International organization will be an added advantage</li> <li>Experience in WASH and water supply development in emergency or disaster response situations</li> <li>Demonstrated experience in Community engagement</li> </ul>

## Key Skills/Attributes/Job Specific Competencies

The following levels would typically be expected for the 100% fully effective level:

Expert level	<ul style="list-style-type: none"><li>• Planning and organising</li><li>• Prioritization of tasks</li><li>• Decision making/problem solving</li><li>• Project management skills.</li><li>• Construction supervision</li></ul>
Advanced level	<ul style="list-style-type: none"><li>• Highly effective communicator</li><li>• Computer skills including data handling and the use of word processing, spreadsheet and database applications with Microsoft Word, Excel, PowerPoint, CAD, GIS</li><li>• Financial and narrative reporting</li><li>• Field logistics</li></ul>
Working knowledge	<ul style="list-style-type: none"><li>• Design and construction of sustainable water abstraction technologies suitable for remote locations</li><li>• Water and sanitation needs in developing countries in particular Pacific Island countries</li><li>• WASH in emergency situations</li><li>• Capacity building skill transferal</li><li>• Standard quality, environmental and health and safety processes</li></ul>
Awareness	<ul style="list-style-type: none"><li>• Understands SPC's role in Pacific Island's development and resource management</li><li>• Aware of international and Pacific regional initiatives in disaster resilience and water resources management.</li><li>• Awareness of Pacific Island cultures and range of challenges in the regional, national and local scales.</li></ul>

## Key Behaviours

All employees are measured against the following **Key Behaviours** as part of Performance Development:

- Change and Innovation
- Interpersonal Skills
- Teamwork
- Promotion of Equity and Equality
- Judgement
- Building Individual Capacity

## Personal Attributes

- High level of professional integrity and ethics
- The ability to work unsupervised
- Demonstrated high level commitment to customer service
- Highly motivated and strong affinity to teamwork
- Continuous improvement mindset
- Good leadership and supervisory skills.
- Physically fit
- Positive attitude to work and high work standards
- Patient and flexible

## Change to Job Description:

From time to time it may be necessary to consider changes in the job description in response to the changing nature of the work environment – including technological requirements or statutory changes. Such

change may be initiated as necessary by SPC. This Job Description may also be reviewed as part of the preparation for performance planning for the annual performance cycle.