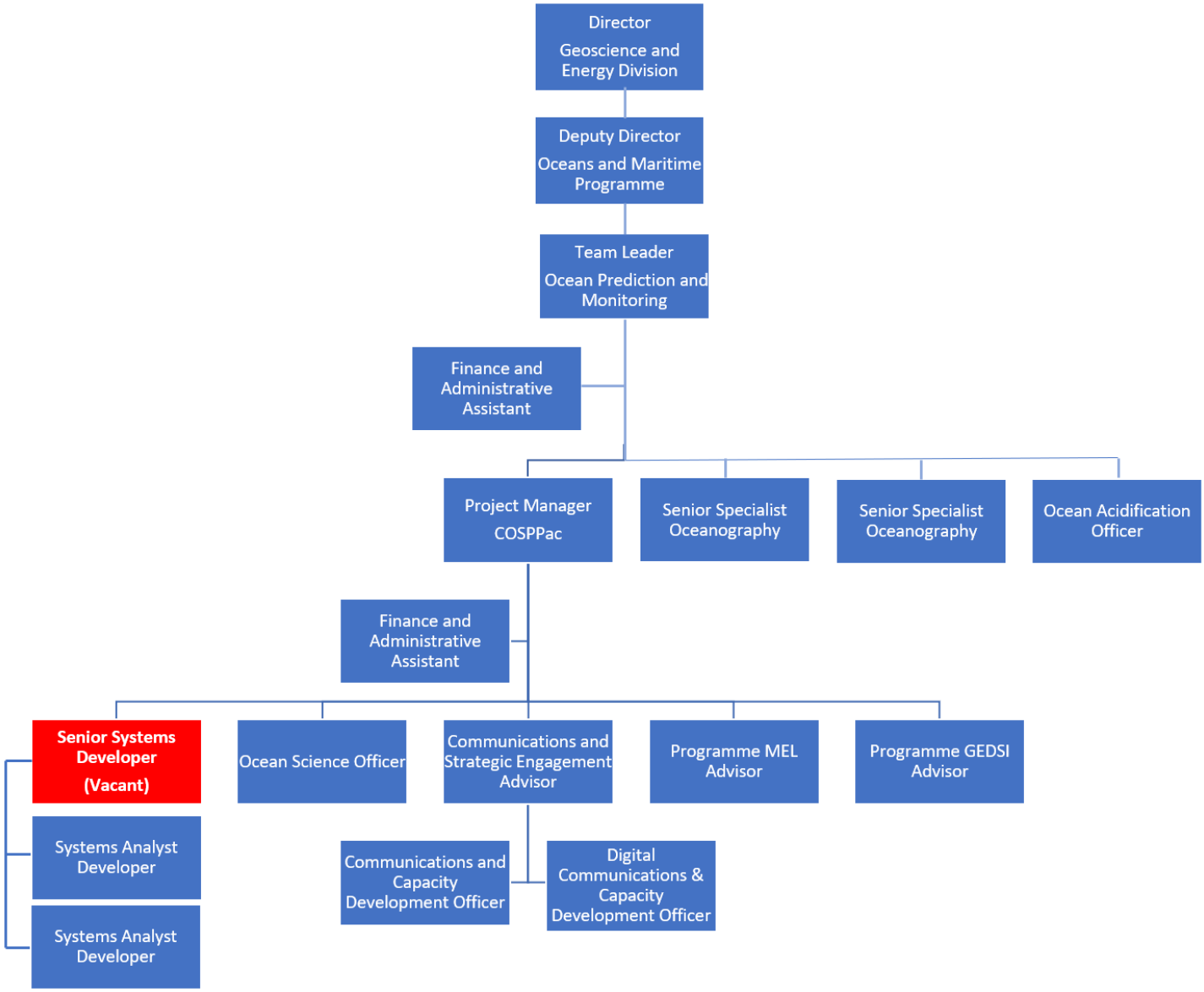
JOB DESCRIPTION

Job Title:	**Senior Systems Developer**
Division/Programme and Section/Project:	**GEM/OMP/COSPPac**
Location:	Suva, Fiji
Reporting to:	Project Manager COSPPac
Number of Direct Reports:	2
Purpose of Role:	The OMP is developing several cutting-edge web-based, desktop and mobile device systems and tools to visualise and analyse ocean and hazard risk information in support of in-country decision making processes. The position will lead a team of system developers in designing, developing, upgrading and maintaining science-based open-source decision support tools and platforms as well as supporting OMP's geospatial and time series data management and scientific computing facility. The jobholder will be working with national meteorological services and land and survey departments within the region and provide support in maintaining and developing decision support tools and platforms including capacity building activities. The position is a software analyst and engineering position, reporting to the Coordinator Applied Ocean Science in conjunction with technical guidance and oversight with the Team Leader Ocean Prediction and Monitoring within the Geoscience Energy and Maritime (GEM) Division.
Date:	*January 2024*

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 Oceans and Maritime Programme is organised to respond to SPC members' needs in three focus areas – Policy and Governance; Technical Assessment and Data Management; and Capacity Building and Gender. The Oceans and maritime Programme has a holistic approach in the three areas to successfully assist SPC members towards achieving four main outcomes: i) Good Oceans and Maritime Governance; ii) Sustainable Maritime Transport and Safe Navigation; iii) Strengthened Ocean and Coastal Monitoring and Prediction Services; and iv) Improved Ocean Literacy and Maritime Capacity.



Key Result Areas (KRAs):

The position of the Senior Systems Developer encompasses the following major functions or Key Result Areas (KRAs):

1. Lead the design, development and life-cycle support of geospatial, planning and risk-based decision support tools, websites and systems.
2. Implementing sound data management and curation methodologies within oceans, geospatial, hazards and risks space
3. Information management, training and knowledge sharing for member countries.
4. People Management

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

Jobholder is accountable for	*Jobholder is successful when*
KRA#1 (40% weight) Lead the design, development and life-cycle support of geospatial, planning and risk-based decision support tools, websites and systems.	• Decision supporting tools developed are tailored to project and country needs.

• Design, develop, document and maintain science-based open-source decision support tools such as the Pacific Ocean Portal. • Develop a system tracking mechanism that notifies issues or when system is down. • Ensure these systems and tools are accessible and remain fit for purpose. • Manage and maintain server systems deployed within OMP's work packages. • Monitor performance, system health checks and use of the system and continuously improve tools. • Ensure redundant mechanisms are deployed such as system backups in GIT.	• The Pacific Ocean Portal and the Pacific Tides App is 100% operational and functional. • A new version of the ocean portal is developed via a consultative process. • System architecture and the relevant components of platforms are well documented and backed up on GitHub. • A sustainable mechanism is adopted to maintain and improve systems through the use of git. • Decision supporting tools are maintained regularly and kept fully functional. • System documentation is accessible and up to date including data sources. • Continuous improvements are identified, planned and implemented. • A health check is developed and used to monitor system performance.
KRA#2 (25% weight) Data management • Support geospatial and time series data management systems. • Enable holistic data dissemination and facilitate open access to information and data. • Support Linux-based high end scientific computing facility • Improve accessibility of Pacific Ocean related data through continuous research and investigation.	• Datasets are integrated into the Pacific Data Hub (PDH) • Data management processes are streamlined and adopted. • Systems, databases, portals and registers are monitored, and use-cases are documented. • Linux-based systems are working efficiently, and software packages are optimally compiled and functional. • Linux users are advised on optimised and tailored solutions to increase work efficiency. • Support development and review of Linux based tools and utilities (Bash Scripting, Python, C/C++ Compilation, GPU/Cuda-oriented task-flows) • Monitoring data are analysed, and reports are submitted.
KRA#3 (25% weight) Capacity building and Partnership • Train national staff in the use of ocean and geospatial data • Support capacity mapping activities relating to ICT components of national counterparts. • Develop training materials relevant to NMHS ICT user needs. • Support NMHS staff in maintaining locally hosted platforms and tools. • Share knowledge and provide assistance for bespoke applications.	• Training workshops are conducted and supported. • Contributions to regional meetings and reports are made. • Countries have a high level of support for requests of applications and use of data. • Applications and requests are documented in support of continuous learning and training. • Capacity mapping efforts are supported. • Relevant PMC panels are supported.

• Fulfil requests by partners and member countries. • Actively engage and support PMC ICT and infrastructure panels. • Engage with regional and global partners on ocean data and related infrastructure.	• Engagement with relevant partners is maintained and collaboration is strengthened towards supporting data accessibility, interoperability, and system integration.
KRA#4 (10% weight) People Management • Manage the performance and supervise a group of system developers in the development and maintenance of tools and platforms. • Influence staff and mediate between colleagues to resolve complex and contentious issues. • Identify opportunities and organise capacity development activities and for staff and stakeholders. • Build strong and effective team capable of providing the highest quality service to member countries and clients. • Monitor the performance and workloads to ensure that objectives and deadlines are met	• Positive feedback from staff is received through the performance development system. • Competent and motivated team is in place, performing efficiently and effectively. Staff training and career developments are resourced and utilised by staff

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):

- Leverage latest technological advancement into project delivery.
- Develop innovative solutions.
- Engaging with diverse technical and non-technical stakeholders across GEM programmes and PICTs projects
- Understanding the core needs and requirements of technical work programmes and delivering appropriately
- Organizing and conducting workshops and training to participants with diverse skill sets

Functional Relationships & Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
External Key external contacts are: • PICTs project partners • International and regional scientific and technical partners • Crop agencies • PICTs ministries e.g.: Lands, Environment, NDMO and Climate Change, Met Offices	• Requirements gathering • Systems design and analysis of existing platforms • Enforcing data management practices and recommendations • Capacity building • Remote and on-site support

Internal Key internal contacts are: • Ocean Science Officer and COSPPac Team • Team Leader ocean prediction and Monitoring Team • Team Leader Geoinformatics Section • Team Leader Disaster Risk and Team • Manager PDH and Team • Head of PCCOS and team	• Requirements and needs assessments. • Collaborating in systems design, development and maintenance • Progress and formal reporting • Support development strategy of tools and systems

Level of Delegation:

Routine Expenditure Budget: *Nil*

Budget Sign off Authority without requiring approval from direct supervisor: *Nil.*

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:
• Master's degree in information technology or related field	• Qualification in developing science based open-source solutions (web, mobile, desktop based)

Knowledge/Experience

Essential:	Desirable:
• 5 years of experience in systems and tool development • Proven programming skills in multiple languages including Python. • Strong understanding of Git/GitHub • Experience in working with the client to get their information system requirements. • Good communication skills • Ability to work and travel in a multicultural and multilingual environment. • Good knowledge of networking, computing hardware and Linux operating systems • Experience in conducting technical training.	• QGIS plugin development (PyQGIS, PYQT) • Working knowledge of C/C++/Fortran and MATLAB • Understanding of GIS concepts and methodologies • Cross-platform mobile application development • Offline tool and utilities development for data processing and analytics • Web-based tool development • Experience with using docker. • Experience with cloud computing • Experience working in the Pacific Island region.

Key Skills/Attributes/Job Specific Competencies

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

Expert level	• Development of tools and systems • Enabling large-scale data processing and analysis
Advanced level	• Unix/Linux Environment • Git source control management and collaboration
Working knowledge	• Data management, system analysis and capacity building • Cloud-based infrastructure management • Conduct training
Awareness	• Familiarity with regional challenges at a technical and decision-making level. • Regional ICT needs and requirements. • Staff management

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
- Friendly demeanour
- Demonstrated high level commitment to customer service.

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.