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| **JOB DESCRIPTION** |

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| Job Title:  | **Ocean and Coastal Risk Data Analyst**  |
| Work Unit: | Ocean and Maritime Programme, Geoscience, Energy and Maritime Division |
| Responsible To: | Senior Specialist, Oceanography |
| Responsible For: | Supporting the development of scientific based solutions to improve ocean & coastal prediction and monitoring services and risk management. |
| Job Purpose: | The job holder contributes to the development and implementation of solutions to strengthen ocean & coastal risk prediction services as well as to address coastal risk management issues having relevance and significance to the peoples and governments of SPC member countries enabling them to improve their capacities, plan, manage and develop their natural resources in a sustainable way. This will be achieved through the application and development of scientific tools such as numerical models and applied research in the context of large ocean small island developingstates. |
| Date: | May 2021 |

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| **Vision:** |

“All CROP (Council of Regional Organisations in the Pacific) agencies contribute to achieving the vision embodied in the Pacific Plan of a region of peace, stability, economic growth, good governance and sustainable development. SPC is committed to these values and to working in partnership with national, regional and international organisations and development partners to serve its members.”

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| **Organisation Context:** |

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 Building.

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| **Key Result Areas:** |

The position of **Ocean and Coastal Risk Data Analyst** encompasses the following major functions or Key Result Areas:

1. Ocean and Risk Knowledge Product Development
2. Ocean Risk Data Analysis and Tool Development.
3. Project Management Support
4. Capacity Building

***The requirements in the above Key Result Areas are broadly identified below.***

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| **Jobholder is accountable for** | ***Jobholder is successful when*** |
| **Ocean and Risk Knowledge Product Development (25%)*** Advise stakeholders on ocean related services, products availability, applications, and limitations.
* Contribute content to the Ocean Portal.
* Participate in relevant partner meetings, forums, and panels. e.g., monthly oceans and climate forums, PIMOS/PICS panels and contribute towards supporting NMHS stakeholder engagement strategy and workshops
* Contribute to the development of ocean knowledge products based on stakeholder’s needs e.g., monthly bulletins, national outlooks, maps, forecast.
* Support the integration of sectorial impact data and risk knowledge into impact-based ocean prediction services and disaster risk products.
* Provide feedbacks on bugs and issues as well as recommendation on existing knowledge products.
* Ensure that outputs are discoverable and accessible to external users and in-country stakeholders, including designing deliverables to suit a non-technical audience.
 | * Stakeholders’ needs are understood and actively integrate into the National Meteorological and Hydrological Services (NMHS) ocean service and prediction services.
* The Ocean Portal remains relevant and is actively used by NMHS and maritime stakeholders.
* New products are integrated into knowledge hubs (e.g., Ocean Portal) based on stakeholder needs.
* Sector specific information-based tools are developed and have demonstrated impacts on decision-making.
* Sector specific applications of forecast and outlook products are supported
* The awareness of SPC’s expertise and capacity related to the development of ocean risk knowledge product is improved amongst partners and stakeholders.
* Relevant information and outputs communicated through partner meetings, panels, forums, and workshops are shared internally with relevant staff.
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| **Ocean Risk Data Analysis and Tool Development (40%)*** Create seamless bathymetry and topography products from various datasets.
* Set-up numerical modelling solutions to support the assessment of various coastal processes, hazards, and disaster risks.
* Ensure the scientific solutions developed are calibrated/validated.
* Support the development of sound and/or innovative methodologies to undertake probabilistic hazard and risk assessment.
* Keep up to date with scientific literature to ensure methodologies and tools are most adequate.
* Process and analyse oceanographic and risk data (including from in-situ data collection) to support science-informed decision.
* Support the development of ocean prediction and monitoring tools.
* Advise on data requirement, methodology, limitations, and applications related to the implementation of a disaster risk framework.
* Support ocean and risk related data collection survey.
 | * Model inputs are of high standard and are made accessible to relevant people in a timely manner.
* Data analysis outputs are of high standard and contribute to the development of knowledge products.
* Calibrated models, maps, and tools (e.g. coastal models leading to hazard maps or impact-based forecast systems) are of high standard and produced in response to demand from/needs of stakeholders.
* Tools and techniques are developed to strengthen the effectiveness and relevance of data analysis in support of SPC’s improved service delivery to countries.
* SPC’s scientific tools (models, scripts), data and products are documented and accessible.
* Limitations from SPC’s science-based solutions are identified and well communicated.
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| **Capacity Building (20%)*** Develop technical training materials
* Support the delivery of training workshops in coastal risk assessment
* Contribute to the design of technical training programme.
* Undertake hands-on training during fieldwork
* Make presentations for stakeholders, partners and for internal purposes.
* Support the development and facilitation of ocean science to service workshops, regionally and nationally.
* Support relevant training, professional attachments and internships, e-learning, and reference material on ocean climate science information for the Pacific, as well ascontribute to the delivery of this training inthe Pacific
* Support the implementation of the agreed upon training related MEL practices.
 | * Training materials are tailored to the audience
* Feedback from participants is positive
* Training material and manual are of high quality.
* On-going support is provided to participants
* feedback is sought and incorporated to improve future trainings.
* MEL related training activities are completed.
* Programmes, projects, and activities under the UN Decade of Ocean Science are supported and actioned
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| **Project Managment Support (15%)*** Support the development and the continuous update of project documents (e.g., costed workplan, daily log, issue log, risk register, progress report, etc.)
* Supported the development of costed workplans with guidance from the technical leads.
* Maintain good communication with project stakeholders.
* Keep track of project timelines
* Organise workshop and project meetings
* Undertake procurement activities
* Support the oceanography team’s annual reporting (e.g., MEL)
 | * Project documents (e.g., budgets, costed workplans, daily and issue logs, MEL) are accessible and up to date.
* Project implementation is monitored
* Procurement follows SPC rules and regulations
* Lessons learnt are collated, accessible and capitalised on.
* Project meetings are held regularly as required.
* Communication between the project team and stakeholders is effective.
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**Note** The above performance standards are provided as a guide only. The precise performance measures for this position will need further discussion between the jobholder and supervisor as part of the performance development process.

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| **Work Complexity:** |

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| Most challenging duties typically undertaken: |
| * Set-up numerical models
* Calibrating model using low resolution and/or sub-optimum baselines.
* Develop scientific tools (scripts) to undertake advanced ocean risk data analysis.
* Understand sector-specific need for ocean knowledge products.
* Diving to deploy and retrieve in oceanographic instruments in marine environment
* Work in remote locations under challenging environmental conditions for extended periods of time, including poor sanitary facilities, malaria, etc.
* Multitasking including shifting between hard and soft skills (e.g. project management)
* Work with people from different backgrounds according to culture and work ethics
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| **Functional Relationships & Relationship Skills:** |

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| **Key internal and/or external contacts** |  **Nature of the contact most typical** |
| **External:**  |
| * Member governments
 | * Technical exchange, seeking/giving advice and support, contribute to product design, preparing and conducting training workshops, etc..
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| * Donors
 | * Share project document (e.g., progress report) on behalf of the Team Leader
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| * International organisations
 | * Collaborate on country specific activities and regional initiatives, preparing documents, training workshops.
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| * Consultants
 | * Lead small size procurement, collaborate including sharing knowledge and data.
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| **Internal:** |
| * Senior Specialist, Oceanography
 | * Day to day collaboration. Seek technical guidance, assist with complex product development. Seek update on project delivery and progress.
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| * Team Leader Oceanography
 | * Liaise for internal and external reporting on projects and team activities; giving and receiving information and feedback.
 |
| * Oceans and Maritime Programme staff
 | * Advise on scientific programming and analysis, liaising to coordinate trainings, workshops, seminar and meetings.
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| * OMP Deputy Director and GEM Director
 | * Obtaining advice on OMP policies and procedures; providing feedback on OMP reporting.
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| **Level of Delegation:** |

The position holder:

* Has a significant degree of autonomy in liaising with stakeholders.
* Has a moderate level of autonomy in developing scientific solutions.

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| **Person 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

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| Essential:  | Desirable:  |
| * Bachelor’s Degree in Coastal Engineering / Oceanography or related field from a recognised university.

  | * Working experience in the Pacific in the areas of climate change adaptation and disaster risk reduction.
* SCUBA diving certificate to Rescue level
* Formal training course in numerical modelling software
* Master in Coastal Engineering / Physical Oceanography or related field
* Formal training course in project management
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**Knowledge / Experience**

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| Essential:  | Desirable:  |
| * At least 3 years of working experience on applied multidisciplinary projects including ocean-related hazard modelling (distant swells, tsunamis and cyclones) and risk assessment.
* Sound experience and knowledge on scientific programming, ocean risk data analysis and open-source modelling software packages.
* Sound knowledge of the disaster risk framework, its implementation at various scales and inherent challenges in the regional context.
* Experience with facilitating stakeholder engagement and training workshop.
* Knowledge on physical processes relating to coastal inundation in the Pacific region.
* Experience with oceanographic field instrumentation used in coastal and nearshore surveys
* Capable and organised report preparation and communication skills
* Strong analytical skills and ability to master new technology quickly
* Demonstrated oral and written communication skills in English
* Aptitude for the provision of high-quality service
* Ability to provide necessary training and transfer of skills as demanded by the project or the team
* Ability to set priorities to meet deadlines.
 | * Professional practical experience in Pacific Island environments
* Strong awareness of Pacific issues and knowledge gap particularly as they relate to hazard and risk knowledge
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###### Key Skills / Attributes / Job Specific Competencies

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

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| Expert level | * Ability to set priorities and plan activities
* Work collaboratively
* Ability to process and analyse large scientific dataset
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| Advanced level | * High level on data processing, analysis, and interpretation skills.
* Ability to program using platforms such as Python and R.
* Sound knowledge of the disaster risk framework
* Prepare digital and written reports as well as interpretive products.
* Ocean related meteorological knowledge and weather and climate patterns
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| Working Knowledge | * Management of modelling data and updating online portals with information
* Able to work within a Linux environment.
* Strong knowledge on setting up and using fieldwork instrument such as wave buoys / gauges, and water level recorders, GNSS RTK system
* Strong knowledge on post disaster survey
* Confidence in using open-source numerical modelling packages such as GEOCLAW, XBeach, SWAN, WW3, Delft3D.
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| Awareness | * Have a broad understanding of the region and its technical and human resource requirements.
* Familiarity with the various strategies, frameworks, and roadmaps that guide climate change adaptation and disaster risk in the Pacific
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###### 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**

* **Communicates effectively**
* **Performs well under pressure**
* **Positive attitude to work**
* **Strongly committed**
* **Highly motivated**
* **Excellent interpersonal skills**
* **Sound judgement**
* **Well organized**
* **Dependable**
* **Creative and imaginative**
* **Demonstrates integrity**
* Demonstrates cultural and gender sensitivity

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| **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 our work environment – including technological requirements or statutory changes. Such change may be initiated as necessary by SPC. This Job Description may be reviewed as part of the preparation for performance planning for the annual performance cycle.