



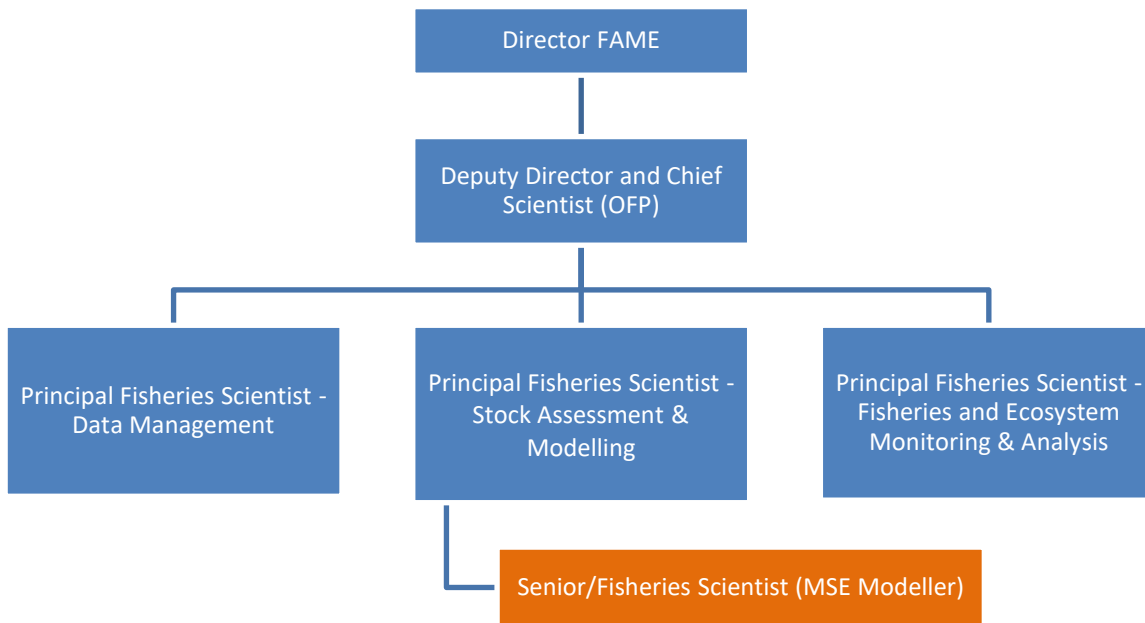
JOB DESCRIPTION

Job Title:	Senior/Fisheries Scientist (Management Strategy Evaluation Modeller)
Division/Programme and Section/Project (if any):	Oceanic Fisheries Programme
Location:	Noumea
Reporting to:	<i>Principal Fisheries Scientist (Stock Assessment & Modelling)</i>
Number of Direct Reports:	None
Purpose of Role:	<ul style="list-style-type: none">• Develop and assist with complex technical development of MSE modelling frameworks for key tuna stocks/fisheries• Develop and assist with the technical work to support implementation of harvest strategies• Contribute to team activities, reports and materials for regional and national capacity building workshops and stakeholder engagement
Date:	October 2024

Organizational Context and Organization Chart

The Pacific Community (SPC) is a regional organization assisting Pacific Island Countries and Territories (PICTs) to achieve their sustainable development goals by delivering technical, scientific, research, policy and training services. The SPC works across the region to assist member countries to better manage vulnerability and risks such as those associated with natural resource management, climate change, natural disasters and water security, including through the implementation of national and regional donor-funded projects and ongoing work programs.

This new role offers an exciting and rewarding opportunity to contribute to a landmark advancement in the sustainable management of the World's largest tuna resource. This position is within the Oceanic Fisheries Programme (OFP) which is a section within the Fisheries Aquaculture and Marine Ecosystems (FAME) division. The OFP's primary focus is on the oceanic fisheries resources of the western and central Pacific Ocean. The OFP has three sections; Stock Assessment and Modelling (SAM), Data Management (DM) and Fisheries & Ecosystems Monitoring and Analysis (FEMA). The position of *Management Strategy Evaluation Modeller* will be within the SAM section. The SAM section conducts stock assessments of tuna, billfish and sharks for the Western and Central Pacific Fisheries Commission (WCPFC) and is the key team providing technical and capacity building support to the WCPFC and the PICTs for the development of harvest strategies for the region's key tuna fisheries – skipjack, bigeye, yellowfin and south Pacific albacore. This new position will join with three established scientists working on MSE and harvest strategy development within SAM and will play an important part in further progressing the technical and capacity building work necessary to complete the development of tuna harvest strategies in the WCPO region.



Key Result Areas (KRAs):

The position of Senior/Fisheries Scientist (MSE Modeller) encompasses the following major functions or Key Result Areas:

1. Develop and implement technical components of MSE model frameworks for key WCPO tuna fisheries
2. Develop and assist with the technical work to support implementation of harvest strategies
3. Deliver high quality written reports and presentations to regional and subregional scientific and management meetings
4. Contribute to capacity building and general stakeholder engagement

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

Jobholder is accountable for	Jobholder is successful when
<p>KRA#1 (40 % weight) Develop and implement technical components of MSE model frameworks for key WCPO tuna fisheries</p> <ul style="list-style-type: none"> • In collaboration with other team members, develop technical MSE components for key WCPO tuna stocks, including: operating models (OMs) and estimation methods (EMs), and the integrated modelling frameworks for conducting MSE of candidate management procedures/harvest control rules. • Develop performance indicators and related modeling outputs. • Incorporate uncertainty into MSE, including options for incorporation of climate change/variability. • Ensure analytical tools (i.e. model scripts) are usable by others, are transparent and the 	<ul style="list-style-type: none"> • MSE components are successfully developed and operate effectively in full MSE studies. • The MSE model frameworks are used effectively for evaluating candidate management procedures that have been develop in consultation with stakeholders. • Outputs of the MSE frameworks, including the performance indicators, are relevant to stakeholder and other fishery management objectives. • MSE models and analyses are documented and repeatable.

<p>analyses are repeatable, including maintaining good documentation and code repository.</p> <ul style="list-style-type: none"> • Assist in the design of candidate harvest control rules, as guided by defined management objectives and informed by stakeholder engagement. • Apply the developed MSE frameworks to evaluate candidate management procedures. • Develop novel methods to deal with challenges of MSE, for example multi-species fisheries. 	
<p>KRA#2 (20% weight) Develop and assist with the technical work to support implementation of harvest strategies</p> <ul style="list-style-type: none"> • Contribute to development of monitoring strategies and related analysis. • Contribute to running analyses and producing reports on performance of harvest strategies once implemented. • Conduct other technical work and provide advice as required by PICT stakeholders/WCPFC for implemented harvest strategies. 	<ul style="list-style-type: none"> • Monitoring strategies are implemented by the WCPFC. • Analyses and reports are produced for the implemented monitoring strategies to the satisfaction of the WCPFC.
<p>KRA#3 (20% weight) Deliver high quality written reports and presentations to regional and subregional scientific and management meetings</p> <ul style="list-style-type: none"> • Lead and or contribute to written technical reports on MSE work for regional and subregional meetings. • Present MSE related work to regional and subregional meetings. • Provide responses to ad hoc MSE/harvest strategy related requests from PICTs and WCPFC. 	<ul style="list-style-type: none"> • Technical papers and presentations are of high quality, relevance and fit for the intended audience. • Technical papers are delivered according to the timelines, e.g. WCPFC Science Committee deadlines. • MSE work and management context is communicated effectively to regional and subregional meetings of fisheries managers.
<p>KRA#4 (20% weight) Contribute to capacity building and general stakeholder engagement</p> <ul style="list-style-type: none"> • Assist in the development and delivery of regional and national capacity building workshops on harvest strategies and use of the MSE process. • Promote/support stakeholder engagement and input into harvest strategy development. • Contribute to development of training materials to improve understanding and ensure uptake and informed interpretation of MSE outputs. • Effectively communicate results and advice arising from MSE analyses to managers and stakeholders. • Address ad-hoc requests for information from members, and other groups such as NGOs. 	<ul style="list-style-type: none"> • Makes a significant contribution (planning, preparation, presentations etc.) to delivering capacity building workshops within agreed timeframes. • Positive feedback received from members on the technical support provided at meetings that assist in improving their capacity and informed decision making. • Managers are using the outputs of MSE to effectively guide their consideration and choices among alternative management producers.

<ul style="list-style-type: none"> Assist with support/mentoring for SPC member country staff attachments within the SAM section, i.e. Pacific Island Fisheries Professionals. 	
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The above performance requirements are provided as a guide only. The precise performance measures and priority work areas for this job will be discussed between the jobholder and supervisor as part of the performance development process.

Most Challenging Duties Typically Undertaken (Complexity):

<ul style="list-style-type: none"> Technical development and delivery of complex MSE modelling framework (including use of Multifan-CL and other relevant stock assessment platforms) across WCPO tuna stocks and fisheries and under timelines determined by the WCPFC harvest strategy workplan and Science Committee deadlines. Delivery of effective capacity building and engagement activities at regional, subregional and national scales to a range of different stakeholders. Effectively conveying the results and uncertainties of Management Strategy Evaluation (MSE) analyses, to both technical (fisheries scientists) and executive (managers) audiences.

Functional Relationships & Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
<p>External</p> <p>Key external contacts are:</p> <ul style="list-style-type: none"> Regional (i.e. WCPFC), sub-regional (i.e. Forum Fisheries Agency - FFA, Parties to the Nauru Agreement - PNA and South Pacific Group -SPG) and national member fishery departments. WCPFC secretariat and Science Committee chairs. External scientists. External computer resource providers (i.e. NeSI in New Zealand). NGOs. 	<ul style="list-style-type: none"> Seek advice and input on development of management procedures and performance indicators. Liaison to obtain feedback on approaches and results and delivery of sound scientific advice. Planning and content for regional and subregional meetings. Technical reviews and advice on MSE. Access to HPC facilities and resources. Broader communications and awareness of harvest strategy development work in the Pacific tuna fisheries.
<p>Internal</p> <p>Key internal contacts are:</p> <ul style="list-style-type: none"> Other SAM team members – especially the stock assessment scientists and Multifan-CL development consultant ICT services, PCCOS (Pacific Community Centre for Ocean Science) Other OFP sections and individual scientists. 	<ul style="list-style-type: none"> Developing OMs conditioned from recent stock assessments, data inputs etc., general knowledge sharing and review. Seeking data support services and collaboration on engagement and capacity building. Seeking advice on uncertainties such as climate implications.

Level of Delegation:

Routine Expenditure Budget: NA

Budget Sign off Authority without requiring approval from direct supervisor: NA

*** No need to mention SPC instrument of delegation authorities here***

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:
Relevant tertiary qualification, preferably at PhD level, in fisheries science, stock assessment modelling, natural resource management, or a related discipline	<ul style="list-style-type: none"> • PhD in fisheries population dynamics • Experience in developing or conducting simulation modeling studies, especially MSE

Knowledge/Experience

Essential:	Desirable:
<ul style="list-style-type: none"> • Strong quantitative analytical skills with practical experience in data modelling, statistics and programming (particularly in R, TMB and/or C++). • Good understanding of fisheries stock assessment principles and techniques in quantitative fisheries science (Note: minimum 7 yrs practical experience expected for <i>Senior</i> level and 3 years for <i>Fisheries</i> level). • Previous experience undertaking Management Strategy Evaluation simulations or other fisheries simulation - estimation studies. • Good presentation and communication skills, both written and verbal, in English. • Demonstrated ability to write high quality technical reports in English. • Ability to work as part of an interdisciplinary and multi-cultural team. • Demonstrated ability to meet project deadlines and apply good time management. • Willingness to travel. 	<ul style="list-style-type: none"> • Experience/knowledge of tuna fisheries in the Pacific region • Working knowledge of French. • Experience working within high-performance compute (HPC) environments.

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"> • Skills in programming in R • Statistical and mathematical modelling skills and programming • Fisheries harvest strategies
Advanced level	<ul style="list-style-type: none"> • Fisheries stock assessment science • Provision of scientific advice for fisheries management • Communication and engagement skills
Working knowledge	<ul style="list-style-type: none"> • Tuna fisheries data and biological and ecological studies
Awareness	<ul style="list-style-type: none"> • International fisheries management and RFMO context, i.e. WCPFC • Pacific way • SPC Regulations and Policies

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
- Respect for deadlines

Personal Attributes

- High level of professional integrity and ethics
- Friendly demeanor
- 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.

This position may be offered at the *Senior* or *Fisheries* science levels (band 11 or 12), depending on the experience, skills and other attributes.