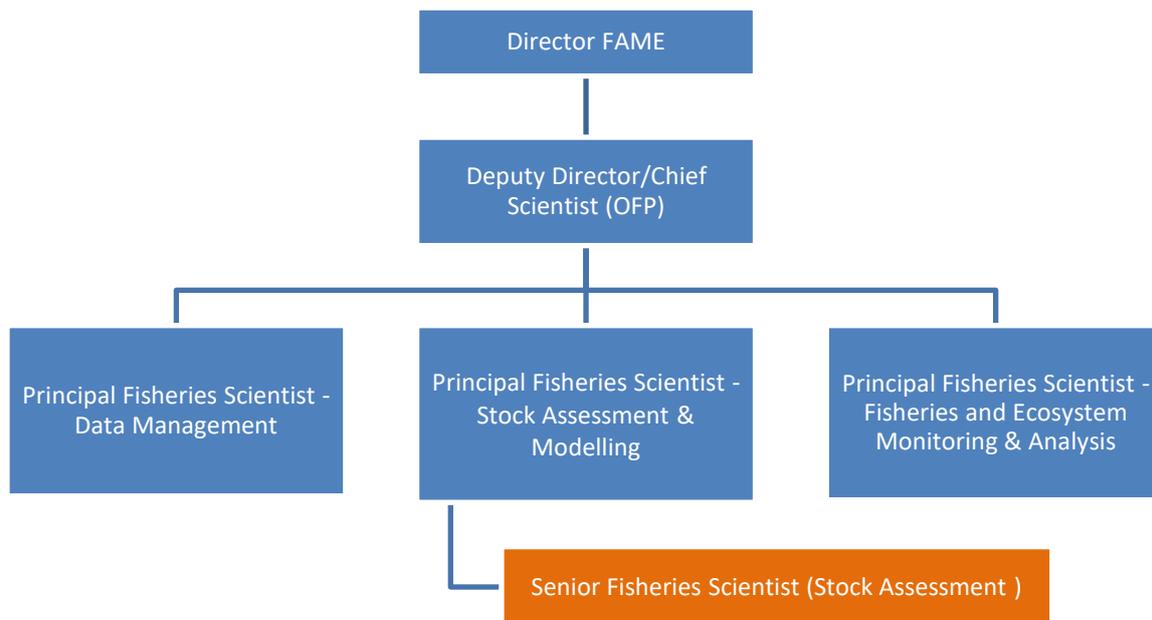


JOB DESCRIPTION

Job Title:	Senior Fisheries Scientist (Stock Assessment)
Work Unit:	Oceanic Fisheries Programme
Responsible To:	Principal Fisheries Scientist (Stock Assessment & Modelling)
Responsible For:	NA
Job Purpose:	To undertake analyses and provide authoritative advice on the status of stocks of tuna and tuna-like species under the management of the Western and Central Pacific Fisheries Commission.
Date:	May 2023

Organisation Context:



Key Result Areas:

The position of Senior Fisheries Scientist (Stock Assessment) encompasses the following major functions or Key Result Areas:

Research and development 20%

Stock assessment 40%

Contribute to team leadership, mentoring and training of more junior/less experienced staff 20%

Management information 10%

Communication 10%

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

Jobholder is accountable for	Jobholder is successful when
<p>1. Research and development</p> <ul style="list-style-type: none"> - Develop and refine methods for the analysis of catch and effort, size composition, growth and tagging data, - Contribute to the MULTIFAN-CL project and other research into statistical stock assessment methodologies, - Contribute to the development of the software used in stock assessment and related activities, as required, - Contribute to research into approaches for estimating and describing uncertainty in stock assessment, including ensemble modelling approaches and weighting methods, - Contribute to methods for evaluating WCPFC Conservation and Management measures, -Develop and conduct research in areas related to your skillset and interests relevant for tuna and tuna like stock assessments. <p>2. Stock assessment</p> <ul style="list-style-type: none"> - Undertake analyses of catch and effort, size composition, growth and tagging data for inputs for stock assessment modelling (auxiliary analyses), - Lead stock assessments of tunas and tuna-like species as requested by the WCPFC using modern statistical stock assessment models, - Characterise the sensitivity / robustness of stock assessment results to alternative model assumptions, e.g., input data, biological parameters, and model structures, - As required, review stock assessments and other supporting analyses (e.g., CPUE) undertaken by SPC, external consultants, the wider WCPFC mandate (e.g., including northern stocks), and other relevant tuna RFMOs (e.g., IATTC). <p>3. Management information</p> <ul style="list-style-type: none"> - Estimate key reference points for tuna and tuna-like species, - Evaluate risk relative to relevant reference levels, - Evaluate assumptions used in the assessment of relevant Conservation and Management Measures, - Evaluate the impacts of alternative management measures, for tuna and tuna-like species using stock assessment models, including approaches such as stock projections, - Contribute to work on Management Strategy Evaluation as required. <p>4. Contribute to team leadership, mentoring and training of more junior/less experienced staff</p> <ul style="list-style-type: none"> - The Senior level scientist will be leading the stock assessment work, including guiding support staff on required data inputs and associated analysis, plus contributing to the training, development and general support and mentoring of other less advanced staff. May also contribute to training workshops for regional fisheries staff. -The Senior scientists will work with the Principal Scientist to identify and develop areas for continual improvement in practices and process for delivering stock assessments and ensuring repeatability and good practices. <p>5. Communication</p>	<ul style="list-style-type: none"> - Work program of stock assessment related activities, as specified in WCPFC service agreement, completed on a timely basis, - Develops approaches that contribute to improved stock assessment methods and or workflows, <ul style="list-style-type: none"> - Stock assessments for tuna and tuna-like species are completed within timelines, to a standard accepted by RFMOs, and presented to the WCPFC-SC, - Auxiliary analyses are completed within timelines and to a standard accepted by RFMOs, - Reviews are undertaken in a professional fashion with constructive feedback provided, -Provide leadership, training and mentoring to less experienced stock assessment staff. <ul style="list-style-type: none"> - Analyses are completed within timelines and to a standard accepted by tuna RFMOs, -Management information is provided in a timely manner upon request from the WCPFC and SPC member countries. <ul style="list-style-type: none"> -Clear direction is provided to analysts providing supporting roles for stock assessment work, including those in the Data Management and Fisheries Ecosystems Monitoring and Analysis sections, -Stock assessment team meetings are conducted regularly to ensure work progresses according to workplans, and task are identified and allocated as appropriate,.

<ul style="list-style-type: none"> - Present clearly and at the appropriate level, the results of technical analyses to scientists, fisheries managers and other stakeholders, - Produce clearly written reports (requiring minimal editing) and present the results of technical analyses in English, - Contribute to the international body of fisheries knowledge through presentations and publications, - Collaborate, as appropriate, with scientists within SPC, the WCPFC membership, and other relevant organisations, - Contribute to regional capacity building in stock assessment as required. 	<ul style="list-style-type: none"> - The quality of publications and presentations is well received at WCPFC meetings, - Material is presented at the level appropriate for the audience, - Stock assessment information is updated annually on the SPC – FAME website, - Research is published in the peer-reviewed scientific literature, - Effective relationships are developed to facilitate the work of SPC in meetings its obligations to WCPFC, - Support to stock assessment training workshops.
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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.

Work Complexity:

<p>Most challenging duties typically undertaken:</p>
<ul style="list-style-type: none"> - The application of complex statistical and mathematical models to fishery catch and effort, size composition, tagging and other biological data, - Time management and organisation of work, including the many data sets, analyses and outputs required to complete a high-quality tuna stock assessment, - Effectively conveying the results and uncertainties of these analyses to both the technical (fisheries scientists), stakeholders and executive (managers) audience, - Completing a demanding work plan within tight timelines whilst maintaining capacity to be responsive to the needs of fisheries management authorities and SPC members, - Maintaining strong collaborations with international scientists where English/French is a second language.

Functional Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
<p>External: Fisheries managers, Scientists, consultants, Non-government organisations.</p>	<p>External: Collaborating, providing advice, obtaining information.</p>
<p>Internal: Fisheries Scientists, Fisheries Information Technology Officers, support staff, SPC Executive.</p>	<p>Internal: Collaborating, providing advice, obtaining information, contribute to popular articles and other promotional and educational materials, effective sharing of work resources, including computing.</p>

Level of Delegation:

Routine Expenditure Budget: 0 Euro.

Budget Sign off Authority without requiring approval from direct supervisor: 2.000 Euro.

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 jobholder 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 or other similar statistical modelling, population biology or a related discipline.	-PhD or equivalent in fisheries population dynamics, with aspects of statistical modelling/stock assessment.

Knowledge / Experience

Knowledge and experience requirements for the two levels of this post are detailed below.

Essential:	Desirable:
<ul style="list-style-type: none"> -Demonstrated experience in leading integrated stock assessments in a management context, -Experience in the use and/or development of statistical, length or age-structured stock assessment models, -Thorough knowledge of fisheries stock assessment principles and techniques, at least seven years of practical fisheries stock assessment experience is desirable, including developing stock assessments used to provide advice for fisheries management, -Strong quantitative analytical skills, including experience in data modelling & programming in R, C++, ADMB, TMB, Python or others, -Good verbal presentation and communication skills in English, -Demonstrated high level of scientific writing skills in English, -Proven ability to work as part of an interdisciplinary and/or multicultural team, -Demonstrated ability to meet project deadlines and to work independently to do this. 	<ul style="list-style-type: none"> Direct experience of tuna fisheries assessment. Knowledge of tuna fisheries in the Pacific region. Experience in leading the development of integrated assessment models and presentation of fisheries assessment results to stakeholders and managers.

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"> Fisheries stock assessment Statistical and mathematical modelling Provision of scientific advice for fisheries management
Advanced level	<ul style="list-style-type: none"> Programming including R, C++, ADMB, TMB, Python or others Fisheries management approaches and principles Report writing Oral communication
Working Knowledge	<ul style="list-style-type: none"> Database platforms e.g., SQL Server Source version control approaches e.g., GitHub Word, Excel, PowerPoint, SharePoint, MS Teams, Zoom
Awareness	<ul style="list-style-type: none"> Cluster high throughput computing (e.g., HTCCondor) International fisheries issues Pacific way

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

- Strong work ethic
- Resilience
- Collaborative
- Innovative
- Reliable
- Leadership

Change to Job Description:

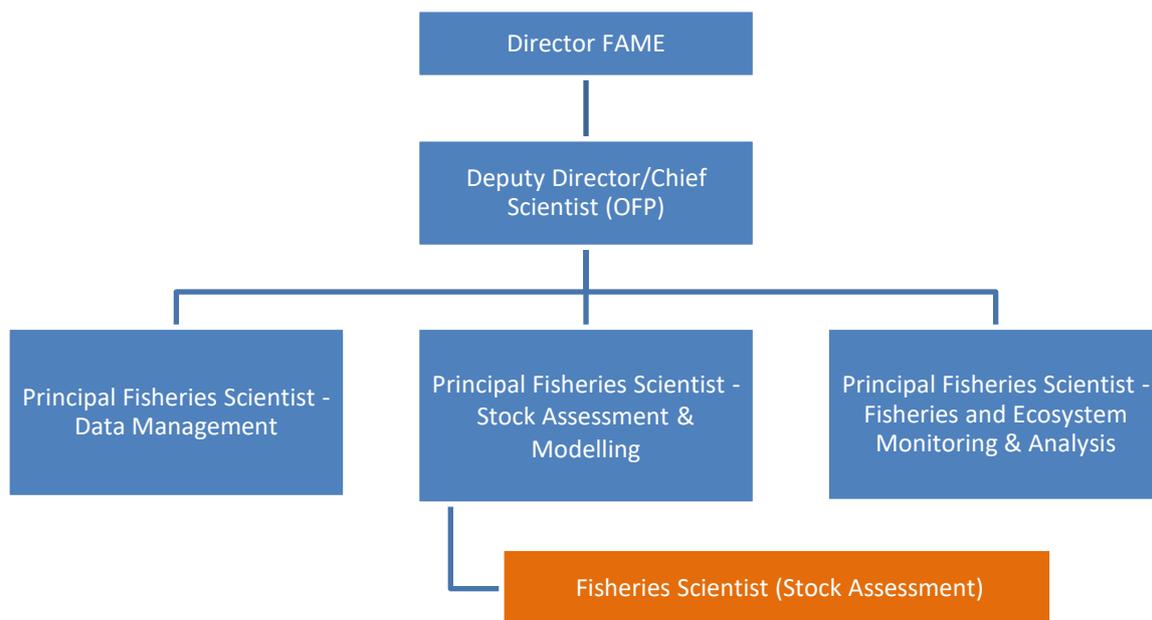
From time to time, it may be necessary to consider changes in the job description in response to the changing nature of our work environment – including technological requirements or statutory changes. Such change may be initiated as necessary by the Director Corporate Services. This Job Description may be reviewed as part of the preparation for performance planning for the annual performance cycle.



JOB DESCRIPTION

Job Title:	Fisheries Scientist (Stock Assessment)
Work Unit:	Oceanic Fisheries Programme
Responsible To:	Principal Fisheries Scientist (Stock Assessment & Modelling)
Responsible For:	NA
Job Purpose:	To undertake analyses and provide authoritative advice on the status of stocks of tuna and tuna-like species under the management of the Western and Central Pacific Fisheries Commission.
Date:	May 2023

Organisation Context:



Key Result Areas:

The position of Senior Fisheries Scientist (Stock Assessment) encompasses the following major functions or Key Result Areas:

- Research and development 40%
- Stock assessment 40%
- Management information 10%
- Communication 10%

The requirements in the above Key Result Areas are broadly identified overleaf

Jobholder is accountable for	Jobholder is successful when
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<p>1. Research and development</p> <ul style="list-style-type: none"> - Develop and refine methods for the analysis of catch and effort, size composition, growth and tagging data, - Contribute to the MULTIFAN-CL project and other research into statistical stock assessment methodologies, - Contribute to the development of the software used in stock assessment and related activities, as required, - Contribute to research into approaches for estimating and describing uncertainty in stock assessment, - Contribute to methods for evaluating WCPFC Conservation and Management measures, -Develop and conduct research in areas related to your skillset and interests relevant for tuna and tuna like stock assessments. <p>2. Stock assessment</p> <ul style="list-style-type: none"> - Undertake analyses of catch and effort, size, growth and tagging data for inputs for stock assessment modelling (auxiliary analyses), - Support or lead stock assessments of tunas and tuna-like species as requested by the WCPFC using modern statistical stock assessment models, - Characterise the sensitivity / robustness of stock assessment results to alternative model assumptions, e.g., input data, biological parameters, and model structures, - Review, as appropriate, stock assessments and other supporting analyses (e.g., CPUE) undertaken by SPC, external consultants, the wider WCPFC mandate (e.g., including northern stocks), and other relevant tuna RFMOs (e.g., IATTC). <p>3. Management information</p> <ul style="list-style-type: none"> - Estimate key reference points for tuna and tuna-like species, - Evaluate risk relative to relevant reference levels, - Evaluate assumptions used in the assessment of relevant Conservation and Management Measures, - Evaluate the impacts of alternative management measures, for tuna and tuna-like species using stock assessment models, including approaches such as stock projections, - Contribute to work on Management Strategy Evaluation as required. <p>4. Communication</p> <ul style="list-style-type: none"> - Present clearly and at the appropriate level, the results of technical analyses to scientists, fisheries managers and other stakeholders, -Contribute to team meetings and communicate ideas and analytical approaches to other staff, - Produce clearly written reports and presentations of the results of technical analyses, - Contribute to the international body of fisheries knowledge through presentations and publications, - Collaborate, as appropriate, with scientists within SPC, the WCPFC membership, and other relevant organisations, -Contribute to regional capacity building in stock assessment as required. 	<ul style="list-style-type: none"> - Work program of stock assessment related activities, as specified in WCPFC service agreement, completed on a timely basis, - Develops approaches that contribute to improved stock assessment methods and or workflows. <ul style="list-style-type: none"> - Stock assessments for tuna and tuna-like species are completed within timelines, to a standard accepted by RFMOs, and presented to the WCPFC-SC, - Auxiliary analyses are completed within timelines and to a standard accepted by RFMOs, - Reviews are undertaken in a professional fashion with constructive feedback provided, -Effectively collaborates with and provides direction to other staff involved in stock assessment work, including those from the Data Management and Fisheries Ecosystems Monitoring and Analysis sections. <ul style="list-style-type: none"> - Analyses are completed within timelines and to a standard accepted by RFMOs, - Management information is provided in a timely manner upon request from the WCPFC and SPC member countries. <ul style="list-style-type: none"> - The quality of publications and presentations is well received at WCPFC meetings, - Material is presented at the level appropriate for the audience, - Stock assessment information is updated annually on the SPC website, - Research is published in the peer-reviewed scientific literature, - Effective relationships are developed to facilitate the work of SPC in meetings its obligations to WCPFC, - Support to stock assessment training workshops.
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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.

Work Complexity:

Most challenging duties typically undertaken:

- The application of complex statistical and mathematical models to fishery catch and effort, size composition, tagging and other biological data,
- Time management and organisation of work, including the many data sets, analyses and outputs required to complete a high-quality tropical tuna assessment,
- Effectively conveying the results and uncertainties of these analyses to both the technical (fisheries scientists), stakeholders and executive (managers) audience,
- Completing a demanding work plan within tight timelines whilst maintaining capacity to be responsive to the needs of fisheries management authorities and SPC members,
- Maintaining strong collaborations with international scientists where English/French is a second language.

Functional Relationship Skills:

Key internal and/or external contacts	Nature of the contact most typical
External: Fisheries managers, Scientists, consultants, Non-government organisations.	External: Collaborating, providing advice, obtaining information.
Internal: Fisheries Scientists, Fisheries Information Technology Officers, support staff, SPC Executive	Internal: Collaborating, providing advice, obtaining information, contribute to popular articles and other promotional and educational materials, effective sharing of work resources, including computing.

Level of Delegation:

Routine Expenditure Budget: 0 Euro.

Budget Sign off Authority without requiring approval from direct supervisor: 50 Euro.

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 jobholder 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 or other similar statistical modelling, population biology or a related discipline.	-PhD or equivalent in fisheries population dynamics, with aspects of statistical modelling

Knowledge / Experience

Knowledge and experience requirements for the two levels of this post are detailed below.

Essential:	Desirable:
<ul style="list-style-type: none"> -Demonstrated experience in conducting integrated stock assessments in a management context. -Experience in the use and/or development of statistical, length or age-structured stock assessment models. -Thorough knowledge of fisheries stock assessment principles and techniques. -Three years practical experience in developing stock assessments, which may include post-graduate studies depending on their relevance to this role. -Quantitative analytical skills, including experience in data modelling & programming in R, C++, ADMB, TMB, Python or others. -Excellent verbal and written presentation and communication skills in English -Proven ability to work as part of an interdisciplinary and/or multicultural team -Ability to meet project deadlines, often under difficult circumstances. 	<ul style="list-style-type: none"> -Direct experience of tuna fisheries in the Pacific region, -Experience in the development of integrated assessment models and presentation of fisheries assessment results to stakeholders and managers.

Key Skills /Attributes / Job Specific Competencies

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

Expert level	Fisheries stock assessment Statistical and mathematical modelling Provision of scientific advice for fisheries management
Advanced level	Programming including R, C++, ADMB, TMB, Python or others Fisheries management approaches and principles Report writing Oral communication
Working Knowledge	Database platforms e.g., SQL Server Source version control approaches e.g., GitHub Word, Excel, PowerPoint, SharePoint, MS Teams, Zoom
Awareness	Cluster high throughput computing (e.g., HTCondor) International fisheries issues Pacific way

Key Behaviours

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

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Personal Attributes

- Strong work ethic
- Resilience
- Collaborative
- Innovative
- Reliable

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 the Director Corporate Services. This Job Description may be reviewed as part of the preparation for performance planning for the annual performance cycle.