➢ Noumea-based position
➢ Attractive expatriate package
➢ Join the principal development organisation in the region

*The Pacific Community (SPC) invites applications for the position of **Postdoctoral Researcher (Marine Ecosystem Modelling)** within its Oceanic Fisheries Programme located at its headquarters in Noumea, New Caledonia.*

Description

The **Pacific Community** (SPC) is the principal scientific and technical organisation in the Pacific region, supporting development since 1947. We are an international development organisation owned and governed by our 27 country and territory members. In pursuit of sustainable development to benefit Pacific people, our unique organisation works across more than 25 sectors. We are known for our knowledge and innovation in such areas as fisheries science, public health surveillance, geoscience, and conservation of plant genetic resources for food and agriculture.

The **Fisheries, Aquaculture and Marine Ecosystems (FAME) Division** includes the Oceanic Fisheries Programme (OFP) and Coastal Fisheries Programme (CFP). The goal of the OFP is to ensure fisheries that exploit the region's resources of tuna, billfish and related species are managed for economic and ecological sustainability using the best available scientific information. In pursuing this goal, the OFP provides scientific support for the management of fisheries for tuna and associated species, with a strong focus on stock assessment and modelling, fisheries and ecosystem monitoring and analysis and data management. The OFP works closely with member countries and territories, the Western and Central Pacific Fisheries Commission, the Forum Fisheries Agency, the Parties to the Nauru Agreement and other regional and sub-regional entities.

The role – the **Postdoctoral Researcher (Marine Ecosystem Modelling)** will undertake a programme of work that supports the development and application of fisheries and ecosystem population dynamics models to tuna fisheries in the western and central Pacific Ocean. The role will have a strong focus on projecting the impact of climate change on tuna populations over seasonal, decadal and longer timeframes to assist the development of advanced warning systems and to evaluate adaptation options that mitigate adverse climate impacts on fisheries.

The key responsibilities of the role include the following:

Model development
- Contributing to the development of existing numerical model, adhering to best practices in code development and version control.
- Contributing to diagnostic and analytical routines for model analyses such as sensitivity analysis, likelihood profiling, etc.
- Contributing to the development of diagnostics to evaluate model performance.

Apply SEAPODYM and similar models
- Developing SEAPODYM model applications by designing and running parameter estimation, performing model error analysis and model validation.
- Undertaking evaluations of the impacts of current and future climate regimes on Pacific tuna population dynamics.

Technical Advice
- Leading or contributing to reports and publications.
- Participating in international conferences and meetings dealing with ocean ecosystem modelling, ocean climate change and ecosystem monitoring.

Develop capacities
- Participating and contributing to workshops and training to build capacity for national and regional institutions to apply climate models to evaluate impacts on Western Central Pacific Ocean ecosystems and tuna fisheries.

For a more detailed account of the key responsibilities, please **refer to the online job description**.

Key selection criteria

Qualifications
- PhD in Applied Mathematics, Mathematical Ecology or a related field with a background in modelling and numerical analysis.

Technical expertise
- Knowledge and understanding of partial differential equations, their analytical and numerical solutions.
- Knowledge and practical experience in solving optimization problems.
- Knowledge of statistical methods for data integration and analysis.
- Knowledge of programming language(s) applied to numerical problems.
- Programming experience in R, Python or similar high-level language for manipulating large volumes of data.
- Linux computing environment.

Language skills
- Ability to write academic texts in English.

Interpersonal skills and cultural awareness
- Proven ability to supervise the tasks of an inter-disciplinary and/or multi-cultural team.
- Knowledge of Pacific Island countries and territories is an advantage.

Salary, terms and conditions

Contract Duration – This vacant position is budgeted until 31 December 2025 and is subject to renewal depending on funding and performance.

Remuneration – the **Postdoctoral Researcher (Maritime Ecosystem Modelling)** is a band 10 position in SPC's 2023 salary scale, with a starting salary range of 3,568–4,364 SDR (special drawing rights) per month, which currently converts to approximately XPF 540,472–660,991 (USD 4,781–5,847; EUR 4,529–5,539). An offer of appointment for an initial contract will normally be made in the lower half of this range, with due consideration being given to experience and qualifications. Progression within the salary scale is based on annual performance reviews. SPC salaries are not presently subject to income tax in New Caledonia.

Benefits for international staff employees based in New Caledonia – SPC provides subsidised housing in Noumea. Establishment and repatriation grant, removal expenses, airfares, home leave travel, health and life and disability insurances and education allowances are available for eligible employees and their eligible dependents. Employees are entitled to 25 working days of annual leave per annum and other types of leave, and access to SPC's Provident Fund (contributing 8 % of salary, to which SPC adds a matching contribution).

Languages – SPC's working languages are English and French.

Recruitment principles – SPC's recruitment is based on merit and fairness, and candidates are competing in a selection process that is fair, transparent and non-discriminatory. SPC is an **equal-opportunity employer**, and is committed to cultural and gender diversity, including bilinguism, and will seek to attract and appoint candidates who respect these values. Due attention is given to gender equity and the maintenance of strong representation from Pacific Island professionals. If two interviewed candidates are ranked equal by the selection panel, preference will begiven to the **Pacific Islander**. Applicants will be assured of complete confidentiality in line with SPC's private policy.

Application procedure

Closing date: 18 Juin 2023 – 11:00 pm (Noumea time)
Job Reference: CR000006

Applicants must apply online at http://careers.spc.int/
Hard copies of applications will not be accepted.
For your application to be considered, you must provide us with:

- an updated resume with contact details for three professional referees
- a cover letter detailing your skills, experience and interest in this position
- responses to all screening questions

Your application will be considered incomplete and will not be reviewed at shortlisting stage if all the above documents are not provided.
Applicants should not attach copies of qualifications or letters of reference.
Please ensure your documents are in Microsoft Word or Adobe PDF format.
SPC does not charge a fee to consider your application and will never ask for your banking or financial information during the recruitment process.

Screening questions (maximum of 2.000 characters per question):
1. Briefly describe why understanding the impact of climate on Pacific fisheries is important to Pacific Island Nations
2. Briefly describe the main differences between projection and forecasting in marine ecosystem modelling
3. Briefly describe the biological and environmental processes that are likely to impact the spatial distribution of tropical tunas and related species. What types of data, and statistical approaches to modelling those data, would you view as potential means of estimating functional relationships between the movement and distribution of tunas, and their environment?