Position Title | Climate Scientist  
---|---
Reports To | Group Manager - Climate Variability  
Function | Science  
Location | Wellington  
Level | Established on appointment  
Position Status | Permanent  
Hours of Work | Full-Time (37.5 hours per week)  
Date Prepared | August 2020  

**Purpose of Position**

To produce, interpret, and deliver national and regional climate change data and information to various stakeholders in New Zealand, using climate simulations and downscaling techniques.

**Scope**

This position contributes essential underpinning research in climate variability and change, as undertaken primarily by Wellington’s Climate Variability Group. This Group is involved in a range of research projects, including the development and analysis of observed climate data sets and modelling of the present-day climate variability and future climate change signal including trends.

The appointee will be expected to develop expertise in the climate models implemented at NIWA (such as the New Zealand Earth System Model NZESM, the New Zealand Regional Climate Model NZRCM, and/or the Conformal Cubic Atmospheric Model CCAM) as well as in techniques for analysing and preparing climate model output for environmental and climate impact studies.

The appointee will work with other New Zealand scientists in the use and application of climate model data for impact and adaptation studies. This often requires developing an understanding of impact models and developing unique and bespoke solutions to meet their data needs.

The appointee will lead and/or support (as appropriate) new science initiatives in their area of expertise.

**Direct Reports**

Nil.

**Key Relationships**

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<tr>
<th>Internal</th>
<th>External</th>
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</table>
| Project Manager, Regional Climate Modelling  
Group Manager, Climate Variability Group  | Ministry for the Environment  
Ministry for Agriculture and Forestry  
Regional Councils |
- Programme Leader, Climate Variability and Change
- Principal Scientists - Climate, Atmosphere, and Hazards
- Members of the Climate Variability Group
- Chief Scientist – Climate, Atmosphere & Hazards
- Senior and Principal Scientists, Physical Oceanography.
- Senior and Principal Scientists, Hydrology.
- Senior and Principal Scientists, Coastal Hazards.

- Various external collaborators e.g. UKMO

### Budget Accountability & Delegated Authorities

This position has the following budget accountability: Nil.

This position has the delegated authorities defined in the Delegated Authority document updated annually, currently: $2,500 as a project team member.

<table>
<thead>
<tr>
<th>Key Result Areas</th>
<th>Key Performance Indicators</th>
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<tbody>
<tr>
<td><strong>Technical</strong></td>
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<tr>
<td>- <em>Generic Level KPIs</em></td>
<td>Contribute to the development, optimization, porting and maintenance of scientific models, software, or database products.</td>
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<tr>
<td><strong>Technical</strong></td>
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</table>
| - *Position Specific KPIs* | Understand and operate climate models for the simulation of New Zealand climate.  
- Understand and apply downscaling software tools, such as machine learning. |
| **Research**     |                           |
| - *Generic Level KPIs* | Communicate scientific research, technical innovation or scientific computing by authoring or co-authoring publications that contribute to new scientific knowledge.  
- Represent the organisation in fora, workshops and conferences within the area of specialist expertise.  
- Prepare and contribute to research planning, applications, proposals or tenders in specialist area in conjunction with other science staff  
- Undertake novel research or software development where innovative thinking is required to identify, direct and define solutions to scientific problems within specialist area  
- Assist with funding applications, proposals or tenders. |
| **Research**     |                           |
| - *Position Specific KPIs* | Lead author and co-author peer-reviewed publications on climate variability and change & data science  
- Represent NIWA at various fora, conferences, government, national or multinational organizations on climate variability and change.  
- Participate in major research initiatives that provide solutions to complex problems of marked importance to New Zealand, have direct commercial application, or are of high strategic importance in advancing climate and data scientific knowledge and theory. |
| **Production, Products, Services**  
| **– Generic Level KPIs** | ▪ Prepare client reports and material for presentations within specialist area.  
| | ▪ Prepare/scope commercial initiatives, projects, tenders and/or solutions.  
| | ▪ Provide information to internal and external clients. Ensure issues are addressed or escalated.  
| | ▪ Source and identify science results or scientific software into products ready for commercialisation including assisting with preparation of patents.  
| | ▪ Provide training support and/or information resources for internal or external clients within specialist area.  

| **Production, Products, Services**  
| **– Position Specific KPIs** | ▪ Work closely with NIWA’s IT and Communications and Marketing teams to develop high quality bespoke products and services to contribute to climate change adaptation initiatives.  

| **Science Management / Leadership / Planning**  
| **– Generic Level KPIs** | ▪ Identify problems and ensure their effects are eliminated or minimised.  
| | ▪ Plan, schedule and participate in detailed phases of work for projects and programmes.  
| | ▪ Lead small projects.  
| | ▪ May take on roles such as Voyage Leader, Project Leader. Contribute to relevant National Centre activities.  
| | ▪ Establish effective internal and external collaborations.  
| | ▪ Assist with training and show new staff how to undertake tasks and duties.  

| **Science Management / Leadership / Planning**  
| **– Position Specific KPIs** | ▪ Participate in work for large, complex projects/programmes and assist the development of integrated research and/or services across NIWA.  
| | ▪ Participate in research projects led by other New Zealand science institutions in which climate science, climate projections and the interpretation of climate information is an integral component.  
| | ▪ Follow best scientific practice across NIWA, nationally and internationally.  

| **Core Indicators**  
| **– Generic Level KPIs** | ▪ Perform all tasks as directed within allocated timeframe, to specified standard, within budget.  
| | ▪ Complete administrative tasks as directed in an accurate and timely manner.  
| | ▪ Comply with safe working practices in accordance with NIWA's Health and Safety Procedures.  
| | ▪ Act within delegated authority level.  
| | ▪ Observe and comply with NIWA's policies, procedures and internal management systems.  
| | ▪ Contribute to effective communication and provide constructive feedback.  
| | ▪ Support and contribute to NIWA's positive overall organisational culture.  
| | ▪ Be a source of specialist advice and maintain an in-depth knowledge of approaches, products, services, market conditions and opportunities.  

| **Health and Safety** | ▪ Take all practicable steps to ensure own safety at work (including using suitable personal protective equipment).  
| | ▪ Ensure that no action or inaction while at work causes harm to any other person.  
| | ▪ Accurately report and record all incidents and accidents.  

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<td>Undertake Health and Safety training and other specific safety training relevant to your work.</td>
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# Person Specification

## Qualifications
- University degree (MSc equivalent or higher) in climate science, meteorology, physics, mathematics, computer science or a related field.

## Experience
- Proven research experience in climate science
- Experience in writing scientific proposals and papers
- Experience in the theory and application of climate modelling
- Experience in scientific programming e.g. HPC
- Proven ability to work in a team environment

## Technical Knowledge and Skills
- High-level proficiency in usage of HPC and desktop applications
- Proficiency with Fortran, Python, and preferably other computer packages for manipulating and visualizing very large data sets
- Understanding of software packages (both user- and where necessary developer-level understanding) of the Unified Model system
- Understanding of machine learning methodologies

## Competencies
- **Planning and Organising**
  Thinks ahead and plans work so requirements are met. Prioritises and manages time effectively. Well-organised and systematic approach.

- **Project Management**
  Plans projects thoroughly, ensures plans are carried out, manages people and resources effectively to ensure project objectives are achieved.

- **Communication Skills**
  Writes and speaks clearly and concisely. Able to convey their ideas and seek relevant information from others effectively. Open and approachable, listens and questions effectively.

- **Relationship-Building**
  Develops positive working relationships with others quickly and easily. Networks effectively. Is well-regarded and uses relationships for mutual benefit.

- **Results Orientation**
  Focused on achieving bottom line results. Puts in the time & effort, drives self & others to achieve outcomes. Proactive in setting & pursuing challenging goals & targets.

- **Customer Focus**
  Decisions and strategies focus on customer needs and perspectives. Challenges existing business processes to achieve optimal service delivery.
<table>
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<tr>
<th>NIWA Values</th>
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<td><strong>Safety</strong></td>
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<tr>
<td><strong>Customer Focus</strong></td>
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<td>We provide our customers with an outstanding service and experience.</td>
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<td>▪ We recognise that NIWA wouldn’t exist without its customers.</td>
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<td>▪ We all work together to ensure a positive customer experience.</td>
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<td>▪ We value and respect our customers, and act to ensure excellent and enduring relationships with them.</td>
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<td>▪ We communicate with our customers openly and proactively.</td>
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<td>▪ We deliver on our commitments to customers – in full, on time and within specifications.</td>
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<td>▪ We seek customer feedback to help us improve.</td>
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<tr>
<td><strong>People and Teamwork</strong></td>
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<tr>
<td>We are OneNIWA and work collaboratively for the greater benefit of NIWA and our customers.</td>
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<tr>
<td>▪ We help and support our colleagues, treating each other with courtesy and respect.</td>
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<td>▪ We value diversity and respect other cultures.</td>
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<td>▪ We value the opinions, knowledge and contributions of others, and celebrate success.</td>
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<tr>
<td>▪ We willingly share our expertise.</td>
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<tr>
<td>▪ We all take responsibility for getting things done.</td>
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<tr>
<td>▪ We listen openly and communicate honestly and constructively.</td>
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<tr>
<td>▪ NIWA’s interests and reputation take precedence over advancing our own individual interests and reputation.</td>
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