

The South African Weather Service (SAWS) is a Section 3(a) public entity under the Ministry of Environment, Forestry and Fisheries (DEFF) and is governed by a Board. The organisation is an authoritative voice for weather and climate-related services in South Africa and is a member of the World Meteorological Organisation (WMO) to fulfil a range of international obligations of the government. SAWS strives to be a Weather and Climate Centre of Excellence, providing innovative solutions to ensure a weather-smart region, sustainable development, and economic growth.

The South African Weather Service is therefore seeking to appoint an efficient and enthusiastic person to undertake the role of:

Senior Scientist: Fire Weather Research

Salary: Negotiable

Research Unit

Two Year Fixed Term Contract

(Ref: WS04/112024)

Job Summary

The principal scientific activity is developing, optimising, and implementing a new national operational fire weather index at the South African Weather Service to support a new National Fire Danger Rating System (NFDRS). The work will involve leading research and development efforts to understand, model, and predict fire weather conditions. This includes conducting in-depth meteorological and fire data analyses, refining various existing algorithms, multivariate data blending and models for calculating the fire weather index and collaborating with internal and external stakeholders to incorporate expertise and feedback. The senior scientist will be essential in translating scientific research into operational (R2O) tools by integrating the fire weather index algorithms into forecasting systems and developing protocols for its use. Additionally, the successful candidate may be required to participate in other research activities within the Research Unit as delegated by the Lead Scientist or Senior Manager.

Key Performance Areas

The candidate will be required to:

- Lead the research and development of a new fire danger index, including the formulation of algorithms, models, and data analysis techniques.
- Collaborate with a multidisciplinary team to integrate meteorological, environmental, and geographical data into developing the fire danger index.
- Conduct thorough literature reviews and stay abreast of the latest fire weather science and technology advancements.
- Design and conduct field experiments and validation studies to assess the fire danger index's performance and accuracy.
- Analyse and interpret complex datasets to identify patterns, trends, and correlations relevant to fire danger assessment.
- Develop and maintain documentation, including technical reports, research papers, and presentations, to communicate the methodology and findings of the fire danger index development.
- Provide technical guidance and training to scientists, forecasters and stakeholders on the new use and interpretation of the new fire danger index.
- Collaborate with stakeholders and end users to understand their needs and incorporate feedback into refining the fire danger index.
- Represent SAWS and present research outputs, where appropriate, at national or international scientific events, e.g. conferences and workshops.
- Ensure that the work environment complies with legislative requirements for Occupational Health and Safety.

Minimum Requirements

Education and Experience

- MSc in a related field (e.g., Atmospheric Science, Meteorology, Environmental Science, or a related field).
- At least 5 years of experience in fire weather research, including developing fire danger indices or related methodologies.

- Proven expertise in statistical analysis, data modelling, and programming languages commonly used in atmospheric and environmental research (e.g., Python, R, Fortran).
- Knowledge of geographic information systems (GIS) and spatial analysis techniques for incorporating geographical and environmental data into fire danger assessments.
- Demonstrated experience in leading research projects, including the design, execution, and analysis of field experiments and validation studies.
- Familiarity with the practical application of fire danger indices in wildfire management and public safety.
- Strong publication record in peer-reviewed scientific journals, with a minimum of three publications as the lead author related to fire weather, atmospheric science, or environmental research.
- Experience collaborating with interdisciplinary teams and stakeholders, including government agencies, research institutions, or industry partners.
- Experience working with government agencies involved in fire management, wildfire prediction, or emergency services will be advantageous.

Behavioural Competencies

- Excellent communication skills (written and verbal)
- Excellent communication skills, with the ability to convey complex scientific concepts to technical and non-technical audiences.

Please Note:

Register as user on our website using this link: <https://www.weathersa.co.za/home/vacancies> to apply for the above position and upload your (Comprehensive CV with certified copies of qualifications).

Enquiries for the above-mentioned positions must be directed to: **Ms Thembisa Bixa, at
Tel. (012) 367 6091.**

Closing Date: 20 November 2024

Preference will be given to People living with disabilities in line with SAWS EE targets. This is an EE position and preference will be given to females, Africans, Indians and Coloureds (AIC). Correspondence will be limited to short listed candidates only. Candidates who have not been contacted within 3 months after the closing date of this advertisement, please accept that your application was unsuccessful. The South African Weather Service is an equal opportunity employer.

Record Reference

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