



Department for
Science, Innovation
& Technology

Met Office tendering on behalf of the Department for Science, Innovation and Technology (DSIT).

To register your interest, see notes at the end of this page. Registering interest requires no proposal detail at this stage and carries no obligation to bid.

Please note that this Expression of Interest is open to UK operating and registered organisations only.

Call Reference:	WCSSP South Africa FY25/25 Grant Funding Opportunities (DN699573)
Expression of Interest for:	WCSSP South Africa
Grant Funds for the Period:	1st May 2024 – 31st March 2025 <i>Funding is initially available to cover a 1-year period (May 2024 – March 2025). Subject to further funding allocations being received from DSIT, the Met Office will confirm extensions to the Grant Agreement on an annual basis to fund year 2 and year 3 activities.</i>

Expressions of Interest for the following lots:

Lot number	Title	Amount	FEC @100%	FEC @80%
SA24_1.1	Improving representation of Climate Variability and change over Africa by using Machine Learning as a tool for Data Rescue	£135,000	£135,000	£108,000
SA24_4.2	Advancing Rip Current forecasts for beach locations across South Africa	£85,000	£85,000	£68,000

The initial level of funding is available at the values stated above. If the Met Office receives funding above the initial level from DSIT, Met Office shall be entitled, but not obliged, to propose an increase in funding from the initial value by any amount up to a maximum of 150% of the initial funding value.

Key Dates

Estimated Publish of Call: <i>(Start of bidding period).</i>	Week commencing 4 th December 2023 <i>A notification email will be sent to parties who have formally registered their interest by way of clicking on the 'Register Interest' button displayed below the opportunity on the ProContract portal</i>
Estimated Bidding Period:	4 th December 2023 – 31 st January 2024



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Estimated Award of Call:	Week Commencing 11 th March 2024
Estimated Delivery Period:	1 st May 2024 – 31 st March 2025 <i>Funding is initially available to cover a 1-year period (April 2024 – March 2025). Subject to further funding allocations being received from DSIT, the Met Office will confirm extensions to the Grant Agreement on an annual basis to fund year 2 and year 3 activities</i>

Background to the Met Office Weather and Climate Science for Services Programme (WCSSP):

The Met Office is a delivery partner on behalf of the UK government's Department for Science, Innovation and Technology (DSIT). We administer funding through our Weather and Climate Science for Service Partnership (WCSSP) programme.

The WCSSP programme has been developing a global network of partnerships that harness the weather and climate scientific expertise of UK and partner countries to strengthen the weather and climate resilience of vulnerable communities around the world since 2014.

Through the WCSSP programme, we are working collaboratively on projects that focus on the global challenges of weather and climate with partners in Brazil, China, India, South Africa and Southeast Asia. International collaboration is vital to addressing the issues presented by global weather and climate change.

Outputs from the WCSSP programme support the UN's Sustainable Development Goals (SDGs) with world-leading weather and climate science. Through working in partnership around the world, we are building international meteorological capacity, saving lives and strengthening resilience and response to crises. The WCSSP programme particularly supports our work towards goal 13 (climate action) and goal 17 (partnerships for the goals).

For more information see the programme website [Met Office WCSSP](#) and follow via Twitter: [@MetOfficeww](#)



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Background to WCSSP South Africa

The Met Office is dedicated to providing accurate weather forecasts and climate information to the South African community. We strive to ensure that our services are accessible to all, regardless of socioeconomic status or geographic location.

WCSSP South Africa - Met Office is an organisation dedicated to providing accurate and reliable weather forecasts and climate information to the people of South Africa. Through our state-of-the-art technologies and expert team of meteorologists, we are able to deliver up-to-date information on weather patterns, extreme events, and long-term climate trends.

But our mission goes beyond just forecasting the weather. We also work closely with communities and businesses to help them prepare for and adapt to the impacts of climate change. By providing tailored solutions and support, we aim to build resilience and promote sustainable development across the country.

At WCSSP South Africa - Met Office, we are proud of our team of experts who are dedicated to providing top-notch services to our clients. Our team consists of meteorologists, climate scientists, data analysts, and support staff who work together to achieve our mission of creating a more sustainable future for South Africa.

At WCSSP South Africa - Met Office, we offer a range of services to help individuals, businesses, and communities make informed decisions about weather and climate. Our services include accurate weather forecasts, climate projections, and risk assessments for extreme weather events.

Since its inception, WCSSP South Africa - Met Office has been dedicated to creating a more sustainable future for South Africa. Our efforts have not gone unnoticed, as we have made significant strides towards reducing carbon emissions and promoting renewable energy sources.

Through partnerships with local communities and businesses, we have been able to implement innovative solutions to address environmental challenges. From developing clean energy technologies to promoting sustainable agriculture practices, our impact can be seen throughout the country.

At WCSSP South Africa - Met Office, we believe that everyone has a role to play in creating a more sustainable future. For further information please visit the project website –

[WCSSP South Africa - Met Office](#)



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Summary of Requirements

Lot SA24_1.1 Improving representation of Climate Variability and change over Africa by using Machine Learning as a tool for Data Rescue

The observational record of weather and climate is severely limited – there are many times and places where we have few or no observations, and these limitations restrict both science and predictions, particularly for extreme, high-impact events. This restriction is particularly severe over Africa.

The aim of this project is to improve the observational record by taking archived observations – currently only on paper – and making them available to science by converting them into computer-readable form. Doing this by hand is unacceptably slow and expensive, but recent developments in Machine Learning offer the potential of a fast, automatic data rescue process.

This work should combine state-of-the-art ML methods, and preexisting work on data rescue, to produce a recommended method for automatic observation transcription, and apply that method to some undigitized records from Africa or the surrounding oceans.

It is anticipated that this project will deliver alignment to WCSSP South Africa's objectives through the delivery of the following activities and benefits;

- This activity is expected to build the capacity or capability of an in-country partner institution or individual, to enable them to more effectively carry out their research/operations e.g. developing improved modelling systems, skills training.
- The activity is expected to contribute to or lead to the development of a weather or climate service prototype.
- The methods or results in this activity are expected to be relevant more widely and could be applied to benefit other countries and regions.

The anticipated outputs of this project are;

- Open-source software for automatic data rescue (GitHub repository or similar);
- publication of findings in peer-review journal.
- presentation of methods and results at relevant meetings and conferences.
- If the work is particularly successful, also new rescued weather data.



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We will be inviting bidders to propose grant activities to cover a 3-year (36 month) period, funding will initially be available for a 1-year period (April 2024 – March 2025). Subject to further funding allocations being received from DSIT, the Met Office will confirm extensions to the Grant Agreement on an annual basis to fund year 2 and year 3 activities.

Lot SA24_4.2 Advancing Rip Current forecasts for beach locations across South Africa

Rip currents are one of the biggest dangers facing beach users in South Africa. To safeguard members of the public and prepare emergency services, a collaborative project by the University of Plymouth and the South African Weather Service (SAWS) developed forecasting tools for rip current hazards in South Africa. The one-year project, funded by WCSSP South Africa in FY20-21, engaged the National Sea Rescue Institute, City of Cape Town, Stellenbosch University, and Lifesaving South Africa, bringing together sea rescue incident records, wind, wave, and water level forecasts as well as the results of field experiments. Despite challenges from the pandemic, a pilot operational rip risk hazard forecast for the Cape Peninsula coastline was developed and successfully trialled in June 2021 to warn the public of the risk of rip currents.

Building on the success of the initial trial service, expansion to an operational service with greater coverage of South African beaches is deemed both desirable and important. There is particularly a need to extend forecasts beyond Cape Town for other dangerous locations across South Africa. This project would build on the previous project, helping to strengthen capacity at SAWS and advance the application of rip current forecasts. Over the course of the three-year project, the aim is to establish a long-term sustainable service that contributes a measurable (and evidenced) improvement in rip current incident prevention at multiple locations, to enhance beach safety.

The work aligns with the WCSSP South Africa Science Plan, which identifies the marine sector as one of four priority sectors. It also responds to the desire of SAWS (a core partner in WCSSP South Africa) to expand and update the current code and further explore coastal hazard services at SAWS.

It is anticipated that this project will deliver alignment to WCSSP South Africa objectives through the delivery of the following activities and benefits;



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- This activity is expected to build the capacity or capability of an in-country partner institution or individual, to enable them to more effectively carry out their research/operations e.g., developing improved modelling systems, skills training.
- The activity is expected to contribute to or lead to the development of a weather or climate service prototype.
- The activity is intended to influence policy or decision-making e.g. citation in report, contribution to Government review, participation in advisory committee.
- The methods or results in this activity are expected to be relevant more widely and could be applied to benefit other countries and regions.

The anticipated outputs of this project are;

- The project should deliver operational (real-time, daily) rip current forecasts for multiple locations across South Africa developed and delivered in real time, with the new/extended capability integrated within production systems at SAWS.
- Additional outputs could include: A peer-review publication detailing the application and evaluation of the forecast model in South Africa; outreach and training materials (report and workshop) that supports understanding and responses to warnings by stakeholder groups and beach users; report quantifying the impact of the rip current services in enhancing beach safety.

We will be inviting bidders to propose grant activities to cover a 3-year (36 month) period, funding will initially be available for a 1-year period (April 2024 – March 2025). Subject to further funding allocations being received from DSIT, the Met Office will confirm extensions to the Grant Agreement on an annual basis to fund year 2 and year 3 activities.



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Eligibility:

The following criteria must be met by the organisation submitting a bid against Calls supported by the Met Office WCSSP Programme in order to be eligible to apply or be awarded funds against this Call:

The following criteria must be met in order for a Bid to be eligible for a Grant Award:

- The Bidder must be an organisation operating and registered in the United Kingdom.
- The Bid must demonstrate how it contributes to the Met Office WSCCP Grant Fund's aim to develop science and innovation partnerships.
- The Bid must demonstrate ODA compliance.
- The Bid does not cover activities in relation to which the Bidder has received, or will receive, external funding.
- There must be an In Country economic and societal benefit to which must be demonstrated.
- The proposed Grant Activities in a Bid will last the full duration of the Grant Period.
- The Bidder must be willing and able to work with Met Office and other organisations and individuals associated with the WCSSP Programme, including by attending meetings and other collaborative events.
- Multiple Bids can be submitted from a single organisation where they are led by different academic departments.
- Bidders are not expected to have pre-existing In Country Partners to respond to this call. The bilateral partnership nature of the Newton Fund means that effort by in-country researchers is supported by our existing In Country partners as standard. In country partners are currently:

South African Weather Service (SAWS)
The Applied Centre for Climate and Earth System Science
The Council for Scientific and Industrial Research
Agricultural Research Council-Institute for Soil, Climate and Water
University of Witwatersrand



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How to Apply:

The above Expression of Interest is advertised on the Met Office ProContract e-Tendering portal called ProContract. To access and register your interest you will need to log onto the ProContract portal via this link: tenders.metoffice.gov.uk

You may need to search for the **Call reference DN699573**

You will need to register your company (if you have not already done so) and register your interest against the opportunity before you are able to access the tender documents.

If you require guidance or 'how to' instructions – see the supplier manuals on the right-hand side of the supplier home page.

Online Discussions between Bidders and the Met Office:

There is a Discussions function on ProContract which shall be used to provide all further information regarding this opportunity including any changes to time scales, scope or clarifications. This function must be used by bidders to submit all clarification questions.