

WCMC



Senior Modelling Scientist
Application Pack

Thank you for your interest in the role of Senior Modelling Scientist within the Science team at UNEP-WCMC

We are seeking an experienced senior modelling scientist with expertise in analysis and modelling of biodiversity and ecosystem futures, project and proposal development, networking and collaboration, and staff support and development.

The scientist will work within UNEP-WCMC's Science Innovation Area which aims to enhance the scientific quality of the Centre's work through research, training, and partnership development. The main purpose of the job is to lead a programme of work focussed on the analysis and modelling of biodiversity and drivers of change. The post holder will provide cutting-edge and novel technical leadership in delivering and expanding the Centre's work on futures modelling and supporting a range of projects and project development opportunities. The postholder will be expected to integrate this work across the Centre, developing and managing the futures modelling portfolio. S/he will support relevant staff and projects focussing on marine, freshwater and/or terrestrial ecosystems.

The senior modelling scientist will be engaged in opportunity development, network building and team development. S/he will act as the Centre's technical lead on futures modelling for the assessment of biodiversity, human pressures, and ecosystem services, interacting externally with major initiatives in biodiversity, land use, modelling and scenarios.

The scientist should have experience in developing, applying, and understanding broad modelling approaches, and experience with aspects of the following: land use models, ecological/ecosystem models, model-data integration, climate or hydrological models and land-/sea-use or other biodiversity pressures models.

We will provide you with the challenge of working on and developing high profile conservation projects, where your work really makes a difference to the field of conservation in an area aligned to our strategic aims and broader global initiatives. In addition to training and development opportunities, we offer a competitive salary and benefits package, including generous pension contributions.

ABOUT THE TEAM

The Science Innovation area drives the research focus of UNEP-WCMC, using primarily quantitative techniques to produce novel information on biodiversity and ecosystem services. We sit at the cutting edge of conservation science, and our work feeds into all areas of the Centre and its impact.

Our team works with academics, other researchers, and practitioners across the world to design new ways of assessing interactions and relationships between biodiversity and pressures, biodiversity and ecosystem services, climate, health and other aspects of human wellbeing. We strive to understand current relationships, and use this knowledge to drive robust scenarios of future changes. We develop and utilise models such as PREDICTS, Madingley and WaterWorld. We produce novel indices such as the Biodiversity Intactness Index, the Ecosystem Integrity Index, and the Multi-dimensional Biodiversity Index. We find integrated solutions to complex goals such as restoring biodiversity, reducing pressures, and feeding the world, for instance, our work on Bending the Curve, RESTORE+, the China Biodiversity Outlook, Trade Hub and Global Infrastructure Modelling & Mapping. We have projects within Science but also work collaboratively with all the other Centre teams.



ABOUT THE ROLE

Job Description

This post is intended to be a leadership position within the Science Team and link across focal initiatives at UNEP-WCMC. The main purpose of the job is to lead a programme of work focussed on the analysis and modelling of biodiversity and ecosystem futures. This could be through the integration of land use modelling with the biodiversity and ecosystem modelling expertise in the team or as direct contributions to our existing modelling expertise. The work is likely to include analyses of pathways of change, including how society might achieve more sustainable futures for biodiversity and society. The role will provide cutting-edge and novel technical leadership in delivering and expanding the Centre's work on analysis and modelling.

The post will require development and delivery of projects that may focus on terrestrial, freshwater and/or marine ecosystems and include a range of modelling and analysis approaches. The post is envisaged to play a key role in the strategic development of the Centre's modelling capabilities and offering. It will require coordinating a modelling group and developing new projects to continue to grow our analytical and modelling skillset and establish the Centre at the forefront of these scientific contributions globally. The post holder will collaborate across the Centre to develop integrated approaches and outputs. S/he will also be expected to interact externally with major initiatives in the biodiversity, modelling and scenarios world, including technologists and policy platforms.

Key Areas of Responsibility

The post holder will act as the Science Innovation area's technical and strategic lead on futures modelling and the analysis of future changes in, e.g., land use, biodiversity, ecosystem structure and function. Responsibilities include:

- Providing leadership and direction to the Science Innovation areas and Centre's modelling and analysis, and working with the Chief Scientist, key specialists and the Communications and Development team to ensure that we provide impactful, novel, and robust outputs.
- Providing technical support in the area of modelling and the development of projects in this field
- Increasing the knowledge and awareness of colleagues on the modelling capabilities within the Centre and the potential for modelling to support the Centre's core areas of work.
- Developing the strategy for futures modelling and analysis at the Centre: what can, and should we be offering or developing given the unique range of expertise and experience?
- Advancing WCMC's reputation as a leading organisation in modelling and analysis for biodiversity and ecosystems by representing the Centre in major initiatives (e.g., IPBES, GEO BON) and through other networking, collaborations, and outputs.
- Lead the development and implementation of selected, high-profile modelling and analysis projects central to the strategic vision in the Science Innovation area and at the Centre.

Other Duties

- Potentially supporting the Science Innovation Area more broadly, such as assisting Head of Science when required, and providing strategic scientific input.

- Line management and associated duties.
- Providing technical support to some of the Centre's key work in modelling, remote sensing, restoration projects, private sector and business risk analyses, Protected Area data and analyses, etc.
- Assist in the development and implementation of global biodiversity and conservation projects, for example, analyses of the impacts of current and future global change on land, freshwaters, and oceans.
- Extend knowledge of scientific and policy issues relevant to the work of the Innovation area and peer review work across the Centre.
- Work with project teams to write up results of analyses as technical reports and scientific papers as required.
- Attend (in person and/or virtually) relevant conferences, workshops, and other specialist meetings both in the UK and internationally, on behalf of UNEP-WCMC.
- Undertake any other duties as required, commensurate with the level of the post.

Person Specification

Qualifications/Education

Essential:

- Post-doctoral and/or work experience (minimum 8-10 years) in land use or other relevant modelling as below, ideally with some focus on predicting the future of global change.
- PhD in modelling/related scientific field.

Desirable:

- Expertise in models of the drivers of environmental change.
- Expertise in scenario production or assessment.
- Experience of policy analysis.
- Experience working in the intersection of biodiversity science, ecology, and Earth system science.

Experience

Essential:

Expertise in land use modelling or two or more of the following:

1. Process based ecological models in marine or terrestrial environments,
2. Modelling and analysing drivers of biodiversity change.
3. Quantitative and qualitative conservation analysis.
4. Development and quantification of pathways of actions towards sustainability, stakeholder management, and policy decisions.

Desirable:

- Knowledge of marine, terrestrial and/or freshwater ecology.
- Knowledge and experience in the development or use of biodiversity indicators.
- Experience with remote sensing or other big data analyses.
- Excellent network of national and international contacts.
- Experience leading and developing a team of scientists.
- Experience managing large budgets and/or project management.

Combined with:

- Proven fundraising ability including proactive, strategic development of proposals.
- Experience developing partnerships with key external scientific partners and funders.
- Experience providing technical guidance and input to international institutions such as IPBES, GEO BON, and the CBD.
- Demonstrated thought leadership across a range of land use, biodiversity and ecosystem fields with a strong publication record in relevant areas.
- Experience coaching and mentoring colleagues and a commitment to training and advancing the next generation of biodiversity scientists.

Skills

- Proven broad thought leadership expertise and ability to collaborate with and coordinate colleagues from a range of disciplinary backgrounds.
- Proven analytical skills applied to modelling, including the ability to produce novel analyses using appropriate programming languages/code such as Python, R, C++, MATLAB, etc. on local or cloud computer resources.
- Team player with proven ability to work collaboratively and internationally.
- Experience and/or willingness to develop and support project-based analysis efforts and a modelling group.
- Ability to write clearly and succinctly, for example, in publishing, reporting and proposals.
- Excellent interpersonal communication skills.
- Demonstrated ability to synthesize and clearly communicate complex scientific concepts to a range of audiences (including non-specialists).
- Fluency in written and spoken English is essential.
- Fluency in further languages is highly desirable, including core UN languages.

Type of Person Required

- Adaptable, able to work collaboratively with others, inside and outside the organisation.
- Able to prioritise and balance multiple projects and competing demands on time
- Innovative, keen to develop ideas.
- Team player happy to work with and lead colleagues from many disciplines.

Other Relevant Information

The post holder will be expected to interact in a professional manner with clients and partners.

OUR OFFER

Job Title: Senior Modelling Scientist

Team: Science

Reporting to: Head of Science

Job Reference: AD1347

Start date: As soon as possible

Salary: £38,000 - £54,000

Contract: Permanent, full-time

Location: The post holder will be expected to locate within commuting distance of our main offices in Cambridge, UK. We are usually able to offer sponsorship to the preferred applicant.

This is not a United Nations Post

As a minimum we aim to match market rates for the conservation charity sector in Cambridge and invest a lot of effort to benchmark our salaries, ensuring that people are rewarded fairly for their role. To add to this, we offer some great benefits - here are the highlights:

- 12% non-contributory pension after 1-year service
- Flexible and family friendly working
- Life assurance against death in service (4X annual salary)
- Extended pay protection for serious illness that exceeds 6 months
- Excellent training and development opportunities, tailored to individual needs
- Scheme to buy (or sell) additional annual leave
- Cycle to work Scheme
- Fantastic shared social space and kitchen facilities
- Employee assistance programme and bereavement line to offer help and advice to staff and their families
- Brilliant Social committee that help to keep things fun!
- Caring Staff Liaison Committee
- Focus on environmental sustainability kept in check by our Environment Committee
- Free (proper) tea and coffee!

Training

Our aim is to do our best for every person who works for us, so that they build their skills and knowledge over their career with us, and when they leave (some never do!) they are better placed to move onto the next stage of their career.

We have a comprehensive induction programme that spans the first 6 months including what's critical in the first week, first month, and then monthly afterwards.

- We encourage everyone to use 5 days for their own personal development each year
- Standard training course which include: Management Development; Coaching culture; Resilience; Negotiation; Pitching and closing a deal.
- We also design our training annual personal development reviews and organise bespoke training courses that meet the skill gaps in the organisation and fulfil the training needs of the people within it.
- Peer-to-Peer learning from our community of experts, taking advantage of the breadth and depth of knowledge and experience across the organisation.
- Internal and external invited speakers, workshops and talks that anyone can join or initiate.



ABOUT UNEP-WCMC

The UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) is a global Centre of expertise in biodiversity. We work at the interface of science, policy and practice to tackle the global crisis facing nature.

The Centre operates as a collaboration between UN Environment Programme and the UK registered charity WCMC. Our cutting-edge science, data and insights inform policy and business decisions worldwide. This position is with the charity WCMC, working in collaboration with UNEP.

Achieving our vision of a world living in harmony with nature will require transformative and systemic change across all sectors. We bring together governments, businesses, research bodies and more to put nature at the heart of decision-making.

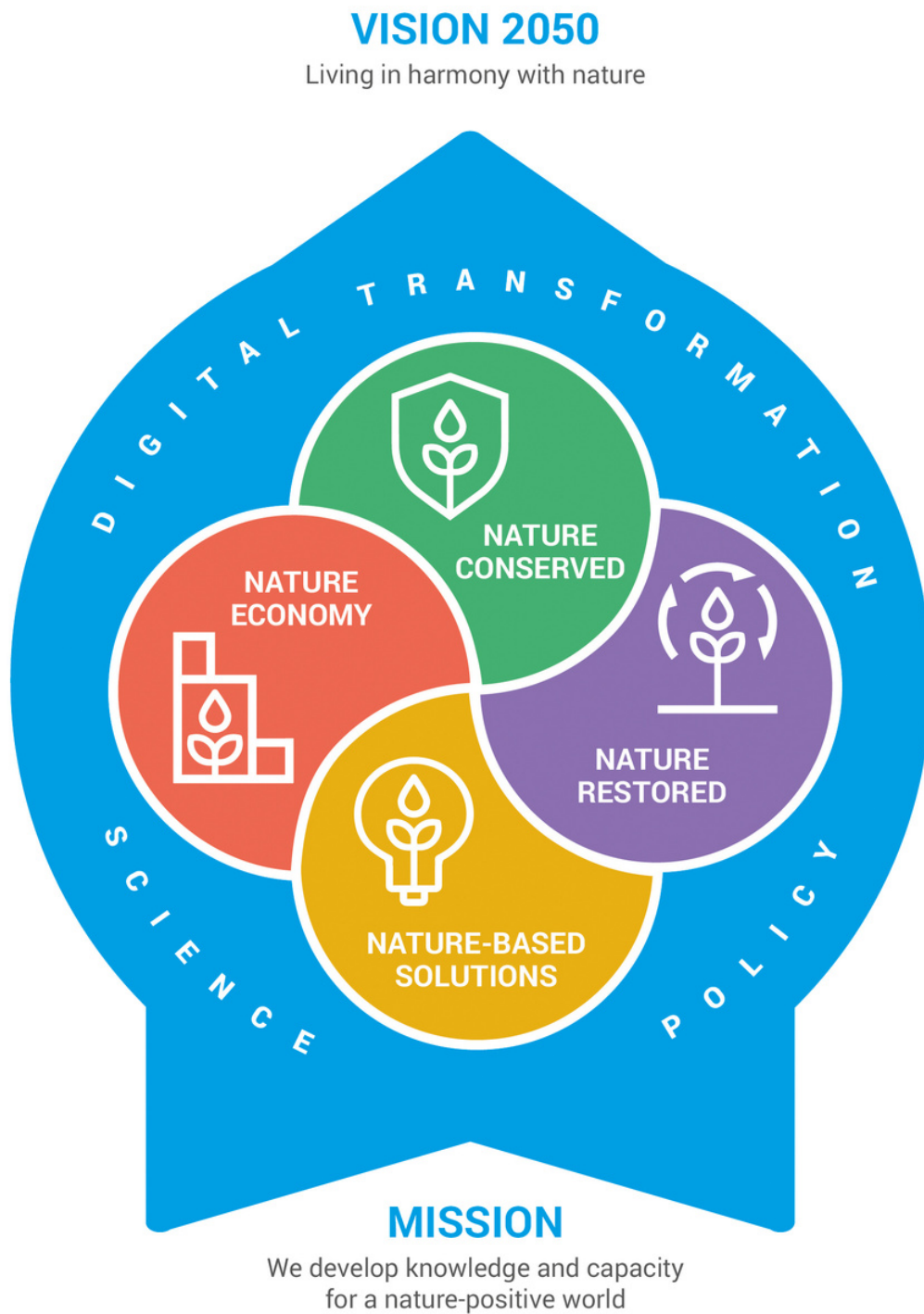
"We are entering a make or break decade for nature with UNEP-WCMC set to play a pivotal role in ensuring humanity finally begins to reverse the catastrophic loss of biodiversity globally."

Jonny Hughes, CEO of WCMC



Our strategy

We deliver our strategy through four independent impact areas which are complemented by three cross cutting innovation areas.





The people

We have around 180 amazing people who make up our organisation. We are a really friendly bunch of professionals and do not think a single person has ever left the organisation without saying that it is the people that make the organisation fantastic and how much they will miss them when they leave. We truly do have world class scientists and professionals!



The culture

Our culture is very supportive. There are lots of ups and downs in life, and we want to support our people through the difficult patches, so they can flourish again. We have a free employee assistance line that is available to all employees and their families and offers 6 remote counselling sessions and other advice services.

We have redesigned our kitchen and library to make a fantastic social space where you can have a quiet chat or a loud lunch with your colleagues! We also have tea every Wednesday afternoon, with locally homemade cakes and catch up with everyone and everything that is going on in the Centre.

We are affiliated with Cambridge University, and have rooms in the David Attenborough Building that we can use when we wish. We are also a member of the Cambridge Conservation Initiative and often collaborate with our CCI colleagues here.

WCMC attaches great importance to addressing safeguarding and ethical considerations in all activities carried out by its staff, including where partner organisations or individuals are part of the delivery of our work. This includes children and vulnerable adults in the community who may be vulnerable to abuse. WCMC acts with integrity, is transparent and expects applicants to share the same values.



Diversity

We really take our diversity seriously, as we operate globally and need to have the people perspectives within the organisation, to fully understand our clients and partners that we work with. Our aim following the introduction of the points based immigration system was to increase our diversity not only in our range of nationalities, but in all protected characteristics (age, disability, gender reassignment, marriage and civil partnership, pregnancy and maternity, race, religion or belief, sex).

We have a sponsorship licence and always take the best candidate for the role from a whole range of applicants and offer sponsorship to those that require it. We have people that have worked for us, for more than 30 years, and our fantastic internships often attract the best and brightest graduates.

HOW TO APPLY

If you are looking for a rewarding and challenging post where you can impress us with your analytical expertise and innovative ideas, we want to hear from you.

Please complete our [application form](#) and send it together with your [2 page CV](#) through this [link](#).

We screen candidates based on skills and experience and not their personal details. **Please do not include a photograph on your CV, and note that any applications which include a photograph may be automatically rejected.**

Closing date: 25th July 2022



WCMC

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