

Careers in meteorology

*Engage
Enthuse
Educate*



rmets.org



theweatherclub.org.uk



metlink.org

SOCIETY INFORMATION

The Royal Meteorological Society (RMetS) is the leading independent expert in weather and climate.

RMetS is a membership charity. Our mission is to engage, enthuse and educate by promoting the understanding and application of weather and climate science for the benefit of all. The Society works to strengthen the science and raise awareness of the importance of weather and climate, support meteorological professionals and inspire enthusiasts.

The Society's programmes are broad and diverse, with activities and events held for members, the general public and wider meteorological and climate community.

This booklet is part of our work to support early career professionals. The Society is very grateful to everyone featured in this booklet for their time in helping to develop a tool for anyone considering a career in meteorology. We highlight some of the many options available from roles in aviation and energy trading to meteorological modelling. Advice on the different issues you might think about when developing your career is set out on the back page.

Accreditation

If you are thinking about starting the journey towards gaining your professional qualifications in meteorology, then we are here to support you.

Our internationally recognised professional accreditation schemes enable you to demonstrate your accomplishments and commitment to your own professional development.

We have two professional accreditation schemes:

- **Chartered Meteorologist (CMet)**, the highest level of professional recognition in meteorology available in the UK no matter what your discipline or sector.
- **Registered Meteorologist (RMet)** is awarded for members pursuing a career in meteorology or working in a role supporting meteorological services.

Professional accreditation brings many benefits, including the right to use CMet and RMet as a post nominal designation.

Continuing Professional Development (CPD)

There are two key tools on our website, ACCSYS and MyCPD, which can be used to create, manage and submit personal CPD or formal RMetS accreditation reports, activities and applications.

Grants and Bursaries

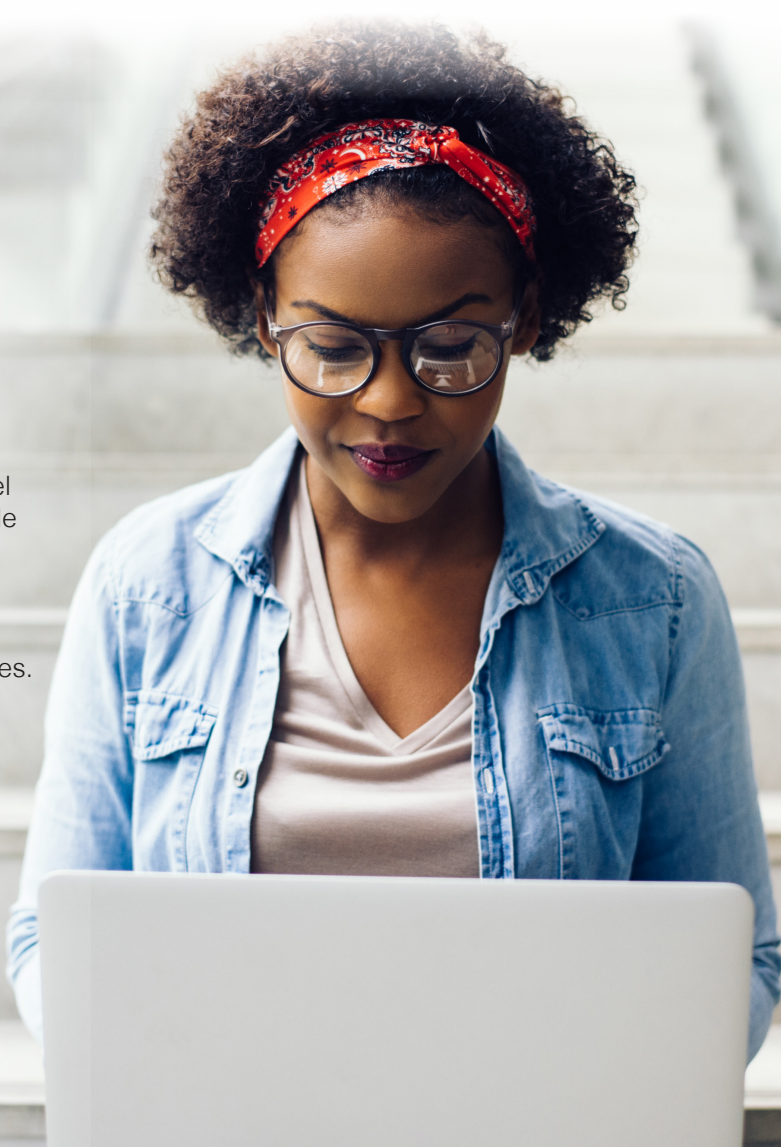
The Society has a number of grants and bursaries to help finance expeditions, carry out research or attend conferences. For example, the Carers' Fund provides small grants to help you take part in meteorologically related events that you may not otherwise be able to attend because you have caring responsibilities.

Mentoring scheme

The Society recognises the wealth of expertise amongst our membership and that mentoring from someone outside your organisation can be of great value. We offer our members mentoring pairings which offer insight, advice and guidance.

Get involved

There are many ways you can be part of the Society from volunteering to be a student ambassador to sitting on one of our Committees. To find out more about the Society and becoming a member, including our Student Membership, and discover the wealth of climate and weather resources, please visit: rmets.org



AN OVERVIEW OF CAREERS IN METEOROLOGY

Dr Jenny Rourke, Head of Production Services at ECMWF



At school, I remember talking to the 'career advice tutor' and saying that I wanted to be a meteorologist; they looked at me blankly and pointed me in the direction of leaflets on water management. Thank goodness that today we have the internet and can research for ourselves, enabling us to discover a whole world of jobs in meteorology. We are also lucky that it is such an interdisciplinary subject - people interested in weather and climate can consider careers in related subjects such as hydrology, climate science, space weather, broadcast meteorology and so much more! Fortunately for us, weather and climate are very important and topical subjects, so as we move forward there should be new jobs opening up, as the world will continue to need weather and climate information. One key message I would like to emphasise is, you can move around once you 'get your foot in the door' of an organisation. During your career, you can have periods in research, operations, academia, model development, international secondments, teaching... these are just a few examples that I have personally worked my way through on my journey to Senior Management at ECMWF.

"If you are interested in weather, climate, hydrology, space weather, oceanography or similar subjects, the coming few years will be an exciting time to be entering the jobs market"

Meteorology is a great area to start a career in, as weather and climate are always going to affect our lives; there will always be a need to provide accurate and timely weather and flooding forecasts, to issue warnings to save lives and to continue to improve our modelling capabilities. Climate change is already having impacts

on Earth, so there is a renewed urgency to improve our modelling and impact assessments of climate change, with research needing to continue in universities, the Met Office and in the private sector. If you are interested in weather, climate, hydrology, space weather, oceanography or similar subjects, the coming few years will be an exciting time to be entering the jobs market.

Clearly, many of these jobs will be competitively sought; so, my best advice to you, if you are early on in your career, is to try to establish a broad amount of experience. These days, communication skills, leadership experience and problem solving are almost as important as your mathematics, programming and/or physics competency. So, of course you will need to have good grades, but to be the best candidate at interview, showcasing your vital soft skills will be what sets you apart from the crowd. These can be gained through voluntary or paid work, getting involved in organising events such as the RMetS Student Conference or workshops at your place of study, working in the summer holidays, or contributing to the running of a group. Take time to tailor each application to the job in question and update your CV regularly. Also take advantage of any mentoring services available to you, to help put you in the strongest possible position for applying for your dream job.

Best of luck and I hope to work with you in the future!

Visit jobs.rmets.org to sign up for job alerts and view the latest vacancies.



CAREER PROFILES



Laura Tobin

**Broadcast Meteorologist,
ITV**

“I honestly think I have the best job in the world.”

What do you do in your current (or previous) job?

I am a broadcast meteorologist at ITV on the breakfast show Good Morning Britain, where I present the national weather to millions of viewers daily. I've been here for 7 years and no two days are the same. In my previous job, I was at the BBC weather centre for five years, also working as a broadcast meteorologist on national TV, radio and online. Before that, I was an aviation forecaster at RAF Brize Norton for five years, forecasting the weather and warning pilots of potentially hazardous conditions.

What made you choose this as a career? How did you get here?

I fell in love with weather at age 14 when my geography teacher taught us about the jet stream. It was so visual, interesting and engaging that I called the Met Office to find out how to become a meteorologist. I then studied A-level maths and physics (which I initially didn't like!) before doing a degree in Physics and Meteorology at the University of Reading. In my final year, I applied for a job at the Met Office and was lucky enough to start there a few months after graduating. I would highly recommend a job in any science – it is great to be so topical.

What are the challenges you face in this type of career?

It can be hard to communicate lots of information in a short space of time to the whole of the UK, especially during severe weather. I use social media to help tell the story and will pick out the key information to help most people.

Do you have any advice for somebody working towards this career?

Get as much experience as you can and try everything. I fell in love with weather and meteorology but had no intentions of being a presenter on TV initially. It was only encouragement from my boss to 'give it a go' that gave me my break at the BBC and led to my current job at ITV. So, my advice is to give everything a go – you never know what it will lead to. I'm so glad I did as I honestly think I have the best job in the world.



Keith Thomson

**UK Operations Manager,
Aerospace & Marine
International (UK) Ltd**

“If you want to work in marine meteorology, take any opportunity you can to observe waves at sea”

What do you do in your current (or previous) job?

Marine meteorology has been my speciality for the last 30 years. My marine forecasting career began in Abu Dhabi in the early 1990s, but after a few years I moved back to the UK and have worked in and near Aberdeen ever since. Most of the time my job has involved preparing specialist marine forecasts for offshore operators. I have also worked offshore on a variety of rigs, platforms and vessels, providing on-site forecasts for critical operations.

What made you choose this as a career? How did you get here?

My interest in weather started in my early youth and was sparked by a fascination with snow. We lived outside Edinburgh in a location which was quite prone to snow and several heavy falls have stuck in my memory to this day. For as long as I can remember I wanted to work as a meteorologist; I had no other competing options all through secondary school and so I went on to study Physics and Meteorology at Reading University. I got a job for a private marine weather company immediately after graduating, and that started me on my path to

where I am today. I count myself very fortunate – few people are lucky to be able to work at their hobby!

What are the challenges you face in this type of career?

As in nearly all operational forecasting, shift work is a necessary part of the job, so you must be prepared to work during the day, night, on Christmas Day etc. Direct contact with clients can be challenging, especially when the forecast has gone wrong and the nice weather window promised has vanished without trace! Clients are often experienced marine professionals with a wide knowledge of offshore weather, and the forecaster must be able to discuss such matters knowledgeably with the client.

Do you have any advice for somebody working towards this career?

Be sure that you want to work in a strand of meteorology in which direct contact with clients is part of the everyday job! If you do want to work in marine meteorology, take any opportunity you can to observe waves at sea.



Dr Daniel Adamson

**Meteorological Modeller,
MetDesk**

“I write bespoke models used by and for a variety of weather-sensitive industries”

What do you do in your current (or previous) job?

As a meteorological modeller and programmer, I write bespoke models used by and for a variety of weather-sensitive industries and applications; these include transportation (e.g. roads, rail, aviation), energy (e.g. renewables, demand) and general forecasting products. Previous roles have included weather forecasting for UK roads and rail, as well as meteorological training.

What made you choose this as a career? How did you get here?

I have had a strong passion for meteorology and physical oceanography for as long as I can remember; possibly this originates from living by the coast my whole life and being fascinated by the interaction between waves, tides, storm surges and the weather. Once I'd decided on a career in meteorology, I studied the relevant subjects at A Level (maths and physics), before undertaking a BSc in Mathematics and Meteorology at the University of Reading, followed by a PhD in Meteorology there. I'd recommend meteorological modelling and programming as a career for anybody with a keen interest in the physical environment, who wishes to use their mathematical expertise

to enhance the way we model and forecast the weather and related applications. The role is exciting and diverse with an ever-increasing range of weather-sensitive areas requiring some kind of bespoke modelling.

What are the challenges you face in this type of career?

With ongoing technological advances and increasing computing capacity, the role of a meteorological modeller is becoming more and more dominated by the requirements for huge volumes of meteorological data to be continuously supplied to multiple clients. To achieve this, the role of a meteorological modeller is becoming increasingly dominated by IT, APIs and the necessity to develop skills in multiple programming languages. Hence, a keen interest in this area is also vital.

Do you have any advice for somebody working towards this career?

Anybody wishing to pursue a career in meteorological modelling and programming should ensure they develop sound mathematical, scientific and IT programming skills, as well as having a passion for meteorology/environmental science.



Verity Fargie

**Meteorologist,
RWE Supply & Trading**

“You should be interested in the financial and trading aspect, as well as the meteorology.”

What do you do in your current (or previous) job?

In my current role I am a meteorologist for the energy trading company, RWE Supply & Trading. The company trades commodities, from energy-based to agricultural products, around the globe. I work on analytical projects and develop tools to improve our forecasting ability. I also provide operational forecasts of meteorological variables that influence energy supply and demand (wind, solar and temperature) for internal clients.

What made you choose this as a career? How did you get here?

I enjoyed both the programming and forecasting aspects of my masters degree. This career is an exciting mix of data analysis of meteorological phenomena and forecasting using the best numerical weather prediction (NWP) models. The information you provide is applied with a sense of real immediacy. When a meteorological analyst opportunity came up after my masters at an energy-based commodities hedge fund, I successfully applied and continue to enjoy working in this fast-paced industry.

What are the challenges you face in this type of career?

Handling and communicating uncertainty can be challenging in this industry. The confidence you have in forecast scenarios is important trading information. A good forecaster will be aware of this and be able to communicate their confidence and reasoning in a consistent and reliable way.

Do you have any advice for somebody working towards this career?

You should be interested in the financial and trading aspect, as well as the meteorology. As a forecaster in the energy industry, your aim is to provide concise and actionable information. To that end, it is useful to understand what products the traders you are interacting with are buying and selling. This information gives you context for their questions on forecast confidence and more opportunities to apply your meteorological specialist knowledge. This is relevant both during interviews and when you have got the position! In addition, data science is increasingly important in this industry. As a result, you should have confidence handling, analysing and interpreting data.

CAREER PROFILES



Dr Sarah Dennis

Manager of Global Food and Environmental Institute, University of Leeds

“I would recommend this career if you enjoy working on challenges in a holistic way”

What do you do in your current (or previous) job?

Currently, I am responsible for leading operational delivery of this cross-faculty research programme. This involves: translating the Institute strategy into delivery plans, leading the Institute's operational team (event planning and communications), monitoring and reporting on Institute activity and managing budgets and reporting on income streams and expenditure.

What made you choose this as a career? How did you get here?

I initially completed a BSc in Meteorology at Reading University, during which I spent two summers working at the Met Office on aircraft instrumentation. This experience in instrument development lead me to a PhD at the University of Leeds, followed by ten years of post-doc experience deploying instrumentation in remote locations e.g. the Polar Regions. The teamwork, organisation and multitasking nature of this work helped develop many skills easily transferable over to roles in Project Coordination and Project Management. A core science background is important in such roles to understand the research and the academic environment, so you can easily communicate

with the scientists and external stakeholders. I would recommend this career if you enjoy working on challenges in a holistic way.

What are the challenges you face in this type of career?

One of the biggest challenges is quickly having to understand a new science topic to be able to be involved in the discussions. I have enjoyed this opportunity to learn about a range of very relevant, novel science.

Do you have any advice for somebody working towards this career?

If you have always had a flare for organisation, good interpersonal skills, and a love for a range of sciences and communication of that to others, then this would be a good step after a postdoc. Fixed Term Contracts (FTC) are used widely in University and are hard to escape. I am still on a FTC but the skills and experience I now have can be applied to a wide range of natural science research projects. These project management skills and experience are transferable between research projects, universities and even into industry, giving you a higher level of job security. Try to get experience organising and planning events by getting involved in the RMetS student conference committee or a local centre.



Andy Wells

Safety Policy Lead, UK Civil Aviation Authority

“I regulate the provision of meteorological information to pilots in the UK”

What do you do in your current (or previous) job?

I am a Safety Policy Lead at the UK Civil Aviation Authority (CAA), covering Air Traffic Management Infrastructure. In this role, I regulate the provision of meteorological information to pilots in the UK, ranging from weather forecasts provided to commercial aviation for global operations, to local forecasts for highly weather-sensitive operations, as well as the weather observations provided from 52 UK airports.

What made you choose this as a career? How did you get here?

My interest in weather began at an early age, measuring temperature and rainfall in the garden and then later running my school's weather station. Armed with maths and physics A-levels, I studied meteorology at university and then joined the Met Office as a trainee forecaster. From there, my interest in aviation meteorology and how information is used to inform operational decision making grew. I spent eight years forecasting at military air bases, before joining the civil aviation team, where I worked with UK airline operators, offshore helicopter operators and General Aviation organisations to understand their requirements and resolve any issues. I then

joined CAA permanently and was co-opted on to several international working groups that are setting the standards of the provision of weather information for future civil aviation.

What are the challenges you face in this type of career?

I have witnessed how meteorology has moved from being something that was dealt with as it happens to something that is actively planned for, including cancelling flights a day in advance based on the forecast. There are many challenges in this area, for example: bridging the desires and reality of forecasting capabilities, funding and equitable cost sharing among airspace users. There are also the newcomers, such as Unmanned Aerial Systems and the need to define the meteorological information required to support these activities.

Do you have any advice for somebody working towards this career?

Try to understand how information is used. Not only does this give you insight into how meteorology fits into the overall operation, it provides a useful feedback loop on how you communicate information, as well as an opportunity to challenge some of the ways in which meteorological information is used incorrectly or wrong assumptions are made.



Geoffrey Saville

**Senior Research Manager,
Willis Research Network's
Weather and Climate hub**

“Coding and statistical skills are an advantage in analytical roles in the risk sector”

What do you do in your current (or previous) job?

The core of my role is focussed on managing the research projects and relationships with our academic partners in the Willis Research Network (WRN). The WRN is an award-winning collaboration between the finance sector and academia, aimed at applying the latest science to advance our understanding and management of risk. I also consult with companies regarding extremes of weather and impacts of climate change.

What made you choose this as a career? How did you get here?

From an early age I was very interested in the weather. It was probably the Great Storm of 1987 which developed this fascination with extreme storms and the impacts they can have on society and the environment. I studied geography, art and maths at A-level before gaining a BSc in Environmental Science from UEA. I then secured a position with the Met Office as a trainee forecaster. After more than ten years in all kinds of forecasting roles, including working for the Bermuda Weather Service, I took a secondment in the Met Office Commercial team to work with the insurance sector to develop new services and

relationships. This role piqued my interest to switch to the private sector, to explore the world of extreme weather and climate risk. A few years ago, I completed a MSc in Climate Change from UCL.

What are the challenges you face in this type of career?

Bridging the gap between academia and business can be challenging for many reasons, including: differing timescales, subtleties around intellectual property, motivations for doing the research, and accurate communication of the latest science as well as specific business needs. While businesses tend to focus on results and applications of projects, in academia the journey to the end conclusions is often more important. I also enjoy the challenge of translating complex science or business practices to be accessible to our business teams and the wider scientific community.

Do you have any advice for somebody working towards this career?

Make sure your maths and physics are strong if you plan to go into forecasting. Subject matter expertise is useful but coding and statistical skills are also an advantage in analytical roles in the risk sector.



Holly Clements

**Senior Hydrometeorologist,
Flood Forecasting Centre,
Met Office**

“If you set your mind to something you can achieve it.”

What do you do in your current (or previous) job?

I am an Operational Hydrometeorologist and a Duty Manager at the Flood Forecasting Centre (FFC), providing a 24/7 hydrometeorological service for Category 1 & 2 responders across England and Wales. In this role, I also work on the development and delivery of service improvements. I am currently working with the Environment Agency (EA) to develop a new Incident Management Forecasting System. This will streamline the flood forecasting service to improve the response during flooding through the whole forecast chain.

What made you choose this as a career? How did you get here?

I loved the practical application of Geography at university, but upon graduating felt I needed a stronger scientific background and so I completed a Masters in Meteorology and Climatology. I then trained in flood hydrology at the EA and worked in flood forecasting and flood incident management. Through this, I learnt first-hand the impact significant flooding can have on lives and became passionate about working in weather forecasting to improve services for communities. In 2009, I trained as an Operational Meteorologist at the Met Office and subsequently gained a role as

a Senior Hydrometeorologist in the FFC, which was a great opportunity to use my knowledge and experience of flood forecasting. Since then, I have taken many opportunities to develop further, including completion of CIWEM and gaining Chartered Scientist status.

What are the challenges you face in this type of career?

Operational shift work is challenging; working weekends and nights can be hard when friends and family have time off. Thankfully, due to project work, my role has a mix of shift work and normal working days and the Met Office are introducing this more widely for other operational meteorologist roles.

Do you have any advice for somebody working towards this career?

If you set your mind to something you can achieve it. Remember skills are transferrable – you can always use experience gained in previous jobs when working in a related area. Formal professional training is also essential, and it provides an excellent background to build on. In my role, I believe success and progression is more about softer skills in relationship management, influencing and communication, so you should develop these skills too.

ADVICE FOR **EARLY** CAREER PROFESSIONALS

For more information on items in blue, head to rmets.org



Do your research into potential employers at least 6 months before graduating



Send speculative applications – there is no set period when jobs are advertised



Try and learn a coding language – it can enhance your employability or help you get a foot in the door



Keep on top of knowledge and stay up-to-date with scientific developments



Look for a **mentor** – sign up for our mentoring scheme to access the wealth of expertise available from our members

INDUSTRY



Undertake your studies or research abroad (**Rupert Ford Award**) – it can enhance your employability



Volunteer for a professional society – join one of our editorial boards or committees



Monitor the job market – subscribe to our **JobsBoard**, MetJobs, Climlist, LinkedIn and Indeed Jobs etc.



Network - attend **conferences** and keep in contact with course professors and friends (LinkedIn, Twitter)



Gain **professional accreditation**



Work Life Balance: if caring for a family member, you might be eligible for our **Carers' Fund**



Present your work at **conferences**



Communicate your research through Twitter or blogs. Use plain language and accessible graphics



Submit your work for **awards**

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