

The 173rd Annual Report of the Royal Meteorological Society for the period 1 January – 31 December 2023

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THE SOCIETY'S MISSION

The Royal Meteorological Society is the UK's Professional and Learned Society for weather and climate and its mission is to advance the understanding of weather and climate and its application for the benefit of all. The Society plays a key role as the custodian of both the science and the profession of meteorology in the UK and has an important role to play internationally as one of the world's largest meteorological societies. The Society is owned by its membership but exists for the benefit of all.

PUBLIC BENEFIT

The Royal Meteorological Society is dedicated to providing benefit to the wider public, or sections of it, in achieving its aims. The Charity Act 2011 lists 13 main charitable purposes that would be regarded as 'for public benefit'. In the Society's case, the public benefit of our activities falls into four of these categories.

The advancement of health or the saving of lives

Through partnerships such as the General Aviation Safety Council (GASCo), the UK Flight Safety Committee (UKFSC), Royal National Lifeboat Institution (RNLI) and the Royal Institute of Navigation (RIN) as well as many weather service providers, the Society offers support and training for weather and climate-related safety-critical issues. The Society holds weather and climate education seminars and events for operational meteorologists, private pilots, and sailors, with the specific purpose of improving safety and reducing the number of accidents and incidents relating to poor weather conditions, which can sometimes be fatal.

In 2023, the Society attended a series of Aviation Safety Information Exchange meetings with GASCo for private pilots and created content raising awareness of World Drowning Prevention Day with the RNLI and co-hosted a webinar on '*Extreme Weather and Safety at the Coast: Insights from RNLI and RMetsS*'. The Society also hosted 6 Met Masterclass events for operational meteorologists in partnership with the University of Reading. Many of these events were free to attend.

The Society is the academic partner with EUROCONTROL to support the SKYbrary website (skybrary.aero/index.php/Main_Page) to oversee weather content in order to encourage a meteorological exchange of information with the aim of enhancing flight safety.

While responsibility for implementing and maintaining the Aeronautical Meteorological Personnel (AMP) standards rests with the weather service providers in the aviation sector, the Society continues to provide support and impartial advice where required to enable them to comply with the World Meteorological Organization's (WMO) and the International Civil Aviation Organization's (ICAO) criteria for competence and qualifications. The Society's professional accreditation schemes (Registered and Chartered Meteorologist) also support record holding of Continuing Professional Development (CPD) activities required as evidence for maintaining the AMP.

The advancement of education

The Society's mission has a wide remit that looks to support people's understanding, interest and enthusiasm in weather and climate, whether they are research scientists, amateur meteorologists, practitioners, communicators or members of the general public. It goes further, supporting the development of high-quality science, the next generation of scientists, the professional development of individuals, recognising further and higher education courses, informing policy and supporting learning in weather and climate through education and outreach activities.

The Society works with teachers and students at primary, secondary and higher education levels to promote understanding of weather and climate, and runs interactive projects to both stimulate the interest of students in meteorology and to improve the quality of teaching materials and resources in

schools. The Society's aim is to reach every student in the UK so that they leave school with the basic weather and climate literacy to understand the impact of weather and climate change in their personal life, leisure activities and employment, and to engage with the climate conversation and make informed decisions about their own opportunities and responsibilities.

A key activity in 2023 was completing 120 expert reviews spanning over 100 GCSE specifications and Key Stage 3 (KS3) curriculum finding any links to climate change. Teachers were then asked to comment on the relevance of the reviews to their classroom practice. The Society also published an overview report in collaboration with major exam boards (AQA, Pearson and OCR) detailing findings with respect to their specifications.

Together with others in the National Climate Education Action Plan partnership, the Society developed a framework for assessing the quality of climate change teaching resources, which the Society is now overseeing.

Building on the groundbreaking 2022 climate literacy survey, to annually monitor school leavers level of climate literacy, the Society again asked Ipsos to carry out a 2023 survey of 16 year-olds in Wales and Scotland, and worked with the Department for Education and climate experts to develop 50 further questions which will be asked of students in England from 2024.

In 2023, the Society: reviewed the quality of climate change information in past school exam and assessment materials; launched a number of new resources on Metlink, www.metlink.org/; hosted a careers day; and continued to support the loan of weather instruments to schools. In addition, the Society is also freely providing an increasing number of Continuing Professional Development (CPD) opportunities for teachers who have come to teaching weather and climate from a non-meteorological background. Additionally, the online weather and climate course, [Come Rain or Shine](#), continues to be permanently available.

At higher education levels, the Society awards financial support to enable students to broaden their studies of meteorological sciences. The Society provides careers information, such as our updated careers booklet rmets.org/careers-meteorology-guide. The Society's Youth and Early Career Special Interest Group (SIG) focuses on the Society's engagement with and provisions for youth and early careers, as well as championing their voice within RMetsS activities.

The Society is recognised as both the competent authority and the regulatory body for meteorology in the UK, and offers independent recognition around training and professional development for meteorology and meteorologists. The Society's accreditation framework offers individuals two schemes: professional registration and chartered status, as well as related CPD opportunities, such as the Met Masterclass series which delivers six webinars in 2023. The Society offers a number of CPD opportunities through the events programme, scientific journals and volunteering.

The advancement of the arts, culture, heritage or science

One of the Society's charitable objectives is to promote the advancement and dissemination of knowledge and education in science for public benefit. The Society aims to advance professionalism in meteorology through the Chartered Meteorologist and Registered Meteorologist accreditation schemes which recognise high professional standards and competences and follow an established code of conduct. The Society sets standards for CPD, and professional conduct and performance, so that meteorologists are empowered to conduct high-quality, ethical work consistently throughout their careers. The Society works with professional bodies, government, employers and national academies, and aims to ensure the workforce across the meteorological community reflects the diversity of society.

The Society publishes eight world-leading scientific journals, including the recently launched journal **Climate Resilience and Sustainability**. These are made available free to developing countries through publishing aid programmes and to the World Meteorological Organisation's (WMO) Regional Training Centres. Half of our portfolio is fully open access providing free access on important science to readers.

The Society has a curation programme for a historical and culturally valuable archive of documentation on behalf of the UK. Most of our important artefacts are held at the National Meteorological Library and Archive in Exeter, with many articles being digitised to make them accessible to all. The Society also owns a set of cloud study drawings (c1803-1811) produced by Luke Howard, famous for naming the clouds, which are held in the archives at the Science Museum and are regularly exhibited.

The Society runs a comprehensive events programme, which is open to all with an interest in weather and climate. This includes free public meetings to encourage a focus on global, national and local issues, and also conferences to bring about the advancement in the understanding of meteorology as a science, through its applications and as an interest to all. In 2023, the Society delivered a diverse and ambitious programme of events throughout 2023, including 52 events (22 in-person; 3 hybrid; and 27 virtual). The programme variety aims to increase accessibility for delegates whilst also supporting different audience needs.

The Society hosts an annual Early Career Scientists' and Student Conference that brings together those involved in graduate and post-graduate studies, as well as early-career scientists from the UK and internationally, to create a community of young scientists and to give them experience in active participation in scientific conferences. In 2023 the event was held as a hybrid conference at the University of Reading in July and attracted over 100 in-person delegates.

The Society offers grants and bursaries to encourage interaction between scientific groups both in the UK and internationally, to enable attendance at meetings and conferences.

The Society's Special Interest Groups deliver events and other activities to facilitate the exchange of information and views within specific areas of meteorology. The groups are primarily a way of communicating at a specialist level and include areas such as the History of Meteorology and Physical Oceanography, Atmospheric Electricity, Climate Dynamics, and Meteorological Observing Systems.

The advancement of environmental protection or improvement

The Society is at the heart of the debate on climate change and aims to lead by example in the transition to net zero. It plays a particularly important role in communicating some of the more complicated scientific and technical issues to the public at large, enabling them to understand and engage with what is one of the most important global issues that we face today. This role is overseen by the Society's Science Engagement Committee, which aims to sustain, encourage, and progress activity in climate science and its relevance to society.

The Society' activities during 2023 included:

- sponsoring three 12-month Science Engagement Fellowships to engage with non-academic stakeholders to build multidisciplinary partnerships, develop engagement skills and experiences, enhance their profile with stakeholders and leading academics, and grow their research impact. The Science Engagement Fellows support three Special Interest Groups on: Energy; Insurance; and Youth and Early Career. Collectively they delivered a number of events on:
 - 'Modelling Weather and Climate Hazards';
 - 'Insurance and Climate Science: Research, Analytics and Grand Challenges';
 - 'Energy, Weather and Climate Forum: Challenges and Opportunities';

- ‘Seasonal Forecast Outlook for the Energy Sector’;
 - ‘Diverse Voices’; and
 - ‘Early Careers: An Insight into the Life of Operational Meteorologists’.
-
- delivery of the Community Leaders Climate Change Training project and delivering climate change communication training to the Public Relations and Communications Association (PRCA), Oxford Diocese, the Greater London Authority, DTN, AJT and Jersey Met, as well as ongoing support to ITV on recent climate science/policy updates. A series of short films were also developed for the Sustainability Unlocked learning portal.
 - hosting a webinar on ‘The Role of Behavioural Change and Communication in Tackling Climate Change’ ahead of COP28 and attending COP28 providing updates to our members and stakeholders through videos and written roundups for both MetMatters and ITV.
 - running the Weather Photographer of the Year Competition which received over 3,700 photos from over 1,200 photographers around the world.
 - responding to over 180 media requests.

The Society’s website rmets.org has a wide range of information and content that is freely available to all with an interest in the Society and in meteorology. The Society continues to invest significantly in making its website more accessible and informative, providing a wide range of freely available educational, scientific and professional material.

PRESIDENT’S FOREWORD

Having completed my term as President in September 2022, I didn’t expect to be writing another President’s foreword. But as I am sure you know, our President Lesley Gray unfortunately had to step down so I have returned for an encore until the new President takes over in October 2024. However, I would like to thank Lesley for all she achieved in her time as President, and wish her well for the future.

I don’t want to just summarise all the Society has achieved this year as you can read that in the report so here I will just give a few personal reflections that occurred to me as I read the report.

I was particularly pleased to see the breakdown of membership which is made up of amateurs (26%), practitioners (32%), academics (32%) and students (10%). This very even spread tells me that we are achieving our aim of serving all those who share a passion for weather and climate.

This led me to reflect on my own personal journey with the Society. I joined as a student, even though I couldn’t really afford it and I had to sacrifice a few pints of beer to pay the membership. The first meeting I attended was a talk at the North West Centre, the first time I gave a presentation of my work was at a Society meeting in London and I published my first paper in the Quarterly Journal.

Over the following years, I attended more Society conferences and published more papers then, much to my surprise, I was asked to become the General Secretary of the Society. I’ll be honest I wasn’t keen as I was already incredibly busy with my full-time job. But my Met Office manager “encouraged” me to do it with those words nobody wants to hear “It will be good for your career”. But I have to say the management and other skills I learned proved invaluable so I hate to admit it, but my manager was probably right.

Over the next 25 years or so I continued to have contact with the Society until, skipping forward quite a few, OK a lot of, years I was again surprised to be asked to become President of the Society. As well as

being interesting and fulfilling in its own right, this gave me the perfect opportunity to start paying back some of the benefit the Society has given me throughout my career.

So, why do I stay with the Society as I no longer need to publish papers or attend conferences to keep up to date with the latest science? Well, I am passionate about weather and climate, and I haven't even mentioned what I think is probably the most important aspect of our work – education. Enthusiasm and educating the next generation is vital and we have a responsibility to make sure the information children receive is accurate, educational and exciting.

So, over the years I have been a student, a practitioner and an academic and now I am just an amateur enthusiast, so I have ticked off all the membership categories and the Society has been of great benefit to me throughout.

Please take the time to read the annual report for yourself and I hope your journey with the Society is as fulfilling as mine has been and continues to be.

THE YEAR JANUARY TO DECEMBER 2023

A brief review of the highlights.

The weather in the UK in 2023 was warmer and wetter than average. It was another record-breaking year with the hottest June on record, joint hottest September and the warmest year on record for Wales and Northern Ireland. Overall, for the UK, 2023 was the second warmest on record, only slightly behind the 2022 record. Climate attribution studies showed that 2023 was 150 times more likely to be this warm due to human-caused climate change. Unusually, June and September experienced the warmest periods, with July and August being cooler and wetter.

It was another busy year for the Society across all of our activities.

In 2023, the Society saw an increase in most levels of membership, including growth in our Member and Student grades, and overall increase in total **membership** of 0.8% (to 3,249). Membership development remains one of the strategic aims of the Society focusing on retention and new member acquisition through a series of activities. Member retention rates for 2023 were 91.2%, achieved during another difficult year, which is all credit to the hard work of the membership team. This demonstrates that members value their membership. The Society recognised the impact of the cost-of-living crisis and subscription renewals have been closely monitored with additional communications on support available to members.

The Society is extremely grateful for the continued support from an active and engaged community of **volunteers**, with over 500 volunteers involved on the Society's committees or contributing in other ways. This important contribution from volunteers allows the Society to successfully achieve many of the activities highlighted in this annual report.

The Society gave 180 media interview requests fulfilled and 2,233 items of media coverage. Social media presence continued to grow with the most significant increase on LinkedIn, where followers grew by 49% to 6,615. In addition, we have 15,426 followers on X (formally known as Twitter), 7,311 on Instagram and 5,100 on Facebook. The Society **Marketing and Communications** delivered an Impact Report during 2023 to highlight the work of the Society and its charitable benefits.

In 2023, the Society worked with an external consultant to provide overarching coordination for the Society's work on **Equality, Diversity, and Inclusion (EDI)** and to support the Society with data

reporting. The Society's EDI Working Group provides advice and guidance to the Society as it continues to deliver and improve its work on EDI by establishing clear actions and priorities. The Society completed its first EDI survey of its membership, which has provided a baseline understanding of the diversity of the RMetS membership and helped to inform the subsequent action plan. In 2023, the Society began communicating more clearly about its work on EDI and developed its strategic priorities for EDI, which include reviewing employment processes internally and building and supporting a diverse meteorological community.

The Society is part of [Pledge to Net Zero](#), [CAFA](#) (Climate Action For Associations), and helped develop and signed Professional Bodies [Charter for Climate Action](#). The Society is committed to achieving **net-zero** direct carbon emissions (Scope 1 & 2) by 2025, where there is direct control through avoiding, reducing and substituting. It is also working towards net-zero indirect emissions (Scope 3) by 2030, subject to a full feasibility assessment. The Society has taking steps to eliminate scope 1 emissions by replacing an end-of-life gas boiler with a new electric system. The Society has already cut its scope 2 electricity emissions to net zero by switching to a 100% renewable energy tariff, switching to efficient lighting and installing solar panels on the roof to contribute to its energy demands. Scope 3 emissions for our baseline year of 2022 were collated during 2023.

The Society continues to strengthen its relationship with strategic partners from a range of organisations including academic institutions, business and industry, NGOs and government to support the delivery of its charitable objectives.

Scientific publishing is one of the Society's strengths and aims to deliver a high-quality portfolio of journals and book programme to support scientific knowledge management and promotion of the science. Income from scientific publishing makes up a significant portion of the Society's total income and allows the Society to deliver several other important programmes of work and charitable activities. In 2023, the Society celebrated the 150th anniversary of the **RMetS Quarterly Journal**, by hosting an event, publishing a commemorative issue of the journal and an online timeline detailing the history of the journal.

The Society has managed to deliver the vast majority of planned activities in 2023, thanks to the support and determination of the staff and volunteers. The Society continues to be in a strong financial position. However, the next few years remain challenging, with pressures on income across the meteorological community and from scientific publishing due to the move to an Open Access model; the Society will enter this period on a firm financial footing.

FINANCE

The Annual Accounts for the year ending 31 December 2023 are published separately from this Annual Report in line with the requirements of the Charity Commission. The Auditors' report is on page 1-2 of the Accounts and certifies that in their opinion the financial statements give a true and fair view of the Society's affairs and of its income and expenditure for the year then ended.

The Society continues to be in a good financial position and total reserves on 31 December 2023 were £2,759,069 (2022: £2,630,199).

The operating surplus of the Society in 2023 was £63,113 (2022: £32,657) which exceeded our budget for the year. Income diversification away from the Society's main income streams of Publishing and Membership is a key element of our medium term strategy and we were able to increase the share of total income derived from other sources in 2023 to 11% (2022: 2%). Investment gains of £65,757 (2022: loss £139,678) were recognised, recovering some of the losses of 2022 as the global outlook

improved. Inflation reduced from the high levels of 2022, and this has prompted expectations that the central banks of US, EU and UK will not need to raise interest rates any higher. Offsetting this is the turbulence in the Middle East, as well as some concerns over China's economic performance. .

The Society's scientific publications continue to provide the bulk of our income totalling £865,614 in 2023. (2022: £911,271), The decrease of 5% is primarily due to the one-off contract renewal bonus included in 2022 figures. On a like-for-like basis, income increased by 7%. Non-subscription publishing income from institutions has again made an important contribution and Open Access income is slowly increasing reflecting the gradual move away from traditional subscription journals. Other publishing activities such as the calendar and books contributed £7,104 (2022: £11,323). The associated expenditure on publications was £160,264 (2022: £203,762).

There was a slight increase in Membership numbers of 1%, with increased numbers of students and associate members compensating for a reduction in Fellows. This change in 'mix' is reflected in slightly lower membership income of £234,608 (2022: £236,835). During 2023 staff, have continued to develop plans to engage and recruit a more diverse membership by creating an improved member value proposition, have 're-booted' the Student Ambassador Scheme, and have worked to increase engagement with our corporate members.

2023 has seen a return to face-to-face events, with 22 delivered in person. The staff continue to provide a diverse and ambitious programme of events and during 2023 carried out a survey to understand how we could reduce barriers and limitations that delegates face. Events income was lower than the previous year at £35,191 (2022: £46,719)

Other Income saw a substantial increase in 2023 to £151,662 (2022: £27,399) with most of the increase attributable to the sponsorship of the Weather Photographer of the Year competition by Standard Chartered Bank, the 1st year of a 3-year contract.

The notes in the separate Annual Accounts provide more insight into the detailed figures and the way these have been compiled.