



Science

Shaping the
world we live in

Trustees' report and financial statements
for the year ended 31 March 2020

THE
ROYAL
SOCIETY

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About us

The Royal Society's fundamental purpose, reflected in its founding Charters of the 1660s, is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity.

The Society is a self-governing Fellowship of distinguished scientists drawn from all areas of science, technology, engineering, mathematics and medicine.

The Society has played a part in some of the most fundamental, significant and life-changing discoveries in history and Royal Society scientists – our Fellows and those people we fund – continue to make outstanding contributions to science and help to shape the world we live in.



Discover more online at:
royalsociety.org

Charity

As a registered charity, the Royal Society undertakes a range of activities that provide public benefit either directly or indirectly. These include providing financial support for scientists at various stages of their careers, funding programmes that advance understanding of our world, organising scientific conferences to foster discussion and collaboration, and publishing scientific journals.

The Society has three roles that are key to performing its purpose:

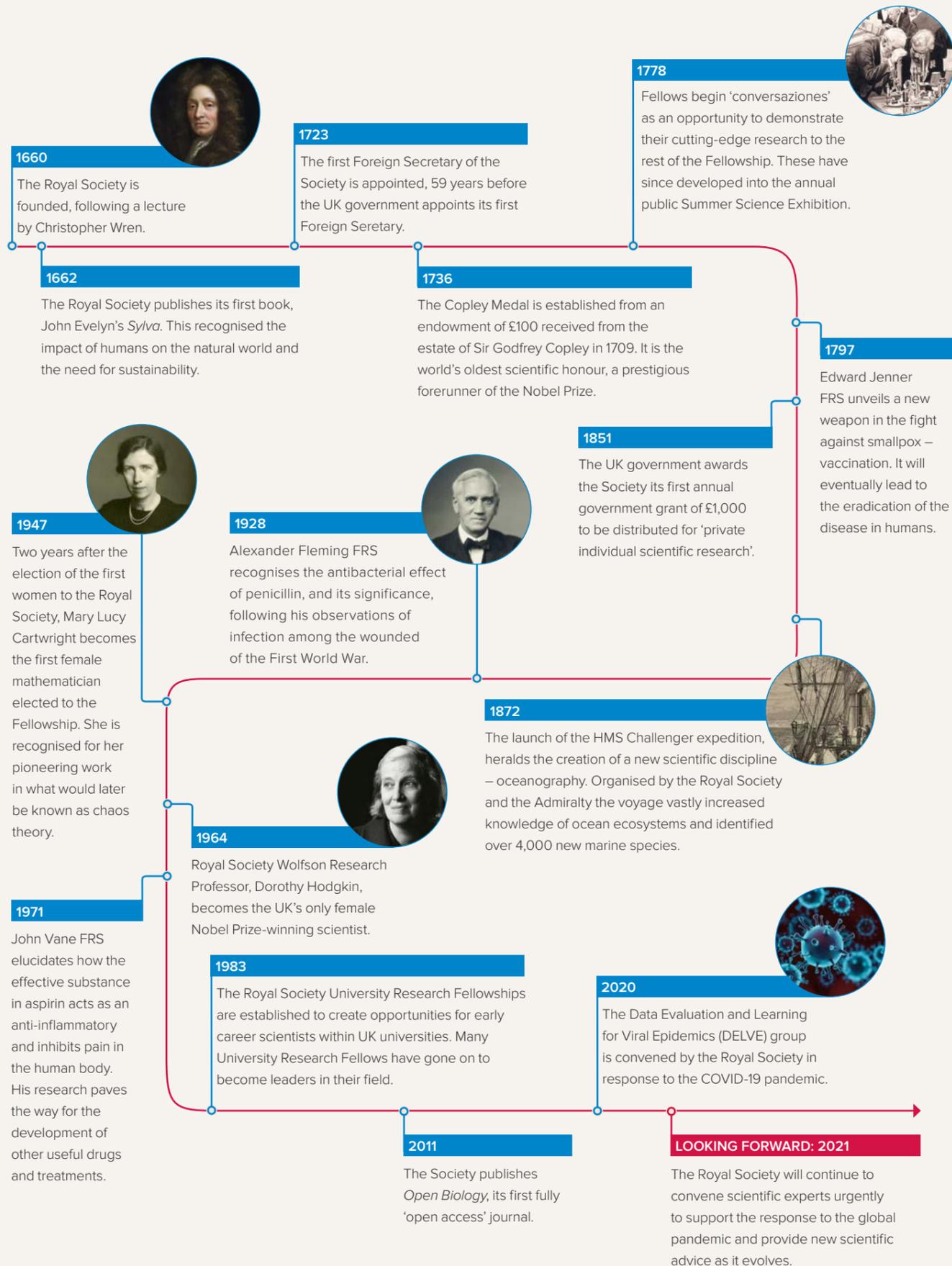
Fellowship

As a fellowship of outstanding scientists embracing the entire scientific landscape, the Society recognises excellence and elects Fellows and Foreign Members from all over the world.

National academy

As a national academy, the Society represents the UK and collaborates with international partners to advocate for science and its benefits. It provides authoritative and independent advice on matters of science that support the public good, including policies that promote excellent science and scientific issues that inform public policy.

Our heritage



At a glance

£133.7m 
total expenditure, 17% increase from 2018/19

11,513 
members of the public attended the Society's Summer Science Exhibition

1,913 
participants at the Society's internationally renowned scientific meetings

1,065 
researchers currently supported by the Royal Society through its research fellowships

Papers from our journals were downloaded over **30m**  times

61 
new Fellows and Foreign Members elected, including 13 women

41,784 
pages from our archives digitised

1,472 
downloads of the *iHuman* report

 The Society's *People of Science* videos received more than **725,000** views on YouTube

212 
staff organised into programmes, services and trading sections

President's foreword



“

Science has been central to the handling of the pandemic and the Royal Society has been to the fore.”

Over the past year we have increased our investment in outstanding scientists from £84.7 million to £102.5 million.

The world in April 2019 was very different from the world in March 2020. The global COVID-19 pandemic has impacted everyone, with millions of confirmed cases and hundreds of thousands of recorded deaths. Societies, including the UK, have spent months in lockdown with people separated from their families and businesses unable to operate.

Science has been central to the handling of the pandemic and the Royal Society has been to the fore. Our Fellows and people who we fund are contributing to the global effort to tackle COVID-19. A long-term investment in science has allowed us to rapidly develop our understanding of this virus and make progress on developing treatments and potential vaccines.

In addition to individual Fellows contributing directly to advice within and to government, the Society convened three groups to support the understanding of the science of the virus and help inform the policy decisions that the government was taking. The Society brought: modelling expertise from a diverse range of disciplines to support the pandemic modelling community; multi-disciplinary expertise to support a data-driven approach to learning from different approaches to managing the pandemic; and the expertise of our Fellows to provide rapid science advice on topics relevant to tackling the pandemic.

These groups, while independent of the government, have also been providing their expertise to

government advisory groups such as the Scientific Advisory Group for Emergencies (SAGE).

As a scientific publisher, the Society also made all COVID-19 data and research findings immediately and freely available. We have also done what we can to help support young people when schools were closed, drawing together our resources that could be used to support home learning in science, technology, engineering and maths.

 [Read more on pages 20 – 21.](#)

The pandemic arrived towards the end of the 2019/20 financial year and will no doubt dominate thinking when looking back on this period. However, much went

before it. Avoiding potential damage to science from a bad Brexit and the general election and what a new government would mean for science were also high on the Royal Society's agenda.

We continued to make the case for the best possible outcome for science as we leave the European Union. The outward-facing, international nature of UK science has never been more important in tackling global challenges. Challenges that are global but that have very real impacts on the everyday lives of all of us – on our health, on the way we live our lives and on jobs and the economy.

The UK has always been outward looking on science – we have thrived by welcoming the best people from around the world to come and work with our own outstanding homegrown talent. That has been threatened by Brexit and we have continued to highlight this problem to the government. In January, Downing Street announced a new Global Talent Visa. The government listened to the research community, and delivered an important first step in creating the visa system that we need to continue to attract global scientific talent – one that is welcoming, faster and more flexible, and takes into

account the long-term aspirations of scientists and their families.

Investment in science is essential for the health, wealth and happiness of the nation. That was one of the key messages that the Royal Society put to politicians in the general election. It is a message that has hit home, with the main parties making a significant commitment to increasing investment in science. In March, the Chancellor of the Exchequer committed to more than doubling government investment in research and innovation by the end of this parliament.

The Royal Society is an important part of delivering that investment in science, and over the past year we have increased our investment in outstanding scientists from £84.7 million to £102.5 million. The people we invest in are pushing the boundaries of human understanding, as our Charter from 1660 describes, for the benefit of humanity.

Science impacts our lives in so many ways. This year the Society has published reports on technologies that can help us decarbonise our economy and tackle climate change and set out ways to support people to develop the data skills that will prepare them for the jobs of the future. We published a report on

the technology and ethical issues raised by the development of neural interfaces – electronic devices linked to our nervous systems that have great potential in medicine but could also exacerbate already strong inequalities in society. We also convened an international commission with the aim of developing principles, criteria and standards for the clinical use of genome editing of the human germline.

Science and innovation promise so many improvements to the way we live but they also bring significant ethical challenges. Science can tell us what we can do but it is up to society to decide what we should do. Over the past year, our Fellows and the people we fund have continued to find new ways to benefit society. The Royal Society has continued to help people understand what the choices are and to give them the means by which they can decide what directions we go in. In a year that ended with great challenges for us all, science offers us hope for the future.

V. Ramakrishnan

Venki Ramakrishnan
President of the Royal Society

“

In a year that ended with great challenges for us all, science offers us hope for the future.”

Executive Director's report



“

Grant-giving is the main way that we support scientists, but we have continued to increase our engagement with industry, encourage international collaborations and strengthen research capacity in developing countries.”

“The second series of our *People of Science* films launched this year and tells the stories of extraordinary scientists, using our archive of science artefacts.”

This year has been another year of growth for the Royal Society but one that ended with the severe disruption of the global coronavirus pandemic. Lockdown closed our building in central London and shut down some of our programme of activities, but we continued much of our work from our homes. As you will see from our President's Foreword, science and the Royal Society have been at the heart of the response to COVID-19.

In the year leading up to the pandemic, we increased our expenditure by 17% to £133.7 million as we continued to recognise scientific excellence by providing financial support for scientists at various stages of their careers in the UK and internationally. We awarded

£102.5 million to fund exceptional researchers and outstanding scientists, which is an increase of 21% from the previous year. More than 1,065 researchers are currently supported by the Society through its research fellowships. This year also saw our first FLAIR fellowships awarded, supporting early career researchers in Africa.

Our work to elect top scientists to our Fellowship continues. This year, two new temporary nominating groups were established to increase nominations from groups that are under-represented because of ethnicity, gender or location, and from those working in industry. There is clearly still more work to be done to increase the diversity of

the Fellowship, but we are making progress in some areas.

In scientific publishing, papers in our journals were downloaded over 30 million times. Our scientific meetings programme has brought together leading experts to discuss the latest research and to develop knowledge of their field. This year we could not complete our programme due to the pandemic, but we are now planning for meetings to take place virtually.

We have continued to highlight the threats to UK science if there is no deal with the EU and to make the case for investment in science. This year saw the new Government commit to more than doubling public investment in research.

We continue to influence policy-makers and three key reports which we published last year illustrate our work in this area. Our reports on green ammonia, data science and neural interfaces showed how new technologies and ways of working can transform different aspects of science in the future. Our *You and the Planet* series of public events were designed to help shape public debate on climate change and biodiversity.

This year, along with US National Academy of Sciences and National Academy of Medicine, we convened an international commission on heritable human genome editing that brought together representatives from countries around the world. The findings of the commission will be published in 2020.

Working with leading scientific nations is an important part of our remit. The Royal Society's Foreign Secretary and I visited Beijing for high-level meetings with national science organisations, ministries and the private sector, as part of the Society's strategic engagement with China. The trip also set the scene for a year of work with China, including a discussion forum with Science Minister Wang Zhigang, exchanges on a range of topics with province-level science academies, and the translation into Chinese of selected science policy reports.

Our Partnership Grants scheme supported 49 schools and colleges, and over 8,400 students from primary and secondary level across the UK with up to £3,000 to buy equipment to run an investigation project in partnership with a STEM professional in either research or industry. Following a focus on promoting the scheme in Northern Ireland, we have had an increase in applications in 2020 from schools in the region.

Our Summer Science Exhibition saw over 11,500 members of the public attending a packed programme of events in our Carlton House Terrace building. Another 3,000 people were able to visit and find out more about our history during London's Open House Weekend. We also had excellent digital engagement, with all our social channels increasing by around 20% on last year and our website having 1.8 million users.

Our books prizes go from strength to strength, with Caroline Criado Perez winning the Royal Society Science Book Prize for her book *Invisible Women: Exposing Data Bias in a World Designed for Men*. A record-breaking 10,600 children from around the UK cast their votes to choose *Planetarium: Welcome to the Museum* by Raman Prinja and Chris Wormel as the winner of our Young People's Book Prize.

The year ahead looks to be very different from the last as the Society operates remotely. We will continue to engage with the public by using digital formats for some of our popular public engagement activities and holding virtual events online. Much of our work will be able to continue as planned, but remotely, such as electing our Fellows, judging our book prizes, publishing journals and funding researchers and we will use our convening strength to advocate for research and innovation and to support the scientific response to the pandemic.

Dr Julie Maxton
Executive Director of the Royal Society

Our strategic plan



Promoting excellence in science

The Society's aim is to harness the expertise of its Fellowship to ensure that excellence in science is recognised and supported and that scientific work is of the highest quality.

[Read more on page 16.](#)



Supporting international scientific collaboration

Science is an inherently international activity. The Society's aim is to reinforce the importance of science to build partnerships between nations and to promote international relations and science's role in culture and society.

[Read more on page 22.](#)



Demonstrating the importance of science to everyone

Science is influenced by culture and other developments in society, just as scientific thinking and innovation influence how people live their lives. It is important that the Society engages with different groups in society and with the public in general to find out about their experiences, to listen to their views and to make science part of wider conversation.

[Read more on page 28.](#)

Public benefit statement

The Society's mission is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity. Research and innovation advance our economic, social and cultural well-being, provide health benefits and are key to sustainable long-term economic growth. The Society is concerned with excellent science, wherever and by whomever it is done, and is committed to increasing diversity in science, technology, engineering and mathematics (STEM).

The Society furthers its mission through its three key roles: as a fellowship of the world's most eminent scientists; as the UK national academy of science; and as a registered charity.

The Society has a number of attributes that help to further its mission:

- the expertise of its Fellowship, which includes world leaders across all scientific fields;
- the breadth of its scientific disciplines; this removes barriers and enables leading scientists in different fields to come together;
- its independence from government and other organisations allows the Society to provide science advice that is unfettered by other interests;
- its ability to convene groups of individuals in key roles and with relevant expertise to address major issues in science and wider society; and
- its history and the successes of the Society's Fellows act as a source of inspiration for what science can achieve.

The activities that the Society undertakes to promote science and its benefits, for the ultimate benefit of humanity, include:

- recognising scientific excellence;
- providing financial support for scientists at various stages of their careers in the UK and internationally;
- funding programmes and research that advance understanding of our world;
- organising discussion meetings to advance scientific discussion and discovery;
- providing expert scientific advice to policy makers;
- promoting excellence in the teaching of STEM subjects and supporting teachers to be part of the scientific community;
- promoting the importance of science internationally; and
- staging programmes to engage the public with science.



Above: Summer Science Exhibition 2019: Living on the moon exhibit.

Our strategy at a glance

Our mission

To promote science and its benefits.

Our motto

Nullius in verba – take nobody's word for it.

Our principles

Independence

Integrity

Diversity and inclusion

Collaboration

Inspiration

Our roles

Charity

Fellowship

National academy

Strategic priorities



Promoting excellence in science

- Elect exceptional scientists to the Fellowship.
- Advise on the research landscape.
- Demonstrate the economic impact of science investment.
- Fund outstanding researchers.
- Recognise scientific achievements.
- Encourage and support innovation.
- Publish scientific research.

What have we achieved?

- Increased spending on grants from £84.7 to over £100 million, including increasing the number of early career researchers and the value of awards across flagship programmes. This includes the University Research Fellowships (URFs) and the Dorothy Hodgkin and Research Professorship schemes.
- Shown the value that investment in research brings to the UK, which is illustrated in the government's announcement that it will invest £22 billion a year in research and innovation by 2025.
- Increased engagement with industry, holding two new Creating Connections events.
- Increased the nomination of candidates for the Fellowship from underrepresented groups and those working in industry, including a 12% increase in the total number of women nominated.

Goals for 2021

- Continue to increase funding for research fellowship schemes for senior and early career researchers to the UK.
- Recognise outstanding scientific achievements through the Fellowship and medals and awards programme.
- Encourage and support innovation through industry fellowship and entrepreneurs in residence schemes.
- Deliver a programme of scientific events.
- Broaden participation and increase the diversity of the scientific workforce.
- Transition to a sustainable open access publishing model.



Supporting international scientific collaboration

- Proactive engagement on major issues.
- Address global challenges.
- Partner with leading scientific nations on new technologies.
- Implement Commonwealth programmes.
- Convene leading international meetings to advance science.

What have we achieved?

- Convened an international commission to develop principles, criteria and standards for the possible clinical use of human germline genome editing.
- Worked with the African Academy of Sciences to award the first ever FLAIR Fellowships and selected the second cohort of awardees.
- Continued to call for the best possible Brexit deal for research.
- Built on scientific partnerships by taking a delegation to China and hosting the 5th Joint Science Conference of the Western Balkans Process.

Goals for 2021

- Engage with European partners to promote collaboration between UK and European researchers.
- Continue to advocate for the UK's inclusion in the EU research framework programmes.
- Deliver scientific and policy engagement with leading scientific nations, such as China, the USA, Brazil and India.
- Participate in G7, G20 and Commonwealth Heads of Government Meeting (CHOGM) and develop a Commonwealth Programme, including a Commonwealth Science Conference.
- Foster collaborations between international and UK researchers through international grant programmes.
- Award FLAIR fellowships to help build research capacity in sub-Saharan Africa.



Demonstrating the importance of science to everyone

- Increase scientific advice for policy makers.
- New programme of public dialogue and engagement.
- Integrate science into public debate and culture.
- Promote the value of STEM education.
- Inspire through historic collections.

What have we achieved?

- Staged a programme of public events in London and around the country, including a series of *You and the planet* events.
- Saw an increase in visitors of 13% for the Summer Science Exhibition.
- Published key reports on neural interfaces, ammonia and data science.
- Pressed for a review of post-16 education.
- Launched a second series of the *People of Science* films.
- Delivered vital work in supporting the response to the pandemic.

Goals for 2021

- Convene scientific experts to support the response to the global pandemic and provide new scientific advice as it emerges.
- Provide evidence to policy makers on climate and biodiversity, future land use in the UK, data and Artificial Intelligence (AI), genetic technologies and other emerging areas.
- Advocate for increased investment in research and innovation.
- Redesign the Society's public engagement programme using digital channels.
- Launch partnership grants that support schools to consider issues around climate change and biodiversity.
- Boost young people's mathematics skills for future careers.

Relationships

Government, parliament and key influencers and funders

Industry, academia, education and civil society

The public, including children and young people

Resources

Royal Charter and strong governance framework

Robust systems, policies and procedures

Engaged Fellows, staff, volunteers and the science community

Where our income comes from and how we spend it

Income

The Society has a number of income sources, including the government, trusts, foundations, companies, individuals, trading activities and income from investments. Its income enables the Society to deliver a wide range of programmes in support of its strategic aims. Income for the year totalled £129.8 million.

Income and endowments from donations and legacies (£0.8 million)

The Society has relied on the generous support of philanthropists throughout its history. This year the Society received funding from trusts, foundations, companies and individuals in addition to the contributions made by Fellows. The Society is grateful to all its donors and their names can be found on the Society's website.

Grants for charitable activities (£108.5 million)

The Society receives the majority of its funding from the UK government's Department for Business, Energy and Industrial Strategy (BEIS). In the year, a grant was also received from the Department for International Development.

In addition to government funding, the Society receives valuable contributions towards charitable activities from long-term partners such as the Wolfson Foundation and the Leverhulme Trust, as well as other external bodies.

Trading in furtherance of charitable activities (£11.5 million)

The Society undertakes trading activities in the form of publishing journals and conferencing activities that further its charitable objectives.

Other trading activities (£2.0 million)

The Society acquired Chicheley Hall in 2008 with the aim of operating the property as a centre for scientific and academic conferences. In addition to its mission-related activities, the Hall hosted conferences and other events, and Royal Society Trading Limited was established to process the activities of the Hall. Royal Society (London) Ltd was established to process other non-charitable trading activities including income from sponsorship agreements.

Income from investments (£6.9 million)

The Society holds a significant investment portfolio which was valued at £234.1 million at 31 March 2020. Many of these funds held were bequeathed to the Society as endowments or gifted as a restricted fund for a specific purpose. The investment objective of the Society is to at least maintain the real value of its investment assets while generating a stable and sustainable return to fund charitable activities, thus being even handed between current and future beneficiaries.

Other income (£0.1 million)

The majority of other income sources relates to financial contributions made to projects led by the Society.

Expenditure

Expenditure for the year totalled £133.7 million. Expenditure is incurred on raising funds and charitable activities.

Expenditure on raising funds (£4.4 million)

Expenditure on raising funds includes the direct costs of raising funds, associated support costs, costs of trading and investment management fees.

Expenditure on charitable activities (£129.3 million)

The Society's charitable expenditure is categorised in the statement of financial activities as follows:

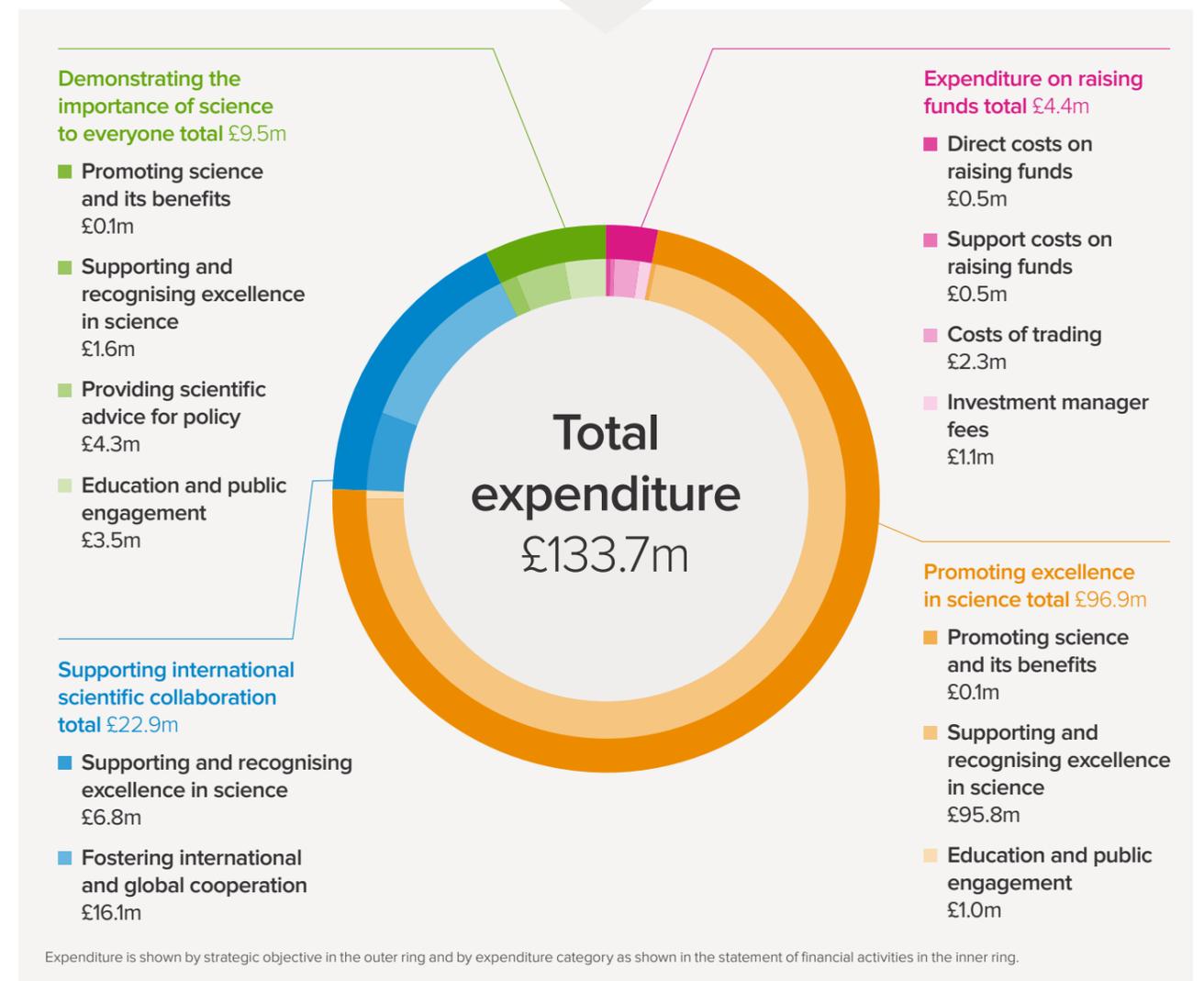
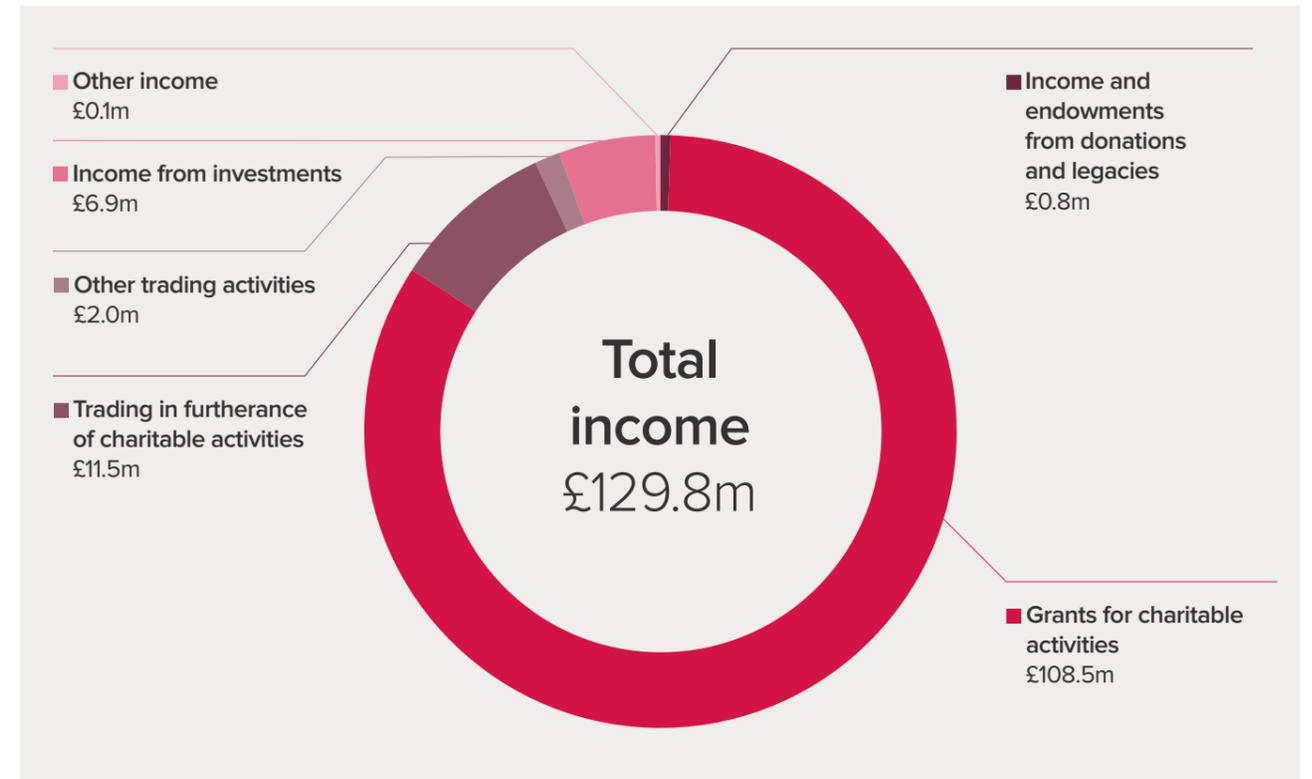
- promoting science and its benefits;
- supporting and recognising excellence in science;
- providing scientific advice for policy;
- fostering international and global cooperation; and
- education and public engagement.

Each of the areas above supports the delivery of the three strategic objectives as set out in the current strategic plan. The expenditure chart on the following page illustrates expenditure by both strategic objective and expenditure category.

The expenditure to further the strategic objective of promoting excellence in science includes the majority of grant awards, the costs of the Society's publishing operation and the costs associated with lettings at Carlton House Terrace which are in furtherance of charitable objects. Expenditure in this area also includes costs arising from recognition of the excellence and creativity of scientists by election to the Fellowship and Foreign Membership and the awards to scientists to recognise excellence in science and technology.

Expenditure to further the objective of supporting international scientific collaboration mainly constitutes grant awards on international schemes, providing scientific advice for areas of international policy and expenditure on events convening scientists from across the world.

The majority of the Society's expenditure to demonstrate the importance of science to everyone is in the form of providing scientific advice for policy and education and public engagement work.



Expenditure is shown by strategic objective in the outer ring and by expenditure category as shown in the statement of financial activities in the inner ring.

Read more on page 40.

Strategy in action

Promoting excellence in science



- Priorities:**
- 1 Elect exceptional scientists to the Fellowship.
 - 2 Advise on research landscape.
 - 3 Demonstrate economic impact of science investment.
 - 4 Fund outstanding researchers.
 - 5 Recognise scientific achievements.
 - 6 Encourage and support innovation.
 - 7 Publish scientific research.

Above: Dr Alyssa-Jennifer Avestro, Dorothy Hodgkin Fellow (2019 – 2023), researches the potential of organic materials to replace the toxic heavy metals typically found in commercially available batteries, which could lead to ultra-fast batteries with faster recharging times – particularly important for storage solutions for renewable energy.

The Society's aim is to harness the expertise of its Fellowship to ensure that excellence in science is recognised and supported and that scientific work is of the highest quality.

Fund outstanding researchers

In 2019/20 the Society awarded £102.5 million to fund exceptional researchers and outstanding scientists. This is an increase in funding of 21% from 2018/19, as we continue to increase the scale of our grants programmes.

Grant-giving is the primary means by which the Society supports scientists and we have a range of schemes to support early career and senior scientists pursuing both discovery-led and applied research. We invest in industry and innovation schemes, work with partners overseas to support international collaborations and strengthen research capacity in developing countries.

We have also developed a range of activities to support the next generation of research leaders, including opportunities for training, mentoring and networking.

These schemes are funded by government, in partnership with other funding organisations, philanthropic gifts and through the Society's own funds.

Number of grants awarded

	2019/20	2018/19	2017/18	2016/17	2015/16	Change over five year period
Early career researchers	287	345	627	290	278	3% ↑
International collaborations and travel	292	328	394	280	284	3% ↑
Capacity building	98	103	157	135	73	34% ↑
Industry, innovation and translation	47	59	49	26	10	370% ↑
Established researchers	52	48	67	64	49	6% ↑
Equipment and infrastructure	–	–	6	8	6	100% ↓
Total	776	883	1,300*	803	700	11% ↑
Total value	£102.5m	£84.7m	£73.3m	£61.2m	£53.5m	92% ↑

* In 2017/18 270 one-off additional grants were awarded alongside a range of other new and one-off grants. From 2018/19 additional funding is largely incorporated into existing grants.

Some of the people we fund:



Gavin Salam is a researcher at the University of Oxford, working on particle physics. His work aims to improve understanding of the fundamental laws and particles of nature. This is achieved by developing novel simulations of high-energy particle collisions for comparison to data from colliders, such as CERN's Large Hadron Collider.

Priorities



Ineke de Moortel is a researcher at the University of St Andrews. Her research is on understanding why the Sun's atmosphere is hotter than its surface, which is fundamental to understanding the solar atmosphere. She uses a combination of high-resolution observations and large-scale computational models to carry out a detailed comparison of different heating mechanisms.

Priorities



Helen Alexander is working at the University of Edinburgh. Her research is on bacteria and how organisms adapt to the environment around them, especially when it changes rapidly and severely for reasons such as pollution or climate change. A key focus of her work is on the evolution of antibiotic resistance.

Priorities



Strategy in action continued

Elect exceptional scientists to the Fellowship

The Royal Society elected 61 new Fellows and Foreign Members, including 13 women, and one Honorary Fellow.

New Fellows have been elected from institutions across the UK and around the world and the ballot was conducted digitally for the first time.

Two temporary nominating groups were established to increase the nominations of candidates for election to the Fellowship from groups underrepresented because of ethnicity, gender or where they work and from those working in industry. This year saw an increase of 12% in the total number of women nominated to the Fellowship.

Two of the 2019 Nobel Prize winners are Fellows of the Royal Society, James Peebles and Sir Peter Ratcliffe, and one is a Foreign Member, John Goodenough. A fourth Nobel Prize winner, Didier Queloz, was a previous recipient of the Society's Wolfson Research Merit Award.

 [Read more: List of our new Fellows on pages 34 – 36.](#)

Priorities



of grants were awarded to women (2018/19: 29%).

of grants were awarded to women in our early career schemes (2018/19: 39%).

of new Fellows and Foreign Members were women (2018/19: 23%).

Advise on research landscape

The Society advocated for the introduction of the Global Talent visa – a UK immigration category for talented and promising individuals in specific sectors wishing to work in the UK. The new visa was introduced in February and allows talented individuals in the research and innovation sector to enter the UK for up to five years without restrictions like a sponsor, minimum salary threshold or language requirements. The Royal Society is one of six endorsing bodies for applicants.

Priorities



Demonstrate economic impact of science investment

During the 2019 general election campaign, the Society wrote to all party leaders outlining the benefits that research and innovation bring to

the UK and produced a manifesto outlining the key steps the government should take to capitalise on the UK's outstanding strengths in science. The Society also wrote to parliamentary candidates with details of the economic impact of research in their region. The manifesto called for action in six key areas, including a good Brexit outcome for science and full participation in Horizon Europe, the European research programme, an increase of investment into science to 3% of GDP by 2030 and delivering the right policies and funding to achieve net-zero carbon emissions.

In March 2020, the Chancellor of the Exchequer committed to investing £22 billion a year in research and innovation by 2025 – a more than doubling of the current £9 billion science budget.

Priorities



Recognise scientific achievements

Foreign Member John Goodenough was awarded the Royal Society's Copley Medal. The solid-state physicist was also awarded the Nobel Prize in Chemistry for his discovery of lithium cobalt oxide, which led to the development of lithium-ion batteries, now widely used in devices such as mobile phones and laptops.

Priorities



Above: A selection of Royal Society journals from 2019/20.

Encourage and support innovation

Fifteen entrepreneurs, senior scientists and business leaders were appointed as Entrepreneurs in Residence this year, joining the 19 appointed in 2018.

The Royal Society-funded scheme aims to increase the knowledge and awareness in UK universities of cutting-edge industrial science, research and innovation.

The scheme provides opportunities for enthusiastic, highly experienced industrial scientists and entrepreneurs to spend one day a week at a university developing a bespoke project. It covers all areas of the life and physical sciences, including engineering.

Priorities



Publish scientific research

The Society publishes high-quality, cutting-edge research and supports open access publishing as part of our commitment to the widest possible dissemination of research outputs. In 2019/20, 41% of 2,954 of our papers were published as open access, which is above the 35% of papers published globally that are open access. Papers from our journals were downloaded over 30 million times in 2019/20. We published the first of a new type of article in the journals. Evidence synthesis articles review the available evidence on a given topic to provide a synthesis for non-specialists and policy makers. They are rigorous, objective and transparent, and driven by stakeholder needs, enabling the reader to make informed decisions.

In March 2020, we removed our paywall to help researchers to freely access COVID-19-related papers on our site. We also created a COVID-19 collection – a comprehensive list of relevant articles and themed issues which allowed researchers to immediately evaluate recent content in their own area of work.

Priorities



Looking forward 2020/21

The Society will:

- Continue to increase funding for research fellowship schemes to attract and retain outstanding senior and early career researchers to the UK.
- Recognise outstanding scientists and scientific achievements through election to the Society's Fellowship and medals and awards programme.
- Encourage and support innovation through industry fellowship and entrepreneurs in residence schemes that promote interaction between academia and industry.
- Deliver a programme of scientific events that foster collaboration and networking, noting that some of these meetings will need to take place virtually.
- Look for ways, working with others, to broaden participation in science and increase the diversity of the scientific workforce.
- Continue to transition our publishing programme to a sustainable open access model.

Strategy in action continued

How the Society has supported the response to the pandemic

The Society's fundamental purpose is to recognise, promote and support excellence in science and to encourage the development and use of science for the benefit of humanity. This is clear from the way we have responded to the pandemic.

Fellows of the Royal Society and people we fund are contributing to the UK and global effort to tackle COVID-19. They are working on urgent research questions, as well as providing independent advice to national and international decision makers. The work includes research on the biology of the virus and therapies to combat it, longer term goals such as the development of vaccines and reviewing evidence to inform policy decisions.

The Society used its convening power to support the response to the pandemic by establishing three groups. The Rapid Assistance in Modelling the Pandemic (RAMP) initiative brings modelling expertise from a diverse range of disciplines to support responses to the pandemic; the Data Evaluation and Learning for Viral Epidemics (DELVE) group, a multi-disciplinary group, takes a data-driven approach to learning about responses to the pandemic; and Science in Emergencies Tasking – COVID-19 (SET-C) draws on expertise to respond to requests for rapid advice on topics relevant to tackling the pandemic. These groups have carried out work on issues such as the protection offered by wearing facemasks, immunological

responses to COVID-19 and the impact of reopening schools.

The Society joined a group of publishers and scholarly communications organisations in a joint call to maximise the efficiency of peer review, ensuring that key work related to COVID-19 is reviewed and published as quickly and openly as possible.

When schools closed across the country, the Society put together a list of resources, activities and videos that could be used to support home learning in science, technology, engineering and maths.

The Society is currently supporting 1,065 active research fellows across the UK through our grants schemes, plus hundreds of PhD students, postdoctoral research assistants and technicians working across the natural sciences. Because of the pandemic, many researchers are unable to progress their work and there has been some job uncertainty within the research community, but other researchers have been working on areas linked to the pandemic or in related areas. Others are using the changes to our lifestyles that the pandemic has brought to carry out research that would not have been possible before.



Dr Katrina Lythgoe is a Sir Henry Dale Fellow at the University of Oxford. Her research area examines the evolutionary epidemiology of viral infections and multi-level adaptation of human viruses. She uses data analysis to study viruses that evolve rapidly and that can have an effect on entire populations and to study how responsive they are to intervention strategies.



Dr Ritesh Kumar is a Newton International Fellow at the University of Hertfordshire. He has used deep learning methods to predict the smell or flavour of molecules based on their physical, chemical and structural properties. His recent research included work on an enhanced understanding of the basis of smell, and assessing the relationship between respiratory illnesses and loss of smell and taste.



Dr Paula Koelemeijer is a University Research Fellow at Royal Holloway, University of London. She is carrying out research into understanding the landscapes of the deep Earth by analysing seismic signals at the Earth's surface. She has been able to use the lockdown to study the impact of humans on seismic activity.



Dr Daniel Streicker is a Sir Henry Dale Fellow alumnus at the University of Glasgow. His research is on managing viral emergence at the interface of bats and livestock, specifically around the transmission of rabies from vampire bats to humans and livestock in Peru. His work has also included how we can predict novel zoonotic diseases, which transfer from animals to humans.

Strategy in action continued

Supporting international scientific collaboration



- Priorities:**
- 1 Proactive engagement in major issues.
 - 2 Address global challenges.
 - 3 Partner with leading scientific nations on new technologies.
 - 4 Implement Commonwealth programmes.
 - 5 Convene leading international meetings to advance science.

Above: The Royal Society team, FAPESP team, UK delegates and Brazilian delegates at the 3rd UK-Brazil Frontiers of Science held in São Paulo state, March 2020.

The Society's aim is to reinforce the importance of science to build partnerships between nations and to promote international relations and science's role in culture and society.



Above: (left to right) Andrej Zhernovski, Deputy Minister of Foreign Affairs, Republic of North Macedonia; Julie Maxton, Executive Director, The Royal Society; Carole Mundell, Chief Scientific Adviser, Foreign and Commonwealth Office and Wiesław Tarka, Coordinator of the Poznań Western Balkans Summit, Ministry of Foreign Affairs, Republic of Poland, during the 5th Joint Science Conference of the Western Balkans Process.

Proactive engagement in major issues

The Society has worked with all political parties to try to achieve the best outcome for research and innovation throughout the Brexit negotiations and the general election to ensure that highly skilled scientists from around the world are still able to work in the UK. We aim to continue to support and build relationships across Europe, and beyond, by reinforcing the importance of science in developing partnerships between nations and emphasising science's role in culture and society.

We have also continued to warn of the dangers of a no-deal Brexit and the damage this could cause to UK science. In October 2019, we published new data highlighting the negative impact that uncertainty over the UK's future relationship with the EU was having on science.

The data showed that the UK was a less attractive destination for top international science talent and the UK's annual share of EU research funding had fallen by almost a third since 2015. There was a drop of almost 40% in UK applications to Horizon 2020, with 35% fewer scientists coming to the UK through key schemes.

This intervention secured strong media coverage and political attention and was mentioned in Parliament and used by the Chair of the Science and Technology Committee to question the Science Minister.

We have since continued to advocate for association with Horizon Europe, highlighting the advantages of association, urging ministers and special advisers to make public commitments to securing association and successfully encouraging opposition members to raise this with the government in both the Commons and the Lords.

The Society also hosted heads of academies and universities from across the Western Balkans in Carlton House Terrace as part of the Berlin Process.

In May 2019, the Society hosted the 5th Joint Science Conference of the Western Balkans Process, bringing together stakeholders from education, research and innovation. Working closely with the German National Academy of Sciences, the Leopoldina, and the Foreign and Commonwealth Office, the event gave an opportunity to consider fresh expectations for research and education across Europe, to encourage collaboration across the European Research Area. The conclusions featured in a political summit in Poland later in the year.

Priorities



Strategy in action continued

Address global challenges

The Society convened an international commission, along with two US national academies, with the aim of developing principles, criteria and standards for the clinical use of heritable human genome editing.

The commission aims to develop a framework for scientists, clinicians and regulatory authorities to consider when assessing potential clinical applications of human germline genome editing. The framework will identify scientific, medical and ethical requirements that should be considered, and could inform the development of a potential pathway from research to clinical use – if public opinion concludes that heritable human genome editing applications are acceptable.

The commission, which also includes participation from science academies from countries around the world, held public meetings throughout 2019 along with webinars by leading academics to inform research in this area.

The Society also oversaw a public call for evidence to inform its work and set up an expert review panel for the commission's final report, which includes its findings and recommendations.

Priorities



Above: The Society's Foreign Secretary, Richard Catlow, during the visit to Beijing.

Partner with leading scientific nations on new technologies

We have continued to work closely with the US National Academy of Sciences (NAS) this year, including joint work with the International Commission on the Clinical Use of Human Germline Genome Editing, which will launch its final report in late 2020. We also collaborated to update a joint NAS and Royal Society report on the evidence for and causes of climate change, and held a successful joint US/UK Scientific Forum on sustainable agriculture. The Society also co-signed a statement led by the NAS on the importance of international cooperation in response to the COVID-19 pandemic.

In May 2019, the Foreign Secretary, Richard Catlow, led a mission to Beijing for high-level meetings with national science organisations, ministries and the private sector, as part of the Society's strategic engagement with China. The trip set the scene for a year of concerted work related to China, including a discussion forum at Carlton House Terrace with Science Minister Wang Zhigang, exchanges on a range of topics with regional science academies, and the translation into Chinese of selected science policy reports.

Priorities



Implement Commonwealth programmes

The Society has continued to engage with scientists and policy makers across the Commonwealth. Plans are underway for the first ever virtual Commonwealth Science Conference, in February 2021, as it was no longer possible to convene the event in Nairobi as planned because of the pandemic. Three 'feeder meetings' in Jamaica, Rwanda and Fiji were also postponed, so a follow-on programme of activity after the conference is being explored which will focus on developing networks between early career researchers.

Priorities



Convene leading international meetings to advance science

The Society runs a series of internationally renowned scientific meetings that bring together leading experts to discuss the latest research and to develop knowledge of their field. We were not able to complete our programme this year owing to the pandemic, but we held 26 of the proposed 31 meetings, with five being postponed until 2021/22.

Topics this year included: *Restoration science relevant for action; Continuous-time quantum computing and simulation: perspectives and challenges; Crossroads between transposons and gene regulation; and Future exploration of the ice giants.*

26
meetings were held with

1,913
attendees and

490
speakers

Priorities



390
international grants awarded

Priorities



£13.4m **68**
of grants awarded to foster international and global cooperation
countries around the world where we supported researchers through our grant schemes



Above: Social media card for the scientific discussion meeting, Future exploration of the ice giants.



Looking forward 2020/21

The Society will:

- Develop a programme of scientific engagement with European partners to promote continued collaboration between UK and European researchers after the UK leaves the EU.
- Continue to advocate the UK's inclusion in the EU research framework programmes.
- Deliver a programme of scientific and policy engagement with leading scientific nations, such as China, the USA, Brazil and India.
- Participate in appropriate multi-lateral fora such as G7, G20 and CHOGM, and issue-related fora including preparation for the UN climate and biodiversity conferences.
- Develop a Commonwealth Programme to include a Commonwealth academies network, joint position development, engagement with UK Commonwealth high commissions and a meeting programme, including the Commonwealth Science Conference in 2021.
- Foster collaborations between international and UK researchers through its international grant programmes.
- Award the second round of FLAIR fellowships to help build research capacity in sub-Saharan Africa and to address global challenges.

Strategy in action continued

Future Leaders – African Independent Research (FLAIR) Fellowships

The Royal Society has partnered with the African Academy of Sciences (AAS) to launch the Future Leaders – African Independent Research (FLAIR) Fellowships. The fellowships are for talented African early career researchers who have the potential to become leaders in their field.

Fellowships were available to support up to 30 talented early career researchers to undertake cutting-edge scientific research that will address the global challenges facing developing countries. It will also support them in establishing independent careers in African institutions and, ultimately, their own research groups. African scientists drawn from across the continent gathered in Naivasha, Kenya, in April 2019 to celebrate the start of the two-year fellowships.

The 2019 FLAIR-funded scientists were selected from a competitive pool of more than 700 applicants. Their research is diverse, ranging from providing renewable energy solutions and addressing climate change to tackling food security and targeting health and environmental problems that are most acute for people living in African countries.

Thanks to the FLAIR scheme, some scientists are returning to African countries from the UK and USA to continue their careers in African institutions. This is an important part of the programme – attracting scientists back from countries where they have completed their postdoctoral training so that they can play a part in building the research infrastructure across the continent. To keep improving their scientific output, African countries need to grow and retain scientific talent and FLAIR is one of a number of initiatives to support African early career researchers to establish their careers in Africa.

FLAIR continues the Royal Society's support of science in Africa. Our programmes are synonymous with excellence in science and our grants programmes play an important role in developing future scientific leaders.

Aims of the programme:

- Developing Africa's next generation of research leaders
- Supporting excellence in research that addresses areas of global significance
- Enhancing research environments through capacity strengthening
- Fostering collaboration and impact between African fellows and UK researchers



Above: FLAIR Fellows at the start of their two-year Fellowships.



Dr Raphael Tshimanga
Université de Kinshasa, Democratic Republic of the Congo

Developing a framework of catchments classification for hydrological predictions and water resources management in an ungauged basin of the Congo River.

The catchments of the Congo are of great importance, providing hydro-power, water supply, fisheries and more. Dr Tshimanga is a hydrologist who is developing a catchment classification system to enable healthy and sustainable resource planning for the Congo Basin.



Dr Oluwaseyi Shorinola
International Livestock Research Institute, Kenya

Rapid mining and mobilisation of beneficial gene alleles to improve wheat production in East Africa.

Dr Shorinola is a crop geneticist. In less than 40 years Africa will have an additional 1.3 billion people to feed, of whom half will be living in urban areas where demands for wheat will only increase. This research focuses on using genetics to improve the yield and quality of wheat production in East Africa.



Dr Sarah Fawcett
University of Cape Town, South Africa

The role of marine ecosystems in improving water quality in rapidly urbanising coastal regions.

Coastal regions that are home to large human populations are subject to significant pressures such as pollution, habitat destruction, resource depletion and climate change. This project aims to identify and track the sources of pollution to rapidly urbanising coastal regions, focusing on the complex relationships between biogeochemical fluxes and primary production in marine systems.

Strategy in action continued

Demonstrating the importance of science to everyone



Priorities:

- 1 Increase scientific advice for policy makers.
- 2 Implement a programme of public dialogue and engagement.
- 3 Integrate science into public debate and culture.
- 4 Promote the value of STEM education.
- 5 Inspire through historic collections.

Above: Participants at the Summer Science Exhibition Lates, 2019.

Scientific thinking influences how people live their lives, never more so than now. The Society engages with the public in many different settings to hear their experiences and views and to make science part of the wider conversation.

Increase scientific advice for policy makers

The Society continues to influence policy makers and three of our reports from the past year illustrate our work in this area.

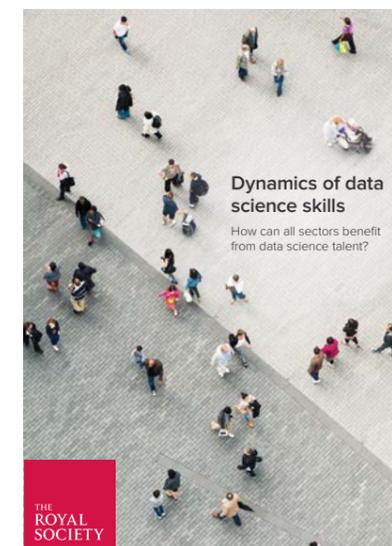
Our report on green ammonia considered the opportunities and challenges associated with the manufacture and future use of zero-carbon or green ammonia. Ammonia is a gas that is widely used to make agricultural fertilisers, and green ammonia is the same gas but made in a way that is 100% renewable and carbon-free. The report looked at how the production of green ammonia could offer further options in the transition to net-zero carbon dioxide emissions, including energy storage for renewable energy, as a zero-carbon fuel and as a means of

storing and carrying hydrogen, which is difficult to store on its own.

Our report on data science illustrated the increased demand for jobs in this area and set out ways to help build a stronger talent pipeline to help all sectors benefit from data science. The report, *Dynamics of data science skills*, looked at the current demand for data professionals and how this varies across industrial sectors and UK regions. It identified areas for action to strengthen the UK's data science talent base. Two companion booklets were also published with case studies highlighting career paths across academia, industry, charity and government; and models and mechanisms presenting innovative approaches which could be implemented to meet demand and share talent.

This year, we launched the *iHuman: blurring lines between mind and machine* report, which showed how new technologies could transform medicine and fundamentally change how we interact with technology and each other. Neural interfaces are electronic devices placed on the outside or inside of the brain or nervous system to record or stimulate activity and interact with the nervous system. The report took a future-facing look into possible applications of neural and brain-computer interfaces, the important ethical questions the technologies raise and how to maximise the benefits and minimise the risks of the technologies.

Priorities



Strategy in action continued

Implement a programme of public dialogue and engagement

The neural interfaces dialogue report was launched as planned in September 2019 with the Society's *iHuman* perspective report on the applications and implications of neural and brain interface technologies.

In autumn 2020, the Society will be running a public dialogue which has two objectives: to obtain insights into people's attitudes towards and priorities for landscapes, the factors which underpin these and how these views are informed by scientific evidence; and to investigate how much people know about how land use decisions are made, and how they would like these decisions to be made in the future.

Because of the pandemic, the decision has been made to conduct this as an online activity.

Priorities



Integrate science into public debate and culture

Our free, week-long Summer Science Exhibition, which celebrates the cutting edge of UK science, took place in July 2019. This year we saw over 11,500 members of the public attending a packed programme of thought-provoking talks, demonstrations and entertaining performances alongside 22 exhibits of hands-on science and technology, showcasing the work of some of the



Above: *You and the planet* event, held in Wales. Hosted by Rachael Garside, Julia Brown DBE FRes FRS, Juliet Davenport OBE, James Durrant FRS and Rebecca Heaton.

UK's top research teams. This was an increase of 13% on last year's attendees.

On social media we have 287,000 followers on Twitter, which is a 24.2% increase on 2018/19. On Facebook, we have 245,000 fans, up 18.9% on last year. Our YouTube channel has 52,000 subscribers, up 21% on last year. Our website had 1.8 million users and 2.7 million sessions, up 9.6% and 3.8% on last year, respectively.

Our *People of Science* videos delve into the Society's rich archive of science artefacts to tell the stories of extraordinary scientists and how their work is still influencing our understanding of the world today. In series two, launched this year, Professor Brian Cox discovered the scientific inspirations of the President of the Royal Society, Venki Ramakrishnan, and Royal Society Fellows Dame Wendy Hall, Professor Joanna Haigh, Professor Martin Rees,



Dame Ottoline Leyser and Professor Richard Fortey. The series received more than 725,000 views on YouTube.

Our *You and the planet* series showcased leading environmental thinkers discussing the issues and their possible solutions at events around the country.

Four high-profile public events took place in Newcastle, Swansea, London and Cornwall and the series was accompanied by a media and digital campaign.

Over 700 people attended the events, with more than 110,000 watching the talks online so far. Media coverage included articles in the *Evening Standard* and regional press.

Priorities



Promote the value of STEM education

The Partnership Grants scheme offers up to £3,000 to UK schools or colleges to buy equipment to run a STEM investigation project in partnership with a STEM professional in either research or industry. These will enable students to gain insight into STEM subjects and give them the skills and interest to further their studies in this area.

In the 2019 funding round, 49 schools from across the UK received Partnership Grants. A further six schools that support students with Special Educational Needs and Disabilities (SEND) were funded. Over 8,400 students from primary and secondary level are involved in these 55 projects. The application process is in two stages. By the end of February 2020, 107 schools had been invited to stage 2 of the 2020 application round, although final submissions are likely to be reduced because of pandemic-related school closures.

Books prizes

A record-breaking 10,600 children from 471 schools and youth groups across the UK chose *Planetarium: Welcome to the Museum* as the winning book for the 2019 Royal Society's Young People's Book Prize.



Writer, broadcaster and feminist campaigner Caroline Criado Perez (above) became the 32nd winner of the prestigious Royal Society Science Books Prize for her book, *Invisible Women: Exposing Data Bias in a World Designed for Men*, which brings together a range of case studies, stories and new research from around the world that exposes the lack of gender-specific data that has unintentionally created a world biased against women.

Priorities



Planetarium is an eye-catching large format tour of our solar system and beyond, written by astrophysicist Raman Prinjasa and illustrated by artist Chris Wormel. The children cast their votes for their favourite science book from a shortlist of six titles, chosen by a panel of adult judges, chaired by Royal Society Fellow Professor Sheila Rowan and including the former children's laureate, poet and author Michael Rosen.

Priorities



Inspire through historic collections

In October 2019, specimens prepared and viewed by the early Dutch naturalist Antoni van Leeuwenhoek were reunited by the Society with one of his original microscopes at the Rijksmuseum Boerhaave in Leiden, the Dutch national museum of the history of science and medicine, for a state-of-the-art photoshoot. The specimens, including cork sections and cotton seeds, may be the earliest surviving objects seen by microscope, and allowed science historians to recapture the 'look' of 17th century science, recording the moment in digital films and with high-resolution colour photographs for the first time and giving us a rare insight into what images of that time might have looked like.

More than 3,000 people were able to visit our Carlton House Terrace building to find out more about its history during Open House weekend, London's free festival of architecture and the urban landscape. This was an increase of 45% on last year's number of attendees.

Priorities



Looking forward 2020/21

The Society will:

- Convene scientific experts urgently to support the UK government's response to the global pandemic and engage with government and other stakeholders to provide new scientific advice as it emerges.
- Provide authoritative, accessible and independent scientific evidence to policy makers on climate and biodiversity, future land use in the UK, data and AI, genetic technologies and other emerging areas of science.
- Continue to advocate for the importance of increased investment in research and innovation and its economic and societal benefits.
- Respond to the restrictions caused by the pandemic by re-imagining the Society's public engagement programme so that it can be delivered using digital channels.
- Engage with the public on major issues, including the nature of science and the pandemic, climate change, biodiversity and UK land use.
- Launch a new programme of partnership grants that supports schools working with a STEM partner to consider issues around climate change and biodiversity.
- Launch a new programme to boost young people's mathematics skills for future careers.

Strategy in action continued

Climate and biodiversity

As global temperatures increase, the impacts of climate change on people and the environment are becoming more severe and adaptation is becoming harder, costlier and, in some cases, impossible. Science is central to understanding the damage that is being done and to helping us to find ways to reduce harm and adapt our lifestyles.

The Royal Society is at the forefront of this work. We fund researchers working on cultivating climate resilient crops to increase food security, engineering infrastructure that is designed to withstand the growing risk of natural disasters, and integrating low-tech renewable energy solutions within communities. In 2019, we launched a series of five events across the UK to connect experts with the public to explore some of the key issues. *You and the planet* looked at issues such as how we tackle climate change, how energy use affects the planet, how our diets can make a difference and how we can nurture nature. Regrettably, a further event, a family festival at the Natural History Museum, had to be cancelled because of the pandemic.

In November 2019, the Society published climate briefings based on the work of the Intergovernmental Panel on Climate Change (IPCC). These looked at the links between land and climate change and the impact of warming temperatures on the ocean and cryosphere. The briefings identify steps that UK policy makers can take, domestically and internationally, to address risks and opportunities. The Society also published reports on microplastics, soil structure and green ammonia.

In June 2019, the UK government committed to net-zero greenhouse gas emissions by 2050. The Society's influence can be seen in the report produced by the Committee on Climate Change that led to that decision, which heavily cited the Greenhouse gas removal report that was published jointly by the Royal Society and the Royal Academy of Engineering in 2018.

Stormy weather – from lore to science is an exhibition which opened at the Royal Society in February 2020. It showcases instruments, books and manuscripts from the National Meteorological Library and Archive collections alongside items from the Royal Society that tell of the evolution of weather and climate science in the UK.



Professor Polly Arnold

Professor Polly Arnold is a synthetic molecular chemist who is using carbon dioxide – one of our biggest problems in terms of environmental damage – to build renewable materials. She describes her work as 'making weird molecules that the textbooks say should not exist'. She is a Fellow of the Royal Society, is based at the University of California, Berkeley and was previously based at the University of Edinburgh, where her laboratory had been funded by a Royal Society Wolfson Laboratory Refurbishment grant.



Professor Clare Grey

Developing new battery technologies is crucial to the ever-growing use of renewable energy and the decarbonisation of transport. Professor Clare Grey is working to develop these technologies by looking at materials to make batteries that can charge and discharge faster and that could store much more power than the batteries currently available. She is a Royal Society Research Professor at the University of Cambridge and a Fellow of the Royal Society.



Professor Daniela Schmidt

Professor Daniela Schmidt studies the impacts of global warming and ocean acidification on marine ecosystems. Human-driven emissions of carbon dioxide to the atmosphere affect the oceans through acidification or warming and deoxygenation. Ecosystem shifts can create significant sustainability and management challenges, particularly among countries with a strong dependence on the sea. She is a Wolfson Research Merit Award holder at the University of Bristol and was previously a Royal Society University Research Fellow.

People

At the core of the Society are people, from Fellows and staff to generous donors and the scientists who are supported through the Society's funding programmes.

Fellows of the Society elected in 2019

Professor Salim S Abdool Karim FRS

Director, Centre for the AIDS Programme of Research in South Africa (CAPRISA), CAPRISA Professor of Global Health, Department of Epidemiology, Columbia University and Pro-Vice-Chancellor (Research), University of KwaZulu-Natal

Professor Charles Bangham FMedSci FRS

Professor of Immunology, Faculty of Medicine, Imperial College London

Professor Gurdyal Besra FMedSci FRS

Bardrick Professor of Microbial Physiology and Chemistry, Institute of Microbiology and Infection, School of Biosciences, University of Birmingham

Professor Manjul Bhargava FRS

R. Brandon Fradd Professor of Mathematics, Department of Mathematics, Princeton University

Professor Caucher Birkar FRS

Professor of Mathematics, Department of Pure Mathematics and Mathematical Statistics, University of Cambridge

Professor Benjamin Blencowe FRS

Professor and Banbury Chair in Medical Research, University of Toronto

Dr James Briscoe FRS

Senior Group Leader, Developmental Dynamics Laboratory, Francis Crick Institute

Professor Peter Butler FRS

Professor of Physics, Department of Physics, University of Liverpool

Professor Lucy Carpenter FRS

Professor of Atmospheric Chemistry, Department of Chemistry, University of York

Professor Sarah C Darby FRS

Professor of Medical Statistics, Nuffield Department of Population Health, University of Oxford

Professor George Davey Smith FMedSci FRS

Professor of Clinical Epidemiology, Population Health Sciences, Bristol Medical School, University of Bristol

Professor Martin Embley FRS

Professor of Molecular Evolutionary Biology, Institute for Cell and Molecular Biosciences, University of Newcastle upon Tyne

Dr Bernard Fanaroff FRS

Special Advisor to the Managing Director, South African Radio Astronomy Observatory and Square Kilometre Array South Africa

Professor Jonathan Flint FRS

Billy and Audrey Wilder Professor of Psychiatry and Neuroscience, Department of Psychiatry and Biobehavioral Sciences at the David Geffen School of Medicine, University of California, Los Angeles

Professor Véronique Gouverneur FRS

Professor of Chemistry, Chemistry Research Laboratory, University of Oxford

Professor Christopher Hacon FRS

McMinn Presidential Endowed Chair and Distinguished Professor, Department of Mathematics, University of Utah

Professor Mark Handley FRS

Professor of Networked Systems, Department of Computer Science, University College London

Professor Richard Harland FRS

CH Li Distinguished Professor of Genetics and Senior Associate Dean of Biological Sciences, Genomics and Development, Department of Molecular and Cell Biology, University of California, Berkeley

Professor Peter Haynes FRS

Professor of Applied Mathematics, Department of Applied Mathematics and Theoretical Physics, University of Cambridge

Professor Martin Head-Gordon FRS

Kenneth S Pitzer Distinguished Professor of Chemistry, Department of Chemistry, University of California, Berkeley and Senior Faculty Scientist, Chemical Sciences Division, Lawrence Berkeley National Laboratory

Professor Matthew Hurles FRS

Senior Group Leader and Head of Human Genetics, Wellcome Sanger Institute

Professor Richard Jozsa FRS

Leigh Trapnell Professor of Quantum Physics, Department of Applied Mathematics and Theoretical Physics, Centre for Mathematical Sciences, University of Cambridge

Professor Gagandeep Kang FRS

Executive Director, Translational Health Science and Technology Institute, India

Professor Steve Kay FRS

Provost Professor of Neurology and Director of Convergent Bioscience, University of Southern California

Professor John-Michael Kendall FRS

BGS Professor of Geophysics, School of Earth Sciences, University of Bristol

Professor Roy Kerr FRS

Canterbury Distinguished Professor, Mathematics Department, University of Canterbury, Christchurch, New Zealand

Professor Jonathan Knight FRS

Professor of Physics, Department of Physics, University of Bath and Pro-Vice-Chancellor (Research), University of Bath

Professor Marta Kwiatkowska FRS

Professor of Computing Systems, Department of Computer Science, University of Oxford and Fellow, Trinity College, Oxford

Dr Mark Mayer FRS

Scientist Emeritus, National Institute of Neurological Disorders and Stroke, National Institutes of Health, USA

Professor Gareth H McKinley FRS

School of Engineering Professor of Teaching Innovation, Department of Mechanical Engineering, Massachusetts Institute of Technology

Professor David Nicholls FRS

Professor Emeritus of Mitochondrial Physiology, the Buck Institute for Research on Aging, USA

Professor Christine Orengo FRS

Professor of Structural Bioinformatics, Division of Biosciences, University College London

Professor Anne Osbourn FRS

Group Leader, Department of Metabolic Biology, John Innes Centre

Professor Anant Parekh FRS

Professor of Physiology, Department of Physiology, Anatomy and Genetics, University of Oxford

Professor Julian Peto FRS

Professor of Epidemiology, Faculty of Epidemiology and Population Health, London School of Hygiene & Tropical Medicine

Professor Caetano Reis e Sousa FMedSci FRS

Assistant Research Director and Senior Group Leader, The Francis Crick Institute

Professor John Rodenburg FRS

Personal Chair, Department of Electronic and Electrical Engineering, University of Sheffield

Professor Matthew Rushworth FRS

Watts Professor of Experimental Psychology, Department of Experimental Psychology and Wellcome Trust Centre for Integrative Neuroimaging (WIN), University of Oxford

Professor Leonid Sazanov FRS

Professor, Institute of Science and Technology Austria

Professor Gregory Scholes FRS

William S Tod Professor of Chemistry, Department of Chemistry, Princeton University

Professor Barbara Sherwood Lollar CC FRS

Director, Stable Isotope Laboratory, Department of Earth Sciences, University of Toronto

Professor Molly Shoichet OC FRS

University Professor, Department of Chemical Engineering and Applied Chemistry, Institute of Biomaterials and Biomedical Engineering, Department of Chemistry, University of Toronto

Professor Liz Sockett FRS

Professor of Bacterial Genetics and Wellcome Trust Investigator, School of Life Sciences, University of Nottingham

Professor Paraskevas Sphicas FRS

Senior Scientist, CERN and Professor of Physics, National and Kapodistrian University of Athens

Professor Jack W Szostak FRS

Professor of Chemistry and Chemical Biology, Harvard University and Massachusetts General Hospital

Dr Andrew Taylor OBE FRS

Executive Director, STFC National Laboratories

People continued

Professor Robert Tibshirani FRS

Professor of Biomedical Data Science and Statistics, Departments of Biomedical Data Science and Statistics, Stanford University

Professor Ian Tomlinson FRS

Director, Institute of Cancer and Genomic Sciences, University of Birmingham

Professor Sir Doug Turnbull FMedSci FRS

Professor of Neurology and Director, Wellcome Centre for Mitochondrial Research, University of Newcastle upon Tyne

Professor Akshay Venkatesh FRS

Professor, School of Mathematics, Institute for Advanced Study

Professor Kumar Wickramasinghe FRS

Distinguished Professor and Nicolaos G and Sue Curtis Alexopoulos Presidential Chair of Electrical Engineering and Computer Science Department, University of California, Irvine

Foreign Members elected in 2019**Professor Barry Barish ForMemRS**

Linde Professor of Physics, Emeritus, California Institute of Technology and Distinguished Professor of Physics, University of California, Riverside

Professor Hans Clevers ForMemRS

Professor in Molecular Genetics, University Medical Center Utrecht and Staff Scientist, Hubrecht Institute of the Royal Netherlands Academy of Arts and Sciences

Professor Sandra Díaz ForMemRS

Professor of Community and Ecosystems Ecology, National University of Córdoba and Senior Researcher, National Research Council, Argentina

Professor Jack Dongarra ForMemRS

University Distinguished Professor, University of Tennessee, Distinguished Staff, Oak Ridge National Laboratory and Turing Fellow, School of Mathematics, University of Manchester

Professor Elaine Fuchs ForMemRS

HHMI, Investigator and Rebecca C. Lancefield Professor, Laboratory of Mammalian Cell Biology and Development, Rockefeller University

Professor Inez Fung ForMemRS

Professor of Atmospheric Science, Department of Earth and Planetary Science and Department of Environmental Science, Policy and Management, University of California, Berkeley

Professor David Milstein ForMemRS

Professor and The Israel Matz Professorial Chair of Organic Chemistry, Department of Organic Chemistry, Weizmann Institute of Science

Professor Akkihebbal Ravishankara ForMemRS

University Distinguished Professor, Departments of Chemistry and Atmospheric Science, Colorado State University

Professor James Rothman ForMemRS

Sterling Professor of Cell Biology, School of Medicine, Yale University

Professor Brian Staskawicz ForMemRS

Professor of Plant and Microbial Biology, University of California, Berkeley

Honorary Fellow elected in 2019**Dr Yusuf Hamied FRS**

Chairman, Cipla

Further information is available online.



Above: Royal Society Fellows and Foreign Members elected in 2019.

Fellows of the Royal Society and people who we fund are contributing to the UK and global effort to tackle COVID-19. They are working inside the UK government as well as providing independent support for national and international efforts. The work includes: research on the biology of the virus and therapies to combat it; longer term goals such as the development of vaccines; and reviewing evidence to inform policy making. Tackling such pandemics will require both basic and clinical research at every stage, and the scientific community is doing all it can to help fight this terrible disease and reduce its toll.

The Society is currently using its convening power to support the efforts to model the pandemic by calling on expertise from those working on modelling in other fields. Areas such as traffic planning, financial market modelling, dataflow optimisation across communications networks and individualised marketing on social media will already be using agent-based modelling, often at very large scale and with well-honed data-science

toolsets. There may be a way such expertise can be usefully made available to work on the COVID-19 modelling.

Fellows

Fellows are elected through a peer-review process on the basis of their contribution to science. It is from the eminence of its Fellowship and Foreign Membership and its independence from government that the Society derives its authority in scientific matters. Fellows and Foreign Members fulfil a range of responsibilities for the Society on a voluntary basis. Many others, scientists and non-scientists, also contribute to the work of the Society on a voluntary basis. The Fellowship is supported by staff based in London.

A new fellowship election process was implemented during the year, moving it from a paper-based process to an online system. This change facilitated a significant increase in the number of votes received.

Scientists

The Society has played a part in some of the most fundamental, significant and life-changing discoveries in scientific history and the Society's scientists continue to make outstanding contributions to science in many research areas. The Society is currently supporting 1,065 (2019: 1,176) researchers through its research fellowships. These researchers receive long-term funding from the Society and range from early career researchers just starting their independent careers to some of the most distinguished senior researchers in the country.

1,065

researchers currently supported by the Royal Society through its research fellowships

Staff

The Society aims to offer fair pay to attract and retain appropriately qualified staff to lead, manage, support and deliver the Society's aims on behalf of its Fellows and Council. As at 31 March 2020, the Society had 212 staff. The Society's staff are organised into programmes, services and trading sections.

In March 2020, the Society's buildings were closed to Fellows, staff, conferencing clients and other visitors. The decision was taken in the interests of all our stakeholders. Although the building is closed, the business of the Society has continued with staff working remotely wherever possible. Some areas of the business were affected more than others and, through consultation with staff, the Society considered when and if it would be appropriate to furlough staff under the government's Coronavirus Job Retention Scheme. No members of

staff were furloughed in the year ended 31 March 2020.

Volunteers

A number of our public engagement events and other work would not be possible without the contribution of our volunteers and the Society is grateful to all those who have contributed to its work over the past year.

Equality, diversity and inclusion

As the UK's national academy of science, engineering, technology and mathematics, the Society has a particular responsibility to ensure that diversity and inclusion are embedded across all of its activities and are part of the culture of the organisation.

The Society's Diversity Committee regularly monitors statistics on diversity across the Society's activities and publishes an annual data report. The Society is committed to making diversity and

inclusion a priority, and the Society has developed a Diversity Strategy for 2019 – 2022, that sets out how the Royal Society will use its convening power and leadership, in partnership with others, to increase diversity in STEM and build a more inclusive scientific community. The Diversity Committee, a standing Committee of Council, keeps under review and makes recommendations to Council on the diversity strategy. The Committee also oversees the delivery of a programme of activities by the Society in line with this strategy. The 2019 – 22 diversity strategy has the following objectives:

1. Maintain a culture within the Society that encourages and promotes diversity and inclusion.
2. Identify and address barriers to participation in STEM.
3. Work in partnership to assess and maximise the effectiveness of diversity initiatives across the scientific community.
4. Recognise and champion the achievements of a wide range of scientists from underrepresented groups, providing inspirational and relatable role models.

As an employer, the Society is committed to providing an environment free from discrimination, bullying, harassment or victimisation and to creating a culture of inclusivity where individual differences and the contributions of all staff are recognised and valued. The Society provides equality of opportunity for all and will not tolerate discrimination on grounds of age, disability, gender reassignment, marriage and civil partnership, pregnancy and parenthood, race, religion or belief, sex or sexual orientation. The Society regularly surveys staff in staff surveys and in exit interviews on matters of diversity and inclusion,

specifically any issues they have witnessed or would like to report.

Remuneration policy

The aim of the Society's remuneration policy is to maintain sustainable, fair levels of pay at the same time as attracting and retaining the right people to deliver our charitable objectives. In setting appropriate levels of senior management pay, the Society considers the skills, experience and competencies required for each

role, and the remuneration level for those roles in sectors where suitable candidates would be found. Remuneration packages for all staff are benchmarked using proprietary pay surveys. The annual inflationary increase provided to all staff and senior management pay are agreed by the Society's Remuneration Committee. The last review of pay structures was undertaken during 2018.

All Trustees are unremunerated.

Gender pay gap reporting

The Society has voluntarily completed gender pay gap reporting in order to better understand how we compare with other organisations. At the 'snapshot' date of 5 April 2019, the mean gender pay gap was -4.6% and the median gender pay gap was 10.4% compared to the national average of 14.1% and 12.8% respectively, as reported on the Gender Pay Gap website as at 10 July 2020.

Gender gap reporting

On 5 April 2019, we employed 212 full-pay relevant employees (2018:174):



Median
men earn 10.4% more than women (2018: 11.4%)

UK median 12.8% less than men (2018: 11.8%)



Quartile 1:
Women paid 22% more than men (2018: 12% more)



Quartile 2:
Women paid 1% more than men (2018: 1% more)

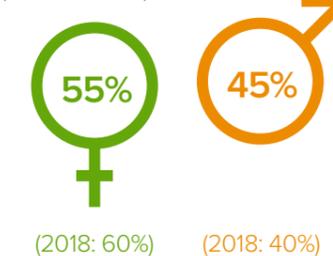


Mean
women earn 4.6% more than men (2018: 0.2%)

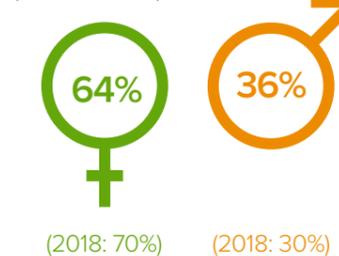
UK average 14.1% less than men (2018: 14.34%)



Quartile 3:
Women paid 2% less than men (2018: 4% less)



Quartile 4:
Women paid 6% less than men (2018: 3% less)



Note: gender pay gap percentages referenced in quartiles are based on mean calculations. The reported quartiles represent an equal number of employees in each quartile, from the highest paid to the lowest paid. Quartile 1 is the upper quartile representing the highest paid employees.



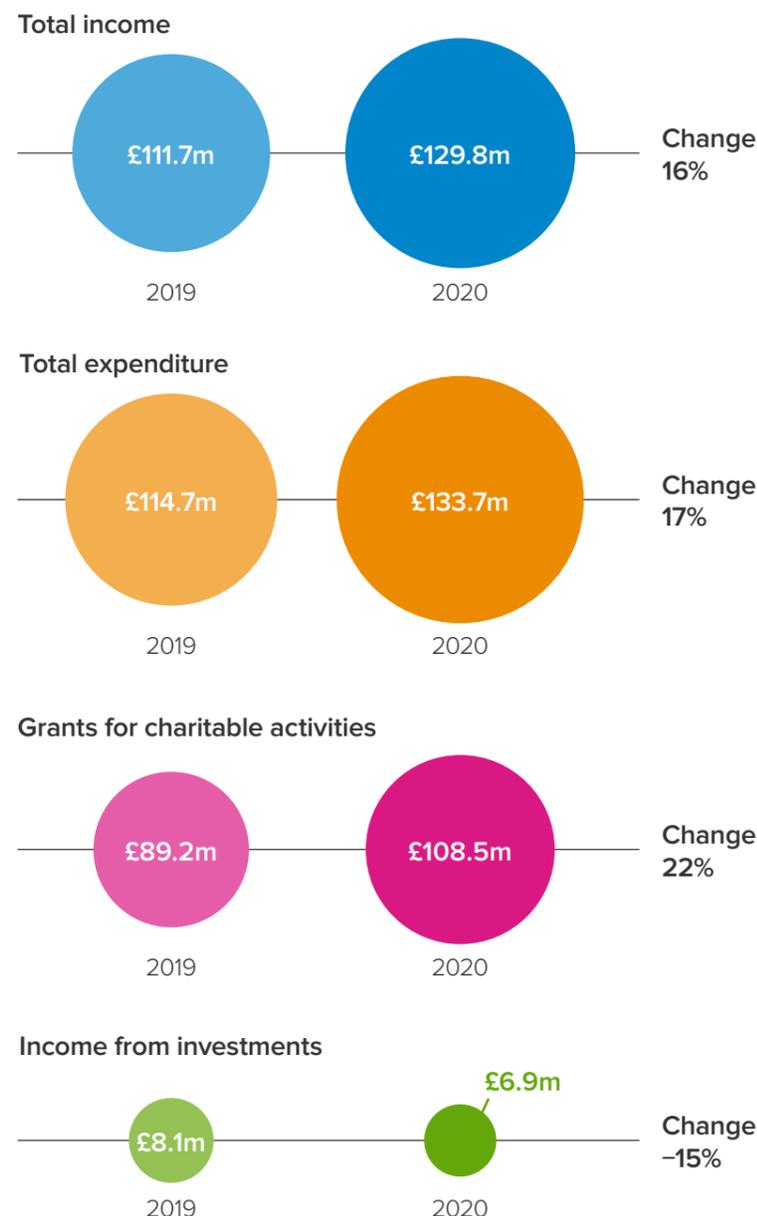
Above: Royal Society staff volunteering at the Summer Science Exhibition Lates, 2019.

Financial review

Overview

In the year to 31 March 2020, the Society's income increased by 16%, from £111.7 million to £129.8 million. The majority of the Society's income came from charitable activities, which increased by 19% during the year to £120.1 million (2019: £100.8 million). Total expenditure increased by 17% on the prior year from £114.7 million to £133.7 million, as the Society has continued to expand its charitable programme. Expenditure on charitable activities increased from £110.5 million to £129.3 million and has risen to around 97% of total expenditure from around 95% in 2019. Income from investments has decreased from the previous year to £6.9 million (2019: £8.1 million).

In March 2020, due to the COVID-19 pandemic, the Society closed its buildings to Fellows, staff, conferencing clients and other visitors. Although the buildings closed, the business of the Society continued with staff working remotely, wherever possible. In line with government advice, Chicheley Hall closed on 23 March 2020.



The operating result before investment gains/losses was in line with the budget and forecast for the year. Although the financial impact was relatively small, there was a significant reduction in some of the Society's activities. The areas most affected are those that perform trading or public-facing programmatic activities where meetings and events that had been planned for 2020 were cancelled or postponed. The COVID-19 pandemic caused investment markets to fall, resulting in a net loss in investments and an overall net deficit result for the year.

On 20 March 2020, the government announced a further series of measures aimed at protecting employees and businesses during the crisis, in particular the Coronavirus Job Retention Scheme. The Society did not receive any financial benefit as a result of the measures in the year ended 31 March 2020 and considered the impact of these measures in the weeks that followed.

	2020 £m	2019 £m
Expenditure on raising funds	4.4	4.2
Expenditure on charitable activities	129.3	110.5
Total expenditure	133.7	114.7

Income

Income from charitable activities
Most of the year-on-year increase in income relates to the increase in grants for charitable activities which rose to £108.5 million (2019: £89.2 million). The Society's core grant from BEIS remained consistent with the prior year at £47.1 million but there were increases in the Society's grants from BEIS under the Investment in Research Talent Fund (IRTF) from £21.7 million in 2019 to £31.6 million in 2020 and under the BEIS Global Challenges Research Fund (GCRF) from £6.0 million in 2019 to £15.0 million in 2020. The increase in the IRTF was to expand the number of grants awarded under existing programmes. The GCRF supports the Future Leaders – African Independent Research Fellowships ('FLAIR'), which launched in May 2018; the year ended 31 March 2020 was the first year of FLAIR Fellows.

Trading in furtherance of charitable objectives remained at a similar level to the previous year with a small decrease in income of £0.1 million to £11.5 million (2019: £11.6 million) due to successful trading for the majority of the year for both publishing and conferencing. In March 2020, the Society closed its buildings and paused the conferencing trading activities. The 2020 programme of meetings and events was cancelled or postponed and, while limited impact was reflected in the trading results of the conferencing trading

activities for the year ended 31 March 2020, it is expected that results for the year ended 31 March 2021 will be significantly reduced.

Income from donations and legacies

Income from donations and legacies remained consistent with the prior year at £0.8 million.

Expenditure

The Society undertakes a broad range of activities that provide public benefit either directly or indirectly, in line with our strategic priorities.

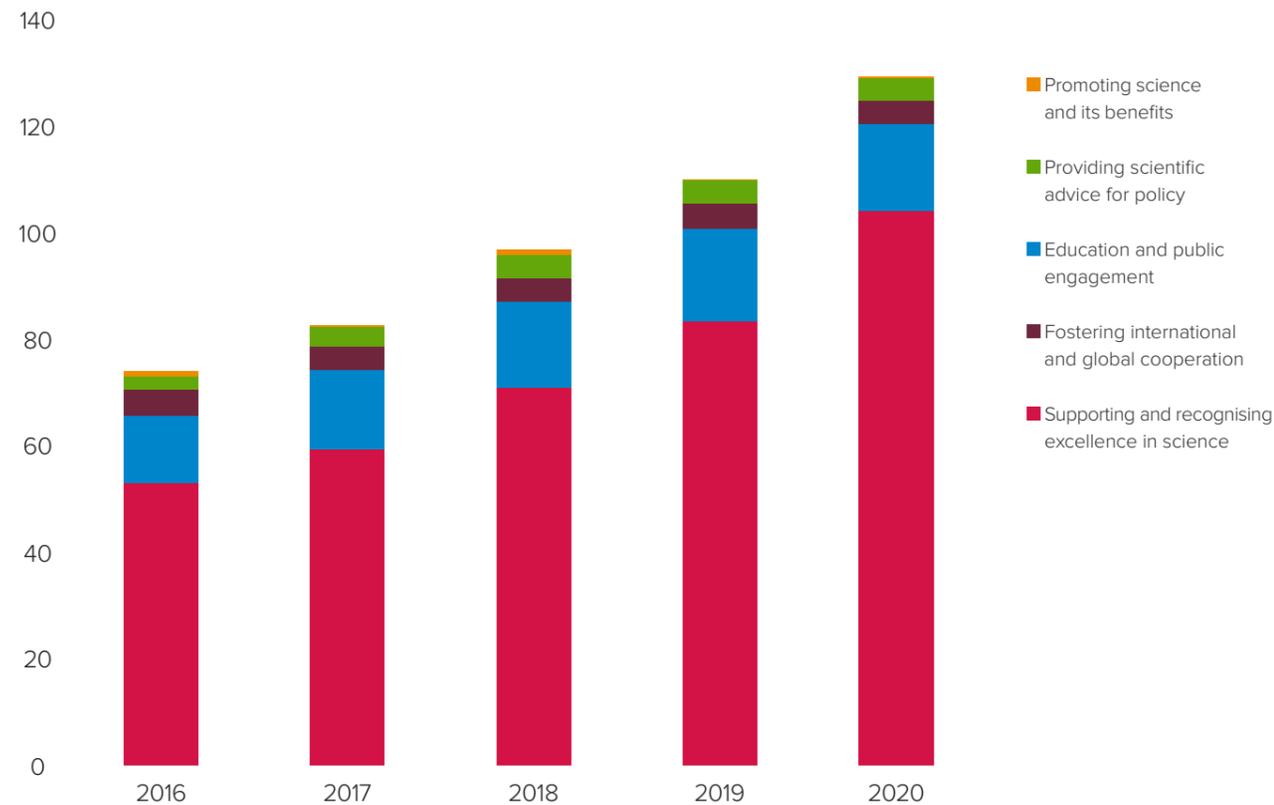
[Read more on the Society's public benefit statement on page 10.](#)

Expenditure on charitable activities

The majority of the Society's charitable expenditure relates to grant awards, this year accounting for £102.5 million (2019: £84.7 million). The expansion of the grant programme included an increase in the value of grants awarded under existing schemes, most significantly in the URF programme of £7.4 million to £45.0 million (2019: £37.6 million), the Dorothy Hodgkin Fellowships of £1.5 million to £6.4 million (2019: £4.9 million), Royal Society Research Professorships of £1.5 million to £13.9 million (2019: £12.4 million), Royal Society Challenge Grants of £1.6 million to £2.9 million (2019: £1.3 million) and Wolfson Advanced Fellowships of £1.2 million to £1.4 million (2019: £0.2 million).

Financial review continued

Expenditure on charitable activities, £m



The funding received under GCRF has enabled the Society to fund more international URFs and establish a new grant programme for funding and supporting research in sub-Saharan Africa called Future Leaders – African Independent Research Fellowships ('FLAIR'). FLAIR aims to support early career researchers who are transitioning into an independent research career. The scheme is operated in partnership with the African Academy of Sciences and was launched in May 2018, with the first awards being made with a commencement date of 1 April 2019.

Aside from grants activity, expenditure on providing scientific advice for policy remained consistent with the prior year at £4.3 million. The Society's work in this area focused particularly on

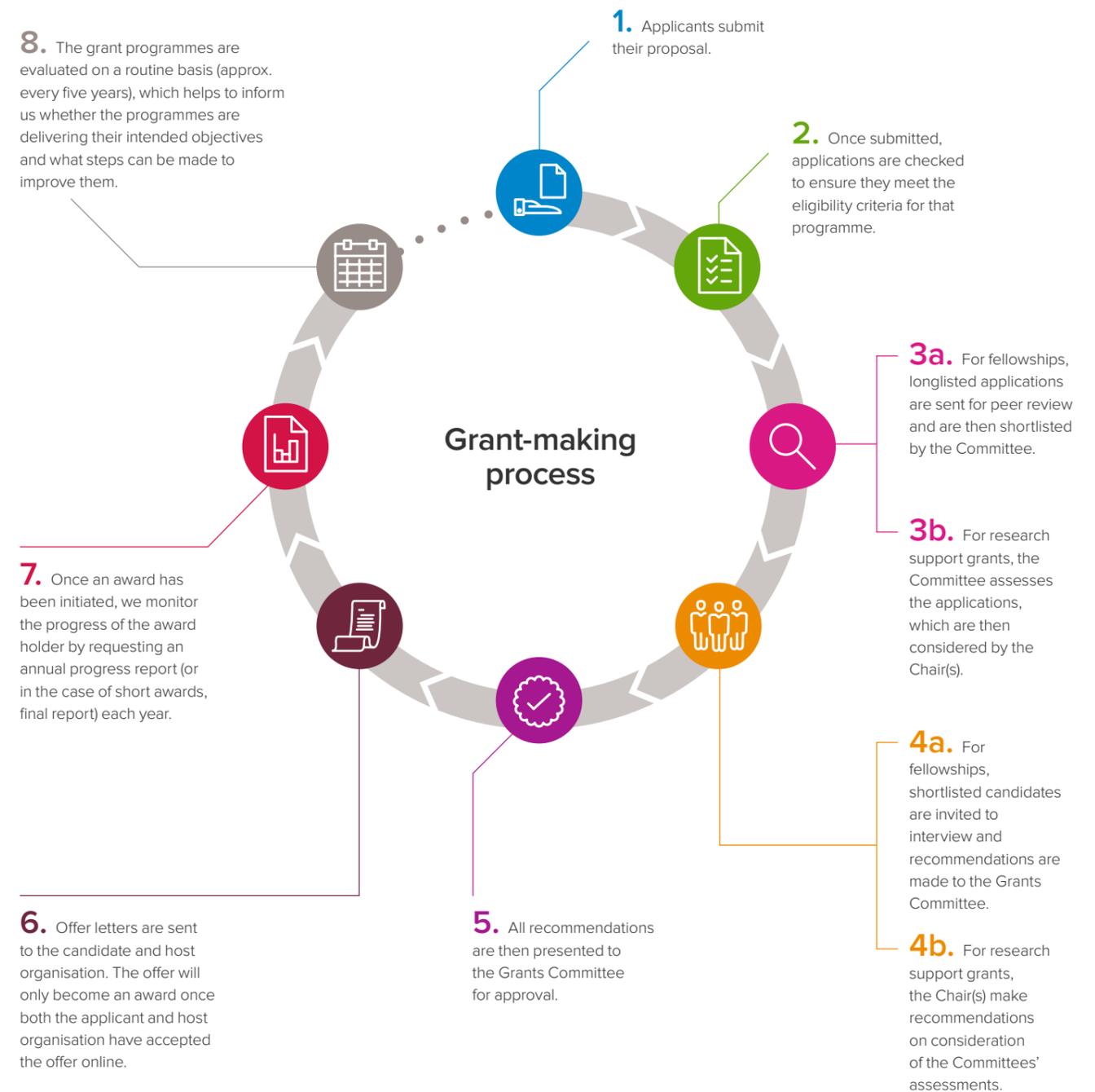
climate change and biodiversity, data science and neural interfaces during the year. Towards the end of the year, the Science Policy team began to support the response to the COVID-19 pandemic, engaging with Fellows and peers to enable participation in initiatives to support scientific analysis and provide scientific advice to the government.

Expenditure on education and public engagement decreased slightly from £4.8 million in 2019 to £4.5 million in 2020. The decrease in spend is due to the delay of public engagement events planned for the end of the financial year due to the pandemic. Spend in the year includes expenditure on a number of events, including the Summer of Science Festival, the launch of a series of *People of Science* videos

and the Society's flagship annual Summer Science Exhibition. In the year, work progressed with the implementation of a new customer relationship management system which aims to centralise and consolidate the Society's contact management processes and improve engagement with key stakeholders. The project is due to be completed during the year ended 31 March 2021.

Grants

The primary purposes of the Society's grant-giving activities are to support the work of outstanding individual scientists at various stages of their careers, primarily in the UK, and to encourage collaborations between UK scientists and scientists throughout the world. Further information is available online.



Further information is available at royalsociety.org/grants/applications

Financial review continued

Grants made by the Society fall into two broad classes as follows:

- (1) Fellowships
- early career fellowships, professorships;
 - senior fellowships, and support for innovation; and
- (2) Research grants
- research grants, collaboration;
 - travel grants;
 - capacity-building grants;
 - education-related grants.

Grant applications are assessed by means of a peer-review process and consideration by a panel of experts comprising Fellows of the Royal Society and other senior scientists. Each panel is chaired by a Fellow of the Society.

Chicheley Hall – Royal Society Trading Limited

The trading subsidiary recorded a loss of £0.2 million in the year (2019: £0.1 million). This was attributed to a difficult trading environment with a lower than anticipated occupancy rate, partly due to the closure of Chicheley Hall in March 2020.

The Society concluded a review of operations at Chicheley Hall with advice taken from relevant professionals. Council decided that it would be in the interests of the charity to dispose of the property as it was unlikely to become financially self-supporting in the near future. As such, Council decided to progress with a sale of the property. Subsequent to the year end, the company managing the property gave notice on the management contract and the Society has no plans to reopen Chicheley Hall and will progress with a sale of the property. At the time the decision was made to progress with a sale of the property, there was an

intercompany debtor between the Society, as the Parent Charity, and Royal Society Trading Limited of £0.8 million. The debt arose as a result of the accumulated trading losses of the company over several years. After several years of losses and the decision to sell Chicheley Hall, it was no longer deemed possible to recover payment and the debt was formally waived in both the parent and subsidiary accounts.

As the company has ceased trading, the financial statements of Royal Society Trading Limited for the year ended 31 March 2020 have been prepared on a basis other than that of the going concern basis. This basis includes, where applicable, writing the company's assets down to net realisable value. Provisions have also been made in respect of contracts which have become onerous at the reporting date. No provision has been made for the future costs of terminating the business unless such costs were committed at the reporting date.

Royal Society (London) Ltd

Royal Society (London) Ltd was set up in 2013 to process corporate sponsorships at the Society. The company commenced trading during the previous financial year and had income of £0.1 million (2019: £0.1 million).

Pension and Life Assurance Plan of the Royal Society

The Society operates a defined benefit pension scheme which was closed to new members in 2014.

The valuation of the scheme at 31 March 2020 showed a deficit of £10.7 million (2019: £11.6 million). This represents the difference between the assets and the obligations of the fund rather than an immediate

cash liability. The decrease in deficit was mainly driven by changes to actuarial assumptions resulting from changes in market conditions and the payment of deficit funding contributions in the year of £0.7 million. In accordance with FRS 102, the actuarial gains on the scheme of £0.8 million (2019: £0.7 million loss) have been taken to unrestricted funds.

A triennial valuation of the scheme at 1 January 2019 was agreed during the year. This showed an increase in the deficit from £3.7 million to £8.7 million and it has been agreed with the Trustees that the Society will pay deficit payments of £1.3 million per annum under a seven-year recovery plan. Current budgets and forecasts indicate that the Society will be able to meet these contributions as they arise.

Investment policy and performance

On 23 March 2016, Council passed a resolution under Section 104A(2) of the Charities Act 2011 to adopt the use of total return in relation to its permanent endowments with the exception of the Theo Murphy Australia Fund in order to best enable it to be even handed between current and future beneficiaries.

The Society does not invest in organisations which conflict with the charity's purpose, or where Council deem that to do so would hamper the charity's work, for example by alienating those who support the Society financially. Council resolved that the Society should not invest in companies or funds that derive a significant portion of their income from the sale or manufacture of tobacco

products. The Society ensures that performance is managed against appropriate benchmarks. Income from investments for the year was £6.9 million (2019: £8.1 million). The value of the Society's investment portfolio decreased in the year, from £261.3 million in 2019 to £234.1 million in 2020. The decrease was due to a fall in investment markets at the end of the financial year due to the COVID-19 pandemic. Subsequent to year end market conditions have improved and, in the quarter ending 30 June 2020, the value of investments increased by 12%.

Reserves

The total funds of the Society decreased by £26.9 million to £277.2 million during the financial year, mainly due to the loss on investments. Free reserves are unrestricted reserves (after the pension deficit) less heritage assets and fixed assets. The Society holds free reserves so that it can respond to unforeseen charitable opportunities and continue to honour existing commitments in the event of a shortfall of income. The Society's policy is to review its income streams and expenditure commitments on an annual basis, and assess the main financial risks faced by the Society and their associated likelihood in order to develop a risk-based reserves level. The target level was set cognisant of the risks associated with the changes in the publishing landscape and volatility in investment markets which may affect returns.

At the balance sheet date, the value of the Society's free reserves was £16.8 million (2019: £20.9 million), well above the target level of £14.8 million. The Society continues

	2020 £m	2019 £m
Unrestricted funds	80.4	83.7
Unrestricted tangible fixed assets	(14.1)	(13.4)
Heritage assets	(49.5)	(49.4)
Free reserves	16.8	20.9

to develop longer-term strategies to increase its charitable activities in a sustainable way, which will reduce the level of reserves while ensuring that it has adequate resources to enable it to respond to emerging risks and opportunities.

Enterprise fund (Amadeus RSEF LP)

The Royal Society Enterprise Fund was created with the aim of becoming a financially successful contributor to early stage science based companies in the UK and a role model for the translation of excellent science for commercial and social benefit. Due to the dual benefits expected to be received, the fund is accounted for as a mixed motive investment in the financial statements. The Society entered into a Limited Partnership Agreement with Amadeus Capital Partners in 2014 to create the Amadeus RSEF LP.

Statement of policy on fundraising

Section 162a of the Charities Act 2011 requires the Society to make a statement regarding fundraising activities because it is subject to an external audit. We do not use professional fundraisers or 'commercial participators' or indeed any third parties to solicit donations. We are therefore not subject to any regulatory scheme or relevant codes of practice, nor have we received any complaints in relation to fundraising activities nor do we consider it necessary to design specific procedures to monitor such

activities.

Modern Slavery Act

The Society is committed to taking the appropriate measures to reduce the risk of slavery and human trafficking taking place in our organisation or our supply chains. Pursuant to Section 54 of the Modern Slavery Act 2015, the Society has published its slavery and human trafficking statement for the financial year ended 31 March 2020.

Further information is available online.

Going concern

During the year, Council decided to progress a sale of Chicheley Hall and, as a result of the pandemic, the trading activities of Royal Society Trading Limited have ceased. As the company has ceased trading, the financial statements of Royal Society Trading Limited for the year ended 31 March 2020 have been prepared on a basis other than that of the going concern basis.

The Trustees consider that there are no material uncertainties about the Society and Royal Society (London) Ltd to continue as a going concern. This conclusion has been reached after careful consideration of future forecasts which take into account the ongoing impact of COVID-19.

Principal risks and uncertainties

Council is responsible for ensuring that proper arrangements are in place for risk management. Council relies principally on the Audit Committee, supported by the internal auditors, KPMG LLP, to assess those arrangements and to advise it accordingly.

The Audit Committee considers regular reports on risk-management systems and management of major risks. Council considers regular reports from the Audit Committee and reviews management of major risks, including using its own risk register. The risk registers of the Society's sections are also updated periodically and used in managing and monitoring risks and communicating information about risks across the organisation. Following previous internal audit reviews, a new process for preparing and considering risk registers was launched in the year and aims to reinforce the importance of risk considerations in decision making at all levels of the organisation.

Council and senior staff reflect frequently on uncertainties and risks to achieving the Society's goals and the effectiveness of the various means it employs to mitigate those risks. They are also vigilant in identifying new risks and taking steps to address them. Actions and processes often contribute to mitigation of several risks simultaneously. The Society works assiduously to develop and maintain relationships to ensure that its activities remain relevant, that its contributions are effective and that the value of its work is recognised. The Society enjoys many beneficial relationships through its Fellows, Foreign Members and staff.

The risk register was reviewed considering developments in the external landscape, in particular the COVID-19 pandemic. This review identified that all key risks had already been included on the risk register but the likelihood and impact had increased, therefore leading to additional management of the risk being required. The main risks identified by Council and actions taken to manage them, including ongoing actions, are described in the table.

Key

Status of risk

- High risk
- Medium risk

Only significant risks are presented in the table, therefore none have been rated as low risk

Change of status

- ↑ Increased risk
- ↔ No change
- ↓ Decreased risk

Key strategic priorities at risk

-  Promoting excellence in science
-  Supporting international scientific collaboration
-  Demonstrating the importance of science to everyone

Risk	Key strategic priorities at risk	Management	Status of risk
Events adversely impact reputation and operations (cyber attack, serious data security breach, a serious fraud, major health and safety incidents or internal process failures).	  	<ul style="list-style-type: none"> Engage senior-level management, committees and Council in policy setting and monitoring. Regular review and update of information security policies and procedures. Regular review and update of business continuity and disaster recovery plans to help minimise disruption to operations from unexpected events. 	■ ↑
The Society's strategy does not clearly articulate objectives to allow effective prioritisation of work, which means the Society commits to work beyond its resource capacity; therefore, the Society does not deliver against its mission and does not act effectively in its three key roles as a charity, fellowship and national academy of science.	  	<ul style="list-style-type: none"> The Society has a system of committees that report to Council and are responsible for key areas of the Society's work. Early planning for the formulation of the 2022 – 2027 strategy with increased focus on financial and risk considerations. Regular meetings of the Officers and regular communication from the Officers to Council. Specifically during the current pandemic, the Officers actively consider the latest government advice and the impact on the Society's work programme with reprioritisation and diversion of resources to the areas of the biggest current need. 	■ ↑
The Society does not ensure the effectiveness of its work, fails to remain relevant and/or address important issues as they arise, and does not ensure that its public benefit is recognised by stakeholders.	  	<ul style="list-style-type: none"> New programmes of work are approved by Council, who have oversight over all work at the Society and set the Society's strategy. Regular meetings of the Officers and regular communication from the Officers to Council. Oversight of the Society's activities by Fellows with relevant experience. Early planning for the formulation of the 2022 – 2027 strategy to include considerations of ways of demonstrating public benefit effectively. Effective project initiation and project management processes. Specifically during the pandemic, engagement with Fellows and peers to enable participation in initiatives to support scientific analysis and provide scientific advice to the government. 	■ ↑
Trading subsidiary, Royal Society Trading Limited, fails to contribute funds to support research and/or carry out activities to further the Society's objectives.		<ul style="list-style-type: none"> Implement the decision of Council to progress with a sale of Chicheley Hall. Continue to take advice from relevant professionals and follow recommended steps. 	■ ↓
Political developments in major international science partners, or between UK and major international science partners, have negative impacts on the UK science system. This could lead to funding cuts to foreign partners or their withdrawal from international agreements and collaboration arrangements and a drop in foreign applications for Royal Society grant awards.	 	<ul style="list-style-type: none"> Continue to work with many partners, in the UK, the rest of Europe and globally. Advocate and promote future arrangements for international collaboration, and the ability of the UK to continue to attract outstanding scientists from overseas, funding for UK science and regulatory matters. Provide advice and build relationships. 	■ ↑

Risk	Key strategic priorities at risk	Management	Status of risk
Governance structure fails to provide the right level and diversification of expertise to make decisions and run the Society effectively.	  	<ul style="list-style-type: none"> Oversight of election process by Officers and other Council members. Clear role descriptions for Officers and Council members. Identify potential members with broad Trustee experience. Include non-Fellows with relevant expertise on Society committees. Continue to enable willing Fellows to contribute to the Society's work. Provide induction and ongoing training and workshops from legal and audit specialists. Complete regular board effectiveness reviews. Engage with internal and external audit functions to provide support as appropriate. 	 
Talented staff not recruited, developed and retained.	  	<ul style="list-style-type: none"> Ongoing benchmarking of compensation and benefits to the rest of the sector. Employee engagement surveys informing areas of change. Schedule of internal courses available for employees. 	 
Dilution in the quality of the science funded by grants and/or failure to apply the available resources to activities that are of the highest quality and are likely to have the most valuable impact to further the Society's strategic aims.		<ul style="list-style-type: none"> Grants Committee formed of experts in subject area, making them best placed to select applications of 'excellent science'. Ongoing review of performance against strategy. Policies and procedures in place to govern decision-making processes. Periodic scheme evaluations to ensure offerings remain relevant and competitive. 	 
The Society does not effectively safeguard its people.	  	<ul style="list-style-type: none"> Relevant and appropriate policies are in place. Internal safeguarding working group and safeguarding officers appointed. Council member with designated responsibility for safeguarding. Agree a code of conduct for staff, Fellows and other relevant stakeholders. Specifically during the pandemic, monitor government advice and opportunities for support, and produce plans for a return to work in the office based on advice and scientific evidence once available. 	 
Funding reduced or remaining static has a negative impact on the Society's ability to support excellent science. A reduction of income could be due to a reduction in funding from government, reduced income generated by publishing activities due to open access journals strategy, failure of trading activities to perform and/or reduced investment returns due to financial crises.	  	<ul style="list-style-type: none"> Strengthen existing relations and develop new relationships, seeking to secure additional funding and diversify sources of funding. Improve arrangements for financial planning. High levels of discretionary expenditure that do not have a long-term commitment attached to them and grant awards include termination clauses in the event of funding withdrawal. Specifically during the current pandemic, the Officers actively consider the latest government advice and the impact on the Society's work programme with reprioritisation and diversion of resources to the areas of the biggest current need, and utilisation of opportunities for support where appropriate. 	 

Risk	Key strategic priorities at risk	Management	Status of risk
The economic climate and inherent uncertainties in performance give rise to the risk that investments are not properly safeguarded or perform poorly, including those in the DB pension scheme.	  	<ul style="list-style-type: none"> Review of investment-management arrangements. Regularly review the investment portfolio and performance of the investment manager. Completed a triennial valuation. Appropriate legal advice sought and followed. Trained and competent staff in senior positions, and professional pension Trustees appointed. 	 
Narrow representation due to lack of diversity in the Fellowship, Council, grant applicants and general science arena.	  	<ul style="list-style-type: none"> Active agenda to positively influence and encourage engagement from underrepresented groups. Unconscious bias training provided to those in positions to make decisions. Continual consideration and engagement with experts in relevant fields. 	 
The Society loses influence and support, and the Fellowship does not support the activities of the Society.	  	<ul style="list-style-type: none"> Regular communication with the Fellowship and other key stakeholders. Implement a new customer relationship management system to more effectively track and monitor communications and contributions. Specifically during the pandemic, engagement with Fellows and peers to enable participation in initiatives to support scientific analysis and provide scientific advice to the government. 	 
The Society does not comply with legal and regulatory requirements.	  	<ul style="list-style-type: none"> Appropriate legal advice sought and followed. Trained and competent staff in senior positions. Approved policies and procedures with significant exceptions reported to the Audit Committee. Internal and external audit functions in place. 	 

Governance

Structure and management

The Society is a registered charity and Council is the Trustee body under charity law. The Society was founded in 1660 and incorporated by Royal Charter. A Supplemental Charter was granted in 2012, and that now serves as the Society's governing document. The governing body of the Society is its Council, whose members are elected by and from the Fellowship.

Under the Charter, Council 'shall and may have full authority, power, and faculty from time to time to draw up, constitute, ordain, make, and establish such laws, statutes, acts, ordinances, and constitutions as shall seem to them, or to the major part of them, to be good, wholesome, useful, honourable, and necessary, according to their sound discretions, for the better government, regulation, and direction of the Royal Society aforesaid, and of every Member of the same, and to do and perform all things belonging to the government, matters, goods, faculties, rents, lands, tenements, hereditaments, and affairs of the Royal Society aforesaid.'

Council

The Charter specifies that Council must have between 20 and 24 members, each of whom must be a Fellow of the Society. Council determines the strategic direction of the Society and in particular approves the Society's strategic plan. Council also approves plans for specific charitable programmes on the recommendation of relevant committees, and those committees oversee activities within the programmes on behalf of Council. There are currently 23 members.

Council has reflected on the new Charity Governance Code for larger charities and supports the principles set out and the model for continuous improvement. The Society's constitution limits Council's ability to conform to some of the principles in the ways that might be adopted by other charities; however, in these instances, the Society seeks alternative means of achieving the same outcome. Council completed a self-assessment in the year based on a series of interviews with Trustees and the results of this review will be used to make improvements to the Society's governance framework.

Membership of Council

Among the members of Council are the President, who is the Chair of Council, and four Officers: the Biological Secretary, the Foreign Secretary, the Physical Secretary and the Treasurer. During the year there were also 18 so-called Ordinary Members. The President and the Officers normally serve five-year terms and the Ordinary Members serve three-year terms.

Changes in the membership of Council took place as usual on 30 November, which is the Society's Anniversary Day. The new members received an induction that included a review of relevant documents and presentations on Trustee duties by a partner in a leading charity-law practice. During the year, Council also received guidance from professional advisers on specific matters and updates on relevant developments affecting charities and Trustees. Council delegates responsibility for day-to-day management of the Society's affairs to the Executive Director.

There have been 61 Presidents of the Royal Society since it was founded in 1660. Previous Presidents of the Royal Society have included Christopher Wren, Samuel Pepys, Isaac Newton, Joseph Banks, Humphry Davy and Ernest Rutherford. The year ended 31 March 2020 is the last full year with the current President, Sir Venki Ramakrishnan, in post and the election process for the new President began in the year. The result of a ballot of the Fellowship was confirmed at a meeting of the Society's Council on 5 May 2020 and Sir Adrian Smith will take up the post of President on 30 November 2020.

Public benefit

Fellows are not remunerated for serving as Trustees. Council has complied with its duty to have due regard to the Charity Commission's public benefit guidance when exercising any powers or duties to which that guidance is relevant. Information about public benefit provided by the Society is presented in this report.

Committees

The Society has a system of committees, which included 46 principal active Standing Committees and 28 principal Working Groups. Standing Committees include committees that oversee key strands of the Society's work, committees that make recommendations to Council of recipients of medals and awards and committees that assess applications for and make grant awards. All Standing Committees have terms of reference agreed by Council that set out the delegations of responsibility to that committee and, for the majority, a member of Council sits on the committee. The committee structure diagram on the following page illustrates the Society's committee structure by type of business and provides additional information on committees relevant to central business on finance, planning and subsidiaries.

Key business in the year

In the year, Council received regular reports from the Executive Director and Board as well as reports from key committees, including Audit Committee; Diversity Committee; Education Committee; Hooke Committee; Nominations Committee; Planning and Resources Committee; Public Engagement Committee; Publishing Board; Science, Industry and Translation Committee; and

Science Policy Committee.

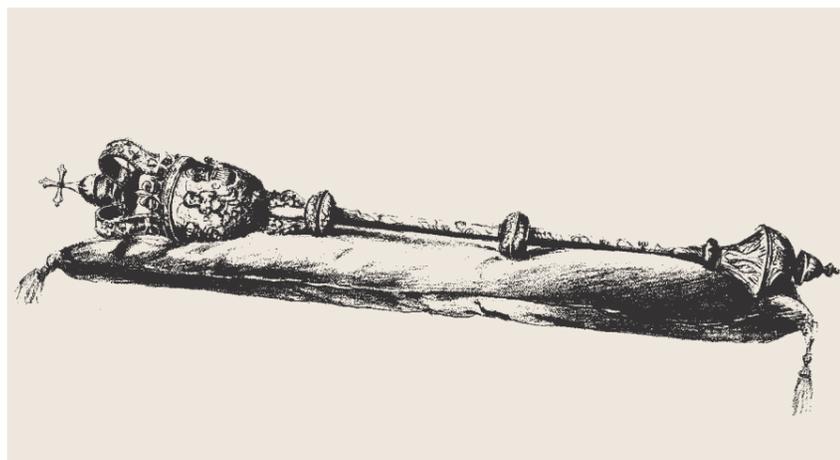
Council made further considerations of the impact on science and science funding following the UK's decision to leave the EU, approved the agreement of the Pension Triennial Valuation and recovery plan, considered and agreed the Council risk register and discussed matters on sustainability and the Society's role in this area.

With a view to increasing the diversity of Officers, Council agreed to submit an application to the Charity Commission to make grants to Officers' parent institutions to reimburse some of the costs that arise from the significant time commitment involved in Officers' roles. We received the Charity Commission's consent to the proposal in February 2020 (confirmed by the Commission in an Order in May 2020). This initiative is expected to bring more diversity to the field from which Officers, who will continue to be unpaid by the Society, is drawn.

In March 2020, following careful consideration of the current course of the COVID-19 pandemic, Council made the decision to implement a closure of the Society's buildings to Fellows, staff, conferencing clients and other visitors. The decision was taken in the interests of all our stakeholders. Although the building was closed, the business of the Society continued with staff working remotely, wherever possible. Meetings and events from the programme that had been planned for 2020 were cancelled or postponed, and the possibility of moving to virtual platforms considered. In line with government advice, Chicheley Hall closed on 23 March 2020.

Council approved the Society's budget for the 2020/21 financial year. The budget was revised to reflect changes assumed due to the impact of the pandemic and, although there was a significant reduction in the Society's key programmatic and trading activities, the net financial impact anticipated is relatively modest.

The Society concluded a review of operations at Chicheley Hall in the financial year. Chicheley Hall has hosted numerous science meetings in a way that was conducive to knowledge exchange and the development of networks, but much has changed since the time of purchase and the Society had exhausted options to make the business financially viable. As such, Council decided to progress with a sale of the property. The management of the property was outsourced to De Vere Venues and, following the closure on 23 March, De Vere wrote to the Society to give notice that the closure was a 'force majeure' event and subsequently gave notice on the contract, which expedited the Society's next steps to progress with a sale of the property.



Above: Drawing of the Royal Society's Charles II mace, 1896.

Committee structure



Statement of Trustees' responsibilities

The Council members (who are the Trustees of the Society) are responsible for preparing the Trustees' annual report and the financial statements in accordance with applicable law and regulations.

Charity law requires the Council to prepare financial statements for each financial year in accordance with United Kingdom Generally Accepted Accounting Practice (United Kingdom Accounting Standards and applicable law). Under charity law the Council members must not approve the financial statements unless they are satisfied that they give a true and fair view of the state of affairs of the group and charity and of the incoming resources and application of resources, including the income and expenditure, of the group for that period.

In preparing these financial statements, the Council members are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and accounting estimates that are reasonable and prudent;
- state whether applicable United Kingdom Accounting Standards have been followed, subject to any material departures disclosed and explained in the financial statements; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the charity will continue in business.

The Council members are responsible for keeping adequate accounting records that are sufficient to show and explain the charity's transactions and disclose with reasonable accuracy at any time the financial position of the charity and enable them to ensure that the financial statements comply with the Charities Act 2011. They are also responsible for safeguarding the assets of the charity and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Financial statements are published on the charity's website in accordance with legislation in the UK governing the preparation and dissemination of financial statements, which may vary from legislation in other jurisdictions. The maintenance and integrity of the charity's website is the responsibility of the Council. The Council's responsibility also extends to the ongoing integrity of the financial statements contained therein.

The current Council members, having made enquiries of fellow Council members and the charity's auditors, confirm that:

- so far as they are aware, there is no relevant audit information of which the charity's auditors are unaware; and
- they have taken all reasonable steps they ought to have taken as Trustees in order to make themselves aware of any relevant audit information and to establish that the charity's auditors are aware of that information.

This report was approved by Council on 6 October 2020 and signed on their behalf by:

V. Ramakrishnan

Venki Ramakrishnan
President of the Royal Society

Independent auditor's report

Opinion

We have audited the financial statements of The Royal Society ('the Parent Charity') and its subsidiaries ('the Group') for the year ended 31 March 2020, which comprise the consolidated statement of financial activities, the consolidated balance sheet, the consolidated statement of cash flows and notes to the financial statements, including a summary of significant accounting policies. The financial reporting framework that has been applied in their preparation is applicable law and United Kingdom Accounting Standards, including Financial Reporting Standard 102, the Financial Reporting Standard applicable in the UK and Republic of Ireland (United Kingdom Generally Accepted Accounting Practice).

In our opinion, the financial statements:

- give a true and fair view of the state of the Group's and of the Parent Charity's affairs as at 31 March 2020 and of the Group's incoming resources and application of resources for the year then ended;
- have been properly prepared in accordance with United Kingdom Generally Accepted Accounting Practice; and
- have been prepared in accordance with the requirements of the Charities Act 2011.

Opinion on other matter as required by BEIS grant letter

In our opinion, in all material aspects, the core grant payments received from the Department for Business, Energy & Industrial Strategy (BEIS) have been applied for the purposes set out in the grant letter and in accordance with the terms and conditions of the core grant.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) (ISAs (UK)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report. We are independent of the Group and the Parent Charity in accordance with the ethical requirements relevant to our audit of the financial statements in the UK, including the FRC's Ethical Standard, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Conclusions related to going concern

We have nothing to report in respect of the following matters in relation to which the ISAs (UK) require us to report to you where:

- the Trustees' use of the going concern basis of accounting in the preparation of the financial statements is not appropriate; or
- the Trustees have not disclosed in the financial statements any identified material uncertainties that may cast significant doubt about the Group or the Parent Charity's ability to continue to adopt the going concern basis of accounting for a period of at least 12 months from the date when the financial statements are authorised for issue.

Other information

The other information comprises the information included in the Trustees' report and financial statements, other than the financial statements and our auditor's report thereon. The other information comprises the Trustees' report. The Trustees are responsible for the other information.

Our opinion on the financial statements does not cover the other information and, except to the extent otherwise explicitly stated in our report, we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify such material inconsistencies or apparent material misstatements, we are required to determine whether there is a material misstatement in the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact.

We have nothing to report in this regard.

Independent auditor's report continued

Matters on which we are required to report by exception

We have nothing to report in respect of the following matters in relation to which the Charities Act 2011 requires us to report to you if, in our opinion:

- the information contained in the financial statements is inconsistent in any material respect with the Trustees' annual report; or
- adequate accounting records have not been kept by the Parent Charity; or
- the Parent Charity financial statements are not in agreement with the accounting records and returns; or
- we have not received all the information and explanations we require for our audit.

Responsibilities of Trustees

As explained more fully in the statement of Trustees' responsibilities, the Trustees are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view, and for such internal control as the Trustees determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Trustees are responsible for assessing the Group's and the Parent Charity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Trustees either intend to liquidate the Group or the Parent Charity or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

We have been appointed as auditor under Section 144 of the Charities Act 2011 and report in accordance with the Act and relevant regulations made or having effect thereunder.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the Financial Reporting Council (FRC) website at: www.frc.org.uk/auditorsresponsibilities

This description forms part of our auditor's report.

Use of report

This report is made solely to the Charity's Trustees, as a body, in accordance with the Charities Act 2011. Our audit work has been undertaken so that we might state to the Charity's Trustees those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Charity and the Charity's Trustees as a body, for our audit work, for this report, or for the opinions we have formed.

BDO LLP

BDO LLP, statutory auditor
Gatwick

23 October 2020

BDO LLP is eligible for appointment as auditor of the charity by virtue of its eligibility for appointment as auditor of a company under Section 1212 of the Companies Act 2006.

BDO LLP is a limited liability partnership registered in England and Wales (with registered number OC305127).

Consolidated statement of financial activities

For the year ended 31 March 2020

(incorporating an income and expenditure account)

	Notes	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Income and endowments from donations and legacies	1	536	269	–	–	805	832
Income from charitable activities							
Grants for charitable activities	4	992	107,537	–	–	108,529	89,246
Trading in furtherance of charitable activities	3	10,905	638	–	–	11,543	11,568
		11,897	108,175	–	–	120,072	100,814
Other trading activities	3	1,975	–	–	–	1,975	1,924
Income from investments	2	1,249	1,004	1,070	3,528	6,851	8,051
Other income	5	–	76	–	–	76	72
Total income		15,657	109,524	1,070	3,528	129,779	111,693
Expenditure on raising funds	6	3,388	413	127	484	4,412	4,254
Expenditure on charitable activities	7						
Promoting science and its benefits		72	173	–	–	245	276
Supporting and recognising excellence in science		10,845	93,246	–	–	104,091	83,772
Providing scientific advice for policy		1,966	2,299	–	–	4,265	4,298
Fostering international and global cooperation		905	15,261	–	–	16,166	17,367
Education and public engagement		3,108	1,417	–	–	4,525	4,753
		16,896	112,396	–	–	129,292	110,466
Total expenditure		20,284	112,809	127	484	133,704	114,720
Net (expenditure)/income before net gains/ (losses) on investments		(4,627)	(3,285)	943	3,044	(3,925)	(3,027)
Net (losses)/gains on investments	18	(2,212)	(1,634)	(4,645)	(15,283)	(23,774)	18,264
Net (expenditure)/income for the year		(6,839)	(4,919)	(3,702)	(12,239)	(27,699)	15,237
Gross transfers between funds	23	2,822	1,218	(735)	(3,305)	–	–
Actuarial gains/(losses) on defined benefit pension scheme	25	780	–	–	–	780	(736)
Net movement in funds		(3,237)	(3,701)	(4,437)	(15,544)	(26,919)	14,501
Total funds brought forward		83,682	40,430	41,426	138,629	304,167	289,666
Total funds carried forward		80,445	36,729	36,989	123,085	277,248	304,167

All of the above results are derived from continuing activities except those from Royal Society Trading Limited, which ceased trading on 23 March 2020. There are no other gains or losses other than those stated above. The income and expenditure in the consolidated statement of financial activities for the Group that relate to the discontinued trading subsidiary were £1.8m (2019: £1.8m) and £2.3m (2019: £2.3m), respectively.

The consolidated statement of financial activities is for the Group as a whole. The Charity's total income for the year was £129.3m (2019: £111.4m). The Charity's total funds decreased by £27.6m in the year (2019: £14.6m increase).

The notes that follow form part of the financial statements.

Consolidated and charity balance sheets

As at 31 March 2020

Notes	Group		Charity	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Fixed assets				
Tangible assets	15	14,074	13,354	14,074
Heritage assets	17	49,476	49,416	49,416
Investments	18	234,075	261,260	234,075
		297,625	324,030	297,625
Current assets				
Stocks		40	43	26
Debtors receivable within one year	19	3,420	6,508	3,479
Cash at bank and in hand		4,759	11,408	4,487
		8,219	17,959	7,992
Creditors: amounts falling due within one year	20	(17,750)	(26,101)	(17,253)
Net current liabilities		(9,531)	(8,142)	(9,261)
Total assets less current liabilities		288,094	315,888	288,364
Creditors: amounts falling due after more than one year	20	(129)	(140)	(129)
Net assets before pension scheme liability		287,965	315,748	288,235
Defined benefit pension scheme liability	25	(10,717)	(11,581)	(10,717)
Total net assets		277,248	304,167	277,518
Permanent endowment funds	23	123,085	138,629	123,085
Expendable endowment funds	23	36,989	41,426	36,989
Restricted funds	23	36,729	40,430	36,729
Unrestricted funds				
Revaluation reserve	23	47,856	47,856	47,856
Defined benefit pension reserve	23	(10,717)	(11,581)	(10,717)
Unrestricted income funds	23	43,306	47,407	43,576
Total funds		277,248	304,167	277,518

The financial statements were approved and authorised for issue by Council on 6 October 2020 and signed on its behalf by



Professor Andrew Hopper
Treasurer

Consolidated statement of cash flows

For the year ended 31 March 2020

	Notes	2020		2019
		£'000	£'000	£'000
Net cash (used in)/provided by operating activities	A		(13,744)	3,790
Cash flows from investing activities				
Investment income	2	6,851		8,051
Purchase of tangible fixed assets	15	(1,983)		(629)
Purchase of heritage assets	17	(20)		(33)
Purchase of investments	18	(31,616)		(21,484)
Proceeds from sale of investments	18	33,863		17,016
Net cash provided by investment activities			7,095	2,921
(Decrease)/increase in cash and cash equivalents			(6,649)	6,711
Cash and cash equivalents at 1 April			11,408	4,697
Cash and cash equivalents at 31 March			4,759	11,408

A. Reconciliation of net (expenditure)/income to net cash flow from operating activities.

		2020	2019
		£'000	£'000
Net (expenditure)/income as per the statement of financial activities		(27,699)	15,237
Adjustments for:			
Depreciation charges	15	1,262	1,580
Losses/(gains) on investments	18	23,774	(18,264)
Investment income	2	(6,851)	(8,051)
Loss on the disposal of fixed assets	15	1	-
Investment management fees charged to portfolio	18	1,164	1,016
Decrease/(increase) in stocks		3	(1)
Decrease in debtors	19	3,088	1,535
(Decrease)/increase in creditors	20	(8,362)	10,974
Donated heritage assets	17	(40)	(62)
Difference between pension charge and cash contributions	25	(84)	(174)
Net cash (used in)/provided by operating activities		(13,744)	3,790

Accounting policies

For the year ended 31 March 2020

The principal accounting policies adopted in the preparation of these financial statements are as follows.

Accounting convention

The financial statements have been prepared in accordance with Financial Reporting Standard 102 – 'The Financial Reporting Standard applicable in the United Kingdom and Republic of Ireland' ('FRS 102') and with the Statement of Recommended Practice: Accounting and Reporting by Charities FRS 102 as revised in 2019 ('the SORP 2019 2nd Edition') together with the reporting requirements of the Charities Act 2011.

The financial statements have been prepared under the historical cost convention with items recognised at cost or transaction value unless otherwise stated in the relevant accounting policy or note.

The accounts have been prepared on a going concern basis. This conclusion has been reached after careful consideration of future forecasts which take into account the on-going impact of COVID-19. The Royal Society ('the Society') is a Public Benefit Entity as defined by FRS 102. The accounting policies have been applied consistently throughout the financial statements and the prior year.

The accounts of the subsidiary Royal Society Trading Limited have been prepared on a basis other than that of the going concern basis. This basis includes, where applicable, writing the company's assets down to net realisable value. Provisions have also been made in respect of contracts which have become onerous at the reporting date. No

provision has been made for the future costs of terminating the business unless such costs were committed at the reporting date.

Basis of consolidation

These financial statements consolidate the results of the Royal Society and its active wholly owned subsidiaries, Royal Society Trading Limited and Royal Society (London) Ltd, on a line-by-line basis. In the consolidated financial statements uniform accounting policies have been used, with the exception of Royal Society Trading Limited. A separate statement of financial activities for the charity itself is not presented.

Cash flow statement

The Society meets the definition of a qualifying entity under FRS 102 and has therefore taken advantage of the disclosure exemption in relation to presentation of a cash flow statement in respect of its separate financial statements, which are presented alongside the consolidated financial statements.

Critical accounting judgements and key sources of estimation uncertainty

In the application of the Group's accounting policies the Trustees are required to make judgements, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. Judgements, estimates and associated assumptions are reviewed on an ongoing basis and are based on historical experience and other factors that are considered to be relevant, including expectations of future events that are believed to be reasonable under the circumstances.

Critical judgements relate to the accounting treatment of the multi-employer defined benefit scheme. Critical accounting estimates and assumptions relate to the defined benefit pension scheme.

Multi-employer defined benefit scheme

Certain employees participate in a multi-employer defined benefit scheme with other organisations. In the judgement of the Trustees, the Society does not have sufficient information on the plan assets and liabilities to be able to reliably account for its share of the defined benefit obligation and plan assets. In accordance with FRS 102 this is therefore accounted for as though it were a defined contribution scheme.

Defined benefit pension scheme

The cost of the defined benefit pension scheme and the value of the present value of the scheme liability depend on a number of factors, including assumptions about inflation, discount rates and mortality, which are taken by actuarial specialists. The valuation of the scheme is particularly sensitive to discount rate assumptions, with a 0.1% movement in the discount rate resulting in a £1.2m change in the value of the scheme liabilities.

Royal Society Trading Limited

During the year, the Society decided to progress with a sale of Chicheley Hall. Royal Society Trading Limited ceased to trade on the closure of Chicheley Hall on 23 March 2020 following government advice due to the COVID-19 pandemic. Subsequent to year end, De Vere Venues, the company appointed to manage the property since February 2013, gave notice on the

Accounting policies continued

management contract. Without a property manager, the Society will not reopen Chicheley Hall and will expedite the process to progress with a sale of the property. As the company has ceased trading, the financial statements of Royal Society Trading Limited for the year ended 31 March 2020 have been prepared on a basis other than that of the going concern basis.

At the time the decision was made to progress with a sale of the property, there was an intercompany debtor between the Society, as the Parent Charity, and Royal Society Trading Limited of £0.8 million. The debt arose due to the accumulated trading losses of the company over several years. After several years of losses and the decision to sell Chicheley Hall, it was no longer deemed possible to recover payment and the debt was formally waived in both the parent and subsidiary accounts.

Income

Income is accrued and recognised when conditions on entitlement are met, receipt can be quantified reliably and is probable.

Donations and legacies

Donated goods and services are included at the value to the Society where these can be quantified. No amounts are included in these financial statements for the services donated by volunteers or Fellows.

Donations are accounted for on a receivable basis where receipt is probable and there is entitlement to the income. Donations include Gift Aid based on amounts receivable at the accounting date.

Legacy income is recognised on a receivable basis when there is

sufficient evidence to assess that receipt is probable and receipt can be quantified reliably. Receipt of a legacy, in whole or in part, is only considered probable when the charity has been notified of the executor's intention to make a contribution.

Fellows' annual contributions are recognised in the year in which they become due.

Grants for charitable activities

Grants are recognised when all conditions for receipt are met. Where donor-imposed restrictions apply to the timing of the related expenditure as a precondition of its use the grant is treated as deferred income until those restrictions are met. Grants received for specific purposes are accounted for as restricted funds.

Income from trading activities

Income from conferencing activities is recognised when the event takes place. Income from publishing activities is recognised when the publication is provided.

Income from investments

Investment income and interest on deposits is recognised on an accruals basis. Investment income arising on endowment funds is credited to the appropriate fund in accordance with the prescribed conditions.

Expenditure

Expenditure, including irrecoverable VAT, is accounted for on an accruals basis. Expenditure is allocated to the particular activity where the cost relates directly to that activity. Support costs, which cannot be directly attributed to a particular activity, are apportioned based on the costs of staff engaged in direct activities.

Expenditure on raising funds

Costs of raising funds include those costs incurred in raising donations and legacies.

Expenditure on charitable activities

Charitable expenditure includes all expenditure incurred on grants awarded and on other schemes run in pursuance of the Society's objectives under its Charter, including Fellowship activities and primary purpose trading.

The direct costs of supporting these activities, including staff and other overhead costs, are separately analysed and shown as support costs under this heading.

Grants are recognised as a liability when the Society formally notifies the recipient of the award. Due to the nature of the funding source for the majority of grant awards, the liability is measured as the total of expected payments for the period to the next confirmation of income due. Payments due in future periods are disclosed as grant commitments. Any termination liabilities are recognised when a decision to cease the grant is made. Liabilities for awards where more than one year of expected payments are provided at the outset are discounted to current value using a rate equivalent to the opportunity cost from investments foregone.

Leased assets

Rentals payable under operating leases are charged to the statement of financial activities evenly over the term of the lease.

Tangible fixed assets

Tangible fixed assets are capitalised at cost, including purchase price and any other costs of bringing the asset into working condition for its intended use. The Society only

capitalises items costing more than £5,000. Batches of items below this threshold are capitalised if forming part of a larger asset or project and together cost more than £5,000.

Depreciation is provided on all assets, excluding freehold land and assets under development, to write off the cost of tangible fixed assets on a straight-line basis over their expected useful lives as follows:

Freehold property and improvements:	20 – 50 years
Freehold fixtures and fittings:	3 – 10 years
Leasehold improvements:	20 – 30 years
Leasehold fixtures and fittings:	3 – 10 years
Computers and AV equipment:	3 – 5 years
Other equipment:	10 – 20 years

On completion, assets under development are transferred to the relevant category and depreciated.

Heritage assets

Heritage assets comprise:

- printed books
- archives
- pictures, sculptures and other works of art
- other artefacts.

Printed books and archives are included on the balance sheet at deemed cost using a valuation performed in 2003. Pictures, sculptures and other works of art, and other artefacts are included on the balance sheet on a valuation basis. The valuation reflects their fair value and was last performed in 2015. Impairment reviews of these collections are undertaken every 5 – 10 years and when changes in circumstances indicate.

Additions to heritage assets are made by purchase or donation. Purchases are initially recorded at cost and donations are recorded at a fair value where practicable. The Society holds and maintains these assets principally for their contribution to knowledge and culture in line with its charitable aims.

The Trustees do not consider that a reliable estimate of the fair value can be obtained for a large part of the archives collection without incurring costs that would exceed the benefits provided. The Society was founded in 1660 and the collection has been built up throughout its existence and the number of assets held in the collection is extensive and diverse in nature. Reliable and relevant information on the cost of many of the assets is therefore not readily available and there is a lack of comparable market values. As such, these assets are not recognised in the accounts.

Investments

Listed investments are held at fair value. Unlisted investments are held at cost as an approximation to fair value where the fair value is not obtainable. Private equity investments are valued at fair value based on the latest information from the fund managers. Realised gains and losses on investments sold in the year and unrealised gains and losses on revaluation of investments are included in the statement of financial activities.

Investment management fees are allocated proportionally against the funds under investment.

The investments in subsidiary undertakings are held at cost on the Society only balance sheet.

Total return accounting

The Society adopts the use of total return in relation to its permanent and expendable endowments with the exception of the Theo Murphy Australia Fund. Income from the endowments and investment gains and losses are recognised in the endowment column of the statement of financial activities. Unapplied total return that is allocated to income funds is presented as an allocation between endowment funds and income funds as a transfer on the face of the statement of financial activities.

The amount of any unapplied total return fund is included as part of the relevant endowment together with the value of the trust for investment on the balance sheet.

The Trustees' policy is to distribute up to 4% of the rolling five-year average capital value of the fund. In determining that the charity should adopt a total return approach, the Trustees considered the Charities (Total Return) Regulations 2013 and received advice from Stone King LLP and Cazenove Capital Investment managers.

The core endowment represents the part of the assets which the Trustees seek to maintain in real terms. It is based on the value of the endowments at 31 March 2012, together with an allowance for inflation (UK consumer price index (CPI) as determined by the Office for National Statistics).

Impairment of fixed assets and investments

Fixed assets and investments are subject to review for impairment when there is an indication of a reduction in their carrying value.

Accounting policies continued

Investments held at cost are reviewed annually for impairment. Any impairment is recognised in the corresponding SOFA category in the year in which it occurs.

Heritage assets are reviewed for impairment at the end of each reporting period to ensure that the carrying value reflects their carrying amounts.

Foreign currency

Transactions in foreign currencies are recorded at the exchange rate at the date of the transaction. Assets and liabilities in foreign currency are translated into sterling at the exchange rate at the balance sheet date. Resulting gains or losses are included in the statement of financial activities.

Financial instruments

The Society has financial assets and financial liabilities of a kind that qualify as basic. Basic financial instruments are initially recognised at transaction value and subsequently measured at their settlement value.

Fund accounting

Restricted funds can only be used for particular purposes specified by or agreed by the donor. Permanent endowment funds are funds where the capital must be retained and invested. Expendable endowment funds are funds that must be invested to produce income. Unrestricted funds may be used for any purpose in the furtherance of the general objectives of the charity.

Pension costs

Defined benefit pension scheme assets are measured at fair value and liabilities on an actuarial basis using the projected unit method and

discounted at a rate equivalent to the current rate of return on a high-quality corporate bond of equivalent currency and term to the Scheme liabilities. The actuarial valuations are obtained triennially and updated under FRS 102 rules at each balance sheet date. Any surplus or deficit is shown in the balance sheet as an asset or liability.

The charge to the statement of financial activities is calculated so as to spread the cost of pensions over employees' working lives with the Society. The charge comprises the administration costs of running the scheme, the current service cost computed by the actuary under FRS 102 and gains and losses on settlements and curtailments. Past service costs or credits are recognised immediately if the benefits have vested. If the benefits have not vested immediately, the costs are recognised over the period until vesting occurs. The interest on the assets and liabilities for the period are shown as a net amount of other finance costs or credits charged or credited to the statement of financial activities. Actuarial gains and losses are recognised immediately under the description 'Actuarial losses on defined benefits pension scheme'.

Multi-employer schemes are accounted for as defined contribution schemes as it is not possible to identify the Society's share of the underlying assets and liabilities on a reasonable and consistent basis. Contributions payable relating to funding of the deficit are included as a liability on the balance sheet and charged to the statement of financial activities.

The amounts charged to the statement of financial activities for defined contribution pension schemes represent the employer's contributions payable in the year.

The method for allocation of pension costs between funds is to allocate on a pro-rata basis using departmental salary costs as a base.

Termination benefits

Termination benefits are payable when employment is terminated by the Society, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The amounts charged to the statement of financial activities represent the best estimate of the expenditure required to settle the obligation at the balance sheet date.

Taxation

The Society is a charity within the meaning of Paragraph 1 Schedule 6 of the Finance Act 2010. Accordingly, the Society is exempt from income and corporation taxes on income and gains to the extent that they are applied to charitable purposes. The trading subsidiaries do not generally pay UK corporation tax because their policy is to pay taxable profits to the Society as Gift Aid.

Prior year comparatives

In accordance with FRS 102, prior year comparative figures can be found as follows:

- consolidated statement of financial activities – note 27
- analysis of net assets between funds – note 28
- movement on trust and specific funds in year – note 29.

Notes to the financial statements

For the year ended 31 March 2020

1 Income and endowments from donations and legacies

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Gifts and donations	251	269	–	–	520	388
Legacies	26	–	–	–	26	209
Fellows' contributions	259	–	–	–	259	235
Total	536	269	–	–	805	832

2 Income from investments

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Dividends and interest	1,215	1,004	1,070	3,528	6,817	8,017
Bank deposit interest	34	–	–	–	34	34
Total	1,249	1,004	1,070	3,528	6,851	8,051

3 Trading

	External income £'000	Recharged internal lettings £'000	Gross expenditure £'000	2020 Net surplus/ (deficit) £'000	2019 Net surplus/ (deficit) £'000
Trading activities through subsidiary companies					
Kavli Royal Society International Centre (Chicheley Hall)	1,848	296	(2,331)	(187)*	(113)
Sponsorships	127	–	(5)	122	123
	1,975	296	(2,336)	(65)	10
Trading in furtherance of charitable activities					
Publishing	7,682	–	(3,265)	4,417	4,228
Lettings in furtherance of objectives – Carlton House Terrace	3,192	1,348	(3,001)	1,539	1,668
Other	669	–	–	669	637
	11,543	1,348	(6,266)	6,625	6,533
Total	13,518	1,644	(8,602)	6,560	6,543

The costs of the Society's publishing operation and the costs associated with the lettings in furtherance of charitable objects are included in 'Supporting and recognising excellence in science' on the face of the statement of financial activities. The costs of trading through subsidiary companies are included in expenditure on raising funds.

The Society was exempt from income tax, corporation tax and capital gains tax on income derived from its primary purpose trading and charitable activities.

Notes to the financial statements continued

4 Grants for charitable activities

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
From government and other public bodies						
Core grant from the Department for Business, Energy and Industrial Strategy (BEIS)	992	46,109	–	–	47,101	47,101
BEIS Investment Research Talent Fund	–	31,629	–	–	31,629	21,673
BEIS Newton Fund	–	6,137	–	–	6,137	6,541
BEIS Global Challenges Research Fund	–	15,033	–	–	15,033	6,028
Department for International Development	–	1,990	–	–	1,990	2,415
Other grants from government and public bodies	–	182	–	–	182	214
From other external bodies						
Contribution to charitable activities	–	6,457	–	–	6,457	5,274
Total	992	107,537	–	–	108,529	89,246

Details of the income to and movement of individual funds are disclosed in note 23.

5 Other income

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Other Income	–	76	–	–	76	72
Total	–	76	–	–	76	72

6 Expenditure on raising funds

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Direct costs on raising funds	473	–	–	–	473	477
Support costs on raising funds	464	–	–	–	464	460
Cost of trading	2,311	–	–	–	2,311	2,301
Investment management fees	140	413	127	484	1,164	1,016
Total	3,388	413	127	484	4,412	4,254

7 Expenditure on charitable activities

	Staff costs £'000	Grant costs £'000 (note 10)	Other direct costs £'000	Support £'000 (note 8)	2020 Total £'000	2019 Total £'000
Charitable activities						
Promoting science and its benefits	17	50	175	3	245	276
Supporting and recognising excellence in science	3,984	88,754	6,901	4,452	104,091	83,772
Providing scientific advice for policy	1,746	–	553	1,966	4,265	4,298
Fostering international and global cooperation	864	13,400	997	905	16,166	17,367
Education and public engagement	1,460	292	1,165	1,608	4,525	4,753
Total for costs of charitable activities	8,071	102,496	9,791	8,934	129,292	110,466

8 Support costs

	Media relations and public engagement £'000	Facilities and building management £'000	Support services £'000	Governance £'000	2020 Total £'000	2019 Total £'000
Support costs on raising funds	27	108	311	18	464	460
Charitable activities						
Promoting science and its benefits	–	1	2	–	3	2
Supporting and recognising excellence in science	261	1,039	2,980	172	4,452	4,367
Providing scientific advice for policy	115	459	1,316	76	1,966	1,993
Fostering international and global cooperation	53	211	606	35	905	905
Education and public engagement	94	375	1,077	62	1,608	1,613
	523	2,085	5,981	345	8,934	8,880
Total support costs	550	2,193	6,292	363	9,398	9,340

Facilities and building management comprises the rent and running costs (maintenance, insurance, cleaning and security) of Carlton House Terrace.

Support services comprises finance, IT, HR, pension costs and corporate management.

Support costs are allocated on a pro-rata basis using departmental salary costs as a base.

Notes to the financial statements continued

9 Staff costs

	2020 £'000	2019 £'000
Costs by type		
Salaries	10,154	9,534
Social security costs	994	957
Pension costs	1,314	1,239
Total	12,462	11,730

As required by FRS 102, included in 2020 staff costs is an amount of £238,000 (2019: £244,000) relating to holiday pay owed to staff at 31 March 2020.

Pension costs include employer contributions to two Royal Society pension schemes, a defined contribution scheme and a defined benefit scheme, and the Universities Superannuation Scheme (USS) pension scheme as follows:

- The Royal Society Group Personal Pension Plan (defined contribution): £594,000 (2019: £472,000)
- The Pension and Life Assurance Plan of the Royal Society (defined benefit): £337,000 (2019: £396,000)
- USS: £41,000 (2019: £110,000).

The following numbers of employees of the Royal Society earning £60,000 per annum or more received total emoluments within the bands shown:

	2020	2019
£60,001 – £70,000	8	10
£70,001 – £80,000	8	7
£80,001 – £90,000	3	1
£90,001 – £100,000	1	2
£100,001 – £110,000	1	–
£110,001 – £120,000	2	2
£120,001 – £130,000	–	1
£130,001 – £140,000	–	–
£140,001 – £150,000	1	1
£150,001 – £160,000	1	1
£160,001 – £170,000	1	–
£170,001 – £180,000	–	1
£340,001 – £350,000	–	1
£360,001 – £370,000	1	–

The 14 key management personnel of the Royal Society (2019: 12) received total remuneration of £1,850,000, including employer's national insurance contributions (2019: £1,694,000).

The average number of employees, analysed by function, was:

	2020	2019
Expenditure on raising funds	6	6
Expenditure on charitable activities	160	150
Support (including governance)	46	44
Total	212	200

The average full-time equivalent was 209 (2019: 197).

Redundancy and termination payments were made to one employee during the year (2019: 1). Total redundancy and termination payments in respect of this employee were £100,000 (2019: £5,000).

10 Grants

	Grants to institutions £'000	Grants to individuals £'000	2020 Total £'000	2019 Total £'000
Fellowships				
University Research Fellowships		45,037	45,037	37,648
Royal Society Research Professorships		13,856	13,856	12,437
Dorothy Hodgkin Fellowships		6,396	6,396	4,948
Newton International Fellowships		6,361	6,361	6,640
FLAIR Fellowships		4,738	4,738	251
Sir Henry Dale Fellowships		3,892	3,892	3,550
RS Visiting Research Professorships		3,835	3,835	2,740
Newton Advanced Fellowships		3,457	3,457	3,608
RS Challenge Grants		2,871	2,871	1,278
Wolfson Research Merit Awards		1,822	1,822	2,322
Industry Fellowships		1,764	1,764	1,708
Wolfson Advanced Fellowships		1,380	1,380	140
Leverhulme Trust Senior Research Fellowships		486	486	511
International Fellowship Grants		200	200	276
Professorships of Public Engagement		22	22	37
Education schemes				
Partnership grants scheme	144	–	144	90
Education Research Fellowships		6	6	2
Other education grants		4	4	7
Other grant programmes				
DFID Africa Awards		1,576	1,576	2,046
International Exchanges		1,558	1,558	1,787
Entrepreneurs in Residence		874	874	487
Leverhulme Trust APEX Awards		579	579	354
Wolfson Laboratory Refurbishment Grants	558	–	558	668
Other GCRF Programmes		227	227	–
Australian Academy of Science Think Tank		200	200	106
Paul Instrument Fund		199	199	196
Awards and prizes		191	191	411
Newton International Exchanges		138	138	202
Brian Mercer Awards		14	14	143
Foundation for Science and Technology		–	–	35
Other		111	111	116
Total	3,904	98,592	102,496	84,744

Notes to the financial statements continued

10 Grants continued

	Number	2020 Total £'000	2019 Total £'000
Recipients of institutional grants			
University College London	14	316	206
Imperial College London	15	313	174
University of Glasgow	10	292	159
University of Cambridge	14	208	188
University of Birmingham	12	175	97
University of Nottingham	8	175	119
University of Edinburgh	11	143	161
University of Southampton	13	141	150
University of Bristol	14	132	156
University of Leeds	9	113	125
University of St Andrews	5	113	127
University of Warwick	12	108	142
University of Leicester	5	108	41
King's College London	6	101	79
University of Oxford	6	85	126
University of Bath	5	68	56
Keele University	1	62	187
University of York	4	52	48
University of Exeter	5	51	93
University of Manchester	8	50	55
London School of Hygiene and Tropical Medicine	1	50	203
Cardiff University	6	40	44
Queen Mary University of London	3	30	42
Newcastle University	3	21	40
Other organisations	90	957	405
Total	280	3,904	3,223

Grants are generally awarded to particular individuals, although the actual award is made to the host organisation.

Details of individual grants awarded during the year analysed by organisation are available from the finance department on request.

11 Reconciliation of grants payable

	2020 Total £'000	2019 Total £'000
Liability at 1 April	12,191	3,052
New grants awarded in year	104,968	86,642
Grants paid in year	(109,902)	(75,606)
Grants refunded to the Society	(2,472)	(1,897)
Liability at 31 March	4,785	12,191

All grants payable fall due within one year.

12 Payments to Trustees and related party transactions

	2020 Total £'000	2019 Total £'000
Expenses: Travel and subsistence	83	131

No Trustees received remuneration from the Society in the year (2019: Nil). Expenses were reimbursed to or paid on behalf of 24 Trustees (2019: 19 Trustees).

Indemnity insurance

With the consent of the Charity Commission, the Society has taken out Trustees' indemnity insurance. The cost of this insurance for the year was £9,000 (2019: £8,000). No claims have been made under this policy.

Grants and awards

Professor Julia Yeomans FRS was an award holder of an International Exchange Cost Share (Taiwan) grant. The total value of the award is £12,000. This was awarded and taken up in 2017. No payment was made in 2019/20.

Professor Peter Bruce FRS was a co-applicant on a Newton Advanced Fellowship grant. The total value of the award is £111,000. This was awarded and taken up in the 2018/19 financial year. In the 2019/20 financial year a payment of £37,000 was made to the University of Oxford.

Professor Jane Langdale FRS was a co-applicant on a Newton International Fellowship grant. The total value of the award is £99,000. This was awarded and taken up in the 2017/18 financial year. In the 2019/20 financial year a payment of £36,295 was made to the University of Oxford. She was also a nominated referee on a Newton Advanced Fellowship grant and a University Research Fellowship grant.

Professor Andrew Hopper FRS was a collaborator (co-applicant's Head of Department Overseas) on a Science Conference Follow-on Travel Grant.

Professor Richard Catlow FRS was a nominated referee on a Newton International Fellowship grant and Industry Fellowship grant.

Professor Karen Steel FRS was a nominated referee on a Newton Advanced Fellowship grant.

Professor Thomas McLeish FRS was a nominated referee on an Apex Award grant.

Professor Richard Jones FRS was a nominated referee on an Entrepreneur in Residence grant.

Other

Sir Venki Ramakrishnan, President of the Royal Society, has use of the President's flat at Carlton House Terrace.

Related party transactions

The Royal Society had two wholly owned trading subsidiaries during the year, Royal Society Trading Limited (registered number 06967016) and Royal Society (London) Ltd (registered number 08808518).

Details of transactions with these subsidiaries are set out in note 26.

Notes to the financial statements continued

13 Total expenditure includes the following amounts:

	2020 Total £'000	2019 Total £'000
Operating lease rentals		
Plant and machinery	79	75
Rent	490	490
	569	565
Fees payable to the Charity's auditors for:		
The audit of the Charity and Group accounts	35	33
The audit of the Charity's subsidiaries accounts pursuant to legislation	6	6
Total audit fees	41	39
Charges on owned assets		
Depreciation	1,262	1,580
	1,262	1,580

14 Financial memoranda

Income and expenditure relating to government grants during the year was as follows:

	2020 Total £'000	2019 Total £'000
Department for Business, Energy and Industrial Strategy – core grant		
Income	47,101	47,101
Expenditure	(47,101)	(47,101)
	–	–
Department for Business, Energy and Industrial Strategy – Investment in Research Talent Fund		
Income	31,629	21,673
Expenditure	(31,629)	(21,673)
	–	–
Department for International Development grant		
Income	1,990	2,415
Expenditure	(1,990)	(2,415)
	–	–
BEIS Global Challenges Research Fund		
Income	15,033	6,028
Expenditure	(15,033)	(6,028)
	–	–
BEIS Newton Fund		
Income	6,137	6,541
Expenditure	(6,137)	(6,541)
	–	–

15 Tangible fixed assets – Group and charity

	Chicheley Hall freehold and property improvement £'000	Chicheley Hall computers and other equipment £'000	Leasehold improvements £'000	Computers and other equipment £'000	Assets under development £'000	2020 £'000	2019 £'000
Cost							
At 1 April	17,682	722	20,979	3,926	110	43,419	42,790
Additions	272	25	1,006	621	59	1,983	629
Disposals	–	(63)	(152)	(441)	–	(656)	–
Transfers	–	–	22	55	(77)	–	–
At 31 March	17,954	684	21,855	4,161	92	44,746	43,419
Depreciation							
At 1 April	14,179	653	12,382	2,851	–	30,065	28,485
Charge for year	80	47	771	364	–	1,262	1,580
Disposals	–	(62)	(152)	(441)	–	(655)	–
Transfer	–	–	–	–	–	–	–
At 31 March	14,259	638	13,001	2,774	–	30,672	30,065
Net book value at 31 March 2020	3,695	46	8,854	1,387	92	14,074	
Net book value at 31 March 2019	3,503	69	8,597	1,075	110		13,354

All tangible fixed assets are used for the support of charitable activities within the Society.

The Group and the charity have freehold property with a net book value of £3,695,000 (2019: £3,503,000).

16 Capital commitments – Group and charity

	2020 £'000	2019 £'000
Authorised and contracted for	182	37
Authorised but not contracted for	1,497	2,567
Total Commitment	1,679	2,604

At the balance sheet date, £712,000 (2019: £1,157,000) of capital commitments was authorised for refurbishment of 6 – 9 Carlton House Terrace. A further spend of £576,000 (2019: £695,000) had been authorised on an IT project. There was no spend authorised for the historic maintenance of Chicheley Hall (2019: £305,000). Other general capital items total £391,000 (2019: £447,000). Of these commitments £182,000 (2019: £37,000) has been contracted for by year end.

Notes to the financial statements continued

17 Heritage assets – Group and charity

The Society holds an extensive collection of heritage assets relating to the history of the Society itself and the wider history of scientific endeavour. The collection has four main components:

Printed works: The Library contains over 70,000 titles, published from the 1470s to the present day. The main strength of the collection is in the 17th and 18th centuries; from the 1680s to the mid-19th century, the policy of the Library was to acquire every important scientific publication.

Archives: These comprise an extraordinary and unrivalled record of the development of science that spans nearly 350 years. The archive collection is a unique resource for historians, particularly historians of science, containing over 250,000 items. It includes the Society's Charter Book and the manuscript of Isaac Newton's *Principia Mathematica*.

Pictures, sculptures and other works of art: The collection includes over 200 original works (primary collection) and approximately 10,000 photographs and engravings (secondary collection), many of them portraits of past and present Fellows.

Other artefacts: The collection comprises approximately 250 items and includes scientific instruments, furniture and furnishings, and the Society's Charter Book.

The collections are accessible to scholars and the wider public through the Royal Society's History of Science Centre, which includes a reference library and an extensive online presence, including a fully searchable catalogue and image library.

	Assets held at cost £'000	Assets held at valuation £'000	2020 £'000	2019 £'000
Summary of heritage asset transactions				
Purchases/donations				
At 1 April	36,248	13,168	49,416	49,321
Additions	20	40	60	95
Valuation or cost at 31 March	36,268	13,208	49,476	49,416
The heritage assets comprise				
Printed books			13,278	13,277
Archives			22,965	22,928
Pictures, sculptures and other works of art			9,462	9,440
Other artefacts			3,771	3,771
Total			49,476	49,416

The printed books and archives were valued by Roger Gaskell, a rare book dealer, in August 2003 and the pictures and other artefacts by Weller King, Fine Art Dealers, in 2015. The valuations are on a fair market/replacement basis on those parts of the collection where it is felt such a valuation can be reasonably made. Assets are held at valuation as a proxy for cost.

The paintings and furniture at Chicheley Hall were valued in March 2015 by Weller King, Fine Art Dealers. The valuations are on a fair market/replacement basis on those parts of the collection where it is felt such a valuation can be reasonably made. The Trustees consider there to be no material impairment on the present market values/replacement values compared with those stated.

17 Heritage assets – Group and charity continued

	2020 £'000	2019 £'000	2018 £'000	2017 £'000	2016 £'000
Five-year financial summary of heritage asset transactions					
Purchases/donations					
Printed books	1	7	1	13	13
Archives	37	51	–	23	4
Pictures, sculptures and other works of art	22	37	20	9	54
Other artefacts	–	–	–	4	–
Total purchases/donations	60	95	21	49	71

Donated heritage assets are recognised in the year they are received. There have been no disposals of heritage assets within the last five years.

Preservation and management

Expenditure which in the Trustees' view is required to preserve or clearly prevent further deterioration of individual collection items is recognised in the income and expenditure account when it is incurred.

The Society has an ongoing cataloguing project and the Society's major strategic facilities for the long-term preservation of its historic archives, manuscripts and printed books are environmentally controlled store rooms (conforming to British Standard BS EN 16893:2018).

The Society's modern records have been subject to a full audit, completed in April 2011. This process enabled the full-life management, destruction and permanent archiving of pertinent files. Conservation of both old and new archives is now underway.

Each of the Society's major collections (archives, modern records, printed books, pictures, journals, objects) has a designated member of curatorial staff and exhibited materials are looked after by an exhibitions manager. Collections are managed and recorded in discrete databases and according to the prevailing standard in each area (for example, International Standard Archival Description (ISAD) for archival cataloguing, SPECTRUM for museum standards and picture control). In 2018, the Society's archives achieved accredited status (for procedures and service quality) with the UK National Archives.

Notes to the financial statements continued

18 Investments – Group and charity

	2020 £'000	2019 £'000
Valuation at 1 April	261,260	239,544
Additions of investments	31,616	25,905
Disposal of investments	(40,903)	(22,619)
Net change in cash invested for trades within portfolio	8,527	(4,422)
Investment management costs	(1,164)	(1,016)
Net cash (withdrawn from)/added to portfolio	(1,487)	5,604
Net gains on valuation at 31 March	(23,774)	18,264
Valuation at 31 March	234,075	261,260
Total historical cost at the end of the year	190,245	189,708
The valuation at 31 March 2019 comprises:		
Investments listed on a recognised stock exchange including investments and unit trusts:		
UK	104,101	130,322
Overseas	97,277	103,022
Other unlisted securities:		
UK	9,633	10,652
Overseas	4,540	5,109
Cash:		
UK	13,094	5,656
Overseas	5,430	6,499
Total	234,075	261,260

Overseas investments comprise equities, unit/investment trusts and fixed interest funds.

The Society owns 100% of the issued share capital of Royal Society Trading Limited (note 26). The principal activity of the company is conferencing activities at Chicheley Hall.

The Society owns 100% of the issued share capital of Royal Society (London) Ltd (note 26). The principal activity of the company is corporate sponsorships.

Funds are invested as follows:

	2020 £'000	2019 £'000
Specific investments – Amadeus RSEF	8,621	9,536
Specific investments – Theo Murphy Australia Fund	2,720	3,480
Pooled investments	222,734	248,244
Total	234,075	261,260

19 Debtors

	2020 Receivable within one year £'000	2019 Receivable within one year £'000
Trade debtors	1,450	2,136
Grants receivable	1,159	2,610
Legacy receivable	96	665
Other debtors	100	228
Accrued income	188	383
Prepayments	427	486
Total	3,420	6,508

Included in the Group debtors are debtors of £64,000 (2019: £151,000) of Royal Society Trading Limited and Nil (2019: £30,000) of Royal Society (London) Ltd. All other debtors relate to the Charity.

20 Creditors

	2020 Due within one year £'000	2020 Due after one year £'000	2019 Due within one year £'000	2019 Due after one year £'000
Trade creditors	2,094	-	1,603	-
Publications advanced sales	3,586	-	3,876	-
Chicheley Hall advanced sales	232	-	211	-
Grants payable	4,785	-	12,191	-
Other creditors	359	-	328	-
Accruals and provisions	935	129	2,302	140
Deferred income	5,759	-	5,590	-
Total	17,750	129	26,101	140

Included in the Group creditors are creditors of £488,000 (2019: £774,000) relating to Royal Society Trading Ltd and £9,000 (2019: £4,000) relating to Royal Society (London) Ltd. All other creditors relate to the Charity.

As required by FRS 102, included within accruals and provisions 2020 is a provision for a liability under the deficit recovery plan for the USS multi-employer pension scheme. A total amount of £140,000 has been provided for, comprising £11,000 due within one year and £129,000 due within more than one year. This provision has been calculated using the modeller developed by the British Universities Finance Directors Group (BUFDG), with the support of the USS Trustee company, to provide a tool for estimating the liability under the recovery plan for accounting purposes.

Reconciliation of deferred income

	2020 £'000	2019 £'000
Deferred income brought forward	5,590	6,073
Amount released from previous year	(5,590)	(6,073)
Income deferred in the year	5,759	5,590
Total	5,759	5,590

Notes to the financial statements continued

21 Statement of total returns

	Expendable endowment £'000	Permanent endowment £'000	2020 Total £'000
Investment returns			
Investment Income	1,070	3,528	4,598
Capital losses	(4,645)	(14,448)	(19,093)
Investment management costs	(127)	(484)	(611)
Total return for year	(3,702)	(11,404)	(15,106)
Indexation	(436)	(1,433)	(1,869)
Less application of total return	(735)	(3,305)	(4,040)
Net total return for the year	(4,873)	(16,142)	(21,015)
Unapplied total return			
At 31 March 2020	7,475	24,107	31,582
At 31 March 2019	12,348	40,249	52,597

22 Analysis of net assets between funds – Group

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2020 Total funds £'000	2019 Total funds £'000
Funds balances at 31 March are represented by:						
Tangible fixed assets	14,074	–	–	–	14,074	13,354
Heritage assets	49,476	–	–	–	49,476	49,416
Investments	37,272	36,729	36,989	123,085	234,075	261,260
Net current liabilities	(9,531)	–	–	–	(9,531)	(8,142)
Creditors: due after one year	(129)	–	–	–	(129)	(140)
Defined benefit pension scheme liability	(10,717)	–	–	–	(10,717)	(11,581)
Net assets	80,445	36,729	36,989	123,085	277,248	304,167

The net current liabilities in 2020 are funded by investments, which could be realised to meet the net liabilities as they fall due.

Included in the Group net current liabilities are liabilities of £270,000 (2019: £925,000) of Royal Society Trading Limited. All other net current liabilities relate to the charity.

23 Movements on trust and specific funds in year – Group

	Relevant value b/f £'000	Indexation £'000	Relevant value c/f £'000	Unapplied total return at 1 April 2019 £'000	Income £'000	Investment gain £'000	Expenditure £'000	Indexation £'000	Transfers/ application of total return £'000	Unapplied total return at 31 March 2020 £'000	Total at 31 March 2020 £'000
Permanent endowment funds											
Life Sciences Trust	11,313	170	11,483	5,170	428	(1,754)	(59)	(170)	(587)	3,028	14,511
Maths and Physical Sciences Trust	10,378	156	10,534	4,770	394	(1,612)	(54)	(156)	(540)	2,802	13,336
RW Paul Instrument Fund	11,127	167	11,294	4,842	415	(1,700)	(57)	(167)	(266)	3,067	14,361
Theo Murphy – UK	53,336	800	54,136	22,052	1,960	(8,025)	(269)	(800)	(1,658)	13,260	67,396
Other permanent endowments	9,339	140	9,479	3,415	331	(1,357)	(45)	(140)	(254)	1,950	11,429
Total permanent endowments part of the unapplied total return	95,493	1,433	96,926	40,249	3,528	(14,448)	(484)	(1,433)	(3,305)	24,107	121,033
Funds not part of the unapplied total return											
Theo Murphy – Australia	2,887	–	2,887	–	–	(835)	–	–	–	–	2,052
Total permanent endowments	98,380	1,433	99,813	40,249	3,528	(15,283)	(484)	(1,433)	(3,305)	24,107	123,085
Expendable endowment funds											
General Trust Fund	10,848	163	11,011	5,444	421	(1,827)	(50)	(163)	–	3,825	14,836
Life Sciences Trust	6,631	99	6,730	3,060	250	(1,087)	(30)	(99)	(345)	1,749	8,479
Maths and Physical Sciences Trust	3,610	54	3,664	1,689	137	(594)	(16)	(54)	(189)	973	4,637
Other expendable funds	7,989	120	8,109	2,155	262	(1,137)	(31)	(120)	(201)	928	9,037
Total expendable endowment funds	29,078	436	29,514	12,348	1,070	(4,645)	(127)	(436)	(735)	7,475	36,989

Indexation has been applied using the annual CPI rate of 1.5% in March 2020 (March 2019: 1.9%).

Notes to the financial statements continued

23 Movements on trust and specific funds in year – Group continued

	Brought forward at 1 April 2019 £'000	Income £'000	Investment and actuarial gain/(loss) £'000	Expenditure £'000	Transfers £'000	Carried forward at 31 March 2020 £'000
Restricted funds						
Life Sciences Trust	5,963	173	(57)	(1,712)	452	4,819
Maths and Physical Sciences Trust	4,783	125	(217)	(1,339)	414	3,766
Enterprise Fund	9,536	–	(605)	(310)	–	8,621
Other restricted funds	20,148	109,226	(755)	(109,448)	352	19,523
Total restricted funds	40,430	109,524	(1,634)	(112,809)	1,218	36,729
Unrestricted funds						
General Trust Fund	15,698	406	(756)	(47)	47	15,348
BEIS Science and Research	–	992	–	(992)	–	–
Revaluation Reserve	47,856	–	–	–	–	47,856
Defined Benefit Pension Reserve	(11,581)	–	780	84	–	(10,717)
General purpose	31,709	14,259	(1,456)	(19,329)	2,775	27,958
Total unrestricted funds	83,682	15,657	(1,432)	(20,284)	2,822	80,445

Purposes of funds

The objects of the Life Sciences Trust are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into, all areas of the life sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of the life sciences.

The objects of the Maths and Physical Sciences Trust are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the study and investigation of, and research into, all areas of mathematics and the physical sciences and other science at the interface between this area and other areas of science. This shall be done in particular by supporting scientists working in this area, advancing engagement of the public in all matters relating to such science and providing the best possible scientific advice and information to those making policy in the area of mathematics and the physical sciences.

Following the Deed of Retirement of the other Trustees the property and investments of the RW Paul Instrument Fund were transferred to the sole remaining Trustee, being the Royal Society. The application of the income from the portfolio is restricted to the provision of grants under the Paul Instrument Grants Scheme.

The Theo Murphy Funds (in the UK and Australia) were created through a bequest from the estate of the late Theo Murphy. The funds 'shall be used or applied to further scientific discovery in the fields of medicine, science, technology and engineering'. The Australia Fund will carry out activities in Australia in accordance with the Will.

The objects of the General Fund are to promote and advance for the general benefit of the public, including the scientific (science, medicine, engineering and technology) community, the efficiency and effectiveness of the Royal Society and its Fellowship. This shall be done in particular by establishing, promoting, supporting and maintaining, for the general benefit of the public and the scientific community, its activities, premises, fixtures and fittings, equipment, libraries and archives, general publications and the history of science.

The Enterprise Fund was created by generous donations in support of the Society in making equity investments in innovative early stage businesses emerging from the science base in the UK and elsewhere.

Other restricted funds comprise monies received to fund separate restricted projects in line with our charitable activities and are held as separate individual funds in our accounts.

The Revaluation Reserve relates to the revaluation of the heritage assets.

23 Movements on trust and specific funds in year – Group continued

The transfers between projects and funds include administration charges of the investments held in the trusts, administration costs reclaimed from projects where applicable, notional interest paid to projects in respect of income held during the year and any income released to the general reserves at the end of projects (where allowed under the gift or grant agreement).

24 Financial commitments – Group and charity

At 31 March 2020 the Society had the following commitments:

Total future minimum lease payments under a non-cancellable operating lease in respect of occupation of 6–9 Carlton House Terrace, London, is as follows for each of the following periods:

	2020 £'000	2019 £'000
Less than one year	490	490
One to five years	1,960	1,960
Over five years	19,110	19,600
Total	21,560	22,050

The lease is due to expire on 5 January 2064; however, the next 10-yearly rent review is due on 5 January 2025.

Agreements and commitments to fund research professorships or fellowships and other grants totalling £171,000,000 (2019: £194,000,000). Of these, £92,000,000 (2019: £79,000,000) are due in less than one year, and £79,000,000 (2019: £115,000,000) in between two and five years. There are no grants payable in more than five years. As the Society retains the discretion to terminate these grants they are treated as liabilities of future periods and will be financed by specific grants or other income receivable in those periods.

The Society has entered into investment contract commitments totalling £510,000 (2019: £489,000) payable at dates yet to be agreed.

25 Pension obligations – Group and charity

The Royal Society ('the Employer') operates a defined benefit pension arrangement in the UK called the Pension and Life Assurance Plan of the Royal Society ('the Plan'), with assets held in a separately administered fund. The Plan provides retirement benefits on the basis of members' final salary. The Plan is closed to new members, although it remains open to future benefit accrual, and provides benefits on a defined benefit basis.

The most recent valuation of the Plan under FRS 102 was carried out as at 31 March 2020. The valuation of the Plan used the projected unit method and was carried out by Barnett Waddingham LLP, professionally qualified actuaries.

The FRS 102 liability does not include any allowance for discretionary benefits. The Employer expects to make contributions to the Plan during the year to 31 March 2021 of around £1,700,000 (2020: £1,110,000).

The Plan is subject to the Statutory Funding Objective under the Pensions Act 2004. A valuation of the Plan is carried out at least once every three years to determine whether the Statutory Funding Objective is met. As part of the process the Employer must agree with the Trustees of the scheme the contributions to be paid to address any shortfall against the Statutory Funding Objective and contributions to pay for future accrual of benefits.

The full actuarial valuation at 1 January 2019 showed an increase in the deficit from £3,716,000 to £8,732,000. It has been agreed with the Trustees that the Employer will pay £652,000 on or before each 30 April and 31 October in the years 2020 to 2026 inclusive to meet the deficit.

Contributions payable by the Employer in respect of future benefit accrual and expenses are at the rate of 28% of pensionable salaries. Members' contributions are 7% of pensionable salaries. Life cover and dependants' pensions in respect of death in service are provided by additional insurance premiums.

Notes to the financial statements continued

25 Pension obligations – Group and charity continued

The principal assumptions used to calculate Plan liabilities include:

	2020 % pa	2019 % pa
Inflation (RPI)	2.8	3.3
Inflation (CPI)	2.0	2.3
Salary escalation	2.0	2.0
Increase to pensions in payment* – subject to LPI minimum 4%	4.1	4.2
Increase to pensions in payment* – subject to LPI	2.7	3.2
Statutory revaluation	2.0	2.3
Discount rate (pre- and post-retirement)	2.3	2.5
Pre-retirement mortality table	105% of S3NA	S2NA
Post-retirement mortality table	105% of S3NA	S2NA
Post-retirement mortality projection	CMI_2019 projections with LTR of 1.25% pa and initial addition of 0.25% pa	CMI_2018 projections with LTR of 1.5% pa
Tax-free cash	20% of pension	20% of pension
Withdrawals	None	None

* Pensions in payment increase by the lesser of the annual increase in the retail price index (RPI) or 5%. For service prior to 1 November 2001 this is subject to a minimum increase of 4%.

Under the mortality tables and projections adopted, the assumed future life expectancy at age 60 is as follows:

	2020	2019
Male currently aged 40	28.2 years	28.4 years
Female currently aged 40	30.8 years	30.6 years
Male currently aged 60	26.8 years	26.6 years
Female currently aged 60	29.4 years	28.8 years

The assets in the Plan were:

	Value at 31 March 2020 £'000	Value at 31 March 2019 £'000
Equities	16,916	21,820
Index-linked gilts	–	–
LDI portfolio	10,793	9,956
Multi-asset fund	4,266	–
Cash	1,056	134
Diversified growth	8,874	10,166
Annuity policies	6,448	5,423
Total market value of Plan assets	48,353	47,499
Present value of scheme liabilities	(59,070)	(59,080)
Net pension liability	(10,717)	(11,581)

25 Pension obligations – Group and charity continued

Reconciliation of present value of scheme liabilities

	Value at 31 March 2020 £'000	Value at 31 March 2019 £'000
Defined benefit obligation at 1 April	59,080	57,241
Current service cost	450	449
Contributions by Plan participants	103	116
Past service cost	–	59
Interest cost	1,462	1,522
Benefits paid	(1,323)	(1,863)
Change due to settlements or curtailments	–	–
Experience (gain)/loss on liabilities	111	(161)
Changes to demographic assumptions	86	(1,341)
Changes to financial assumptions	(899)	3,058
Defined benefit obligation at 31 March	59,070	59,080

Sensitivity analysis of the scheme deficit

The sensitivity of the present value of the scheme deficit to changes in the principal assumptions used is set out below.

	Change in assumption	Change in liabilities £'000
Discount rate	–0.10%	1,162
Rate of inflation*	–0.10%	(691)
Commutation	No commutation	1,858
	1% pa long-term rate of mortality improvements	(616)
Mortality		

* Other assumptions linked to the rate of inflation are also assumed to change appropriately.

Reconciliation of fair value of scheme assets

	Value at 31 March 2020 £'000	Value at 31 March 2019 £'000
Fair value of scheme assets at 1 April	47,499	46,222
Interest on assets	1,182	1,238
Contributions by the Employer	1,054	1,114
Contributions by scheme participants	103	116
Benefits paid	(1,323)	(1,863)
Administration costs	(240)	(148)
Return on Plan assets less interest	78	820
Fair value of scheme assets at 31 March	48,353	47,499

The actual return on Plan assets in the year was £2,210,000 (2019: £2,060,000).

Notes to the financial statements continued

25 Pension obligations – Group and charity continued**Analysis of the amount charged to the statement of financial activities – operations**

	Value at 31 March 2020 £'000	Value at 31 March 2019 £'000
Current service cost	450	449
Administration costs	240	148
Interest cost	1,462	1,522
Interest on assets	(1,182)	(1,238)
Past service cost	–	59
Total charge	970	940

Actuarial gains and losses

	Value at 31 March 2020 £'000	Value at 31 March 2019 £'000
Gains on scheme assets in excess of interest	(78)	(820)
Experience losses (gains) on liabilities	111	(161)
Losses (gains) from changes to demographic assumptions	86	(1,341)
Losses (gains) from changes to financial assumptions	(899)	3,058
Actuarial (gains)/losses	(780)	736

The Royal Society ('the Employer') operates two pension schemes and contributes to the USS.

During the year one member of the Society's staff was a member of USS, a defined benefit scheme (2019: two members). During the year ended 31 March 2020, employer contributions to this scheme totalled £41,000 (2019: £110,000). The employer contribution rate at year end was 21% (2019: 18%).

USS is a defined benefit scheme which is externally funded and valued every three years by professionally qualified independent actuaries using the Projected Unit Method. The scheme is a 'last man standing' scheme, which means that in the event that another member institution becomes insolvent the other participating members will pick up any funding shortfall.

At the date of the latest actuarial valuation of the scheme (31 March 2020), the assets were sufficient to cover 84% of the benefits that had accrued to members; the deficit at 31 March 2020 was £12.9 billion (2019: £5.4 billion).

Based on expected contributions until 31 March 2031, the net present value of the payment towards the reduction of the deficit is estimated using the modeller developed by the BUFDG, with the support of the USS Trustee company, as a tool for estimating the liability under the recovery plan for accounting purposes. An initial liability of £184,000 was charged to the statement of financial activities during 2015/16 and recorded as a liability on the balance sheet to be unwound over time (initially over the period to 2031) as the liability is discharged; to 31 March 2020, £44,000 of this provision has been released. Further information can be found at <https://www.uss.co.uk>

26 Subsidiary undertakings

The Society owns 100% of the £1 called-up and issued share capital of Royal Society Trading Limited 06967016. Royal Society Trading Limited has been set up to process the activities that occur at Chicheley Hall. On 23 March 2020, the Directors of Royal Society Trading Limited agreed to cease operations immediately and the charity (Parent) agreed to waive the debt owed by the subsidiary. This has been treated as a capital contribution directly to shareholders' funds in the subsidiary. The annual accounts for the financial year ended 31 March 2020 were not prepared on a going concern basis.

The Society also owns 100% of the £1 called-up and issued share capital of Royal Society (London) Ltd 08808518. Royal Society (London) Ltd has been set up to process corporate sponsorships at the Society.

	Royal Society (London) Ltd		Royal Society Trading Limited	
	2020 £'000	2019 £'000	2020 £'000	2019 £'000
Results for the year ended 31 March:				
Trading income				
Internal income	–	–	296	413
External income	127	127	1,848	1,797
Cost of sales	–	–	(2,273)	(2,268)
Gross profit/(loss)	127	127	(129)	(58)
Administrative expenses	(5)	(4)	(46)	(43)
Operating profit/(loss)	122	123	(175)	(101)
Interest on loan account to parent	–	–	(12)	(12)
Gift Aid payable to Parent Charity	(122)	(123)	–	–
Result for the period	–	–	(187)	(113)
Total funds brought forward at 1 April	–	–	(925)	(812)
Capital contribution from parent charity	–	–	842	–
Total funds carried forward at 31 March	–	–	(270)	(925)
Balance sheet as at 31 March:				
Current assets				
Stock	–	–	14	23
Debtors	–	30	64	231
Cash at bank and in hand	132	122	140	632
	132	152	218	886
Creditors: amounts falling due within one year	(132)	(152)	(488)	(1,811)
Net current liabilities	–	–	(270)	(925)
Capital and reserves				
Called-up share capital	–	–	–	–
Profit and loss reserve	–	–	(270)	(925)
Shareholder's funds	–	–	(270)	(925)

Royal Society (Australia) Pty Limited ACN 126112678 is the Trustee of the Royal Society Theo Murphy (Australia) Fund. It is an Australian company, the shares of which are owned by the Society.

Notes to the financial statements continued

27 Prior year comparison – Consolidated statement of financial activities

For the year ended 31 March 2019

(incorporating an income and expenditure account)

	Notes	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2019 Total funds £'000
Income and endowments from donations and legacies	1	638	194	-	-	832
Income from charitable activities						
Grants for charitable activities	4	992	88,254	-	-	89,246
Trading in furtherance of charitable activities	3	10,960	608	-	-	11,568
		11,952	88,862	-	-	100,814
Other trading activities	3	1,924	-	-	-	1,924
Income from investments	2	1,804	1,208	1,172	3,867	8,051
Other income	5	7	65	-	-	72
Total income		16,325	90,329	1,172	3,867	111,693
Raising funds	6	3,370	361	114	409	4,254
Expenditure on charitable activities	7					
Promoting science and its benefits		73	203	-	-	276
Supporting and recognising excellence in science		11,056	72,716	-	-	83,772
Providing scientific advice for policy		1,993	2,305	-	-	4,298
Fostering international and global cooperation		905	16,462	-	-	17,367
Education and public engagement		3,020	1,733	-	-	4,753
		17,047	93,419	-	-	110,466
Total expenditure		20,417	93,780	114	409	114,720
Net (expenditure)/income before net (losses)/gains on investments		(4,092)	(3,451)	1,058	3,458	(3,027)
Net (losses)/gains on investments	18	1,406	2,962	2,903	10,993	18,264
Net (expenditure)/income for the year		(2,686)	(489)	3,961	14,451	15,237
Gross transfers between funds	23	2,966	1,099	(671)	(3,394)	-
Actuarial losses on defined benefit pension scheme	25	(736)	-	-	-	(736)
Net movement in funds		(456)	610	3,290	11,057	14,501
Total funds brought forward		84,138	39,820	38,136	127,572	289,666
Total funds carried forward		83,682	40,430	41,426	138,629	304,167

28 Prior year comparison – Analysis of net assets between funds – Group

	Unrestricted funds £'000	Restricted funds £'000	Expendable endowment funds £'000	Permanent endowment funds £'000	2019 Total funds £'000
Funds balances at 31 March 2019 are represented by:					
Tangible fixed assets	13,354	-	-	-	13,354
Heritage assets	49,416	-	-	-	49,416
Investments	40,775	40,430	41,426	138,629	261,260
Net current liabilities	(8,142)	-	-	-	(8,142)
Creditors: due after one year	(140)	-	-	-	(140)
Defined benefit pension scheme liability	(11,581)	-	-	-	(11,581)
Net assets	83,682	40,430	41,426	138,629	304,167

29 Prior year comparison – Movements on trust and specific funds in year – Group

For the year ended 31 March 2019

	Brought forward at 1 April 2018 £'000	Income £'000	Expenditure £'000	Transfers £'000	Investment and actuarial gain/(loss) £'000	Carried forward at 31 March 2019 £'000
Permanent endowment funds						
Life Sciences Trust	15,277	474	(50)	(555)	1,338	16,484
Maths and Physical Sciences Trust	14,038	435	(46)	(509)	1,230	15,148
RW Paul Instrument Fund	14,571	450	(48)	(266)	1,261	15,968
Theo Murphy – UK	69,272	2,149	(227)	(1,875)	6,069	75,388
Theo Murphy – Australia	2,774	-	-	-	113	2,887
Other permanent endowments	11,640	359	(38)	(189)	982	12,754
Total permanent endowment funds	127,572	3,867	(409)	(3,394)	10,993	138,629
Expendable endowment funds						
General Trust Fund	14,756	454	(44)	-	1,125	16,291
Life Sciences Trust	8,959	276	(27)	(199)	683	9,692
Maths and Physical Sciences Trust	4,967	152	(15)	(178)	373	5,299
Other expendable endowments	9,454	290	(28)	(294)	722	10,144
Total expendable endowment funds	38,136	1,172	(114)	(671)	2,903	41,426
Restricted funds						
Life Sciences Trust	5,416	340	(488)	488	207	5,963
Maths and Physical Sciences Trust	6,437	261	(2,668)	516	237	4,783
Enterprise Fund	7,854	-	(255)	-	1,937	9,536
Other restricted funds	20,113	89,728	(90,369)	95	581	20,148
Total restricted funds	39,820	90,329	(93,780)	1,099	2,962	40,430

29 Prior year comparison – Movements on trust and specific funds in year – Group

For the year ended 31 March 2019 continued

	Brought forward at 1 April 2018 £'000	Income £'000	Expenditure £'000	Transfers £'000	Investment and actuarial gain/(loss) £'000	Carried forward at 31 March 2019 £'000
Unrestricted funds						
General Trust Fund	14,446	606	(45)	45	646	15,698
BEIS Science and Research	-	992	(992)	-	-	-
Revaluation Reserve	47,856	-	-	-	-	47,856
Defined Benefit Pension Reserve	(11,019)	-	174	-	(736)	(11,581)
General purpose	32,855	14,727	(19,554)	2,921	760	31,709
Total unrestricted funds	84,138	16,325	(20,417)	2,966	670	83,682
Total for all trusts						
Life Sciences Trust	29,652	1,090	(565)	(266)	2,228	32,139
Maths and Physical Sciences Trust	25,442	848	(2,729)	(171)	1,840	25,230
RW Paul Instrument Fund	14,571	450	(48)	(266)	1,261	15,968
Theo Murphy – UK	69,272	2,149	(227)	(1,875)	6,069	75,388
Other permanent endowments	11,640	359	(38)	(189)	982	12,754
Theo Murphy – Australia	2,774	-	-	-	113	2,887
General Trust Fund	29,202	1,060	(89)	45	1,771	31,989
Other expendable endowments	9,454	290	(28)	(294)	722	10,144
Enterprise Fund	7,854	-	(255)	-	1,937	9,536
Other restricted funds	20,113	89,728	(90,369)	95	581	20,148
BEIS Science and Research	-	992	(992)	-	-	-
Revaluation Reserve	47,856	-	-	-	-	47,856
Defined Benefit Pension Reserve	(11,019)	-	174	-	(736)	(11,581)
General purpose	32,855	14,727	(19,554)	2,921	760	31,709
Total	289,666	111,693	(114,720)	-	17,528	304,167

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Treasurer

Professor Andrew Hopper

Physical Secretary

Professor Peter Bruce

Foreign Secretary

Professor Richard Catlow

Biological Secretary

Sir John Skehel*

Dame Linda Partridge**

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Professor Julia Yeomans

* Retired 30 November 2019

** Appointed 30 November 2019

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- Supporting international collaboration
- Demonstrating the importance of science to everyone

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