

Briefing

UK academic institutions' response to the Paris Climate Agreement

The December 2015 Paris Climate Agreement, now signed by 180 nations, aims to keep global temperature rises to 1.5 degrees. This is a major challenge, as the world is currently on course for at least 3 degrees warming. So, to meet its goals, the Paris Agreement calls on all nations to pursue the *"highest possible ambition"*¹. In practice, for the world's nations to keep emissions within the rapidly dwindling Global Carbon Budget for 1.5 degrees will require as swift as possible a transition away from fossil fuel use. In the words of Professor Piers Forster at the University of Leeds: *"To achieve this, everything must change"*².

Keeping to 1.5 degrees is a colossal and complex challenge, crossing all disciplines, all sectors of society, and all nations, with major implications for economies and societies, as well as the environment. There is a crucial leadership role for academic institutions in providing the research, analysis and advocacy required to deliver these changes. In many cases they are ideally placed to lead the way, with a strong history of inter-disciplinary collaboration. This is often written into these institutions' purpose – for example, the National Environment Research Council (NERC) state that: *"People around the world aspire to escape poverty and improve living standards: achieving this whilst living within the Earth's limits is a great challenge of the 21st century. NERC science has a critical role to play in meeting this challenge"*³.

The UK is a world leader in academic research and advocacy on climate change. So, in March 2016 Friends of the Earth wrote to 40 UK universities and 19 UK research councils and institutes⁴ asking them how their institutions were responding to the 1.5 degree challenge

For more than 40 years we've seen that the wellbeing of people and planet go hand in hand – and it's been the inspiration for our campaigns. Together with thousands of people like you we've secured safer food and water, defended wildlife and natural habitats, championed the move to clean energy and acted to keep our climate stable. Be a Friend of the Earth – see things differently.

set in Paris. This briefing looks at the responses we received, and the common themes which are emerging.

Summary

We had a 97% response rate. All the replies are available on our website, at <https://www.foe.co.uk/page/paris-climate-change-agreement-responses>, as is the original request letter, and the list of institutions contacted. We are very aware that activity on climate change in UK academic institutions is not limited to the sample of institutions we surveyed here!

1) Overall view on climate change

All responses were clear that climate change is a major challenge, and set out work that their institution was doing to rise to it.

In Friends of the Earth's view, there is a colossal amount of high-quality research and advocacy on climate change being undertaken in UK academic institutions, with the UK being a clear lead country in the physical science of climate change, but also in research on how countries can cut emissions, and on the technological, cultural, social and economic implications of doing so. We feel that overall academic institutions are setting a strong example to other sectors of society on the urgency of climate change, with much genuinely world-leading research and advocacy. However the responses to Paris in many places should be stepped up, and there are also some glaring contradictions within institutions, where often actions go against the Paris Agreement goals.

2) Research response on 1.5 degrees

Many but not all institutions explicitly mentioned the new 1.5 degree imperative from Paris. Some institutions have already changed their research plans or activities to address the 1.5 degree issues, others intend to. Other institutions stated that their climate change plans are already very strong and that Paris does not materially change this work.

Clearly, many institutions highlighted their work in the physical sciences. But also there are major contributions from other departments – for example economics, law, psychology, social sciences – covering the increasingly important cultural, economic and technical issues of how to rapidly cut global greenhouse gas emissions, faced by the imperatives highlighted by the physical science research.

Some institutions have a very clear understanding of the scale of the 1.5 degree challenge, and that it is majorly different to 2 degrees. However, for other institutions it is not yet clear that this change has been recognised. In part, this is due to the Paris Agreement still being relatively new. We hope that academic initiatives such as the September 2016 1.5 degree conference organised by the University of Oxford, Priestley Centre Leeds, Met Office and Tyndall Centre will be a springboard for a new wave of research and advocacy to meet the Paris goals. In particular, the UK Government is putting in place a new “carbon plan” by the end of 2016, and later in 2016 the UK Committee on Climate Change will be looking at the implications of the Paris goals for UK action. We noticed that only 4 UK academic institutions inputted to the early 2016 parliamentary inquiry into carbon budgets post Paris. We hope that more UK academic institutions will engage in detail with processes set out by DECC, parliamentary committees, devolved administrations and the CCC.

3) Beyond research

Many institutions also replied setting out other issues related to climate, beyond their research activity – for example impressive work on teaching, measures to cut their institution’s overall greenhouse gas footprint, and programmes to engage with non-academic institutions and communities, particularly in their host cities.

4) Finance and investment

In these other issues however, very few institutions mentioned the impact of their financial holdings, and whether or not these holdings were in companies whose actions are compatible with the Paris 1.5 degree goals. Sponsorship of Universities from corporations whose actions are incompatible with the Paris 1.5 degree goal was also not mentioned.

5) Fossil fuels

Similarly, no institutions mentioned research which might run counter to the Paris goals – for example research leading to greater exploration and exploitation of new fossil fuels reserves, when it is likely that at least 80% of existing fossil fuel reserves will need to stay unburned, even with high take-up of CCS technologies. In our view it is not sufficient for a University to have a strong climate change programme if other work in that University actively undermines it. Departments need to move away from research which aims to extracting more or new fossil fuels. Universities should implement a “transition pathway” for departments with research related to the fossil fuel sector.

6) Climate silos?

Although many institutions outlined many actions they were undertaking, in some places there was a sense that “climate change” was something which was just to be done in a specific institute within a university, rather than something that touched on other departments or areas. An increasing number of Universities though are developing or already have Centres which take a more holistic view on climate change right across the University. This appears to be a strong model for other institutions to replicate.

7) Overarching strategy

This sense of a lack of an overarching plan in some institutions has prompted Friends of the Earth to ask “*what core elements might be in a comprehensive ‘climate change strategy’ for a University?*”? We asked a cross-section of people involved in both academia and climate change – including MSc students, Post-Docs, members of the NUS, people in campaigning NGOs, members of the UCU and institute directors. **We include a first draft of such a strategy in Section 2 of this briefing, pages 15-18.**

8) Communications

There are some superb examples of communication of climate change issues to people outside of academic institutions – for example Professor Hawkins at the University of Reading’s recent “viral spiral”⁵ of growing global temperatures. However, there still seems

to be comparatively little of this compared with research impact work within and between universities. The kaleidoscope of ground-breaking, impressive, exciting work on climate change in UK academic institutions deserves and needs a far wider audience. We appreciate that this is difficult, and welcome initiatives which are trying to increase the communication of institutions' climate change work more widely. This should be accelerated.

Section 1 Responses in more detail

This section sets out examples from institutions' responses to the 8 main areas set out above.

1) Climate

All responses acknowledged the importance of climate change, and that their institution had a role to play. Bristol summarised this as:

"Universities have an obligation to address society's challenges, and...anthropogenic climate disruption is one of the most profound of those challenges"

Similarly, Goldsmith's response described climate change as *"the most crucial issue of the 21st Century"*.

University College London (UCL) set out how the Paris Agreement has increased the imperative for academics institutions to act:

"The achievement in Paris is hugely significant and provides an unprecedented opportunity to stabilise the global climate; but that opportunity is not to be taken lightly nor the outcome assured. There is a tremendous challenge now posed: to translate the political will within the Paris Agreement into action on the ground...UCL is fully committed to playing a leading role in meeting this challenge"

King's College London said *"we see climate change...as an important area of focus as we seek to make the world a better place"*.

Overall the responses also highlighted the very large numbers of world-leading researchers there are in UK academic institutions on climate science: with for example 50 IPCC chapter

authors at East Anglia, six lead authors at Exeter, five lead authors at Leeds, and strong ongoing climate science research at the British Antarctic Survey, Centre for Ecology and Hydrology, National Centre for Atmospheric Science, the National Centre for Earth Observation, the National Oceanography Centre and the Met Office.

2) Research on 1.5 degrees

University of Liverpool: *"The Paris Agreement is an important milestone in reinforcing the importance of initiating new programmes of research"*

A large minority of institutions' responses mentioned work they have done to either assess the Paris Agreement, suggest responses to it, or propose changes to research or other activity. The activities of those who have done so are strong:

- Four institutions responded to the Energy and Climate Change Select Committee's early 2016 inquiry⁶ into the UK 5th Carbon Budget: Grantham Imperial, Grantham LSE, CIE-MAP Leeds and Tyndall Manchester. The latter three of these argued that the Paris Agreement would mean stronger UK climate targets.
- The University of Oxford, Tyndall Centre, Met Office, and Priestley Centre Leeds are co-hosting a major international conference on the challenges of meeting 1.5 degrees on 20-22nd September 2016⁷.
- Strathclyde⁸ (Jan), Leeds (4th Feb), Imperial (11th April)⁹, Warwick (7th March), UEA (20th June) have held public or internal events on the Paris Agreement; UEA have said *"we expect our academics to come up with 5 questions on climate change that UEA can answer in the coming 3 years"*. Tyndall Manchester are holding a public 1.5 degree event on 12th September; York are holding a series of public lectures related to climate change in Autumn 2016; the new Priestley Centre in Leeds held a public Question Time event on 1.5 degree solutions in June.
- Post-Paris research:
 - Grantham LSE¹⁰ have published research on the adequacy of the Paris INDC's;
 - Reading highlighted its research as part of the DECC AVOID2 project to assess impacts at lower temperature levels;

- SOAS noted its work on new models of economic development compatible with 1.5 degrees and the top-billing for climate change in its October 2016 conference on environmental challenges in the Middle East and North Africa;
- Exeter's HELIX project will address 1.5 degree scenarios;
- Leeds' new Priestley Centre *"has already initiated research based on the outcome from Paris. These include but are not limited to analyses of the INDCs, the technical and political feasibility and risks of achieving the 1.5 degree target, the differential impact of 1.5 C and 2C target, and the co-benefits of rapid mitigation"*
- Aberdeen mentions new research proposals going in on a 1.5 degree future
- Cardiff is conducting work on the behavioural impacts of 1.5, due Summer 2016
- Dundee is hosting the International Transformations Conference 2017 – research into the processes of change: how to achieve systemic and deep transformations in society. www.transformations2017.org
- UEA Law School is newly engaging in issues related to climate change, with a workshop on climate refugees on 4th July
- NCAS mentioned development of models for assessing 1.5 degree pathways, and CEH set out its work to adapt its research to the new 1.5 degree limit.
- Some responses highlighted the work they had already done on 1.5 targets and/or more rapid mitigation, for example Grantham LSE's 2010 paper¹¹, and Tyndall Centre's TED talks¹² from Professor Bows.
- It was surprising to see the low apparent initial priority given to climate research by Research UK, particularly regarding its new Global Challenges Research Fund. This fund's priorities are still being developed, with RUK saying: *"During 2016, the Research Councils will consult the UK research community and other stakeholders in order to confirm the challenge areas, identify and validate other challenge opportunities and define the research priorities within these"*¹³. We hope that academic institutions would push for a greater focus on climate change within this fund, given its complex, cross-disciplinary nature and strong fit with RUK objectives.

Overall there is a great deal of activity to make clear the implications of the new Paris 1.5 degree goal, and this should be strongly informing UK public policy by the end of the year, with a clear view of the overall size of the global carbon budget for 1.5 degree goal, and the speed of transition needed to achieve it.

Many institutions highlighted other climate-related research activity they were leading, for example:

Energy technologies	CREST at Loughborough; Queen's Belfast
Smart-grids	Sir Joseph Swan Centre at Newcastle
Storage	Heriot Watt
Agriculture and Forestry	Nottingham, Aberdeen
Understanding Risk	Cardiff
Negative emissions and CCS	Sheffield, Aberdeen, UKERC, BGS and Cardiff
Sustainable materials	Bath
Sustainable Prosperity	CUSP at Surrey
Adaptation	Heriot-Watt
Business and finance masters	Imperial
Law	Strathclyde ¹⁴
Comparative Literacy Studies	Warwick

3) Non-research activity

Besides research, Universities have a complex and wide-ranging set of other impacts on climate change. Many of these are covered by People and Planet's wide-ranging annual survey of UK universities' environmental and ethical performance¹⁵. Here we looked at how responses covered 3 non-research impacts on climate: operations, education and outreach.

3.1 Operations

Many institutions have carbon reduction targets – however these appear to vary wildly in ambition – ranging from 20% cuts on 2005 levels by 2020, to Royal Holloway’s 48% by 2020, to Sheffield carbon neutral by 2025 and St Andrews by 2019. King’s London stated their 43% 2020 target, but that they were off-track and needed to “accelerate progress”. A number of institutions have in 2016 argued that the UK’s climate targets need to be toughened post Paris; UK academic institutions’ greenhouse gas targets for their estates and operations should also be strengthened to be compatible with a fair contribution from the UK to the Paris goals.

Many responses highlighted initiatives to cut greenhouse gas emissions, for example:

- Newcastle: Two research farms looking at biogas and low input agriculture
- Nottingham: Investing £14m in renewable and low-C energy generation projects to 2020
- UEA – awarded platinum eco campus¹⁶; new Enterprise Centre is one of Europe’s lowest carbon buildings.
- King’s College London was the only respondent to say they had signed the UNFCCC’s Pledge for Action <http://www.parispledgeforaction.org/>

Further details of the many other initiatives occurring on UK campuses can be found on the Environmental Association for Universities and Colleges (EAUC) website, at www.eauc.org.uk, including 115 finalists for this November’s Green Gown Awards¹⁷.

3.2 Education

Many responses also highlighted how they are embedding climate change into teaching courses. For example:

- Manchester - All first year undergrads take an exercise in environmental sustainability, includes COP21
- Bristol – “our University’s commitment to addressing environmental change is not limited to our research. We believe it must be part of our educational offer.. [we] are

currently reviewing new proposals that would enshrine sustainability into the Bristol student experience beyond the work we have already done”.

- Leeds University Sustainability service with the Priestley Centre and Leeds Council are establishing a “Living lab”/”Living campus”, “to ensure our research also leads to behaviour change and reduced carbon emissions across university staff, students, estate”
- Sheffield: “we have embedded sustainability issues in all our undergraduate programmes, through our Achieve More initiative”

3.3 Outreach

Many responses also highlighted work to engage people outside of academia, or people in other countries:

- Edinburgh in Sept 2015 launched the Edinburgh Action for the Climate, a hub within the wider city for exchange of ideas and opinions
- Glasgow Supporting Future City Demonstrator City.. a large-scale programme of citizen engagement <http://futurecity.glasgow.gov.uk/>
- Manchester’s 10,000 actions programme, launching November <http://www.socialresponsibility.manchester.ac.uk/news/may-2016/10000-actions/>
- Leeds: “playing a leading role in... NERC-DFID Future Climate for Africa” and formal partnerships with UN convention to combat desertification and CGIAR centres
- UEA: Deploying large efforts to foster international links with emerging economies (China, SA, India, Malaysia)
- Leeds also mentioned the strong role played by students on climate – for example through the International Youth Climate Movement at the last seven UNFCCC meetings.
- UCL awarded a “first class award” from People and Planet’s University league rankings, with 100% for sustainability strategy, staffing levels and engaging the university community.

4) Finance

Barely any institution's response mentioned anything concerning the impacts of its investments, pension fund, sponsorship or donations on climate change. The sole mention was the University of Warwick's mention of the potential of the university superannuation scheme to play a more active role in investing in low-carbon technologies.

This underplays the extent of change happening in this area – for example there are 24 universities in the UK who have made some form of divestment from fossil fuels, mostly in the last year¹⁸.

Sponsorship of research is also a major area where there is strong potential for research to run counter to climate change goals. For example Durham's website states that *"Much of the work we do within the area of Petroleum is applied, answering problems brought to us from the petroleum industry. Research sponsors include: BG, BP, Chevron, ConocoPhillips, DONG Energy, ENI, EON Ruhrgas, Petrobras, Petronas, Statoil, Tullow, Centrica, Crowne Estate, UKOGL, Igas, Shell, DDS, Woodside Energy, and Aramco."*¹⁹

5) Fossil fuels

Related, a problematic issue is whether research in one area of an institution would be undermining meeting the Paris Agreement's goals. This possibility emerges in some of the replies. For example, three responses cited groups at least part of whose work appears to contradict the Paris 1.5 goals:

- Cambridge cited its "energy@cambridge" group, who among many other things *"investigate new techniques for **upstream exploration** of fossil fuel resources. **Enhanced oil recovery** research includes the modelling of oil recovery processes, the development of new approaches to remote monitoring of oil-water flow patterns, the use of surface chemistry to maximise oil output from reservoirs, physical solutions to oil recovery such as the optimisation of controlled hydraulic fracturing for 'tight gas' reservoirs."*²⁰

- Durham cited its Durham Energy Institute, whose GeoEnergy group states: *“Whether it be oil, gas, coal, geothermal, 'unconventionals' or carbon capture and storage (CCS) we are tackling the problems that will allow clean sustainable energy supply to be delivered for our planet today and for generations to come.”* It is not clear how this is compatible with either the DEI’s vision of a *“low carbon energy future”*, or a Paris Agreement which will require most of the world’s existing fossil fuel reserves to stay in the ground.
- The British Geological Survey *“supports science that seeks to understand and maximise the recovery of dwindling fossil fuel reserves”*²¹.

Other institutions also have programmes whose work appears to go against the Paris goals, for example Oxford <http://shell.earth.ox.ac.uk/>, Glasgow’s work on Underground Coal Gasification²² and Petroleum Leeds <http://www.cipeg.leeds.ac.uk/>

We appreciate that some Universities may have long-standing financial and other links with fossil fuel corporations. Some of the research funded by these links will be into low-carbon technologies or approaches. But much of it is still in research which helps lock the world into unsustainable high-carbon dependence. The Paris Agreement is a strong imperative for change. Universities should implement a “transition pathway” for departments with research related to the fossil fuel sector. Departments need to move away from research which aims to extract more or new fossil fuels. Departments need to move away from companies whose business models are not compatible with the Paris goals and who continue to ignore shareholder pressure to change course, such as Exxon and Chevron.

6 and 7) Silos and strategy

In some institutions, the response was passed from the vice-chancellor’s office to a climate-related institute within the University. The reasons for this varied. However, one possibility is that climate change can be seen as a “silo” issue dealt with by one specific institute, rather than treated as a systemic issue cutting across the whole of the University. This potential is reduced where the institute has a specific remit to represent climate change more broadly across the University.

Examples of this broader cross-University role are

- the Priestley Centre Leeds,
- Cabot Institute Bristol: “brings together 600 researchers in all our faculties”
- Grantham Sheffield.
- UEA – regrouped all research on climate change under single umbrella climate@UEA

Other ways of ensuring that climate change is considered beyond “core” physical-science research centres within Universities include treating it as overarching university priority, for example:

- Exeter - climate change is embedded as a priority into the University’s overall research and impact strategy.
- Dundee – sustainable use of global resources is one of three key themes for the university
- Manchester – “environmental sustainability is a strategic priority for one of the University’s three strategic goals – “social responsibility”.
- Southampton - Overarching action plan addressing sustainability in whole University – Curriculum, Operations, Research and Experience.
- Edinburgh – a “whole-institution approach” to sustainability

It is the case though that in most institutions, even those listed above, there is not yet an overarching climate strategy which covers all the main aspects of a comprehensive response to climate change and the challenge set out by Paris. Friends of the Earth consulted with academics, students, campaigners and teaching union members to ask what a comprehensive overall strategy could look like. This is set out in section 2, is a draft, and we would welcome any suggestions on how to improve it.

8) Communications

Climate change is an existential urgent challenge for human societies, but is often treated by the general public as a distant threat. Climate communications from all sectors in society – from academics and businesses to NGOs and the Government – need to be more engaging.

The responses highlighted a number of innovative and/or successful approaches from academia, such as Professor Hawkins viral spiral, Professor Bows's 1 million+ view TED talk, and Goldsmith's 'Energy Babble'²³. These are also complemented by the growth of the study of the psychology of climate change, the study of decision-making, and behavioural economics, for example at Priestley Leeds, and the University of Cardiff, and in collaborative work led by ESRC and Climate Outreach. But from responses received, these feel like relatively isolated incidences.

Section 2 a draft template climate change strategy for a UK university

“Should universities pilot social and infrastructure change? Is that what they are for?

Undoubtedly. We know we need to find new ways of living and working, and universities are for learning; for individuals to learn and for society to learn. So when we have a problem as pervasive and complex as climate change they should be pioneering. They should be visionary and experimental, as part of that learning process. They’re not passive organisations simply observing or responding to the world but active agents engaging and shaping it, directly and indirectly.” John Broderick, Teesside University

Climate change is a complex, urgent, global challenge which requires the efforts of universities and academic institutions to help solve it. Because the solutions are multi-disciplinary and sectoral, we argue that a University’s response to climate change needs to be similarly holistic and cross-cutting.

A strong University response on climate change is also wholeheartedly in its self-interest. Reputation matters more than ever. Universities are at root about transforming society for the better. Institutions whose actions are stuck in the past, or who are reliant on companies whose actions are putting young people’s future at risk, or whose actions on climate are wildly inconsistent, will lose out – for the best and most talented researchers and students will over-time stay away.

In contrast, a strong strategy would show leadership and increasingly attract people - as a place which provides the education students need to face the 21st century with confidence. A University’s response to climate change needs to be visionary, inspiring and comprehensive. But what should be in such a response?

We contacted a cross-section of people - academics, students, and people connected with universities - to ask *“what would a comprehensive climate strategy for a University look like?”*

What follows is a summary of those answers – we set it down as a challenge to all academic institutions – to set out a stronger strategy than this, and then to implement it.

A climate change strategy for the University of X

“This University recognises that climate change is a complex and urgent global challenge, whose resolution requires cross-disciplinary research and action. Universities have a critical leadership role in providing research and answers to the complex challenges involved in preventing dangerous climate change, and this University is committed to playing its full part in meeting these challenges, working with other universities and all sectors of society, across all areas of University life and activity.

The University will implement a comprehensive strategy to ensure its research and other impacts are compatible with the Paris Climate Agreement’s goal of keeping global warming to 1.5 degrees, and the Agreement’s aim to increase the ability of nations to adapt to climate change we can no longer avoid.

The University also recognises that for the UK, as a developed country, the Paris Agreement has clear text that national contributions to these global goals must be made *“on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty”* with a nation’s contributions reflecting *“its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities”*. The UK must lead.

The University will offer a bold and positive vision, and lead by example, to help show that the humanity can rise up to and address the threats posed by climate change.

The University’s response will cover the following areas:

- Research:
 - The University’s mitigation-based climate-related research will be based on the global carbon budget available for the Paris 1.5 degree goal, and an equitable contribution from the UK to keeping within that budget.

- As well as climate research in physical science departments, the University will seek to implement new climate-related research programmes in Departments such as law, social sciences and economics, as appropriate.
- The University will implement a “transition pathway” away from research, internships and placements in areas which would lead to action incompatible with the Paris goals, such as increased extraction of fossil fuels. It will not take any new sponsorship into activities which would lead to increased extraction of fossil fuels
- Own operations:
 - The University will implement a timetabled plan for the University’s carbon footprint to go as close to zero as possible, as quickly as possible. This will cover all operations: from buildings and supply chains to travel and food policy
 - The University will produce or source 100% of its energy from renewable sources by 2025
 - The University will conduct a climate change risk assessment and implement an adaptation strategy, to help it adapt to climate impacts which can no longer be avoided.
- Education:
 - The University will ensure that all students leave their time in education with the skills, knowledge and attributes needed to drive sustainable development, no matter their area of study.
 - The University will conduct an audit of education for sustainability in the curriculum offer. All course programmes will be asked to provide evidence of how they have integrated this into the syllabus.
 - The University will implement an education programme available to all staff and students about climate change and sustainability, and the University’s work on climate change. This would also be available to residents and businesses in the city.

- Outreach:
 - The University will help ensure pan-UK academic networks coordinate to promote research and action to meet the Paris Agreement's goals, linking with other academic networks world-wide
 - The University will promote a strong vision of how the world can make the transition to a 1.5 degree pathway, and its role in helping do so, and showcase its work as a "living laboratory" to tackle climate change.
- Finance:
 - The University will divest all of its endowments and other funds from companies involved in fossil fuel extraction by 2020
 - The University's representatives on the University Superannuation Scheme (USS) Board of Trustees will push for USS divestment by 2020
 - The University will not accept new sponsorship from companies involved in fossil fuel extraction; we will not allow such companies at career events on campus until they have published and started to implement a strategy for how their business model has changed to be compatible with the Paris 1.5 degree goal.
- Governance:
 - The University's overall strategy on climate change sits within a broader commitment to sustainable development: that all people's needs should be met, in all countries, in this generation and the next, within environmental limits. Action on climate change must be delivered alongside other societal goals, not placed in conflict with them.
 - The University will engage with union representatives on the climate change strategy. It will recognise Union Environment Representatives, and provide faculty time for them to carry out their functions. The University will also engage with student representatives on this strategy.
 - The responsibility for ensuring the delivery of this strategy is with the senior leadership team of the University."

Further information:

There are many excellent and long-standing initiatives working with and in Universities across sustainability issues. Two major organisations include:

EAUC – www.eauc.org.uk - in particular their resources on building resilience into the future of universities²⁴.

People and Planet – peopleandplanet.org - in particular their annual league table of Universities and Colleges across a wide range of sustainability issues²⁵.

Contact details:

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Further detail: <https://www.foe.co.uk/page/paris-climate-change-agreement-responses>

References:

¹ UNFCCC, 2015. <http://unfccc.int/resource/docs/2015/cop21/eng/l09r01.pdf>

² Carbon Brief, 2015. <http://www.carbonbrief.org/piers-forster-1-5c-is-a-brave-new-world> . Dec 15th

³ <http://www.nerc.ac.uk/about/whatwedo/vision/>, accessed June 2016

⁴ Institutions surveyed: Cardiff University, Durham University, Goldsmiths, Heriot-Watt University, Imperial College London, King's College London, Lancaster University, London School of Economics, Loughborough University, Newcastle University, Queen Mary University of London, Queen's University Belfast, Royal Holloway, SOAS, University College London, University of Aberdeen, University of Bath, University of Bristol, University of Cambridge, University of Dundee, University of East Anglia, University of Edinburgh, University of Exeter, University of Glasgow, University of Kent, University of Leeds, University of Leicester, University of Liverpool, University of Manchester, University of Nottingham, University of Oxford, University of Reading, University of Sheffield, University of Southampton, University of St Andrews, University of Strathclyde, University of Surrey, University of Sussex, University of Warwick, University of York; plus: British Antarctic Survey, Arts and Humanities Research Council, Biotechnology and Biological Sciences Research Council, British Geological Survey, Centre for Ecology and Hydrology, Economic and Social Research Council, Engineering and Physical Sciences Research Council, Grantham Institute - Climate Change and the Environment, Grantham Research Institute on Climate Change and the Environment, Medical Research Council, Met Office, National Centre for Atmospheric Science, National Centre for Earth Observation, National Oceanography Centre, Natural Environment Research Council, Priestley International Centre for Climate, Science and Technology Facilities Council, Tyndall Centre, UKERC. All responded except the University of Leicester and Queen Mary University of London.

⁵ Eg in Vox <http://www.vox.com/2016/5/10/11643864/global-warming-spiral-temperatures>

⁶ <http://www.parliament.uk/business/committees/committees-a-z/commons-select/energy-and-climate-change-committee/inquiries/parliament-2015/setting-fifth-carbon-budget/publications/>

⁷ <http://www.eci.ox.ac.uk/events/2016/1point5degrees/>

⁸ Climate Co-operation after Paris. <https://www.youtube.com/watch?v=GdcyL9Q34Zw>

⁹ Transforming growth: Climate policy today for a sustainable tomorrow - Christiana Figueres

<https://www.youtube.com/watch?v=vwTCiOW0QtU>

¹⁰ http://www.lse.ac.uk/GranthamInstitute/publication/beyond-the_targets/

¹¹ <http://www.lse.ac.uk/GranthamInstitute/publication/mitigating-climate-change-through-reductions-in-greenhouse-gas-emissions-is-it-possible-to-limit-global-warming-to-no-more-than-1-5c/>

¹² https://www.ted.com/talks/alice_bows_larkin_we_re_too_late_to_prevent_climate_change_here_s_how_we_adapt?language=en

¹³ <http://www.rcuk.ac.uk/funding/gcrf/challenges/> and <http://www.rcuk.ac.uk/funding/gcrf/sagcall/>

¹⁴ <https://www.strath.ac.uk/courses/postgraduatetaught/climatechangelawpolicy/>

¹⁵ <https://peopleandplanet.org/university-league>

¹⁶ A list of other institutions' awards under eco campus is here:

<http://www.loreus.com/Programmes/EcoCampus/EcoCampus-Register>

¹⁷ <http://www.greengownawards.org/2016-finalists>

¹⁸ <http://gofossilfree.org/commitments/>

¹⁹ <https://www.dur.ac.uk/cerees/research/petroleum/>

²⁰ <http://www.energy.cam.ac.uk/directory/research-themes/supply/fossilfuels>

²¹ <http://www.bgs.ac.uk/research/energy/home.html?src=topNav> ,

<http://www.bgs.ac.uk/research/energy/UCG.html>

²² www.gla.ac.uk/schools/engineering/research/divisions/systems/researchthemes/energy/#d.en.272733

²³ Energy Babble <http://research.gold.ac.uk/11392/>

²⁴ http://www.sustainabilityexchange.ac.uk/a_business_guide_for_university_governors and their Climate

Commitment in Scotland: http://www.eauc.org.uk/universities_and_colleges_climate_commitment_fo2

²⁵ <http://peopleandplanet.org/university-league>