

IPOG

UKRI and NERC update

4 October 2019

Jacky Wood, UKRI – NERC
Head of Business Partnerships
Jacqueline.wood@nerc.ukri.org

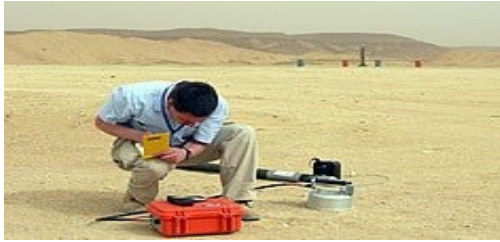


Natural Environment Research Council

- NERC is the UK's leading public funder of environmental science
- We invest £330M each year in cutting-edge research, postgraduate training and innovation in UK universities and research centres



We support



- 3,000 scientists and over 1,500 PhD students



- 1,000 research projects and 60 UK or international programmes

- 55 universities and 20 research institutes



- UK national capability: 3 ships (plus 1 being built), 6 aircraft, 6 polar bases, the NERC Data Service and 11 community research facilities



Evolving research & innovation landscape



UK Research and Innovation



UK Research and Innovation



To be an outstanding organisation that ensures the UK maintains its world leading position in research and innovation

Knowledge

Push the frontiers of human knowledge

Economy

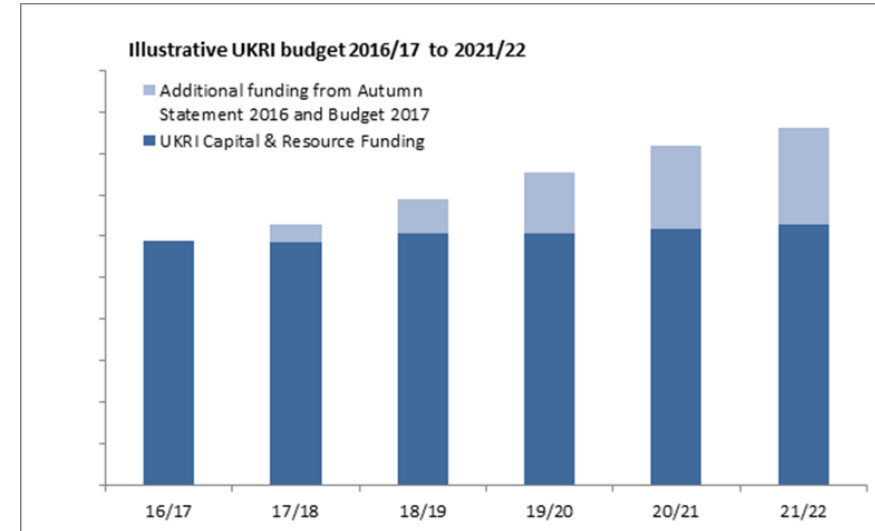
Deliver economic impact and create better jobs

Society

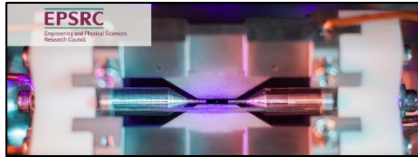
Create social impact by supporting our society to become stronger and healthier

Autumn Statement 2016

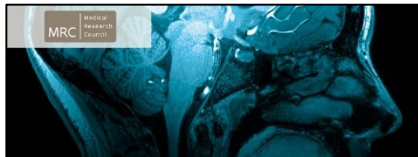
- ***“Mr Speaker, we do not invest enough in research, development and innovation.***
- £4.7bn of additional funding for R&D was announced over the period 2017/18 to 2020/21 with a rising profile.
- Working towards R&D being 2.4% of GDP (currently 1.7%)



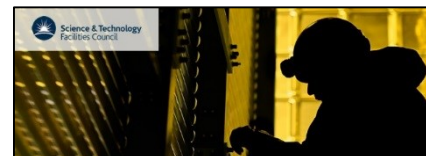
UKRI 2019 Delivery Plans



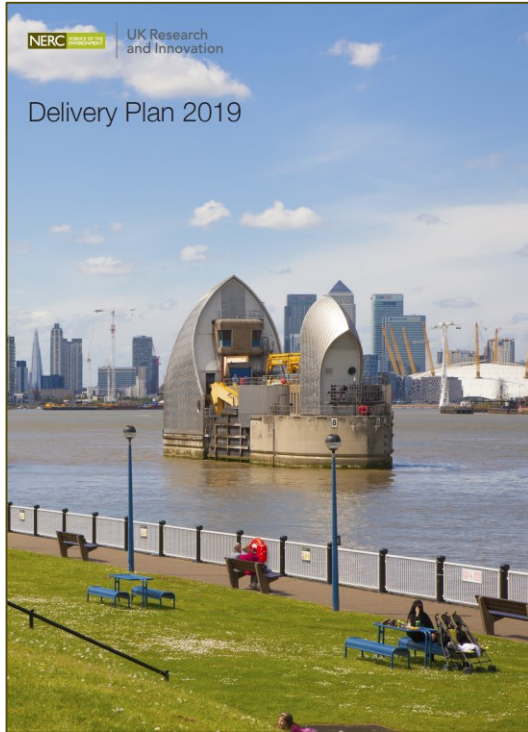
- The 2019-20 Delivery Plans highlight the areas of focus and key activities of UKRI's nine constituent councils and its cross-cutting themes.



- The plans have been developed with input from across UKRI's research and innovation communities and build upon the Strategic Prospectus, published in May 2018, which outlined UKRI's vision, mission and values.



NERC Delivery Plan



- Recognises the transition to UKRI and NERC's role within a new agile organisation
- Highlights the importance of interdisciplinary working and global partnerships to respond to environmental challenges
- Articulates NERC ambitions for the future and identifies eight priority areas

NERC Priority Themes



Environmental Solutions

- Champion the importance of environmental solutions in contributing to clean growth across UKRI, and create initiatives that meet this aim.



Resilient Environment

- Increase understanding of environmental hazards, environmental change and their interactions, to plan for and manage vulnerability, risk, response and recovery.



Productive Environment

- Promote research and innovation to enable a shift to a circular, resource-efficient economy, working with partners to translate research into effective business models.



Healthy Environment

- Increase understanding of the benefits of a healthy environment to health and wellbeing, and of feedback mechanisms between environmental systems and a healthy economy, society and culture.

NERC Priority Themes



Pushing the frontiers of understanding

- Maintain the UK's considerable breadth of expertise across environmental science, to prepare for the unknown challenges of the future.



Global Environment

- Provide leadership in, and bring UK expertise to bear on, global challenges, aiding international development and responses to environmental emergencies.



Digital Environment

- Use cutting-edge technology to advance environmental outcomes, taking advantage of machine learning, miniaturisation, battery technology and wireless communications



Best Environment for R&I

- Ensure a talent pipeline in environmental science that has the skills and expertise to resolve future unknown challenges and to lead and influence broad, systemic thinking for environmental solutions.

Generating strategic R&I programmes

Generate ideas

NERC SDP ambitions vs existing portfolio – gap analysis, Council priorities
Partnerships and opportunities – Executive engage and shape
Open portal for ideas – ‘Crowd-sourcing’?

NERC strategic R&I budget

- Strategic R&I programmes
 - AO based on Council priorities (Exec)
 - Assess proposals (Science Committee)
- Highlight topics (Science Committee)
- Partnerships & opportunities (Exec)

UKRI collective funds

- Open call for SPF prog ideas (Exec)
- Generate programme proposal then business case to UKRI (Exec plus ‘rotators’)



Strategic research and innovation

i. Strategic programme areas

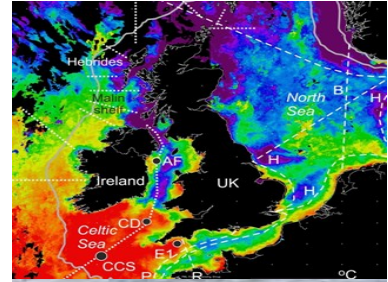
Large scale complex programmes that take time to develop and deliver. Typically range in size from £5m to £20m depending on their scope and partnership funding.

ii. Highlight topics

Focus strategic research on defined topic areas. Can be worth up to £4m and last up to four years.

iii. Partnerships and Opportunity

Provides a timely response to opportunities for NERC to partner with other research funders. Size and scope will vary according to the opportunity.



New Cross Council funds

- **Strategic Priorities Fund (SPF)**
 - Support for new strategic priorities that aren't covered by other more specific funding streams
 - Incentivising inter-disciplinary work
 - Links to cross-departmental R&I priorities
 - NERC Priorities:
 - Clean Air; Landscape Decisions; Digital Environment; UK Climate Resilience
 - Space Weather (NEW – announced September 2019)
- **Fund for International Collaboration (FIC)**
 - UKRI and BEIS developing new International Research and Innovation Strategy
 - Focus initially on countries we have Science, Technology & Innovation agreements. £110m UKRI (2017 Autumn statement)



New Cross Council funds

- **Industrial Strategy Challenge Fund (ISCF)**
 - Launched 2017 following Industrial Strategy white paper
 - Industry led, Grand Challenge focus:
 - Clean Growth
 - Artificial Intelligence & Data Economy
 - Ageing Society
 - Future of Mobility
 - Wave 1 - £485m & Wave 2 - £725m
 - Wave 3 – Up to £500m: 9 shortlisted bids:
 - **Industrial decarbonisation (£170m)**
 - Manufacturing made smarter (£121m)
 - **Smart Sustainable plastic packaging (£60m) – NERC led**
 - Wave 4?



New Cross Council Funds

- **Strength in Places Fund**
 - Launched in 2018
 - Competitive £115m UKRI Fund (in partnership with devolved funding bodies).
Run by UKRI team
 - Collaborations between universities, research organisations, businesses, local government and LEPs in England and relevant agencies in devolved nations.
 - Demonstrate strong impact on local productivity



Talent and Skills

Responsive studentships

Studentship topics chosen by student/supervisor from any area of NERC remit

DTPs and DTP CASE

Directed studentships

Studentships providing specialist skills linked to NERC strategic priorities or to skills needs identified by NERC and the NERC community

CDTs and CDT CASE

Advanced Training

Technical, professional and personal transferable skills

Short courses
Policy Internships
REPs
Professional skills training

Training Partnerships & Opportunities

Flexible stream addressing emerging skills gaps to ensure a healthy research base

Flexible/agile stream delivered as appropriate

Fellowships

Opportunities for outstanding early-career environmental scientists to devote their time to developing into recognised science leaders.

IRF
Daphne Jackson
Knowledge Exchange

Invest in talent and skills – approx. £34m core annual investment through several funding streams



Talent and Skills

National Productivity Investment Fund (NPIF)

Additional studentships
UKRI CDTs
Innovation placements
Industrial strategy
short courses
NPIF Fellowships

Fund for International Collaboration (FIC)

MITACS – Canada
Globalink exchange
programme

Invest in talent and skills through collective funds – approx. £7m (variable per annum)



Working with you

- To facilitate and convene – help you to access the science
- To listen – what solutions can science help you deliver?
- To respond – help inform future R&I programmes

....over to you!



Innovation Programme
in Oil & Gas

NERC
SCIENCE OF THE
ENVIRONMENT

