

Data from a UK marine science COVID-19 working group impact survey

December 2020

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Background

The COVID-19 global pandemic has affected everyone. This survey focused on the effect on the UK marine science community and was motivated by the emerging but abundant anecdotal evidence of a disproportionate impact on some marine scientists, for example, those caring for others at home, Early Career Researchers and under-represented groups.

The wider context of Covid-19 impact is well-recognised, and the authors recognise that the impact on the general population has been significantly greater. However, there is an opportunity to learn from the pandemic within the marine science community and this survey helps inform partners of potential improvements that will outlive Covid-19.

The survey was issued in October 2020 to marine scientists based at research institutes across the UK. The COVID-19 Working Group was led by Dr Kate Hendry of the University of Bristol and supported by Jackie Pearson of the NOC Association of Marine Science National Capability Beneficiaries (NOCA).

The data

Data from the survey will be stored on secure servers in Europe and complies with GDPR requirements as of May 2018. Data will be kept until the results are known and we estimate that this will be around 12 months, after which it will be destroyed.

General Statistics

General notes:

Data collected from 5th October to 1st November 2020
193 respondents (all UK-based marine scientists)
PntS = Prefer not to Say

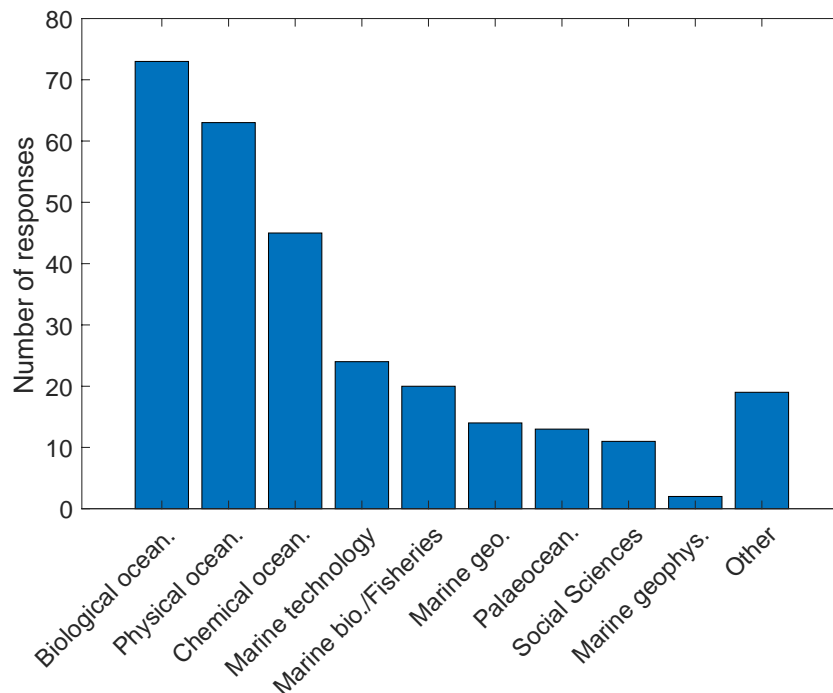
Field and mode of research work:

Q1: Are you working for a UK-based institution? (If you select "no", thank you for your interest but we are limiting responses to colleagues in UK institutions and so will not be able to use your survey answers beyond this point)

- All 193 respondents were from UK-based institutions and were included in the data analysis.

Q2: What is the main focus of your research? Select all that apply.

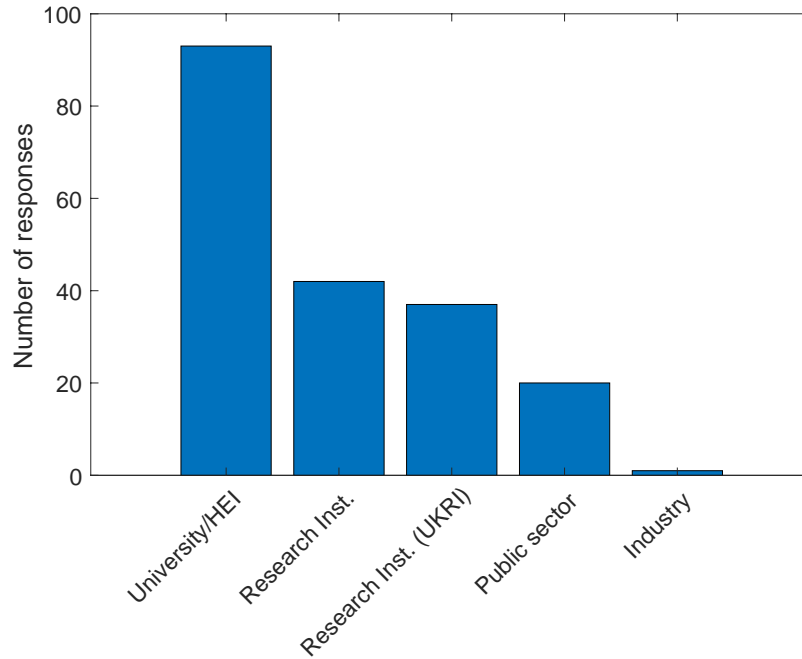
- Plot shows the number of respondents that selected each category. Some respondents selected multiple answers (and have been classified later in this report as “multidisciplinary”).



The “Other” categories included Marine Meteorology, Marine/Blue Biotechnology and Engineering, and Robotics. Please note that the Marine Biology and Fisheries category also includes Aquaculture, Ecology, Conservation, Population Studies and Behaviour. Two respondents elected PntS.

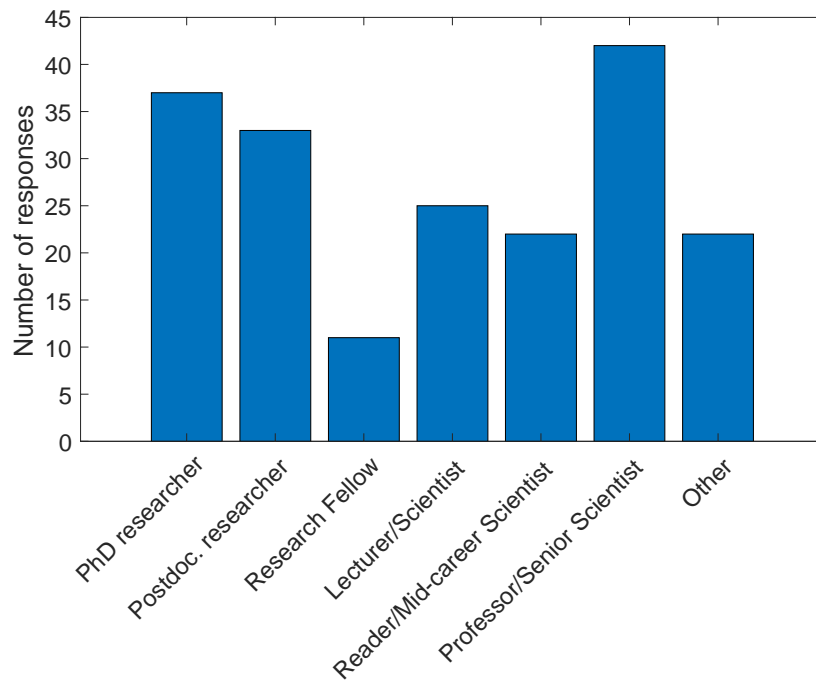
Q3: What sector do you work in predominantly?

- Plot below shows the number of respondents that selected each category.



Q4: How would you describe your career stage? (If your institution uses a classification that does not align with the following options, please feel free to state your job title in the "Other" box).

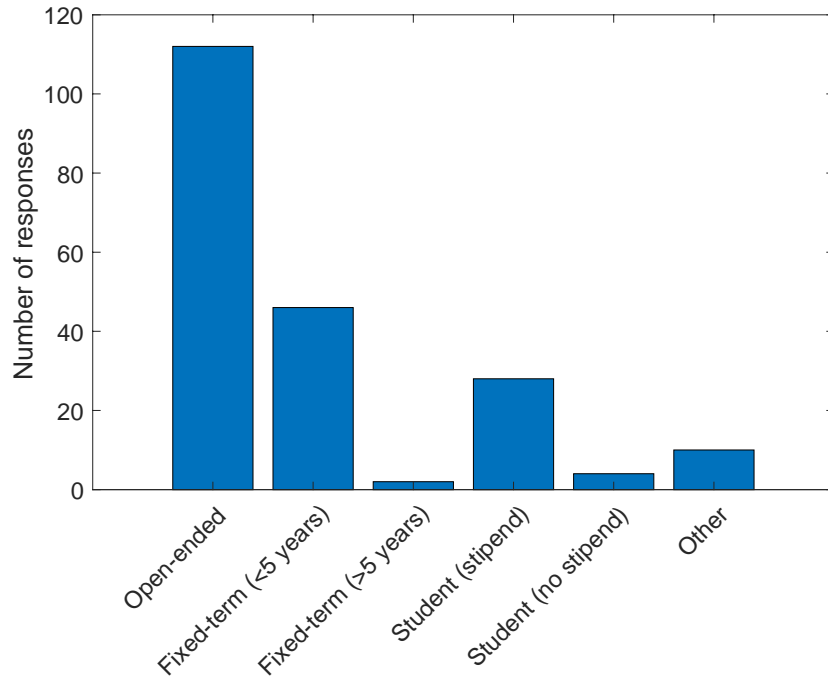
- Plot below shows the number of respondents that selected each category.



The "Other" category included Emeritus positions, Scientific Management, and more detailed descriptions of the listed career stages or specific job titles. One respondent selected PntS.

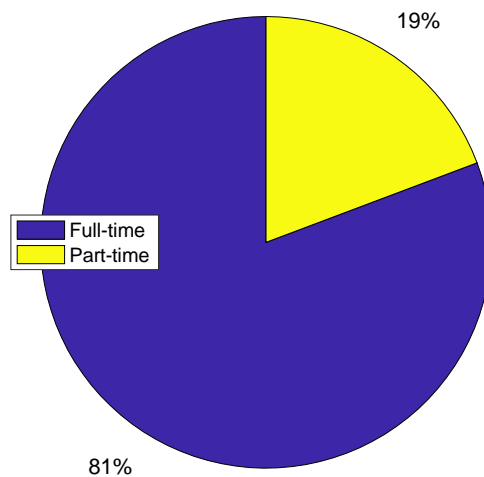
Q5: How would you best describe your current contract or studentship? Select all that apply.

- Plot below shows the number of respondents that selected each category.



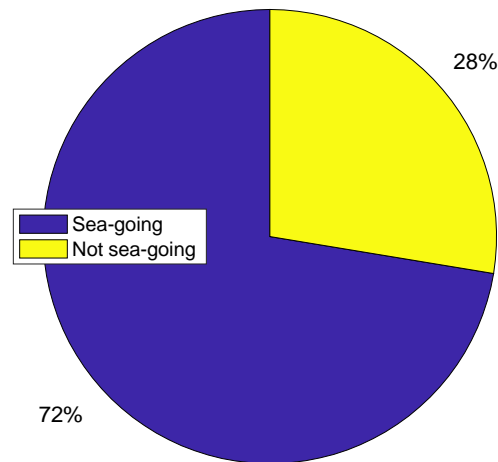
No respondents selected that they were primarily employed on casual or hourly-paid contracts.

Q6: Please indicate whether your main research work is full-time or part-time.



One respondent selected PntS.

Q7: Have you carried out sea-going or coastal fieldwork as part of your research in the last five years?



One respondent selected PntS.

Q8: Are you involved in or benefit from any of the following National Capability (NC) initiatives? Please select all that apply. If you would like to add details, please use the "Other" box below.

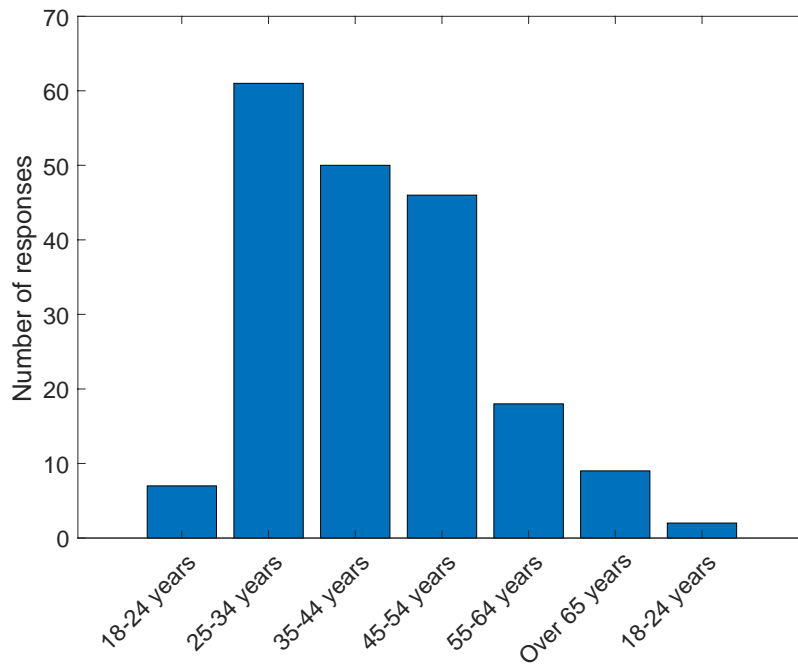
- Table below shows the number of respondents that selected each category. Some respondents selected multiple answers.

NC Science (single centre/multi-centre/ODA projects)	54
NC Large-scale Research Infrastructure	29
NC Services, Facilities and Data	33
NC National and Public Good	15
Not sure	45
Not applicable	74
Other (relating to NERC grants)	6

Diversity monitoring

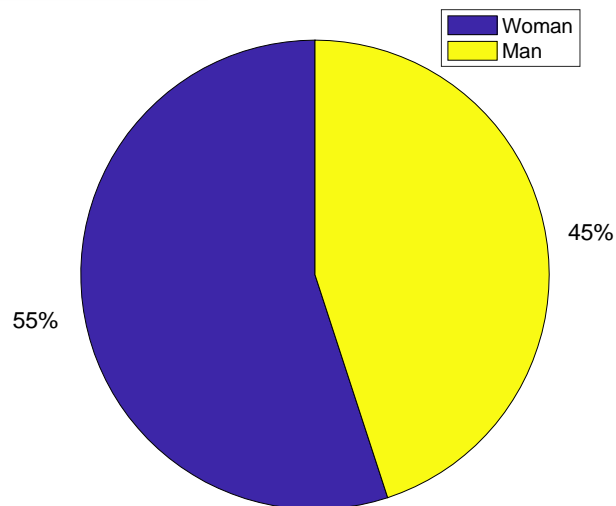
Age range:

Q28 What is your age? Please indicate from the list which best describes your age group.



Gender identity:

Q29. What is your gender identity?



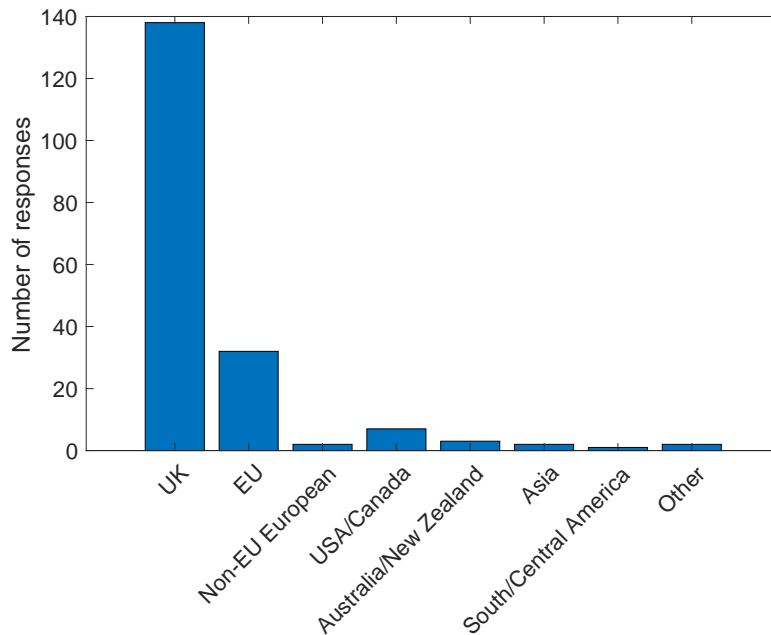
Four respondents selected PntS; there were no respondents who identified as non-binary.

Q30. Is your gender identity the same as the gender you were assigned at birth?

Two respondents stated their gender identity is not the gender that was assigned at birth (approximately 1% of respondents). Five respondents selected PntS.

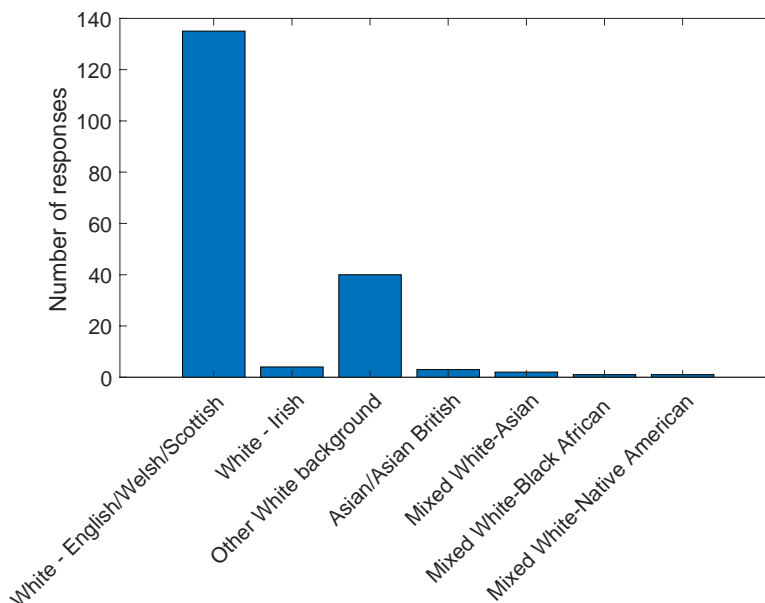
Nationality and ethnicity:

Q31. What region are you from (your nationality)?



Seven respondents selected PntS. No respondents selected the other groups available.

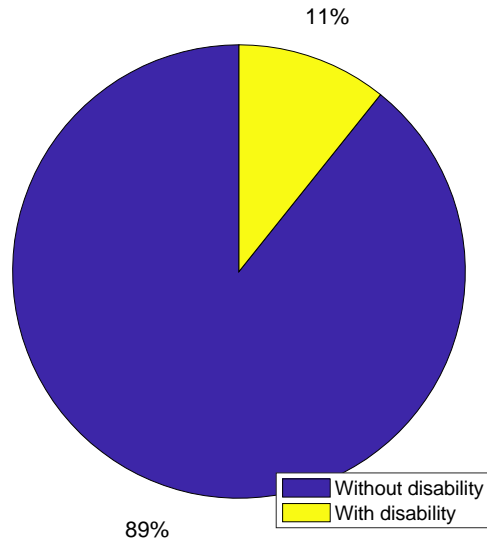
Q32. What is your ethnicity? This question is not about your nationality, place of birth or citizenship – it is about the cultural group to which you perceive you belong. Please select one option you feel most accurately describes you.



Eleven respondents selected PntS. No respondents selected the other groups available.

Disability:

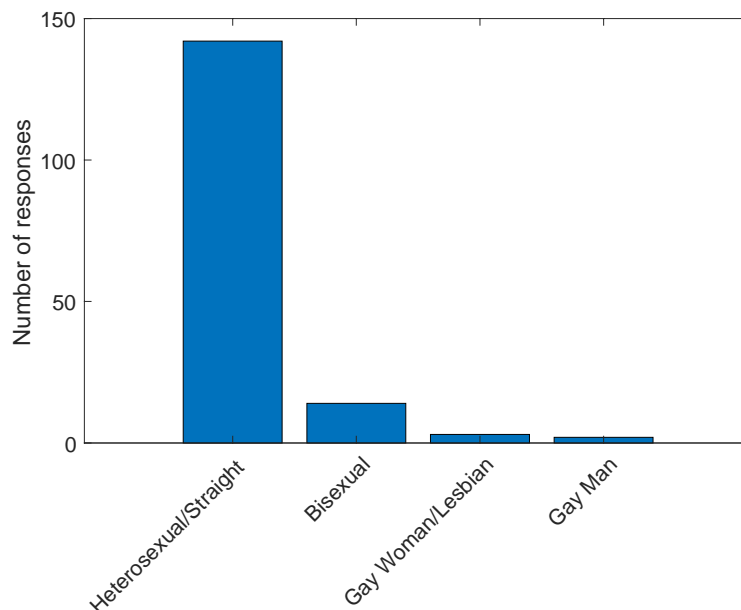
Q33. The Equality Act 2010 defines a disabled person as someone who has ‘a physical or mental impairment which has a ‘substantial’ and ‘long-term’ adverse effect on his/her ability to carry out normal day to day activities.’
For example, this can include diabetes, learning difficulties, hearing or speech impairments, arthritis, heart problems, epilepsy, depression, anxiety etc.
Do you consider yourself to have a disability as defined above?



Seven respondents selected PntS.

Sexual orientation:

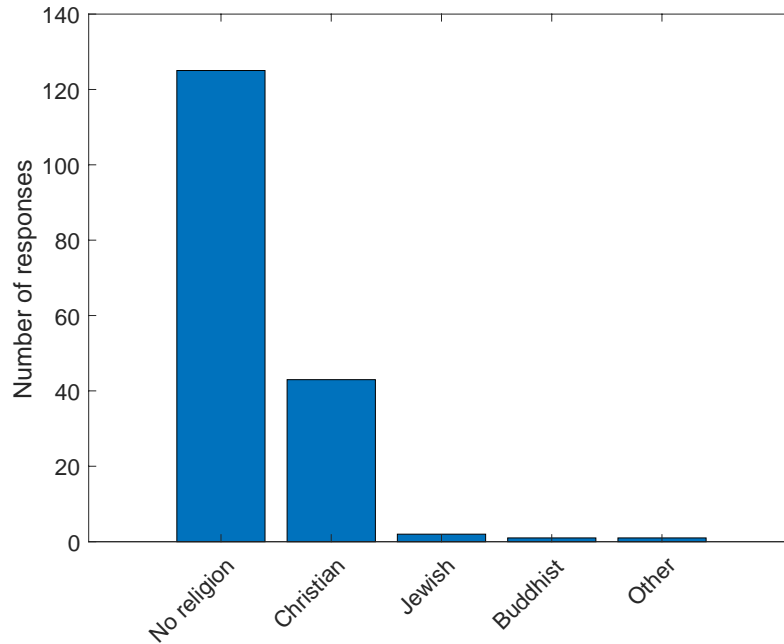
Q34. Please indicate from the list which best describes your sexual orientation. The options have been listed alphabetically.



Thirty-two respondents selected PntS or did not answer.

Religion:

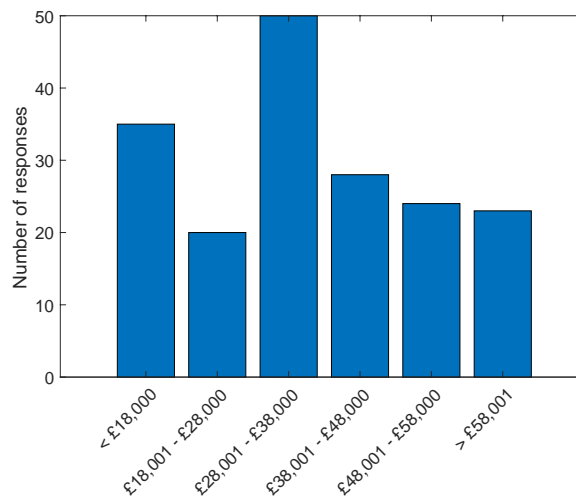
Q35. What is your religion? Please indicate from the list which best describes your religion or belief.



Twenty-one respondents selected PntS. No respondents identified as Hindu, Muslim, or Sikh.

Earnings:

Q36. What is your individual annual income range?



Thirteen respondents selected PntS.

Qualitative data:

If you would like to add further information about your situation (e.g. socio-economic background), please do so below:

A few people added more information about their background (socio-economic background, details about caring duties); some respondents expressed disapproval at being asked diversity questions.

Some quotes from respondents

“It is very hard to be an older part-time student in the first place, never mind with COVID-19 as a backdrop.”

“I’m in a long-distance relationship, with my partner being in another country in the EU. I couldn’t see my partner for months during the first wave of the pandemic and, with Brexit and the II coronavirus wave at the door, I fear mobility in/out of the UK will just worsen in 2021.

I feel my personal situation is more of a concern than work and this is extremely distracting. I wish I were in the EU. I’m considering moving out of the UK as soon as my project will end to improve my personal life.”

“My regular working pattern is part-time, four days a week, in order to look after my daughter. However, as her nursery has been closed until recently I have been working about three days a week, until it re-opened at the beginning of September. Since then there has been a confirmed positive test at the nursery, so we were told to isolate for two weeks as a precaution before she can go back. As we live in an area with a high number of cases, nursery closure and isolation could repeat.”

Overall impact results

General notes:

Those who responded “Not sure” or “Prefer not to Say” (PntS) are generally removed from the overall statistics unless otherwise stated.

Red italics show the key messages from each section.

Fieldwork:

Q9: Has the pandemic impacted planned coastal/sea-going fieldwork?

- 58% of respondents were planning sea-going/coastal fieldwork this year (111 out of 193 responded in the first four categories above)
- Of those 111 respondents intending to do sea-going/coastal fieldwork this year:

49 reported fieldwork being cancelled = 44%

13 reported fieldwork being delayed (but went ahead since) = 12%

44 reported fieldwork being postponed = 40%

5 reported fieldwork going ahead as planned = 5%

Within our sample, 84% of the planned marine fieldwork in the UK was cancelled or postponed; our results give a relevant estimate of the huge impact of the pandemic on the marine science community.

Q10: If your coastal/sea-going fieldwork was impacted by the pandemic please provide us with some information (e.g. cruise number, ship, location) if you are happy to do so.

For further qualitative feedback on fieldwork, see Appendix A.

The main themes identified were that fieldwork had been postponed/cancelled (32 comments, not including comments that just listed cruise numbers or campaigns without specific details), the degree of future uncertainty (5 comments), and additional levels and complexity of organisation (4 comments).

Some key points:

- Impact on research cruises on NERC vessels (eight comments specifically reference RRS *Discovery*, RRS *James Clark Ross* or RRS *James Cook* cruise numbers) including impacts on post-fieldwork activities;

e.g. “There was already a delay with ship time, COVID has now meant this is further delayed, and potentially won't take place now until 2023, just a year before the end of the grant. So I have no idea how I or my colleagues are meant to fulfil the objectives that were set in the grant.”

- Impact on long-term/time series work e.g. Atlantic Meridional Transect (AMT), Rapid Climate Change (RAPID) and Porcupine Abyssal Plain (PAP) projects (seven comments specifically reference AMT, RAPID and PAP);
- Impact on NC Large Grant (ORCHESTRA specifically mentioned in a comment);
- Impact on work from smaller vessels around UK including all devolved nations (e.g. SAMS boat, RVs *Scotia* and *Tridens*, RV *Corystes*, marine ecological work for Natural Resources Wales), Northern Europe (e.g. RVs *Belgica* and *Simon Stevin*, *IB Oden*), although there were comments that some shore-based work could continue;
- No access to marine field stations;
- Impact on international collaborations (e.g. Canada, Norway – EU funded, USA) and many comments on cancelled/postponed international cruises;
- International Ocean Discovery Program (IODP) specifically mentioned in a comment;
- Impact on fisheries and fish farm research (several comments, one specifically about Cefas);
- Impact on industry (in one case an industry collaboration was possible, but the scientist was not allowed to join) and military links (delayed activity with a Royal Navy Vessel);
- Direct impact on sea-going experience for Early Career Researchers (ECR);
- Direct impact on seasonal/temporary staff, leading to redundancies;
- Direct impact on visiting fellows (visiting fellows from to UK HEI on Global Challenge Research Funded development project cancelled);
- Specific comments on uncertainty (not sure when fieldwork will – or can – be rescheduled);
- Logistical challenges e.g. insurance, safety measures.

A wide range of stakeholders (commercial, government agency, military, HEIs and Research Council programmes; coastal, inshore, shelf seas and deep ocean) have been impacted throughout the UK and internationally, and share serious concerns over the uncertainty of fieldwork plans in the future.

There are major implications of postponed and cancelled fieldwork for the career progression of ECRs.

Labwork:

Q11: Has the pandemic impacted your labwork or labwork within your group?

- 139 out of 193 respondents carry out labwork as part of their research (72% respondents).
 - Of these 139 respondents, 55 (40%) of these respondents said that labwork had been impacted severely; 71 (51%) of these respondents said that labwork had been impacted moderately

Within our sample, >90% of marine science labwork was impacted either moderately or severely by the pandemic, giving a good idea of the significant disruption of labwork across the whole community.

Q12: If your labwork has been impacted by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on labwork, see Appendix B.

The main themes identified were issues in accessing laboratory and resources (resources include equipment, consumables, remote access to software, and delays in lab refurbishment; 59 comments) and new lab working patterns, referring to having a limited number of people that can be in a lab at the same time due to COVID-19 protocol resulting in reduced efficiency (13 comments).

Problems reported include:

- Many respondents were delayed due to lab closures lasting at least 3 months, many are now operating at limited capacity, some are still not operational at all (one report of uncertainty as to when labwork could resume);
- A report of experiments having to be stopped part way:

“I had to stop an experiment midway due to the lockdown. I am now able to work in the laboratory and I am performing the experiments but the difference in seasonality has to be accounted for. Also, now I am constantly anxious if I will be able to finish before a second lockdown or having to isolate if my partner or I show symptoms.”

“Covid-19 restrictions meant no access to the lab for three months. Analytical instrumentation had to be switched off and some instruments have a long lead time to get them running again before analysis can re-start (estimate six month delay) particularly given the restricted number of staff allowed within each lab for social distancing purposes.”

- Reports of implications for those working with live organisms, e.g.:

“Cessation of labwork for four months. Loss of study organisms. Failure to deliver aspects of grant funded research.”

- Closure of workshops (equipment maintenance, refurbishment, replacing sensors etc.);
- A report of difficulties in access to software:

“More challenging access to seismic interpretation software/data - remote connection for this type of work is not ideal”

- A report on impact on industry partners:

“There are ongoing impacts on shore side sampling programmes due to changes in market conditions and industry working patterns.”

- Labwork being delayed due to reallocation of duties to priority tasks, and staff furloughing;
- Additional administrative burden related to labwork, e.g.:

“Significant levels of additional administration associated with permissions to enter building, amending lab protocols, additional risk assessments, booking procedures and greatly increased email correspondence [sic] to arrange/ coordinate access with lab manager(s) and other users.”

- A report of reduced lab access for international partners, and cancelled international visits;
- Reduced data acquisition leading to a delay in publications;
- Reduced effectiveness of lab-using staff due to caring duties and stress;
- A report of reduced effectiveness of lab-using staff due to illness;
- Lack of access to samples post-cruise;
- Impact for undergraduate, MSc and PhD student projects and postdoctoral researchers including cruise time and international visits (although one respondent reported that they had limited lab access because “*priority was given to finishing post-docs and finishing PhD students*”);
- Impact on PI/supervisor time resulting from having to find alternative project work for students and postdoctoral researchers, e.g.:

“PhD students labwork was put on hold/delayed. Although we found ways to keep students busy (i.e by writing up thesis chapters), the delays still affected their progress.”

- A report on a specific impact on an ECR:

“I was in the process of setting up a new lab when the lockdown period started. This was postponed for several months as I was not able to order consumables or enter the lab for quite some time, which impacted preparation for fieldwork, and my students have only recently began working on samples again.”

And some detailed feedback for NERC:

“Lack of access to institute's NERC COVID Grant Allocation has impacted delivery of lab results for one NERC-funded Highlight Topic project. This is because the project already had a no cost extension prior to COVID that fell outside NERC's cut off dates, and yet staff funding for the lab work package finished in May 2020 according to the original project schedule.”

There have been widespread impacts on labwork including sample processing, issues associate with maintaining live organisms, experiments, workshops, and software access. There is an associated increase in administrative burden relating to labwork health and safety. Delays in labwork have most strongly impacted ECRs and their supervisors, and researchers with caring duties and health issues.

Proposal writing:

Q13: Has the pandemic impacted your grant/proposal writing?

- 61% of respondents had plans to write grant proposals;
- 53% of these respondents found that their grant writing had been negatively impacted;

- 47% of these respondents found either a positive impact or no impact on their grant writing.

Within our sample, over half of marine scientists planning on writing a grant proposal or proposals this year felt that they were negatively impacted by the pandemic, giving a good idea of the significant disruption within the whole community.

Q14: If your grant/proposal writing has been impacted by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on proposal-writing, see Appendix C.

The main theme identified was the lack of time, for various reasons, to dedicate to grant writing (33 comments). There were also some comments relating to increased sense of uncertainty, and the impacts of reduced motivation and mental health.

Problems reported include:

- Delayed proposal-writing due to caring duties whilst working from home;

e.g. “The pressure to write and win grants does not go away (in many ways it has increased). Thus, grants still have to be written and submitted, despite home-schooling three children. This has put huge pressure on my personal life.”

- Delayed proposal-writing due to:
 - anxiety and general productivity decline whilst working from home;
 - illness;
 - lack of networking opportunities;
 - lack of pilot data (as planned fieldwork couldn't happen);
 - other priorities (online teaching, student wellbeing, preparation for a new academic year, university administration).

e.g. “Many more hours spent manging team, fire-fighting issues and maintaining relationship with overseas partners”

- A report of delays due to being furloughed
- Enhanced uncertainty (e.g. changes in cruise planning) impacting future decision-making.

e.g. “I had to redesign my NERC Independent Research Fellowship application, I was originally planning to propose research involving field work to the open ocean, but COVID creates uncertainty on ship schedules and so made this very difficult/impossible. I had to re think my ideas and propose some coastal oceanography-based research, effectively this halved the time I had originally planned to allocate to writing the fellowship application. Additionally, getting advice/mentoring from senior academics was very difficult, as they there were very busy trying to move teaching online etc.”

- Cancellation of internal funds due to budget shortfalls;

e.g. *“Internal funds available for more speculative projects have been re-directed into the COVID-19 response.”*

- Delays in obtaining research equipment;

e.g. *“All fieldwork prep took twice as long as only lab techs on site could order equipment and chemicals as orders can only be made from computer on site at University and as a new starter I couldn't get the training for using the finance/ordering system”*

- One report of major implications of pandemic on career path:

“Before COVID-19 I was deciding on whether to pursue a postdoc as my next career step. But due to COVID-19 I want more job security so have accepted a permanent role in the UK Civil Service.”

- There were seven responses that could be considered positive for proposal-writing, e.g.

“It has allowed more time to write grants - however this has the side effect of being asked to review more grants too”

The marine researchers surveyed who have caring duties and/or are at Higher Education Institutes and/or have pastoral care duties for postgraduate students reported more negative impacts in terms of grant/proposal-writing.

There have been impacts from the cancellation of small funding ‘pots’ due to institutional funding shortfalls.

These funding impacts have important implications on an individual level for career progression and for organisations in terms of future decision-making.

NC Capabilities:

Q15: Has the pandemic impacted your access to data centres or other NC facilities?

- 35% of respondents said that they had plans to use NC facilities (‘end-users’);
- Of these respondents, 31% said that their access to the facilities had been impacted negatively, none were impacted positively, and 69% didn't feel that their access had been impacted.

In our sample, whilst the majority of NC end-users felt their access to the facilities were not impacted, almost one-third of end-users found that their access to NC facilities had been negatively impacted.

Q16: If your access to data centres or other NC facilities has been impacted by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on NC/facility access, see Appendix D.

Problems reported include:

- Lack of access to data and computing facilities (specific reference to JASMIN errors, access to Archer/Archer2, online connection issues/data transfer, access to seismic data);
- Delays in cruise planning via NMF, and delays in access to NMF Equipment Pool;
- Delays in access to libraries and online journals;
- Delays in sample analysis;

e.g. *“Samples to be analysed at the Phenome Centre were delayed (not sure if that is an NC facility anymore- previously NERC NBAF Metabolomics Centre)”*

Author comment: *Although this comment above is referring to a non-marine NC facility, the data was retained in the survey results.*

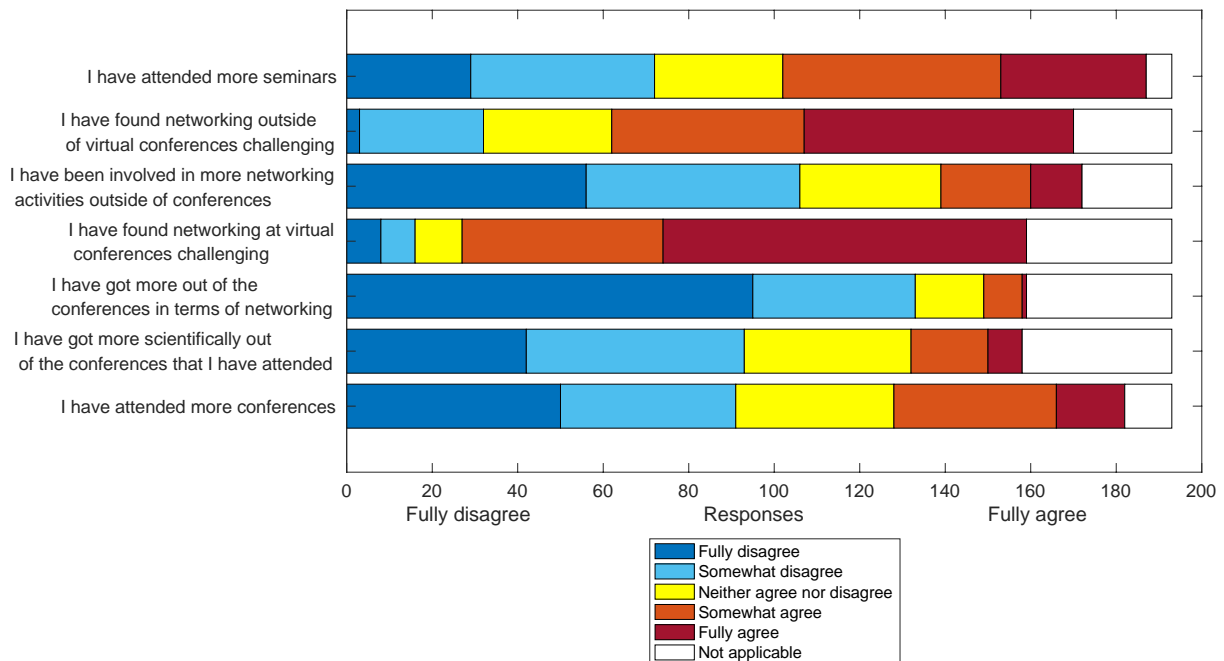
- Delays in accessing storage facilities e.g. marine sediment core repositories.

Problems arose due to lack of access to data centres, computing facilities, cruise planning, storage repositories, and analytical facilities.*

**There has been no impact on the operation of data centres, however, end user access is on-line and problems noted under this heading relate to issues with remote connection/speed.*

Conferences and networking:

Q17: Has the transition to virtual meetings during the pandemic impacted how you network and attend conferences/seminars? Select to what extent you agree or disagree with the following statements.



More than half of respondents have attended fewer conferences, and two-thirds of people have got less out of the conferences that they did attend. In particular, networking and informal meetings, which are so important to the development of careers and of research, is almost impossible. Those identifying as multidisciplinary and ECRs, and part-time researchers, may have been in a position to take greater advantage of online conferences, networking and seminars.

Q18: If your conferences/networking has been impacted (positively or negatively) by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on conferences and networking, see Appendix E.

The main positive theme identified was that it is easier to attend virtual conferences, seminars and working groups for a variety of reasons (cheaper, less time consuming, more accessible, smaller carbon footprint; 28 comments). The main negative themes identified were that it is harder to network, interact socially, and chat informally (with an impact on work and collaborations; 32 comments); it is harder to focus during online conferences e.g. spending time in front of a computer screen for too long (18 comments); and cancellation, postponement or challenges to attending planned conferences (12 comments).

Problems reported include:

- Cancelled or postponed meetings, and meetings held virtually;
- Negative impacts on conference attendance due to online format (time zone issues, connectivity issues, tiring);
- Negative impacts on conference attendance due to other priorities and lack of time (caring duties, furloughing, illness);
- Negative impacts on conference networking opportunities especially the informal 'corridor' meetings or informal/incidental meetings (although some reports of improvements gradually coming on line via Zoom and Gather.town, although these views are not unanimous);

e.g. *"impossible to network or have informal interactions during virtual conferences, which negatively impacts collaborations, ideas, future grants and papers."*

- Issues attending online conferences due to lack of ability to focus and lack of commitment, e.g.:

"I also feel however that I was less committed to any one event/seminar series, as I picked and chose whether I logged into a session or not. If I had been physically in Vienna however, I would have probably attended a broader variety of talks."

- A report of loss of travel funds resulting in significant financial problems;
- Many positive/mixed comments on online conferences due to their increased accessibility, opportunities to broaden subject areas ('dip in and out' of sessions), and reduced cost/travel (some positive thoughts regarding the use of breakout rooms or chat groups, and some feelings along the lines of 'it's better than nothing');
- Some reports that it is easier to attend online seminars/webinars given in other institutions;
- One report of a respondent attending a small conference that would not have occurred if it weren't for the pandemic;
- Some comments that were positive regarding international conferences but critical of networking at an institutional level:

e.g. *"Positive to attend more small seminars at similar institutions worldwide. But much worse networking within own institution."*

- A report on negative impacts on working group meetings;
- Negative impacts on ECRs/researchers in new positions, including impacts on first attendances at conferences and meeting people within an institution:

e.g. *"I moved institute in January 2020 and have never had the opportunity to really network with people in there. I feel my name isn't even really acknowledged by people of my institute, as they have never seen me around really. I don't think I'll gain as much as I wanted from my postdoc due to the pandemic."*

- There were several comments regarding the *Challenger* Conference, particularly relevant because this is a fairly relaxed atmosphere and promotes ECR contributions.

A lack of in-person conferences and informal networking opportunities (at conferences and within institutions) is detrimental to research overall, and to individuals especially ECRs.

There were mixed feelings expressed by those answering the survey regarding online conferences, although the negative comments outweighed the positives.

The positive comments about online conferences related to reduced cost and travel, and enhanced accessibility, and were expressed most strongly by those with caring duties and disabilities. There have been positive impacts from the increase in online seminars and webinars relating to enhanced accessibility.

The negative comments related to complications with time zones, connectivity issues, lack of networking, and lack of motivation.

Teaching:

Q19: Has the pandemic impacted the teaching of marine science in your organisation? (select all that apply)

Taking into consideration that 70 respondents said that the question was not relevant to their organisation and two respondents replied PntS, for the remaining respondents:

Undergraduate marine science field teaching cancelled or postponed = 40%

Undergraduate marine science face-to-face classroom teaching cancelled or postponed 53%

Postgraduate marine science field teaching cancelled or postponed = 35%

Postgraduate marine science face-to-face classroom teaching cancelled or postponed 51%

No changes = 3%

35-40% of the respondents concerned by impacts on education reported that marine science field teaching for undergraduate and postgraduate students was cancelled or postponed in their organisation.

Over half of respondents reported that marine science face-to-face classroom teaching for undergraduate and postgraduate students was cancelled or postponed in their organisation.

Q20: If teaching has been impacted (positively or negatively) at your institution by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on teaching impacts, see Appendix F.

The main themes identified were concern over a lack of fieldwork experience for graduating students (nine comments), a lack of organisation/support for transition to blended/online teaching at an institutional level (seven), cancelled/postponed fieldwork (four comments), changes in student projects (three comments), and impact on wellbeing (two comments).

Some key points:

- Reports of cancelled teaching in the field, including international trips, and 'classroom' (but also boat and lab teaching) with significant impacts on training opportunities;

e.g. *"No marine science fieldwork across all years for at least the next year. For some, they will graduate without any experience in marine-related fieldwork."*

- Reports of blended learning, some with concerns about effectiveness and several reports of the time-commitments required to adjust teaching material;
- Reports of online training for postgraduate students, some of which is reported as being effective;
- Reports of negative impacts on informal training opportunities for postgraduate students and postdoctoral researchers;
- Comments on the financial implications for students and universities of online only teaching;
- A report on loss of volunteer researchers due to pandemic;
- A report of loss of in-house training opportunities:

"We have not been able to bring persons who are not experienced sea going scientists and so in house training and training of students from outside our lab was cancelled"

- Note that there are reports of teaching-related stress in academic staff and general loss of morale:

e.g. *"We have experienced a complete upheaval of our teaching and have been mistreated by our employers. I have work 14+ hour days, 7 days a week since lockdown. I am physically, mentally and emotionally exhausted. Further, not of this extra work had been remunerated - indeed we have been docked deferred strike deductions which has placed additional financial strain on my household."*

"We are firefighting. there is no clear strategy - we were to start semester in person this has now been moved online for three weeks. I feel that some proper oversight and planning could provide a better experience for students and less stress for staff e.g. we could have decided to move all online in May and had a better plan."

“A key part of our oceanography degree, the field component on a ship, had to be run virtually which was a massive blow to all staff and students.”

- One report of lack of impact because *“My institution already does a lot of virtual teaching and was thus prepared to deal with this situation.”*

There has been a major upheaval to marine science teaching impacting learning opportunities and the welfare of academic staff; there have been impacts on training opportunities across sectors including volunteers and technicians.

Supervision and mentoring:

Q21: If you are an Early Career Researcher (undergraduate student, postgraduate student or less than 8 years post-PhD excluding career breaks), has the pandemic impacted mentoring/supervision programmes?

80 respondents identified as an Early Career Researcher. Of these, 45% said that mentoring and supervising had declined during the pandemic, 39% said that mentoring and supervising had either not been impacted or had increased during the pandemic, 16% said that they do not have a mentoring and supervising programme

Nearly half of the marine science ECRs reported a drop in mentoring and supervision during the pandemic; one-in-six marine science ECRs do not feel that they have a mentoring and supervising programme.

Q22: If your mentoring/supervision has been impacted (positively or negatively) by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on supervision/mentoring impacts, see Appendix G.

The main themes identified were a reduction in access to supervision and expertise because supervisors are harder to reach and communication is more challenging (nine comments); change in efficiency of supervisor meetings (10 comments); and a decline in mentoring and supervision (seven comments).

Some key points:

- Reports of meetings moving online rather than face-to-face, with some concern about effectiveness – especially from students;
- Reports that supervision has increased, in many cases for pastoral as well as academic support;
- Reports of no change in supervision provision;
- Reports of decline in supervisor time due to caring duties or other time commitments;

e.g. *“Spoken to my supervisor once since March. He is not interested in anything that adds to his workload. Second supervisor has said if I ever want to talk that she is 'there for me' but waved away her own need to be proactive with mutterings about a busy schedule impacting her ability to reach out... Not impressed. I am on the verge of abandoning my PhD.”*

- Reports of reduction in informal ‘corridor’ meetings;
- Reports of a decline in co-supervisor/CASE partner interactions;
- Reports of reduced mentoring opportunities or cancelled/postponed mentoring programmes;
- Reports of concerns surrounding the effectiveness of remote supervision, especially for struggling students:

e.g. *“As mentor/supervisor I found it more difficult to follow up students who were struggling. Students who were doing OK, for example with writing, were easy to follow up with online meetings and manuscripts & reviews, but those who found life under COVID difficult were not that easy to reach.”*

- Reports of concerns due to lack of peer-to-peer support;
- Below is a quote from a supervisor’s point of view, relating to impacts being relative to stage of PhD/personal circumstances of students:

“Supervision for students in the writing-up phase has benefited as I've gained time in each day (2.5 hr) from not having to commute. For students in the data collection phase I would say that I have had less interaction with them.”

“Supervising PhD students remotely has had its ups and downs - as the mood and expectations of the students has changed - some have been very isolated and anxious, others struggling to balance work/family commitments.”

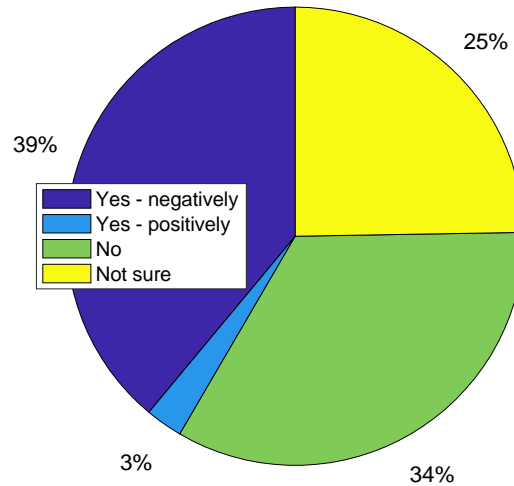
There have been widespread impacts of move from face-to-face to online supervisions, but severity of impacts clearly dependent on student situation and/or career stage. There have been delays or cancellations in mentoring programmes.

“I have a strong sense that amongst staff it's a case of 'everyone for themselves' with a number of my fellow PhD students and I feeling abandoned, even more isolated than normal, and wondering what the point is of our research - particularly given the present government's manipulation of science to justify being 'guided by the science' rather than taking an 'evidence led approach'.”

Career progression and promotions:

Q23: Do you feel that the pandemic has impacted your career progression (at any career stage)?

- Plot below shows the number of respondents that selected each category.

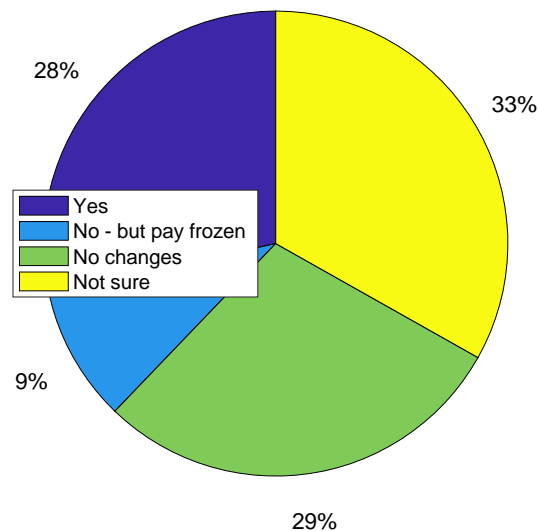


Three respondents selected PntS.

Over a third of respondents feel that their career progression will be negatively impacted by the pandemic.

Q24: Has annual progression or promotion been cancelled or postponed in your organisation or University?

- Plot below shows the number of respondents that selected each category.



Approximately one third of respondents do not know whether career progression and promotion has been cancelled or postponed in their organisations.

There is a clear need for ongoing monitoring of the long-term impacts on career development so that we can target extra support.

Q25: If you feel that your career progression has been impacted (positively or negatively) by the pandemic please provide us with some details if you are happy to do so.

For further qualitative feedback on career progression/promotion impacts, see Appendix H.

The main themes identified were being less productive/less able to gain valuable experience (e.g. fieldwork, sabbatical) and take advantage of opportunities to network and disseminate results that are perceived to count towards promotion (24 comments); negative impacts on promotion schemes (11 comments); and delays to competition of qualifications and training (three comments) and delays in starting new positions/grants (five comments).

Some key points:

- Reports of Feelings of Missing Out (FOMO), especially relating to networking, and reduced productivity and lack of time/furloughing (impacting papers, grant proposals etc. associated with career progression vs. activities that do not contribute to CV e.g. pastoral care);

e.g. *“There is no way for me to improve myself and become competitive in winning the types of grant that I need to get even a few years of stability and success that I could build on in my career moving forward.”*

- Reports of lost opportunities to obtain sea-going experience;
- There were reports of increased focus on administrative/pastoral care duties, which are often considered less key than research output for career progression.

e.g. *“I feel my productivity in the things that are usually evaluated as part of career progression and in the search for a permanent role (e.g. paper publications, taking on teaching) has suffered. The things I have perhaps focused more time on (e.g. pastoral support for more junior peers) aren't quantified and evaluated in the same way. A subtle and not-very-quantifiable general inefficiency, lack of productivity, and lack of proper rest.”*

- A report of university restructuring and redundancies;
- A report of postponed national award scheme;
- A report of a cancelled sabbatical;
- A report of career progression concerns in industry (oil industry, related to oil price);
- Reports of reduced opportunities and job adverts (in UK);
- Reports of cancelled/frozen promotion, with major impacts for career progression especially for ECRs;

“My organisation decided to completely cancel the promotion this year and no definite indication has been made as to when this will be reinstated in the future. I feel this is a major blow to my career progression as I don't see my career or my ambition to be on hold. The reasons my organisation gave us for their decision were finance related,

however many ECRs on fixed-term contracts already have guaranteed funding that has been secured prior to the pandemic. While I understand that funding outcomes are insecure in the future, our contracts only run until the funding runs out, with or without COVID. Thus I think my organisation has made a very short-sighted decision and makes me feel less supported as a ECR. Furthermore, creating a case to be promoted takes a considerable amount of time to gather evidence/write the application so naturally these have been prepared prior to the announcement that no promotion opportunities were available.”

- There were some specific comments on gender-bias in impacts on career progression.

“My university’s flexibility and generosity all takes the form of saying, “it’s fine with us if you become less productive and take years longer to be promoted.” It’s a systemic bias against people with caring responsibilities (and, I will say as a man, against women) that will look in a couple of years like an issue of individual performance.”

“I was on maternity leave when the pandemic started, so I’m now trying to regain career momentum with less reliable childcare (until August, no childcare), no ability to access my office, and labwork that is months behind. I also can’t take advantage of things like the plethora of online seminars or other networking opportunities because the above means I’m too busy just trying to do the basics.”

- A report of leniency in promotion scheme:

“Annual progression still took place, but obviously online. The university stated that it was going to be a much more lenient/positive progression experience this year compared to other years (which I feel should be implemented every year (not necessarily the leniency but the whole experience should be much more supportive)).”

- Some reports of paid extensions;

Three positive comments:

“The past several months has definitely given plenty of time to ponder career progression / future and better hone my future direction to maximise the advantages that come with these strange circumstances.”

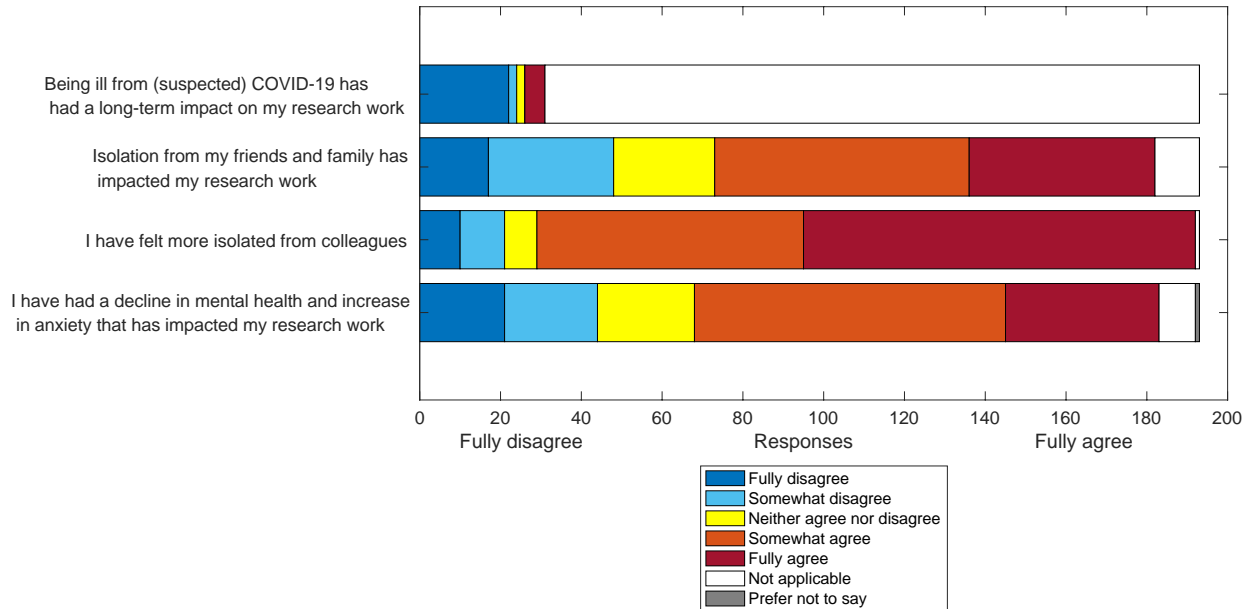
“Potentially positively because I have taken on additional work streams (although temporarily) which may help me to become a specialist/expert.”

And one report of a university with several positions being advertised.

Major impacts on opportunities needed for career progression across different sectors (i.e. perceptions of impacts on CV), clearly impacting ECRs, women and other under-represented groups significantly.

Other impacts:

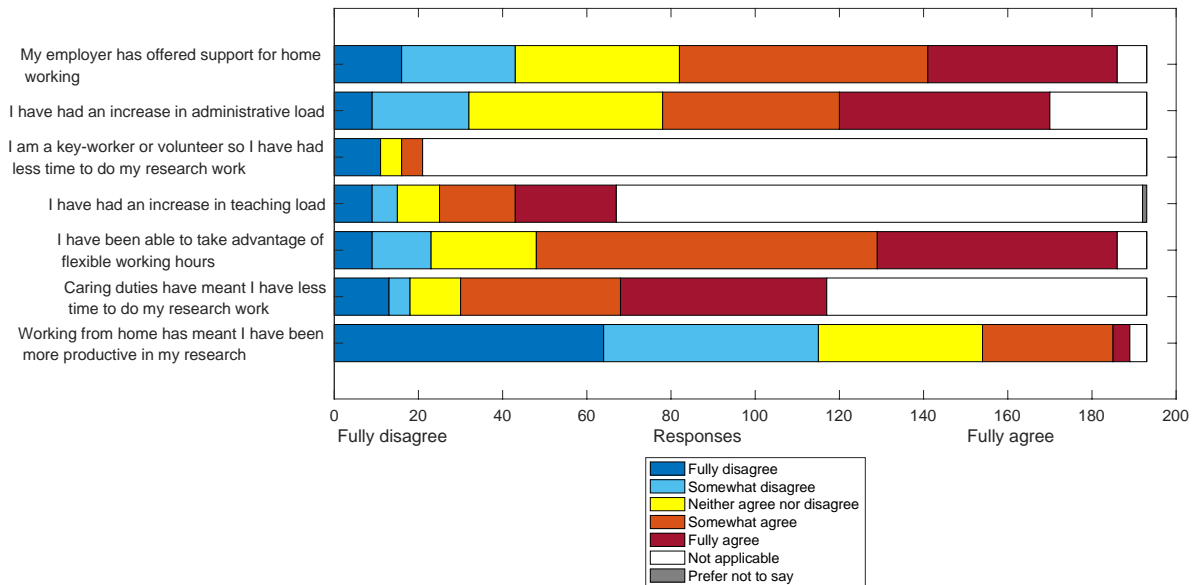
Q26: Has the pandemic impacted your work in any other way? Select to what extent you agree or disagree with the following statements.



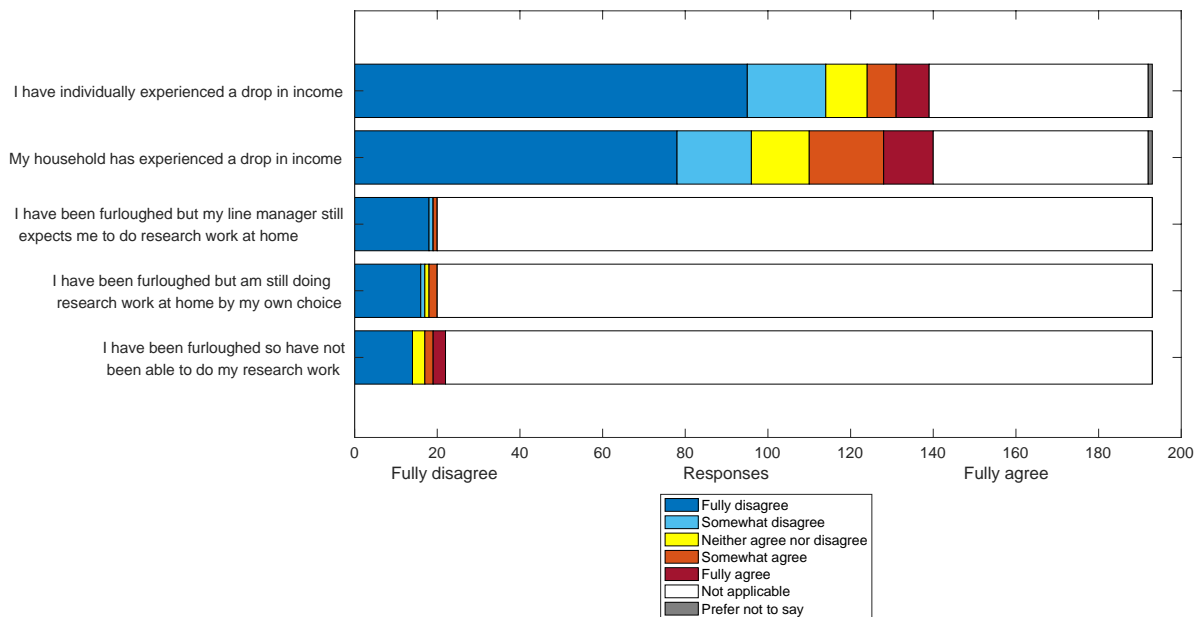
There is a clear negative impact on the mental health of the marine science community. From our sample, more than half of people find it hard to work from home. 25% have decline in mental health, over 50% feel more isolated, 40% have admin increase, giving a good idea of the significant impacts within the whole community.

“...mental health is rarely mentioned and always as an afterthought. The university counselling service is now operating online, and luckily had increased staffing levels last year, but now that the students are back they're struggling with capacity - and it's only the first week of term. There's been no systematic approach to checking up on all categories of staff to see how they're coping, and post-docs in particular have been left to fall through the cracks. There's been no attempt to establish formal/informal support networks beyond what existed pre-COVID, it's basically just a matter of whether your group is supportive or not. There's been no widespread discussion of the impact on mental health, no guidance from senior management.”

“Having been banned from the office has made clear just how much my life is determined by being a scientist, even more than I thought. Almost all of my friends are fellow scientists whom I either see at work or because of work. Living alone in a foreign country with my few hobbies where I had social contact outside of the office been cancelled I have found myself very lonely. I have really missed my colleagues who are 90% of my social interactions.”



Whilst the surveyed researchers have largely been able to take advantage of flexible working hours, they feel that they have been less productive whilst working at home.



Few researchers were furloughed. However, for those that were, there were consequences in terms of build-up of workload, which could be considered as contrasting with those from other sectors e.g. leisure, hospitality, etc.

“Grant / proposal writing impacted negatively because I was furloughed and not allowed to do any grant or proposal writing during this time... Since returning to work... grant/proposal writing has been impacted negatively because I have been catching up on all the work that mounted up while I was away, and because I was less able than usual to work extra hours, due to childcare / home schooling.”

Q27: If you would like to tell us more about your experiences, or give examples of where support was sufficient or could have been better during the pandemic, or if you have any general comments that will be helpful for us in understanding the broader impact of COVID-19, please do so in the box below (as a reminder: the survey is anonymous)

For additional qualitative feedback, see Appendix I.

The main positive themes identified were support at an institutional level for working at home, change of work patterns, and return to work (six comments), and more time for writing and other tasks (three comments).

The main negative comments related to concerns over mental health decline and a lack of support for mental health at an institutional level (17 comments), impacts on personal finance (three comments), impacts on grant and PhD submission (seven comments), impacts on workload (nine comments), lack of support/mixed messages from institution regarding working at home, changes in work circumstances, returning to work safely, or forward planning (nine comments), and doubts over motivation for working in science/current career path (four comments).

Key points will be discussed in the next section.

In-depth statistics

Results by subject area

As far as can be determined, there were no specific comments related to subject area/discipline.

To test for any differences, the subject areas where there were 30 or more respondents were investigated separately:

1. Biological oceanography (n = 34)
2. Physical oceanography (n = 36)
3. Multi-disciplinary (n = 68), defined as selecting two or more subject categories.

Key points:

There were more physical oceanographers and multidisciplinary marine scientists represented by those identifying as ECRs than biological oceanography (which might have consequences for how the different subject areas responded).

- Biological oceanography impacted more by fieldwork cancellations (and were planning more fieldwork) and labwork disruption (not surprisingly); biological oceanographers also planned on using facilities less.
- More physical oceanographers and multidisciplinary marine scientists fully agreed or somewhat agreed that they had attended more conferences than biological oceanographers, but more physical oceanographers either fully or somewhat disagreed about the statement “I have got more scientifically out of the conferences that I have attended”.
- Biological and physical oceanographers replied more negatively than multidisciplinary marine scientists about networking within and outside of virtual conferences (although overall more negative feelings than positive towards networking opportunities within and outside of virtual conferences).
- More multidisciplinary marine scientists fully or somewhat agreed that they had attended more seminars than biological and physical oceanographers.
- Fewer physical oceanographers either fully agreed or somewhat agreed with the statement “Caring duties have meant I have less time to do my research work”.
- Fewer biological oceanographers either fully agreed or somewhat agreed with the statement “I have been able to take advantage of flexible working hours”.
- More biological oceanographers either fully agreed or somewhat agreed with the statements “I have had an increase in teaching load” and “I have had an increase in administrative load”.
- More physical oceanographers either fully disagreed or somewhat disagreed with the statements “During the pandemic, my household has/I have individually experienced a drop in income”.

There was some subject-specific difference in impact, but this could be linked with representation by certain groups (e.g. ECRs). Those identifying as multidisciplinary may have been in a position to take greater advantage of online conferences, networking and seminars. Some differences in impact relating to field and labwork are evident.

Results by sector

1. University/HEI
2. Non-University research centre (UKRI)
3. Non-University research centre (other)
4. Civil service/industry

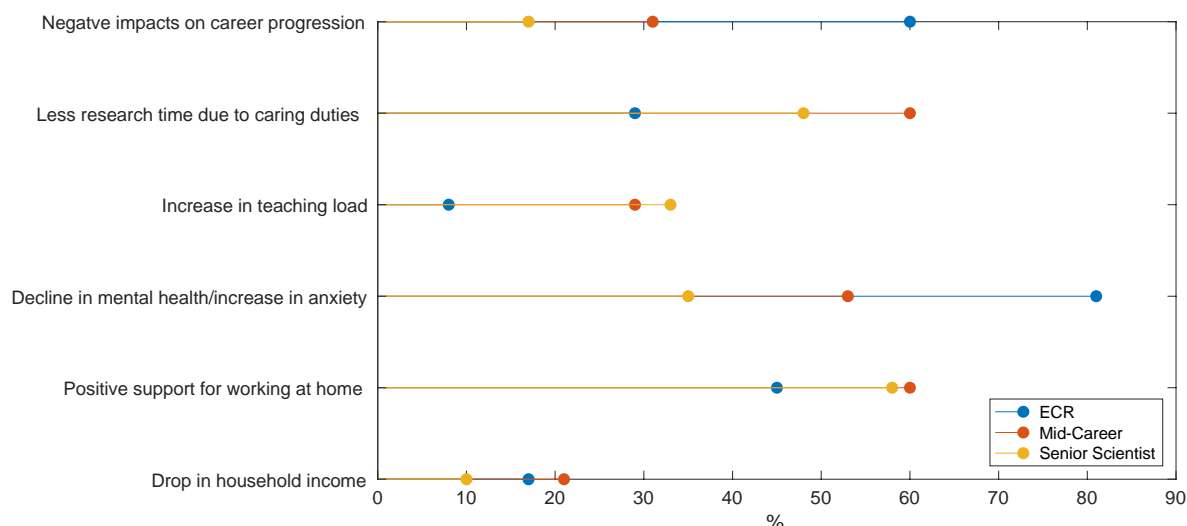
There were more University and Research Centre (UKRI) marine scientists represented by those identifying as ECRs than other sectors (which might have consequences for how the different sectors responded)

- More Research Centre (UKRI) not carrying out fieldwork than other sectors.
- More University scientists impacted severely in terms of labwork delays than other sectors.
- University scientists impacted more in terms of grant writing than other sectors.
- Fewer civil service/industry scientists require access NC facilities than other sectors.
- More University and Research Centre marine scientists fully or somewhat disagreed that they had attended more conferences (compared to civil service/industry), and either fully or somewhat disagreed about the statement “I have got more scientifically out of the conferences that I have attended” (similar case for networking at virtual conferences).
- More civil service/industry scientists fully or somewhat agree that they have attended more seminars than the other sectors.
- A higher proportion of University and Research Centre scientists are unsure about impacts to promotion than those in civil service/industry.
- Fewer University researchers fully or somewhat agree with the statement “I have been able to take advantage of flexible working hours” than other sectors.
- Very few (but non-zero) scientists outside of the University sector have had an increase in teaching load.
- A greater proportion of University and civil service/industry scientists fully or somewhat agree with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work” as compared to Research Centre scientists.
- More University scientists agreed with the statements relating to isolation from colleagues and friends/family compared to other sectors.
- With the exception of Research Centres (UKRI), more than half of respondents fully or somewhat agreed that they had an increase in administrative load.
- Fewer University scientists fully or somewhat agreed with the statement “My employer has offered support for working at home” compared to other sectors.
- Fewer civil service/industry scientists either fully disagreed or somewhat disagreed with the statements “During the pandemic, my household has/I have individually experienced a drop in income” than other sectors.

There was some sector-specific difference in impact, but this could be linked with representation by ECRs. Those in universities more impacted by teaching load (increase in administrative load felt more uniformly across sectors) and lack of flexibility.

Results by career stage

1. Senior positions (Emeritus, HoD, Professor/Senior Scientist, Senior Officer)
 2. Early Career (PhD, postdoc, specified “ECR”, research assistant)
 3. Mid-career (everything else!)
- Senior career scientists were impacted most in terms of postponed or cancelled fieldwork, but ECRs were more impacted by labwork delays.
 - Mid-career scientists were more impacted by delays in grant writing than other career stages.
 - ECRs appeared to be less sure as to whether they were impacted in terms of NC facilities.
 - More ECRs either fully or somewhat agreed that they attended more conferences and seminars than other career stages.
 - More ECRs either fully or somewhat agreed that they found networking at virtual conferences challenging than other career stages.
 - More ECRs felt that the pandemic had resulted in negative consequences for their career progression.
 - ECRs were generally less sure about promotion programme changes at their institutions relative to mid and senior career scientists.
 - More ECRs either fully or somewhat disagreed with the statement “Working from home has meant I have been more productive in my research” than other career stages.
 - More mid-career scientists either fully or somewhat agreed with the statement “Caring duties have meant I have less time to do my research work” than other career stages.
 - More senior and mid-career scientists either fully or somewhat agreed with the statement “I have had an increase in teaching load” than ECRs.
 - There is a clear correlation with career stage and the agreement with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work” (with more ECRs reporting a decline in mental health and feelings of isolation from colleagues and friends/family).
 - More mid-career and senior scientists either fully or somewhat agreed with the statement “I have had an increase in administrative load”.
 - More mid and senior career scientists either fully or somewhat agreed with the statement “My employer has offered support for working at home” than ECRs.
 - There is a potential link between career stage and loss of household and individual income (with more ECRs feeling negatively impacted in both cases relative to their more senior counterparts).



More ECRs report a decline in productivity and mental health, and an increase in isolation, than compared to mid and senior career scientists; more ECRs also feel that there have been negative consequences for their career progression, and feel less supported by their institution whilst working from home, than mid- and senior career scientists; More ECRs engage with online conferences and seminars; there could be more communication with ECRs about NC facilities, and institutions should engage more with ECRs about career progression mechanisms.

More mid-career scientists reported lack of time for research due to caring duties than other career stages; more mid- and senior career scientists feel that they have had an increase in teaching and administrative loads than compared to ECRs.

“The research councils and my university have been moderately forthcoming with funded extensions for students and grants in their final year. None of it does any good for students _not_ in their final year, or postdocs on grants not in their final year. There will be a wave coming of ECRs without good results to show for their effort, and it isn't their fault, just accidents of timing. Without much broader offers of funding extensions and personal fellowships, we will be throwing away a whole cohort of excellent researchers.”

Results by employment type

1) Full-time vs. part-time

Note: A greater proportion of ECRs are part-time as opposed to full-time, so there may be an age-related factor in some of these observations; of the full-time respondents, there is an approximately equal number of women (50%) and men (47%); of the part-time researchers, a higher proportion are women (68%) than men (32%).

- More part-time respondents either fully or somewhat agreed that they attended more conferences and seminars than full-time respondents.
- More full-time respondents either fully or somewhat agreed that they found networking at conferences more challenging compared to part-time respondents.
- More full-time respondents thought that they had negative impacts on career progression when compared to part-time respondents (and more part-time

respondents reported no change in career progression in their institutions relative to full-time respondents).

- More part-time respondents either fully or somewhat agreed with the statement “Caring duties have meant I have less time to do my research work” than full-time respondents.
- More full-time respondents fully or somewhat agreed with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work” as compared to part-time respondents.
- More full-time respondents fully or somewhat agreed with the statement “Isolation from my friends and family has impacted my research work” as compared to part-time respondents.
- More part-time respondents either fully or somewhat agreed with the statement “My employer has offered support for working at home” as compared to full-time respondents.
- More part-time scientists either fully or somewhat disagreed with the statement “During the pandemic, I have individually experienced a drop in income” as compared to full-time respondents.

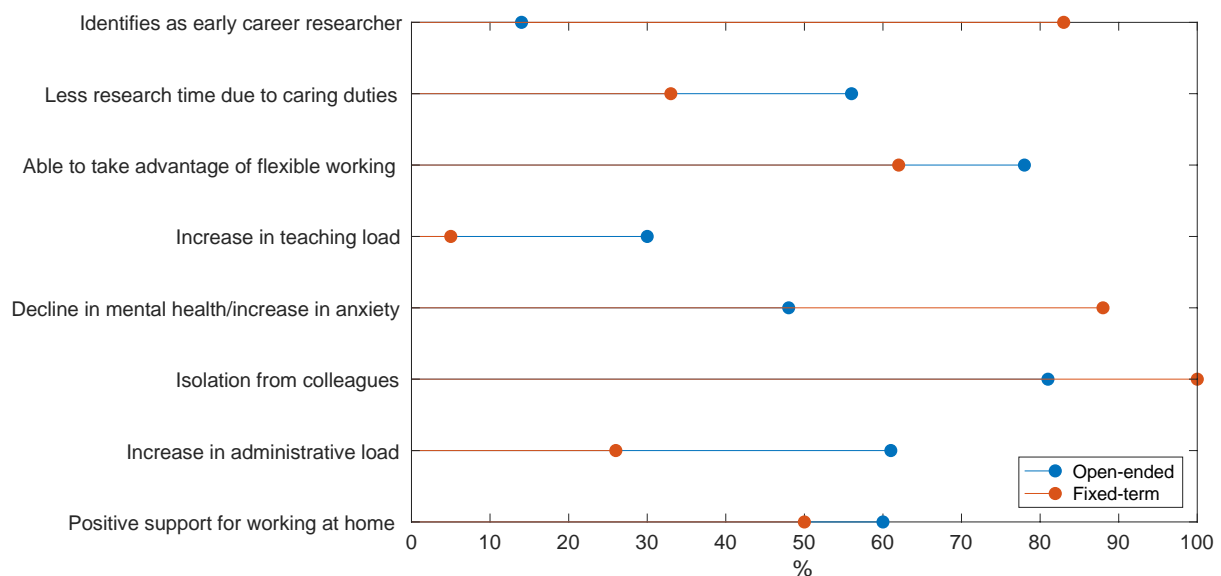
Part-time respondents are more likely to be impacted by caring duties than full-time respondents, but – more positively - also engage more with virtual conferences; more full-time respondents feel that they have had negative impacts on their career progression relative to part-time respondents, and are more likely to report isolation from friends and family and a decline in mental health. Part-time respondents are disproportionately represented by women.

2) Open ended vs. Fixed-term

Most fixed-term employees are ECRs, hence the similarities between the results here and in the section of results by career stage.

- More scientists with an open-ended contract experienced cancelled fieldwork compared to fixed-term employees.
- More scientists with an open-ended contract experienced either severe or moderate impacts on labwork compared to fixed-term employees.
- More scientists with an open-ended contract reported that their plans for grant writing were not impacted, and fewer were not planning to write grant proposals, compared to fixed-term employees.
- Fixed-term employees were less sure about NC facilities than those on open-ended contracts.
- More scientists on fixed-term contracts fully or somewhat disagreed that they have got more scientifically out of conferences – or networked at conferences - than those with open-ended contracts.
- More scientists on fixed-term contracts fully or somewhat agreed with the statement “I have found networking at virtual conferences challenging”.
- More fixed-term employees reported that they had experienced negative impacts on their career progression.
- More scientists with an open-ended contract reported that there had been no change to promotion processes in institution.

- More scientists with an open-ended contract fully or somewhat agreed with the statement “Caring duties have meant I have less time to do my research work”.
- More scientists with an open-ended contract fully or somewhat agreed with the statement “I have been able to take advantage of flexible working hours”.
- More scientists with an open-ended contract fully or somewhat agreed with the statement “I have had an increase in teaching load”.
- More scientists on fixed-term contracts fully or somewhat agreed with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work”.
- 100% of fixed-term employees fully or somewhat agreed that they felt more isolated from colleagues.
- More scientists on fixed-term contracts fully or somewhat agreed with the statement “Isolation from my friends and family has impacted my research work”.
- More scientists on open-ended contracts fully or somewhat agreed with the statement “I have had an increase in administrative load”.
- More scientists with an open-ended contract fully or somewhat agreed with the statement “My employer has offered support for working at home”.



Scientists on fixed-term contracts feel more vulnerable to increases in loss of flexibility, more mental health decline, more concern over career progression, and generally feel less supported compared to those on open-ended contracts; every fixed-term employee felt more isolated from colleagues, and were more likely to feel isolated from friends and family. However, scientists with open-ended contracts were more likely to feel that they had negative impacts on their research due to caring duties and an increase in teaching load.

Results by income

- 1) <£18k
- 2) £18k-£38k
- 3) >£38k

There is a clear relationship between salary and career stage, which likely links the observations.

Results by age

- 1) <34 years
- 2) 35-44 years
- 3) 45-55 years
- 4) >55 years

There is a clear relationship between age and career stage, which likely links the observations.

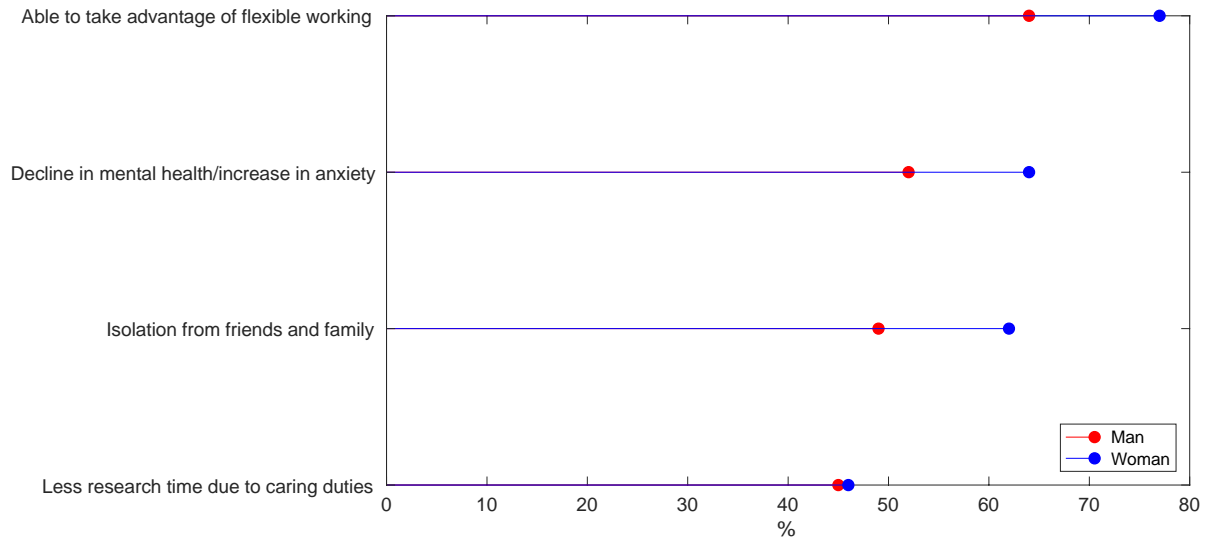
There is no major variation with age to the agreement or disagreement of the statement “Being ill from COVID-19 (or suspected COVID-19) has had a long-term impact on my research work”.

Results by gender

- 1) Man
- 2) Woman

More women identify as ECRs than men, which may in part relate to some of the observations below. Note that there were no non-binary respondents.

- More women either fully or somewhat agree with the statement “I have been able to take advantage of flexible working hours” than men.
- More women either fully or somewhat agree with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work” than men.
- More women either fully or somewhat agree with the statement “Isolation from my friends and family has impacted my research work” than men.
- More women either fully or somewhat disagree with the statement “During the pandemic, I have individually experienced a drop in income” than men.



There was no major difference between perceived impacts of caring duties on research between men and women; women are more likely to report an increase in isolation from friends and family and a decline in mental health than men, but are also more likely to report being able to take advantage of flexible working.

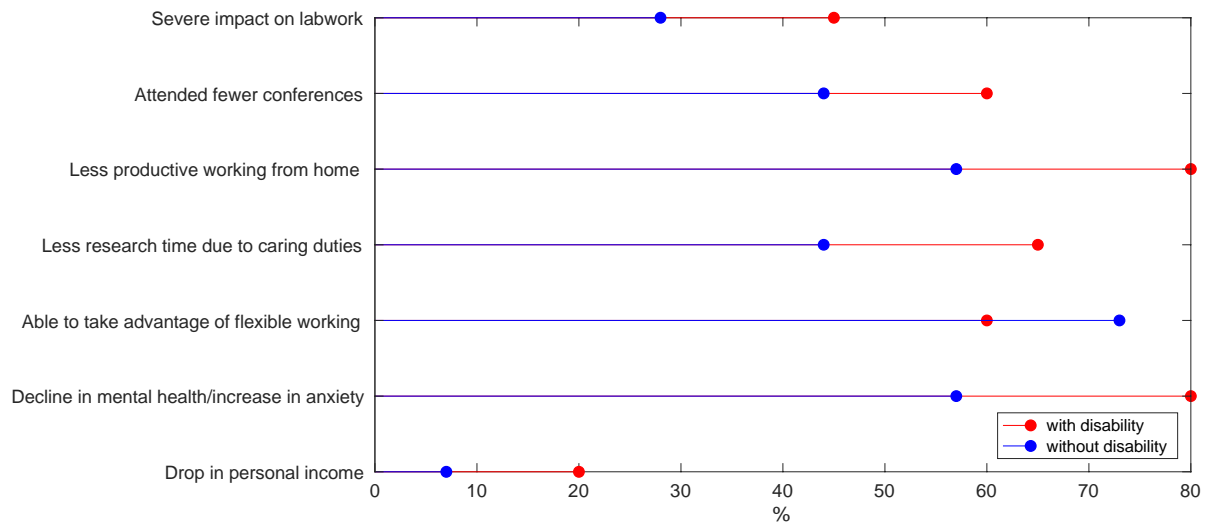
Results by identity defined by Disability Act

- 1) With disability
- 2) Without disability

Respondents who identify as having (a) disability(ies) were fairly evenly distributed between ECRs and non-ECRs.

- Those with disabilities reported being more severely impacted in terms of labwork than those without disabilities.
- More scientists with disabilities either fully or somewhat disagree that they attended more conferences and seminars, and carried out more networking outside of conferences compared to those without.
- More scientists with disabilities either fully or somewhat disagree that they carry out more networking outside of conferences compared to those without.
- More scientists with disabilities feel that their career progression has been negatively impacted compared to those without.
- More scientists with disabilities either fully or somewhat disagree with the statement “Working from home has meant I have been more productive in my research” than those without.
- More scientists with disabilities either fully or somewhat agree with the statement “Caring duties have meant I have less time to do my research work” than those without.
- More scientists with disabilities either fully or somewhat agree with the statement “I have had an increase in teaching load” than those without.
- More scientists with disabilities either fully or somewhat agree with the statement “I have had a decline in mental health/increase in anxiety that has impacted my research work” than those without.

- More scientists with disabilities either fully or somewhat agree with the statement “During the pandemic, I have individually experienced a drop in income” than those without.



Marine scientists who identify as having a disability reported being more severely impacted during the pandemic in terms of delays to labwork, increase in teaching load, with career progression, low productivity during working from home (e.g. due to caring duties), a personal drop in income, and a decline in mental health.

Results by ethnic background and nationality

There were low numbers of respondents who identified as being from under-represented ethnic groups or as being international. As such, we have elected not to carry out any statistical analysis of responses by these groups. Pertinent quotes have been included in the report in relevant sections.

Results by sexual orientation

There were low numbers of respondents who identified as being LGBTQIA+. As such, we have elected not to carry out any statistical analysis of responses by these groups. Pertinent quotes have been included in the report in relevant sections.

Appendices

Appendix A: Quotes on fieldwork impacts

For all appendices, only a selection of quotes is shown but the complete set of comments received is available on request.

- BEIS funded UK-Canada Arctic fieldwork cancelled (trip to CHARS)
- Our cruise (DY111) took place just before pandemic but lockdown led to delays getting samples off ship which was locked down in UK on return.
- Canadian cruise to Arctic cancelled / three field trips using SAMS boat cancelled / local field sampling cancelled
- [...] One survey was cancelled, others have been combined with other longer surveys but this has meant compromising on deliverables and an increased demand on pressure to cover a larger amount of staff time.
- PAP-cruise 2020; This should have been my first cruise experience, key for my CV and scientific development.
- Overseas fieldwork in Chile and Peru has been cancelled. To date we have lost seven+ months of a three year grant because of UK researchers cannot travel and overseas partners still don't have permission to start field work.
- IODP Expeditions 390 and 393 postponed until 2022; C208, SME 17/122 - postponed after waiting years to get on the schedule.
- RV *Corystes* cruise programme was cancelled from March to July 2020. Moorings at Long Terms Monitoring Stations in the central Irish Sea where effectively mothballed for this period, leading to the loss of five months of data collection.
- Went ahead with additional Covid protocols
- All coastal fieldwork, which would have employed 12 Post Grad research assistants, was cancelled.
- Fieldwork to monitor seabird populations, and track seabirds using GPS/multi-sensor loggers [...] cancelled [...]. 7 seasonal field staff had been offered and accepted jobs and these job offers were withdrawn less than 2 weeks before they were due to start (senior management decision, not mine); [...] (we would have provided them with accommodation); hence they were made homeless as well as jobless by this decision.
- Coastal fieldwork is due to start in January but may be delayed due to the difficulty with logistics, sites visits, the lack of face-to face meetings with partners for negotiations about what can/not be done.
- Glider deployment as part as of CAMPUS project was cancelled.
- Fish farm sampling at Mull and Loch Ewe cancelled. Staff shortage unable to carry out sampling, and risk factors deemed too high.
- National and international related North Sea and West coast surveys cancelled, commercial fishing fleet onboard observation programme cancelled, on shore biological sampling postponed 6 months
- Marine ecological monitoring work for Natural Resources Wales (NRW) was largely cancelled in Wales during 2020 and staff and contractors were reassigned to desk-based reporting work.
- Local coastal vessel work was cancelled for four months and now goes ahead with restricted numbers on vessel and other safety measures taken.
- Whole monitoring programme for Skomer MCZ cancelled, except for sediment infauna and seal pup production monitoring, for the first time since 1992.

- Marine Scotland Science research programme was suspended from late March to mid-June. Research cruise (on MRV *Scotia*) for H2020 Smartfish project postponed from May to November and almost halved in days available (10-6). Other surveys that are funded by the EU for the Fisheries Data Collection Framework (DCF) have gone ahead as scheduled but with fewer staff and reduced scientific objectives/output.
- UK-based: N-Arc cruise NE/T001240/1 to the eastern Arctic has been postponed for yet another year. Our collaboration on international vessels has also been affected with international cruises postponed.

Appendix B: Quotes on labwork impacts

- Some labwork has been delayed but it was not critical to the project.
- Greatly reduced access to laboratories. All undergraduate and masters project students have had to abandon lab work.
- Lab access restrictions from March - May and lack of access to institute's NERC Covid Grant Allocation has impacted delivery of lab results for one NERC-funded Highlight Topic project. This is because the project already had a no cost extension prior to Covid that fell outside NERC's cut off dates, and yet staff funding for the lab work package finished in May 2020 according to the original project schedule.
- 1) Delayed start of lab work from end of March to July and then much more time consuming & significant inconvenience going to and from home to lab twice a day to meet timings of lab work and fit with home responsibilities.
[...] 3) reduced efficiency: compromised access to lab made it impossible to monitor and tweak underway procedures, leading to more sample losses during each procedure.
- Reduced effectiveness from staff, particularly those with childcare responsibilities.; Lab access for international partners has impacted on progress with analyses and paper development. Personally, contracting C19 (unconfirmed) appears to have significantly impacted on my own health throughout 2020, contributing to prolonged periods of absence and reduced output.
- All lab and fieldwork was delayed by six months. Due to the cancellation of a cruise, a significant amount of planned work is no longer possible. Additionally, one of the research vessels owned by my institution was decommissioned early as a consequence of the pandemic, significantly limiting what fieldwork is now possible locally.
- Significantly slowed practical developments due to lack of equipment & lab access and difficulty accessing deliveries. Organisation has shown no flexibility to have small items delivered to home addresses for work and some flexibility in this would facilitate progress significantly.
- Our work is considered key so from the start our team have been working in the lab, initially on a rota basis, then in most days but socially distanced and with other safety measures.
- During lockdown labs were shut. Labs reopened in August - I was not allowed to train PGR students in lab until end of September. No undergrad or masters level lab projects allowed at the moment. Have lost at least seven months of lab time/work
- Access to labs to conduct analyses relevant to the delivery of project objectives was not granted.
- Our group analyses salinity samples, and these are not delayed.

Appendix C: Quotes on proposal-writing impacts

- Working from home (without a home office), and managing caring responsibilities reduced productivity.
- Childcare responsibilities impacted working effectiveness. Home working enabling the generation of proposal (not possible to have a quick chat with colleague).
- University requirements for Covid-security planning and re-writing of all teaching commitments to remote access meant much less time to devote to anything strategic or grant writing.
- Additional work dealing with constantly changing cruise plans negatively impacts time available for proposal writing.
- Our collaborations have been reduced, and deadlines put back. Also the work will start later (and be funded later) so we have to bridge the gap in the coming financial year.
- The whole working situation has reduced my productivity and motivation. It makes networking harder and discussing ideas even harder still. Everything takes longer, e.g. gone from spending ~ three hours to students per week to ~ six hours.
- The rapid move to online teaching and the uncertainty about plans for this academic year have left me with no time to work on proposals.
- Grant writing between March and July was negatively affected by supporting UG students. Since July grant writing has been negatively impacted as a function of relocating to a new HEI and prepping for this academic year.
- Much harder to build new teams and explore new ideas without at least some face to face meetings.
- Caring responsibilities used up the time I had intended to use for planning and writing a grant proposal
- Grant / proposal writing impacted negatively because I was furloughed and not allowed to do any grant or proposal writing during this time (I was due to a combination of personal childcare responsibilities, and organisational finances). Since returning to work in July, grant/proposal writing has been impacted negatively because I have been catching up on all the work that mounted up while I was away, and because I was less able than usual to work extra hours, due to childcare / home schooling.
- It has allowed more time to write grants - however this has the side effect of being asked to review more grants too.
- Prolonged illness that appears to be associate with unconfirmed C19 in Feb has led to me stopping a planned SMMR SPF proposal, on which I was the lead P.I.
- Time gone to other duties, plus teaching.
- The pressures of university administration and teaching increased significantly, reducing the time for research and proposal writing.
- I had planned to interact with several institutions, including international ones, and working groups on large grant idea, with a brainstorming initial meeting. Postponed for a year now.
- I did have time to write a successful proposal for the UKRI Canada globalink exchange scheme, and had more time to focus on writing that than I would've done otherwise.
- I had no childcare for a 1.5 year old so this was difficult to get anything done
- Trying to work on a proposal to meet a deadline at home with two young children and being the primary caregiver was virtually impossible.

- Due to field work being cancelled on current project we did not generate the level of data required to help showcase our progress as well as we could have. I believe this limited our chances winning follow on funding.
- Small University grants were pulled due to Covid and thus couldn't not be applied for.
- I intended to finish a grant over the summer period, a grant that I have been working on for over two years, at times when I can, because of childcare responsibilities and increased blended-learning related workload I have not been able to work on it.
- Home work environment has been more conducive to proposal writing than shared office environment where accessibility to students and other staff members is a repeated distraction.
- I submitted more proposals than last year.
- I've basically lost a year due to caring duties and other disruptions, which mainly translates into a lack of extensions for early-career scientists.
- Opportunities to discuss with colleagues reduced / access to 'the grapevine' reduced
- I was hoping to put in a lead PI grant for the round in Jan 2020. I do not have time with teaching moving online and have felt quite depressed throughout lockdown/pandemic and so do not have mental capacity. During lockdown I had to home school as well which was difficult.
- Especially due to the move of teaching to remote delivery as well as the closure of childcare facilities, I did not have any creative headspace or time to work on a grant I was planning to write.
- No clear evidence of any reduction in grant submissions at the institutional level.
- I have a pre-school age child and my partner has a full-time job that they had to do from our small home. I had to assume full childminding responsibilities and do my work for my current position at night, largely eliminating any time to write grants.
- Less motivation and delays, both for myself and co-authors.
- Communication via colleagues electronically, when so many were working irregular or reduced hours due to childcare responsibilities (including myself) has meant development of proposals has been put on the back burner.
- We have managed to keep this going remotely.
- Significant time has had to be diverted to managing my team and their working arrangements through the COVID lockdown, which would otherwise have been spent on grant/ proposal writing.
- Finding the time to write a grant amongst other priorities is difficult. Although formally my role has not changed, I find there is more pressure on my time and more pastoral support required, and my general energy and focus is lacking.
- Grants/funding unavailable as funding streams redirected due to Covid impacts.
- Not a substantial impact thus far, but I'm due to revise a proposal over the next few months, and my working hours are still being impacted by lack of childcare (out of nursery for every cough/fever until child tests negative for Covid, lack of informal childcare options). That lack of hours is not going to improve the proposal.
- WFH with fewer distractions has allowed me more headspace to think about proposal ideas etc.
- The impact on proposal writing was comparatively minor compared to some people as I do not have caring responsibilities, however it was my first time writing

a major grant proposal and using things like JeS, so it would have been helpful to have had some more in-person help. Also my mental health was affected at the start of the lockdown which really affected productivity.

Appendix D: Quotes on NC/facility access impacts

- My access to data and computer facilities - an important part of the research I carry out, has not been affected. My main problem has been a lack of access to the NOC library.
- National Marine Facilities (NMF) supported cruises affected.
- JASMIN errors and issues are taking longer to be sorted due to limited machine room access. The entire procurement process for Archer2 has slowed to a crawl.
- Technical staff on furlough unable to answer questions regarding data quality.
- Samples to be analysed at the Phenome Centre were delayed (not sure if that is an NC facility anymore- previously NERC NBAF Metabolomics Centre).
- Unable to access marine sediment core repositories to take samples and severe delays getting samples taken for me.
- Uncertainty over Archer / Archer 2 switch-over time-frame.
- Less access to online journals and articles. No access to university library.
- Connection issues due to remote working (intermittent broadband and slow connection speeds).
- Poor internet connection working from home has meant 6month pause in modelling work.
- University was totally closed for four months.
- Closure of university meant no access to library nor to my workspace.
- Cruises have been cancelled, and thus we cannot collect samples that would underpin our research.
- Continued closure of the NOC to non-laboratory staff is detrimental to my productivity and psychological well-being because, as with many short-term contract staff, the workplace is our main source of human contact. The fact (now backed by insurmountable and alarmingly censored scientific evidence) that this closure, and indeed all of this year's restrictions, provide only harm and zero benefit to public health makes it increasingly difficult to tolerate.
- Some access to NERC Equipment Pool has been impacted.
- At this time, no change to my access to facilities / data, but I can foresee an on-going negative impact because of the impact to sea-going field work and general maintenance issues.
- I have had to work from home and my home internet connection is quite unstable and causing delays. Connection in the office is much better so I can work faster with no disruptions.
- Lack of access to seismic data, which is stored on the servers, and which can be accessed remotely. However, the remote access is too slow to be able to work effectively. No access to physical data such as core stores has changed working plans, and would become a problem if this goes on into next FY
Unable to transfer data from 2019 fieldwork to the relevant data centre because it's not feasible.

Appendix E: Quotes on conferences and networking impacts – a selection only is shown but the complete set of comments received is available on request.

- Free virtual conferences has made it easier to attend more conferences, but I found the lack of face-to-face interaction made networking much harder.
- The virtual format of current seminar series and conferences has made it easier to attend a higher number of different events than pre-pandemic, mostly because there is either no actual cost associated with it (other than time) and no need to travel. This meant I was exposed to a wider variety of talks [...] Some groups/events have explored virtual break-out rooms to combat this, but they are obviously not as fluid as social interactions tends to be.
- Able to attend more conferences without the travel burden, however, I get less out of the virtual meetings and have struggled to network virtually.
- I have not had time (personally) to attend any seminars. However, I think that having everything online is very 'levelling' and allows people to attend a lot more than they would otherwise, with reduced travel costs/time etc.
- Difficult to interact although some conferences have been inventive. I have attended more conferences (doing one on USA time then switching to Europe time in the afternoon). A great opportunity but is tiring and goes beyond my hours
- My major tri-annual conference was cancelled with loss of my travel and hotel funding. This has put me under financial strain and prevented me from registering for any other conferences, digital or otherwise. Also, strict budget controls by my institution removed any autonomy that I had in deciding whether to participate on conferences.
- I have attended no conferences due to furlough and subsequent workload on returning to work. Most of my networking is usually (in non-pandemic times) done informally in the coffee/lunch breaks at meetings [...]. I have found it extremely challenging to replicate this type of informal networking via VC/email.
- Lack of childcare has meant I have passed on opportunities for live conferences and seminars. However, I have watched recordings of seminars that I would have not seen otherwise.
- I have attended less, although this is jointly attributable to illness, cancellation and reduced networking potential. I have attended one major online conference (EGU), which was well organised and valuable. The value of this meeting relative to normal arrangements was however massively reduced. I have managed to attend a number of webinars and I found these more rewarding than big conferences. Good chairing of webinars and conferences is essential, but that is true in both virtual and in-person formats.
- I have been able to attend one session of one virtual conference. On one hand I would not have attended this conference since it was in Sydney this year, so it is good that I could attend it at least virtually. On the other hand because of the massively increased workload I only had time for one session, had I attended the conference physically I would have seen most of it.
- The range of places I could virtually attend was far bigger than normal, as no travel time, or budget, was required. I felt much more in contact with my discipline and freer to explore beyond my normal interests.
- I find virtual calls and video calls draining and have not been a part of the virtual seminars that I would usually be a part of in person.

- Great to be able to dip into things (but often, too, to be able to dip out if not what was expected/hoped for), but there have been a lot of events for the sake of it which didn't add much value other than maintain visibility for the organising body. Networking is very tricky. I often ask questions or contribute to chat just to let others know I am there but haven't used conference networking to follow up with anyone.
- I think online conferences have been really good. Provides more opportunity to attend conferences since money and time isn't required for travel and it's much easier to fit in conference sessions into your normal working day
- I simply do not have time to attend these now - my workload has increased massively.
- Opportunity to informally discuss science ideas, as and when you feel like it, perhaps over a coffee/beer, not possible. I often find these spontaneous conversations the most inspiring.
- I was planning to attend at least two conferences/project meetings abroad, which was made impossible by the pandemic. I attended some meetings/parts of meetings online, but sitting at home, there is no real "pressure" or "conference mindset" to fully engage in the conference experience. So I don't think I got much out of it in terms of networking or inspiration. But arguably I also "wasted" less time on potentially irrelevant aspects of the conference. The few online meetings I attended had the clear advantage of being cheaper, better for the CO₂ footprint, and I was able to make a cup of coffee without disturbing anyone. So there were some positive and some negative aspects. It also seems that the online conference setups are getting better now that they are becoming more normal.
- After giving a presentation, there is not enough engagement with individual, one-on-one discussion as would happen in a physical conference, everyone seems to just leave the Teams/Zoom/etc session.
- A number of conferences/events have been cancelled or moved online (mainly moved online). I struggle to allocate time for virtual events, and even when I do attend I am trying to do many other things at the same time... So my participation has not been particularly active or useful.
- Easy to get distracted and the high amount of virtual meetings (conferences and not) gets very tiring
- So much has been postponed while everyone adjusted to the new realities of restricted travel. Due to childcare responsibilities, I did not have the opportunities to travel as much as I would have liked anyway. So I very much welcome the switch to remote meetings, I just need to get my head around how to make them work for me in terms of making new connections.
- I attended the online EGU conference. The text-only format just did not work in my opinion: it was not engaging or practical. Networking did not happen.
- I would not have attended EGU 2020 if it had not been made available online. I did attend and found some of the conversations useful, but I am an established researcher so I now have some of the network already. I imagine it would be very difficult for a new researcher, and particularly without an option to be introduced to people by supervisors etc. It is disappointing that Challenger Soc Conference was postponed as it forms an informal, easy networking event for early career researchers.
- Unable to attend due to cancellations. Justifying the time when already behind with other work due to Covid and lack of childcare was difficult. Trying to attend

them virtually with children at home does not allow 'immersion' and is littered with distraction, therefore the conferences could not be enjoyed in their full capacity. The ones I attended though were really well run - just personal circumstance meant I couldn't benefit fully.

- I've attended more conferences in place of other staff who have been seconded to other priority areas of government or have childcaring responsibilities. There is limited to no networking at online events or natural opportunities to follow up with attendees about their research. Conferences have been made more challenging by the large differences in time zones due to multi-national location of attendees this has meant conferences have been half days in the afternoon and spread over multiple weeks rather than a single week of 9-5. Positively, I have been able to put forward staff that I manage to attend conferences that we would not have had the budget for them to attend in person.
- I've been dropping out of online conferences and meetings because of internet problems. I find it much easier to concentrate on talks when attending in person [...].
- Conference attendance was much lower, and with some conference moved to next year, it has made dissemination of research more challenging, if not put on hold entirely this FY. However, I have networked with groups that meet in person, but ones that I am too far away to be able to attend those meetings on a regular basis. Their move to online conferences/meetings has enable me to attend them.

Appendix F: Quotes on teaching impacts

- We don't do formal postgraduate marine science classroom teaching or field teaching, so in that sense it has not been impacted. However, in previous years there's been a lot of informal training and mentoring, e.g., postdocs training PhD students in use of equipment, coding, etc, and this is much more difficult without face-to-face contact - and the ability to just walk into someone's office and say 'could you spare me 5 minutes to explain X?' And since our cruises are postponed indefinitely, we don't know when/if the students will get their field training.
- Blended learning has been implemented but (in early October) it is too early to say whether the student experience will be as good as with face-to-face teaching.
- I am unsure of undergrad, but at the postgrad level, training has been adapted into online sessions. These have still been informative and interesting.
- Moving traditional teaching on-line takes a huge amount of time and effort if it is to be done well. Flexibility as to teaching model and agreement to test novel ways of helping students learn is essential
- Teaching is 100% virtual. Student exchanges have been cancelled.
- I am unable to meet my MSc and PhD students face to face to discuss their projects (and their own personal situations and problems). I have also had to restructure their research projects and find additional datasets.
- No face to face teaching allowed. Some lab work has been cancelled, affecting income I would usually get for demonstrating in such classes.
- I teach [a] [...] field course every year [...] It's been totally cancelled and we have switched to virtual teaching. I feel the students are severely losing valuable hands-on experience and fieldwork skills. Postgraduate teaching is now all online too but it's tiring looking at a screen and the social aspect has gone. I also teach the statistics course and not being at the students' side when they run into problems (which is a lot), is a huge issue - it's near impossible to do remotely when you can't access their computer.
- It's been very hard to justify any face to face fieldwork that involves bus journeys to field sites. Also the pool of demonstrators and lecturers is shrinking due to forced house moves (i.e: no accommodation or shielding away from students) during the pandemic.

Appendix G: Quotes on supervision/mentoring impacts

- Supervision has increased to provide both academic and wellbeing support.
- My employer had planned to offer targeted mentoring and training sessions this year. Except for one generic meeting between senior staff and all ECRs at my organisation at the beginning of lockdown, nothing has materialised nor have there been any updates since then. Meetings with my direct line manager/supervisor have been just as regularly as before however.
- Meetings with my individual staff have moved to on-line rather than face-to-face. I feel that they require more support when isolated, and miss the scientific interactions, and pastoral support of the wider organisation
- Lab closures during lockdown meant PhD students made good progress on writing up earlier than they would have otherwise achieved.
- Supervisor has less time for meetings etc due to childcare commitments
- Learning new skills has been difficult without regular interaction with peers
- Actually able to get into contact with supervisors more now as more people are working from home and not travelling.
- As I tend to work for long periods without seeking advice I am relatively unconcerned by this, however, having to arrange meetings over Zoom instead of simply walking down a corridor and knocking on doors has massively reduced my access to the knowledge and experience of more senior researchers. Because of this inability to communicate directly with other researchers whenever needed, living in this unfamiliar city is now absolutely pointless.
- My PhD students have found quite stressful especially as some have had to cancel field experiments and cruises.
- The number of supervision meetings have increased however the effectiveness of this supervision has decreased without face to face contact
- I am in the write up stage of my PhD, and ideally would be able to knock on my supervisors door and quickly get a response to a small "how do i word this" or "is this structure suitable" question, but now we only meet virtually for 1 hour a month. Also, my supervisor has two young children at home who he had to home school, while completing all of his usual academic activities.
- Lack of interaction with more senior members of the group and communication, which limits involvement in activities, grants, etc. Feeling of constantly having to chase people up and reminding everyone of your existence. And my line manager probably wouldn't even notice if I disappeared for a month or two.
- I find it harder to contact and interact with my supervisors virtually. It's easier to have in-person meetings to work on problems together but this is no longer possible.
- I started my first permanent position [...] right before the lockdown and therefore have missed out on regular meetings with my mentor (who has school-age children).

Appendix H: Quotes on career progression/promotion impacts

- Transitioning to working at home was a challenge. I had a very strong work/home separation before the lockdown. My productivity was definitely lower this year and only now do I feel that I am starting to return to 'normal' levels of productivity. I have PhD paper revisions that remain unfinished due to finding it difficult to work outside of normal work hours at home due to many distractions.
- Reduced grant writing and papers will hit the metrics that are used both in the short term (which will be accepted) and in the long term (which will weight on decisions). Those is circumstances that allow proliferation will do very well out of the Covid period.
- I haven't had the opportunity to participate to my first cruise. I haven't had enough time to network with people of my (new) current institute. I feel cut out.
- The past several months has definitely given plenty of time to ponder career progression / future and better hone my future direction to maximise the advantages that come with these strange circumstances
- Personally, childcare responsibilities have overtaken work. What time left is dedicated to supporting my staff, and management. Therefore time which would have developed my own career, specifically authoring and publishing peer-reviewed literature, has disappeared. This is a common storm amongst those with caring responsibilities.
- The rapid change to teaching online and new methods of delivery for this coming academic year have prevented the writing of proposals: this affects career progression, and this induces a clear distinction between research-active academics (who need to teach and do research) and those with no teaching responsibilities (e.g. on short-term fellowships). At the same, my institution has frozen all promotion pathways for the foreseeable future.
- Reduction is time available to write proposals or papers due to redesign of teaching material.
- I was furloughed for several months and unable, both legally and practically (due to caring responsibilities), to work during this time. I have written no papers since March. Since returning to work my job has been dominated by Zoom meetings and administrative/management issues, leaving virtually no time for research unless I work additional hours, which is currently much harder than it was previously as we have no access to after school childcare (pre-pandemic kids were in childcare until 6pm, now I have to leave to do the school run at 3pm and unable to get back to work until ~9pm when kids are asleep).
- For my own career pathway, networking is essential. While virtual meetings have been useful, networking has been difficult and is leading to 'tunnel vision' i.e. speaking to the same reduced number of people, which I believe is having a detrimental impact on my and other career progression opportunities.
- They've used Covid as an excuse to delay/cancel promotions.
- I don't think I wrote as strong a fellowship proposal as I could have (see above reasons). The delay in the lab work will likely mean that I won't have time to publish research from this position before the end of my contract- publish or perish....
- Annual progression still took place, but obviously online. The university stated that it was going to be a much more lenient/positive progression experience this year compared to other years (which I feel should be implemented every year (not

necessarily the leniency but the whole experience should be much more supportive)).

- I had just come back from maternity leave and I was on a short term contract. When Covid happened it took another 6 months of that contract. We have got a short extension so hopefully there is some time to catch up.
- Sabbatical cancelled: sabbatical is the time to build for future / be creative
- Internal promotion has been withdrawn, so there is effectively zero opportunity for career progression. This is also true externally, e.g. Universities and other organisations, where we may hold or apply for honorary positions.
- I am lucky to have a post doc waiting, but have been unable to finish my write up during the pandemic due to lack of childcare. I am lucky that the post-doc is able to delay funding for me to start next year, when field work is more possible, but this leaves me with a gap in finances.
- Promotions are going ahead in terms of planning, but there are suggestions that they may be impacted by financial considerations
- I had caring responsibilities during lock down so was unable to work my full hours as normal. I've been unable to write as many papers/reports as I had planned to this year.
- I was planning on putting in a case for promotion this year but the deadline fell right in the middle of lockdown. The promotion application is a detailed, lengthy document and I just didn't have the time or energy to put towards the case when I was juggling trying to work with childcare.
- Some collaborators are not as responsive as they used to, mainly due to increased parenting responsibilities during the pandemic. This has slow down the submission of my first-author paper, which I need for career progression.
- Progression for me has been affected by the reduced opportunities to participate in surveys and travel to meetings with colleagues from other organisations and learn from them.

Appendix I: Quotes on other impacts

- My employer didn't offer furlough. Talking to my colleagues and friends I felt many would have chosen furlough due to caring responsibilities had they had the opportunity. [...] I felt my organisation didn't offer us a lot of support if we weren't as productive as pre-Covid. They offered us to monitor our effectiveness as a percentage when filling in time sheets, but I felt this was very intrusive and though it could be used against us in the future.
- Mixed messages from government translated repeatedly into reactionary university responses that created significant amounts of work at short notice and all staff were expected to deliver, without additional resources, without adequate computing and/or software, and at very short notice. Many ended up working through the night. No account was taken on whether individuals had caring duties/children at home. Messaging was supportive of home schooling and other priorities, but deadlines and demands kept coming, even on bank holidays. no extra time was given for anything, and because the system was not working at full capacity, things were delayed and then end deadline still had to meet. e.g. marking usually has 21 working days to be completed, at times this was reduced to 5 days because of delays.
- Final year PhD students funded by UKRI have been waiting since April for a decision on desperately needed funding extensions, which drastically increased anxiety.
- As an expat, worrying for my loved one in a foreign country and not being able to go to visit them for months has been a huge source of concern. My own health has worried me too as I felt sick and felt I had no access to proper care or mental support. I fell into depression for weeks and couldn't focus on work. I have surely lost week's worth of work in worrying and felt I was trapped in the UK. I feel this will be an issue now again until Spring 2021.
- The ENTIRE spring and summer were spent re-organising teaching to be done online. Nothing else got done at all. And it probably won't until 2021.
- My organisation has allowed time off to support childcare, and reduced expectations. However, individual work and projects must go on, so there are still very strong pressures in reality, even if the 'party line' is that people should be cut some slack.
- Line management excellent but more meetings put into my calendar without checking or asking - mostly by people outside of my team - sometimes invited to attend two meetings at once – part-time hours not always respected
- Gained flexible time because no need to commute, but find increased computer VDU work an issue, because all meetings are online and there is an increase in emails. Previously, used meetings as a break from VDU work. Can mitigate by taking hourly short breaks between VDU sessions, but I find I am sensitized to full days of online meetings that put me on edge.
- National Marine Facilities were not prepared for the requirements of universities in putting people back onto ships, and were basically not providing the information needed to allow us to do effective risk assessments.
- [...] There are only two of us (of eight) working at my level in my organisation who have young kids, and I feel that we have both been disadvantaged, in terms of career progression/publication record etc, by the pandemic, compared to those who do not have young kids and who have been able to do extra work during the

pandemic due to less time spent commuting etc. I feel that those who do not have young kids completely underestimate the amount of time and mental energy required to home school young children and care for them 24/7.

- Offers of support related to C19 has been offered from work but has not be fully supported by actions e.g.
 - Funds are not available to buy new equipment to better facilitate working from home (request on behalf of staff was denied by NOC).
 - Support for mental health issues has been communicated but flagging potential issues with staff has been dealt with negatively by HR. Feedback included advice to get staff to 'pull their socks up'. I've therefore managed ongoing issues with staff on a personal level and now bypass HR ""support"", which is putting further pressure on my own time and mental health.
- I am passionate about marine science, but in the context of struggling universities with many having had redundancies or hiring freezes for a number of years, now likely to have finances further impacted by COVID, I have for the first time seriously started to look at non-academic positions as I am no longer convinced that there is a reasonable chance of pursuing a successful career in oceanography as an academic researcher. I think amongst ERC on fixed-term contracts I am probably not alone in that thought process.
- There has been no real understanding of the impact on careers, I had already missed out on two marine surveys during pregnancy but then with COVID I missed the next two as well, which means I did not gain vital marine surveying experience I needed to progress my career. And now my two year post is coming to an end. It says more about the precarity of early careers contracts and how hard it is to have a family on these short posts. And then the amount of zoom meetings when I had so little time to actually work between childcare, this was not taken into account by my PI/project leaders. So I ended up only doing meetings and admin and no research at all.
- I have a strong sense that amongst staff it's a case of 'everyone for themselves' with a number of my fellow PhD students and I feeling abandoned, even more isolated than normal, and wondering what the point is of our research - particularly given the present government's manipulation of science to justify being 'guided by the science' rather than taking an 'evidence led approach'.
- Early on (and continuing) there were mixed messages from my employer regarding expectations for work done. Lab manager said look after your family and work if you can, but overall employer didn't say things so explicitly, which lead to significant stress regarding workload etc. This improved, but now I'm so far behind in research and responsibilities, that I feel stressed about that too.
- There has been 'lip service' to the idea that working at home caring for children and elderly neighbours is recognised and a reduced work load is ok - but the reality is that our business has continued regardless.
- The closure/reduction of working hours in some offices made bureaucratically work harder to complete, taking up more of my time and causing further anxiety when solutions are not found in a timely manner (i.e. University offices and Council Tax offices)
- Support from my institution has been excellent during the national lockdown. [...]
- Working from home has been really good for writing and analysis, as there are fewer distractions at home than in the open plan office I work in

- Working from home has highlighted the poor internal management of my organization and the poor nature of the line management system I work under. It has also highlighted the fact that I am not working on any projects with any of my colleagues from my home institutional department but am instead working with colleagues across departments and institutions. This is a worrying sign of isolation and disengagement and makes me concerned about future research opportunities
- University has provided well-being materials for staff online - this is not helpful my workload has increase and I don't have time to engage with this. I also do not want to spend my spare time looking at well-being materials on a screen. Proper bold decision making would be welcome rather than fighting fires, being honest with students about what they can expect and in time - not 1 or 2 weeks before they arrive at university. Taking staff workload and well-being seriously. Not bringing out a workload allocation model in the middle of a pandemic based on a 37.5 h working week - give me an example of an academic who works 37.5 hours. Telling staff they don't work enough due to this 37.5 h week WAM is insulting and a kick in teeth.
- My employer has been fantastic throughout the pandemic and very quickly got everyone who could working at home safely. They were also able to get people back into laboratories as soon as they were able to do so. I split my week between home and lab working. But due to social distancing measures, it is still difficult to meet and interact with colleagues.
- I have several projects with industry, fishing and aquaculture - all these have been impacted leading to no-cost project extensions, potentially reduced outcomes, delays in fieldwork etc.
- I work from home, long-distance since one year before the pandemic when I moved [overseas]. Everyone moving to work online actually increased my opportunities of interaction with co-workers. The main impact of the pandemic is that my family and I were on holiday visiting my mom [] and we got stuck there for five months! which was very challenging for my mental health. Also, my scheduled work trip to the lab in the UK got cancelled, but since everyone was working from home I think that actually minimized the negative impact...
- The research councils and my university have been moderately forthcoming with funded extensions for students and grants in their final year. None of it does any good for students _not_ in their final year, or postdocs on grants not in their final year. There will be a wave coming of ECRs without good results to show for their effort, and it isn't their fault, just accidents of timing. Without much broader offers of funding extensions and personal fellowships, we will be throwing away a whole cohort of excellent researchers.
- Move to online teaching has been a real drain on my time. The university did not provide sufficient computing equipment for this purpose, so my limited IT facilities at home have been the cause of great stress and "computer rage". I have felt uncreative, overstretched, and have as a result been an unpleasant person to live with.
- There has been very little-no support for PhD students in the early stages of their project whose progress has been severely affected. For example, final stage students have been offered the opportunity to apply for funded extensions but this is not available to first or second year students and there has been no information about how this might be dealt with in the future. This is a critical stage for data collection and not being able to progress creates a very high possibility of running

out of time and funding in the later stages, this in turn creates intense levels of anxiety.

- I've received a no-cost extension for one of my grants, but PDRAs and technicians still need to be paid (even on furlough, there are some costs), so really, PIs are going to need costed extensions. Otherwise Covid is going to eat a large percentage of a typical three year grant.

Appendix J: Acronyms used within report

AGM	Annual General Meeting
AMT	Atlantic Meridional Transect (project)
BEIS	Department for Business, Energy & Industrial Strategy
CHARS	Canadian High Arctic Research Station
ECR	Early Career Researcher
EGU	European Geosciences Union (also refers to their spring conference)
HEI	Higher Education Institute
IODP	International Ocean Discovery Program
LGBTQIA+	Lesbian, Gay, Bisexual, Pansexual, Transgender, Genderqueer, Queer, Intersexed, Agender, Asexual, and Allies
NERC	Natural Environment Research Council
NMF	National Marine Facilities
NOC	National Oceanography Centre
NRW	Natural Resources Wales
ORCHESTRA	Ocean Regulation of Climate by Heat and Carbon Sequestration and Transports (project)
PAP	Procupine Abbyssal Plain (project)
PI	Principal Investigator
RAPID	Rapid Climate Change (project)
RV	Research Vessel
SAMS	The Scottish Association for Marine Science
SME	Ship-time & Marine Equipment (form)
SPF	Strategic Priorities Fund
UKRI	UK Research and Innovation
VDU	Visual Display Unit
WAM	Workload Allocation Model