Science Information Strategy

Stake Holder Consultation Phase 1 Report

February 2011

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Summary

A stakeholder consultation was undertaken in autumn 2010. The main objectives of the study were:

- To identify how NERC could improve the services and service levels of its Environmental Data Centres; and
- To understand customer expectations and plan how to improve the management of those expectations.

The responses provide a baseline of the current stakeholder experience of using the NERC data centres and the attitude of the community towards them. Subsequent consultations will allow us to moniotor the impact of the Science Information Strategy as it is implemented. NERC were aided in the design, implementation and analysis of the consultation by LISU (Loughborough University). The dataset created during this project is very rich and diverse and should be studied further during the second phase of the Science Information Strategy Implementation. This report, and its companion report by Loughborough University staff, should be regarded as initial findings, however, a number of principle conclusions can be drawn, and these are:

1. The study has met its goal of finding the views of existing and potential users. The demographics clearly indicate the success. We have a good spread across the major sectors and research areas.
2. There is a high level of stakeholder satisfaction with the services from the data centres. 86% of respondents are either "Very Satisfied" or "Fairly Satisfied" with using the data centres; whilst 75% of respondents depositing data are either "Very Satisfied" or "Fairly Satisfied". There is clearly some work to be done in improving customer satisfaction, especially with the process of depositing data, but the overall satisfaction rates are very gratifying.
3. The Polar Data Centre appears to be under performing, when compared to the other data centres. This needs to be explored further.
4. The profile of the data centres needs to be raised. There is clearly considerable ignorance about the data centres. A disappointing 22% of those interviewed by telephone said they would consult NERC data centres in the first instance.
5. High quality metadata is valued by the data centre users.
6. The barriers to use of NERC data centres need to be further investigated. Some of these have been addressed in the NERC Data Policy and this message needs to be communicated clearly to users. Others need more work and should be explored in the later phase of the Science Information Strategy Implementation.
7. The NERC data centres have many users who require more than just digital data. For example 26% of depositors are depositing physical samples or collections.
8. Ease of use of the systems developed by the data centres is commented on several times by users. During the telephone interviews more users listed improved functionality as the one thing they would change.
9. The specialist knowledge provided by the data centre staff is clearly important to some stakeholders and not to others. It is possible to speculate that academics don't value this service while non-specialists see its value. However, this area needs further investigation to discover what is really required by different stakeholder communities and what is legitimate for NERC to actively support.
10. Users are looking for data that we do not hold. We need to publish clear collections policies for the data centres, so that users know what we do hold and what we don't hold.

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Introduction

In 2010 the Science Information Strategy Implantation Programme undertook a Stakeholder Consultation of existing and potential users. The NERC Environmental Data Centres (EDCs) have each developed independently to meet the specific needs of their elements of the NERC community. This heterogeneous approach has worked well and the data centres already have a highly successful track record in acquiring, managing and disseminating science data and information generated by publicly and privately funded research and other investigative activities. NERC information management activities are well respected both nationally and internationally. However, the heterogeneous approach has lead to different levels of engagement with different user communities, duplication of effort and no single voice for NERC in environmental information management. The Science Information Strategy has been designed to address these perceived short comings through a series of actions which will be implemented over time.

One of the aims of the Science Information Strategy is the understanding and prioritisation of aspirational customer requirements for NERC's Environmental Data Centres. By consultation with existing and potential customer groups NERC will be able to understand the range of services that are expected and the level at which those services should operate. NERC will be able to make more informed decisions about what service it should provide and their level of operation. They will also be in a better position to manage user's expectations.

The main objectives of the study were:
- To identify how NERC could improve the services and service levels of its Environmental Data Centres;
- To understand customer expectations and plan how to improve the management of those expectations;
- To identify criteria that should be used to determine data of long-term value to NERC and the standards and formats which will maximise the opportunities for efficient re-use and re-purposing,

This report describes the results of the study and draws conclusions for the Science Information Strategy Implementation Board (SIB) and the Science Information Strategy Group (ISG).

The NERC Environmental Data Centres are:

ADS	Archaeological Data Service
BADC	British Atmospheric Data Centre
BODC	British Oceanographic Data Centre
EIDC	Environmental Information Data Centre
EODC	Earth Observation Data Centre
NGDC	National Geoscience Data Centre
PDC	Polar Data Centre
SSDC	Solar System Data Centre

More information about the data centres can be found at: www.nerc.ac.uk/research/sites/data/.

Methodology

The methodology changed during the planning phase of the project and continued to evolve during the project due to the changing political climate that existed in 2010.

The initial methodology was to define a 'Scope of Works' and employ a consultant to undertake the study and report to the SIB and ISG. The consultancy firm Technoplis[1] was indentified as the preferred consultant because of their recent work with the Research Information Network (RIN) on a study called the Benefits of Research Data Centres[2]. During this project Technoplis had worked closely with both the British Atmospheric Data Centre and the National Geoscience Data Centre and had developed an understanding of the way the NERC data centres work. However, following the General Election the new government banned the majority of consultancy work.

The revised methodology involved the study being undertaken by data centre staff working closely with LISU[3], a research and consultancy unit within the Department of Information Science at Loughborough University. Two questionnaires were developed; the first was a web-based questionnaire on SurveyMonkey[4] and the second was a telephone survey undertaken by data centre staff. As the staff had little experience of telephone interviewing a training day was held on 4th November 2010. The two questionnaires form Appendices 1 and 2 of this report. The intention had been to advertise the web-based questionnaire in Nature and New Scientist. However, in addition to the new government imposing a ban on consultancy they also banned all forms of advertising by government bodies.

LISU researchers have analysised the results and produced a final report (Creaser, C., Greenwood, H., and White, S. 2011[5]) see Appendix 5. Extracts from the report are included in this report.

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[1] www.technopolis-group.com
[2] www.rin.ac.uk/our-work/data-management-and-curation/benefits-research-data-centres
[3] www.lboro.ac.uk/departments/ls/lisu/
[4] www.surveymonkey.com
[5] Creaser, C., Greenwood, H., and White, S. 2011. Stakeholder Consultation Project: Survey Analysis. Consultancy Report commission by NERC from LISU, Loughborogh University

Results

The synthesis of the data collected by the questionnaires is presented in Appendices 3 and 4 of this report.

Initially a total of 715 responses were received to the online questionnaire; with a total of 607 responses included in the anlaysis. The 108 excluded responses comprised 2 developer test records and 106 responses that answerd only section A. There were a total of 78 interviews conducted over the telephone with people who had volunteered as part of the online questionnaire.

Demographics

The first set of questions in the web-based questionnaire and the telephone survey were designed to find out the profile of those who responded.

Over 90% of those who took part in the survey were based in the UK. This figure seems high and suggests that the data centres are under used by non-UK resident or that there is a sampling bias in the methodology. Further investigation is clearly required. The majority[6] were academic researchers describing themselves as belonging to a University/Higher Education or Research Institute/Facility – see Table 1. But there were good responses from the Public Sector and some from Commercial/Industrial and Voluntary/NGO.

	Number	Percentage*
University/Higher Education	208	34.3
Research Institute/Facility	180	29.7
Other	38	6.3
Public Sector	138	22.7
Voluntary/NGO	23	3.8
General public	15	2.5
Commercial/industrial	48	7.9
School/Further Education	3	0.5
Total respondents	607	

Table 1: Please indicate the sector which best describes where you are based.

*more than one option could be selected

The response from the different research area is not distorted by a single dominant sector (see Figure 2), but it appears to reflect the balance of the sectors, except for Science-based archaeology, which is under represented. The majority of academic researchers (67.3%) have received NERC support within the past five years. The response relating to Science-based Archaeology and the associated Archaeological Data Service (ADS) was so low that this sector is not discussed further in this report.

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[6] The term majority is used throughout this report to mean more than 50%; e.g. a simple majority.. It is not meant to imply an overwhelming majority; e.g. 80-90%.
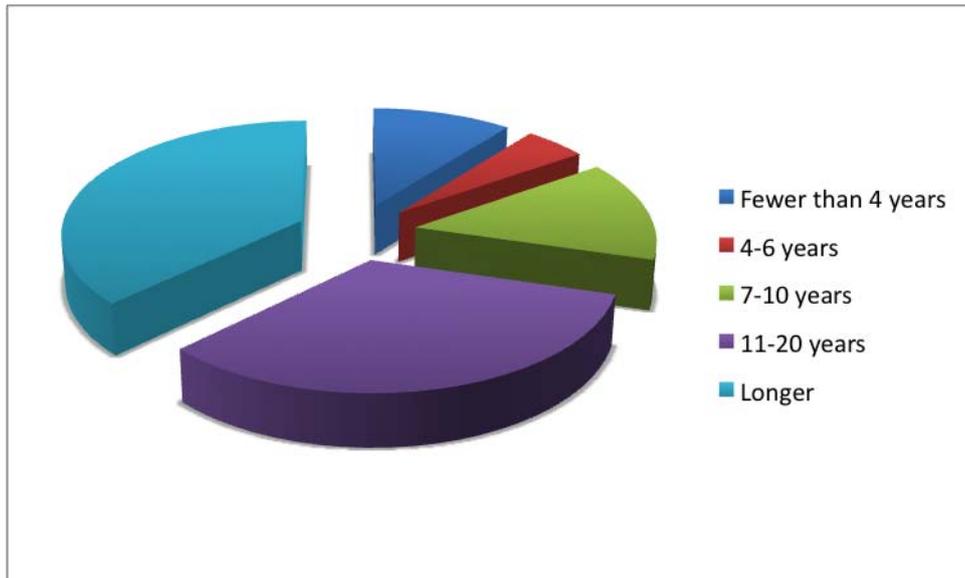
Figure 1: Response to the question: "For how long have you been involved in academic research (including any time spent as a postgraduate student)?" (Base: 379 respondents)
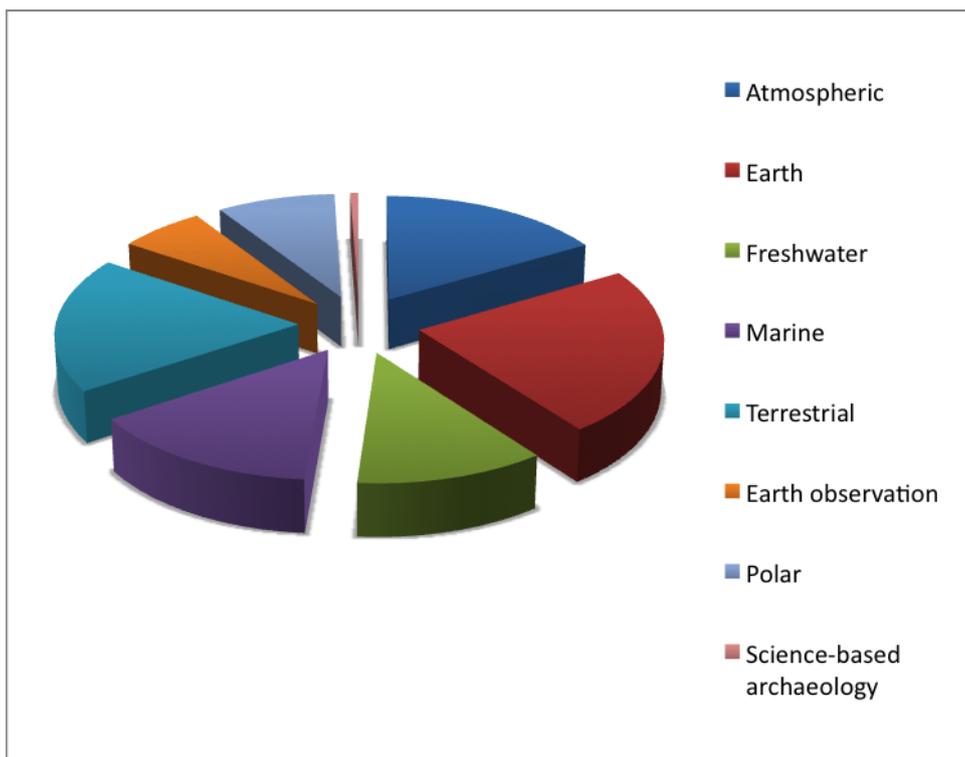
Figure 2: Response to the question: "What is your main area of research?" (Base: 379 respondents).

Of the 607 valid respondents 53.4% have used a NERC data centre. Interestingly 13.8% are not sure if they have used an EDC. This may reflect either the exchange of datasets between researchers once they have been obtained from a NERC data centre or the low profile of the data centres 'brands'.

Respondents were asked to indicate if they use data and/or deposit data. By combining the results of these questions it is possible to show that the survey did succeed in reaching a range of user

groups: see Table 2 and Figure 3. Despite initial concerns, the survey does appear to have reached a significant number of people who could be described as potential users.

Use Group	Nos. of respondents
Use NERC data centres but not deposit	144
Both use NERC data centres and deposit	149
Deposit data with NERC data centres but not use	35
Do not use NERC data centres (Potential Users)	234

Table 2: Reported use of NERC data centres

- Neither user nor deposit
- Use not deposit
- Use and deposit
- Deposit not use

Figure 3: Reported use of NERC data centres (Base: 562 respondents to questions on both use and deposit of data)[7]

User Satisfaction

The web-based survey asked two questions about user satisfaction. Users of data from NERC data centres were asked: "Overall, how satisfied are you with the NERC Data Centre(s) you have used?" – see Figure 4 and Figure 5. Users who deposited data with NERC EDCs were asked: "How satisfied were you with the process overall?" – see Figure 6 and Figure 7.

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[7] Figure taken form Creaser, C., Greenwood, H., and White, S. 2011. Stakeholder Consultation Project: Survey Analysis. Consultancy Report commission by NERC from LISU, Loughborogh University.
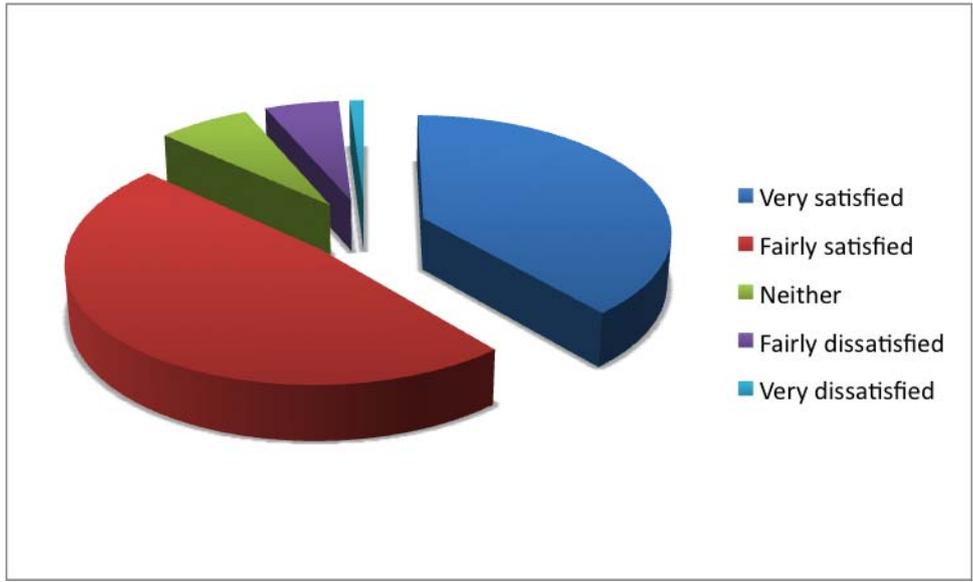
Figure 4: Response to the question: "Overall, how satisfied are you with the NERC Data Centre(s) you have used?" (Base: 294 data centre users)
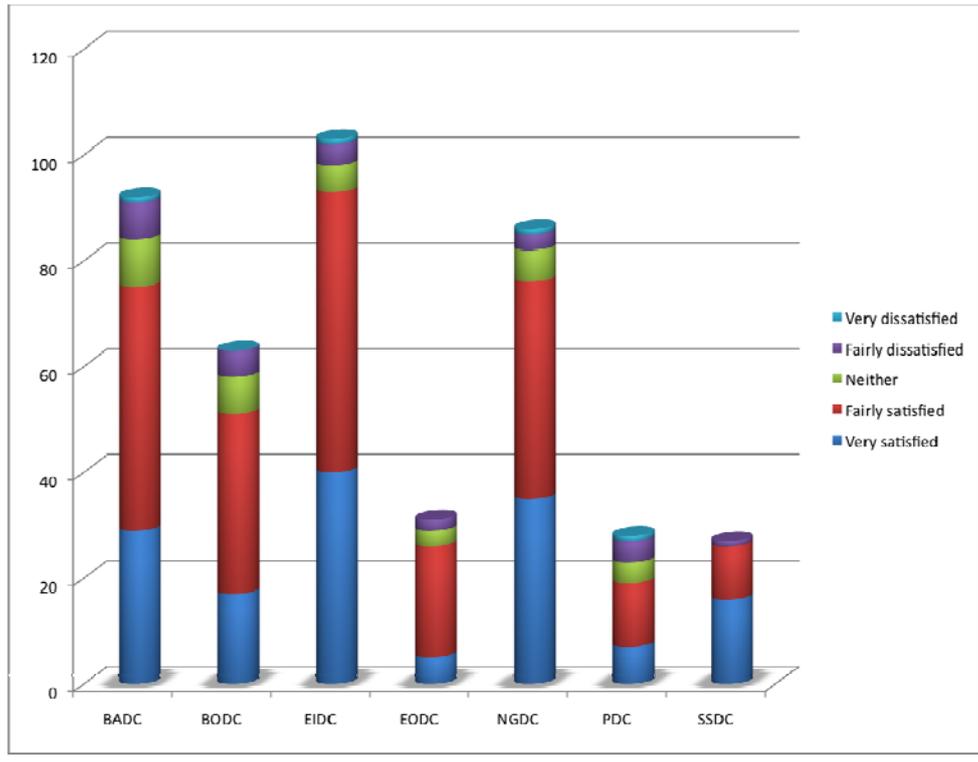
Figure 5: Response to the question: "Overall, how satisfied are you with the NERC Data Centre(s) you have used?" organised by EDCs (Base: 294 data centre users).

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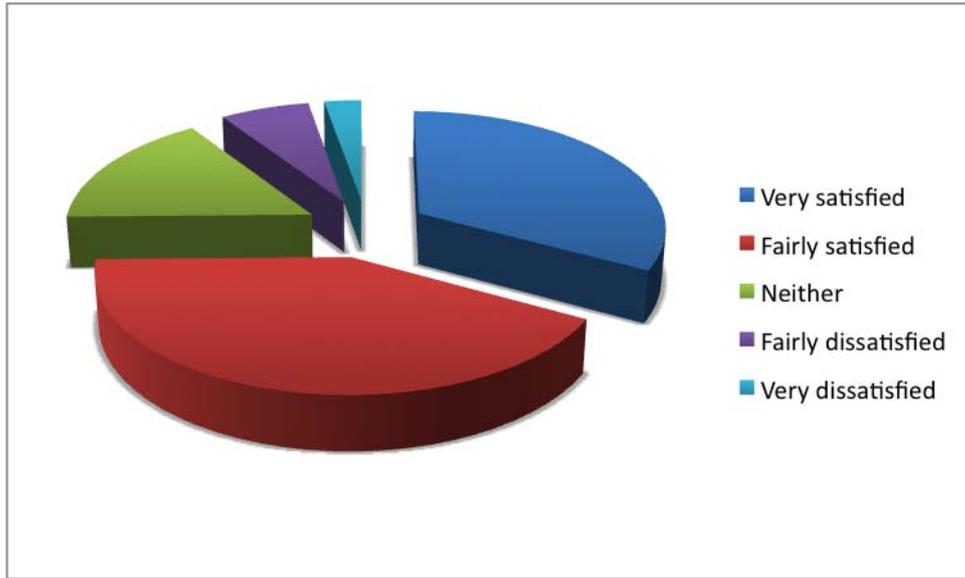
Figure 6: Response to the question: "How satisfied were you with the process deposit overall?" (Base: 182 data centre users).
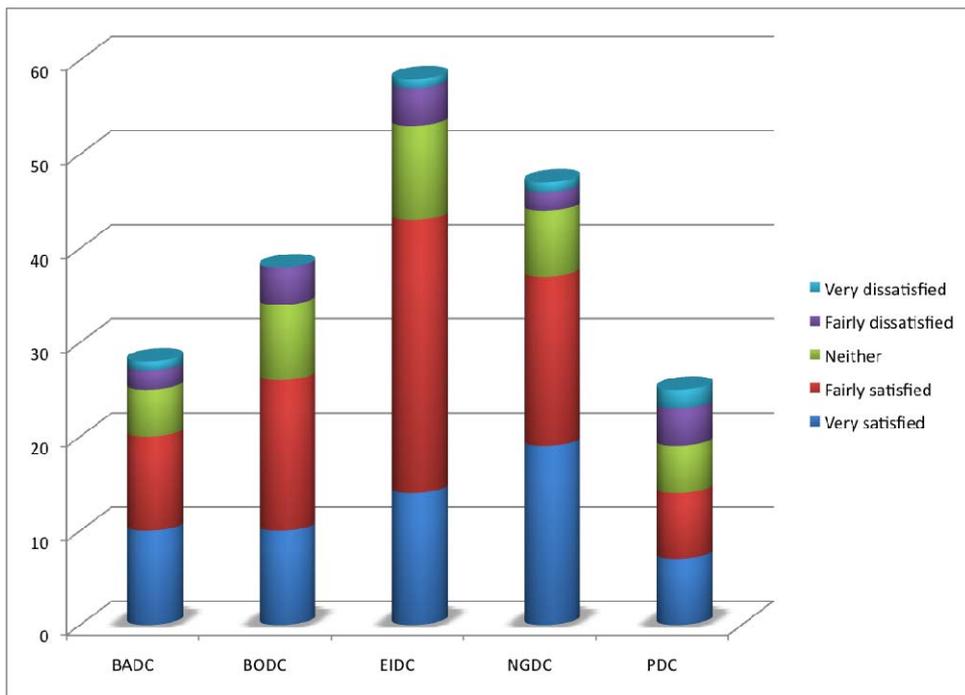
Figure 7: Response to the question: "How satisfied were you with the depsoit process overall?" organised by EDCs? (Base: 182 data centre users).

Figure 4 shows that 87% of respondents are either "Very Satisfied" or "Fairly Satisfied" with using the EDCs; whilst Figure 6 shows that 75% of respondents depositing data are either "Very Satisfied" or "Fairly Satisfied". There is clearly some work to be done in improving customer satisfaction, especially with the process of depositing data, but the overall satisfaction rates are very gratifying.

There are some differences between satisfaction rates for the EDCs. Figure 8 shows the satisfaction/dissatisfaction rates of respondents using data from EDCs, whilst Figure 9 shows the

satisfaction/dissatisfaction rates of those depositing data. The majority of EDCs show comparable rates of satisfaction/dissatisfaction. The one exception is the Polar data Centre which scores higher levels of dissatisfaction and lower levels of satisfaction than its peers: see Figure 8 and Figure 9.
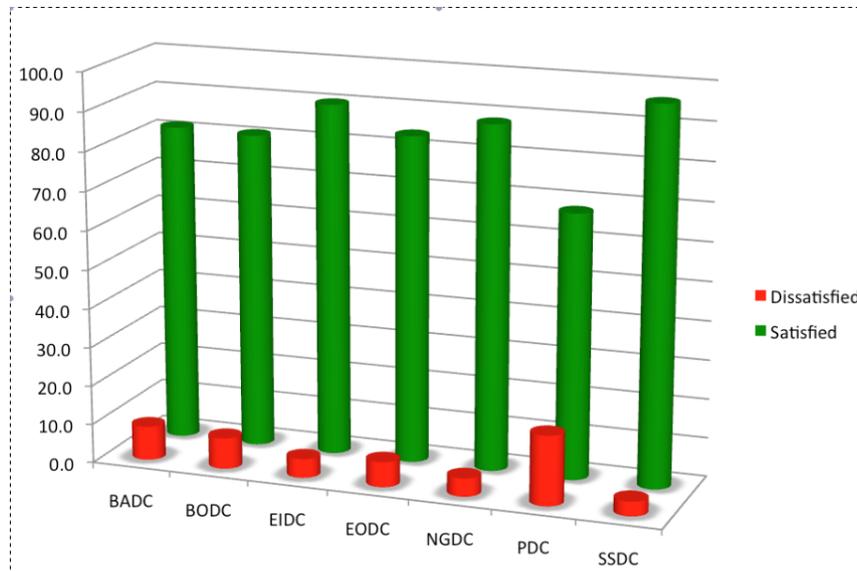
Figure 8: Plot of levels of satisfied and dissatisfied users by data centre.
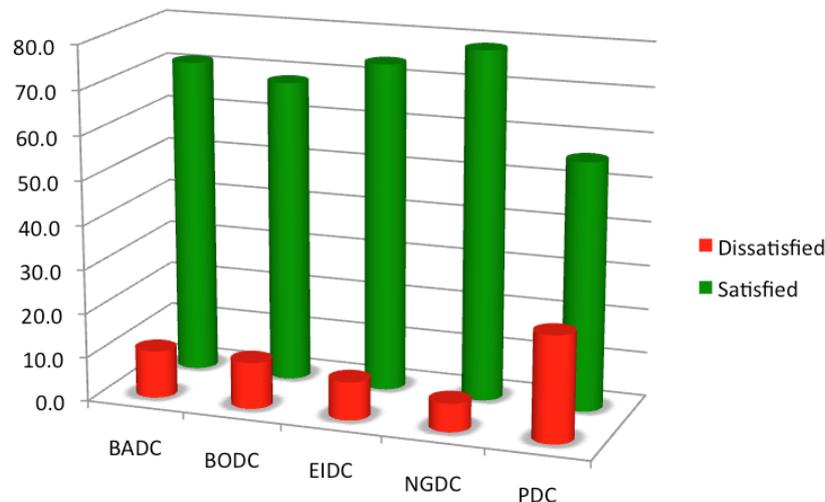
Figure 9: Plot of levels of satisfied and dissatisfied data depositors by data centre.

Using Data

The online questionnaire sought to identify the range of users that used the individual data centres; Figure 10 shows the data centre usage by different sectors of the community. No homogeneous picture emerges. Academic users dominate all the data centres, either as Universities/HE or as Research Institute/Facility. SSDC has the largest percentage of usage by Universities/HE while the PDC the smallest. Conversely, the PDC has the largest percentage of usage by Research Institute/Facility. The EIDCC has the largest percentage of use by public sector whilst the SSDC has the smallest. The NGDC has the largest percentage of use by industry and the PDC the smallest.

BADC

BODC

EIDC

EODC

NGDC

PDC

SSDC

Key

- University/ HE
- Research Institute
- Other
- Public sector
- Voluntary/ NGO
- Commercial/ industrial
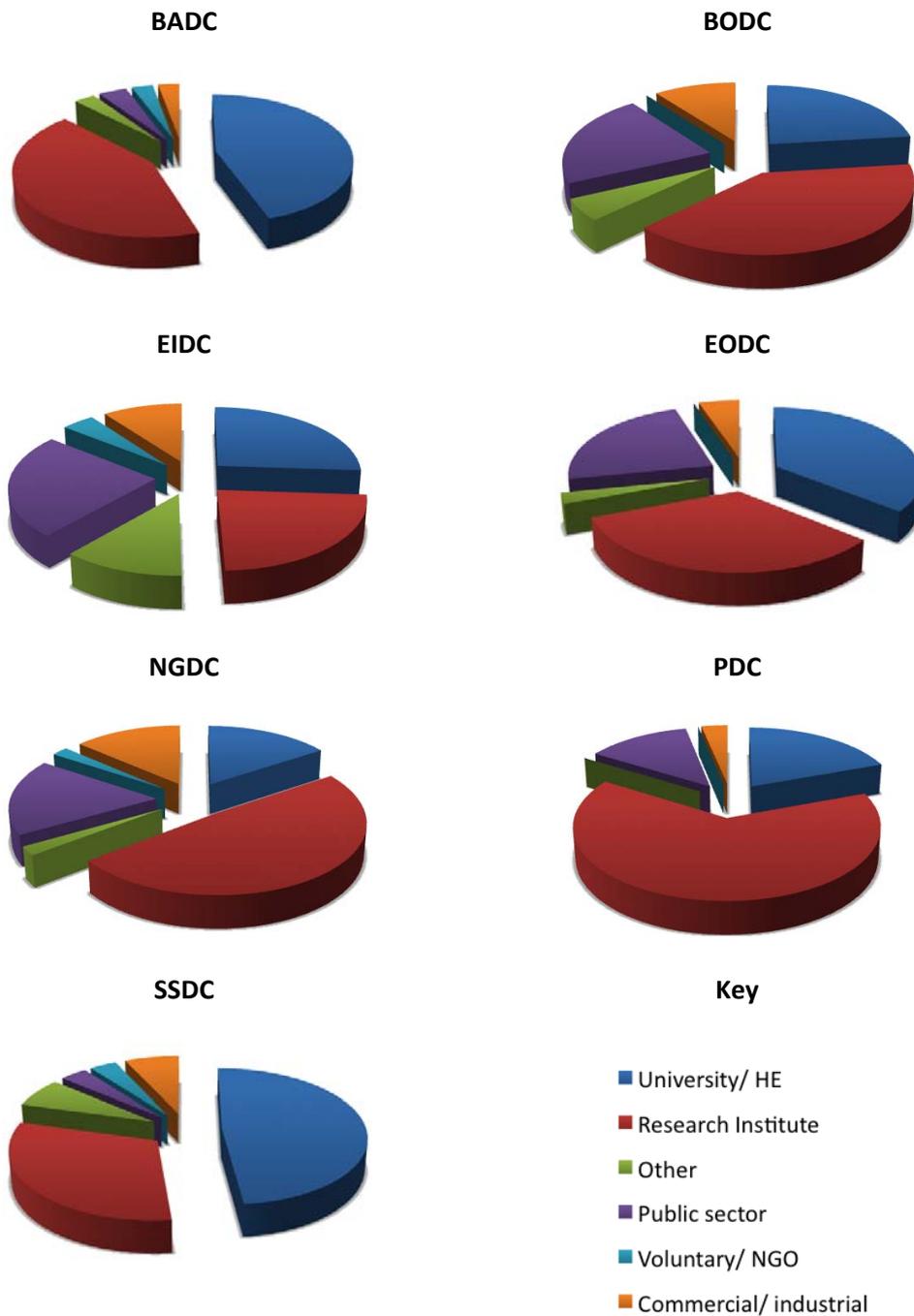
Figure 10: Data centre usage by different sectors of the community (Base: 607 respondees).

The data held by the EDCs is important to the work of the researchers who use it. The majority of telephone interviewees thought that it was very important for their research: see Figure 11.

Figure 11: Telephone interviewees were asked: "Overall, how important for your research/work are the data available from NERC?" (Base: 53 telephone interviewees).

The telephone interviewees were asked: "Can you identify examples of wider impacts (e.g. on society, the economy, policy, etc.) that have resulted from your research, where data provided by NERC has played a significant role?". A selection of their comments are shown below:

- "Used a lot of borehole data for carbon capture and storage projects which is a current area of international interest/research."
- "Improves engineering design and this must reduce engineering costs, helps make sure we have the yield of reservoirs correctly through correct data and make sure we are not overdesigning things."
- "No - but we use the research of others who have used the NERC datasets i.e. Natural Cavities database."
- "NERC data are considered to be reliable and credible so if I can use this in my work. It makes my argument more persuasive. Main impact is water usage by new development e.g. housing - using hydrology information is essential to understanding the change to ecosystems that these developments have. Long data sets help to determine the trend from the variability."
- "Numerous policy areas would be much less definite on trends and biodiversity - partly due to relationship between NERC and volunteer recorders."
- "Scottish Government policy on water resources management."
- "Heavily cited in DEFRAs of Upland Burning Code - strong policy impact."
- "HiGEM knowledge exchange interaction with the Willis network risk assessment through high resolution coupled climate modelling. All facilitated by being able to store data at NERC data centres."
- "CCMVal - We successfully participated and written a WMO ozone assessment. This participation would not have happened without the collaborative space provided by BADC."
- "Yes, input into radioactive waste management policy and legacy management for the UK."

The telephone survey asked: "When you're looking for environmental data, do you generally approach NERC in the first instance?". The disappointing result is that only 22% said that they consulted NERC data centres in the first instance. This suggests that the data centres need to raise their profile in the environmental community as the 'brand' recognition is poor.

The telephone survey also asked what the users normal search behaviour was. A summary of these verbal responses are shown in Figure 12.
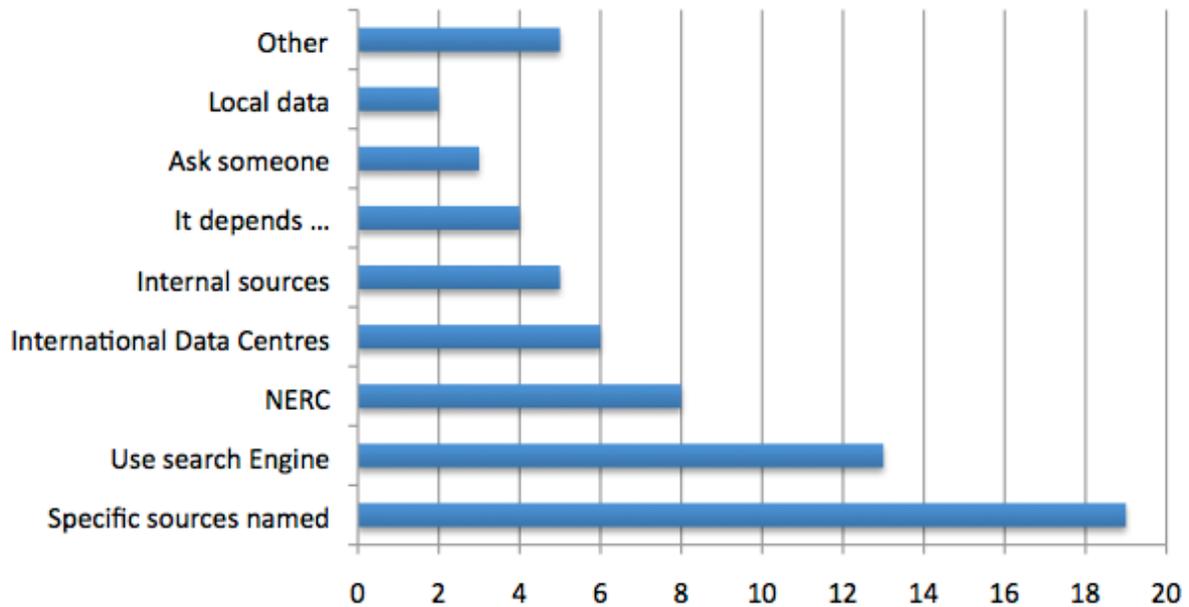
Figure 12: Data centre users were asked that they normally did to find data (Base: 61 data centre users)

Most users knew where they wanted to get data. Users named a specific source or responded with a more general phrase such as NERC, International Data Centres, internal sources, etc. A significant number of users would use a search engine and a few would ask for advice. Examples of user comments are shown below:

- "Would already have good knowledge of what data centres hold and would only approach data centres where I know they have data. However, this does mean that there may be data that I am not aware of in the Data Centres. Method of providing data are always changing and being updated."
- "Would have a good idea where to go in first instance. Would depend on type of data and origin. Modern climate data at BADC and RAPID data at Proudman."
- "There is a geographic bias; if I want southern ocean physical oceanography then I would go to the BODC for British sector stuff or NOC if I couldn't find it. If I want data from Australian sector then I would go to appropriate Australian data centre. I would also look at world data centres. I also use Google for satellite data."
- "I generally go to the US data centres."
- "Have only recently become aware of the NERC data resource through a BBSRC funded project."
- "Perception of NERC being only at national level. Long term monitoring of flora/fauna - UK dependent on data - use appropriate repositories at an international level - NERC too small for topic area. UK data centre for certain subject makes sense but for many of science topics UK centric not useful. NERC can't be a domain specialist in everything.

The users of the data centres primarily use electronic/digital data, with lesser amounts of the other data types. The exception is the NGDC where physical samples/collections and hard copy/analogue data and information products also contribute a major component of the data types used.
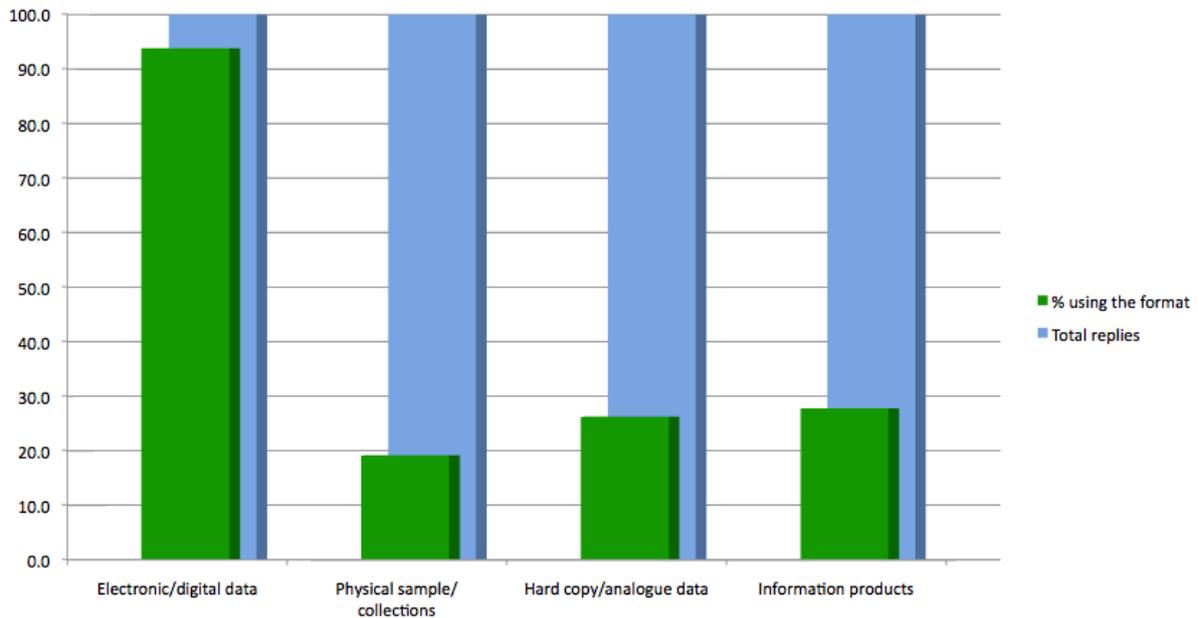
Figure 13: Response to the question: "Which type(s) of data do you use?" (Base: 324 data centre users)

The web-based questionnaire asked users how easy was it to identify the data they needed on the last occasion they used the data centres. – see Figure 14.
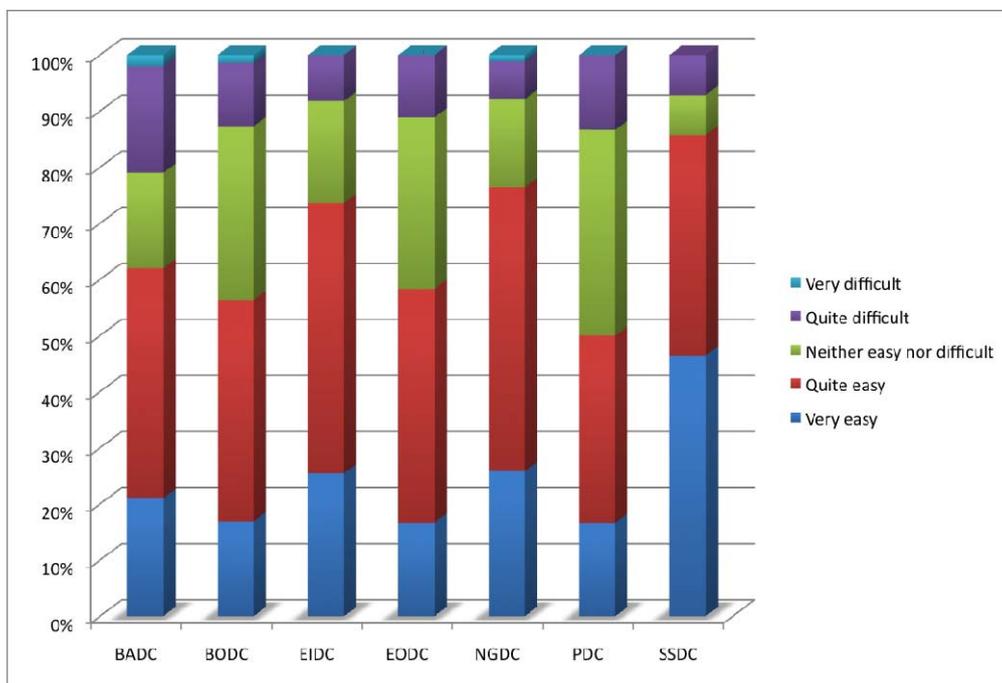
Figure 14: Responses to the question "How easy did you find it to identify the data you needed on the last occasion you sort data?", organised by EDC.

In all but one case the majority of respondents thought that it was very easy or quite easy to identify what they needed. The one exception was the PDC. In the case of the BADC, 21% of respondents thought that the process of identifying the data they needed was quite difficult or very difficult.

The telephone survey asked 77 users how they identified the NERC data they required. The most frequent responses were using the websites, personal contacts and using the metadata. Figure 15 shows a summary of these verbal responses.
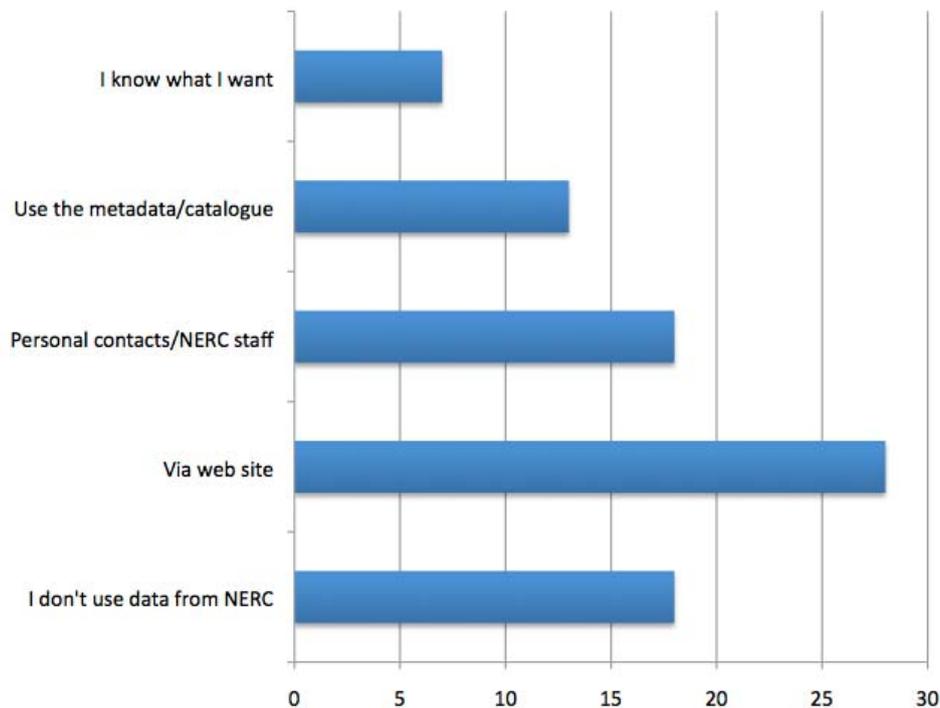
Figure 15: Approach to identifying data held by NERC (Base: 77 data centre users)

Comments made by users include:

- "By location, site, grid reference, country name and length of record - user liked BODC as metadata is of a high standard allowing discovery. User carried out a poll of operational users looking at "nice things about national network of tide gauges" - most users went on about BODC holdings rather than about the network itself. The results came back saying that BODC data are held in high regard due to quality of metadata."
- "E.G. BGS, look at the data catalogues because they have good metadata then look through the categories of data to work out if the data we need is there. If not there we would talk to a contact at the BGS to find out if we missed it, personal contacts are important."
- "Through the NBN gateway - national biodiversity network gateway and use search facilities."
- "By contact with the NGDC (BGS) Materials Collection Chief Curator."
- "I just know what I want."
- "Scientific papers which gave site names, Google searched those and that linked to fact that CEH held the data. Then went through NERC."
- "If from BADC then I search for data by programme and project. Otherwise I use the search on the web interface. If I know the data is there I look until I find it."

- "I know what I'm looking for because I talk to the people first. I know the data exists before I look for it."
- "By using the NGDC online service – i.e. GeoIndex."
- "Look at Discovery Metadata – Dataset Index."
- "Existing knowledge by osmosis from colleagues."

Once the required data had been identified, the next step is obtaining the data. In all cases more than 50% of respondents to the online survey thought that this step was "very easy" or "quite easy" – see Figure 16.
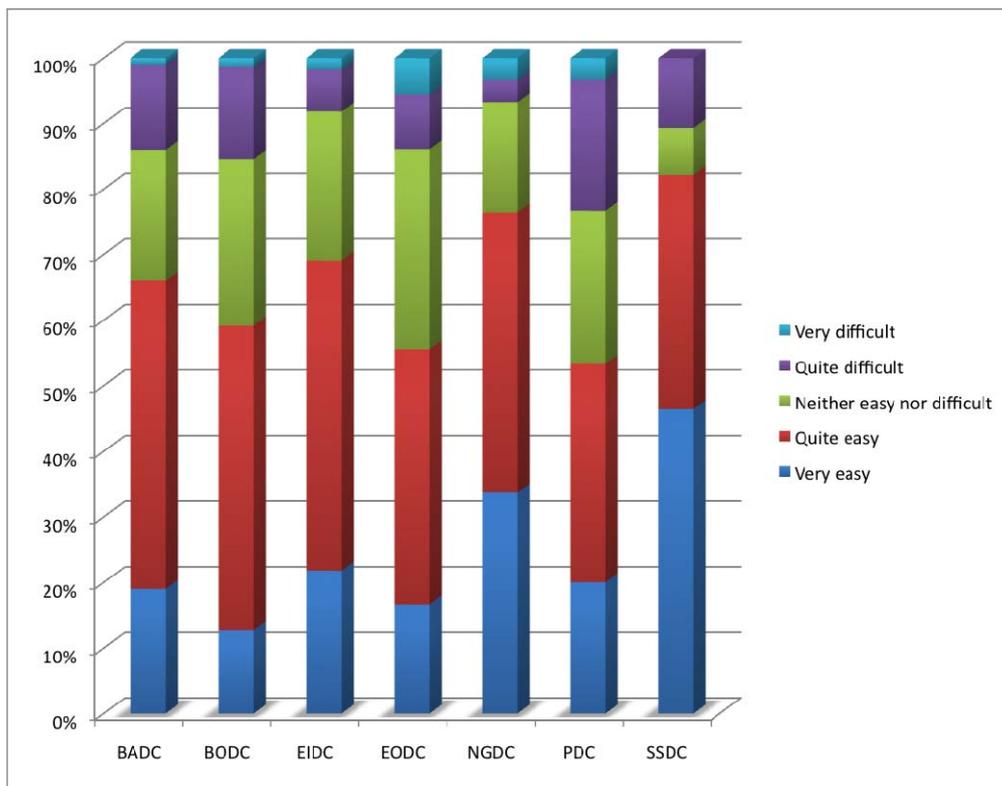
Figure 16: Responses to the question "Once identified, how easy did you find it to obtain the data?", organised by EDC.

However, some users are still having difficulties – see Figure 17.

In the majority of data centres over 10% of users find it "quite difficult" or "very difficult" to obtain the data they have identified. In the case of the PDC this figure rises to 23%: see Figure 17. This clearly indicates that there is a need to improve the usability of these services.
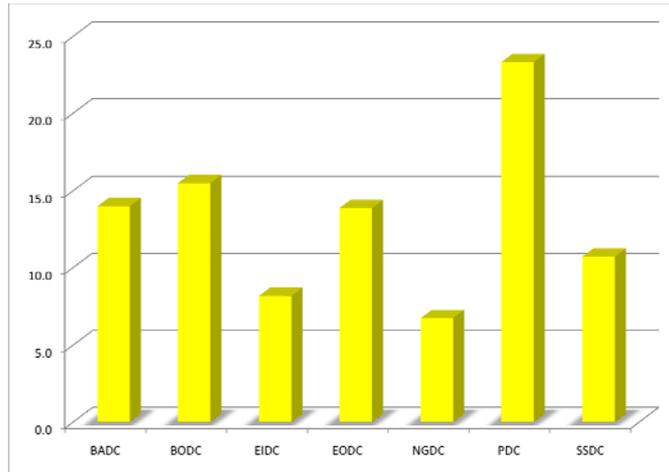
Figure 17: Percentage of users finding it quite difficult or very difficult to obtain data they have identified, organised by EDC.

During the telephone survey users were asked: "What (if anything) would make it easier to identify data?". The most common response was for improved metadata[8]. Figure 18 shows a summary of user's verbal responses.
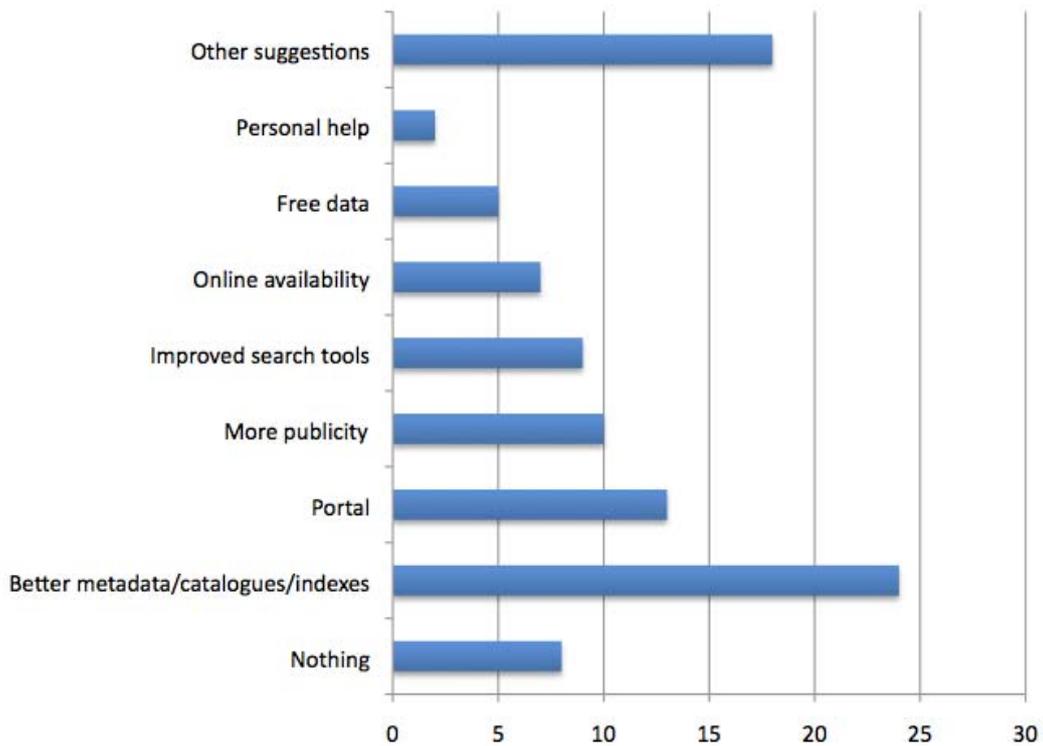
Figure 18: Summary of user suggestions for ways of making it easier to identify data (Base: 78 data centre users).

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[8] The terms "cataloges" and "indexes" have been treated a synonym for metadata.

Individual users commented:

- "Clarity of metadata. Anything that makes this easier is helpful. NOAA is relatively easy. PANGEA search for locality. The clearer and simpler the Metadata the easier to find holdings."
- "Improved metadata. Difficult to get ideal metadata but centres do well...."
- "Better web sites and easier access, not having to register and getting direct delivery of data."
- "If it could be really obvious on the NERC home page where you can get data and if it said it was free."
- "Not really, it's normally fairly specific - so normally approach a person rather than an organisation."
- "Searchable databases and more searchable metadata. Ability to search all databases in one to ensure you are not missing any data by following the wrong routes."
- "A problem is people don't know about it because they don't have need for it. Very little wrong with it but haven't got a clue what a lot of stuff means - too complicated. Specialist available who could answer a question quickly would be good. One size does not fit all."
- "A coherent catalogue between all the data centres, with a directory guide and inventory levels so users can work their way around the various data sets available."

Respondents to the online questionnaire were asked if the data that they had obtained was suitable for immediate use or analysis, or were additional processing steps required. Just under half (47.3%) said that additional processing steps were required. This group (147 individuals) was then asked approximately what portion, of the total time spent using the data, did this processing occupy? The result is shown in Figure 19.
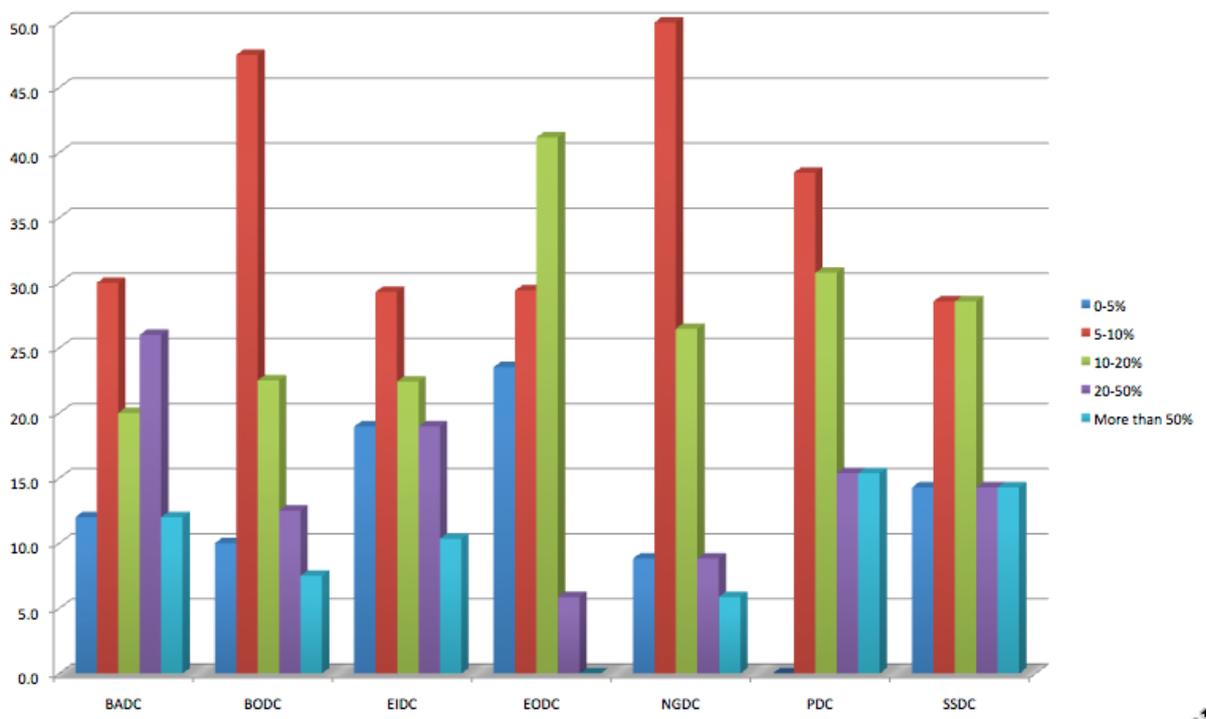
Figure 19: Response to the question: "Approximately what proportion of the total time spent using the data did this additional processing occupy?" organised by EDC (Base: 147 data centre users).

The results are of course dependant on the nature of the data provided by the data centre. However, there are some marked differences between the data centres. For example the majority of BODC, EODC and NGDC users answering this question spent less than 10% of their time using the data on additional processing. BADC has the highest number of users spending between 20% and 50% of their data use time on processing. One telephone interviewee stated" "Regarding the BADC: Allow more data formats. I find submitting and accessing data quite restrictive because the formats are not easy to use".

The majority (59.2%) of users of the data centres regarded the data they obtained as essential to furthering their work – see Figure 20. The level of response was variable across the data centres with over 70% of users of the NGDC and SSDC regarding the data as essential.
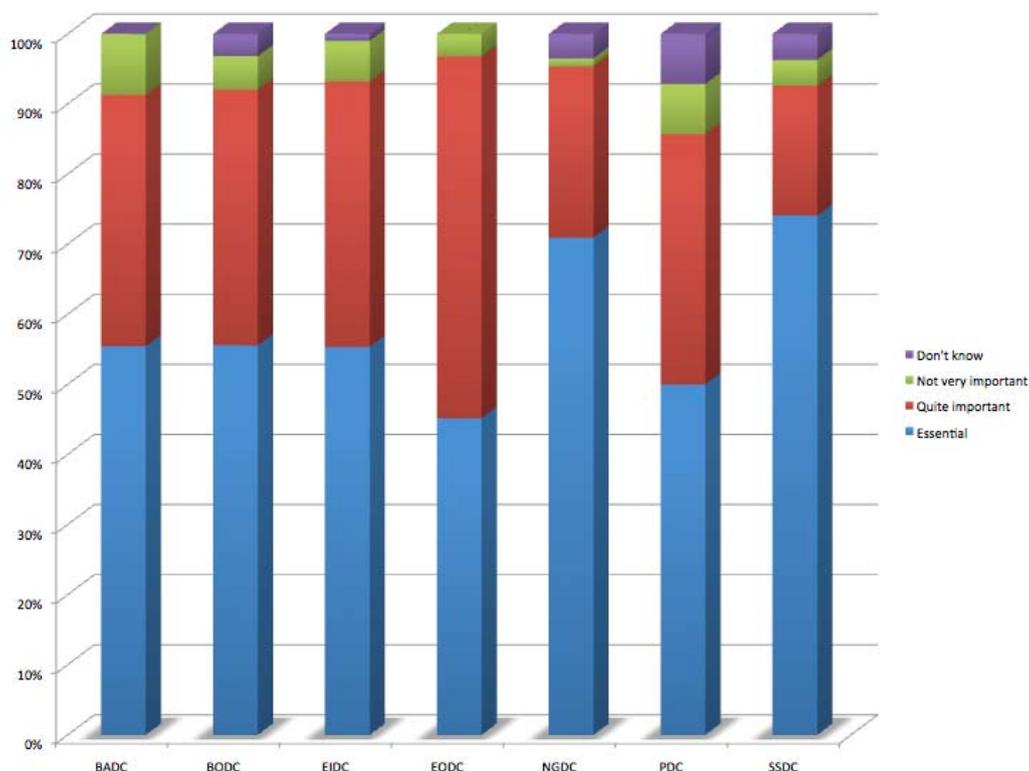
Figure 20: Response to the question: "To what extent was using the data critical to furthering your work?" organised by EDC.

The telephone survey asked interviewees about certain aspects of the data centres: see Figure 21. Interviewees thought that easy access to the data they needed was the most important attribute; 87% considered this "very important". Secure archiving was thought to be "very important" to 56% of users. Speed of response was an important issue with 85% listing it as either "very important" or "quite important". A relationship with the data centres was also seen as important with 85% listing it as either "very important" or "quite important". The least important aspect appears to be "specialists available to help with analysis" with 35% of interviewees describing this aspect as either "not important at all" or "not very important". However, 53% thought that it was, listing it as either "very important" or "quite important". This may represent the needs of different sectors. It may be

that University/HE and Research Institute/Facility don't value this aspect, while it is important to other sectors such as the Public Sector and Commercial/Industrial.
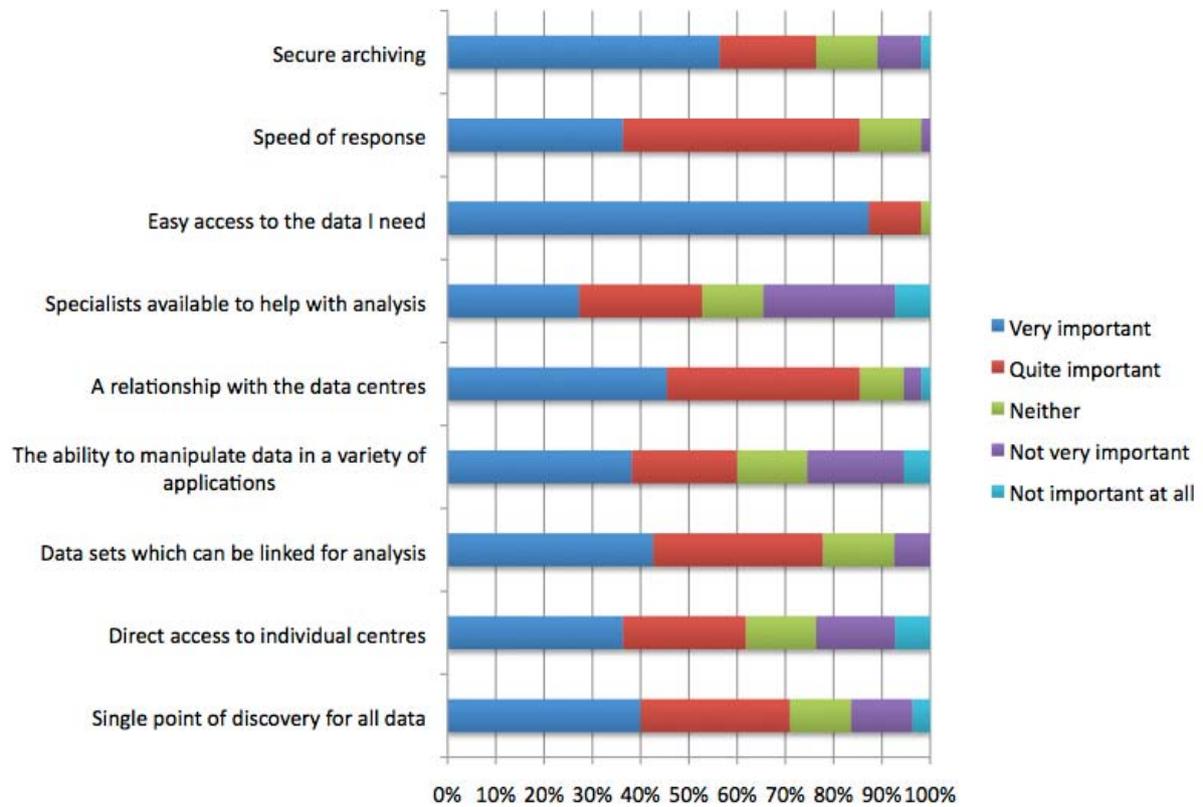
Figure 21: Telephone interviewees were asked: "How important to you are the following aspects of NERC Data Centres?" (Base: 55 interviewees)

A different view of the response immerges when interviewees were asked to identify the single most important aspect: see Figure 22.
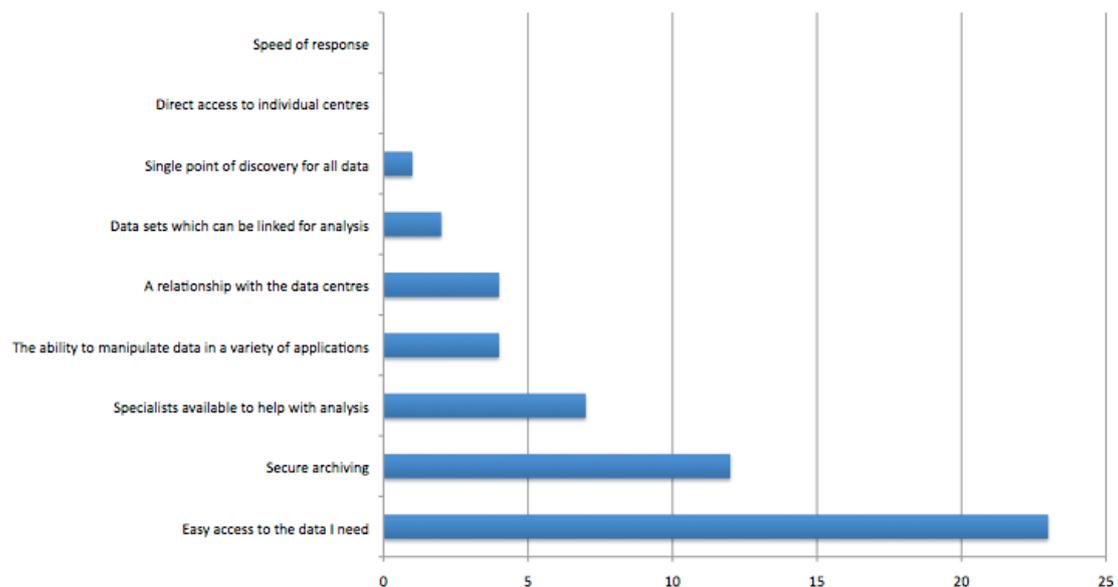
Figure 22: Telephone interviewees were asked: "Which of those is the most important aspect of the NERC Data Centres service to you?" (Base: 55 telephone interviewees)

Easy of access remains the most important and secure archiving remains high. Speed of response is not considered the most important aspect by any interviewee, this is despite 85% listing it as either "very important" or "quite important" in the multiple choice question: see Figure 21. Specialist available to help with analysis is considered the most important aspect by 13% of interviewees. This could be interpreted as suggesting that non-specialists find this an important service.

Telephone interviewee comments include:

- "Having specialists who understand you and can help you and are knowledgeable about the data and the users. Have the expertise and do their best to record information so it is available. Expertise acts as advocates for the Data Centres.
- "Long term security of data and the continuing archiving of new data - that the datasets continue to grow. This is important as ionospheric data only cover 5 sun spot cycles, but longer term measurements are vital for longer term trends to be established (e.g. relationship with climate change). Therefore maintaining present ionosonde network to support these long term measurements in a consistent manner is vital. User works with ITU and they are looking at GPS - ionospheric maps being used for this these maps are 50 years old, but these all need to be updated due to changes in the earth's magnetic field. Ground based, static measurements are essential for this."
- "Mainly easy access - main bug bear is need to register for access beforehand... also problems as a company so questions why data collected at public expense is not open access (e.g. Chilbolton Radar, and river levels - wants near real time data)."
- "Easy access then relationship then archiving safety then compatibility of data."
- "Secure archiving. Importance retaining material for future research."

The telephone interviewees were asked if they agreed with a number of statements about data from NERC. The results are summarised in Figure 23.
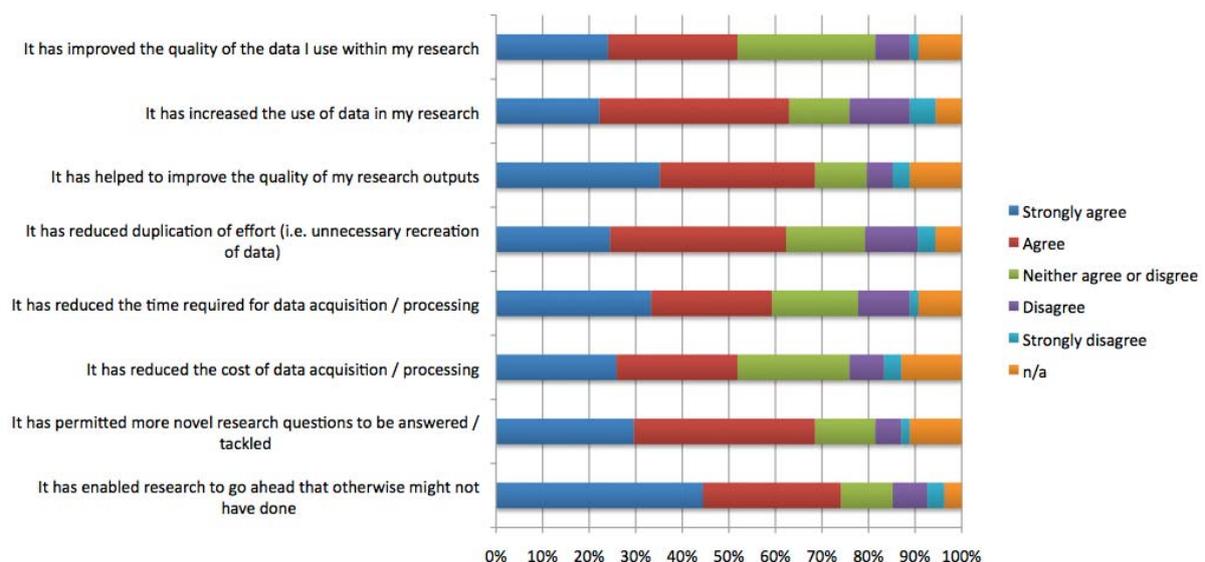
Figure 23: Telephone interviewees where asked if they agreed with statement about data from NERC (Base: 54 telephone interviewees).

Over 50% of interviewees "agreed" or "strongly agreed" with the statements. The more emphatic response was to the statement: "It has enabled research to go ahead that otherwise might not been done." Over 44% of interviewees "strongly agreed" with this statement and a total of 74% either "strongly agreed" or "agreed" with it. The statements "It has helped to improve the quality of my research outputs" and "It has permitted more novel research questions to be answered/tackled" both scored 69% agreement when the totals for "strongly agree" and "agree" are combined.

Interviewees who answered this question also commented:

- "We are not a research organisation   - we take science that exists and combine it with our business needs   - in some cases it would not be possible to come up with our tools without NERC data and expertise. There are specific examples where NERC data has been used in innovative research   - e.g. flood risk tools   - if the data were not there, there would be a need to create the data set."
- "NERC can still do more to ensure Universities provide data to Data Centres."

The telephone interviewees were asked if they could change one thing about NERC data service, what would it be? The verbal responses are summarised in Figure 24. Answers to this question reveal a range of responses, of which functionality is the highest scoring. Quality assuranceand deposit issues were the lowest scoring. This either indicates that the data centres are doing a satisfactory job on QA or that quality is not valued.
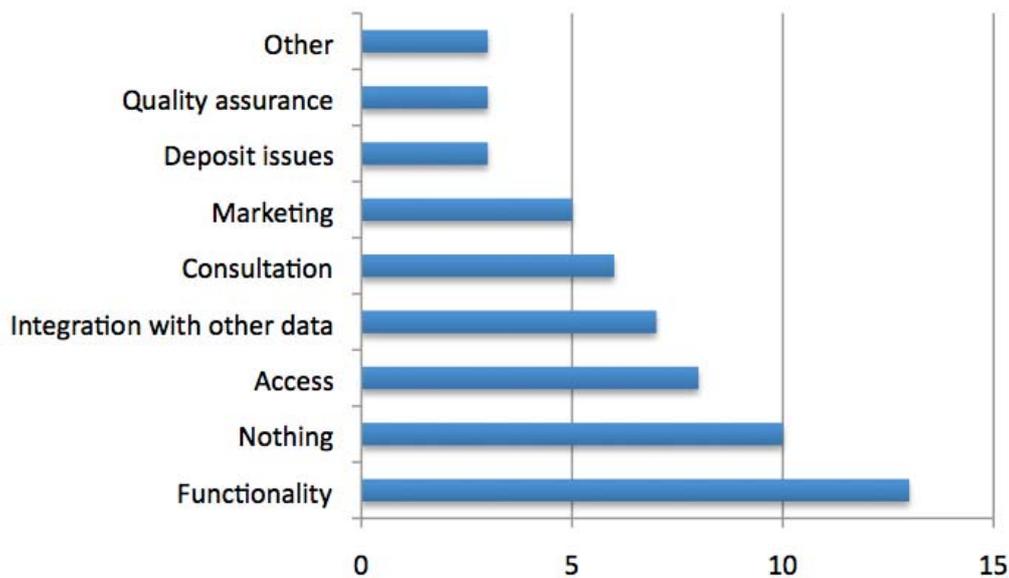
Figure 24: Telephone interviewees were asked: "If you could change one thing about NERC data service, what would it be?" (Base: 53 telephone interviewees)

Interviewees commented:

- "Marketing the data that NERC has to other people. Many of my colleagues do not know about NERC data There are many factors that effect invertebrate life in the water ways and it would be good to know what data is available - low productivity is not necessarily all to do with predation. Soil samples at water margins are example of information it would be good to know about."

- "Expand the amount of information is accessible via the web."
- "External access on line to more of the large scale/ and historical mapping material available within NGDC."
- "Some kind of compulsion for researchers to deposit data and resources available to manage it."
- "I would have the level of detail I want available over the web - is this a lot to ask?"
- "The ability to search the metadata across all institutions and datasets."
- "Consistency and relevance. A dialogue between data centres and user requirements would be valuable data dumps are not useful."
- "Consulting the community more. We have good data professionals but it works best when they sit down with working scientists. Data scientists would benefit hugely from sitting down with scientists and asking them to show how they work their data."
- "As a coupled modeller - better link up between the BADC and BODC, cross referencing between atmospheric and oceanographic data sets."
- "Add the ability to subset large datasets - a particular example would be IASI data (e.g. downloaded 4 Tb and discarded 3.5 Tb) - e.g. by area or temporally. (there was a discussion before the last NCEO meeting which highlighted this and other issues, e.g. there were more requests for funding to large local storage for large local stores of large datasets when sub-setting could be centralised making these local storage requests redundant and far more efficient transfers could be done when dealing with pre-subsetted data at source (i.e. NEODC)."
- "Better assurance that the data services would continue to exist and information on the long term plans."

Barriers to Access
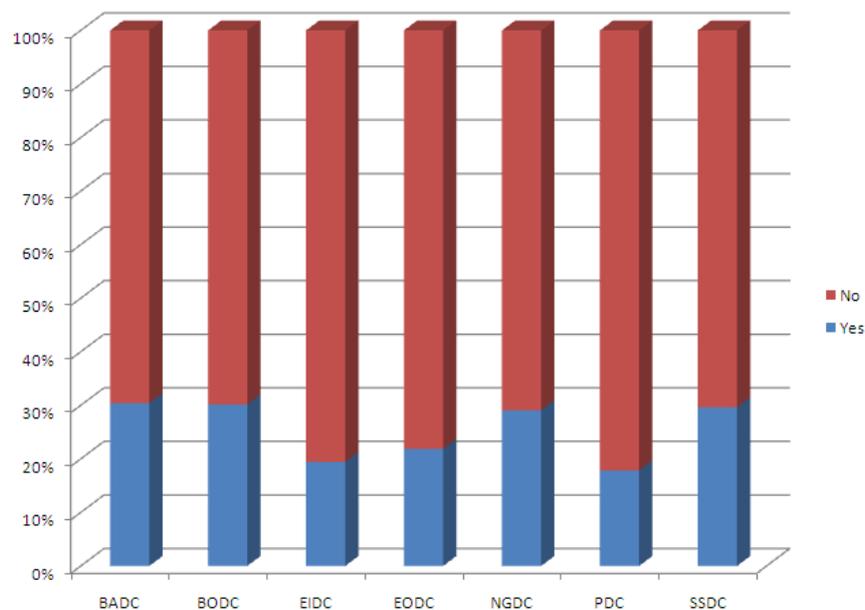
Figure 25: Response to the question: "Have you ever tried to obtain or use data from NERC without success?" organised by EDC.

In response to the question in the online survey: "Have you ever tried to obtain or use data from NERC without success?" the majority of users had successfully obtained and used the data they needed. However, there are significant number of users who have encountered problems; shown as the Yes (Blue) respondents in Figure 25.

The follow on question asked users to select common barriers to access (Figure 26) from the following list:

- Data not held by NERC
- Unable to identify the required data
- Data were not fit for my purpose
- Data were in an unsuitable format
- Data were too expensive
- Licensing restrictions on the data
- Other

Figure 26: Shows the percentage of respondents indicating a particular barrier to access, organised by data centre (Base: 99 data centre users)

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Figure 26 illustrates that different data centres have different issues when it comes to barriers to access. The sample size is relatively small (99 respondents) so the figure is illustrative rather than accurate (SSDC has been excluded because of a small sample size). However, there are a number of conclusions that can be inferred, in conjunction with other data collected.

1. Data not being held by NERC is not a significant issue for data centre users. The survey asked the question: "Do you use data from sources other than NERC?" with 87% of respondents using other sources of data.

2. Being able to identify the required data is the most significant issue. The importance of high quality resource discovery metadata cannot be under estimated.

3. The data centres need to work together to manage expectations. Users are looking for data that we do not hold, or finding data that is not fit for their specific purpose. We need to publish clear collections policies for the data centres so that users know what we do and don't hold. The data centres also need to provide metadata of sufficient quality to allow potential users to assess its suitability for their intended purpose.

4. Unsuitable data delivery formats is an issue that concerns a number of users. There are two aspects to this issue. First, the data centres need to consider whether they are using the delivery formats that the majority of users can reasonably expect. Second, the data centres need to manage the expectation of what formats are provided.

5. Licensing restrictions and costs remain an issue for some users. Again the resolution of these issues involves managing user expectations.

A number of users cited other barriers to access. Illustrative user comments are listed below:

Technical difficulties with systems
- "Trouble extracting data from the online extraction facility."
- "Constant problems trying to download data."
- "Extremely difficult to access large volumes of data."
- "Unable to access data via OGC services (unsupported method due to no security) for a portal - ended up getting data directly from the original PI."
- "Data extractor not working."
- "Problems with correct search criteria - dialogue boxes abstruse at times."
- "Borehole logs and geological maps held as scans according to indexes but when try to access they are not available so one does not know whether the indexing is wrong or they do exist but not linked correctly."

Technical restriction at user's site
- "Computer restrictions at Defra."

Delays in making data available
- "Delay on publications"
- "The authors of the data were behind schedule in delivering the data."
- "Data not ready - not sure why CEH has taken 3 years to make Land Cover 2007 data available - remarkably slow."
- "Backlog of unprocessed accessions."

Attitude of NERC staff

- "Fobbed off by staff member who just kept telling me they would do it in a few weeks time."
- "No response to query."
- "I was informed by letter that the data could be provided but that CEH staff must approve and co-author any subsequent publication."

Respondents to the online survey had never tried to obtain or use data from a data centre were asked to indicate why. The overwhelming majority of the respondents were not aware what might be available: see Figure 27. Over 80% of the Public sector and commercial/industry, and 60% of the University/HE respondents, who do not use the data centres, were not aware of what might be available: see Figure 28.
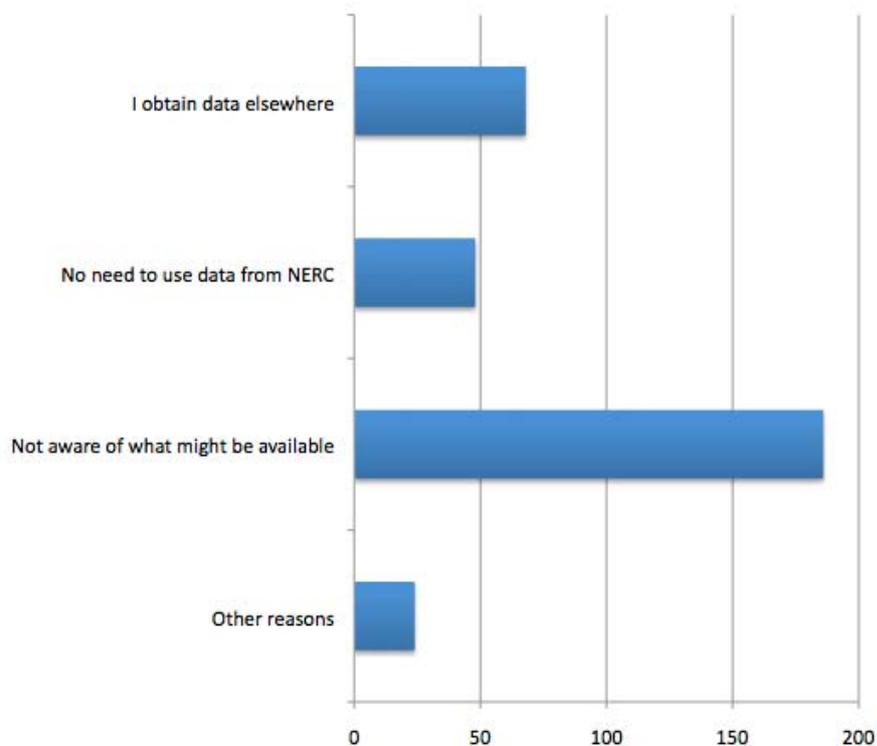
Figure 27: Responses to the question: "Please indicate why you have not tried to obtain/use data?" (Base: 259 non-data centre users).

Not aware of what might be available
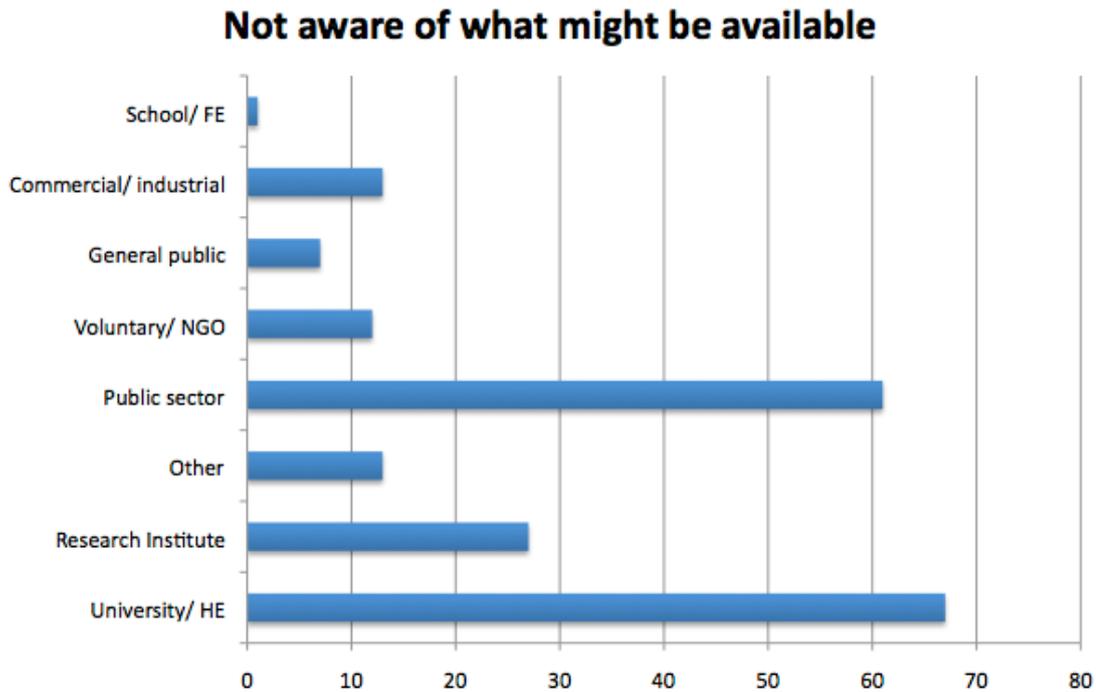
Figure 28: Responses to the question: "Please indicate why you have not tried to obtain/use data?" who answered "Not aware of what might be available", organised by sector (Base: 186 non-data centres users).

It is clear that potential users of the data centres are not aware of what might be available. This suggests that the data centres would benefit from some well targeted promotion.

Depositing Data

Just under a third of respondents have deposited data with a NERC data centre. This does not increase significantly if the academic community[9] are considered separately, as only 38% have deposited data. This figure should be considered as disappointing given that 67% of this community, who responded to the survey, have received grants in the last 5 years.

	Number	%
Within last year	89	48.9
Last 5 years	65	35.7
Last 10 years	16	8.8
Longer ago	12	6.6
Total	182	100.0

Table 3: Responses to the question: "When did you last deposit data?" (Base: 182 data centre depositors).

The data centres are actively bringing in data; nearly 50% of respondents had deposited data in the last year: see Table 3.

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[9] Univeristy/HE plus Research Institute
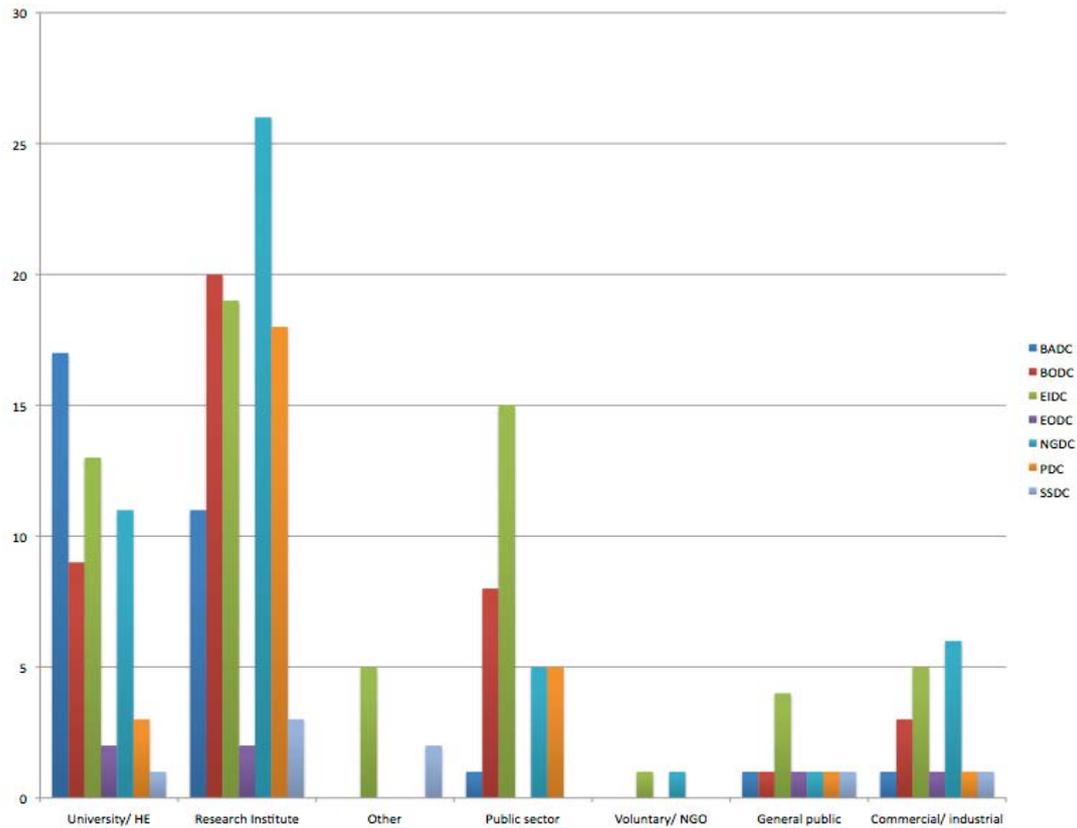
Figure 29: Responses to the question: "In which Data Centre(s) have you deposited data?" organised by sector (Base: 182 data centre depositors).

Figure 29 shows the sectors and the data centres used by those sectors. Clearly the Research Institute/Facility and the University/HE are the dominant depositors, but there are smaller, but valued, contributions from the Public Sector and Commercial/Industrial sectors.

Electronic/digital data is the principle type of data used (82% overall): see Figure 30. This matches the patterns illustrated in Figure 13 for data use. Physical sample/collections come second with 26% of respondents overall depositing this type of data.
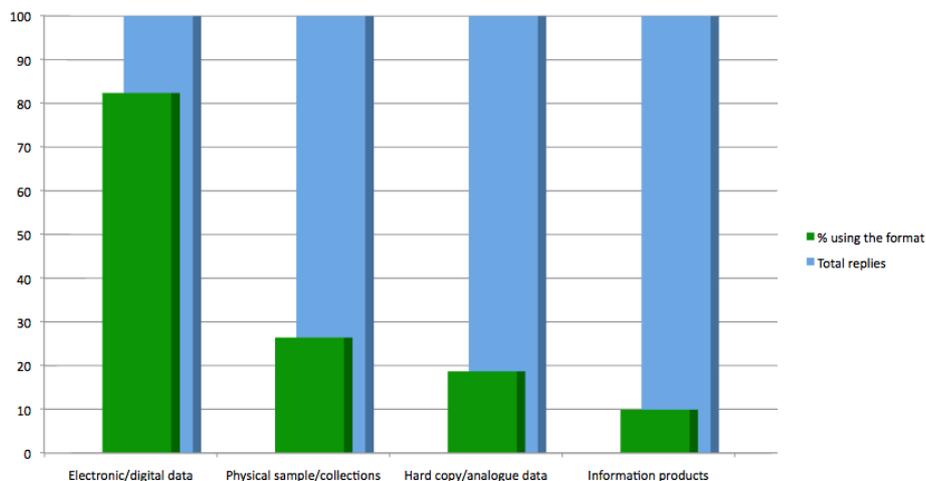
Figure 30: Responses to the question: "Which type(s) of data did you deposit?" (Base: 182 data centre depositors)

Nearly half (49%) of those depositing data with a NERC data centre do so because it is mandated by NERC as part of their grant conditions: see Figure 31. This is followed by the user choosing to deposit (36%) and the desire of users for their data to be in a secure and persistent archive (34%). The level of users depositing because it is the policy of the organisation they work for is disappointing at 17%. NERC could be actively promoting this change in the policies of University/HE and Research Institute/Facility.
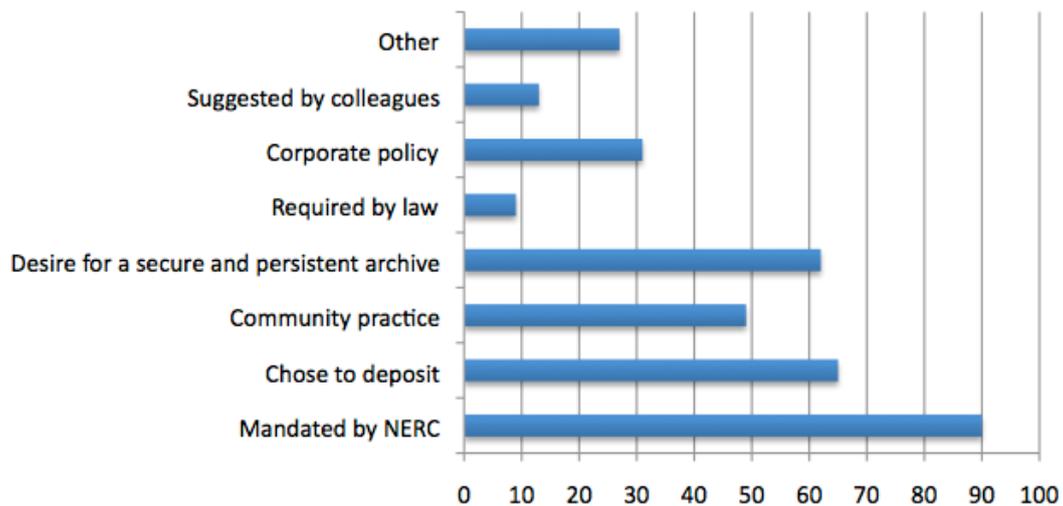
Figure 31: Response to the question: "What prompted you to deposit the data?" (Base 182 data centre depositors)

Depositor comments suggest that policy, best practice and agreements are an important driver to deposit (see below). The reputation of the data centres is also important as is the building of existing important collections.

Policy/Best Practise/Agreements
- "Promote best practice and required by EU funded project."
- "CCMVal project requirements."
- "Project data policy."
- "IEEM recommendation"
- "Provision of hydrometric data under MOU and SL with measuring agencies."
- "Quid Pro Quo agreement with NGDC."

Reputation
- "PDC has links to well structured sample record system. Also has storage space and good archive people."
- "To facilitate easier use of NIMROD uk-1km composite data by future researchers."
- "It is the only truly national, independent repository for geoscience information in the UK."

Adding established collections
- "PhD research using BGS specimens."

In response to a question asking users how easy they found the deposition process 69% found it "very easy" or "quite easy" compared with 11% who found it "very difficult" or "quite difficult". This average figure hides issues at the PDC, where users were less satisfied with the process.

Figure 32 illustrates the comparison between PDC and the other data centres. Only 48% of PDC users found the process of depositing data "very easy" or "quite easy", whilst 24% found the process "very difficult" or "quite difficult". Data depositors were invited to make comments. All data centres received a mix of positive, neutral and negative comments. The five comments submitted for the PDC are shown below:

- "Awkward system, too manual, undefined purpose, no clear benefit from doing so."
- "Polar Data Centre seems short-staffed for basic inputting of data (though the staff who are doing it are good), and perhaps overloaded with less-fundamental capabilities."
- "Overall our data centre is adequate for our particular working needs & is pretty straight forward to use, & when I have any problem I have always been quickly helped to rectify any problem I've had."
- "I wish to deposit all of the data I have in my custody, but find the NERC system complex, under-staffed and does not provide DOIs. I am likely to use the EGU in future."
- "Plenty of support already given by BAS."
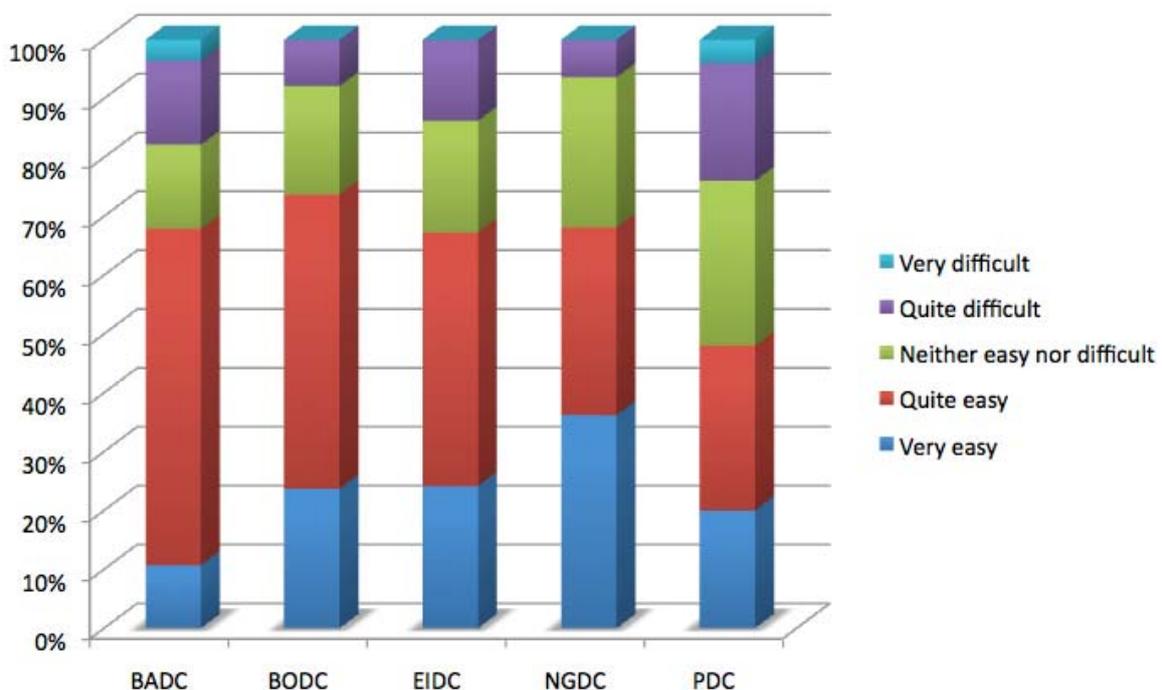
Figure 32: Response to the question: "How easy did you find the overall process of depositing data?" organised by EDC (Base: 182 data centre depositors)[10]

In total 15 potential depositors had tried to deposit data without success. These were spread across all data centres.

Telephone interviewees regarded help during the process of depositing data as important. Only 26% of those interviewed had deposited data without any help. Almost 30% said they needed a lot of help to deposit data. Some of their comments are listed below:

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[10] EODC and SSDC sample were to small to be meaningful.

- "BADC staff are very helpful."
- "Through RAPID and BODC. Support was available to help. Would have found it difficult without and easy to not bother."
- "Sent information on excel spreadsheet with covering notes and the rest was done by someone else."
- "A little - again very prescriptive. Very much told what to do, no flexibility."
- "Wasn't clear in the guidance what format was required and I had to search that out."
- "Only because of the support was it easy to do. They (data centre) did most of the work."
- "Great, good follow-up. Hassled for return of specimens and research output, by Curator, which was exactly what was needed."
- "Gave up - by passed NERC completely."
- "I got there in the end. There is quite a lot of online help but you have to go on a merry dance to get all the information you need. Guidance could be more user friendly."

Data of Long-term Value

(Taken from Creaser, C., Greenwood, H., and White, S. 2011. Stakeholder Consultation Project: Survey Analysis. Consultancy Report commission by NERC from LISU, Loughborogh University)

Participants in the telephone survey were asked to identify the important factors in determining whether data are of long-term value to the environmental science community. The most important issue, referred to by more than half of all respondents to this question, was data quality. This was frequently felt to be associated not only with the completeness and accuracy of the record, but also with how the data had been collected, and by whom:

- "Accuracy of collecting the data A person who has surveyed the same area of land for 20 years will get better at observing changes. Would be useful if this kind of information can be captured in the metadata. Also whether more than one person is making the observations."
- "... confidence in the data, indication of the errors, quality assurance..."
- "The integrity of the data the accuracy of the data the completeness of the data..."
- "quality control history of the data and how it has been generated..."

Associated with this was the quality of the metadata, mentioned by 24 respondents. Some felt that without high quality metadata, future use might be limited:

- "accuracy of calibration of instruments date and time recording need to be accurate in the data location of where the measurements are made quality control of data but also knowledge of external factors surround data acquisition:
- "Properly described data (in 10 years time researchers won't know what is undescribed."
- "Metadata - can never have too much!"

Time series and historical data were also thought to be valuable, mentioned specifically by 22 respondents. Some also noted that it was important that such data should be collected consistently.

- "part of long term dataset - long term monitoring rather than one off experiments."
- "Able to identify if there have been any changes in a dataset over time that can be attributed to other factors, e.g. climate change, human activities - e.g. water quality being affected by pollution etc. The time span of the dataset needs to be sufficiently long enough to resolve long term trends. It is important to have old data to compare against with future samples/surveying."
- "Should be from long-term data sets of relevance to community"

Data sets which were unique or could not easily be replicated also had their proponents:

- "In Palaeontology lots of localities disappear and new material is no longer available Historical Aspect - original specimens need to be available for verification"
- "datasets that no one else could collect or repeat"

Perhaps surprisingly, only 13 respondents talked about the accessibility of the data, although maybe this was taken as a given. One made the point very succinctly: ..."not accessible = not usable ...". Others considered the fitness for purpose of the data, and whether it was held in appropriate

formats for re-use. There were a small number of comments expressing opposing views as to what the appropriate format might be, however:

- "raw and disaggregated data - very important."
- "Not all the raw data but something that has meaning and is well documented"

While some respondents referred to the need for data to be re-useable, ten respondents expressed concerns that it was impossible to know what was of long term value at the time the data were collected, and as a result everything of sufficient quality should be archived:

- "it is difficult to predict what we need . As long as good quality data should be archived as may be needed and important in future"
- Many cases where unwanted data has found a use in the future so difficult to prioritise what is important (potential user)

One suggested that NERC could assess the ongoing importance of data by monitoring hits of data usage.

Other factors mentioned by only one or two respondents each included the relevance of data sets to policy, the international standing of the research generating the data, and whether it was generated using public funding.

Conclusions

There are a number of initial conclusions that arise from the Stakeholder Consultation. These are listed below. The dataset created during this project is very rich and diverse and should be studied further during the second phase of the Science Information Strategy Implementation.

1. The study has met its goal of finding the views of existing and potential users. The demographics clearly indicate the success: see Figure 3. We have a good spread across the major sectors and research areas (Figure 2). In total 715 responses were received to the online survey of which LISU included 607 in the anlaysis. The other 108 were incomplete or inappropriate for other reasons.

2. There is a high level of stakeholder satisfaction with the services from the data centres: see Figure 4 and Figure 6. Figure 4 shows that 87% of respondents are either "very satisfied" or "fairly satisfied" with using the data centres; whilst Figure 6 shows that 75% of respondents depositing data are either "very satisfied" or "fairly satisfied". There is clearly some work to be done in improving customer satisfaction, especially with the process of depositing data, but the overall satisfaction rates are very gratifying.

3. The PDC appears to be under performing when compared to the other data centres. The evidence that indicates this can be seen in the following figures and the associated text commentary: see Figure 8, Figure 9, Figure 14, Figure 17 and Figure 26.

4. The profile of the data centres needs to be raised: see Figure 27 and Figure 28. There is clearly considerable ignorance about the data centres. A disappointing 22% of those interviewed by telephone said they would consult NERC data centres in the first instance. From comments acquired during the study it is clear than some researchers have fixed habits for acquiring data, which in some cases do not include NERC data centres. The profile of NERC data centres in the Public Sector is also too low.

5. High quality metadata is valued by the data centre users. There are a number of specific requests by users to improve the quality and make it simple to search. Figure 26 suggests that being unable to identify the required data is the most significant barrier to use of the data centres.

6. NERC has clear policies that those funded by NERC must deposit data in NERC data centres. However, only 38% of the respondents from the academic community[11] had deposited data, even though 67% of the community had received NERC grants in the last five years. Clearly more work needs to be done in this area. Some stakeholder organisations have policies that support NERC's policy by requiring staff to deposit data with data centres. This policy alignment reinforces the messages to staff and helps build the desired culture. The NERC data centres should explore ways of encouraging such policies in stakeholder organisations.

7. The barriers to use of NERC data centres need to be further investigated. Some of these have been addressed in the updated NERC Data Policy but the message needs to be communicated clearly to the user communities. Others need more work and should be explored in the later phases of the Science Information Strategy Implementation.

8. The NERC data centres have many users who require more than just digital data: see Figure 13 and Figure 30. For example 26% of depositors are depositing physical samples or collections.

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[11] Comprising University/HE sector and Research Institute/Facility

9. Ease of use of the system developed by the data centres is commented on several times by users. During the telephone interviews more users listed improved functionality as the one thing they would change: see Figure 24. Once users had identified a dataset in a data centre over 10% of them found it 'very difficulty' or 'quite difficult' to obtain the data: see Figure 16 and Figure 17. This figure rose to 23% for the PDC.

10. The specialists being available at the data centre staff is clearly important to some stakeholders and not to others: see Figure 21 and Figure 22. For some, having specialists available to help with analysis is the most important data centre service (Figure 22) for others it is not an important service (Figure 21). It is possible to speculate that academics don't value this service while non-specialists do value it. However, this area needs further investigation to discover what is really required by stakeholders and what is legitimate for NERC to support. It may be we could increase commercial use and policy impact by support non-specialists to use NERC data.

11. Digital systems delivering data are seen as the cheapest way to meet user requirements. Many stakeholders comment that they want simple digital systems that take them to the data they want. However, it clear that some users value personal contacts with data centre staff. In some case the primary search tool was to ask a data centre contact. This area needs exploring further to find out what is really required by stakeholders and what is legitimate for NERC to support.

12. Multi-disciplinary users make comments suggesting that they would welcome better links between the NERC data centres. There appears to be specific requirements for pairing of data centres rather than a whole scale union. BADC and BODC are specifically mentioned for ocean atmosphere interaction.

13. Over 90% of the respondents were UK based. It is unclear whether this reflects reality or is a bias created by the sampling methodology. Work in later phases of the Science Information Strategy Implementation needs to look at non-UK users of the data centres.

14. NERC needs to define and publish clear collections policies for the data centres. This will allow users to understand what data is held and can be deposited. It will also help dispel the perception that NERC data centres have parochial collections rather than the global reach that they have.

15. The requirement to register at some NERC data centres is a real annoyance to some users, solving the problem may increase user satisfaction.

16. The range of formats in which data is delivered to users, or in which users must provide data for deposit, is an issue with a number of users: see Figure 26. Solving this problem would increase overall user satisfaction.

Appendix 1 – NERC Data Centres online questionnaire

NERC Data Centres online questionnaire

Comments in green are notes for the web form designers

NERC's Environmental Data Centres – tell us what you think

The Natural Environment Research Council (NERC) manages a number of environmental data centres. These are a unique resource of data and information about our environment from the earth's core to the edge of the solar system. The data centres hold data and information from environmental scientists working both in the public and private sectors in the UK and around the world. It is available through the website data.nerc.ac.uk.

In order to ensure that the data centres are delivering the range of services that users need, NERC is keen to understand what existing and potential users think of the services that are currently offered. To help develop this understanding, NERC invites you to complete this short which will take no more than 10 minutes to complete.

<p style="text-align:center; color:red;">LINK TO SURVEY HERE</p>

This work is being undertaken as part of the activity to implement NERC's new Science Information Strategy. For further information on the strategy see http://www.nerc.ac.uk/research/sites/data/sis.asp.

For more information, or general enquiries about NERC's environmental data and information, please contact the data management co-ordinator, Mark Thorley.

Please respond to all questions from your personal perspective, not on behalf of your organisation.

Section A – About you

A1   Are you based in the UK?   Yes   No

A2   Please indicate the sector which best describes where you are based:

University/Higher Education	Research Institute/Facility
Public sector	Commercial/industrial
Voluntary	School/Further Education
General public	Other. *Please specify*

[Filter: If based in HE or a Research Institute/Facility]

A2.1   For how long have you been involved in academic research (including any time spent as a postgraduate student)?

Fewer than 3 years   3-6 years   6-10 years   10-20 years   longer

A2.2 What is your main area of research? [Allow multiple response here, but don't suggest it!]

Atmospheric
Earth
Earth observation
Marine
Polar
Science-based archaeology
Terrestrial and freshwater

A2.3 Please give details

[Free text]

A2.4 Have you received any grant funding from NERC within the last 5 years?

Yes   No

[Filter: Other respondents]

A2.3i What is your main area of activity/interest?

[Free text]

Filter question:

A3 Have you ever used data from any of the NERC Data Centres?

Yes   go to section B

No   go to section C1

Not sure   go to section C1

Section B – Use of data from NERC Data Centres

B1 **Which of the following data sources have you used?** *Select all that apply*

Archaeological Data Service
Biological Records Centre
British Antarctic Survey
British Atmospheric Data Centre
British Geological Survey
British Oceanographic Data Centre
Centre for Ecology and Hydrology
Environmental Information Data Centre
National Oceanographic Centre (including Plymouth Marine Laboratory)
National River Flow Archive
NERC Earth Observation Data Centre
NERC Environmental Bioinformatics Centre
National Geoscience Data Centre
Polar Data Centre (formerly Antarctic Environment Data Centre)
UK Solar System Data Centre

B2 **For how many years have you been using NERC data?**

Less than 1   1-3   4-6   7-10   11-20   more than 20

B3 **Which types of data do you use?** *Select all that apply*

Electronic/digital data   hard copy/analogue data

physical samples/collections   information products

B4 **When did you last seek to obtain data?**

Within last year   last 5 years   last 10 years   longer ago

B5 **How easy did you find it to obtain the data you were looking for on that occasion?**

Very easy   quite easy   neither easy nor difficult   quite difficult   very difficult

B6 **What did you use these data for?**

[Free text]

B7 **Were the data suitable for immediate use/analysis, or were additional processing steps required?**

Suitable for immediate use   Additional steps required

[Filter: If Additional steps required]

B7.1   Approximately what proportion of the total time spent using the data did this processing occupy?

0-5%   5-10%   10-20%   20-50%   more than 50%

B8   Overall, how satisfied are you with the NERC Data Centres(s) you have used?

Very satisfied   fairly satisfied   neither   fairly dissatisfied   very dissatisfied

Filter question:

B9   Have you ever tried to obtain or use NERC data without success?

Yes   go to section C2

No   go to section D

Section C1 –Barriers to access

C1   Have you ever <u>tried</u> to use any NERC data?

Yes   No

C1.1   From which centre(s)? *Select all that apply* List as in B1

C1.2   What were the barriers? *Select all that apply*

Data not held by NERC

Unable to identify the required data

Data not fit for my purpose

Data in unsuitable format

Too expensive

Licensing restrictions

Other. *Please specify*

C1.3   Please indicate why you have not tried to obtain/use data. *Select all that apply*

No need to use NERC data

I obtain data elsewhere

Not aware of what might be available

Other reasons. *Please specify*

Section C2 – Barriers to access

C2.1   From which centre(s) did you try to obtain or use data without success? *Select all that apply* List as in B1

C2.2   What were the barriers? *Select all that apply* *List as in C1.2*

Section D – Use of other data

D1 **If you use data from sources other than NERC, please give details.**
[Free text]

Filter question:

D2 **Have you ever deposited data in any of the NERC Data Centres?**

Yes   go to section E1

No   go to section E2

Section E1 – Depositing data

E1.1 **In which Data Centre(s) have you deposited data**? *Select all that apply* List as in B1

E1.2 **When did you last deposit data?**

Within last year   last 5 years   last 10 years   longer ago

E1.3 **Which type(s) of data did you deposit?** *Select all that apply*

Electronic/digital data   hard copy/analogue data   physical samples/collections
information products

E1.4 **What prompted you to deposit the data?** *Select all that apply*

Mandated by NERC   Required by law

Chose to deposit   Corporate policy

Community practice   Suggested by colleagues

Desire for a secure and persistent archive   Other. *Please specify*

E1.5 **How easy did you find the process overall?**

Very easy   quite easy   neither easy nor difficult   quite difficult   very
difficult

E1.6 **How satisfied were you with the process overall?**

Very satisfied   fairly satisfied   neither   fairly dissatisfied   very dissatisfied

E1.7 **Please add any general comments about depositing data**
[Free text]

[Go to Section F]

Section E2 – Depositing data

E2.1   Do you have data that you think could be relevant to the environmental science community, which the NERC Data Centres could hold?

Yes   No   Not sure

[Filter: If yes]

E2.1.1 Please give details
[Free text]

E2.1.2 What has prevented you from depositing it? *Select all that apply*
Don't know how   Too difficult   Not enough time   Data Centre(s) didn't want it
No funding to do so   Inappropriate format   No demand identified   Other.   *Please specify*

E2.1.3 What would encourage you to deposit your data in the future?
[Free text]

[Filter: If not sure]

E2.1.1i Please give details
[Free text]

Section F – Comments & contact details

F1   Please add any further comments about the NERC Data Centres
[Free text]

We would like to follow up a sample of responses with some more in-depth questions, during a telephone interview lasting no more than 20 minutes. If you are willing to be approached, please tick here and give your contact details

Name:

Email:

Daytime phone no:

Data protection statement – contact details will be used only in connection with this research, and will not be passed to any third party. Responses will be anonymised for analysis and archiving.

Appendix 2 – Telephone Questionnaire

Telephone Questionnaire

This will give an opportunity to gain more in-depth and qualitative information than the online survey. It would be beneficial for interviewers to refer to each interviewee's response to the online questionnaire prior to the interview. Demographic information will have been collected in the first questionnaire, so there is no need to ask for these details again.

<Intro to be supplied by NERC>

Awareness

1. **Apart from the NERC Data Centres you use, are you aware of any others?** *Please name them*
2. **How did you become aware of the NERC Data Centres?** [More answer options needed]

      NERC publications   Colleagues   Academic supervisor   Other. *Please specify*

Identifying data

3. **When you're looking for environmental data, do you generally approach NERC in the first instance?**

      Yes   No   Varies

      If 'no' or 'varies'

      3a. What do you do?

4. **Whenever you do go to NERC, by what means do you identify data?**
5. **What (if anything) would make it easier to identify data?**

Value – for users of and/or depositors at NERC Data Centres

6. **How important to you are the following aspects of NERC Data Centres?**

      v important   quite important   neither   not v important   not important at all

   a. Single point of discovery for all data
   b. Direct access to individual centres
   c. Data sets which can be linked for analysis
   d. The ability to manipulate data in a variety of applications
   e. A relationship with the data centres
   f. Specialists available to help with analysis
   g. Easy access to the data I need
   h. Speed of response
   i. Secure archiving

7. **Which of those is the most important aspect of the NERC Data Centres' service to you?**
8. **To what extent do you agree with the following statements about data from NERC?**

     Strongly agree agree   neither agree/disagree disagree   strongly disagree   n/a

   a. It has enabled research to go ahead that otherwise might not have done
   b. It has permitted more novel research questions to be answered / tackled
   c. It has reduced the cost of data acquisition / processing
   d. It has reduced the time required for data acquisition / processing
   e. It has reduced duplication of effort (i.e. unnecessary recreation of data)

f. It has helped to improve the quality of my research outputs

g. It has increased the use of data in my research

h. It has improved the quality of the data I use within my research

9. **If you could change one thing about NERC data services, what would it be?**

Impact – for users of data from NERC

10. **Overall, how important for your research/work are the data available from NERC?**

  v important quite important neither not v important not important at all

11. **What has been the impact of using data from NERC – e.g. what would have hapened if you hadn't had it?**

12. **Can you identify examples of wider impacts (e.g. on society, the economy, policy, etc.) that have resulted from your research, where data provided by NERC has played a significant role?** Ask them to explain briefly

Depositing data

If they say 'yes' to depositing data in the online survey QD2:

13. **On the last occasion you deposited data, how easy was it to prepare your data for submission?** (e.g. prepare metadata to recognised standards)

  Very easy quite easy neither easy nor difficult quite difficult very difficult

14. **How much support/guidance did you require in the deposit process?**

  None Some A lot   If appropriate, ask for details

15. **If applicable, to what extent did the support /guidance received meet your needs?**

  completely largely   partly   very limited not at all

  If appropriate, ask for details

If in Q E2.1 of the online survey they said 'yes'/ 'not sure' to having data which has not yet been deposited:

16. **Seek more details about these data** (if necessary)

Future development

17. **What factors do you think are important in determining whether data are of long-term value to the environmental science community?**

18. **Are there any other services that you would like to see provided by the NERC Data Centre(s)?**

Invite any other comments about the NERC Data Centres

Appendix 3 – Data from Online Questionnaire

A1 Are you based in the UK?

	Number	%
Yes	556	91.6
No	51	8.4
Total	607	100.0

	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	107	95.5	80	88.9	134	97.1	46	97.9	97	93.3	38	88.4	26	86.7	5	100.0
No	5	4.5	10	11.1	4	2.9	1	2.1	7	6.7	5	11.6	4	13.3	0	0.0
Total	112	100.0	90	100.0	138	100.0	47	100.0	104	100.0	43	100.0	30	100.0	5	100.0

	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	184	88.5	160	88.9	32	84.2	134	97.1	23	100.0	14	93.3	45	93.8	2	66.7
No	24	11.5	20	11.1	6	15.8	4	2.9	0	0.0	1	6.7	3	6.3	1	33.3
Total	208	100.0	180	100.0	38	100.0	138	100.0	23	100.0	15	100.0	48	100.0	3	100.0

	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	75	87.2	104	86.0	56	93.3	59	78.7	90	91.8	32	97.0	42	93.3	2	66.7
No	11	12.8	17	14.0	4	6.7	16	21.3	8	8.2	1	3.0	3	6.7	1	33.3
Total	86	100.0	121	100.0	60	100.0	75	100.0	98	100.0	33	100.0	45	100.0	3	100.0

A2 Please indicate the sector which best describes where you based:

	Number	%*
University/Higher Education	208	34.3
Research Institute/Facility	180	29.7
Other	38	6.3
Public sector	138	22.7
Voluntary/NGO	23	3.8
General public	15	2.5
Commercial/industrial	48	7.9
School/Further Education	3	0.5
Total respondents	607	

	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
University/Higher Education	50	44.6	23	25.6	39	28.3	19	40.4	23	22.1	9	20.9	14	46.7	1	20.0
Research Institute/Facility	48	42.9	41	45.6	36	26.1	16	34.0	48	46.2	26	60.5	9	30.0	0	0.0
Other. Please specify	3	2.7	4	4.4	15	10.9	1	2.1	2	1.9	0	0.0	2	6.7	0	0.0
Public sector	7	6.3	17	18.9	32	23.2	9	19.1	19	18.3	7	16.3	1	3.3	2	40.0
Voluntary/NGO	3	2.7	0	0.0	5	3.6	1	2.1	2	1.9	0	0.0	1	3.3	0	0.0
General public	2	1.8	1	1.1	5	3.6	2	4.3	1	1.0	2	4.7	3	10.0	1	20.0
Commercial/industrial	4	3.6	9	10.0	14	10.1	4	8.5	14	13.5	2	4.7	3	10.0	2	40.0
School/Further Education	1	0.9	1	1.1	2	1.4	1	2.1	1	1.0	1	2.3	1	3.3	1	20.0

	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
University/Higher Education	49	57.0	59	48.8	33	55.0	35	46.7	61	62.2	17	51.5	18	40.0	3	100.0
Research Institute/Facility	39	45.3	64	52.9	28	46.7	42	56.0	40	40.8	17	51.5	27	60.0	1	33.3
Total respondents	86		121		60		75		98		33		45		3	

Amateur geological society	Museum
combination	National Museum
consultant	Museum
Scientific Publishing	Local Record Centre
Private consultancy	A Natural History Museum
Charity	record centre
UKSSDC	Naturalists' Club
public sector/voluntary sector partnership	Independent consultant
Retired	Local natural history group
Professional Body	National Museum
Society of Biology	public sector/voluntary sector partnership
Intergovernmental	inter governmental organization
Trade Association	Central Government
Amateur geological society	International Governmental Organisation
Minerals Industry Trade Association	Local record Centre
Private research organisation	Privatised research company
Manufacturing	Water Company
Nat. Hist. Museum	consultancy
Natural History Museum	Local wildlife group chair, eco-hydrological consultant doing lots of volunteering.

A2.1 For how long have you been involved in academic research (including any time spent as a postgraduate student)?

	Number	%
Fewer than 4 years	40	10.6
4-6 years	18	4.7
7-10 years	54	14.2
11-20 years	126	33.2

	Number	%
Longer	141	37.2
Total	379	100.0

	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Fewer than 4 years	15	15.5	6	9.4	14	19.2	4	11.8	7	10.0	1	2.9	2	8.7	1	100.0
4-6 years	6	6.2	3	4.7	5	6.8	0	0.0	1	1.4	0	0.0	2	8.7	0	0.0
7-10 years	17	17.5	8	12.5	8	11.0	6	17.6	12	17.1	6	17.1	2	8.7	0	0.0
11-20 years	29	29.9	21	32.8	25	34.2	10	29.4	18	25.7	10	28.6	4	17.4	0	0.0
Longer	30	30.9	26	40.6	21	28.8	14	41.2	32	45.7	18	51.4	13	56.5	0	0.0
Total	97	100.0	64	100.0	73	100.0	34	100.0	70	100.0	35	100.0	23	100.0	1	100.0

	University/ HE		Research Institute	
	Number	%	Number	%
Fewer than 4 years	25	12.0	17	9.4
4-6 years	8	3.8	10	5.6
7-10 years	26	12.5	29	16.1
11-20 years	80	38.5	49	27.2
Longer	69	33.2	75	41.7
Total	208	100.0	180	100.0

	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Fewer than 4 years	10	11.6	17	14.0	11	18.3	5	6.7	6	6.1	5	15.2	2	4.4	0	0.0
4-6 years	9	10.5	6	5.0	5	8.3	3	4.0	3	3.1	1	3.0	1	2.2	0	0.0
7-10 years	13	15.1	19	15.7	7	11.7	6	8.0	14	14.3	6	18.2	8	17.8	0	0.0
11-20 years	23	26.7	32	26.4	21	35.0	31	41.3	42	42.9	13	39.4	18	40.0	0	0.0
Longer	31	36.0	47	38.8	16	26.7	30	40.0	33	33.7	8	24.2	16	35.6	3	100.0
Total	86	100.0	121	100.0	60	100.0	75	100.0	98	100.0	33	100.0	45	100.0	3	100.0

A2.2 What is your main area of research?

	Number	%*
Atmospheric	86	22.7
Earth	121	31.9
Freshwater	60	15.8
Marine	75	19.8
Terrestrial	98	25.9
Earth observation	33	8.7
Polar	45	11.9
Science-based archaeology	3	0.8
Total respondents	379	

percentage of respondents answering question A2.2

	University/ HE		Research Institute	
	Number	%	Number	%
Atmospheric	49	23.6	39	21.7
Earth	59	28.4	64	35.6
Freshwater	33	15.9	28	15.6
Marine	35	16.8	42	23.3
Terrestrial	61	29.3	40	22.2
Earth observation	17	8.2	17	9.4
Polar	18	8.7	27	15.0
Science-based archaeology	3	1.4	1	0.6
Total	208		180	

A 2.3 Volunteered details of main area of research

Sector	Main area of research	Volunteered description of main area of research
Commercial/industrial		retail sofware
		Environmental consultancy and software
		environmental services and consultancy
		Upstream EO
		Oceanography
		Geotechnics and surface water drainage
		geotechnical & environmental engineering
		Engineering Hydrology
		Hydrology and Hydrological modelling
		The planning and engineering of the built environment - geology, geotechnical engineering, hydrology and geo-environment
		Environmental Consultancy
		Marine Environmental Advice
		Spatial environmental & ecological data
		Sustainable business operations from agriculture, through food manufacturing to logistics, in the context of eco-system, resource depletion and cimate impact.
		River discharge and water quality data
		Sustainability
		Video and DVD Production for the Science, Medical and High Tech sectors.
		Ecology
		Ecological consultancy, records relevant to development proposals
		Environmental and geographic information consultancy and services
		marine, estuarine
		Ecological consultancy
		Oil and Gas consultancy, utilising UK and UKCS geological and environmental data
		Oil industry
		Energy
		Water
		Development of Cemeteries
		Commercial oceanography and meteorology and its impact on offshore oil and gas and other users of marine space.
		Structural geology and basin analysis for the petroleum industry
		Structural geology and basin analysis for the petroleum industry
		geotechnical engineering
		Town Planning Consultancy

			Air pollution including noise, dust, gases and climate
			Chemicals Regulation
			Metocean consultancy to offshore industries including oil & gas, wind farms, renewables, cables
			Earth Observation
			Energy and climate change, mining, land and property, waste resource management, infrastructure and utilities, environment and sustainability
			environmental risk assessment of chemicals
			Manufacture of data loggers and sensors
			Mineral exploration (geology)
			inspire
			Radio communications
			Ionospheric research and HF propagation Oceanographic data collection
General public			Ground beetles Invasive non-native plants
			Botany & Bryology
			dragonfly/bird/fungi/plant recording
			Entomological survey
			archaeology/fossils
			Mollusca - Land and Freshwater - distribution
			Energy demand reduction
			Radio propagation through ionospheric refraction
			Sharing of data collected by public bodies
			quantum physics
			Biological recording and surveys
			sustainable agriculture
			History of Geology (John Milne) Carboniferous rocks of the Bowland Sub-Basin
			Climate science
			Avian conservation and ecology
			rural and urban land use and development
			Ecology/Environmental Science
Multipule Sectors			Laboratory Analysis
			Research and evaluation
			radiowave propagation, radio spectrum management
			Interactions between marine bioresource exploitation and environment
			Antarctic Treaty matters
			Marine contaminants and bological communities
			Marine knowledge
			Mainly botany but also birds, butterflies, hoverflies, dragonflies and fungi
			Biodiversity and geodiversity datasets
			Habitat and species data input, collatin, management, analysis and dissemination.

		Minerals Industry
		Palaeontology
		museum curation
		Cretaceous mollusks of west coast No. America
		Geographical variation in mammals and birds Hybridisation in mammals and birds Zooarchaeology Skeletal pathologies
		Earth Sciences
		Invertebrates
		Habitat management & restoration
		Waste and resource management, environment, legislation, climate change and carbon agenda
		Biodiversity data dissemination and use
		biodiversity data
		UK pseudoscorpions; national recorder Sussex marine life; data manager, recorder, diver
		ecological data recording; carrying out data searches
		Publishing journals in meteorology, hydrology, soil science, geomorphology, quaternary science
		Water and Wastewater
		Space environment physics, data provision.
		Hydrology, water resources, climate change
Public sector		Freshwater ecology (invertebrate specialist)
		Avian ecology, mapping dispersal
		air pollution and its impacts on health and ecosystems
		Evidence provision for policy development, business related decision making in relation to conservation/protection of Natural environmnent
		Data sharing
		Petroleum geology - consultancy to the Department of Energy & Climate Change
		Work in the NGDC
		Work In the NGDC
		Earth Science
		Groundwater
		Provision of data and information to inform nature conservation within the UK
		Microbial ecology
		Nature Conservation
		water resources availability, claimate change
		Assembling and making available spatial datasets via web-based mapping.
		Atmospheric Science
		UK Nature Conservation
		Hydrology Water Resources Flooding
		Marine data management
		Geoscientific data exchange
		Geophysics
		Forestry and woodland conservation

		Hydrometry/hydrology. Hydrometric data. Flow, level etc
		Statutory Conservation Advice
		Nature conservation
		Climate change research on impacts, adaptation and mitigation
		statistics on woods and forests
		international development
		environmental information, facilitating the working practices of environmental scientists
		enhancing research use of publicly funded data and information
		Science Policy
		Water quality and hydrology
		Biodiversity conservation (climate change and air pollution)
		drinking water quality
		National planning policy as it relates to flood risk, coastal change and water.
		ocean monitoring and forecasting
		Adapting buildings to the changing climate
		Ocean modelling
		Climate Change
		pollution, frshwater, nature conservation
		Environmental economics
		Nature conservation
		public services
		Climate change
		Polar
		conservation and climate change
		Scientific evidence to support development of government environmental policy
		National spatial planning policy
		Environmental regulation, operational policy and information management in Northern Ireland
		biodiversity information
		Land use
		Agriculture
		We look after the natural environment and ensure that it is preserved for future generations.
		Environmental Policy
		Development of evidence to support policy on air quality, noise and the local environment
		Marine mapping for nature conservation
		Coastal Forecasting
		Environmental regulator - Evidence Directorate
		Biodiversity data
		Freshwater

		Biodiversity, geodiversity, landscape management
		Habitat information - Local Wildlife Sites and BAP priority areas
		woodland, wood-pasture, parkland, heathland, dead wood, decaying wood
		Production of local Development Framework documents for a Local Authority
		Species distribution and population and habitat extent and condition
		Hydrology
		Local government
		plant science
		Evidence to support Defra's objectives
		Metadata or Env datasets, NBN species lists, common spatial reference of data
		Marine management, mrine nature conservation, enforcement, marine planning, licensing, emergencies, building a marine evidence base, data and knowledge management.
		Micropalaeontology
		Stratigraphy, Devonian period
		Geology - mapping/sedimentology/stratigraphy
		Geology
		Vertebrate palaeontology
		Palaeontology
		Independent scientific advice and research management
		museum zoology and geology
		UK and International Biodiversity - assessment of biodiverstiy change, monitoring and data supply.
		GIS
		Nature conservation / biodiversity
		Inforation and Data Management
		Environmental Science
		east mildands environmental data
		Environmental Stewardship Monitoring specifically Landscape Objective. Landscape Change Monitoring - both landscape character and landscape function vis ecosyetmen goods and services
		UK Exports
		Ecosystem services policy
		Operational oceanography
		Endocrine disruption in the environment
		Non-native plant pest risk and management
		Nature Conservation
		marine energy
		Social science
		Flood and Coastal Risk Management
		National Data Center - scientific stewardship of marine data and information
		National Data Center - scientific stewardship of marine data and information

		agri-environment and upland habitat management
		Environmental/Ecological Public health, Evidential Standards and Policy
		Research - parasites, systematics, biodiversity
		environmental science
		Government advice
		Commissioning policy relevant science and promoting Knowledge Exchange
		Statutory Nature Conservation Body
		water science, air quality policy/science
		Air and noise pollution. CLimate change
		environmental issues
		forestry
		Lichens and bryophytes.
		Long term record for sea level and defence design
		museum collections & historic/scientific displays
		Resource depletion/scarcity. In particular oil and coal.
		Research and data sets that present a better understanding of our part of the UK (Lancashire) and place us in a national and international context.
		As Corporate Research and Intelligence Manager, I need an overview of all aspects of data relating to Blackpool including the natural environment.
		waste and sustainability
		local government policy
		Spatial Planning
		Spatial Planning
		Research collaboration and management
		flooding
		social science & Environment
		biodiversity
		Atmospheric science
		Mapping & Geographic Information
		Carboniferous geology of the Bowland Sub-Basin History of Geology
		Field ecology in the UK
Multiple sectors	Atmospheric	Boundary-layer physics
		Space and Upper Atmosphere
		Solar influences on the troposphere and stratosphere
		Polar meteorology and climatology
		I work at BADC
		No longer a researcher - response relates to last research area
		air pollution, atmospheric chemistry, effects on vegetation
		Main area of research is active ground-based remote sensing. Provide facilities at CFARR.
		Atmsopheric dynamics, climate

			Atmospheric chemistry field
			climate change
			wind
			atmospheric physics looking at Sting Jets in rapidly deepening extratropical cyclones and mid-tropospheric wind climatologies. Also working as data scientist at BADC and NEODC
			Solar-terrestrial physics
			Solar Terrestrial Physics: the earth's ionosphere and magnetosphere; radar studeis of the aurora and associated phenomena
			Space weather Solar-terrestrial physics
			atmospheric electricity, ionospheric physics
			Polar meteorology and climatolgy, fieldwork and model analysis
			Solar-terrestrial physics, especially the scientific interpretation of historical observations of sunspots and aurorae. The correction of the printed and digital datasets containing the Greenwich Photoheliographic Results (1874-1976). Magnetospheric physics during geomagnetic polarity reversals.
			the ionosphere
			radio wave propagation in the ionosphere and magnetoshere
	Earth		geology
			Geological storage of CO2
			Applied sedimentologist and survey geologist
			I am an economic geologist at the BGS
			hydrogeology
			Geo chemistry
			Hydrogeology
			Environmental Radioactivity, Geochemistry.
			Quaternary geology
			hydrogeology, site investigations, fracture networks, metamorphic petrology, structural geology
			Geology
			British geologcial Survey
			Geologist working on petroleum and CCS
			hydrogeology
			GeoScience
			Lower palaeozoic graptolite biostratigraphy
			Geology
			Palaeobiology; biodiversity
			Deep geological disposal of radioactive waste
			Geology of UK
			Geology
			Marine geophysics.
			Stratigraphy / biostratigraphy
			Geology of the UK and Overseas countries, including mineral exploration. Main areas are igneous and metamorphic geology, volcanology, sedimentology and structural geology
			Geology

			Main areas of research include the application of data management principles to geoscience data, and more recently the development of methods to link geoscience and environmental models, as well as visualising the results so that they can be made use of by non-specialists.
			Geology and Information Science
			I specialise in the palaeontology of the Mesozoic and Cenozoic
			Borehole drilling and other site investigation
			Landslides
			Several branches of geophysics - seismology, potential fields, remote sensing, marine surveying - in various degrees.
			Geoscience
			Stratigraphy and dating of rock successions; sedimentary processes and the impact of regional and global events
			Earth Observation and Vegetation. Conservation etc
			Actually none of above but have to click box to proceed. I work on environment-related policy-focused research
			geoscience
			Groundwater and hydrogeological studies
			Mainly agricultural, environmental and social spatial research
			millennial-scale changes in Antarctic ice sheets using cosmogenic isotope exposure dating
	Earth observation		Involved with NERC facilities NEODAAS & ARSF
			geoscience
			Remote Sensing (satellite and airborne), working for ARSF-DAN and NEODAAS.
			Provide traceability for EO sensors pre- and post- launch Land, atmosphere and Ocean
	Mulitipule Research Areas		Bi-polar ice sheet research, sea-level change
			Earth observation applied to the science and logistics for the British Antarctic Survey
			Geoscience
			Climate modelling
			Long term monitoring of polar atmosphere
			I work with data rather than do research.
			I currently have projects which involve groundwater modelling, surface water modelling, and measurement and modelling of atmospheric variables
			I undertake research in Groundwater Modelling and Atmospheric Dynamics
			I am work across the environmental sciences - not all people employed in research centres are specialists and it is increasingly hard to fit people into categories like the above.
			Data systems development
			Earth system science
			I am studying the dynamics of the atmosphere and climate. I am also involved in the analysis of ice cores.
			I work for an environmental monitoring programmes
			Was middle/upper atmosphere research, solar-terrestrial physics. Now with glaciology
			Ice cores
			Polar meteorology, mountain meteorology, potential vorticity, stratospheric sudden warmings, QBO, describing climate models (Metafor CIM)
			Atmospheric and climate variability and predictability
			Climatologist at BAS
			ecology

		Primarily the research into the impacts of changes in air pollution climate change and landuse on upland soils and waters. More recently a wider remit through involvement with the Environmental Change Network.
		Tectonics, Marine Geology, Holocene, Coastal Changes, Marine Seismic Geophysics, GIS, Database Management.
		Head Marine Geoscience, BGS
		Jurassic invertebrates
		micropalaeontology, foraminifera, palaeoecology, biostratigraphy
		I refuse to be pigeon holed into any one of the above categories. My main area spans Earth, Marine and Polar (i.e. marine earth science in the polar resaons)
		Palaeoclimatology-palaeoceanography
		Mainly Earth Science research in Antarctica
		marine geophysics and geology
		I provide geo-technical support to geologists
		Solar terrestrial physics, medium term change (1- 100 years)
		Over 20+ years my research has covered a broad spectrum of activities that cross several of your broad areas
		Oceanography, fisheries, environmental, ecological advice to government
		HydroInformatics (both measured and modelled data).
		Natural resource management
		Marine bio-optics
		I am interested in satellite remote sensing of the oceans and also in uncertainty in climate/ocean modelling
		Physical oceanography, ice/ocean interaction
		Marine Biogeography/Ecology in the Antarctic
		Ocean modelling
		Arctic and sub-Arctic ocean and sea ice circulation, fluxes and climate (with some Antarctic)
		Study of Southern Ocean Ecosystems
		Polar Science and Oceanography. Information and Data Science
		Large scale, long term experiments in the terrestrial environment
		Molecular studies involving plants and animals from freshwater, marine, terrestrial environments, including polar.
		I am not an active research but I manage science projects
		Groundwater science
		Population genetics of various animal species.
		Environmental Microbiology
University/Higher Education		Earth Radiation Budget, Water vapour feedback, Climate Variability and change, Changes in global Precipitation
		Solar-Terrestrial Physics
		Stochastic nature of cloud frequency with regard to energy production
		Paleoclimatolofy/Paleooceanography, mainly Neogene, see "highlights" of the odplegacy-site; see URLs of the IODP-INCEST congerence Whitepapers. Linking reconstructions/modeling - results differ from PRISM (they had always been different), see the abstract (Cold aspects of....) for the IGC in Oslo as reason (PRISM: Scenarious, I reconstructions). Independent data now (2010) same as me 1995ff but PRISM got published easily. Polar and wind for fundraising. See the Smolka-Methods URL for ongoing things.
		Data assimilation applied to all these areas.
		Reconstruction of long-term climate and environmental change.
		Ocean and Climate modelling

			My Research focuses on the Interactions between large scale ocean flows and the Atmosphere, on long time scales. I am also interested in the climate of the Arctic region, and how it interacts with the ocean and the wider climate.
			Use EISCAT radar and optical measurements from high polar latitudes, aurora, solar-terrestrial studies
			Interested in Sun-Earth System. In particular the energy transport via energetic particle precipitation and wave-partcle interactions
			Winter-time polar stratospheric and mesospheric dynamics
			radio propagation within the polar ionosphere
			Polar ionosphere Wave-plasma interactions
			Data assimilation for environmental modelling
			Glaciology; glacial geomorphology; glaciers; ice sheets; ice streams; remote sensing
			Geodesy, glaciology
			kinetic interaction of trace metal -organic matter in soils and fresh waters
			hydrogeology studies
			geochemistry
			Marine and terrestrial geophysics
			Palaeoceanography and climate change
			Palaeozoic palaeontology
			I'm paleontologist, working on marine mollusks for paleoclimate and paleoenvironmental reconstruction
			Palaeozoic Earth systems and early animals
			permafrost trends
			Quaternary science, palaeoecology
			Geomorphology, from laboratory testing to field monitoring
			Palaeoecology, Palynology, Geology, Palaeoclimatology
			Aquatic parasitology and fish genomics / transcriptomics
			Aquaculture and ecotoxicology
			Development and application of metabolomics, in particular in the field of ecotoxicogenomics.
			Biodiversity, Natural Capital, Offsetting
			Biostatistics, evidence synthesis (formerly) in the areas indicated
			Carbon cycling in soils and freshwaters, particularly DOC.
			Polar paleoceanography Plaeomonsoon
			I am a molecular virologist and study the control of basic features of the virus replication - for example, including the influence of environmental factors.
			Ecology and conservation
			Carbon dynamics of upland ecosystems including transfers from soil to waters & management effects; soil & water acidification; aluminium behaviour in forest & upland soils and waters;
			Behavioural Ecology
			Urban physical geography, Sustainable drainage
			Glaciology
			Ground based cosmic ray observations for the space weather needs the high-altitude atmospheric data for the correction of the atmospheric effects
			Microwave satellites for flood hydrology
			Assimilation of earth observation data into models of terrestrial vegetation processes

University/Higher EducationResearch Institute/Facility		Environmental protection
University/Higher Education		human evolution, human palaeoenvironments
University/Higher EducationResearch Institute/Facility		I work at the interface of palaeontology/palaeoanthropology/archaeology
University/Higher Education		solar-terrestrial physics, ionosphere, aeronomy
Multiple sectors		Research on water, ecosystems, biodiversity, agriculture
	Marine	Late Quaternary Antarctic marine micropalaeontology
		Biological oceanography and multi disciplinary marine science
		coastal zone and continental shelf
		physical and biological oceanography, satellite oceanography
		Geophysical measurements in marine enviroment
		I am a paleoecologist, specializing primarily in reconstructing Holocene events in estuarine and marine environments.
		Marine Biology
		Marine and polar data management
		Research on Plankton Ecology
		Sea bed habitat mapping and ecosystem managment
		Data manager and information systems developer
		climate studies related to phytoplankton growth, water quality monitoring and air-sea gas interactions for climate related studies.
		Study of marine climate and air sea interaction
		Physical-biological interactions in the ocean Fisheries oceanography Satellite oceanography
		Physical Oceanography, Sea Level and Climate
		Antarctic marine biology, especially biodiversity, biogeography and evolutionary history
		Oceanography modelling
		Coastal Processes
		Seabird ecology
	Polar	Ice sheets, ice streams & glaciers. Dynamics, controlling mechanisms & mass balance. Predominantly polar glaciology & geophyscis research - mostly Antarctic, with some in the Arctic. High data acquisition component from fieldwork campaigns.
		Ice sheet & glacier dynamics and mechanisms; cryosphere impacts of climate change; mass balance; ice sheet history; glaciological & geophysical methods; predominantly polar research - mostly Antarctic, with some Arctic.
		I am a member of the mapping unit at British Antarctic Survey. Over the years, I have participated in many branches of the Earth and Environmental Sciences, in particular glaciology.
		Polar genomics of marine and terrestrial invertebrates. Molecular adaptations to Polar environments and cellular responses to climate change.
	Terrestrial	Soil biology, chemistry and ecotoxicology
		Landscape & Geology, Sustainable soils, Quaternary
		Soil Ecosystem Research
		quantitative entomology

		Agroecosystems
		Solid phase distribution and bioacessibility of potentially harmful elements in soils , rocks, sediments and dusts
		Sustainable agriculture, soil ecology
		forest and forest soil biogeochemist
		Evolutionary geobiology of land plants
		I work on host-parasite interactions and build informatics tools supporting biodiversity research.
		ornithology
		CEH Lancaster
		Terrestri8al ecosystem ecology
		Environmental radioactivity
		plant evolutionary studies
		agriculture
		Forest ecology, pollinator ecology, informatics
		soil Scientist, agroecosystem modeller
		Farming systems, organic farming.
		Before retiring, I headed the STP Division of the US Department of Commerce, NOAA, National Geophysical Data Center and WDC-A for STP. I continue to pursue information about solar activity that affects near-Earth space: satellites and astronauts, and maintain informal information exchange with colleagues.
		I work supporting researchers via the Library service
	Freshwater	Hydrology
		hydrology
		rivers
		Surface water acidification and eutrophication in the uplands
		hydrology, water resources, developing countries
		Freshwatwr bacteriology
		biogeochemical modelling of pollutants at the catchment scale (e.g. nitrogen, phosophorus)
		Environmental Data Scientist at CEH Wallingford
		Fate and Behaviour of Chemicals in freshwaters
		Data management for large NERC funded Thematic programmes
		River flow, water quality, dissolved organic carbon,suspended solids
		Procurement of research project for the water and sewerage industry
		Groundwater
School/Further Education		countryside management
University/Higher Education	Atmospheric	climate modelling
		Global atmospheric modelling
		High resolution climate modelling and decadal prediction
		Long term data analysis, GCMS terpenes
		Investigating the possibility of getting skillful predictions of climate in the next ten years from initialised atmosphere-earth models
		Climate modeller

		The study of chemistry-climate interactions using state-of-the-art models and observations.
		Atmospheric and land-surface processes.
		Atmospheric chemistry
		Investigation of atmospheric composition through measurement of trace gas species and modelling of data collected
		Atmospheric chemistry
		Atmospheric composition and long term trends. Dispersion modelling
		Biosphere-Atmosphere Interaction
		Dynamical meterology
		Global atmospheric modelling
		Atmospheric composition measurement, air pollution source apportionment, some atmospheric modelling.
		Boundary layer dynamics, lidar
		Atmospheric physics, aerosols, clouds, climate
		Mainly I focused on the statistical method relevant to the atmosphere,e.g., functional data analysis,time series analysis.
		I mainly work in the field of atmospheric aerosol measurements. I currently work for NCAS composition
		Modelling and prediction of urban flooding based on rain radar, raingauge and other weather data measurements.
		Climatology and air quality.
		Atmospheric Kinetics analytical instrumentation measurements on FAAM
		Ionosphere, Magnetosphere, space and ground based.
		Auroral ionosphere and solar-terrestrial physics
		Solar-terrestrial physics
		Modelling of Earth's upper atmosphere, incoherent scatter research on the ionosphere, modelling of planetary and exoplanetary atmospheres
		Ionospheric and solar-terrestrial physics
		Ionospheric research
		Ionosphere
	Earth	A dissertation on chloide deposition from precipitation and the changes over time.
		Ecological responses to climate change in terrestrial systems
		Lake sediment records of late Quaternary climate
		geochemistry of the solid earth
		aeolian sediment transport on beach and dune systems. High resolution measurement of sediment flux in natural environments.
		environmental risk assessment focusing on contaminated land andurban land management focusing on brownfield regeneration
		Earth Science/ Earth Engineering
		Insect ecology, insect-pathogen interactions, ecosystem service provision, conservation biology and genetics
		Geodesy and geophysics - GNSS positioning, lithospheric deformation, seismic hazard, surface mass loading, atmospheric water vapour monitoring
		Palaeontology
		Palaeontology
		Vertebrate Palaeontology
		Sedimentology, Palaeobiology and Ichnology
		palaeontology

		Nannoplankton, particularly Mesozoic, taxonomy, biostratigraphy, biogeography, ecology, geochemistry, climate change, global
		Lower Palaeozoic Biostratigraphy, mostly graptolites
		palaeobotany, palynology
		I am a vertebrate paleontologist focusing on Palaeozoic fossil fishes.
		My main area of research is Palaeontology
		Palaeontology; stratigraphy
		Biostratigraphy
		Paleontology in Permic-Triassic
		Geodynamics
		Palaeontology
		Using geochemistry and geochronology to investigate Earth systems
		Palaeontology
		volcanoes/ geochemistry
		Environmental Radiaoctivity Geological disposal of radioactive wastes
		Natural Resources
		We are involved in Environmental adaptive strategies for reducing carbon in Heavy Diesel emissions, renewable BioEnergy from algae, Urban Farming for Food security and use of Digital technologies for Intelligent Buildings and Building Information Management Systems adapting to a changed climate.
		Palaeoclimates on Quaternary timescales
		Observational geomagnetism
		Scottish igneous geology, especially Hebrides.
		geology - palaeontology - polar
		Paleontology
		Global Geophysics
	Earth	Geodnamics, Structure, Microstructure, metamorphism
	Earth observation	Earth observation
		Earth Observation of the Land Surface
		Detection and attribution of longterm climate change through analysis of infra-red emiited radiance spectra from the Earth. Quantification of the radiative impact of cirrus clouds on the Earth Radiation Budget.
		Solar Terrestrial Physics
		Solar-Terrestrial Physics
	Freshwater	mathematical modelling of freshwater ecology
		Spatial and temporal variability of hydrological systems
		monthly water quality variables
		metal toxicity in freshwater invertebrates
		ecology, ecotoxicology
		qweqwe
		River modelling, flume experiments
		aquatic ecology fisheries Invasive species Conservation ecology & genetics
		freshwater ecology

			freshwater toxicology and chemistry
			Edotoxicology - effects of pollution on aquatic wildlife
			Hydrological modelling
			My research was basically climate change and effects on Hydropower potential
			I am currently investigating the impact of climate change on change on freshwater resources.
			Water resources management primarily catchment science, information systems, water demand assessment and forecasting, microbiological dynamics, virtual observatory and the water business
			Hydrological and Hydrochemical Modelling - Application of high resolution data
			Fluvial environments
			Hydrogeology and Water Management
			Water and wetlands ecosystem services, and science in to policy
	Marine		EO and in situ physical ocean data modelling
			Coral reefs
			Environmental regulation of primary productivity (algae, corals)
			Oceanography
			Environmental Microbiology. Marine microbiology is the main area, but terrestrial microbial communities are also considered.
			Molecular Ecology/Biodiversity
			Marine Turtles
			coastal processes and management, coastal erosion and flooding, shoreline changes
			underwater acoustics - seabed mapping
			Very diverse: Effects of extremes (esp hihg salinity) and stressors on microbes and microbial processes Carbon cycling, e.g. EPS, hydrocarbon and isoprene degradation / production
			Ocean carbon cycle, CO2 air-sea transfer
			Specifically conservation, management, behavioural ecology of large marine vertebrates
			Ground based remote sensing of waves, currents and winds using HF radar
			Physical and biological oceanography of shelf seas, primarily from a seagoing observational perspective.
			Mathematical ecology
			Seabirds mainly (foraging ecology)
	Polar		Resaech into the Quaternary history of Arctic
			Antarctic ice sheet change
			I am a glaciologist with interests in polar and non-polar glaciated regions.
	Science-based archaeology		I study ancient DNA in preserved bones and plant remains and also use evolutionary biology studies of modern plants to infer events in the archaeological past.
	Terrestrial		ecology, soil, climate change effects on terrestial ecosystems, land use changes, biodiversity
			Ecology
			I work in the application of statistics to archaeology and palaeoenvironmental science
			Evolution and Ecology

		Genomics
		risk science, biochemistry, toxicology
		Environmental genomics and evolution
		Orgtanic Geochemistry
		Geomorphology
		large scale ecology and conservation biology
		Chemcial ecology and honeybee pathogens
		Landscape ecology
		Behaviour, ecology, conservation
		Behavioural Ecology, evolutionary ecology
		Terrestrial ecosystem and the carbon cycle
		DNA fingerprinting for parentage, relatedness, poulation structure, maternal effects
		Ecology and evolution.
		Ecological and mathematical genetics.
		Evolution and population genetics in Drosophila
		spatial ecology, global change biology, land use change, plant communities, conservation, invertebrates.
		Evolutionary ecology of host-parasite interactions; Conservation biology of bees
		Biodiversity Informatics
		Evolutionary ecologist / modeller
		Quaternary palaeoecology
		Population and evolutionary genetics
		Ecology Alien invasions Population dynamics
		Geomorphology, Quaternary science
		population genetics
		geophysics
		land use and agriculture
		Behavioural ecology, Population ecology, community ecology
		Alien and invasive plants on urban rivers
		Understanding how organisms adapt to changing environments. In particular the stress responses of terrestrial invertabrates, and the seasonally adaptive dormancy insect diapause.
		Macroecology and conservation ecology, usually of terrestrial systems but not always.
		Plant diseases
		My work is part of the OPAL project, specifically the iSpot project based at the Open University. I also have an interest in the ecology and conservation of terrestrial invertebrates.
		Evolutionary ecology
University/Higher EducationResearch Institute/Facility		Biogeochemical cycling in terrestrial ecosystems, peatlands in particular
		Insect ecology and biogeography
University/Higher Education		Centre of Terrestrial Carbon Dynamics Monitoring and measuring C stocks and fluxes as well as improving existing soil carbon models
		Peatland biogeochemistry

University/Higher EducationResearch Institute/Facility		Space plasma physics, magnetospheric physics
		solar storms; space-weather
		rural economy and land use issues; interactions people and biodiversity
	Atmospheric	Surface atmosphere exchange Aircraft measurements of cloud microphsyical properties and aerosols
	Earth	invertebrate paleontology Neogene and Quaternary stratigraphy Cretaceous biostratigraphy
		Micropaleontology
	Marine	Biochemistry, chemical ecology and biodiversity of marine algae and microorganisms
		coral reef ecology
Voluntary/NGO		conservation management of semi natural neutral grassland and ancient woodlands
		moths
		Biodiversity - lichens
		Protecting and enhancing wildlife and the environment
		Lichen and Higher plant Biodiversity
		evidence-based decision making
		Ponds / wetland habitats Reptiles & amphibians
		Local Environmental Records Centre - Biodiversity information
		data for conservation purposes
		Plants, spiders, various insects
		Non-vascular plants
		ecology/conservation
		Biological records
		geology
		Biology and Nature Conservation
		Working with Shropshire Wildlife Trust maintaining and surveying various Nature Reserves in the Telford & Wrekin area plus personally surveying other areas in Shropshire.
		biodiversity
		History of Geology (John Milne) Carboniferous geology of the Bowland Sub-Basin
Multiple Sectors		Ecological consultancy, bat & mammal conservation and ecology
		Ecology of wetland habitats, ornithology, biodiversity

A2.4 Have you received any research support from NERC within the last 5 years? (e.g. grant funding or use of NERC facilities)

	Number	%
Yes	255	67.3
No	124	32.7
Total	379	100.0

Data centre - composite	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	78	80.4	51	79.7	54	74.0	30	88.2	46	65.7	26	74.3	6	26.1	0	0.0
No	19	19.6	13	20.3	19	26.0	4	11.8	24	34.3	9	25.7	17	73.9	1	100.0
Total	97	100.0	64	100.0	73	100.0	34	100.0	70	100.0	35	100.0	23	100.0	1	100.0

Sector	University/ HE		Research Institute	
	Number	%	Number	%
Yes	138	66.3	122	67.8
No	70	33.7	58	32.2
Total	208	100.0	180	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	57	66.3	76	62.8	41	68.3	51	68.0	68	69.4	24	72.7	34	75.6	2	66.7
No	29	33.7	45	37.2	19	31.7	24	32.0	30	30.6	9	27.3	11	24.4	1	33.3
Total	86	100.0	121	100.0	60	100.0	75	100.0	98	100.0	33	100.0	45	100.0	3	100.0

A3 Have you ever used data from any of the NERC Data Centres?

Data centre - composite	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	103	92.0	78	86.7	118	85.5	40	85.1	94	90.4	31	72.1	29	96.7	4	80.0
Not sure	2	1.8	6	6.7	7	5.1	3	6.4	4	3.8	5	11.6	1	3.3	1	20.0
No	7	6.3	6	6.7	13	9.4	4	8.5	6	5.8	7	16.3	0	0.0	0	0.0
Total	112	100.0	90	100.0	138	100.0	47	100.0	104	100.0	43	100.0	30	100.0	5	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	98	47.1	122	67.8	20	52.6	58	42.0	8	34.8	6	40.0	29	60.4	1	33.3
Not sure	18	8.7	17	9.4	7	18.4	32	23.2	6	26.1	7	46.7	8	16.7	2	66.7
No	92	44.2	41	22.8	11	28.9	48	34.8	9	39.1	2	13.3	11	22.9	0	0.0
Total	208	100.0	180	100.0	38	100.0	138	100.0	23	100.0	15	100.0	48	100.0	3	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	67	77.9	72	59.5	33	55.0	39	52.0	39	39.8	22	66.7	25	55.6	0	0.0
Not sure	4	4.7	9	7.4	3	5.0	10	13.3	9	9.2	0	0.0	4	8.9	0	0.0
No	15	17.4	40	33.1	24	40.0	26	34.7	50	51.0	11	33.3	16	35.6	3	100.0
Total	86	100.0	121	100.0	60	100.0	75	100.0	98	100.0	33	100.0	45	100.0	3	100.0

B1 Which of the following data sources have you used?

	Number	%*
BADC	102	31.5
BODC	74	22.8
EIDC	116	35.8
EODC	37	11.4
NGDC	92	28.4
PDC	31	9.6
SSDC	29	9.0
ADS	3	0.9
Total respondents	324	

% of respondents answering question B1

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	47	48.0	45	36.9	3	15.0	4	6.9	3	37.5	1	16.7	3	10.3	0	0.0
BODC	18	18.4	31	25.4	4	20.0	17	29.3	0	0.0	0	0.0	8	27.6	0	0.0
EIDC	31	31.6	28	23.0	14	70.0	29	50.0	5	62.5	3	50.0	12	41.4	1	100.0
EODC	14	14.3	13	10.7	1	5.0	9	15.5	0	0.0	0	0.0	2	6.9	0	0.0
NGDC	15	15.3	47	38.5	2	10.0	17	29.3	2	25.0	0	0.0	13	44.8	0	0.0
PDC	6	6.1	20	16.4	0	0.0	4	6.9	0	0.0	1	16.7	1	3.4	0	0.0
SSDC	14	14.3	9	7.4	2	10.0	1	1.7	1	12.5	2	33.3	2	6.9	0	0.0
ADS	1	1.0	0	0.0	0	0.0	1	1.7	0	0.0	0	0.0	1	3.4	0	0.0
Total respondents	98		122		20		58		8		6		29		1	

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	52	77.6	19	26.4	13	39.4	12	30.8	11	28.2	14	63.6	13	52.0
BODC	7	10.4	14	19.4	3	9.1	28	71.8	3	7.7	9	40.9	7	28.0
EIDC	5	7.5	10	13.9	29	87.9	6	15.4	26	66.7	5	22.7	1	4.0
EODC	4	6.0	5	6.9	1	3.0	6	15.4	9	23.1	8	36.4	4	16.0
NGDC	2	3.0	48	66.7	5	15.2	9	23.1	4	10.3	2	9.1	3	12.0
PDC	7	10.4	13	18.1	0	0.0	7	17.9	2	5.1	5	22.7	13	52.0
SSDC	18	26.9	4	5.6	0	0.0	1	2.6	4	10.3	5	22.7	6	24.0
ADS	0	0.0	1	1.4	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total respondents	67		72		33		39		39		22		25	

B2 For how many years have you been using these sources?

	Number	%
Less than 1	23	7.1
1-3	63	19.4
4-6	54	16.7
7-10	63	19.4
11-20	64	19.8
More than 20	57	17.6
Total	324	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Less than 1	5	4.9	4	5.4	15	12.9	1	2.7	4	4.3	2	6.5	1	3.4	1	33.3
1-3	26	25.5	9	12.2	25	21.6	7	18.9	12	13.0	6	19.4	2	6.9	0	0.0
4-6	16	15.7	18	24.3	16	13.8	9	24.3	11	12.0	7	22.6	6	20.7	0	0.0
7-10	24	23.5	12	16.2	22	19.0	11	29.7	20	21.7	4	12.9	4	13.8	1	33.3
11-20	27	26.5	18	24.3	23	19.8	6	16.2	19	20.7	7	22.6	4	13.8	0	0.0
More than 20	4	3.9	13	17.6	15	12.9	3	8.1	26	28.3	5	16.1	12	41.4	1	33.3
Total	102	100.0	74	100.0	116	100.0	37	100.0	92	100.0	31	100.0	29	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Less than 1	12	12.2	8	6.6	0	0.0	3	5.2	0	0.0	0	0.0	2	6.9	0	0.0
1-3	23	23.5	18	14.8	5	25.0	9	15.5	4	50.0	1	16.7	7	24.1	1	100
4-6	19	19.4	20	16.4	2	10.0	8	13.8	0	0.0	1	16.7	7	24.1	0	0.0
7-10	22	22.4	20	16.4	3	15.0	15	25.9	1	12.5	2	33.3	3	10.3	0	0.0
11-20	11	11.2	34	27.9	6	30.0	11	19.0	2	25.0	0	0.0	2	6.9	0	0.0
More than 20	11	11.2	22	18.0	4	20.0	12	20.7	1	12.5	2	33.3	8	27.6	0	0.0
Total	98	100	122	100.0	20	100.0	58	100.0	8	100.0	6	100	29	100	1	100

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Less than 1	3	4.5	5	6.9	8	24.2	3	7.7	3	7.7	1	4.5	0	0.0
1-3	15	22.4	14	19.4	6	18.2	4	10.3	7	17.9	4	18.2	6	24.0
4-6	15	22.4	10	13.9	6	18.2	11	28.2	9	23.1	6	27.3	7	28.0
7-10	12	17.9	12	16.7	4	12.1	7	17.9	10	25.6	5	22.7	5	20.0
11-20	14	20.9	15	20.8	6	18.2	8	20.5	5	12.8	3	13.6	3	12.0
More than 20	8	11.9	16	22.2	3	9.1	6	15.4	5	12.8	3	13.6	4	16.0
Total	67	100.0	72	100.0	33	100.0	39	100.0	39	100.0	22	100.0	25	100.0

B3 Which types of data do you use?

	Number	%*
Electronic/ digital data	304	93.8
Physical samples/ collections	62	19.1
Hard copy/analogue data	85	26.2
Information products	90	27.8
Total respondents	324	

% of respondents answering question B3

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/ digital data	101	99.0	73	98.6	110	94.8	35	94.6	80	87.0	31	100.0	29	100.0	3	100.0
Physical samples/ collections	8	7.8	9	12.2	9	7.8	3	8.1	44	47.8	10	32.3	0	0.0	0	0.0
Hard copy/analogue data	9	8.8	10	13.5	25	21.6	6	16.2	51	55.4	9	29.0	6	20.7	1	33.3
Information products	13	12.7	22	29.7	36	31.0	10	27.0	46	50.0	6	19.4	4	13.8	1	33.3
Total respondents	102		74		116		37		92		31		29		3	

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/ digital data	90	91.8	115	94.3	20	100.0	53	91.4	7	87.5	5	83.3	29	100.0	1	100.0
Physical samples/ collections	11	11.2	39	32.0	2	10.0	9	15.5	1	12.5	2	33.3	3	10.3	0	0.0
Hard copy/analogue data	9	9.2	41	33.6	3	15.0	19	32.8	2	25.0	3	50.0	11	37.9	0	0.0
Information products	8	8.2	40	32.8	6	30.0	26	44.8	4	50.0	5	83.3	8	27.6	0	0.0
Total respondents	98		122		20		58		8		6		29		1	

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/ digital data	65	97.0	63	87.5	31	93.9	37	94.9	38	97.4	21	95.5	25	100.0
Physical samples/ collections	3	4.5	39	54.2	4	12.1	6	15.4	3	7.7	2	9.1	6	24.0
Hard copy/analogue data	5	7.5	33	45.8	4	12.1	3	7.7	7	17.9	2	9.1	3	12.0
Information products	6	9.0	26	36.1	9	27.3	9	23.1	9	23.1	2	9.1	5	20.0
Total respondents	67		72		33		39		39		22		25	

B4 When did you last obtain data?

	Number	%
Within last year	228	73.3
Last 5 years	73	23.5
Last 10 years	7	2.3
Longer ago	3	1.0
Total	311	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	72	72.0	46	64.8	82	74.5	25	69.4	73	82.0	28	93.3	21	75.0	3	100.0
Last 5 years	25	25.0	24	33.8	27	24.5	9	25.0	14	15.7	2	6.7	5	17.9	0	0.0
Last 10 years	2	2.0	1	1.4	1	0.9	2	5.6	1	1.1	0	0.0	1	3.6	0	0.0
Longer ago	1	1.0	0	0.0	0	0.0	0	0.0	1	1.1	0	0.0	1	3.6	0	0.0
Total	100	100.0	71	100.0	110	100.0	36	100.0	89	100.0	30	100.0	28	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	65	67.0	93	79.5	11	57.9	37	68.5	5	71.4	5	83.3	24	85.7	1	100.0
Last 5 years	27	27.8	20	17.1	8	42.1	15	27.8	1	14.3	1	16.7	4	14.3	0	0.0
Last 10 years	4	4.1	2	1.7	0	0.0	2	3.7	1	14.3	0	0.0	0	0.0	0	0.0
Longer ago	1	1.0	2	1.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	97	100	117	100	19	100	54	100	7	100.0	6	100	28	100	1	100

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	49	75.4	57	80.3	23	71.9	21	55.3	24	66.7	16	76.2	20	83.3
Last 5 years	13	20.0	12	16.9	9	28.1	16	42.1	10	27.8	5	23.8	4	16.7
Last 10 years	2	3.1	1	1.4	0	0.0	1	2.6	1	2.8	0	0.0	0	0.0
Longer ago	1	1.5	1	1.4	0	0.0	0	0.0	1	2.8	0	0.0	0	0.0
Total	65	100.0	71	100.0	32	100.0	38	100.0	36	100.0	21	100.0	24	100.0

B5 How easy did you find it to identify the data you needed on that occasion?

	Number	%
Very easy	82	26.4
Quite easy	138	44.4
Neither easy nor difficult	57	18.3
Quite difficult	31	10.0
Very difficult	3	1.0
Total	311	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	21	21.0	12	16.9	28	25.5	6	16.7	23	25.8	5	16.7	13	46.4	0	0.0
Quite easy	41	41.0	28	39.4	53	48.2	15	41.7	45	50.6	10	33.3	11	39.3	1	33.3
Neither easy nor difficult	17	17.0	22	31.0	20	18.2	11	30.6	14	15.7	11	36.7	2	7.1	0	0.0
Quite difficult	19	19.0	8	11.3	9	8.2	4	11.1	6	6.7	4	13.3	2	7.1	2	66.7
Very difficult	2	2.0	1	1.4	0	0.0	0	0.0	1	1.1	0	0.0	0	0.0	0	0.0
Total	100	100.0	71	100.0	110	100.0	36	100.0	89	100.0	30	100.0	28	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	24	24.7	39	33.3	6	31.6	7	13.0	0	0.0	2	33.3	7	25.0	0	0.0
Quite easy	46	47.4	49	41.9	8	42.1	27	50.0	3	42.9	1	16.7	11	39.3	1	100.0
Neither easy nor difficult	12	12.4	19	16.2	4	21.1	14	25.9	1	14.3	2	33.3	7	25.0	0	0.0
Quite difficult	14	14.4	9	7.7	1	5.3	6	11.1	3	42.9	1	16.7	2	7.1	0	0.0
Very difficult	1	1.0	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0	1	3.6	0	0.0
Total	97	100.0	117	100.0	19	100.0	54	100.0	7	100.0	6	100.0	28	100.0	1	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	20	30.8	21	29.6	11	34.4	7	18.4	11	30.6	4	19.0	6	25.0
Quite easy	26	40.0	32	45.1	13	40.6	17	44.7	17	47.2	10	47.6	7	29.2
Neither easy nor difficult	7	10.8	11	15.5	7	21.9	10	26.3	5	13.9	4	19.0	8	33.3
Quite difficult	12	18.5	7	9.9	0	0.0	3	7.9	3	8.3	3	14.3	3	12.5
Very difficult	0	0.0	0	0.0	1	3.1	1	2.6	0	0.0	0	0.0	0	0.0
Total	65	100.0	71	100.0	32	100.0	38	100.0	36	100.0	21	100.0	24	100.0

B6 Once identified, how easy did you find it to obtain the data?

	Number	%
Very easy	84	27.0
Quite easy	136	43.7
Neither easy nor difficult	59	19.0
Quite difficult	26	8.4
Very difficult	6	1.9
Total	311	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	19	19.0	9	12.7	24	21.8	6	16.7	30	33.7	6	20.0	13	46.4	0	0.0
Quite easy	47	47.0	33	46.5	52	47.3	14	38.9	38	42.7	10	33.3	10	35.7	1	33.3
Neither easy nor difficult	20	20.0	18	25.4	25	22.7	11	30.6	15	16.9	7	23.3	2	7.1	1	33.3
Quite difficult	13	13.0	10	14.1	7	6.4	3	8.3	3	3.4	6	20.0	3	10.7	1	33.3
Very difficult	1	1.0	1	1.4	2	1.8	2	5.6	3	3.4	1	3.3	0	0.0	0	0.0
Total	100	100.0	71	100.0	110	100.0	36	100.0	89	100.0	30	100.0	28	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	25	25.8	39	33.3	5	26.3	10	18.5	0	0.0	2	33.3	5	17.9	0	0.0
Quite easy	44	45.4	51	43.6	6	31.6	24	44.4	5	71.4	2	33.3	12	42.9	1	100.0
Neither easy nor difficult	20	20.6	15	12.8	7	36.8	11	20.4	0	0.0	1	16.7	7	25.0	0	0.0
Quite difficult	7	7.2	10	8.5	1	5.3	8	14.8	1	14.3	1	16.7	3	10.7	0	0.0
Very difficult	1	1.0	2	1.7	0	0.0	1	1.9	1	14.3	0	0.0	1	3.6	0	0.0
Total	97	100.0	117	100.0	19	100.0	54	100.0	7	100.0	6	100.0	28	100.0	1	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	18	27.7	25	35.2	11	34.4	7	18.4	5	13.9	5	23.8	6	25.0
Quite easy	31	47.7	29	40.8	11	34.4	16	42.1	18	50.0	9	42.9	8	33.3
Neither easy nor difficult	9	13.8	12	16.9	8	25.0	9	23.7	8	22.2	3	14.3	4	16.7
Quite difficult	7	10.8	5	7.0	1	3.1	4	10.5	4	11.1	3	14.3	5	20.8
Very difficult	0	0.0	0	0.0	1	3.1	2	5.3	1	2.8	1	4.8	1	4.2
Total	65	100.0	71	100.0	32	100.0	38	100.0	36	100.0	21	100.0	24	100.0

B7 Were the data suitable for immediate use/analysis, or were additional processing steps required?

	Number	%
Suitable for immediate use	164	52.7
Additional steps required	147	47.3
Total	311	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Suitable for immediate use	47	48.5	64	54.7	13	68.4	25	46.3	1	14.3	5	83.3	17	60.7	1	100.0
Additional steps required	50	51.5	53	45.3	6	31.6	29	53.7	6	85.7	1	16.7	11	39.3	0	0.0
Total	97	100.0	117	100.0	19	100.0	54	100.0	7	100.0	6	100.0	28	100.0	1	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Suitable for immediate use	49	49.0	30	42.3	52	47.3	18	50.0	55	61.8	17	56.7	14	50.0	0	0.0
Additional steps required	51	51.0	41	57.7	58	52.7	18	50.0	34	38.2	13	43.3	14	50.0	3	100.0
Total	100	100.0	71	100.0	110	100.0	36	100.0	89	100.0	30	100.0	28	100.0	3	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Suitable for immediate use	33	*50.8*	47	*66.2*	14	*43.8*	16	*42.1*	15	*41.7*	9	*42.9*	8	*33.3*
Additional steps required	32	*49.2*	24	*33.8*	18	*56.3*	22	*57.9*	21	*58.3*	12	*57.1*	16	*66.7*
Total	65	*100.0*	71	*100.0*	32	*100.0*	38	*100.0*	36	*100.0*	21	*100.0*	24	*100.0*

B7.1 Approximately what proportion of the total time spent using the data did this processing occupy?

	Number	%
0-5%	20	*13.9*
5-10%	53	*36.8*
10-20%	32	*22.2*
20-50%	24	*16.7*
More than 50%	15	*10.4*
Total	144	*100.0*

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-5%	6	*12.0*	4	*10.0*	11	*19.0*	4	*23.5*	3	*8.8*	0	*0.0*	2	*14.3*	0	*0.0*
5-10%	15	*30.0*	19	*47.5*	17	*29.3*	5	*29.4*	17	*50.0*	5	*38.5*	4	*28.6*	0	*0.0*
10-20%	10	*20.0*	9	*22.5*	13	*22.4*	7	*41.2*	9	*26.5*	4	*30.8*	4	*28.6*	2	*66.7*
20-50%	13	*26.0*	5	*12.5*	11	*19.0*	1	*5.9*	3	*8.8*	2	*15.4*	2	*14.3*	1	*33.3*
More than 50%	6	*12.0*	3	*7.5*	6	*10.3*	0	*0.0*	2	*5.9*	2	*15.4*	2	*14.3*	0	*0.0*
Total	50	*100.0*	40	*100.0*	58	*100.0*	17	*100.0*	34	*100.0*	13	*100.0*	14	*100.0*	3	*100.0*

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-5%	8	16.3	7	13.5	1	16.7	5	18.5	0	0.0	0	0.0	0	0.0
5-10%	17	34.7	24	46.2	2	33.3	8	29.6	2	33.3	0	0.0	3	27.3
10-20%	10	20.4	8	15.4	2	33.3	11	40.7	0	0.0	0	0.0	2	18.2
20-50%	10	20.4	8	15.4	1	16.7	3	11.1	2	33.3	0	0.0	1	9.1
More than 50%	4	8.2	5	9.6	0	0.0	0	0.0	2	33.3	1	100.0	5	45.5
Total	49	100.0	52	100.0	6	100.0	27	100.0	6	100.0	1	100.0	11	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
0-5%	4	12.9	2	8.3	3	16.7	1	4.8	5	23.8	2	16.7	0	0.0
5-10%	10	32.3	14	58.3	8	44.4	12	57.1	7	33.3	7	58.3	6	37.5
10-20%	5	16.1	3	12.5	2	11.1	3	14.3	4	19.0	1	8.3	4	25.0
20-50%	7	22.6	3	12.5	4	22.2	3	14.3	4	19.0	1	8.3	3	18.8
More than 50%	5	16.1	2	8.3	1	5.6	2	9.5	1	4.8	1	8.3	3	18.8
Total	31	100.0	24	100.0	18	100.0	21	100.0	21	100.0	12	100.0	16	100.0

Data centre	B8: What did you use the data for?
British Atmospheric Data Centre	I used data from FAAM to help with our analysis as part of a flying campaign
	I want to analyse air mass transport by using the trajectory tool.
	Correction of ground based cosmic ray data for the atmospheric effects
	Testing relationship between rainfall data and avain productivity
	Weather data to include as covariates in analysis
	Synoptic scale analysis of polar disturbances in the Northern and Southern hemisphere's middle atmosphere
	climatology of wind conditions over eastern Himalayas
	Prediction (nowcasting) of rainfall over a given (small) catchment based on UKMO NIMROD radar data, cross-calibrated using daily MIDAS raingauge data for the catchment.
	for reseach on atmospheric tele-connections
	the data was used in a published paper to support the efficiency of the proposed statistical method
	for validation
	Climate input data into a hydrological model
	I didn't use it in the end as I found an alternative source in a better format.
	Meteorological data - to run models. CCM output - comparing models.
	Using Cape Verde and Weybourne data to build up a picture of all the data at the 2 sites and combine it with my analysis
	Local weather data used in analyses of demography of bird populations
	data that was collected by other research groups during a research campaign involving many institutions was obtained and used to aid analysis of my data and to give a wider picture than looking at isolated species.
	To determine the stability of the Atmosphere during the CSIP fild campaign. This effects other results in the study.
	Used data from FAAM aircraft to compare with measurements produced on the ground at CFARR
	I used radiosonde data from the Convective Storm Initiation Project to analyse the stability of the atmosphere at a nearby location
	air mass back trajectory analysis
	PhD research (weather data to use as covariates with ecological data) - but didn't go down the research path very far.
	Comparison with model results
	Downloaded UKCP09 climate data to inform presentations on the results of the UK Climate projections.
	Analysing model output to understand physical processes and assess model performance
	Air mass trajectory analysis
	Supporting customers. Internal reserach, Filling gaps in our archive.
	Model validation and testing.
	Analysing climate varibility
	Adding to my analysis
	Observational comparisons with model data. Analysis of processes in High resolution models.
	To validate atmospheric model results.
	Validation of climate model
	Various research projects
	Comparing with other collected data and producing back trajectories
UK Solar System Data Centre	to analyse experimental data
	Preparing data analyses for publishing papers
	For the analysis of geomagnetic field changes related to Earth-surface measured responses to ionospheric electrojet currents arising from solar activity.
	HF radio propagation predictions
	Ionospheric research Wave-plasma interactions
	reasearch
	Ionospheric reseach.
	Providing essential information to allow prediction of likely radio propagation paths, operating frequencies and likely signal strengths to enable radio contact with individuals worldwide.
	Scientific research with the purpose of writing a publication
	Analysis of the extremes of space weather events.
	Study of long term variation in geomagnetic indices
	examination of a major ionospheric storm event
	studying medium term solar change (1-100 years).
	Compare solar activity with spacecraft radiation induced upsets.
	ionosonde data - used for building background ionospheric maps (together with data from other sources)
	To study changes in the ionosphere resulting from particle precipitation and solar influence. Also as extra background information for event being studied.
British Oceanographic Data Centre (including data from	creation of an Hydrodynamic model of the North Atlantic

National Oceanography Centre and Proudman Oceanographic Laboratory)	I answered this because I think I got some adcp data from BODC but it may be that I got it directly from POL. I used it to validate radar data
	event anaylsis
	Environmental assessment
	Development of GIS resources
	Quality assurance, assessments of marine contaminants
	Bathymetry studies of UK coasts
	Tidal correction of bathymetric data
	Characterising physical conditions at a North Sea site
	Background to research paper publication
	Strategic planning
	Sea level rise measurement; tidal loading
	event tracking and comparison
	Sea Level Statistics Analysis Tidal Levels Statistics
	initialisation of ocean forecasts
	Assessing sites for tidal wave generators
	To complete a scientific paper
Environmental Information Data Centre (including data from Biological Records Centre, Centre for Ecology and Hydrology, National River Flow Archive and NERC Environmental Bioinformatics Centre)	I used long term data on burning at moorhouse to replace outdated published data. I synthesised the data using meta-analysis and published in biological conservation
	Generation of single mass curves from flow data.
	River flow analysis
	To assess the preliminary environmental situation in my study area.
	Most recently, I have been working on a dataset of moth records supplied by BRC via Butterfly Conservation, as part of the National Moth Recording Scheme. This is largely in a voluntary capacity rather than as part of my academic work.
	I used it for analysis During my Master degree thesis
	biodiversity mapping and improving access
	personal study
	Research
	Water quality project.
	Monitoring
	Botanical change
	Molecular pathway analysis
	Policy analysis
	Analysis of spatial distribution of insect species across the UK
	Comparison with existing data resource
	Modelling water quality
	Species turnover analysis and conservation targeting.
	To inform the ecology section of an environmental impact assessment.
	Atlas of woodlice.
	Consultancy report
	Researching background to species I was particularly interested in, as part of my research interests
	In support of field survey work on behalf of clients undertaking develpments
	Use to help assess impacts of species/habitats on particular projects
	Species recording, survey reports, presentations,
	Knowledge transfer.
	Updated information on invasive plant species from CEH for use in deciding on land management
	Looking for empirical relationships between our own chemistry data and ECN meteorological data; checking the accuracy of our own weather station & chemistry data against ECN data
	Water footprint sustainability assessment
	broadening access to data and integrating data with data from other sources
	Checking information against our own databases
	data used were concentration of metals + organic matter in waters. These data were very important to identify the suitable sites for conducting our field research
	I identified microsatellite loci that were likely to amplify and be polymorphic in a bird species where there was no information on Genbank
	checking distributions of species
	spatial trends in UK species and communities
	Records of mean daily flows for selected gauging stations
	Scoped its ability to be merged with another data set.
	Distribution of higher plant species
	comparative genomics analyses
	Addd to species records database in Local Record Cenntre. Used for reporting sopecies information within a defined geographical area., species distributions.
	BRC records for species distribution
	Searching for a sequence set, which could just be downloaded from Genbank, using the link provided in NEBC Envbase.
	Defra-funded contract.

	Used hydrological summaries and UK Hydrometric Register to help with answering both strategic and detailled queies from customers internally about the recent past and status of individual stations.
	comparison of current woodland composition with past records; assessment of soil changes
	for speciation and bioavailability modelling
	Confirming own analysis. Comparison of Scottish records with some from England, Wales, and Ireland.
	Species distribution modelling
	meta-data analyses.
	Looking at long-term trends in relationships between Al and DOC (data subsequently not used). Looking at long-term rends in recovery from acidification (used as demonstration for teaching purposes)
	Looking at patterns of phylogenetic dispersion in British plant communities. Data from the Countryside Survey was used to create lists of plant species present in different communities.
	Analysis of loss/gain river flow downstream
	environmental assessment
	The Predatory Bird Monitoring Scheme (PBMS; http://pbms.ceh.ac.uk/)
	modelling
	College Assignment
	Research
	Distributive invertebarte information for book (Cambridge University Press)
National Geoscience Data Centre (including data from British Geological Survey)	provide background information to inform decision making for commercial mineral exploration purposes
	Early 20th century physical specimen being sectioned for SEM / microprobe work.
	assisting in identification of marine protected areas
	Geological assessment
	To provide historic baseline maps and datasets as a backdrop to new observations and data collections
	Interpretative reports and desk studies
	Developing groundwater models for site selection
	building stones survey
	Identification of boreholes drilled and stored by BGS. Collection of samples form BGS boreholes. Examination of fossils stored in the BGS collections.
	Researching landslides
	Development of value added delivery products
	Answering commercial enquiries
	Studying a site in advance of full site investigation
	Reference material
	I used borehole data in the construction of a GSI3D geological model.
	Geological maps
	PhD research; MIddle Jurassic species Research for new species of Ordovician starfish
	I am constructing a new phylogeny for lower Carboniferous ray-finned fishes. Many of the specimens in the collections at BGS Edinburgh (Mains Rd) have not been included in any previous systematic study.
	Research. The British Geological Survey houses extremely important palaeontological collections. They are particularly valuable because they are well localised, well curated and encompass a huge number of sites.
	databasing rock samples
	Compiling specimen data from particular stratigraphical horizons for publication
	research
	Project work
	Systematic palaeontology and stratigraphy of Jurassic strata in Europe.
	Stratigraphic research
	Palaeo and Core collections, for comparison with field and newly collected material
	Public information. Background work for site work.
	Collections catalogue of British Carboniferous vertebrates
	Palaeontological taxonomy
	Modelling geological depositional environments over an area of the UKCS
	Finding out about geology of a site
	BGS marine mapping programme - overview presentations etc
	Previous borehole records to aid identification of geological conditions on our site
	Desk study
	assesing the spatial distrubution of potentially harmful elements in soils
	Survy work commercial reports peer reviewed publication
	Graptolites are being described and identified and will provide information on taxonomy, age, palaeogeography and possibly maturation..
	Developing knowledge exchange systems
	To support seismic interpretation for a potential carbon storage project
	Demonstrating site investigation techniques to teachers and lecturers

	Geological surveying
	Used Archived soil data from the G-BASE project, to gain further analysis on. I have also used electronic records held by the NGDC to support interpretation for a radon potential map.
	Map and geological model making; writing Scientific reports (Commercial and science budget)
	Wider dissemination via BGS and NERC supported web services
	Site investigations/building conceptual models
	Rock samples selected for experimental investigations
	borehole logs for strata interpretation
	Compiling GeoReports
	3D modelling of Mersey area and Belfast region. Boreholes needed to be coded into a database before they could be used in the modelling software.
	To check for duplicate Site Investigations in the collection
	Looking at digital and paper copies of geophysical well logs and site investigation reports to determine rock properties eg porosity (to refine CO2 storage capacity estimations) and salinity and temperature (for hydrogeological applications).
	I regularly use NGDC data to carry out research and answer enquiries from the public
NERC Earth Observation Data Centre	Landscape analysis. Mapping landslides and river terrace landforms.
	Remote sensing interpretation of UK landforms
	High-resolution DTM of PhD study site used for generating topographic information.
Polar Data Centre (formerly Antarctic Environmental Data Centre; including data from British Antarctic Survey)	rock samples used for exposure dating also used swath bathymetry data in a publication
	Modelling demographic rates of penguins and examining foraging tracks
	Rock and fossils samples for several types of lab analysis.
	testing its utility for potential future projects looking at polar biodiversity
	use of fossil samples for academic research; use of station and locality information for academic research; checking extensive archives
	In my work I need data to be able to locate any geological sample in the BAS Antarctic geological collections from archives; To be able to see what geo-technical procedure may have been applied to any samples.
	Checking metadata and geochemical analyses for antarctic rock samples used in a publication in preparation
Multiple Data Centres	Used in all aspects of our work.
	Looking at the distribution of plant species that can be considered minor weeds in crops
	BGS Stream water chemistry data. Used to look at water quality of potential drinking water sources.
	Anaysis of the relationships between characteristics of the the geology of the UK and the characteristics of river flows. To build predictive models of river flows in ungauged basins.
	Assessing current regime in the global context, particuarly in terms of the inter-annual variability of major ocean currents.
	NGDC Data to underpin Information Products BADC data to carry out climate change and geohazards research
	I needed some atmospheric model output from ECMWF
	Writing a research proposal - I wanted to see the nature of the data available.
	Remapping ARSF data to support another user having problems (part of ARSF-DAN support).
	Supporting science undertaken by BAS thematic research
	To see what the tide was doing.
	Various data from BODC and BADC
	Modelling peatland carbon stocks and fluxes
	Use of MIDAS hourly weather data to construct windroses, and pollution polar plots, and similar. Also, air mass back-trajectories calculated using the BADC trajectory service.
	developing and testing a model for dissolved organic carbon from peatlands
	met data for gap filling
	To check the functionality of the CEH Information Gateway
	data
	assessing temporal trends in the natural environment
	- determining past and present distributions of butterflies - determining temperature change in the last 30 years for sites in Northern England and Scotland
	investigating the influence of climate on dissolved organic carbon concentrations in waters across the UK
	Use in the LowFlows software & various consultacy projects
	Hydrological modelling.
	Examination of temporal variability in water availability
	I used flow data from the NRFA for a research project on forestry impacts in surface water quality

Feeding computer models Input time series) + model testing against observations.
Climate data for field site. Working with Countryside Survey data,
Information regarding a UK site
Interpretation of lichen distribution and ecology
As part of a study on the flux of Hg in the environment, attempting to integrate / reconcil information from emissions / dispersal through deposition to accumulation in biota.
data analysis - monte carlo simulations
Quantifying the inter-annual variability of the spectrally resolved infra-red radiation emitted to space under cloud-free conditions.
Atmospheric models
Evaluation of quality of level 2 products from the HIRDLS instrument
Testing atmospheric chemistry transport models.
Comparison against model outputs
Validation of a oceanographic model.
computation of pressure lapse rates for Antarctica
I used UKMO data for comparison with BAS data. UKMO data took considerable post-processing to understand.   I use BAS-archived data regularly. I am familiar with BAS data so these data require minimal post-processing.
Building atmospheric flow tubes. THe idea didn't work with the data supplied.
SOLCLI project, global radar data from middle atmosphere, relation to stratospheric effects.
Scientific analysis leading to research papers
Accessed from UKSSDC   Used to study space weather effects on the Earth's ionosphere, with an underlying engineering application (HF communication system)
Parameters used to inform of the state of the atmosphere for a modelling study
Testing hypothesis
statistical analysis of ecmwf ERA-40 data   zonal meaning and climatological statistics comparing model simulations with "observed" analyses
Rivwer input for models and tide gauge data to validate models.
Record updating
CEH Flow data for probabilistic flood modelling.
EU and NERC funded research
Understanding the natural environment (surface and sub-surface0 as it applies to particuar planning, development and environmental management projects on which we are working.
thematic maps of soil characteristics
Varies - as background information to other studies, or as key information supplied (with appropriate permissions) to collaborators as part of joint studies.
in addition to our own acquired data to improve e.g. grids
For research.
To inform 3D and 4D real time modelling of the geology of the Midland Valley of Scotland
Collating data for scientific mapping
i used seismic images for interpretation
Comparison with other monitoring field monitoring data, and assistance for processing of dGPS data.
State of the Seas Report. MCCIP etc
Field work site selection
Defra MCZ mapping project
Cruise planning and site awareness
Time series of measured environmental data to correlate with system performance
Populate in-house developed vocabularies, using vocabulary web-services
Electronic mapping of sample locations
Part of assembling a series of datasets for future conservation planning work.
Planning a survey, and integrating with data collected at sea
Species distribution modelling
Comparing changes to vegetation using aerial photos from different years; species attribute data for comparison between different management techniques of grassland.
www.naturalcapitalinitiative.org.uk
species distribution information
UK Biodiversity Indicators
Biological records and Environmental Data
context for evidence presentation
Topographic analysis of British upland areas. Investigation of landslide risk, as well as the effects of post-glacial incision on upland catchments.
In the Countryside Quality Counts projects and in the development of CQC's suceesor CQuEL
The main useage was sampling of rock materials at teh British Geological Survey
Identifying sunspots large enough to be seen with the unaided eye

	Assessment of space weather risks from severe geomagnetic storms
	1. Geological mapping 2. Vertebrate taxonomy

B9 To what extent was using the data critical to furthering your work?

	Number	%
Essential	174	59.2
Quite important	99	33.7
Not very important	16	5.4
Don't know	5	1.7
Total	294	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSD		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Essential	51	55.4	35	55.6	57	55.3	14	45.2	61	70.9	14	50.0	20	74.1	2	66.7
Quite important	33	35.9	23	36.5	39	37.9	16	51.6	21	24.4	10	35.7	5	18.5	1	33.3
Not very important	8	8.7	3	4.8	6	5.8	1	3.2	1	1.2	2	7.1	1	3.7	0	0.0
Don't know	0	0.0	2	3.2	1	1.0	0	0.0	3	3.5	2	7.1	1	3.7	0	0.0
Total	92	100.0	63	100.0	103	100.0	31	100.0	86	100.0	28	100.0	27	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Essential	57	62.0	70	63.6	10	52.6	25	51.0	2	33.3	1	16.7	18	64.3	0	0.0
Quite important	28	30.4	31	28.2	8	42.1	23	46.9	3	50.0	4	66.7	9	32.1	1	100.0
Not very important	6	6.5	7	6.4	0	0.0	0	0.0	1	16.7	1	16.7	1	3.6	0	0.0
Don't know	1	1.1	2	1.8	1	5.3	1	2.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	92	100.0	110	100.0	19	100.0	49	100.0	6	100.0	6	100.0	28	100.0	1	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Essential	35	54.7	45	65.2	20	69.0	16	45.7	22	61.1	7	36.8	9	40.9
Quite important	23	35.9	21	30.4	6	20.7	15	42.9	9	25.0	9	47.4	9	40.9
Not very important	6	9.4	0	0.0	3	10.3	2	5.7	5	13.9	3	15.8	3	13.6
Don't know	0	0.0	3	4.3	0	0.0	2	5.7	0	0.0	0	0.0	1	4.5
Total	64	100.0	69	100.0	29	100.0	35	100.0	36	100.0	19	100.0	22	100.0

B10 Overall, how satisfied are you with the NERC Data Centres(s) you have used?

	Number	%
Very satisfied	114	38.8
Fairly satisfied	141	48.0
Neither	20	6.8
Fairly dissatisfied	16	5.4
Very dissatisfied	3	1.0
Total	294	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	29	31.5	17	27.0	40	38.8	5	16.1	35	40.7	7	25.0	16	59.3	0	0.0
Fairly satisfied	46	50.0	34	54.0	53	51.5	21	67.7	41	47.7	12	42.9	10	37.0	2	66.7
Neither	9	9.8	7	11.1	5	4.9	3	9.7	6	7.0	4	14.3	0	0.0	1	33.3
Fairly dissatisfied	7	7.6	5	7.9	4	3.9	2	6.5	3	3.5	4	14.3	1	3.7	0	0.0
Very dissatisfied	1	1.1	0	0.0	1	1.0	0	0.0	1	1.2	1	3.6	0	0.0	0	0.0
Total	92	100.0	63	100.0	103	100.0	31	100.0	86	100.0	28	100.0	27	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	35	38.0	55	50.0	6	31.6	12	24.5	1	16.7	2	33.3	8	28.6	1	100.0
Fairly satisfied	44	47.8	40	36.4	12	63.2	34	69.4	4	66.7	3	50.0	14	50.0	0	0.0
Neither	9	9.8	8	7.3	1	5.3	2	4.1	0	0.0	0	0.0	1	3.6	0	0.0
Fairly dissatisfied	4	4.3	6	5.5	0	0.0	1	2.0	1	16.7	1	16.7	3	10.7	0	0.0
Very dissatisfied	0	0.0	1	0.9	0	0.0	0	0.0	0	0.0	0	0.0	2	7.1	0	0.0
Total	92	100.0	110	100.0	19	100.0	49	100.0	6	100.0	6	100.0	28	100.0	1	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	24	37.5	35	50.7	15	51.7	12	34.3	12	33.3	5	26.3	6	27.3
Fairly satisfied	31	48.4	27	39.1	12	41.4	14	40.0	18	50.0	8	42.1	8	36.4
Neither	5	7.8	4	5.8	1	3.4	6	17.1	4	11.1	3	15.8	4	18.2
Fairly dissatisfied	3	4.7	3	4.3	1	3.4	3	8.6	2	5.6	3	15.8	4	18.2
Very dissatisfied	1	1.6	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Total	64	100.0	69	100.0	29	100.0	35	100.0	36	100.0	19	100.0	22	100.0

B11 (and C1) Have you ever tried to obtain or use data from NERC without success?

	Number	%
Yes	100	17.3
No	478	82.7
Total	578	100.0

Data centre used (B1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	28	30.4	19	30.2	20	19.4	7	21.9	25	29.1	5	17.9	8	29.6	0	0.0
No	64	69.6	44	69.8	83	80.6	25	78.1	61	70.9	23	82.1	19	70.4	3	100.0
Total	92	100.0	63	100.0	103	100.0	32	100.0	86	100.0	28	100.0	27	100.0	3	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	30	14.9	33	19.6	7	18.9	19	14.6	3	14.3	5	33.3	11	23.4	1	33.3
No	172	85.1	135	80.4	30	81.1	111	85.4	18	85.7	10	66.7	36	76.6	2	66.7
Total	202	100.0	168	100.0	37	100.0	130	100.0	21	100.0	15	100.0	47	100.0	3	100.0

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	20	24.1	24	20.3	7	12.5	19	26.8	9	9.5	9	30.0	8	19.0	0	0.0
No	63	75.9	94	79.7	49	87.5	52	73.2	86	90.5	21	70.0	34	81.0	3	100.0
Total	83	100.0	118	100.0	56	100.0	71	100.0	95	100.0	30	100.0	42	100.0	3	100.0

C1.1 (& C2.1) If yes, from which centre(s)?

	Number	%*
BADC	29	29.3
BODC	17	17.2
EIDC	24	24.2
EODC	8	8.1
NGDC	26	26.3
PDC	9	9.1
SSDC	4	4.0
ADS	2	2.0
Total respondents	99	

% of respondents answering question C1.1 & C2.1

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	13	44.8	7	21.2	2	28.6	5	26.3	2	66.7	2	40.0	2	18.2	1	100.0
BODC	5	17.2	8	24.2	0	0.0	3	15.8	0	0.0	1	20.0	2	18.2	1	100.0
EIDC	5	17.2	4	12.1	5	71.4	6	31.6	0	0.0	3	60.0	4	36.4	1	100.0
EODC	3	10.3	2	6.1	0	0.0	0	0.0	1	33.3	2	40.0	3	27.3	1	100.0
NGDC	6	20.7	11	33.3	0	0.0	5	26.3	1	33.3	1	20.0	4	36.4	1	100.0
PDC	2	6.9	4	12.1	0	0.0	2	10.5	0	0.0	1	20.0	1	9.1	1	100.0
SSDC	1	3.4	1	3.0	0	0.0	0	0.0	1	33.3	3	60.0	1	9.1	1	100.0
ADS	0	0.0	0	0.0	0	0.0	1	5.3	0	0.0	1	20.0	1	9.1	1	100.0
Total respondents	29		33		7		19		3		5		11		1	

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	12	60.0	6	25.0	2	33.3	4	21.1	1	11.1	4	44.4	3	37.5
BODC	3	15.0	3	12.5	0	0.0	11	57.9	2	22.2	4	44.4	2	25.0
EIDC	2	10.0	2	8.3	4	66.7	3	15.8	6	66.7	1	11.1	1	12.5
EODC	2	10.0	2	8.3	0	0.0	1	5.3	0	0.0	2	22.2	0	0.0
NGDC	0	0.0	13	54.2	0	0.0	2	10.5	2	22.2	0	0.0	0	0.0
PDC	4	20.0	3	12.5	0	0.0	3	15.8	1	11.1	2	22.2	4	50.0

SSDC	2	10.0	1	4.2	0	0.0	0	0.0	0	0.0	1	11.1	0	0.0
Total respondents	20		24		6		19		9		9		8	

C1.2 (& C2.2) What were the barriers?

	Number	%*
Data not held by NERC	17	21.7
Unable to identify the required data	38	52.2
Data were not fit for my purpose	14	17.4
Data were in an unsuitable format	22	21.7
Data were too expensive	10	21.7
Licensing restrictions on the data	23	30.4
Other	37	26.1
Total respondents	99	

% of respondents answering question C1.2 & C2.2

Data centre tried (C1.1/C2.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Data not held by NERC	6	20.7	3	17.6	5	20.8	3	37.5	5	19.2	1	11.1	3	75.0	1	50.0
Unable to identify the required data	14	48.3	8	47.1	9	37.5	4	50.0	9	34.6	7	77.8	2	50.0	1	50.0
Data were not fit for my purpose	4	13.8	2	11.8	4	16.7	4	50.0	5	19.2	1	11.1	2	50.0	2	100.0
Data were in an unsuitable format	10	34.5	4	23.5	8	33.3	3	37.5	5	19.2	2	22.2	2	50.0	1	50.0
Data were too expensive	4	13.8	2	11.8	6	25.0	2	25.0	3	11.5	2	22.2	2	50.0	1	50.0
Licensing restrictions on the data	11	37.9	4	23.5	10	41.7	3	37.5	3	11.5	2	22.2	2	50.0	1	50.0
Other	7	24.1	6	35.3	7	29.2	2	25.0	13	50.0	4	44.4	1	25.0	0	0.0
Total respondents	29		17		24		8		26		9		4		2	

This is C1.2 and C2.2 combined crosstabulated with C1.1 and C2.1 combined

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Data not held by NERC	8	27.6	7	21.2	1	14.3	1	5.3	1	33.3	2	40.0	3	27.3	1	100.0
Unable to identify the required data	10	34.5	12	36.4	1	14.3	8	42.1	3	100.0	3	60.0	5	45.5	1	100.0
Data were not fit for my purpose	6	20.7	5	15.2	0	0.0	1	5.3	1	33.3	2	40.0	2	18.2	1	100.0
Data were in an unsuitable format	6	20.7	8	24.2	1	14.3	4	21.1	2	66.7	2	40.0	3	27.3	1	100.0
Data were too expensive	3	10.3	1	3.0	0	0.0	3	15.8	1	33.3	2	40.0	4	36.4	1	100.0
Licensing restrictions on the data	4	13.8	10	30.3	1	14.3	4	21.1	2	66.7	2	40.0	5	45.5	1	100.0
Other	9	31.0	9	27.3	4	57.1	8	42.1	0	0.0	2	40.0	5	45.5	0	0.0
Total respondents	29		33		7		19		3		5		11		1	

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Data not held by NERC	5	25.0	8	33.3	1	16.7	3	15.8	2	22.2	1	11.1	0	0.0
Unable to identify the required data	8	40.0	10	41.7	0	0.0	8	42.1	2	22.2	3	33.3	4	50.0
Data were not fit for my purpose	4	20.0	5	20.8	0	0.0	2	10.5	1	11.1	1	11.1	0	0.0
Data were in an unsuitable format	4	20.0	4	16.7	2	33.3	3	15.8	2	22.2	4	44.4	1	12.5
Data were too expensive	1	5.0	1	4.2	2	33.3	0	0.0	1	11.1	1	11.1	0	0.0
Licensing restrictions on the data	5	25.0	5	20.8	4	66.7	3	15.8	4	44.4	3	33.3	3	37.5
Other	6	30.0	7	29.2	2	33.3	7	36.8	3	33.3	4	44.4	2	25.0
Total respondents	20		24		6		19		9		9		8	

Data centre	C1.2 What were the barriers?
British Atmospheric Data Centre	Trouble extracting data from the online extraction facility
	Constant problems trying to download data
	Extremely difficult to access large volumes of data
	computer restrictions at Defra
	temporary problems with network
British Oceanographic Data Centre (including data from National Oceanography Centre and Proudman Oceanographic Laboratory)	very hard to find out what was available and to locate the data.
	delay on publications
	No response to query
	Unable to access data via OGC services (unsupported method due to no security) for a portal - ended up getting data directly from the original PI.
	not on the site pmsl
	The authors of the data were behind schedule in delivering the data
Environmental Information Data Centre (including data from Biological Records Centre, Centre for Ecology and Hydrology, National River Flow Archive and NERC Environmental Bioinformatics Centre)	I couldn't work out how to acces the information
	Data generated under NERC contract but charged under licence
	Data not ready - not sure why CEH has taken 3 years to make Land Cover 2007 data available - remarkably slow.
	I was informed by letter that the data could be provided but that CEH staff must approve and coauthor any subsequent publication. Additionally the data was not in the format that was required (disaggregated)
	data was too much (27,000 records) many of which were over 25 years old
	Fobbed off by staff member who just kept telling me they would do it in a few weeks time. (The person in question has now left BRC.)
	data needed for research publications
	Resources to supply data
National Geoscience Data Centre (including data from British Geological Survey)	Apparant lack of knowledge/data not recorded or destroyed
	Only metadata available for NERC-BRIDGE archived data
	confidential nature of data
	Confidentiality of data
	problems with correct search criteria - dialogue boxes abstruse at times
	Scanned data would not load or sometimes wrong documents have been scanned into online borehole access
	Outputs of NERC Funded university science not lodged with NERC
	Data had been lost
	Borehole logs and geological maps held as scans according to indexes but when try to access they are not available so one does not know whether the indexing is wrong or they do exist but not linked correctly
	Data confidentiality - not yet released; insufficient metadata available for some legacy data.
	backlog of unprocessed accessions, poorly scanned data, lost or missing records
NERC Earth Observation Data Centre	Needed to be NERC funded
	Not available to companies or without onerous personal registration
	although to be honest I can't really remember the details
Polar Data Centre (formerly Antarctic Environmental Data Centre; including data from British Antarctic Survey)	Code 404, just a few minutes ago, Polar, data and collections
	Only metadata were available with no indication of how to get at the data themselves
	Unable to find the data on the site
UK Solar System Data Centre	Outages due to occasional data server problems
Multiple Data Centres	BADC: Data extractor not working. BODC: Very good at taking data in, very poor at making it available
	Inconvienient data access
	only metadata available - not the real thing
	really complicated to find the information
	difficult to find; difficult to interpret

C1.3 Please indicate why you have not tried to obtain/use data

	Number	%*
No need to use data from NERC	48	18.5
I obtain data elsewhere	68	26.3
Not aware of what might be available	186	71.8
Other reasons	24	9.3
Total respondents	259	

% of respondents answering question C1.3

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
No need to use data from NERC	29	27.9	11	22.0	3	18.8	6	8.1	1	6.7	0	0.0	4	25.0	0	0.0
I obtain data elsewhere	33	31.7	19	38.0	0	0.0	15	20.3	3	20.0	1	14.3	1	6.3	0	0.0
Not aware of what might be available	67	64.4	27	54.0	13	81.3	61	82.4	12	80.0	7	100.0	13	81.3	1	100.0
Other reasons	10	9.6	6	12.0	0	0.0	7	9.5	1	6.7	1	14.3	1	6.3	0	0.0
Total respondents	104		50		16		74		15		7		16		1	

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
No need to use data from NERC	4	25.0	10	23.3	6	22.2	6	20.7	18	32.1	4	44.4	3	18.8	1	33.3
I obtain data elsewhere	9	56.3	14	32.6	6	22.2	9	31.0	21	37.5	4	44.4	8	50.0	1	33.3
Not aware of what might be available	7	43.8	30	69.8	16	59.3	14	48.3	31	55.4	5	55.6	8	50.0	1	33.3
Other reasons	1	6.3	4	9.3	5	18.5	4	13.8	3	5.4	3	33.3	2	12.5	1	33.3
Total respondents	16		43		27		29		56		9		16		3	

Sector	Main area of research	C1.3 Please indicate why you have not tried to obtain/use data
Commercial/industrial		Most work contracted out - contractors will obtain data
		Only became aware of this via the LARCI mailing.
		I'd normally expect our research providers to so this
		Would be used by consultants we employed, if at all
Public sector		Looking for potential commercial benefits to UK suppliers
		and not at local level
		obtain much NERC info, but not directly from data centres
		not aware of its existence until I received this email
		data usually accessed via the environment agency rather than directly
Voluntary/NGOGeneral public		Use data from BTO and Kent & medway biological record centre, also Kent landscape information system
	Multipul Areas Of Research	No need of NERC data at this moment, likely to need data in the future.
University/Higher Education		more l,ikely to want to deposit data but not very obvious how this can be done
		Not needed so far but might request some in near future
		Currently the bottleneck is storing omics data. When we have systems in place to achieve this, the "re-use" (or meta-analysis) of datasets will become possible.
Research Institute/FacilityPublic sector		It's always easier to ask colleagues directly
University/Higher EducationOtherPublic sectorVoluntary/NGOCommercial/industrialPrivate consultancy		Work experience no in UK
		Often utilize data from a cruise prior to it going into a data centre
		I am a supplier of data to BODC and not (thus far) a consumer.
Research Institute/Facility	Freshwater	I used a lot of published data from lakes monitored by NERC
		Normally collect own through NERC funded research
		I am not sure whether I used. If CEH and EA data is NECR
	Earth	Given policy-focused nature of my research I work from synthesis reports of environmental science
		Use data from BGS - but this is a world data centre, not just NERC
University/Higher Education		Correlation of my data to a single time-scale is important for accurate interpretations, so other data is not so useful in my work, unless I can precisely date the data
	Earth observation	Haven't needed it to date. Might in the future.
	Terrestrial	Until 2008 I was based in Ireland at Trinity College Dublin
		Limited scope. Data held in other repositories.
	Marine	NERC data are provided to (EU) projects by UK partners

D1 Do you use data from sources other than NERC?

	Number	%
Yes	501	87.4
No	72	12.6
Total	573	100.0

Data centre - composite	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	91	89.2	73	92.4	110	88.7	39	92.9	89	91.8	35	87.5	26	92.9	5	100.0
No	11	10.8	6	7.6	14	11.3	3	7.1	8	8.2	5	12.5	2	7.1	0	0.0
Total	102	100.0	79	100.0	124	100.0	42	100.0	97	100.0	40	100.0	28	100.0	5	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	171	85.5	146	88.0	31	86.1	117	90.7	20	95.2	13	92.9	36	76.6	3	100.0
No	29	14.5	20	12.0	5	13.9	12	9.3	1	4.8	1	7.1	11	23.4	0	0.0
Total	200	100.0	166	100.0	36	100.0	129	100.0	21	100.0	14	100.0	47	100.0	3	100.0

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	76	91.6	100	86.2	43	78.2	61	85.9	81	85.3	26	86.7	38	90.5	2	66.7
No	7	8.4	16	13.8	12	21.8	10	14.1	14	14.7	4	13.3	4	9.5	1	33.3
Total	83	100.0	116	100.0	55	100.0	71	100.0	95	100.0	30	100.0	42	100.0	3	100.0

Sector	Main area of research	D1.1: It would help us to know from where else you obtain data. Please give details.
Commercial/industrial		HAARP Fluxgate Magnetometer
		Other National Geological Surveys
		European Environment Agency Literature UNEP
		Public records (eg local authority), internet, commercial data searches, library, publications, government agencies, utility companies etc
		European Space Agency NASA
		Oil industry consortium (NUG wave models) Outside UK waters, some data obtained from other nations' institutions
		Company specific information
		ONS and other similar sites.
		environment agency web site "whats in my back yard"
		Directly from companies in the petroleum industry
		Model generated data from our own models. ECMWF NOAA NODC NCDC ,etc.
		Environment agency we sites
		Met office Defra Environment Agency Natural England Our own data sets
		Proprietary data acquisition DECC and DECC data release agents including CDA Ltd Ordnance Survey NASA GIS and satellite data vendors
		Natural England and JNCC websites.
		industry, other consultants, NGO's
		Local bat, ornithological, herpetofauna, botanical and mammal groups. NBN Gateway.
		NBN/MAGIC/bat groups
		DEFRA, Cabon Trust, Web.
		Defra Ordnance survey Environment Agency JRC National Soils Research Institute Natural England Scottish Natural Heritage CCW MET Office English Heritage Cadw European Environment Agency AA ONS MLURI CLG
		Met Office, Environment Agency
		Envirocheck, maps, EA, magic, local authority websites
		Sorry commercial information
		SEPA, EA, OS, Met Office, local councils, SNH.
General public		Libraries, Archives MSS documents
		Archaeology Data Service http://ads.ahds.ac.uk/ Fossils from the UK http://www.ukfossils.co.uk/
		CCW, Natural England, museums, NBN, other entomologists incl. national recording schemes.
		Literature sources
		Biological Records Centre NBN Gateway
General public, Commercial/industrialSchool/Further Education		US Geological Survey NASA Defra
Other		Journals, magazines, websites, meetings, colleagues
		Butterfly Conservation, Lincolnshire Naturlists Union and on line websites.
		Met Office UK Climate Impacts Programme IPCC
		Primary data collection and use of pre-existing survey data, or management data from clients
		some data obtained from routine emails from observatories
		general web-site searching information on individual NERC programme information on individual institutes in NERC 'family'
		Other national data centres
		NBN, North Yorks and Humberside, local recorders in and around Ryedale and VC62
		Natural England Environment Agency Local recording groups and individuals National recording groups and organisations Other local record centres
		Local Vice county recorders Wildlife Trusts CCW
		1. BGS 2. Professional indtitutes 3. Academia 4. Technical and Trade Journals 5. Industry Associations 6. ONS/HMRC 7. Trade statistics 6. USGS
		British Geological Survey
		Other museums Libraries Internet Universities
		Journals Books other Paleontologists going to the field - e.g. collecting fossils visiting other west coast collections --Univ. Calif. Berkeley; Calif. Acad. Sci.; San Diego Nat. Hist. Mus. interested amateurs
		GenBank EMBL
		Local record centre, NBN, local Natural History Societies, national societies, National and County Recorders,
		Wildlife Trusts and other local/regional organisations.
		Environment agency, gov dept web sites, wastenet, our library, internet, scientific journals
		public agencies NGOs not supplying data to BRC eg.RSPB and BTO Local record centres commercial sector
		NGOs, public agencies, commercial sector
		Marine conservation Soc via other marine recording schemes Museums Wessex

		Archaeology (English Heritage) Private contractors e.g. EMU Individual recorders
		local record centre database; NBN Gateway
		Supporting information attached to published journal articles PANGAEA Obtained directly from colleagues/contacts
		Environment Agency Water Utilities Private Companies
		Met Office (climate data), Environment Agency (river flow, rainfall data)
Public sector		Commercial data such as Land Use. Sources tend to change based on need. Address data (PAF) from Royal Mail. Building information from Construction companies. Planning information form Local Authorities.
		ngdc nssdc kyoto wdc many other
		CEDaR
		Forestry commission JNCC Natural England
		Transport Statistics Great Britain
		Ordnance survey, Environment Agency
		ONS, conduct our own market research, Defra,
		A woide varety of sources but statistics.gov.uk, nomisweb.co.uk, communities.gov.uk, dft.gov.uk and decc.gov.uk
		www.theoildrum.com www.energybulletin.net www.peakoil.net www.aspo-usa.com www.odac-info.org
		biodiversity records centres NASA
		own databases, CEFAS
		NBN Gateway, British Lichen Society database, British Bryological Society website.
		World Data Centre for Greenhouse Gases (WDCGG) World Ozone and Ultraviolet radiation Data Centre (WOUDC)
		Air quality data sites kings college heathrow airwatch AEA
		academics]consultancies UK environmental agencies Sniffer SEPA NI EA
		MEDIN Data Archiving Centres; Other Government agencies Industry sources
		Government marine labs and environment agencies
		regulators and agencys
		Public Health Observatory Data, NHS data, Data fom envitonmneatal regulators (SEPA. EA. Scottish Water and local authorities, data from AEA technology re Air quality .
		In-house data generated from contracted surveys and R&D etc
		Environment Agency
		JNCC, NBN, CEDaR, MARLIN
		CAB abstracts In house records CLIMEX software package
		Number of international websites (i.e Stanford University pages, OECD websites, etc)
		Intergovernmental organisation and governmental agencies responsible for ocean research and services.
		Anywhere and eveywhere I can find it. Mainly from published sources.
		UK Government sources, UK trade representative bodies, Knowledge Transfer Networks etc
		Forestry Commision Environment Agency English Heritage OS Land Use Change Statistics RPA
		Environment agency natural england voluntary sector - eg rspb, wildlife trusts, monitoring reports for planning documents
		MLURI FC range of NGOs
		Ordnance Survey
		British Trust for Ornithology National Biodiversity Network Gateway Natural England, Countryside Council for Wales, Scottish Natural Heritage, Environment Agency northern Ireland, Environment Agency (England and Wales), Forestry Commisssion RSPB
		University and national museums.
		Museums both in the UK and abroad that hold palaeontological collections
		Web Search
		Different scientists. If working abroad, then will use data from their geological surveys/maps etc.
		NASA STFC boards University networks and other academic colleagues
		SNH, EA OS EEA
		various university/Government
		For environment data I tend to go to defra.
		Statutory bodies, 3rd sector organisations, NBN, LRCs and contracted surveys
		Biodiversity Records centre
		Science direct
		Phase 1 surveys, Local Biological Records centre - Warwickshiore
		Local Biological Record Centre -GIGL
		DEFRA, Government agencies, Publication etc
		Met Office, own, Cefas
		SeaZone Hydrospatial (i.e. UKHO) British Geological Survey - are these a NERC data centre? Proudman Oceanographic Lab - as above? Met Office - as above? NOAA
		From our own (Defra) research programme and monitoring network
		Relevant academic literature and government/NDPB/NGO reports
		Ordnance Survey
		Pan Government Agreement National Climatic Data Centre (USA)

		Commercial companies In-house datasets European Commission
		JNCC website Country Agency websites
		data collected in house by NIEA and other government departments and agencies in Northern Ireland
		Environment Agency University Departments CIRIA
		ERFF, Defra, SEPA, SNH
		Met office universities
		MoA with various NGOs, voluntary sector, Natural England Enviroment Agency, Forestry Commission
		SEPA, SNH
		Natural England SSSI data Environment Agency water quality data published and grey literature
		Met Office British Atmospheric Data Centre Defra internal databases
		UK Climate Impacts Programme UK climate projections.
		Global Telecomms Centre Various international sources
		(i) Communities and Local Government Land Use Change Statistics (ii) Environment Agency 'Development and Flood Risk' reports
		from a range of research project that we commission from water comapny datasets that we hold for regulatory purposes occasionally from the EA general literature
		Water Authorities, Local Authorities (Local Government) and Universities.
		ERFF database Web of science reviews
		Official statistics published by own department and others. Published research reports. Direct access to online data, e.g. for Countryside Survey. Databases produced from research commissioned by own department or wider consortia.
		Environment Agency Met Office Hadley Centre CEH National GHG emissions inventories
		Own contracts to find out responses to specific questions. Collaborations with universities and NGOs. Own monitoring systems.
		Local biological record centres and research projects at Welsh universities.
		From within the EA, WISKI archive, Hydrometry and Telemetry Data Aquisition Tool
		Universities, individual researchers
		online - USGS, DTI BGS library
		Internet
		UK Met Office. Environmental Change Network.
		EDINA - Agricultural census UKCIP NBN European Soils database OS Soil Survey Geoloical Survey Country Agencies etc, etc
		nsgdc spidr world data centres for geomagnetism (eg Kyoto) cclrc many others
		Australian Antarctic Data Centre SCAR sources (e.g. MarBIN) Seasaroundus website
		Department of Energy & Climate Change databases
		100 other places
		NBN - probably uses BRC data anyway CEDaR Other online mapping portals
		national air quality archive local authroity websites, EU and international air quality data sources - published journal and grey literature sources
		electronic journals magicmap Natural England GIS datasets
		Environment Agency BIOSYS, ECOSYS. Wildlife Trusts. Natural England. JNCC. Universities (Loughborough, Leicester, Birmingham, Southampton, Lincoln). FBA.
Public sectorVoluntary/NGOGeneral publicCommercial/industrial		wilife trusts nbn gateway various specialist interest groups i.e. county bat groups. local record centres i.e. Record (Cheshire)
School/Further Education		Environment agency. Natural england. Forrestry Commission. R.S.P.B
		RSWT
		NBN Gateway Shropshire County Recorders
		Published research and research institutions
		multifarious, primarily museums and county archives
		BTO (as part of PhD research) Various biological recording schemes and societies
		BTO Wildlife Trust/biodiversity projects RHS Froglife Local groups PTES Museums services (Essex) Local Authorities Natural England Environment Agency
		NBN BSBI website Spider recording scheme website
Voluntary/NGO		Data comes from county wildlife recorders, members of the public, statutory agencies (NE, EA), NGOs
		National Biodiversity Network and Local Record Centres Environment Agency Local Authorities Natural England NGO's
		National Biodiversity Network (NBN) Local record centres County bird recorders Data held by NGOs (BTO, RSPB)
		Various sources including British Lichen Society databases
		the dorset moth network
		journals and research papers provided by friends and colleagues; Natural England publications, British Wildlife; books
Voluntary/NGOCommercial/industrial		Local record centres, NBN Gateway, local bat groups
Voluntary/NGOGeneral public		Kent County Council - Kent Landscape Information System British Trust for Ornithology, Wetland bird Survey, BBS and Migration Watch Kent and Medway Biological Record Centre, Wye, Kent
Research Institute/Facility	Atmospheric	SPIDR, DIAS, ftp://cddis.gsfc.nasa.gov/pub/gps/products

		World Data Centers A and B
		NASA National Space Science Data Centre NOAA Space Weather Prediction Centre NOAA National Geophysical Data Centre ESA Cluster Science Data System ESA SWENET system DIAS upper atmosphere server
		NASA web sites such as CDAWEB - which I consider exemplary (http://cdaweb.gsfc.nasa.gov/). NOAA web sites (e.g. http://www.swpc.noaa.gov/Data/index.html) World Data Centre web sites (e.g. http://wdc.kugi.kyoto-u.ac.jp/)
		Directly from NASA and other science websites From two American science portals - SPIDR and CDAWeb
		NCEP reanalysis, ECMWF reanalysis, Japan Reanalysis
		from Eumetsat for IASI L1C and L2 data from Chalmers for ODIN/SMR L1B and L2 data
		NOAA Paleoclimte Data Centre http://www.ncdc.noaa.gov/paleo/
		CALIPSO lidar
		NOAA HYSPLIT model
		National Snow and Ice Data Center (USA). Many other sources.
		ECMWF ERA-40 and Interim data
		NASA data centres UK and overseas University colleagues
		Data acquired during field research. ERA40
University/Higher Education		WDC Edinburgh Madrigal Millstone Hill Other WDCs for geomagnetism, ionosphere and stratospheric warmings
		Universidad de Concepcion, Instituto Antartico Argentino and China Research Institute of Radiowave Propagation Institute operated ionosondes
		From instruments run by my own organisation and those of collaborators and from the EISCAT radar facility (funded by NERC, although the data are usually obtained directly from the facility).
		- EISCAT site (www.eiscat.se) - Institute-owned instruments
		ESA Cluster spacecraft, Chinese Double Star.
		NASA data UK air quality archive
		BADC CERA Gateway or directly from UK MetOffice or IRI/LDEO Climate Data Library
		Various water authorities / companies (measurement data)
		I have used data from the NILU database as part of the EUCAARI campaign. I have also used the NOAA back trajectory and geophysical data (elevation and coastline) services.
		http://lib.stat.cmu.edu/datasets/
		Universities that don't put their data on BADC.
		NASA NDACC Specific satellite home pages ECMWF Met Office
		US archive centers
		fluxnet organisations
		EMEP GAW (World Meteorological Organisation) WMO Other atmsopheric station data sites
		US and EU (particularly French and German) data services
		Environment Canada websites ESA IONIA web map server UK National Air Quality Archive
		NASA DAAC. Very easy to use. Clear data protocol.
		Satellite data from other data centres (e.g. NASA) or collaboraters.
		Met Office PCMDI
		http://climexp.knmi.nl/ Met Office
		CDC (Climate Diagnostics Center) in the US which has a live access server for NCEP reanslysis data
		ECMWF
		NASA, AERONET websites
University/Higher Education, Research Institute/Facility		FAAM Database
Research Institute/Facility	Earth	Internally, SNH, SEPA, OS
		Ordnance Survey NSRI Macaulay
		Primary data collection - but most of our work is social research. Journal based literature Synthesis reports
		Major satillite imagery providers. Other data met office, worldclim, UNEP, ++++
		Published and academic datasets
		Environment Agency DEFRA Scottish GovernmentCouncils accross Britain
		Various international repositories (World Data Centres, ORFEUS, CSEM, NASA)
		Environment Agency
		These data/material sources are all from overseas surveys and similar institutions
		Search engines, Google Earth etc
		Engineering companies, academic sources
		UK Hydrographic Office, Alfred Wegener Institute, various data libraries associated with the Scientific Commitee for Antarctic Research, US Marine Geoscience Data Synthesis.
		For commercial work use data from clients
		EA OS
		Byrd Polar Research Center, Ohio State University; Natural History Museum, London; other museum catalogues
		Universities commercial companies

		Other palaeontological collections, including universities of Oslo, Cambridge, Leicester, Lund & Birmingham, National Museum of Wales and Natural History Museum, London.
		Ordnance Survey
		Oil companies, DECC
		Natural England, EA, JNCC, SNH English Heritage
		University research departments Government departments NDPBs
		From the RIMNET network, for example. Online from the FOREGS website. Also TELLUS project (run by the Geological Survey of Northern Ireland).
		County Councils, EA,
		From Clients
		OS EA
		peer reviwed literature
		Local Council data Ordnance Survey data Local interest group publications and data
		CDA (common data access to UK oil and gas data, www.ukdeal.co.uk) Literature searches from online scientific journals (eg www.sciencedirect.com) and British Geological Survey library.
		published literature, public and private sector bodies
Research Institute/FacilityPublic sectorCommercial/industrial		Various web based sources
University/Higher Education		IRIS Data Management Center (Incorporated Research Institutions for Seismology www.iris.edu) ORFEUS (Observatories and Research Facilities for European Seismology - www.orfeus-eu.org/)
		From independent researchers who store their own data. Drill core stores (overseas)
		Geological collections and archives held by museums, University geology departments and individual researchers.
		World Data Centers for Geomagnetism (Edinburgh and Boulder) Magnetic satellite missions (CAHMP and Oersted) Intermagnet (also hosted by BGS)
		Published work. NOAA paleoclimate database: http://www.ncdc.noaa.gov/paleo/data.html
		NASA US Federal Sources China
		Papers (peer review) Databases (for speciation modelling) We make data (experiemental scientists)
		colleagues/ published data
		Geochemical databases held on the web. Colleagues.
		Oil companies (boreholes)
		NASA, papers
		1. Personal contacts with colleagues working on similar topics. 2. Databases of some museums, when available 3. Internet sources
		American collections catalogues.
		My own field collections Scientific publications Oil company collections Other institutions (museums, both in the UK and abroad)
		Collaborators who can either supply original sample for me to date, or who are working on the same samples as myself. Published sources where the age of the data is clear, or if I don't need absolute precision.
		Digimorph web-site in Texas
		Museum collections
		Museums worldwide
		UNAVCO archive International GNSS Service (various archives) International Earth Rotation and Reference frames Service NOAA NASA ESA
		Meteorological Office, private individuals
		NASA online satellite data Digimap
		industry archives primary fieldwork
		Irish and UK met offices (atmospheric data) UK hydrographic office (bathymetry) Geological Survey Ireland (bathymetry)
		GEOROC and GERM databases mainly
		NOAA Paleoclimatology, Pangea, various ice-core data repositories, personal approaches (e.g. by email) to authors, public websites of individuals, in-house data archives
		distribution of butterflies from Butterlfy Conservation, data on distribution of bird atlas from the BTO, distribution of european birds from European atlas and data from distribution of Portuguese and Spanish birds from each country national agencies.
University/Higher EducationResearch Institute/FacilityOtherPublic sectorGeneral publicSchool/Further EducationNatural History Museum		IODP/ODP/DSDP repositories Museum collections NGDC Data center Data provided by German universities (geomar, uni.-bremen) Literature Internet, on-line services
Research Institute/Facility	Earth observation	ESA, NASA, NOAA
		STFC funded data archives
University/Higher Education		NOAA (CLASS) NASA LP DAAC EUMETSAT (UMARF)
		National Snow and Ice Data Center
		Operational centers and alternative data archives
Research Institute/Facility	Freshwater	These are data for particular projects funded externally - data providers include UK Met. Office, Environment Agency, other researchers (UK and overseas)
		Environment Agency FERA (formerly CSL) SEPA Natural England

		From published literature international journals
		country in which I am working
		I use data from the UKAWMN and UKADMN, SEPA, Forestry commission, water industry
Research Institute/FacilityCommercial/industrial		Data is used from a variety of sources depending on the project being undertaken
Research Institute/FacilityPublic sector		USGS IIASA etc..
		Edina Digimap
		National Oceanic and Atmospheric Administration Climate prediction Centre, NASA, CPC FEWS-NET, Canadian Institute for Climate studies (CICS)
		Environment Agency
University/Higher Education		Centre of Ecology and Hydrology, Wallingford for river hydrology data
		environment agency national park service (USA)
		DIAS FAO database FishBase Govt stats
		Environment Agency Industry
		Previous research has extensively used data from the British Hydrological Society's 'Chronology of British Hydrological Events'
		data from overseas + EA
		WORMS/OBIS databases
		NCEP/NCAR NASA JAMSTEC MIT
Research Institute/Facility	Marine	Primarily get data through the Computer and Information Systems Laboratory Research Data Archive at NCAR (http://dss.ucar.edu/). It's often easier to find and retrieve (and also serve data) the required data from here than through either BADC or BODC.
		- direct from the scientist/PI - NASA related sources - European Space Agency - RADS (Radar altimeter data archive)
		From the range of MEDIN Data Archive Centres including the Marine Biological Association and the UK Hydrographic Office.
		Sir Alister Hardy Foundation for Ocean Sciences
		Data centres within SeaDataNet-, SCADM-, IODE- and WDS-systems
		Federal institute for geoscience and Natural Ressources (Germany, Hanover)
		various sources - mainly satellite data centres e.g. AVISO in France, NASA Goddard Space Flight Centre
		Usually go direct to source and work with the people who collected it.
Research Institute/FacilityVoluntary/NGO		Data Archive Centre for seabed species and habitats (DASSH)
University/Higher Education		Various university collaborators, UK and overseas. Cefas. Publicly accessible databases on the internet.
		Cefas Wavenet site Collaborators
		CDIAC - Carbon Dioxide Information Centre (USA, intenational, also hosts data synthesis products like GLODAP, CARINA and soon SOCAT); CarboOcean data base (Bergen, Norway).
		Most genomic data e.g. NCBI, EBI, RDP
		NSF Ridge data centre (US) NGDC (US)
		european databases (e.g. ERA-40), Met Office, EA, NASA
		Environment Agency
		Public sequence databases NCBI, Camera, IMG, Ribosomal database project Brenda enzyme database, Expasy
		Open access remote sensing data bases
		Hadley Centre
University/Higher EducationResearch Institute/Facility		reef base, NOAA
		sequence databases (NCBI, EBI)
Research Institute/Facility		EBI and NCBI: downloads of gene data and data sets, plus any relevant genome data web sites.
University/Higher Education	Polar	Freely available remote sensing data, such as that available via the Global Land Cover Facility. Glacier mass balance data and other glacier data from the World Glacier Monitoring Service.
		A plethora of US and European organisations who have single portals for vast repositries of well-dcoiumented and free data. A few examples: USGS, NSIDC, PANGEA
		Met data Long term experiments, Worldwide colleagues data UKCIP
		County Data Centres (in particular Dorset Environmental Data Centre), data from recording schemes (in particular BWARS).
Research Institute/Facility	Terrestrial	Genbank; Scratchpads; Global Biodiversity Information Facility; Encyclopedia of Life; uBIO; flickr; Morphbank; NBN network; Catalogue of Life; Consortium for the Barcode of Life. Many small institutional and even personal repositories that are online.
		BADC - metereological data CEH - mapped deposition data NSRI - soil mapping data etc.
		Automatic Urban and Rural Network air sampling data
		metdata
		From University collaborators.
		You've got to be kidding! data from all over the UK/World
		RIVM NCBI and associated databases
Research Institute/FacilityVoluntary/NGO		Various research team data. Also FBS and other farm economic data.

University/Higher Education		Kew botanic gardens Missouri botanic gardens UK Data Archive
		NSSDC OMNI web COHO web
		NOAA NASA WDC kyoto
		ORNL NPP GPP AET ect data of global dimensions
		Things like Genbank, and the broader literature of course.
		This is a very broad question, but I mostly use biological recording data from a number of recording schemes, organisations and individuals, sometimes via NBN.
		Genbank database and similar Rothamsted Insect Survey
		Literature. Genbank. Several online repositories.
		Met office Environment Agency
		LT Term weather data sets form various sources, long term studies of bird populations from WWT.
		fao worldbank defra
		USGS
		Bioinformatics Data from genome centres, bioinformatics databases
		Botanical Society of the British Isles Individual scientists
		gen bank
		NOAA/Global pollen databases
		I use long term demographic databases (e.g. Soay sheep), stewarded by others, though collected in part through NERC funding.
		Institutional databases, GBIF, other online data sources such as the Biodiversity Heritage Library, NCBI Entrez, paper publications, and collaborators
		BWARS (Bee, Wasp and Ant Recording Society)
		NCBI EBI
		DNA sequence databases genebank etc Data from researchers web sites Currently exploring DRYAD data
		GenBank.
		Genbank for sequence data various organisms
		sequence data from GenBank
		IUCN - species geographical ranges BTO Museums - species occurence data Scientific literature Other researchers
		NCBI and EBI genome databases
		Defra, Environment Agency,
		NCBI/EMBL/DDBJ BoLD Data Systems CAMERA
		Generally direct from the researchers who collect/create it, but that might change in the next few years.
		BSBI vice county atlas
		glopnet
University/Higher Education, Public sector		UK Climate Impacts Programme, GBIF, WCMC and NOAA.
University/Higher Education, Research Institute/Facility		Bluesky for high-resolution aerial photography.
Voluntary/NGO		National Biodiversity Network through the NBN Gateway and The British Lichen Society's Mapping Scheme and the British Lichen Society's own database. Also GBIF
University/Higher Education	Multipule Area of Research	NASA STFC World Data Centres
		NASA, ssmi.com, NOAA, RMIB, Met Office, CRU Norwich
		I obtain data from various international colleagues I have worked with through my academic career.
		Mainly the NCAR sites and subsites, ODP (incl. IODP/ICDP sites and subsites), NGDC (and follow-up sites and subsites, such as ice core repository).
		World Data Centre Own data
		Nasa NOAA World data centre Spidr (NGDC)
		TIMED/SABER
		Satellite data from various sites and ground-based data from STP facilities.
		e.g. Data from US satellite missions (DMSP, IMAGE)
		NOAA World Data Centre for Palaeoclimatology http://www.ncdc.noaa.gov/paleo/treering.html
		National Space Science Data Center, NASA
		Project partners (e.g., Met Office, HR Wallingford, Environment Agency) Channel Coast Observatory Direct from ESA
		There is a marine mollusk database that sometime I use. see a thttp://www.santateresa.enea.it/wwwste/malaco/home.htm
		NAOO Pangaea both are much more accessible
		NGDC Boulder SDLS (OGS, Italy) CATS (France)
		ESA
		public archives of Global Positioning System data (GPS) from the International GNSS Service (www.igs.org) or EUREF
		Remote sensing data from United States Geological Survey Geological data from various national angencies (e.g. BGS, CGS, etc).
		web
		International Permafrost Association projects on permafrost temperatures and active layer trends.

		1. A variety of museum resources 2. USGS 3. Geological Survey of Denmark & Greenland
		EA, local Ports Authority, local councils . . .
		NOAA Palaeoclimatology http://www.ncdc.noaa.gov/paleo/paleo.html Pollen databases, e.g. http://research.fit.edu/paleolab/pollen.php, http://medias3.mediasfrance.org/apd/accueil.htm
		Genbank/EMBL/Ensembl eg arrayexpress, GEO, genomes seqs, ESTs etc
		a wide range of government, industry and academic sources
		I obtain data from literature searching, contact with authors, and contact with any relevant organisations- as a routine part of undertaking meta-analyses
		Databases of journals and individual researchers
		pamgaea data base NOAA database
		Seabird Monitoring Program database maintained by JNCC.
		Publicly available databases. Pubmed/Genbank and more specific databases related to individual viruses.
		As I work with DNA sequences my main sources of data are the international databases such as GenBank and the dedicated sites for genome information on specific species.
		Environment Agency, Local Authorities.
		Met Office UKCIP Air quality archive
		ESA NASA CNES (LEGOS) DLR CSA EA of England & Wales
		AVISO Coriolis NCEP NODC
		http://hadobs.metoffice.com/ CMIP3 Archive: http://www-pcmdi.llnl.gov/ipcc/about_ipcc.php
University/Higher EducationOtherSociety of Biology		FluxNet/AmeriFlux (eddy covariance data) NASA & ORNL (sattelite data - primarily MODIS) JRC (land cover data) POSTEL (land cover data) Snotel
		MEDIN MBA Universities, NBN EA MCA
University/Higher EducationVoluntary/NGOGeneral public		http://www.wunderground.com http://www.degreedays.net/ http://www.noaa.gov/
University/Higher EducationResearch Institute/Facility		Field sampling
		Canada, USA, ESA etc
		NOAA Metoffice
		NOAA UKCP09 Metoffice
		Environment Agency, the literature, university websites - just wherever the data might be located.
		Mainly NASA, NOAA and sometimes ESA
		http://www.esrl.noaa.gov/psd/data/
		BADC Meteorological data from Canada, New Zealand, Australia ECMWF Met Office Ice core data from individuals
		I am using the NCEP-NCAR reanalysis data which are free to download from NOAA website
		World Data Centre (STFC) I obtained solar irradiance measurements.
		World data centre for Palaeoclimatology Boulder; Pangaea; NOAA NCDC (Climate)
		NASA/NOAA
		nasa, noaa, mpi,
		Mainly from US sources, e.g. NOAA, NASA, JPL etc. Also significant volumes of data from ESA.
		Various Local Authorities. The Petroleum Industry Universities
Research Institute/Facility		Various mueums and university collections in Europe.
		oil and gas companies The Crown Estate UKHO MCA Cowrie Channel Coastal Observatory
		Eu-Seased Euroseismic Geo-Seas USGS Google Earth
		NGDC Lamont MGDS NOAA Pangaea USGS NEIC IRIS Harvard CMT catalog
		Internationally available satellite data
		Ephemeris data from JPL.
		I have on occasion obtained data from the USA (of UK / European area).
		national data: http://wwwp2.ymparisto.fi/scripts/oiva.asp NERC data potentially interesting for comparative purposes and for developing European wide analyses
		Lots of molecular resources, including but not restricted to: EnsEMBL EBI - multiple databases NCBI - multiple databases Uniprot/Expasy KEGG GO ReBASE Prosite
		European databases; other national databases
		I do not use data that specifically relates to that held by EIDC and call on DNA databases more often then anything.
		EBI resources such as Genbank and ArrayExpress.
		UKCIP USGS
		I get remote sensing data from ESA, NASA and Uni Delft
		Polar science communities. SCAR MarBin Census of Marine Life World Register of Marine Species WMO NASA Snow and Ice Data Centre NOAA NASA Biodiversity Heritage Library Scott Polar Research Institute Hydrographic Office Argo ESA

		Pangaea
		CCAMLR holds much relevant fisheries and international data which can be accessed for work to be submitted to CCAMLR meetings
		US (NODC, NSIDC, NCEP etc) Germany (AWI) France (Mercator) Russia (PINRO) Personal data from PIs nationally / internationally The list is quite long, this is a selection.
		NASA SCAR-MarBIN OBIS/GBIF World Ocean Atlas
Research Institute/FacilityPublic sector		NSIDC, NODC (NOAA), LAADS/Modis Rapidfire (NASA)
		ICES WODC own data collaborative partners (SNH, JNCC, SEPA, NODC)
		NASA, ESA, National Snow and Ice Data Center (Colorado), Colleagues and direct contacts, Pangea, and various data repository journals run by EGU etc.
Research Institute/Facility, Public sector		ECMWF, PCMDI, NCAR, NERC , BAS Observational data sources, various US navy……. Anyone with met and ocean data that will give us access.

D2 Have you ever deposited data in any of the NERC Data Centres?

	Number	%
Yes	184	32.6
No	380	67.4
Total	564	100.0

Data centre - composite	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	49	48.0	51	64.6	64	51.6	23	54.8	52	53.6	27	67.5	9	32.1	3	60.0
No	53	52.0	28	35.4	60	48.4	19	45.2	45	46.4	13	32.5	19	67.9	2	40.0
Total	102	100.0	79	100.0	124	100.0	42	100.0	97	100.0	40	100.0	28	100.0	5	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	54	27.3	83	50.3	7	19.4	33	27.0	2	9.5	4	28.6	12	25.5	1	33.3
No	144	72.7	82	49.7	29	80.6	89	73.0	19	90.5	10	71.4	35	74.5	2	66.7
Total	198	100.0	165	100.0	36	100.0	122	100.0	21	100.0	14	100.0	47	100.0	3	100.0

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	29	34.9	52	45.2	16	29.1	32	45.1	26	28.0	12	40.0	19	47.5	0	0.0
No	54	65.1	63	54.8	39	70.9	39	54.9	67	72.0	18	60.0	21	52.5	3	100.0
Total	83	100.0	115	100.0	55	100.0	71	100.0	93	100.0	30	100.0	40	100.0	3	100.0

E1.1 In which Data Centre(s) have you deposited data?

	Number	%
BADC	28	15.4
BODC	38	20.9
EIDC	58	31.9
EODC	5	2.7
NGDC	47	25.8
PDC	25	13.7
SSDC	7	3.8
ADS	1	0.5
Total respondents	182	

*% of respondents answering question E1.1

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	17	31.5	11	13.4	0	0.0	1	3.1	0	0.0	1	25.0	1	8.3	1	100.0
BODC	9	16.7	20	24.4	0	0.0	8	25.0	0	0.0	1	25.0	3	25.0	1	100.0
EIDC	13	24.1	19	23.2	5	71.4	15	46.9	1	50.0	4	100.0	5	41.7	1	100.0
EODC	2	3.7	2	2.4	0	0.0	0	0.0	0	0.0	1	25.0	1	8.3	1	100.0
NGDC	11	20.4	26	31.7	0	0.0	5	15.6	1	50.0	1	25.0	6	50.0	1	100.0
PDC	3	5.6	18	22.0	0	0.0	5	15.6	0	0.0	1	25.0	1	8.3	1	100.0
SSDC	1	1.9	3	3.7	2	28.6	0	0.0	0	0.0	1	25.0	1	8.3	1	100.0
ADS	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	25.0	1	8.3	1	100.0
Total respondents	54		82		7		32		2		4		12		1	

Reasearch Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
BADC	23	79.3	3	5.8	0	0.0	2	6.3	1	3.8	4	33.3	2	11.1
BODC	4	13.8	6	11.5	1	6.3	23	71.9	0	0.0	3	25.0	8	44.4
EIDC	4	13.8	6	11.5	12	75.0	3	9.4	19	73.1	4	33.3	3	16.7
EODC	0	0.0	3	5.8	1	6.3	1	3.1	1	3.8	1	8.3	0	0.0
NGDC	0	0.0	33	63.5	3	18.8	4	12.5	4	15.4	1	8.3	1	5.6
PDC	3	10.3	7	13.5	0	0.0	8	25.0	0	0.0	3	25.0	12	66.7
SSDC	2	6.9	1	1.9	0	0.0	0	0.0	2	7.7	0	0.0	0	0.0
Total respondents	29		52		16		32		26		12		18	

none of the respondents selected ADS

E1.2 When did you last deposit data?

	Number	%
Within last year	89	48.9
Last 5 years	65	35.7
Last 10 years	16	8.8
Longer ago	12	6.6
Total	182	100.0

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	17	60.7	19	50.0	27	46.6	4	80.0	19	40.4	13	52.0	0	0.0	0	0.0
Last 5 years	10	35.7	15	39.5	22	37.9	1	20.0	18	38.3	10	40.0	4	57.1	1	100.0
Last 10 years	0	0.0	3	7.9	5	8.6	0	0.0	7	14.9	1	4.0	0	0.0	0	0.0
Longer ago	1	3.6	1	2.6	4	6.9	0	0.0	3	6.4	1	4.0	3	42.9	0	0.0
Total	28	100.0	38	100.0	58	100.0	5	100.0	47	100.0	25	100.0	7	100.0	1	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	21	38.9	46	56.1	5	71.4	18	56.3	0	0.0	2	50.0	6	50.0	0	0.0
Last 5 years	26	48.1	27	32.9	1	14.3	7	21.9	0	0.0	2	50.0	4	33.3	1	100.0
Last 10 years	4	7.4	7	8.5	0	0.0	4	12.5	1	50.0	0	0.0	0	0.0	0	0.0
Longer ago	3	5.6	2	2.4	1	14.3	3	9.4	1	50.0	0	0.0	2	16.7	0	0.0
Total	54	100.0	82	100.0	7	100.0	32	100.0	2	100.0	4	100.0	12	100.0	1	100.0

Reasearch Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Within last year	16	55.2	24	46.2	7	43.8	16	50.0	13	50.0	9	75.0	7	38.9
Last 5 years	10	34.5	23	44.2	6	37.5	12	37.5	11	42.3	3	25.0	10	55.6
Last 10 years	1	3.4	4	7.7	3	18.8	3	9.4	1	3.8	0	0.0	1	5.6
Longer ago	2	6.9	1	1.9	0	0.0	1	3.1	1	3.8	0	0.0	0	0.0
Total	29	100.0	52	100.0	16	100.0	32	100.0	26	100.0	12	100.0	18	100.0

E1.3 Which type(s) of data did you deposit?

	Number	%*
Electronic/digital data	150	0.8
Physical samples/collections	48	0.3
Hard copy/analogue data	34	0.2
Information products	18	0.1
Total respondents	182	

% of respondents answering question E1.3

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/digital data	26	92.9	37	97.4	53	91.4	5	100.0	25	53.2	25	100.0	5	71.4	1	100.0
Physical samples/collections	2	7.1	4	10.5	12	20.7	1	20.0	27	57.4	6	24.0	4	57.1	1	100.0
Hard copy/analogue data	1	3.6	5	13.2	3	5.2	2	40.0	24	51.1	7	28.0	1	14.3	1	100.0
Information products	2	7.1	4	10.5	4	6.9	1	20.0	9	19.1	3	12.0	2	28.6	1	100.0
Total respondents	28	110.7	38	131.6	58	124.1	5	180.0	47	180.9	25	164.0	7	171.4	1	400.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/digital data	46	85.2	71	86.6	6	85.7	28	87.5	0	0.0	4	100.0	6	50.0	1	100.0
Physical samples/collections	7	13.0	21	25.6	2	28.6	9	28.1	2	100.0	2	50.0	8	66.7	1	100.0
Hard copy/analogue data	7	13.0	21	25.6	1	14.3	4	12.5	0	0.0	1	25.0	3	25.0	1	100.0
Information products	3	5.6	9	11.0	0	0.0	4	12.5	0	0.0	1	25.0	2	16.7	1	100.0
Total respondents	54	116.7	82	148.8	7	128.6	32	140.6	2	100.0	4	200.0	12	158.3	1	400.0

Reasearch Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Electronic/digital data	27	93.1	37	71.2	16	100.0	32	100.0	24	92.3	12	100.0	17	94.4
Physical samples/collections	1	3.4	21	40.4	0	0.0	4	12.5	3	11.5	0	0.0	4	22.2
Hard copy/analogue data	0	0.0	24	46.2	0	0.0	3	9.4	1	3.8	1	8.3	5	27.8
Information products	1	3.4	5	9.6	0	0.0	2	6.3	2	7.7	2	16.7	3	16.7
Total respondents	29	100.0	52	167.3	16	100.0	32	128.1	26	115.4	12	125.0	18	161.1

E1.4 What prompted you to deposit the data?

	Number	%
Mandated by NERC	90	49.4
Chose to deposit	65	35.7
Community practice	49	26.9
Desire for a secure and persistent archive	62	34.0
Required by law	9	4.9
Corporate policy	31	17.0
Suggested by colleagues	13	7.1
Other	27	14.8
Total respondents	182.00	

% of respondents answering question E1.4

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mandated by NERC	14	50.0	27	71.0	19	32.7	4	80.0	27	57.4	22	88.0	1	14.2	1	100.0
Chose to deposit	10	35.7	11	28.9	22	37.9	3	60.0	20	42.5	9	36.0	4	57.1	1	100.0
Community practice	11	39.2	17	44.7	11	18.9	3	60.0	6	12.7	12	48.0	5	71.4	1	100.0
Desire for a secure and persistent archive	5	17.8	13	34.2	14	24.1	4	80.0	21	44.6	14	56.0	4	57.1	1	100.0
Required by law	2	7.1	3	7.8	2	3.4	1	20.0	6	12.7	3	12.0	1	14.2	1	100.0
Corporate policy	3	10.7	7	18.4	9	15.5	1	20.0	13	27.6	8	32.0	1	14.2	1	100.0
Suggested by colleagues	4	14.2	1	2.6	6	10.3	1	20.0	3	6.3	2	8.0	2	28.5	1	100.0
Other	4	14.2	4	10.5	11	18.9	1	20.0	5	10.6	2	8.0	1	14.2	0	0.00
Total respondents	28.00		38.00		58.00		5.00		47.00		25.00		7.00		1.00	

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mandated by NERC	30	55.5	51	62.2	1	14.2	10	31.2	0	0.00	1	25.0	3	25.0	1	100.0
Chose to deposit	16	29.6	29	35.3	4	57.1	13	40.6	1	50.0	3	75.0	8	66.6	1	100.0
Community practice	17	31.4	17	20.7	3	42.8	9	28.1	0	0.00	2	50.0	4	33.3	1	100.0
Desire for a secure and persistent archive	16	29.6	28	34.1	4	57.1	11	34.3	0	0.00	2	50.0	5	41.6	1	100.0
Required by law	0	0.00	5	6.1	0	0.00	1	3.1	0	0.00	1	25.0	3	25.0	1	100.0
Corporate policy	0	0.00	21	25.6	0	0.00	10	31.2	0	0.00	1	25.0	4	33.3	1	100.0
Suggested by colleagues	3	5.5	6	7.3	0	0.00	3	9.3	0	0.00	1	25.0	3	25.0	1	100.0
Other	7	12.9	12	14.6	1	14.2	6	18.7	1	50.0	0	0.00	1	8.3	0	0.00
Total respondents	54.00		82.00		7.00		32.00		2.00		4.00		12.00		1.00	

Reseacrh Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Mandated by NERC	11	37.9	32	61.5	8	50.0	26	81.2	12	46.1	10	83.3	15	83.3
Chose to deposit	10	34.4	17	32.6	4	25.0	7	21.8	8	30.7	3	25.0	6	33.3
Community practice	11	37.9	10	19.2	2	12.5	10	31.2	4	15.3	2	16.6	7	38.8
Desire for a secure and persistent archive	4	13.7	25	48.0	1	6.2	9	28.1	6	23.0	7	58.3	8	44.4
Required by law	1	3.4	2	3.8	0	0.0	0	0.00	2	7.6	1	8.3	1	5.5
Corporate policy	3	10.3	11	21.1	3	18.7	3	9.3	6	23.0	4	33.3	6	33.3
Suggested by colleagues	4	13.7	2	3.8	2	12.5	0	0.00	3	11.5	2	16.6	0	0.00
Other	5	17.2	8	15.3	4	25.0	4	12.5	6	23.0	2	16.6	2	11.1
Total respondents	29.00		52.00		16.00		32.00		26.00		12.00		18.00	

Data centre	E1.4 What prompted you to deposit the data
British Atmospheric Data Centre	To facilitate easier use of NIMROD uk-1km composite data by future researchers
	CCMVal project requirements
	decision of PI that data should be deposited
	Partnerships, e.g. funded by DEFRA
British Oceanographic Data Centre (including data from National Oceanography Centre and Proudman Oceanographic Laboratory)	The NERC project required data to be made avaliable.
	Project data policy
	UKCMF data paid for by taxpayer public access
British Oceanographic Data Centre (including data from National Oceanography Centre and Proudman Oceanographic Laboratory), Polar Data Centre (formerly Antarctic Environmental Data Centre; including data from British Antarctic Survey)	Promote best practice and required by EU funded project
Environmental Information Data Centre(including data from Biological Records Centre, Centre for Ecology and Hydrology, National River Flow Archive and NERC Environmental Bioinformatics Centre)	on behalf of Relu programme, as data management support service
	BRC runs our server
	part of LOIS programme
	IEEM recommendation
	Data from participating in national project
	I am on the NEBC staff - so it's my job.
	Provision of hydrometric data under MOU and SL with measuring agencies
	dirve by the CEH Information Gateway.
	as a CEH Fellow
	Service Level Agreement
	For testing data systems for EIDC
	via BSBI
National Geoscience Data Centre (including data from British Geological Survey)	Quid Pro Quo arrangement
	Quid Pro Quo agreement with NGDC
	PhD research using BGS specimens
	important to build up a comprehensive catalogue of publications
	It is the only truly national, independant repository for geoscience information in hte UK
NERC Earth Observation Data Centre	I am referring to the NERC BIG F archive, but this is somehow missing fromn the list of NERC data centres
Polar Data Centre (formerly Antarctic Environmental Data Centre; including data from British Antarctic Survey)	Links to well structured sample record system. Also has storage space and good archive people
UK Solar System Data Centre	Participation in the ICSU WDC system.
	PPARC funded data and data centre.

E1.5 How easy did you find the process overall?

	Number	%
Very easy	47	25.8
Quite easy	79	43.4
Neither easy nor difficult	36	19.7
Quite difficult	18	9.8
Very difficult	2	1.1
Total	182.00	100.0

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	3	10.7	9	23.6	14	24.1	0	0.00	17	36.1	5	20.0	2	28.5	0	0.00
Quite easy	16	57.1	19	50.0	25	43.1	2	40.0	15	31.9	7	28.0	3	42.8	0	0.00
Neither easy nor difficult	4	14.2	7	18.4	11	18.9	2	40.0	12	25.5	7	28.0	1	14.2	0	0.00
Quite difficult	4	14.2	3	7.8	8	13.7	1	20.0	3	6.3	5	20.0	1	14.2	1	100.0
Very difficult	1	3.5	0	0.00	0	0.00	0	0.00	0	0.00	1	4.00	0	0.00	0	0.00
Total	28		38		58		5		47		25		7		1	

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary / NGO		General public		Commercial / industrial		School / FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	12	22.2	24	29.2	5	71.4	6	18.7	0	0.00	2	50.0	1	8.3	0	0.00
Quite easy	27	50.0	32	39.0	1	14.2	17	53.1	1	50.0	1	25.0	5	41.6	0	0.00
Neither easy nor difficult	9	16.6	17	20.7	1	14.2	6	18.7	1	50.0	0	0.00	3	25.0	0	0.00
Quite difficult	5	9.2	8	9.7	0	0.00	3	9.3	0	0.00	1	25.0	3	25.0	1	100.0
Very difficult	1	1.8	1	1.2	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total	54.00		82.00		7.00		32.00		2.00		4.00		12.00		1.00	

Reasearch Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very easy	3	10.3	22	42.3	4	25.0	8	25.0	5	19.2	4	33.3	3	16.6
Quite easy	19	65.5	20	38.4	5	31.2	15	46.8	9	34.6	4	33.3	6	33.3
Neither easy nor difficult	4	13.7	9	17.3	6	37.5	6	18.7	7	26.9	2	16.6	4	22.2
Quite difficult	3	10.3	1	1.9	1	6.2	2	6.2	5	19.2	2	16.6	4	22.2
Very difficult	0	0.00	0	0.00	0	0.00	1	3.1	0	0.0	0	0.00	1	5.5
Total	29.00		52.00		16.00		32.00		26.00		12.00		18.00	

E1.6 How satisfied were you with the process overall?

	Number	%
Very satisfied	60.00	33.0
Fairly satisfied	76	41.7
Neither	29	15.9
Fairly dissatisfied	12	6.5
Very dissatisfied	5	2.7
Total	182.00	100.0

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	10	35.7	10	26.3	14	24.1	1	20.0	19	40.4	7	28.0	4	57.1	0	0.00
Fairly satisfied	10	35.7	16	42.1	29	50.0	0	0.00	18	38.3	7	28.0	2	28.5	0	0.00
Neither	5	17.8	8	21.0	10	17.2	1	20.0	7	14.8	5	20.0	0	0.0	0	0.00
Fairly dissatisfied	2	7.1	4	10.5	4	6.9	2	40.0	2	4.2	4	16.0	1	14.2	1	100.0
Very dissatisfied	1	3.5	0	0.00	1	1.7	1	20.0	1	2.1	2	8.0	0	0.0	0	0.00
Total	28.00		38.00		58.00		5.00		47.00		25.00		7.00		1.00	

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary / NGO		General public		Commercial / industrial		School / FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	18	33.3	31	37.8	6	85.7	7	21.8	0	0.00	1	25.0	1	8.3	0	0.00
Fairly satisfied	18	33.3	36	43.9	1	14.2	19	59.3	1	50.0	2	50.0	4	33.3	0	0.00
Neither	11	20.3	8	9.7	0	0.00	4	12.5	1	50.0	0	0.00	5	41.6	0	0.00
Fairly dissatisfied	4	7.4	5	6.1	0	0.00	2	6.25	0	0.00	1	25.00	2	16.67	1	100.0
Very dissatisfied	3	5.56	2	2.44	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
Total	54.00		82.00		7.00		32.00		2.00		4.00		12.00		1.00	

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Very satisfied	11	37.9	25	48.0	4	25.0	9	28.1	3	11.5	5	41.6	3	16.6
Fairly satisfied	11	37.9	20	38.4	7	43.7	12	37.5	17	65.3	3	25.0	8	44.4
Neither	5	17.2	4	7.6	4	25.0	7	21.8	2	7.6	2	16.6	2	11.1
Fairly dissatisfied	1	3.4	2	3.8	0	0.00	2	6.25	2	7.6	2	16.6	4	22.2
Very dissatisfied	1	3.45	1	1.92	1	6.25	2	6.25	2	7.6	0	0.00	1	5.56
Total	29.00		52.00		16.00		32.00		26.00		12.00		18.00	

Data centre	E1.7: Please add any general comments about depositing data
	the file format is not obvious for a novice for uploading
	The process was easy because I simply emailed the relevant files (they were not large!) to the BADC helpdesk and they did the rest!
	No. Was quite easy once I'd figured out how to save in NetCDF format.
	I found this really useful especially as recently some local data went missing and I was able to retrieve it from BADC which saved me a great deal of time.
British Atmospheric Data Centre	It generally worked well. Some issues concerning not being able to replace/delete old files.
	Required some help from the NERC Facilty masnbger (eg MSF)
	It's part of our commitment to NERC. It provides a useful back-up resource to our own data archiving
	I can muster only so much enthusiasm for depositing data. I want the process to be easy and painless.
	Data is excellent. Meta-data could be better, but is acceptable.
	Use of a collaborative work space.
	The only tricky bit is that Met Office model output needs to be translated to NetCDF
	Much more data would be deposited if similar processes for individual acknowledgement and security advocated by Jackie McGlade at the European Environment Agency were uninversally adopted.
	Help is required to convert data to CF-netCDF so it complies with the European formats
	The only problems experienced in data deposits are usually a need for better understanding of the quality and processing protocols required by BODC. These problems are largely now ironed out.
British Oceanographic Data Centre (including data from National Oceanography Centre and Proudman Oceanographic Laboratory)	BODC runs a helpful and professional service
	data produced during NERC funded research
	Straight forward process
	Data owned by UKCMF subsumed by the data centre
	Our group deposited sequence data (or metadata describing samples from which these were obtained) regarding microbial community analyses carried out in the frame work of the NERC Marine and Freshwater Microbial Diversity program.
	Deposition until 1996 from the NERC Institute in which I worked. This was obligatory as a condition of the support I received for the programmes we undertook.
	There could be huge scope here for NERC to host data on behalf of otehr funders esp Defra
	Biodiversity science should be cumulative but there seems to be no sensible framework for depositing information - data or, as important, program code - such that it is useful to the broader research community.
	Make it as easy as possible - use plain language/don't ask for info not really needed
	It should be as easy to get data out (and in suitable format) as it is to put data in
	Data deposited by a 3rd party, which worked well
	Initially had issues that I wanted to specify extremely detailed metadata but the system assumed that I'd be reluctant to supply more than the absolute minimum of metadata.
	Most of the data I generate is gene sequence data which has to be deposited in either EBI or NCBI before publication and made public on publication.
Environmental Information Data Centre (including data from Biological Records Centre, Centre for Ecology and Hydrology, National River Flow Archive and NERC Environmental Bioinformatics Centre)	Supply additional (or improved) data sets had much to do with my professional contacts with Terry Marsh and Martin Lees who continually sought to improve the data sets held on the National Flow Data Archive.
	Someone in my lab deposited it, so I do not know how easy (or difficult) this was. Hence the previous 2 questions are not applicable to me.
	transcriptome data deposition aided by xml tools generated by nebc
	While it was possible to deposit data, it was unclear how well publicised it would be to others. Repositories such as genbank or ArrayExpress are more widely known and accessed.
	Found it a cumbersome process and a duplication of standard procedures for deposition on other publically accessible, more globally relevant databases
	We are working together to make the process more seamless and to minimise differences between whats held at the NRFA and whats held here.
	Some problems did arise in reciprocity
	System has, I am told, improved considerably since I was last personally involved.
	Archived the Invertebrate Site Register
	Great experience!
National Geoscience Data Centre (including data from British Geological Survey)	This was part of the NERC-BRIDGE programme. The data deposited included seafloor sonar imagery.
	Deposit sitre investigation data (eg borehole records), on a refgular basis but communication with the BGS is difficult. Have asked BGS to conform receipt of

	information sent but BGS fail to respond.
	As a former NERC employee I was obliged to deposit data in institute data centre as a matter of routine
	The staff made things very clear and helped to catologue the data I deposited.
	Online submission of data would be useful and make depositing data simpler and more efficient
	It is very easy now, to deposit a pdf. This should be made mandatory for all suitable documents (obviously unreasonable to expect this to be done with very large ones such as Theses)
	These data comprise reprints or electronic files of papers dealing with fossils from the Geological Survey collection.
	Greater awareness of and easier access to the NERC data would be appreciated. Sometimes it is hard to know what questions to answer until one is aware of what data are available.
	Generally deposiit information from commercial geotechnical and geo-environmental boreholes
	It is time & effort consumming; difficult when resources are sparse and being reduced year on year
	Depositing data with the NGRC is generally easy
NERC Earth Observation Data Centre	The staff at NEODC are very helpful and flexible.
Polar Data Centre (formerly Antarctic Environmental Data Centre; including data from British Antarctic Survey)	Awkward system, too manual, undefined purpose, no clear benefit from doing so.
	Polar Data Centre seems short-staffed for basic inputting of data (though the staff who are doing it are good), and perhaps overloaded with less-fundamental capabilities.
	Overall our data centre is adequate for our particular working needs & is pretty straight forward to use, & when I have any problem I have always been quickly helped to rectify any problem I've had.
	I wish to deposit all of the data I have in my custody, but find the NERC system complex, under-staffed and does not provide DOI. I am likely to use the EGU in future.
UK Solar System Data Centre	It is a great pleasure to confirm that all data requests have been dealt with most successful and efficiently
	It would be great if there was a mechanism to receive usage statistics on the deposited data.
	I have also run a project which fed all its data in real time to the UKSSDC. (I no longer work on it, but it still does this.)
Multiple Data Centres	I am no longer involved with data collection - hence my rather dated experience of this aspect
	Don't see the point of making the repository of data mandatory by NERC except to justify the peoples maintaining those centers but consuming resources that can be better used. It's basicaly too expensive for waht it's done with it.
	Lots of barrier to use. It is difficult to do quickly. The befits to the science are obscured by the complex process. Also the costs can be inhibitive depending on how the project is funded.
	The staff at BADC are extremely helpful (and patient)

E1.8 Have you ever tried to deposit data with NERC without success?

	Number	%
Yes	15	8.2
No	167	91.7
Total	182.00	100.0

Data centre used (E1.1)	BADC		BODC		EIDC		EODC		NGDC		PDC		SSDC		ADS	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	6	21.4	5	13.1	4	6.90	1	20.0	2	4.2	4	16.0	1	14.2	1	100.0
No	22	78.5	33	86.8	54	93.1	4	80.0	45	95.7	21	84.0	6	85.7	0	0.00
Total	28.00	100.0	38.00	100.0	58.00	100.0	5.00	100.0	47.00	100.0	25.00	100.0	7.00	100.0	1.00	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary / NGO		General public		Commercial / industrial		School / FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	5	9.2	6	7.3	0	0.00	3	9.3	0	0.00	1	25.0	2	16.6	1	100.0
No	49	90.7	76	92.6	7	100.0	29	90.6	2	100.0	3	75.0	10	83.3	0	0.00
Total	54.00	100.0	82.00	100.0	7.00	100.0	32.00	100.0	2.00	100.0	4.00	100.0	12.00	100.0	1.00	100.0

Reseach Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	5	17.2	3	5.7	0	0.00	1	3.1	2	7.6	1	8.3	2	11.1
No	24	82.7	49	94.2	16	100.0	31	96.8	24	92.3	11	91.6	16	88.8
Total	29.00	100.0	52.00	100.0	16.00	100.0	32.00	100.0	26.00	100.0	12.00	100.0	18.00	100.0

E2.1 Do you have data that you think could be relevant to the environmental science community, which the NERC Data Centres could hold?

	Number	%
Yes	84	22.0
Not sure	137	36.0
No	160	42.0
Total	381	100.0

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary / NGO		General public		Commercial/ industrial		School/ FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	38	26.4	19	22.9	6	20.7	17	19.1	4	21.1	0	0.0	7	20.0	0	0.0
Not sure	54	37.5	21	25.3	13	44.8	34	38.2	10	52.6	6	60.0	12	34.3	1	50.0
No	52	36.1	43	51.8	10	34.5	38	42.7	5	26.3	4	40.0	16	45.7	1	50.0
Total	144		83		29		89		19		10		35		2	

Research Area	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Yes	17	31.5	14	22.2	6	15.4	8	20.5	19	27.9	4	22.2	3	14.3	2	66.7
Not sure	11	20.4	25	39.7	11	28.2	11	28.2	25	36.8	5	27.8	9	42.9	0	0.0
No	26	48.1	24	38.1	22	56.4	20	51.3	24	35.3	9	50.0	9	42.9	1	33.3
Total	54		63		39		39		68		18		21		3	

Sector	Main area of research	E2.1.1: Please give details of the data that you think could be relevant to the environmental science community, which the NERC Data Centres could hold:
Research Institute/Facility	Atmospheric	All of it.
		Upper atmosphere radar data Auroral Imager data
		All BAS data are handled expertly by the small number of BAS employees devoted to data management.
		various Antarctic field data
		I have data derived from images of the aurora that provide an insight into prevailing geospace conditions and activity in the Earth's upper atmosphere and magnetosphere. This is particularly relevant to the polar regions.
		Records of historical space weather events
		The existing sunspot digital dataset stored at the National Geophysical Data Center, Boulder, and the UK Solar System Data Centre, Chilton, has been revised. The revised digital dataset is a significant improvement on the existing digital dataset and it should be made available to the scientific community. This is part of the current plan. Further improvements could be made to this dataset but this might require additional resources.
		the ionospheric total electron content (TEC)
		to predict radio wave propagation
University/Higher Education		climate model output
		Amateur (hobbyist) data
		The filoe format was incorrect or the FTP site to the BADC was not working
		Data from our project will be submitted to BADC when it is due for delivery in Dec 2010.
		Aerosol optical thickness measurements after Eyjafjallajokull eruption
		Current project with ARSF
		New versions of files
		geopotential data NAO Index data
		Large database of Fabry-Perot Interferometer data of auroral thermosphere winds and temperatures
University/Higher EducationResearch Institute/Facility		Image data from CCD imaging probes
Research Institute/Facility	Earth	I have many palaeontological data but this is all held in the archives of the British Geological Survey, and hence part of a NERC data centre
		Some of these questions don't quite fit my situation as a NERC staff member. Regarding this one, I am working with NGDC colleagues to ensure that relevant data I am holding is appropriately prepared for and lodged at NGDC.
		Vegetation maps and data. Plants species, Family, genera data
		We have knowledge and outputs that environmental scientists may find of use in translating their research findings to policy-makers
University/Higher Education		geochemical data derived from UK PhD theses. Archiving of such material in University libraries is patchy
		high frequency (50 Hz) wind flow measurements over natural topography
		I believe that as a NERC-funded standard grant of mine is about to end, that I am obliged to deposit data, but I am not sure how.
		We will be depositing data at the end of our current NERC-funded project
		I have occurrence data for UK fossil fishes
		Biostratigraphical data
		collecting a database of stratigraphic, structural and thermochronology data for the southern Andes
		I have geochemical and geochronology datasets from different studies I have conducted. The data for which are primarily published in peer-review journals. However as not all universities have access to the same journals a general dataset would be useful.
		Details of fossil assemblages from UK Quaternary sites
		I don't really think geochemistry data could be properly organised and validated in a data centre
		We will be developing a dataset of radionuclide bahviour - this will be reported to NERC as per their requirements although I note we will also be publishing the data and thus there is a consideration of whether impact for "data generation" can be measured with data outputs from science papers?
		Quaternary palaeoclimate data from the Mediterranean and South America (faunal and palynological data, isotopic records, sedimentological data, dating information)
		Seismological event data from several arrays. All the data are hold in other data centers as continuous data streams.
		We collect microstructural data using electron backscatter diffraction - rather specialised; not sure who else would use it.
	Earth observation	Fieldwork data, model outputs

Research Institute/FacilityCommercial/industrial		Most data is collected and held in confidence
University/Higher Education	Freshwater	I am currently developing long hydrological variability series from proxy sources.I also hold long historical food series.
		distribution of native and invasive freshwater fishes long tem demographic and genetic data on exploited stocks
		population data
		Measurements of contaminants in envriuments and their biota Possibly some omics data e.g. metabolomics, transcriptomics data
Research Institute/Facility	Marine	There is lots of marine information that is still only in hard copy and requires a backup urgently.
		transnational data products created by international consortia with UK participation (although many projects develop their own data portals)
		I am a US Federal Government worker, so by US law all of my data must be held by US institutions.
		We hold biodiversity data, which is suitalble for the MEDIN biodiversity data archive centre DASSH.
		A detailed 3D, time-varying dataset of ocean potential vorticity for the Southern Ocean.
University/Higher Education		Environmental metagenetic sequence data
		Well that depends on your definition of what the data centres should hold. Personally, I think that the work of many international class scientists in this country are held on overseas databases. Sea turtles for example in Hays and Godley and their teams we have some of the best in the world. If you want their raw data its not easily accessible and their papers are stored on seaturtle.org in the USA. Its accessible. But not from the UK unless you pay for the Journal Articles. I think a broader question is what do we want to preserve? Our world class research, or just historical data.
		DNA data isoprene cylcing data
		Lots of HF radar wave data. I have discussed this with BODC in the past but they were focussing on working out how to handle current data first
Research Institute/Facility	Polar	Geophysical data from Arctic fieldwork. Approx. 10 years ago
University/Higher Education		Radio-echo sounding data of glaciers. Glacier dynamics data. Airborne imagery acquired on ARSF flights.
Research Institute/Facility	Terrestrial	3D geological models into GLOS
		I believe that we are in the process of transferring all our aphid and moth records onto the NBN gateway (if this is one of your data centres?)
		Spatial bioacessibility data of potentially harmful elements in soils
		forest monitoring data
		DNA sequences; specimen records; images; host-parasite association data; morphometric data. Note that just because the NERC data centre could hold them, does not mean I think the NERC data centre should hold them.
		relevant stuff goes to NBN
		lots of archive/completed data but of unknown quality
		soil samples: Physical properties of soil
Research Institute/Facility, Public sector		The existing datacentres of NERC does nto assemble data that are likely generated frequently in my research. Thus, the link is a bit difficult. Some of my biological observations, occurrence data, will be deposited in the future if relevant but the often narrow scope of the NERC centres restrict their importance to my research.
University/Higher Education		Long term population data from birds. Epidemiological data from malaria infections in birds
		Short read sequence data
		Inorganic parameters of all UK soils
		I have instead placed data in open acess sites associated with journals and with research centres in the US
		Chemical profile data
		mammal life history data
		I know of none that I have not put on Genbank or in papers.
		GPS coordinates of collection sites for NERC funded data Genotypes Thought this might be better used if posted on DRYAD
		DNA sequence data, natural DNA polymorphism. Microarray expression data of transcriptome response to environmental changes. Phenotype data of strains collected in the wild.
		Data on the distribution and prevalence of bumble bee parasites
		Quaternary pollen data
		DNA sequences information, although its being held at NERC centres would duplicate databases elsewhere
		Soil EM properties for GPR studies
		I am not sure what knd of data you want I have arange of emsions dat from ruminant livestock
		I have a long term migratory bird database. Part of the data collection has

		been funded by NERC, however there are several stakeholders and we still have lots of plans for analyses.
		Data on alien and invasive species on urban rivers, the dynamics of plant propagules and recommendations for river restoration and management, and implications based on climate change predictions.
		I have an ongoing grant from a previous postdoc position that in NERC funded; this will have a range of omic data on the stress responses of C. elegans, and will be deposited within NERC data centre when completed. I have NERC PhD students, and data from their projects, on polar terrestrial invertebrate ecophysiology, and insect diapause, may also be suitable for NERC data centres.
		Soil respiration data from various ecosytems (forest, grassland, peatland) within the UK
University/Higher EducationResearch Institute/Facility		Spatial information on peat depth and greenhouse gas fluxes.
		Distributional data for fossil and living mammals and their attributes
		I will be glad to deposit my data, after my PhD study at North Wyke Station
University/Higher EducationVoluntary/NGOGeneral public		Analysis of cloud frequency (or just how predictable is the cloud formations/timings). The solar and the atmospheric portions of your site may be the places to deposit it
University/Higher EducationOtherSociety of Biology		River Thames ~ species
University/Higher EducationOtherPublic sectorVoluntary/NGOCommercial/industrialPrivate consultancy		I have knowledge about looking for information for resolving geological and hydrology problems in several fields around environment. I can provide my background to the NERC if you are interested
Research Institute/Facility		palaeoenvironmental data
		Old seismic data that is stored on magnetic tape
		I have data on the Southern Annular Mode: it is on a BAS-hosted website and is accessible to the public but is not in a 'data centre'
		To be discussed in the context of possible initiatives across PEER centres
	Multipule Areas Of Research	Spectrographic data from Svalbard
		Magnetometer data from SAMNET chain Riometer data
		Optical data, aurora images
		Isotope time-series for palaeoclimatic research - some already sent to NOAA
		Some monitoring data of soil and stream water chemistry from Moor House
		Any data I have are published so are available anyway
		Mapped data of glacial geology/geomorphology Cryosphere data on glacier/ice sheet fluctuations and past glacier/ice sheet fluctuations
		Global Positioning System data. This sort of data is archived by the NERC BIGF, but that is not a data centre but a NERC facility with a focus on the UK
		The results of oldweather.org
		Plant macrofossil, C/N and testate amoebae data from peat bog deposits - these can be used to reconstruct climate change and changes in long-term carbon sequestration rates in the UK's largest terrestrial carbon store.
University/Higher Education		Sea surface temperatures for many, many DSDP/ODP drillsites, sample-specific (e.g. each sample one summer and one winter temperature) plus of course time-intervals. More SSTs to come, they can be added stepwise. See the CD of the book to IGCP341, Smolka and Volkheimer 2000 (temper-directory). Of course data of model-results driven by above (presented, invited speaker, on the IGC in Florence) and on the IGCs in Oslo, Rio and partially in Bejing. The relevance: How did a world look-like with El-Nino type (reconstructed(!)) temperatures in the Pliocene tropical Pacific together with quite cold reconstructed (independently of the tropics) temperatures in co-existence with ice-rafted detritus (reconstructed, Jansen et al., Krissek et al.) in the Norwegian Sea and the high lat. Pacific, that is: An ice-covered Arctic throughout the entire Pliocene as ice-rafts in the Norwegian Sea normally require more ice further North. The SSTs are from me the IRD is independent of me (Jansen, Krissek and other), additional consistent Alkenone-SSTs and Ca/Mg SSTs (Pacific El Nino) are also independent of me.
		Past environmental change records (fossil pollen, charcoal, chironomids and other proxies)
		Marine sediment data, geochemical data and stable isotope racords
		I will have water level data at flood edges from low resolution space data (including associated uncertainties) for a number of floods and sites at the end of next year probably, which NERC's NCEO might like to hold as a freely available data set.
		ancient footprints. computer models, morphometric anatomical data, kinematics/kinetics datasets
Commercial/industrial		Sorry this is commercial data

		Borehole information, but this belongs to our client.
		As per previous answer, I don't know.
		Information on energy use in buildings as a result of ongoing work with one of my research engineers.
		Records of species/habitat types that we come across during projects
		We have emailed records centres asking how they would like the data presented and they have not responded
		Satellite and UAV imagery
		the data we hold is not of our owernship but includes flow data, turbidity, benthic, sediment quality
		Comprehensive, properly depth-linked digital oil & gas industry core photogrpahs and data
		Wading bird counts River and estuarine water quality
		undertake bore holes for site development work
		Our data is confidential to our clients, however we try to promote sharing with Research organisations where possible. Previously we have offered data to NOC and funding through consultancy but NOC was unable or unwilling to participate despite significant efforts on our behalf to agree to a suitable contract.
		borehole / trial pit logs
General public		Archaeology site information/finds Fossil finds/location and photographs..eg Metadat
		I am unable to be specific on detail as my research oftem develops in different ways
General public, Commercial/industrialSchool/Further Education		Magnetic data
		low-cost, low energy cultivation systems
		information regarding tourism activities in the Antarctic
		I keep annual records of all my wildlife sightings, that I then forward to the NEYorks record centre - I think they then send them on to NBN
		Species records
Other		I generate my own data such as shallow boreholes, reports on sites and habitats, survey data, met data, topographic data, water levels, water quality data etc. Some of this belongs to clients (paid work), some wholly to me (volunteer work). Borehole data normally ends up at BGS (Wallingford). Species data goes to TVERC. Met data not accurate enough, WQ, water level and topographic survey data go in the reports, which remain with the landowners. I keep copies of all data, except where specifically asked to erase or licence conditions require removal.
		Collections data
		Specimen data of fossil reptiles in the collections of the Natural History Museum, London.
		I don't know what kind of data you want
		Locality data and measurements from a wide variety of mammal and bird species
		Geological site records. Specimen data.
		I am not sure we do have any data that would be appropriate.
		This is very difficult to answer as NERC are partners is NBN and we already work together
		As A trade association for the Water Supply Chain we establish data on watere related areas such as financial information, projects, trends and some test data.
Public sector		Spatial and temporal dispersal patterns of the hen harrier (in prep PhD Thesis)
		the national air quality archive is a publically accessible data source which is relevant tot he es community but is held by our contractors to make it easily available to all.
		Data collected by my organisation is available to researchers or others if needed. We have data on the conservation status of species and habitats.
		food data
		Drinking Water Quality samples for Scotland, 2006 to present.
		Climate Change Risk Assessment (due for completion by end 2011)
		contaminated land in urban areas
		I would need to review the relevance of data centres to our work in more detail.
		Large datasets on forest environments
		Data on air pollution emissions, concentrations, deposition, and transport
		It depends if MEDIN DACS are NERC Data Centres. We have put data into DASSH and BGS and UKHO Data Archive Centres and will continue to do so.
		Local tide guage observations
		Environmental monitoring - large volume of data held by the Environment Agency (as an examples)

		This is the tricky question. Lot's of wildlife records and clearly this should reach national recording schemes but then there's the NBN and local groups
		species and habitat data
		GIS Phase 1 and Local Sites surveys
		Small amounts of information about heathlands and their management; the location of wood-pasture and parkland priority HAP
		Condition of habitats ancient woodalnds, hedgerows, Ecological studies produced for development schemes.
		Species and habitat records
		If relevant, all data from Defra commissioned research could be added to the data centres. But how would this duplicate e.g. other databases such as ERFF's?
		Links to Scottish Environmetal data sets Metadata of Scottish Environmental data sets
		We are data users rather than data originators. It is not clear at present how we could contribute.
		Localised micropalaeontological data from estuary sites
		Geological models
		External Data from other surveys
		collections specimen data
		the comprehensive spending review and new coalition government have closed Regional Assemblies and are closing Regional Development Agencies and Government Offices. Without these organisations support the regional observatories will start (or already have) to close by April 2011. Government Departments in Whitehall have not recognised the importance of data to a range of voluntary organisations and local authorities on the ground. NERC data centres could assist.
		Perhaps some of the statistical material about UK sector growth and international markets.
		I represent a data user, not provider.
		Aquatic animal disease Freshwater fish Biomarkers
		All Wave Hub interpreative reports are published at www.wavehub.co.uk We do also have the data files for many of the reports but have not published these. We are a little reluctant to do so, partly because the data may not have been checked for accuracy and partly because it could be used by ill qualified researchers leading to adverse but inaccurate statements entering the public domain.
		Agri-environment monitoring data. Held centrally and available through a web-based portal. Not managed by me so don't know what the links/ potential links with NERC datacentres are
		I feel most of the data I would utilise is not of a type normally within the scope of NERC's interest
		We contribute data to the ERFF/LWEC UK-EOF initiative.
		We hold a number of benthic biological survey datasets, this will be lodged with the MEDIN Data Archiving Centres
		NATIONAL DIATOM MONITORING DATA - held by Environment Agency (HO Bristol)
		biodivesity noise weather trends
		sea level measursments
		General policy work on energy and developing countries.
		We used to do some quality of life environment perception work, but the future of this is uncertain in the current budget climate.
		Land use data and strategic plans
		Statutory Development Plan data including green belt, local nature areas, wildlife habitat network, greenspace etc.
		Large amounts if grey literature related to policy development and to operational practice.
Voluntary/NGO		I supply data via butterfly monitoring scheme, BTO and records sent to local wildlife trust which owns the reserves where I organise volunteer work parties
		i am unsure of nerc's role, and how the data would benefit the environmental science community. the data belongs to the county and the custodians are ultimately dorset environmental records centre.
		Species distribution data - some of which is held by the NBN Gateway
		Is your species data shared on the National Biodiversity Network? If not, I'd highly recommend it as an ideal central location for the definitive dataset
		Biodiversity data from the county of Kent, currently over 2.4 million records from over 17,000 taxa.
		I pass data on to relevant national groups, and so presumably this will reach NERC data centres
		BRC may wish to hold some of the data, but think they prefer that the data is shared via the NBN Gateway.
		I am a moth-trapper and have a couple of thousand records from the last 2

		years; micro's and macro's.
Voluntary/NGO, General public		Data relating to changing use of wetland habitats in North Kent, eg grazing marsh in Medway / North Kent. effects of managing such areas for shooting; cessation of grazing regimes etc

E2.1.2 (& E2.1.2i) What has prevented you from depositing them?

	Number	%
Plan to do so, but have not yet**	17	17.9
Don't know how**	17	17.9
Too difficult	9	9.5
Not enough time	21	22.1
Data Centre(s) didn't want it	6	6.3
No funding to do so	20	21.1
Inappropriate format	5	5.3
Other	42	44.2
Total respondents	95	

*percentage of respondents answering question E2.1.2 & E2.1.2i

**please note that 'plan to do so, but have not yet' and 'don't know how' were not options in E2.1.2i

Sector	University/ HE		Research Institute		Other		Public sector		Voluntary/ NGO		General public		Commercial/ industrial		School / FE	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Plan to do so, but have not yet**	10	24.4	5	20.8	0	0.0	2	10.5	0	0.0	0	0.0	1	12.5	0	0.0
Don't know how**	8	19.5	2	8.3	0	0.0	6	31.6	0	0.0	0	0.0	1	12.5	0	0.0
Too difficult	6	14.6	4	16.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Not enough time	10	24.4	7	29.2	1	20.0	3	15.8	0	0.0	0	0.0	1	12.5	0	0.0
Data Centre(s) didn't want it	3	7.3	0	0.0	0	0.0	1	5.3	1	50.0	1	100.0	1	12.5	1	100.0
No funding to do so	8	19.5	5	20.8	1	20.0	4	21.1	1	50.0	0	0.0	1	12.5	0	0.0
Inappropriate format	4	9.8	2	8.3	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Other	14	34.1	9	37.5	5	100.0	10	52.6	1	50.0	0	0.0	4	50.0	0	0.0
Total respondents	41		24		5		19		2		1		8		1	

**please note that 'plan to do so, but have not yet' and 'don't know how' were not options in E2.1.2i

Research Areas	Atmospheric		Earth		Freshwater		Marine		Terrestrial		Earth observation		Polar		Archaeology	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Plan to do so, but have not yet**	6	27.3	4	25.0	2	40.0	2	22.2	2	10.0	2	50.0	0	0.0	0	0.0
Don't know how**	2	9.1	4	25.0	1	20.0	1	11.1	6	30.0	0	0.0	0	0.0	0	0.0
Too difficult	3	13.6	3	18.8	0	0.0	1	11.1	3	15.0	1	25.0	2	40.0	1	50.0
Not enough time	5	22.7	4	25.0	1	20.0	2	22.2	6	30.0	1	25.0	1	20.0	1	50.0
Data Centre(s) didn't want it	1	4.5	1	6.3	0	0.0	1	11.1	1	5.0	0	0.0	0	0.0	0	0.0
No funding to do so	5	22.7	4	25.0	0	0.0	1	11.1	5	25.0	0	0.0	2	40.0	1	50.0
Inappropriate format	3	13.6	0	0.0	0	0.0	0	0.0	3	15.0	0	0.0	0	0.0	1	50.0
Other	5	22.7	5	31.3	2	40.0	5	55.6	9	45.0	0	0.0	3	60.0	0	0.0
Total respondents	22		16		5		9		20		4		5		2	

*please note that 'plan to do so, but have not yet' and 'don't know how' were not options in E2.1.2i

Sector	Main area of research	E2.1.2
Commercial/industrial		We would have to charge for the data
		please see previous comment
		Not really aware of the option
		Client confidentiality
Other, Local record Centre		Sensitivity and confidentiality
Other, Local wildlife group chair, eco-hydrological consultant doing lots of volunteering.		What do you want? In return I would like access..... Sometimes it is a big black hole that is a one way process and gives no reward for the hours spent collecting the data.
Other, Museum		Have not previously considered this
Other, National Museum		Not likely to deposit.
Other, public sector/voluntary sector partnership		not necessary
Public sector		Awaiting write up
		Loss of competitive advantage
		data quality not acceptable
		sharing arrangements
		Difficult to get a simple data exchange agreement. Lack of contact on both sides.
		local solutions have work effectivly until now
		as above
		my EA Science post was axed this Spring, I am now on assignment in Welsh Assembly, to be made redundant from EA end March
		data quality
		I don't think you are interested in this type of data
Voluntary/NGO		Unaware of NERC
Research Institute/Facility	Atmospheric	see previous answer
		Have contacted a data centre - awaiting response
University/Higher Education		Write permissions
		i don't know of i can
	Atmospheric, Earth, Marine	Learned right now that NERC might want data
	Earth	Not yet complete
		Proposal didnt require data; commitment to publication means that this may be an addional task rather then a benefit.
		Slight concern over making sure we publish using the data before others do
Research Institute/Facility	Earth, Marine, Polar	It is the job of the data cetnres to rescue heritage data sets that were responsibly archived in the appropriate way at the time they were worked on, but they don't seem to be doing anything about it
University/Higher Education	Freshwater	Assumed no facility existed to deposit them
	Freshwater, Marine, T errestrial	Never been asked or encouraged to do so
	Marine	Not yet ready, not finished work
		Not at the time it was discussed due to volume and type of data
Research Institute/Facility	Polar	Data centre were uncertain what to do with them
University/Higher Education		Not really aware of what is required.
Research Institute/Facility	Terrestrial	No support in my office no one could easily expalin the steps required despite persistant attempts to find out over a more than a year
		data still worked out by us for publications
		Data looses its context in these centres, and in most cases is too heterogenious for NERC to do a proper job of managing the varierty of different data forms. Perhaps crucially, these data centres have no defined userbase.
		data quality/completeness
Research Institute/FacilityPublic sector		Most of my data are not fitting into the scope of NERCs data centres
University/Higher Education		Projects are continuous so hard to see how to maintain data integrity
		Not aware of an appropriate data centre
		Am not quite sure in what format and how much work this would invovle and how to make sure I know who uses the data to make sure they are used appropriately

Sector	Main area of research	E2.1.3: What would encourage you to deposit your data in the future?
Commercial/industrial		Ability to exploit comemrcially value within data through access to appropriate research.
		justin.smith@cem-dev.co.uk
		More information on the type of data that would be interesting to you
		as above - but know that for government projects it needs to be deposited, it is the industry and others that it does not apply to
		Data belongs to clients. In process of putting in terms and conditions to allow us to deposit data after projects are in public domain. A straight forward online inputting service would make this easier
		Payment for the data and a signed release form from commercial clients
Other		Sufficient core funding to LRC to ensure it can maintain staffing levels to continue gathering data and supporting the biological recording community who supply this data.
		External support to help gather whatever data is appropriate and in the format required.
		Easy access and no charges.
		Not relevant, but could happen if NBN failed
Public sector		1/2 day seminars on what is on offer.
		Advice about what is useful and how to deposit data.
		now up to Evidence Directorate, EA, Bristol what they do with the data
		Having the staff time to be able to properly archive and deposit datasets
		your views on my concerns above
		if there was a longer term legacy for the information
		More information about the function and purpose of the data centres specifically how they fit in with environmental data community i.e. LRCs, NBN etc
		COver our cost of supplying the data
		Clarity of what the Data Centres would want/ data sharing arrangements etc
		Ensuring the deposited data serves both Defra and the wider research communities needs in terms of access, security and presentation
		Fees for their use
		Online user guides.
		awareness and support in doing so
Voluntary/NGO		Tell me more
		Clarification of the roles of the Biological Records Centre and National Biodiversity Network
Research Institute/Facility	Multipule Areas of Research	easy access, smart promotion
University/Higher EducationResearch Institute/Facility		Participation in respective programs including EU
		Clear guidelines from NERC upon receipt of a Small or Standard Grant
		The availability of other data for future use
		I am pleased to know that NERC does have a propoer data policy and I will make sure I request funding in future applications to NERC for depositing our data.
		The data obtained externally to NERC should still be deposited but it will require time to sort out and there are only 25 hours in the day!
		as they are not used to archiving this type of data I found the metadata requirements too complex
		I am not aware of an appropriate data centre for the type of data which I generate.
		Knowledge of appropriate database, contact person and required format and associated information that was needed.
		clear indication what would be valued and how to go about it
		Additional funding on projects to get the data in required formats and free availability
		easier access, more flexible formatting, better data security, data storage autometically provided to grantholders
		Ease of deposition
Public sector		Nothing, I will do so willingly as I think the data we have should be accessible by land managers etc
Research Institute/Facility	Atmospheric	I don't plan to deposit data in the future
		Information about how to deposit and who to contact for this being more freely available and well publicised
		Recognition of data publication as a research output
		More BAS employees dedicated to data management.
		More time.
University/Higher		The funding
		only if i continue in this job
		Will do once it is ready

Sector	Main area of research	
		Have time to do so...
		If they were easy to find and linked to a published paper so I could get credit.
		make process easier
Research Institute/Facility	Marine	It would be very useful if the data centre advertised the dataset before it was finalised and compiled a list of potential end users who are to use the dataset for further scientific research.
		A joined-up approach for marine data between NERC and Defra on the archiving and management of data. NERC has one model of data centres and Defra another (MEDIN).
University/Higher Education		Funding and time to do so, ease of uploading.
		Nothing
		Dialogue with the centres
	Polar	More information of what sort of data is available and what is required.
Research Institute/Facility	Terrestrial	good management of data and qc
		if it is published first
		easier procedures for data deposition
Research Institute/FacilityPublic sector		Most importantly the scope of the data centres will be expanded to cover plant dievristy data globally.
University/Higher Education		1) Some funding to do so - to pay time. 2) Some information on who access and uses the data. 3) Some positive 'push' towards being included as co-author for people using the data.
		A clear identified process highlighting what is required to deposit data, what format it needs to be in etc etc. In general I think the data centres need more exposure regarding what content is available and how to access it.
		Funding to help get RA to collate the vast amounts of data
		Confidence that people interested in the same fields as me would access them from this source
		Ease of use, flexibility of format
		Being convinced that this is the appropriate database
		Ways in which continuous nature of ongoing work could be maintained.
Research Institute/Facility	Earth	Better website for distribution. Funding
		I need no further encouragement, and vigorously advocate to University colleagues that they should be ensuring that their data is appropriately stored at and made available through NGDC &c.
University/Higher Education		I need to check "ownership" issues and terms of use.
		NERC requirements
		Getting funded
		More direct contact from data centres linked to particular research council funded projects and their data outputs/timelines

Sector	Main area of research	F1: How do you feel we could improve the service provided by the NERC Data Centres?
Commercial/industrial		Easy online access to all publicly funded data. Easy access to time series data for analysis and added value service provision. Targetted support for long term continuous data collection of environmental data affecting human life.
		1. My first 'Port of call' was the BGS enquiry service from which I received no useful information. So if this is not part NERC data centres please ignore my ratings of the previous questions as they are highly influenced by this recent experience. I have received help and co-operation in the past from the data archives, rock store and library staff at BGS.
		More publicity about available data
		Improve communication - send receipt of data received.ichard Lowman
		It's a very good service and the people I contact are among the nicest I have ever encountered However, I tend to get lost looking for certain types of data such as wave data Also, UK data are highly priced compared to (say) USA and this sometimes makes it harder for us to compete for work
		More information on what is in the Data Centres would help.
		Make workres in the commercial sector more aware of them
		if something works dont change it and if you are about to change it send out a survey first
		Raise awareness in the first instance
		Leave the BGS Oil & Gas Core Store in Edinburgh
		Clearer definition of roles and responsibilities of centres and their relationship to other initiatives (MEDIN, for example).
		It needs a standard approach with standard charges. All data should be provided electronically.
		I have no real idea about what you hold, why you hold it, or how to access it.

		Data received from centres is sent in different formats, occasionally as pdf meaning that we cannot easily manipulate to remove irrelevant records, reorganise or add further information not supplied. Data is frequently not targeted to the request, for example lists of species not required or requested or dates in excess of 50 years old. Data can be incomplete, for example location estimated to a wide area, species not provided ("a bat" is a commonly encountered record). It is often unclear whether the data supplied is complete, whether the data centre receives records from bat, herpetofauna etc groups. This means we have to order (and pay for) data from multiple sources and then analyze to ascertain if they are the same as those provided by the records centre. There is wide discrepancies in cost, Derbyshire for example has an excellent biological records centre providing very high quality data very quickly and is a usable format but charges less than half of other, very poor, biological records centres.
		Data to be equal and of the same price across the board. Some data is excellent and easy to use, others are lists and lists that cost so much in obtaining and then wasted as not useful. (it must be noted usually this data that is wasted is not asked for).
		Service was fine for our use.
		Better integration of GIS data with water quantity data.
		No idea.
		One portal for all datasets. Enable web download of digital data in common formats. Transparent pricing structure. Better documentation/ metadata.
		I have had no feeling that it could be improved. I very much appreciate the open access to various data and believe that it is an excellent return for the public money that was spent in obtaining them in the first place. The continuation of these services is an essential aprt of informing contemporary and future national observational programmes and environmental policy
		At the moment it is is very much oriented for use by academics and non -profit organisations. Commercial organisations also need access to data and either free or at a realistic fee to be able to carry out analysis and provide solutions for clients. There needs to be greater openess in sharing data with consultants etc so we can develop solutions using the latest information and not make decisions using gneric approximations when we are unable to source baseline data.
		Some data collected/collated as part of IoH/CEH research projects was not incorporated into the data sets held by the Flow Data Archive and has become unavailable for follow up work. Flow data collected as part of research projects by Universities to not appear to be routinely forwarded to the National Flow data Archive for use by other. Such a practise would help boost the numbers of data sets available for small catchments.
		NA
		Needs to be more commercially focussed with a clear emphasis on the value that is offered, NERC is a government funded facility. Yet as a tax payer to use the data is astronomically expensive compared to other sources. It is just not commercially justified in my opinion.
		Improving web access and data licensing constraints.
General public		I cannot think how the current service might be improved as it is already quite excellent. My only wish would be that its funding is never reduced or withdrawn so that the service can continue indefinately. My thanks to all those who make this service possible and maintain it on a daily basis. I would not enjoy a telephone interview but would be willing to participate if it would help retain the services I enjoy.
		At this stage I am unable to say
		Specific staff details online for you to contact, not enquiries every time. Online booking forms for visits to data centres/breakdown of facilities available.
		Is there a way of semi-quantifying effort in recording?
Other		I am quite happy with the service
		Better data extractor facility for atmosheric data
		Explain what you have a lot more clearly.
		conduct thorough research
		I am working with the International Telecommunication Union, who keep maps of ionospheric parameters for use in predicting propagation conditions for operational purposes and for planning services, for terrestrial communications and particularly for trans-ionospheric systems such as GNSS services (e.g. GPS, Galilieo). It is recognised that these widely used maps are out of date, taking into account the improved understanding and modelling capability now available and the movements in the Earth's magnetic field. At recent meetings we have discussed the need for these updated maps and have started to discuss how a new analysis might be done. The requirement will emerge soon for this work which will need to take advantage of all available data, to look for trends in morphology and to calibrate models. At a meeting today, looking to the future, taking account of the magnetic field and the potential effects of global warming, and of the critical importance for accurate navigation. it was envisaged that such updating ought to be unertaken every 5 years.
		I intend to check out and make use ofthe data centres esp the NODC in Liverpool,

		in future. So this question is premature.
		Hard to say since this is the first I heard of it (via the NBN news)!
		Make downloads oof species data available to LRCs at full resolution
		Very difficult. I don't know what your constraints are, but I have given some examples in the last question.
		Disitribute information on where they are and what they do.
		I don't understans what you provide Right now I need to finish a paper I've been working on
		I don't know
		More paper records converted to electronic, more staff, better cataloguing,
		NERC staff are extremely helpful and efficient but may have other responsibilities than data provision which can cause delays.
		Raise awareness of what sort of data is held and how to access it.
		maintain partnership approach
		Build on existing systems do not reinvent the wheel!
		As far as I have used the system I can not see that any improvements are needed.
		Feedback from author/society contacts shows that the process is currently arduous, so should be made easier. Also, the case should be made more strongly that gives concrete evidence of the benefit to authors of depositing their data systematically.
		As staff, not a real user I don't think I can answer this.
		Free availabaility of climate records currently provided at huge cost by the Met Office
Public sector		Not sure how amateur geological societies would benefit. Planet Earth Magazine though is well conceived and an interesting read.
		Don;t know as we have not used the service.
		make all formats readable in ascii
		Don't know enough to say.
		Greater promotion to Local Authorities.
		I haven't tries to use the Data Centres. Will try soon.
		unsure, as found the proccess and level of knowledge expected too off-putting to really use the systems again for our low-level requirements
		Need a simple method of requesting data between one month old and three month old - have to phone and specify exact piece of data - should be very simlar process for down loading the qa'd data
		This is the first time I have heard of the NERC Data Centre. I am guessing that the NBN Gateway is not part of it??? Haven't used it so can't help.
		By updating the users regarding new product in the NERC Data Centres
		Advertise availability of data to those concerned with environmental public health.
		Not had enough exposure to comment
		N/A
		More user friendly
		I regard the British NODC as one of the best oceanographic data centres in the World. Just keep your present quality.
		Not sure.
		From our point of view, give them more of a commercial edge.
		relate to locality within England
		Continuing online search and retrieval facilities
		Resolution of queries on data accuracy and interpretation is extremely slow and relies on personal contacts.
		Catalogue of fossil specimens available on line.
		We are not familiar with the NERC Data Centres but are convinced that there could be a good amount of data and information that the MMO could use to fulfill its functions.
		More information advertised on data held, how to add data, and what it is used for.
		Wider advertising of what you are offering and requesting
		Promote the information and servises it has available more.
		promote awareness of its existance; make it easy to know what is available
		Not sure have not looked at the service
		By linking to the existing network of Locla Record Centres you wil be better able to provide your services to practitioners and land managers. LRCs are better for us than the NBN as information is made available at better resolutions to enable information to influence decision making, the level of resolution on many data sets available on the NBN does nat allow this.
		For BRC - make it clear to everyone what BRC does and how it relates to what everyone else does - NBN, national schemes, local records centres, local recorders and recording groups.
		Make us aware of the Centres and how to access the data/information
		As a owner of data and funding (40K) per year need clearer access to data less than 3 months old.
		Not having used a NERC data centre it would be hard to say how they could be improved. Maybe an awareness campaign is needed.
		Expand to include social science data on environmental matters. Promote re-use of

		data for new purposes - evidence based approaches that suit the environment rather than medicine. In our world there is far more grey literature, commercial funding of experiments is rare and controls are much more difficult - if you've just got one watershed to research then that's the situation you have to work with.
		Don't know
		Improve awareness amongst protential users of what is available and how to access it
		Raise their profile and make it as easy as possible to (1) see what they contain and (2) to access the data.
		more user friendly interfaces
		Greater publicity about what is available, and in what format and how this data can be used.
		Clear statement on any NERC report (or reports from other organisations that are derived from Data Centre material) what data sources were used, where the data are held, and how to access.
		Raise awareness across central govt of what is there and, very importantly, why it might be relevant for policy development.
		raise awarenes of it
		I need to know more about the data and its relevance to anyone working on international development
		Link more with other public sector data initiatives, e.g. official statistics or "making public data public".
		By raising awareness of what datasets the centres hold and how it can be accessed
		targeting conservation agencies to let us know which data you hold and how we could use it to carry out our work. In some cases we may be behind in knowing about the latest environmental measurements but if we saw a presentation perhaps we could see how we could apply it to our work.
		The move to electronic document sin many organisations risks the loss of valuable historic records, documents and data. Working to help secure such long term information will be of great value to the science community.
		We need to continue to work together. Need to link our services more closely. Get more data online. Improve our meta data.. work together to make it more consistent. Consider impact of website convergence initatives
		Could do with a plan of the BGS NGDC (including where the collection came from) as the files are sometimes moved during collection re-organisation.
		The main thing I need is time series land cover data. Because the Land Cover Map has used different techniques and categorisations each time, this is currently not possible. Need to revisit early LCMs using current techniques to provide times series and changes!
		Single open access web interface with simple focused seraching (see NGDC / NASA as an example of how it should be done) plus readable formats (eg text) which don't need specilised software to unravel. Less protectionism through bafflement.
		It seems like there is a lot of data out there which is still tricky to find because even minimal metadata in an online discovery level system is lacking (it would be good to know the data is there and how to get it, even if the process of getting it is more complicated than a simple digital download) . From my perspective there needs to be a significant data cataloguing effort to make this kind of system effective.
		Overall: - I would focus more on proving easy access to the raw data rather than derived products. At the moment I feel there is a lot that is not that easy to access (or scattered) and could be a much simpler download option. - sorting out some of the costed options would also really help - eg. rivers could be made more freely available (in line with where other departments etc are going)
		In view of the looming distinction between 'free' data and chargeable interpretated information I think the data centres should all be renamed as ....Data and Information Centres and indormation strategies and policies rewritten accordingly
		Conistant metadata linked to the projects and programmes and platforms that produced the data. One voice - one route in Clear access policy Hosting of others data for set fees
Voluntary/NGO		Links from other related websites maybe? Also, my moth records go through to the County Moth Recorders and Shropshire Wildlife Trust. From there they are incorporated into the National Moth Recording Scheme. Information as to how this type of data could benefit others through NERC when there is already an excellent national recording system (i.e. NMRS).
		improved access for those working outside HEI
		publicise it more and clarify how NERC data centres fit in with other data holding organisations such as NBN and local record centres/ CEH records centre
		I'm not aware of what services NERC offer, so I am unable to comment.
		no view
		Advertise the service and how to access it via advert or short article in journals such as British Wildlife or newsletters of organisations such as BTO, Butterfly Conservation, Mammal Society. I would welcome the opportunity to access data on the internet.
Voluntary/NGOGeneral public		It would be useful to know the range of data held by NERC so that I could record

		information additional to that which I collect for the BTO, for example, recording changes to management regimes both by landowners and Environment Agency that affects populations of invertebrates, changes in grassland flora etc.
Research Institute/Facility, Public sector		Better data discovery tools Quicker provision of discovery and similar meta-data Better on-line filtering tools
		To be fair, my experience is really only with the PDC and so my comments are rather specific. I think we need to make sure that the data centres are focused on delivery of plain and simple data (with sufficient metadata), and this means not getting hung up on complex interfaces, or opportunities for multi-disciplinary science, etc. The data centres I use most are ones that have simple interfaces but lots and lots of data. I think PDC in particular must do the simple things first, and then (perhaps) aim at more complex things later. And NERC should probably use its contractual muscle to make sure that data is submitted by all its employees and granted researchers.
		The costs estimated by BODC for data management are currently very high; this should be a cost underwritten directly by NERC rather than included on individual grants.
		emailing data is restricted to a certain size of attachments. So users unable to link by FTP have to split up the data. Perhaps provide web-access to FTP client? Improvements to navigating the top level of the website. Once an information source is located is it great to work with, but the initial process of locating the right area is somehow not "intuitive".
Research Institute/Facility	Multiple Areas of Research	At all costs maintain its independance and neutrality as this is the only way to ensure that this most valuable archive of Geoscience Data is maintained for future generations of scientists and the public. Maintaining and fully resourcing a centre that not only captures, stores, monitors, maintains and most importantly understands the data they husband for the good of the entire nation is a vital component of the success of the NGRC as a National Data Repository.
		Understand much better the needs of non-researchers and academics. NERC data intergration exercises should not be focused on serving researchers, but the wider world of business and policy. Suggest that the NERC KE Team is integral to NERC data strategies as they have a good understanding of the external needs for NERC data.
		Have it user orientated rather than data custody orientated
		Greater focus on users needs
		Provide data in netcdf format Allow to truncate ECMWF ERA-40 ERA-Interim data to be truncated before downloading Allow easier access to retrieve lots of trajectories from atmospheric trajectory service
		Better advertising
		Provide a tool which allows to truncate ECMWF reanalysis data to lower resolution and also merges daily data into bigger files (e.g yearly files). The trajectory tool could be much more user friendly by allowing to submit many trajectory requests at the same time.
		improve search facilities I knew what data I wanted to get hold of and I knew it existed so it was straight forward to find but I reckon if you were doing a speculative search it would be much more difficult to find all the data that was relevant to you.
		1. Make a clear decision about palaeo, preferably using international centres rather than making a new one; 2. Be clear whether you are securing data, or making it available to outsiders. The data centres seem poorly set up for both.
		Better tools for managing, depositing and accessing data. (carrot) Clearer guidance on policy and requirements. (stick) Evidence of impact and wider reach of data. (carrot) Create a joined up, efficient and comprehensive data management practice that delivers proper user defined support for NERC science and knwoeldge exchange. Strong clear leadership and direction.
		BADC Met data would be much easier to handle if it were possible to download multtiple years of data in one continuous file.
		It´s absolutely ok - I am satisfied.
		NERC should be part of the wisder data community where at all possible - through linked distributed data centres, such as the marine Data Archive Centres. We should be working towards more direct delivery of data with simple on line licensing with no restrictions on use. We should try and develop our data centres to capture data fromn third parties All data collected by research grants dhould be lodged with NERC approved data centres. within an agreed time period.
		Nothing to declare.
		Increase focus on getting data into shape so that our own scientists can use it rather than wasting time on gimmicky portals for the community at large. That job should be done by PR teams and web managers. Stop reinventing the wheel and pass data on to existing international data centres that already have effective tools for accessing data.
		For our needs, in the Polar Data Centre context, I feel that it is important to maintain the relevant expertise that is currently involved (Alex Tate) because he has a wealth of experience of the BAS geological collections, & in managing Polar geological information data-sets.

		Keep local representatives for Data Centres embedding in institutes and research teams.
		Some of the search facilities leave something to be desired.
		Increased coverage of CEH flow grid. CEH flow grid at higher resolution.
		A more simple geographical interface that would give direct overview of particular data in a location/area would be useful.
		Ensure they are working with other international repositories that provide similar data. Ideally, a user wouldn't need to know that two data sets they are considering downloading are from two different data resources. They should be able to find and obtain them easily, whether they are in the NERC Data Centre, or held elsewhere. The accompanying information should make it clear who should be credited with the data production.
		I feel the service should be tailored more to those scientists who know they will directly benefit and have aneed for it. For some time now those of us who have not seen a need for it have had it thrust upon us and been made aware of how imprtant it is for us to the point whereby we have to think about it in context all the time in planning and outputs etc, independent of its relevance to our work. Not all of us are involved in long term monitoring or generation of raw data that should be deposited in EIDC, but to my mind our views have not been considered since it seems to be a 'one size fits all' approach with EIDC.
		The cataloging and data access systems could be made more transparent and automatic ie computers should be able to find and extract data without manual intervention
		More tools for the users so the process is simplified. Better content so searches resolve to useful data.
		more online data sources for imediate download
University/Higher EducationOtherSociety of Biology		More could be done by NERC to ensure that data derived from NERC funding is deposited with a NERC Data Centre
		More could be done by NERC to ensure that data derived from NERC funding is deposited with a NERC Data Centre
University/Higher Education		Provide NetCDF data, easily searchable and accessable via ftp.
		1) URLs should work (no broken links) 2) Data: Free of charge 3) Formats: Should be "plain ASCII in fixed columns" e.g. no "tab-separated fields" but just ASCII without tabs so they can be read in easily and fast by Fortran-Programs. E.g. ASCII plus a head with description that one for example can easily overread. All that "user-friendly meta-stuff" makes life really, really complicated, see the netcDF-Garbage of NCAR (I wrote my own netcdf-porgram, all-Fortran, as the original NCAR netcdf really did not work). Data must be "for eternity" and not for some "user-interface". You might provide the same data both "user-friendly" (such as XML-obstacles for those who like them) and easy ASCII. Regarding below-questions (follow up a sample of): I prefer email but telephone is OK if email is prohibited by NERC-internal regulations.
		Haven't had any experience yet.
		BODC ought to make its data as easily accessible as BADC!
		Better pre-data download processing. e.g. faster extraction of slices of large data sets (e.g. regions, levels) Often we have to download an entire dataset and extract what we want when it arrives. This can require a large amount of disk space this end. The Data Extractor is part-way there, but it could be much more powerful.
		No comment.
		More publicity, more details about the data held. Who is eligible?
		easier to get data into them - perhaps more assistance on that front.
		I'm not sure the community is fully aware of the type of data that is available. I'm sure there are specific 'depositors' and 'users' in specific scientific areas who find it a wonderful resources but, personally, I've had virtually no interaction. So, maybe just some broad adverts/web-pages/e-mails that regularly update potential users of significant new datasets being depoisted might help.
		not sure
		Close it and let others doing it. We cannot aford it anymore.
		I don't know much about the NERC Data. However I'd like to free on-line access to ecological marine datasets.
		Join up with other exisiting ones to make the information availalbe in one data base. Serach function needs to be better
		Raise awareness with regard to the diversity of data held
		By making everyone more aware they exist and what data they provide and how those can be obtained
		Increased capabilities to support environmental omics data.
		If data is deposited on other databases, then only supply link to NERC
		Better dissemination of information concerning the nature of data held and the availability of such data to NERC-funded and non NERC funded researchers and other interested parties
		more resource, more people,
		Unsure - sorry
		Linking in with more widely known genomic data resources.

		I dont know what data NERC holds, I am a bit embarassed to say I didnt know the facility existed until I did this survey..... Any sort of publicity would undoubtedly help.
		Information on many data sets hosted by CEH is scanty and it is common to be directed to external sites where it is not easy to know what is actually available. It would be helpful to see a proper catalogue of data holdings on the host (currently CEH) website.
		Improved [brief] documentation about methods used the collect data etc.
		Promote it. They still seem to come as a surpise to most people.That said, we need more people collecting data, rather than more people piggy-backing projects off the efforts of others.
		I am not in a position to answer this.
Research Institute/Facility	Earth	Improved click-on links between metadata lists, including GIS platforms, and primary data holdings
		Harmonise best practice between them
		Hard to say; academics are notoriously proprietory regarding "their" data. Just keep plugging away - positive attitudes and a persuasive stance (plus perhaps some clear "direction" from grant awards!) are what is needed.
		I feel that NERC does a very good job of archiving data, but perhaps the data centres could be pubblicised more effectively and possible integrated.
		Better search facilities which allow the user to search all NERC datasets using plain English queries.
		I think that the mechanisms available for dermining what data is available and for locating it are quite good at the current time - good information available via various websites, and through relevant metadata gateways, particularly in terms of the geoscience data which I am most involved with. One area of development that is probably being pursued and which could be advantageous is looking at the development of value added data by integrating relevant data from different data centres to develop further information products.
		Open online access to borehole logs Open online access to other internal non-confidential reports and documents relating to boreholes
		Please see previous section
		Anything would be an improvement as I am essentially unaware of them.
		Scans of archive geological maps have not been thoroughly checked, some are misplaced or missing, some are upside down and files are too large to use directly in ARC GIS
		Publicise more what the centres are, and what they hold as I'm sure I would have used data from other centres if I had known more about them. I have only used data from the NGDC at BGS as I work at BGS and therefore know how to access it etc...but as I work across disciplines at times, I'm sure I could make use of data stored at other centres.
		In particular NGRC need to have proper support in place for their users. The centre needs to be manned during its opening hours.
		Rationalising some of the databases where the information is held, - making electronic/intranet/internet searches for data more simple (eg one access port to search for all data on a particular site or area) and improve knowledge of what is available. Staff in NGRC are excellent at helping people find the data required, but self-electronic searching for data requires knowlege of which system to look on and how best to conduct searches which is not intuitive.
Research Institute/FacilityPublic sectorCommercial/industrial		Perhaps making what is available more accessible externally
University/Higher Education		N/A since I am not familiar with NERC data centers. So perhaps some more information about the centers could be useful.
		BGS do not seem to play a leading role in trying to coordinate geological data so I think that a lot of useful field observations and samples are lost.
		Online access to more geological specimen data. Even where these are not individually catalogued, short summary collection-level descriptions would be very useful. NERCC-funded projects could usefully include an assessment of whether specimen preservation was an appropriate part of data preservation, and if so, how this might be undertaken. For any NERC-funded project it would be useful to be able to find out online any agreed (and actual) repositories for specimen materials and data arising from that project.
		Not applicable
		Better awareness to the user community that the Data Centres are there, what they offer, what the restrictions are for depositing data. This questionnaire, for example, hasn't specifically mentioned any of the Data Centres that are available (perhaps deliberately). Provide each Data Centre with an intuitive user interface that is equipped with easy search facilities (not always the case).
		Move to a Cloud Computing environment e.g. see Salesforce.com with a common set of interface of interface formats that will allow the data to be used by a wider spectrum of users for digital mash ups.
		I have looked on the website for how to design a data centre programme for my consortium grant and there is no clear pathway for me to get a clear idea of what "data deposition" requirements are expected. Also, I have a strng commitment to

		publishing data, and thus see this as duplication of effort.
		n/a
		I know nothing about the kind of information they hold or how to access it - needs wider publicity.
		It would be interesting to know what data is available from NERC data centres. This could be achieved by an advertising e_mail.
		don't know enough about them, have just started considering.
		No idea, because I have never used NERC data Centers.
		Increasing the number of curatorial staff to highlight how important the maintenace of the internationally significant collections held by the BGS is to the nation as a whole. A much better use of funds than bailing out banks!
		I just quickly looked through the online ESAA guidelines. Although I appreciate it is necessary to preserve data, it seems like a lot of work to do so, and for someone who is producing a lot of data, this would take weeks. It seems old-fashioned for this not to be an automated system. And it doesn't look so easy to update. For me, it would be easier to be able to do this automatically, online. Maybe have a folder ascribed to each researcher (PIs and PDRAs) that they can add to and update, and direct co-workers to, with regular automated e-mail prompts (6 monthly) to do so, to get it to be a regular part of doing NERC research; an exhaustive checklist to indicate what's included in each Excel file uploaded (there are only so many kinds of data that could be deposited) rather than the requested 'essay'; maybe an area to indicate published papers that are associated with the data. And increase visibility . A clear idea of what data is wanted, where it is, and an easy way of uploading it as an Excel file, or something (I haven't tried, so I don't know how easy it is). Is the data related to the researcher - is it possible to judge the quality of the datasets? Fossil data can be quite subjective. Reminders - there are so many things to remember to do, that maybe a yearly call to everyone who ever had NERC funding to deposit their data would be useful. Perhaps NERC should advertise the need for curation by insisting that part of any funds should be for curation purposes?
		fine as is.
		Provide data freely!
		You are doing an excellent job! Keep up-to-date with recorder activities and promote/encourage amateur groups to contribute their vital data.
		Make things more transparent to the wider research community i.e. type of data available, location collected and formats
		In certain areas (I work in the palaeo community) there needs to be a dedicated data centre with resources. Where well resourced, the centres work well although the process is sometimes a little overcomplex.
		1. making it more obvious what data you hold, at the moment it is a matter of putting in dates and hoping. 2. Metadata - more information required about the data e.g. reasons for gaps, changes to methodologies, information on how the data collected e.g size of the collector funnel so that volume and mass can be calculated with confidence, the order in which data is analysed - this can be important when samples are small. 3. a method of reporting back when errors found. e'g for Eskdalemuir daily precipitation downloads stop on the 30th October 2001/2 (? can't remember which) and have to be restarted from the 1st Nov.
Research Institute/Facility	Atmospheric	Everyyhing is perfect
		The Science and Technology Facilities Council, previously the Particle Physics and Astronomy Research Council, has never formulated a proper strategy for storing data in the field of solar-terrestrial physics. This statement is particularly true for datasets extending over many decades. In particular, it is important that the Slough/Chilton ionosonde data, which is stored in the UK Solar System Data Centre, should be preserved for future scientific research. For example, it has been found that high-speed solar-wind streams produce a characteristic response in the F-region of the ionosphere. It may be possible to "reverse" this process and use the Slough ionosonde data to determine the times of high-speed solar-wind streams in the past (possibly using neural networks).
		Improved cataloguing of long-term archives of STP data to help identify sources of data on past conditions in the upper atmosphere and the space weather environment In the longer-term this could set priorities for conservation and eventual digitisation of historical datasets - with an eye to those that can drive studies on: (a) the record of extreme space weather events, (b) conditions in the upper atmosphere and their response to long-term change on the Sun and on Earth.
		Searching for data - metadata is still a weakness. Its interesting that the US web sites I have used tend to go for "quick and dirty" solutions using structure/organisation of data centres that active community members will readily understand (intuitive) but do not facilitate outsiders finding data easily. By contrast, many UK DCs are admirable in wanting to adopt international standards (for things like metadata) but are very slow to deliver a working product. Also. many active scientists are often ignorant of international metadata standards and would not such on terms defined in such standards.
		Ensuring that NERC programme and projects producing data archive their data within the NERC data centres in a timely manner, with appropriate metadata and in

		archive standard formats
		Nothing. The present system is fine.
		Encouraging scientists to contribute more thoroughly documented data.
		Not enough detailed knowedge to answer.
		Don't try and generate an all-encompassing NERC-wide data centre, no matter how tempting this may be from a management perspective. Understand that different types of data require different skills to acquire, manage and archive. Recognise that scientists will not collaborate just because NERC puts their data onto a website, they will collaborate if given the freedom to discuss ideas amongst colleagues and the time to develop these ideas.
		Offer full DOI of data sets Getting more people
		Not sure
		Keeping operation of ionosondes from Port Stanley and fostering through international cooperation the operation of ionosondes at other Antarctic Peninsula stations (Argentine Islands-Ukraine and San Martin-Argentine).
		I don't really use it enough to comment much. The data I couldn't find was some satellite data which was expected to be in the database. I was surprised there seemed few people who had a historic overview of what should be there and in what form.
		My experience is limited to the UKSSDC. In this case, the main improvement would be in terms of the available formats for downloading data.
		the information is probably out there but my group seemed to find information out by osmosis. I think a big "in your face" red button on the front page saying click here for first time users. Then this will lead to all the documented help guides etc. in one click
		1) Make the ftp servers more reliable and accessible 2) Clear guidelines on using ftp to download multiple data files 3) Better and more software drivers for reading the data files (which, after all, are in standard format) 4) More comprehensive and accurate documentation regarding the format of data in all the repositories. 5) User discussion group for each type of data on each site, so that people could help to answer each others' questions.
University/Higher Education		The NASA AMES and NetCDF formats mandated by BADC are outdated and restrictive in my opinion. I would be in favour of officially supporting formats such as ICARTT (which has recently diverged from AMES) or HDF5. Having tools available online to convert between formats or export data would be of great use, whichever way. I would also be in favour of revamping the web interface of BADC. Browsing datasets seems to be a little more difficult than it could be. However, I would be dead against the sort of over-engineering that has occurred in other databases such as NILU; you can see what they were trying to achieve, but with all that effort they have somehow managed to make it harder to submit and access data.
		BADC access seems slow at times.
		It is already an excellent service (although the Data Extractor on the met data at BADC is a bit slow!) It would be very useful if MIDAS met data (at BADC) could be sorted into continous time series of hourly values. At present missing hours or days of data do not appear as time-stamped but empty rows, but instead are completely absent, giving rise to non-sequator times (i.e. discontinuties) in the downloaded datasets.
		Make it easier to download large data sets.
		If you are looking for available data on a specific topic, for example global snow cover or trace gas concentrations at sites similar to your own, it is very difficult to find out if they exist and if they are freely available without knowing project names. I also was not aware of any of the other data centres except the BADC which is widely used within my research community, so perhaps more obvious links?
		I like the current ECMWF initiative using python scripting for the selection and sub-setting of data. Currently slow, but promising.
		Give them more funding
		The web interface for BADC and BODC is cumbersome and inefficient. The metadata is overwhelming. A better service would have an easier way to find the data and a choice as to what level of detail of metadata is wanted.
		Make the sites more user friendly
		I only feel qualified to speak about BADC. From my point of view BADC provides an examplary service and their staff are extremely helpful. In terms of improvments, other users of the HiGEM climate model data complain about not being able to easily access and subset the large amount HiGEM data into invidual variables and domains etc.. although I believe initiatives such as UKCIS should make some improvements in this regard.
		Break down the dataset index - 1 screenful per webpage.
University/Higher Education, Research Institute/Facility		Nothing to add.
		More open data - reduce bureaucratic barrier to using data.
University/Higher Education		Support to data centers is crucial and should be increased to take advantage of new technologies.
		The ability to subset data (e.g. by geographical area, time, etc..) on the NERC system, prior to downloading, would make using data such as IASI l1c data much

		easier.
		Not sure. Is there are webpage (I've not looked) - if so, this should be publicised. Newsletter with details about what is held, or Planet Earth article?
Research Institute/Facility		It would be great if data were made available more quickly - i.e. data collected in 2006 be available by mid-2007.
		I cant think of any way to improve the service since I have had very positive experiences with accessing data
Research Institute/FacilityCommercial/industrial		Free and unfetterred access to all data that is generated using NERC funding
University/Higher Education	Freshwater	I would need more knowledge of what they hold - probably best done through targeted communication by NERC to likely users of each data centre. Some form of encouragement to utilise these Centres
		I think the service is very good but perhaps more attention needs to be given advertising its existence - raise the profile.
		Present the data in an more user friendly form.
		The NERC Data Centres are an excellent resource, staffed by well-informed and helpful people. My principal issue has been the acquisition of large volumes of data (e.g. climate model outputs) and the post-processing required to interrogate the data effectively. Although I am aware of the NetCDF format, it is clunky to incorporate in software, and isn't directly compatible with major database applications. Perhaps a database connection from NERC data centres to users' databases would allow direct transfer of data in native formats, circumventing slow and less reliable methods like FTP. Also, while graphical search is useful when searching for specific data, a facility for bulk-downloading many data is always a time-saver!
		YES
		Complete re-structuring of UKMO MIDAS data user interface to become more intuitive
		More targeted information about what is available (mail drop) i.e. geared towards interests/expertise from JeS.
		More publicity on where they are and what they do, and what they want. There is also the assumption that they probably do not have the resources to handle large amounts of data from different sources.
		Make it better known!
		to have monthly available data as a lot of times some months were missing; to have the precision, the accuracy and the error measurements for each variable measurement; to have data for all the variables as there were a lot of times during the time period that a measurement of a variable was missing
		The service provided is excellent. A little more clarity of what data is stored for each of the land stations within the GIS station search function within the BADC series would be beneficial.
		To have a central metadata base with information about all available data.
Research Institute/Facility	Marine	It would be useful if Data Centres could examine whether certain NERC institutes have multiple copies of certain large datasets and, if so, to discuss with a contact in the institute whether there would be any benefit in a shared copy being held locally. For example, a large amount of storage at the National Oceanography Centre, Liverpool is being used by multiple fragments of the ECMWF ERA-40 dataset obtained from BADC being stored by several users. It is likely that there is some overlap in these individual fragments. It would be useful if BADC could collate the total amount of overlap data for NOC-L and if it is above a certain threshold, contact someone here to give them the information and discuss any potential solutions to saving on data storage. (I don't mind being a contact).
		Clearer instructions for depositing data, better search facilities to retrieve data, open access to the data, more responsive when dealing with email enquiries / requests.
		provide easier routes to the data (allowing users to easily locate and download the data). provide references (doi ?) for datasets so they can be easily traced and referred to in publications.
		Not a lot
		I will need to use your services more before I can make recommendations
		Never used the service, so no idea
		Ensure that the site can be approached (and queried?) through other (international) data portals.
		Different data centres work to different guidelines and provide different services so what is said for one data centre does not apply to another - even though they can be handling the same type of data. Some standardisation (of the good practices) would therefore be useful. The focus should be more on the correct meta data and archive of data rather than the fancy end user point (which is nice but do the first bit first please).
		Continue to cater to individual areas of science - people invovled in the data storage/archiving need to have a good grounding the relevant science so that they can understand the data and it's limitations.
Research Institute/FacilityVoluntary/NGO		Work with MEDIN to deliver the data centres within the national context and support the network with the other Data archive Centres. The UK is close to having

		an excellent delivery mechanism for marine data but it needs support
		Not used, no opinion worth listening to.
		Not a different contact person for every cruise; Less frequent changes of personnel; Less frequent queries for (outstanding) data; Contribution to quality control of basic parameters, e.g. sea surface temperature (JC31); Better access to data in repository. In the marine carbon community international colleagues will not ask BODC for data, but will go to the PIs of the data, as a result of poor experiences in the past. The statement on use of (historic) data is overly restrictive (2 years only). The young colleagues at BODC are very friendly and on a personal level I get on well with them. BODC asks for a substantial contribution to research grants requiring use of BODC. Is the contribution justified? At present I submit all my marine carbon data 3-fold: to BODC, to CarboOcean and to CDIAC. CDIAC and CarboOcean generally have a query within a week. BODC comes with a query after 4 months. The BODC query is generally not particularly relevant and often worrying (e.g. whether they can convert DIC from umol/kg to umol/l, which goes against WOCE standards). A UK colleague rather recently moaned that marine phytoplankton data from several cruises had been changed by BODC. In the end he asked the data originators for the original data.
		Better access to data (other than metadata). Maybe a single portal (based at NERC HQ) to show which datasets are available where.
		make available in digital format older data still archived in paper format or not available online
University/Higher Education		See my previous comments. I suspect that this is a questionnaire based on the status quo. Unfortunately, that in itself makes the survey of limited use. Also, why are other databases which hold valuable data not here such as the National Biodiversity Network? That database now has the most accurate assessment of our biodiversity but the point I made about the researchers earlier still holds with that data. I think we need to radically look at the data we hold, its uses now and in the future and to be easily accessible for everyone from 8 to 88 years old. Some of the work of the UNEP WCMC is excellent and has easy to use interfaces. Can't always say the same for British Geological Survey stuff, for example. None of us has time to waste.
		Further dialogue with the Data Centres, support in depositions, more publicity, examples of what data are available. Recovering data from other agencies that are likely to get lost as people retire.
		A quick check of the BODC website seems to suggest that data that we submitted to BODC would not be directly accessible as they do not fall under any of the categories mentioned in the main section. Thus for 'other data' an online request would have to be filled in. It seems that a search option allowing to search through all data held at BODC (or other data centres) should be set up.
		Perhaps better advertising of (i) what dat ais held and (ii) perhaps case studies of what these data can/have been used for. A better web presence overall form those seeking (or currently hold) NERC funding perhaps even make it obligatory for potential grant holders to view the data centers to see what already exists but more importantly how their data could ultimately contribute.
University/Higher EducationResearch Institute/Facility		A quickj overview email that shows the contents of the data bases
		Hard to say! But I would be happy to discuss.
Research Institute/Facility	Polar	More rapid capability for depositing data & meta-data.
		see previous comments - single portal. And stability/retention of data managers.
		Clarify their role. Explain better what sources are available.
University/Higher Education	Science-based archaeology	In my field - science based archaeology - there seems to be an expectation that data from NERC grants be deposited in the ADS at York. This is unnecessary with DNA data as it would duplicate the accepted standard for curation, which is by submission to GenBank. Deposition in ADS simply adds an unnecessary cost and complication to a DNA project. But I've had negative referee comments when I've not included ADS under the 'data management' part of the proposal, and with one failed proposal the absence of a planned usage of ADS was highlighted in the feedback as a reason why the grant was rejected. Basically I think there is confusion over the role of the data centres and the service as a whole could be improved by rethinking what this role is and what obligations NERC funded PIs have to use them.
Research Institute/Facility	Terrestrial	I have been away from direct administrative involvement with data management for many years but suspect that the tension remains between time spent securing resources necessary to fund the work and doing the work that must be done. It's O.K. to survey the activities from time-to-time, but if there remains a belief that the work is worth doing and is a responsibility of the government, then keep supporting it at the necessary level and don't make too much of a fuss about it.
		publicising what is available
		User friendly, simply phrased with no jargon help and guidance documents
		According to the categories in the first section of this questionnaire I don't feel it would make sense for me to suggest anything, since I am probably too far from the core target group anyway?
		Not good - THIS IS THE WRONG MODEL. NERC would do better by devolving this problem to the communities that know about the data and provide support for

		technical people within these communities to build the services needed by the different userbases. Fundamentally this means supporting the construction of services. THIS IS NOT RESEARCH AND NERC AS A RESEARCH FUNDING BODY IS NOT WELL PLACED TO DO THIS WELL - leave it to the people that use the data and construct your metrics of success for this work based on the quality of the services provided and the level of user engagement.
		make awareness of what data is available and how and to whom is available
		Make them more easily available over web based portals
		N/A
		More staff and more time both to specifically archive and obtain the data in the first place
		Clear vision of the purpose of data Centre beyond just being a data store.
Research Institute/FacilityVoluntary/NGO		I have such limited knowledge I cannot say.
University/Higher Education		have never tried. but perhaps absolute clarity of the data sources available on the front page, ie area of research > further categorised into specific missions
		With the previous suggestions.
		For me, the key thing is knowing what the Data Centres actually do. I don't really know very much about them.
		Collect proper metadata. Build a small fixed cost into each NERC grant that's funded for properly archiving the material - this would be much more beneficial than many ephemeral activities for which Pathways to Impact money seems to be readily available.
		Highlight the service better, and outline what data is available.
		Be more explicit about how these may help new researchers, what is available, and give case studies of where the data has been used for positive ends.
		Greater awareness of what data NERC holds and cheaper/free access to data
		Don't know enough about the current service
		I think they're fine. You just need to make sure that the community is repeatedly aware that the facilities are there and can be accessed with collaborative projects.
		Make the whole thoing down-loadable in potentially big chunks from the web.
		I know practically nothing what data is available and how it is available. I would need to take time to find out. So maybe an easy way to find out would help? But it may be that that is already avaialble on the web.
		I am not really sure that the data held by NERC is of the type I would use.
		I don't know much about the nature of the NERC data centres to comment.
		I tried (briefly) to find the current data repositories, and to see what what held and in what format. Nothing ... just policy documents. Is there a central web page?
		I do not know.
		I may use the sequencing service at Edinburgh Unviersity in the near future.
		NERC data centre staff are (perhaps justifiably) protective of their data. Much of their data is simply not available and, even if it is, often requires very laborious discussions and in some cases considerable cost to obtain a copy - even then it may not be useful. One large data set we purchased was not formatted in a way that we could use it - dealong with this proved to be a long and ultimnately futile process. Unfortunately our experience is that the NERC data may be excellent but it does not feel as though it is there for the research community to use. On the other hand, we have not been able to deposit some large data sets that we have generated from NERC funded projects wit thehe NERC data centres.
		For NextMAP data (which I most often download), it is not easy to download large areas. This could be streamlined.
		Advertise it a bit better, I'm not even sure what it is.
		Less time spent developing ever more complex data standards for which it is unclear whether a need exists, and more time simply doing the core but dull work of getting data into the repositories.
		proactive assistance in xml generation
		Don't know enough about it to answer
		Faster response to data requests Transparency over potential to gain higher quality data (e.g. finer spatial scale) than provided in the publicly accessible data set
		NERC should provide data organized under different scientific fields and keep users updated of new addition. The access to data should be easy.
University/Higher Education Public sector		1.) Ensure that government-funded bodies only pay once for data. All data arising from publicly funded research and volunteer recording should be open access to any non-commercial organisation, including university departments. 2.) Stop data custodians from requesting details of research proposals from researchers before releasing data. Such individuals have a competitive advantage and delays have been present when requesting data for research that overlaps with active research proposals or publication submissions from certain data centres. 3.) Remove number of publications from the performance evaluation criteria of all data centre employees so that conflicts of interest can be avoided. Similarly, links with CEH need to be more closely scrutinised so that then open competition for research funding can be secured by other institutions.

University/Higher Education Research Institute/Facility		My use of the data has been highly specialised and I feel that anything I may add here would be a biased view from use of a very limited set of data
Voluntary/NGO		Even more support for NGOs collecting, maintaining and processing environmental data. The British Lichen Society has already received invaluable help from the Biological Records Centre and needs to have more support. This help is in terms of advice and computational assistance. More support including financial support would be needed for the BLS data to made available for environmental research - lichens are a key group for monitoring environmental change but the BLS data has not yet been use to anything like its potential value.
University/Higher Education	Terrestrial Science-based archaeology	as above

Appendix 4 – Data from Telephone Questionnaire

Demographics

Question 2 Apart from the NERC Data Centres you use, are you aware of any others?

	Number	%*
AEDC	5	5.5
ADS	2	2.2
BRC	12	13.2
BAS	17	18.7
BADS	13	14.3
BGS	18	19.8
BODC	22	24.2
CEH	18	19.8
EIDC	4	4.4
NGDC	9	9.9
NOC	12	13.2
NRFA	6	6.6
EODC	14	15.4
EBC	5	5.5
PDC	7	7.7
POL	14	15.4
SSDC	3	3.3
General awareness; non-specific	3	3.3
Other (non-NERC)	17	18.7
None / blank	24	26.4
Total respondents	78	

*% of respondents answering question 2

Q 2: Apart from the NERC data centres you use, are you aware of any others: 'other'
ROSCOFF- French navy data centre
IRIS and ORPHEUS and other international data centres
Paeolclimatology Database NOAA,PANGEA in Germany
Internationally a number Data Centres
Marine Data Archives and Fisheries and UKHO
Aware that NERC has other data Centres but in a 'vague way'
BTO british trust for ornothology, ornothological society
none
Lareac - local authority research in science
CDIAC, carbo-ocean (SOCAT)
Brit Lichen society data, BBSRC
ESRC Data Centres
Countryside Survey
None other than those used
ECN
NERC collections ie rock stores
No
Harwell
MBN gateway
Not sure how to access areas
Numerous data centres across the world: United States, NASA, Japan, Australian etc.
vaguely know of other Data Centres, but dont use them
Generally aware of other organisations
No not at all
Can't think of other NERC data centres besides BADC and NEODC as already indicated on the original questionnaire; GGSPS (Rutherford based GERB Ground Segment Processing System); UMARF (EUMETSAT); NASA - Climate Data Sets held in NOAA CLASS (and ones within NOAA)
Aware of them in general but dont use them
Antartic Data Centre oidp and others
no to NERC data centres, but also IPCC-DDC, NOSS (Norh Atlantic Operating Service - European oceanography data); CEPAS, Wavenet, Metdata - wave buoy of west coast (American power company service); CCO;
ECN
others - multinational scale
Doesn't really use them
GBASE

Not aware of them or what's available
Limited knowldege on NERC datacentres
none; Icluid dataset (stored by the joint research centre) - contains properties for species toxicity, persistance etc. ; Danish environment protection agency; Australian NicNas scheme - substance registration scheme; Environmental descriptive data - e.g. river basins and river flows, environment statistics (e.g. pH, rain rates etc).
Local record centres, natural england puts data into those local mainly terrestrial and marine, MEDIN archive centre outside NERC centres involved in those - is aware of the NERC centres in MEDIAN
Genomic databases
Not used. Not previously aware
theOildrum.com ; energybulletin.net - use these for absolute uptodate informaiton on energy related matters. economic, social aspects as well as environmenatal persepctives
Bolder - NOAA facilities, IGY data centres, not aware of any other NERC data centres (interest is in the ionosphere); Also aware of riometer (Lancaster) and middle atmoshere (MST radar data which is stored at BADC) datasets (not sure if within NERC or not)
No
NASA portals - remote sensing data + others, europea GBIFF - cf NBN
BADC, met office, JNCC, DACS, SARFOS - Plymouth
BIGF, ESA rolling archive, NASA data archives - NOAA
also look NOAA Space weather prediction centre, X-ray flux; satellite environment plots, solar activity sun spot cycles and impact on radio propogation (and other impacts too - e.g. aurua)
Astronmical Data System (ADS in USA); Pangea; occasionally look at others as well
MapMate for Shropshire Moss - flora and fauna database
Type of data of interest for work are environmental data that are spatially and temporally tagged to look at experience and epxpose to environmenal goods. Looking at generating more sophisticated environmental health - so looks at health data. epidemalogical work. SEPA are now coordinating a new environment monitoring statergy in Scotland - relooking at how this is gathered, handled and made available. so a new monitoring statergy and website is being proposed.
international - USGS, ESA, GEO, also aware of data centre activity through UK EOF
NOAA in Bolder, dedicated ones to instruments such as ionospherics and oceanographics, solar flare effects for collerlations - solar flare informaiton access was a problem (but can't remember how - thinks it was Sweedish). Space weather.usu.edu - for Global Ionosphere at Utah state university

Question 3 How did you become aware of the NERC Data Centres?

	Number	%*
NERC publications	5	6.6
Planet Earth	2	2.6
NERC web site	2	2.6
Data Centre web sites	1	1.3
BODC website	1	1.3
NGDC website	2	2.6
EIDC website	1	1.3
I've always known about them	15	19.7
Other: word of mouth	27	35.5
Other: through work	20	26.3
Other: grant	8	10.5
Other: searched	5	6.6
Other: other	4	5.3
Don't know/can't remember	6	7.9
Total respondents	76	

*% of respondents answering question 3

Q 3: How did you become aware of the NERC data centres: "other"
From a NERC colleague and later at Oceans 2025 meetings.
Wasnt aware of them apart from stipulation to deposit data required in NERC Grants.
Through RAPID programme. PIs of RAPID projects had to sign up to depositing in Proudman.
Throughout my professional career
As part of my work. Being part of MEDIN
Have known about BGS and data it hold. Lot by personal contact
Knew director of BODC and visited as information gathering. Dutch counterpart to AEDC - through SCAR.
stem science programme through meetings
long contact with NERC and have sat on NERC committees
obtaining data from BGS and their data sets for UK work and a company called Landmark
kenton and medway biological records centre   I'm interested in land cover maps and flooding which are important for

the butterfly surveys and other bird surveys
Told to deposit data there - terms of project he was working on
known of the BRC for years and years - new scientists and other journals but difficult to tell what is NERC data centre and what is contracted out I wouldn't use the term NERC data centre
probably from a colleague
We do work with NERC and it's institutions regularly part of normal wokring life
Automatic request from the local authority when submitting planning applications
Through supervisers
Probably through publications
when I need data I look for it
working with NERC colleagues
Ongoing exposure through work
I used to work for the solar system data centre
Scientific papers which gave site names, google searched those and that linked to fact that CEH held the data. Then went through NERC.   Orphus told where data was held, i.e. CEH.   Above both happended in mid 09s
I was working on a NERC directed programme COPEX
conferences, meetings, research
Searched on internet
Through working at BAS and speaking to other scientists.
Word of mouth at work
through projects I work on I've been involved with BADC since day one
Word of mouth, a colleague told me
Through CEH scientists
Colleagues who already the service & recomended.
Communication from colleagues
Collaborations Only recently aware of NERC through BBSRC funding
Member of NERC staff.
mentioned by colleague
member NERC through grant applications
Always known of BGS through Phd studies and being asked to deposit NERC grant data by the Data Centres.
Doing Phd and main source of data NGDC
n/a
GERB instrument PI at Imperial; data are archived at BADC; also aware of BADC through research from PhD days when briefed, became aware of NEODC through the NCEO.
Work at one of the centres
Through colleagues
Googling for solar data
Because of Grants and work at BAS
Through being a funding mechanism and now working to get data out to be inputed in real time into forecasting service   BODC also funded (data cleaning and data archiving for tide gauge network)   Operational requirement drove search to find data and then discovered data centres through that.
Requirementy to dposit NERC research Dasta
Searching the internet - esp CEH website.
As the name NERC data only becuse of the grant application proposal   NERC designated data centre
Via email
Direct contact with NERC
n/a
Through previous job Joint Nature Conservation Committee (colleague would have signposted)
Grant - part of programme call - contacted by NEBC
Existance via the survey
Through contacts and work - DFID
Were doing ionospheric research during the IGY - 1957-58 the user was at Hadley Bay carrying out first measurements at high altitude   Subsequent work with knowledge of the data centre at part of World data centre network   running national radio propogation work as funder for data centre along with SRC
University - given the website - was very impressed that the data was available for his project.
Work for CEH/NERC!
Through people I knew at BODC - someone would come to talk to me about data. has been aware of BODC for years. Others through MEDAG group (no longer exists).
Through job (work in PML) and colleagues
Interest through amateur radio and ionospheric propagation
working with researchers - generally talked about in the publishing context..

on scientific advisory committee for NERC Environmental and Human Health representing science and policy perspectives

through various committees that Nigel is on... he chairs committee on SEOS and is aware that NERC provides data. Works with RAL's AATSR support groups   Also through UK EOF is aware of NERC data centres are there and their activities that NERC data centres are one of the main data providers in the UK

since 1972 since working with staff in Slough at Ionosonde station and Chilbolton Facility

Question 4 When you're looking for environmental data, do you generally approach NERC in the first instance?

	Number	%
Yes	17	21.8
No	35	44.9
Varies	26	33.3
Total	78	100.0

Question 5 What do you do?

	Number	%
Specific sources named	16	26.2
Search	13	21.3
NERC	8	13.1
International	6	9.8
Internal sources	5	8.2
It depends ...	4	6.6
Ask someone	3	4.9
Know the sources	3	4.9
Local data	2	3.3
Other	5	8.2
Total respondents	61	

Question 5: what do you do?
If know about it, would go outside NERC
NERC one of first calls.
Approach International Data Centres
Would have a good idea where to go in first instance . Would depend on type of data and origin. Modern climate data at BADC and RAPID data at Proudman
Would contact individuals within data Centres or use automated methods
Depends what is needed. Approach Crown estates BNCC Hydrographic office and anyone with relevant data
Would alreday have good knowledge of what data centres hold and would only approach data centres I know they have data. However this does mean that there may be data that I am not aware of in the Data Centres.   Method of providing data are always changing and being updated.
First would look within own organisation and then through Sea Data Net
Chief Hydrologist with Black & Veatch
water quality and land cover data would come from NERC otherwise I'd go to other data centres
Google it or serach peer reviewed articles.
usually start at the NBN then a BRC atlas from CEH
normally local representative of the national biodiversity network and then our own staff
depends on what the task is ecology and hydrology   first look at in house data then CEH and BGS websites if we don't find the data in house
CARBO-OCEAN oe CDIAC
ecosystem services policy
We would go to the local biological record centre first From there we would pick up other information tools
Depends on the nature of the project. Review data available in publications- may not need primary data
Using other servers, NASA - most data is freely available. Mostly American servers. In UK, Coastal Obs - Plymouth. Land Map (Manchster). Dundee satellite station (NERC).
Manager, Water Resources Unit and Hydrology, Science & Strategy Directorate SEPA
professionally - ecohydrologist/environment consultant (catchment studies and the influence of water chemistry, morphology, vegetation) and atmospheric pollution, and intertidal volunteer - species surveys, lepidopter and botanical
run environmental observation framework trying to get UK view of what environmental observations and collections

| are available in public and private sector |
| Google search and then go to sites I recognsie and trust. Sites linked to UNEP |
| Sometimes from NERC sometimes from the United States where there are good graphical tools. |
| Input data from sample preparations and retrieve sample data. Geology laboratory suite manager |
| Google |
| energy and environment adviser   environmental mainly |
| There is a geographic bias If I want southern ocean physical oceanography then I would go to the BODC for british sector stuff or NOC if I couldn't find it. If I want data from Australian sector then I would go to appropriate australian data centre. I would also look at world data centres I also use google for satellite data. |
| I generally go to the US data centres |
| depends where in the world I'm looking for data. Not the BADC for non uk data |
| I approach a colleague |
| Speak to colleagues first to see who to approach for data |
| Has only recently become aware of the NERC data resource through a BBSRC funded project. |
| Google |
| Principal Curator Certebrates at National Museums of Scotland which includes general enquiries, exhibitions, collection development and database |
| Alway look for material held by BGS |
| Haven't needed to get too much data. have used met office and EA - contacted directly |
| Generally a Google search for project homepage for the particular instrument of interests, leading to a products user guide with targets of where the latest data are held and associated caveats and known data issues. |
| Ask colleagues or consult publicly available databases |
| Would come to NERC for solar data but generally not. If referenced in paper would come to Data Centre |
| Use specimens , own data and material from museums and   BAS collections.   Notebooks maps collected informatiomn and data |
| do a search on the web, then internally to see what they fund, then approach the Met Ofifce - NERC tends to come up alot during these searches.   However, a problem is that there are a lot of data that are not accessible which are discovered in search - e.g. wave measurement data (for short studies) held by different consultants (e.g. HR Wallingford) |
| Literature Search |
| General internet search or want something specific go on a specific website |
| Perception of NERC being only at national level Long term monitoring of flora/fauna - UK Dependent on data - use appropriate respositories at an international level - NERC too small for topic area. Uk data centre for certain subject makes sense but for many of science topics UK centric not useful. NERC can't be a domain specialist in everything. |
| trawl the internet |
| From CEH at Wallingford, arranging times to go up and get it from NRFA |
| He go to databses such as Fish base, DIAS etc. |
| generally look for environmental information on chemicals species (e.g. toxic chemicals) and use contacts in internal database to then source data |
| Most of the time a contract does work, but if doing work then use the MEDIN portal for marine data and also through Natural England's own data holdings/archive. |
| Generate genomic data & upload data |
| search the internet, used various services |
| Gathered huge database of own data that user has collected. eg. new report written on any aspect of climate change, build up on a daily basis (grey literature collection) |
| Looked through various websites and then was given website link to NERC data centres |
| Go directlcy to BODC website - use their search engines, same for ICIS |
| Google search or ask colleague |
| particularly use data from UK SSDC exclusively for ionospheric data (particularly ionograms)   Prime interest. Receive meteosat images from EUMETSAT, then Met Office for other meteorological data. |
| usually looking for data related to a particular article. |
| If want a particular species (e.g. moths) then go to MapMate first to sync with other people.   Then user National Biodiversity Gateway |
| wasn't really using data in the right way. largely because didn't expect to find temporally and spatially tagged data. |
| thinks where data are likely to come from that leads to where data are likely to be stored. E.g. if ESA data heads over to ESA |

Q6 Whenever you do go to NERC, by what means do you identify data?

	Number	%
I don't use data from NERC	18	23.4

Via web site	28	*36.4*
Personal contacts	16	*20.8*
Use the metadata	11	*14.3*
I know what I want	7	*9.1*
Use the catalogue	4	*5.2*
Ask NERC staff	2	*2.6*
Other	2	*2.6*
n/k	2	*2.6*
Total respondents	77	

Q6 Whenever you do go to NERC, by what means do you identify data?
Usually go to catalogue.
Often by location.
Possibly use NERC data, but only indirectly via IRIS.   Not sure how I would find out what data is available
Probably looking around on web, looking for Metadata - usually fruitful
Depends on nature of data. Again would use contacts for some data eg magnetic or auto DRN for example for seismic
Use my staff to investigate and find data. Most of our marine data is in BGS front end
Normally approach NGDC via on-line presence or by specific contacts
By area usually - also period and type
usually go through internet
starting point with Hydrometric Register and Statistics which has all gauging stations in UK Flow datasets National Flow Archive over years alot of contact with people at CEH, personal contact
via BGS as a source via website or personal telephone call
mostly through CEH I use the search facility on their website search for environmental bioinformatics, land use and biodiversity information
I have the atlas on the book shelf NBN might be NERC data   -in this case I search either by location or by species
I don't use NERC as a primary source but when I do I would use website search facilities
eg BGS look at the data catalogues because they have good metadata then look through the categories of data to work out if the data we need is there if not there we would talk to a contact at the BGS to find out if we missed it personal contacts are important
By cruise, dates or region.
Aware of survey work that has gone on.
Through the NBN gateway - national biodiverstiy network gateway   and use search facilities
NERC Web sites
Online
By contact with the NGDC (BGS) Materials collection Chief Curator
national river flow archives data is used most - their website or their annual register,
ask a person/specialist within the data centre
major domains is how we classify things
Semi - informed searching   No one site has all the data I need.
I just know where it is
Scientific papers which gave site names, google searched those and that linked to fact that CEH held the data. Then went through NERC.
I would use the search facility on the web site
by search query
published material and directly interacting with academics
Through NERC website
Go the appropriate website and search for data in a particular discipline.   The data centre I use depends on the kind of data I am looking for.
I phone people up
If from BADC then I search for data by programme and project Otherwise I use the search on the web interface. If I know the data is there I look until I find it
I would look through the catalogue and use the search facilities on their website
usually by looking through the index list of data on the website Unless I already know where to find it
Contact people directly.
MBN Gateway   Browse the Interface Generally know what is available   Via word of mouth
Not sure how to access sites
Selecting appropriate data centre dependent on topic.
I know what I'm looking for because I talk to the people first. I know the data exists before I look for it.
email people in the Institutes directly.
Usually information in BGS Memoirs or via diect contact with Data Centre (Mike Howe) Favours paper approach first
general search on BADC to see if data are in a dataset held
By using NGDC online services - ie Geoindex
Look at Discovery Metadata - Dataset Index
One line records and personal contact with collection managers
by location, site, grid reference, country name, length of record - user likes BODC as metadata is of a high standard allowing discovery   User carried out a poll of operational users was carried out looking at "nice things about national network of tide gauges" - most users went on about BODC holdings rather than about the netowrk itself. The results came back saying that BODC data are held in high regard due to quality of metadata... They will share findings with the National Tide Level faciliity and BODC when negotiating a new contract (Juan Brown)

Odd question for her research	
Look for relevant person and contact them and ask if they have what she wants, what to do etc.	
BRC - pull out records of species in UK - known functionality - machine services - multiple routes Dependant on question (Gateway - was down - needs to be dependable - acting as a respository)	
Explores the website	
intrnet web sites	
Speaking with people (Mike Lockwood) Now goes via the data centre website in the first instance and if have questions will approach data centre staff (limited research activities as now retired)	
Going on website	
Existing knowledge by osmossis from colleagues	
Through a search engine or ask someone else to find the data for me. Area searcch.	
some idea what they are after already before going through main data centre websites and then navigate to data (doesn't use the DDS)	
goes directly to the data of interest (i.e. bypasses other data in the data centre)	
trial and error through "Google" - usua Usually have problems through the RAL or NERC central sites. Then from Google searches find data centre (captures names changes) and then uses links from those sources	

Q7 What (if anything) would make it easier to identify data?

	Number	%
Nothing	8	10.3
Better metadata	14	17.9
Portal	13	16.7
More publicity	10	12.8
Improved search tools	9	11.5
Better catalogue	7	9.0
Online availability	7	9.0
Free data	5	6.4
Better index	3	3.8
Personal help	2	2.6
Other suggestions	18	23.1
Total respondents	78	

Q7 What (if anything) would make it easier to identify data
A better catalogue - CMD - needs better metadata. Also inclusion of non NERC sources.
Country , region (names).
Summary of what is held and probably an automated method of finding data
Clarity of metadata . Anything that makes this easier is helpful. NOAA is relatively easy. PANGEA search for locality. The clearer and simpler the Metadata the easier to find holdings
Improved metadata . Difficult to get ideal metadat but Centres do well. Who holds what data dont have well integrated . Working on EPOS data poprtal trying to unify data providers to get common fromaework for data and platform for analysis. Issue linking to data in other countries. Need to be more interdiciplinary. ie not just specialists need to have access to data. Improved discovery methods
Better web sites and easier access, not having to register and getting direct delivery of data
More and fuller on-line records , particularly for rock and mineral specimens . Data in Britrocks etc varies in content, but completeness is better than skeletal indexes. There is a point wher any data is better than no data but it will increase use of data if indexes are more complete
If it could be really obvious on the NERC home page where you can get data and if it said it was free
More information available on line that can archive directly the better feedback to people on the data used where incorrect and the information you have gathered and improved to make a two way process
we would use the data more if free as have to charge clients for data search and acquistion
I don't have a GIS mapping system so it is difficult for me to use these kind of advanced systems I tend to use data based on OS grid
not really, It's normally fairly specific - so normally approach a person rather than an organisation.
a well indexed search box   how do you know if you haven't found something or that it isn't there
the biological records centre is an umbrella I usually go to a local centre to make use of local expertise a published metadata catalouge and access routes to data would make life easier
from the catelogues I have seen   BGS is good, key word search seems to be ok can get fairly close to working out whether data is available   If I know what I'm looking for things work ok now but when I don't know for sure then

better search tools would help   map based interface could help in certain circumstances
can't think of anything. Alerted by journals etc. Targeted reports of data would help
consistency in terms of the application procedure consistency in the results   - every local biological record centre does things slightly differently
Searchable databases and more searchable metadata. Ability to search all databases in one to ensure you are not missing any data by following the wrong routes
A problem is people don't know about it because they don't have need for it. Very little wrong with it but haven't got a clue what alot of stuff means - too complicated. problem is limit of his knowledge.   Specilaist available who could answer a question quickly would be good.   One size does not fit all.
Biggest trouble is not having a single point to get data.
more user friendly gis front page
simple list - what the data is, example of the data, and contact - and then is it free, etc
links between the data and the project and programme that it is funded under comprehensive metadata
Be able to track data quickly   A good spread of reliable data that is easy to look at and use example GRID arundal which is very graphical and allows you to track references
good search tools tabular tools work better for me. less issues with firewall blockages.
Data Repositry organised around end users - no filter. Important for Evidence based data. He has pulished a paper on this in Biology Letters (2010) on merits of repository.
not sure
more centralisation the better
No problem. Better location? More awareness.   Interviewer Note: I had a lot of trouble with this interview as I was ringing Uganda and the telephone line was terrible.
A working scientist would search by instrument or by large platform (ie a ship). I find this out by going to conferences. But for an outsider (outside of the science community) this is difficult. Data structured around the global master change directory not great for the working scientist but I can see that this is easier for people outside of science to consume.   Accronymns are important for working scientists.
A coherent catalogue between all the data centres With a directory guide and inventory levels so users can work their way around the various data sets available
Now data is organised acording to data base A way of searching for data by type would be better. Searching by type rather than for a specific product Providing more search terms
A central repository of data catalogues
Lists that are there are ok But would be better to index data according to features or attributes aswel eg. if you are looking for windspeed data, then a dynamically produced cross reference table would be good which would be a list of all places where such data exists   Difficult when I first started but easier now I know the structure of the data Knowing nothing of the contributing organisations that provide data to the badc was an obstacle.
Pretty happy with what exists at the moment.
What is available - Index   Comphensive availabilility   eg CS data - can download data but not able to know the location of data plots
Clear & obvious link on the front page on the NERC website - really urgent! No central arrangements   Central facility
Use of meta terms, comprehensive list of terms makes it easier to understand. standardised meta terms Eg BBRSC - define expertise via very limted metaterms - therefore this can lead to incorrect identification identify The term "virology" encompasses many different areas - a more comphehensive meta terms list would be better able to pin point the required resource.
Proper linking of the metadata to the data.
search engine that allows you to look for data.
greater awareness or common portal for environmental data
More on-line material . Much is already available ie the Borehole Data and Fossil Collections at BGS.
Favours human knowledge and paper approach first as often online information is prone to being incorrect or out of date
Knowing where to look for it.
dedicated pages for particular instrument - core information about the instrument which details available products. (BADC appears to be getting better about this, rather than relying on ftp and guess work as was previous practice)
Put more data online. Possible to locate data but more information is required to make decisions as to wherther the data is of value.
Kow what he is looking for using search criteria. How often data collected and what it is. Knowing that data you ask for is what you want. Could small examples be made available or provide it free of charge. Knowing precisely type of data available ie model data
On-line information and records
The data matches site name. Downloaded data have a grid reference which allows data to be tied to a lat-long location. Internal metadata give correct spatial and temporal fixes.   Requirement of model developement they need to have awareness of what data are suitable for the data (e.g. no graphical representation of location of wave buoys -

this woudl be useful when developing a model)
Think data centres are for larger volumes of research data rather than bespoke experiments
If it was accessible straight from internet although no problem getting what want so far
Good as a registry Operation of NERC data as a NERC designated centre, official std to become a trusted source eg guaranteed funding, enable NERC to give approved status - badged (approved) data centres would have twofold effect of future security & crucial sustainabilty and it would aso help user by inspiring trust.   Registry needs to be improved UK centric - too small - bigger questions required - become international
No problems in identifying
good websites better linking of datacentres together national & worldwide
Knowing that it's there! Something telling you what's available and advertise that it's freely available.
It's quite difficult to identify data and is often not advertised. A list of databases and what they provide would be useful. Also need to incentivise people to use/deposit in them
better awareness of what databases are available and what they contain (lack of awareness on interviewee's part)
greater metadata that can be searched on, with a web-portal if possible
Obvious web portal
Looking at NERC home page - nothing clear on data - no links
Google is fairly ubiquitous, but the way data are catagorised and cross-referenced would be benefical
In user's experience not sure as they are already able to target the data they need.
incomplete data sets - ie geographic coverage or thematic coverage licencing rules prevent some soils data survey - cost of using the data prohibit NERC data centres don't yet hold data sets that he knows exist
Biggest problem is lack of adverrtising fact that data centres / data exist. MEDAG group used to issue pamphlets which were very popular. I don't think one stop shop will solve the problem.
probably if use the discovery portal
that currently use very little from ionograph page that leads elsewhere... no suggestion of other similar links.   that don't use something that was specific to the UK to act as a filter for UK specific data
DOIs on the data any other metadata conventions - for cataloging system. So metadata and data are using prescribed standards
look at SEPA parallel which has brought together a steering group of users of their data, this acted as an oportunity to see what was practicle for SEPA to provide according to the use requirements (looking mainly at social exposure)
guesses that a good indication as to data usefulness to particular applications. Good descriptors of data useage and quality
data portal (e.g. recent or real time data) that you could go down.... akin to portal seen on Utah State University website sw05.spaceweather.usu.edu - NERC don't do this as well at present.

Question 8 Is the interviewee a user of and/or depositors at NERC Data Centres?

	Number	%*
Yes	54	69.2
No	24	30.8
Total	78	100.0

Question 9 How important to you are the following aspects of NERC Data Centres?

		Very important	Quite important	Neither	Not very important	Not important at all	Total
Single point of discovery for all data	Count	22	17	7	7	2	55
	%	40.0	30.9	12.7	12.7	3.6	100.0
Direct access to individual centres	Count	20	14	8	9	4	55
	%	36.4	25.5	14.5	16.4	7.3	100.0
Data sets which can be linked for analysis	Count	23	19	8	4	0	54
	%	42.6	35.2	14.8	7.4	0.0	100.0
The ability to manipulate data in a variety of applications	Count	21	12	8	11	3	55
	%	38.2	21.8	14.5	20.0	5.5	100.0
A relationship with the data centres	Count	25	22	5	2	1	55
	%	45.5	40.0	9.1	3.6	1.8	100.0
Specialists available to help with analysis	Count	15	14	7	15	4	55
	%	27.3	25.5	12.7	27.3	7.3	100.0
Easy access to the data I need	Count	48	6	1	0	0	55
	%	87.3	10.9	1.8	0.0	0.0	100.0
Speed of response	Count	20	27	7	1	0	55
	%	36.4	49.1	12.7	1.8	0.0	100.0
Secure archiving	Count	31	11	7	5	1	55
	%	56.4	20.0	12.7	9.1	1.8	100.0
Other	Count	9	1	1	0	0	11
	%	81.8	9.1	9.1	0.0	0.0	100.0

Q9: Additional information / comments:
Need to find it.
Main reason we have deposited data is having relationship with the data centres.
a. More work needed in this area d. need to move towards processed data f. As part of coherent structure i. Critical
Single point of entry not importNT FOR ALL DATA . iMPORTANT BY THEME.   Dont like data in propritry databases and software. Open access
Specialists dont generally need single point of access Questions c d will depend on the use and research being done Assumption seems to be data are more narrow than in fact the case. i. may depend on the type of data , but the whole point of a repository is the long term storage.   Would like to see better automatic processing for depositing of data and making it available. If you know data is there it is worth putting effort into tracking it down.
specialist knowledge of the information the data centre holds or another data centre holds which might be outside of NERC
d. I would need more skills and software to use these g. online speed is important - but I am prepared to wait for data to be emailed to me if necessary j. knowing whether data is a primary or a secondary source
Assured of the quality of the data!
j the level of detail is important and can be frustrating. I would like to know what site a thing was found at and when and who by rather than a dot on the map
d. we have our own applications so this is not so essential h. has to be balanced with quality of the data - sometimes quality is more important than speed in order to have confidence in the application that consumes the data j. metadata is very important   - knowing what data the centres have   - how it was created   -what it is suitable for   - what it is not suitable for   -who to contact about the dataset in question
Most important is data quality. BODC not delivering specialists with analysis. ~(quality)   Not too many strings - too much paperwork.
Difficult towork with unis - no incentive to archive. example - Sheffield centre for plant ecology - mass of work, no idea of security. Also Philip Grimes work in Buxton - of global importance
j relevant data and the kind of data we ask for is very important
Revisited data from 1990 recently . Maintaining long term continuity of data . Preserving formats and accessibility with changing software and hardware.
good metadata
accurate information, methodology R r
simple search mechanisms
quality control of data is important and that the data is explicit
d. assume applciations at the data centre j. filter data to identify specific conditions eg dates when data is above a certain threshold j. elementary graphics for quick look/summary to help with selection
a: should be important but NERC data centres don't do that now
a - quite useful, easier e- being able to contact data centres - more specialise info
Having people available who have a knowledge of data and databases - found to be superb at NGDC (BGS)
Confidence that material will be stored in perpituity
Pers data on to contact and knowing you will get response.   Future proofing
Samples and data are linked to comprehensive records and expertise is available at beginning of grant ie BAS provides formatting for field record system and provides suppport for recording data throughout grant and afterwards
a) It is important as it would save a lot of money and time, but it is not there yet - user has been working with Leisley Ricards and Elizabeth Bradshaw in BODC to generate a European Web Portal for a similar portal (cost 40K, but this hasn't taken off - been running for about 3 years)   b) Not important if one portal exists   e and g) V V important - relationship is key to how access to data, customer requirements, customer usage is improved (user feels that BODC can be a little remote) - computer interaction is there, but not human interaction.. can be a hassle to get through to someone at BODC to speak to about particular issues. Once data goes in, it appears to be claimed as BODC's ownership, user doesn't want to pay twice to get the data out - they are paying for archiving services and sometimes have to go through too many hassles to get data before it is archived again, which is too much of an overhead when dealing in near real time analysis. h) web services are moderately important (routine work), human should be very important as usually dealing with unusual requests i) secure as in being available, and not lost, but integrity of the data (i.e. others not messing it up)
Currently acceesss isnt important but may become so in future. This will depend on NERC requirements
a - lack for a naive user would be problematic , experienced user - less interested, more focused on their own piece of the puzzle. b - inspires confidence - know about the specific sort of data c - depends upon user perspective - ability to reuse data (depositor not so intereted in linking - more of a use as store) d - eg export data in different formats v useful e - trust vip f - scientist - should know what to - specific expertise might be diff to achive,   g - minimal barriers required h - queries - need to know quickly serendipitous i - trust in sustainable & lock - permanent record. Archive function eg versions j - nothing else
c - can of worms - jamming together of potentially incompatible data sets - would like to make this facility harder to prevent incorrect final analysis results (lack of human expertise involvement with individual metadata) d - prefer provided in raw form j- importance of good quality metadata - why collected, what was purpose, details how /why

done, any hints or titbits on quality.		
I thnk it is important to know the people you are communicating with - it helps alot. Also their attitude - which has always been good from BODC people.		
i) two opinions - as data user not too bothered (would be 3) as more interested in data access, but as a data provider you would want the data to be securely archived and preserved (5)		
b) good to have a central point to go to right site, rather than have to hop around data centres. f) rated as neither as not fee paying, doesnt feel like they have a right to ask for such assistance		
b) preferred to search purely by data type rather than data centres (but if data centres are already searchable by type this is ok) d) depends on access to data - if can see the data this is key before delving into the data. g) shouldn't need to have to go through access steps before getting to data. wants instant access due to costs to get the data. i) interested in Near Real Time data (really working on current data - access to last week's worth of data is more important to older data) - if the data have been collected then would be important to keep due to collection costs.		

Question 10 Which of those is the most important aspect of the NERC Data Centres' service to you?

	Number	%
Easy access to the data I need	23	41.8
Secure archiving	12	21.8
Specialists available to help with analysis	7	12.7
Other	6	10.9
The ability to manipulate data in a variety of applications	4	7.3
A relationship with the data centres	4	7.3
Data sets which can be linked for analysis	2	3.6
Single point of discovery for all data	1	1.8
Direct access to individual centres	0	
Speed of response	0	
Total respondents	55	

Q10: Which of those is the most important aspect of the NERC Data Centres' service to you?
Secure archiving.
Easy access
An integrated service is the root we should move towards
Completeness and inclusiveness
Having specialists who understand you and can help you and are knowledgeable about the data and the users., Have the expertise and do their best to record information so it is available. Experise acts as advocates for the Data Centres.
easy access
data that is accessible ideally free of charge or modest charge
speedy, ready access
a. single point of discovery j. knowing whether data is a primary or secondary source
Assured of the quality of the data!
g. most important to me i. most important in the wider scheme of things
j. knowing what the data is for and how it is created how the data can be used is most important
Secure archive
Specialists available
d. ability to manipulate
Accessibility and knowing data is maintained and available.
Easty access
e - a relationship with the data centres
g - easy acces to the data needed
d
g. easy access user friendlyness is important
i secure archiving
Ability to mainpulate data. Raw data is very important.
having a specialist
g. easy access
access of data
Soemone to talk to

f. specialist - someone who knows the data and the ins and outs of it
i secure archiving then g. easy access to data
g. easy access
e a relationship with the data centre
g. easy access to the data I need
Easy access
c - linked
g easy access
Secure long term archiving.
Secure Archiving. Importance retaining material for future research
ease of access
Easy access to the data
Easy Acces to the data and getting it quickly
Secure archiving
relationship with the data centre vital to access to data, but use of data in various applications is most important from science perspective
Relationship with data centres
Specialists available for help
Combination of easier access = secure archive g - i
c -
f).
i - secure archiving
Long term security of data and the continuing archiving of new data - that the datasets continue to grow. This is important as ionospheric data only cover 5 sun spot cycles, but longer term measurements are vital for longer term trends to be established (e.g. relationship with climate change). Therefore maintaining present ionosonde network to support these long term measurements in a consistent manner is vital. User works with ITU and they are looking at GPS - ionospheric maps being used for this these maps are 50 years old, but these all need to be updated due to changes in the earth's magnetic field. Ground based, static measurements are essential for this.
Easy Access then relationship then archiving safety then compatibilty of data.
positive - knowing the data exists
All rtop
g)
g)
mainly easy access - main bug bear is need to register for access beforehand... also problems as a company so questions why data collected at public expense is not open access (e.g. Chilbolton Radar, and river levels - wants near real time data)

Question 11 To what extent do you agree with the following statements about data from NERC?

		Strongly agree	Agree	Neither agree or disgree	Disagree	Strongly disagree	n/a	Total
It has enabled research to go ahead that otherwise might not have done	Count	24	16	6	4	2	2	54
	%	44.4	29.6	11.1	7.4	3.7	3.7	100.0
It has permitted more novel research questions to be answered / tackled	Count	16	21	7	3	1	6	54
	%	29.6	38.9	13.0	5.6	1.9	11.1	100.0
It has reduced the cost of data acquisition / processing	Count	14	14	13	4	2	7	54
	%	25.9	25.9	24.1	7.4	3.7	13.0	100.0
It has reduced the time required for data acquisition / processing	Count	18	14	10	6	1	5	54
	%	33.3	25.9	18.5	11.1	1.9	9.3	100.0
It has reduced duplication of effort (i.e. unnecessary recreation of data)	Count	13	20	9	6	2	3	53
	%	24.5	37.7	17.0	11.3	3.8	5.7	100.0
It has helped to improve the quality of my research outputs	Count	19	18	6	3	2	6	54
	%	35.2	33.3	11.1	5.6	3.7	11.1	100.0
It has increased the use of data in my research	Count	12	22	7	7	3	3	54
	%	22.2	40.7	13.0	13.0	5.6	5.6	100.0
It has improved the quality of the data I use within my research	Count	13	15	16	4	1	5	54
	%	24.1	27.8	29.6	7.4	1.9	9.3	100.0

Question 11: Additional comments
Would be more strongly agree if had made greater use of NERC Data Centres. If it applied to all the Data Centres I use it would be strongly agree to all questions.
NERC can still do more to ensure Universities provide data to Data Centres.
In theory data acquisition is not duplicated but we dont know what others are doing
Use BGS data on most days for research
making data more obvious
Important to know whether data has been entered into different centres more than once
n/a
important to have access to the level of detailed data that is useful to me
a. we are not a research organisation - we take science that exists and combine it with our business needs - in some cases it would not be possible to come up with our tools without NERC data and expertise b. there are specific examples where NERC data has been used in innovative research - eg flood risk tools - if the data were not there, there would be a need to create the data set
Go back to originators.
we don't have a choice to use the data we use and it is not very reliable It can be patchy and excepitonally out of date some data more than 130 years out of date We have to buy it and it can be very expensive Almost an inverse relationship between the cost and the value of data There are good data centres it would be good if the others learned from them When spending alot of money on behalf of a client it is difficult when the data is not up to scratch
I am mainly doing applied policy resarch whilst colleagues using data more
Not had sufficient access to be able to answer all of these questions completely
d. most of my data is historical g and h. we use what we have and make decisions about the quality of it
Until recently I was at the Hadley centre and would have had direct access to most of the data. I have worked collaboratively with other users who have had to access data from the BADC
no data before and the data was free so the cost questions don't make sense
The Data Centres quality checks are useful
For geological field work provides robust and standardised format for recording and storage of data
All answers are form an Operational NOT research perspective!!! ***** a) user is in operational section where this is not appropriate, but research section does have this aspect as need to look at integrity of data - permits easier adoption of data into the operational environment through the quality of NERC data. d) This is from an operational perspective
Worry is duplication of effort
a - Awareness of NERC dc not high enough within certain domaines eg dependent on the domaine b - in his domaine, no has not, but in other active areas has been eg weather Ukcentric has been very successful c - d - some benefits eg BRC - quite useful (awareness issues) e - most of data then has to be replicated at an international level. f - not in his sector; focus from internal repostotories g - h -
c- has not yet but it might in the future if otherr organisations join e- has not yet but it might in the future if otherr organisations join
No comment
d) If it wasn't for the database then you wouldn't have the data to go back and do the work. e) can't recreate data f) As these are data are acquired from elsewhere then this has not altered the quality
He got info about soil chemistry which prompted questions to ask to in his own research.
b - difficult to come up with a truly novel pieces of research (not read of anything) f - quantity def increas dif to judge quality h - tendancy to use because available when not suitable
Thinks it may be difficult to draw to much from his answers as he is only speaking for people who use the data, not really using the data himself.

Q12: If you could change one thing about NERC data services, what would it be?
A better front-end catalogue.
Some kind of compulsion for researchers to deposit data and resources available to manage it.
Give them higher priority in the system . The Data Centres seem to be poor relations
Integrate with Sefas, crown estates, UKHO
External access on line to more of the large scale/ and historical mapping material available within NGDC (BGS)
keeping data so that it has easy access for all scientists
expand the amount of information is accessible via the web
would like a restarting of the programme of producing engineering geology maps and reprots for urban areas (not the digital modelling!) - see report maps for Firth of Forth, Belfast, and Stoke on Trent which are exemplary.

Marketing the data that NERC has to other people. Many of my colleagues do not know about NERC data There are many factors that effect invertibrate life in the water ways and it would be good to know what data is available - low productivity is not necessarilly all to do with predation. Soil samples at water margins are example of information it would be good to know about.
Not really one thing but found it very clunky and a fairly frustrating process.
I would have the level of detail I want available over the web - is this a lot to ask?
the ability to search the metadata across all institutions and datasets
SST and salinity not routinely calibrated - sensors poor quality. NMF issue.
Analyses more relevant to policy, to influencing policy. More interdisciplinary analyses.
Consitency and relevance A dialogue between data centres and user requirements would be valuable data dumps are not useful
Useful to get updates of datasets being added. More proactive information delivery by the data centres
At the moment meets my requirements
no comment
focus on the non specialist users only useful for academics who know its there, but not so good for people outside this linking nerc data centres with other non nerc data centres
Accessibility and quality of organisation of data At a recent conference I was blown away by the quality of the material I was hearing about and I didn't know that it was available. NERC is not standing out as a go to site in the business community.
Ability to display online graphics
Greater avialbility of quality assured data.   Problems have been accessing data - esp disaggregated.
On line tools for manipulating data.
it would be acess to historical predictions i.e. sea level predicted to do 2008 at a port in uk is available now
Check quality - ask people how they got data. He said quite a bit more but was such a bad line that couldn't hear it at all, even after asking him to repeat what he said.
Consulting the community more. We have good data professionals but it works best when they sit down with working scientists. Data scientists would benefit hugely from sitting down with scientists and asking them to show how they work their data
The ability to find data. This is a key problem for us. Can't always find the data that Mark says is there. The links to the data that Mark sends with the data do not appear in an easily recognisable form. Need a map between the data the Met Office send and the cataloguing system at the BADC.
Regarding the BADC Allow more data formats I find submitting and accessing data quite restrictive because the formats are not easy to use
As a coupled modeller - better link up between the BADC and BODC Cross referencing between atmospheric and oceanographic data sets
the ease of downloading the data. bearing in mind the enormity of the data available so the use of http download is not really feasible. providing ftp tools tailored to making it easy to download multiple directories would be great. Need to be able to recursively go through directories - difficult to do this on a windows computer.
Speed of response - he pointed out that this was some time ago however and the response time may have improved since then.
Transparency of data availability
Common front end - similar structure -built in the same way So if I know how to access one data centre I will be orientated to access another
Cannot think of anything immediately as service has always met my expectations.
Stability and availability is very important and the reason I placed my collections in BGS
Add the ability to subset large datasets - a particular example would be IASI data (e.g. downloaded 4 Tb and discarded 3.5 Tb) - eg. by area or temporally.   (there was a discussion before the last NCEO meeting which highlighted this and other issues, e.g. there were more requests for funding to large local storage for large local stores of large datasets when subsetting could be centralised making these local storage requests redundant and far more efficient transfers could be done when dealing with pre-subsetted data at source (ie. NEODC)
Very difficult to choose one aspect. Important to ensure that data is as complete as possible. Data is held or not held by NERC which isnt incorporated needs to be obtained. Data Centres need to be proactive in data collection - not only from NERC research but also from external sources.
Everything for nothing
Data Centres being more proactive. Ensure common systems are used . ie provide standardised field records
That they are much more responsive to user! Data gets subsumed into BODC and then appears to loose its ownership - therefore it becomes difficult to secure future funding to follow up with additional data.
Very difficult to undersatnd requirements and what data needs to be deoposited and whats available
Where possible for chemical total / dissolved concentrations   Be able to find out the precision of techniques of the data that I'm getting
To internationalise.   Many of questions that scientists face are at an international level.   Rather than trying to

accomodate everything, just do things on a national level - concentrate on the strong areas, where it makes sense to keep databases at a UK level
make outward looking instead of inward   data community - not just a store - development linking nationally & internationally
Don't know as not used services enough.
To be more focused on the core activity of supporting science reserchers rather than dictating stds
a better assurance that the data services would continue to exist and information on the long term plans.
No, no point in his experience
See notes above. Metadata the main criteria
Making people more aware that the centres exist, especially students and 'new' scientists, tutors. Also think that universities shoudl be more aware.
Documentation of formats and data needs to be improved - notes with data tend to be too targeted at a specific user community, while more accessible notes need to be provided (probably by data providers)
nothing, as you are happy with the present service
Accessibility of data - FAST open access to data - especially near real time.   And ability to then link other data sets in the same timescales

Question 12 If you could change one thing about NERC data services, what would it be?

	Number	%
Functionality	13	*24.5*
Nothing	10	*18.9*
Access	8	*15.1*
Integration with other data	7	*13.2*
Consultation	6	*11.3*
Marketing	5	*9.4*
Deposit issues	3	*5.7*
Quality assurance	3	*5.7*
Other	3	*5.7*
Total respondents	53	

Question 13 Overall, how important for your research/work are the data available from NERC?

	Number	%
Very important	27	50.9
Quite important	15	28.3
Neither	3	5.7
Not very important	6	11.3
Not important at all	2	3.8
Total	53	100.0

Q13: Additional information / comments:
Remote sensing/model output main source - not from NERC.
If this question applied to Data Centres in general (not just NERC) this would be V important
Critical. Also as part of international system we are making our contribution
Key data used from BGS and UKHO
Varies some cases v important othes irrelevant
I am interested to see the range of data sets now I know that NERC data is available.
n/a
I would do what I do but having national data sets available helps to put things into context
because it is a legal requirement to use it
Indirectly we use for environmental policy
Not a must go to site right now but could easily become very important now I know about it
Should be really really important but it isn't!
Balance between producing data in the right standards and having something that collaborators can use in a timely fashion.
I have the data I need, I'm providing my data for other people to use. But this will change when we start using CMIP5.
we use it as a data repository for collaborative projects
some data is missing in NIMROD rain radar data set. frequently blocks of up to 6 hours of data files missing. some of which from critical storms. Why are these files missing.   Some method of reporting missing data would be good.
Vital for my projects.
Effort in for example Geological mapping has been immense and one resarcher couldnt hope to repeat
Depends on what project is being worked on. Presently it is very important as NEODC has assisted in data provision from EUMETSAT which otherwise would have taken a long time to obtain due to local (EUMETSAT) limits
Use NASA data and NERC Data together provides comparison
Critical to work
use data around once a month (quite a lot from operational perspective)
Becuse not at the correct level for his wrk
since work is now presently to ensure that others carry out work the data will be vital to others, but don't use the data personally any more.

Question 14 What has been the impact of using data from NERC?

	Number	%
Research would not be done	19	35.2
Quality would suffer	19	35.2
Would obtain data elsewhere	7	13.0
None	7	13.0
Research would be more difficult	4	7.4
Cost implications	4	7.4
Total respondents	54	

Q14 What has been the impact of using data from NERC – e.g. what would have happened if you hadn't had it?
Probably could have got it elsewhere
Certain research would have bits missing. Wouldnt have been able to do some work
Lot of science wouldnt be done.
Packed up and go home would be no BGS MArine Programme and Marine industries academia and government would all suffer
Unthinkable for any form of geological research and other activities to take place without national mapping coverage from BGS . Research relies on this data. Other organisations only deal with small parts of the country
We wouldn't have been able to do the projects i.e borehole logs and couldn't offer the service or depth of knowledge

that we do
would have acquired the same data via another route ie archives held by river authorities etc, but the data is often inconsistent from one period to another, and time consuming to bring together information using one organisation who is bringing everything together to minimise duplication etc is good
no geology maps of the uk! no borehole database for the uk !
I would have to get my data from unreliable resources. NERC data is considered to be reliable and creadible
n/a
I would have been working in isolation and making claims about rarity that were based on personal experience and not so close to the truth Would other organisations have come up with the same background information if BRC was not there?
none
Numerous policy areas would be much less definite on trends and biodiversity - partly due to relationship between NERC and volunteer recorders
planning applications could not procede without the data from NERC
Some of the projects wouldnt go ahead . Some work would only be speculation
Reduced the amount of research done and some of the data and specimens required are no longer available
additional costs
decisions would have been made not based on data - i.e. high degree of error, waste of resources, loss of species
n/a
Limited impact so far because I didn't know the data existed.
I would have used the US data centres had I not been able to access data from NERC
Would still have been able to do reserach but analysis would have been outdated. Was better evidenced.
enquiries from scientists and others about sample retrieval would take alot longer - it's vital to provide a quick service to our clients
Enables collaboration that would not otherwise have been possible
lack of independent authority
Wouldn't ahve been able to do the research
I probably would have got it by other means - direct from scientists Data centres make it easy to access.
Not much of an impact because we deliver the data.
In big projects we build proposals stating that we will use BADC for sharing data. If we didn't use BADC we would have to use some other central repsoitory Ad hoc repositories are never as well organised by the BADC
HiGEM project would have had to deal with data locally so would have made it difficult for collaborators to access the data. We don't have to maintain metadata- server- access locally.
Would not have been possible to use rainradar for nowcasting in relation to urban flooding.
Couldn't have done the project without it!
Wouldn't have been able to do work to the same standard. smaller spatial scale more field work to acquire data
Collaborative work would not have happened - eg CCMVal
Wouldnt have been able to do projects. Working on coalfields at the moment and surface research wouldnt provide any subsurface information and the only source is the Data Centres (NGDC, BGS).
Would still be doing Phd 20 years later
Would have either meant incuring charges to have data written to media and shipped from EUMETSAT or a delay to the project as having to wait to download the data
Seriously limited the quality and scope of research
Wouldnt attempt projects
Couldnt do the work
would have cost a lot more to archive the data, it would not have been available to the public... also central government require that data are publicly accessible.. would have been very difficult to share data due to security issues - stifling enterprise.
Not applicable
Would not have been able to do analysis - it was 100% of analysis so very important.
Gone elsewhere
Slight improvement in papers would not have occured as climate / weather data wouldn't have been used
Not used alot, but it has reduced the cost of work as not have to collect the data themselves. Likewise saving on time as surveying work didn't need to be commissioned.   Overall costs reduced due to improved turn around times on research.
Not really relevant
Globally ionospheric research would have seriously suffered.   Personally, there have been jobs that would not have been possible without the data.
It will have reduced the scope of his research and research questions. He wouldn't have been happy if hadn't been able to get the data! One of the reasons undertook study here is because he knew data was available here and people are reday to help. It makes him very happy!

Couldn'y have done work
Working with less data! Limited data means answers are based on limited data.
would have a significant impact on accuracy of work (e.g. use 80 m DEM as opposed to 5m DEM) with inherent problems with precision work.
Helped considerably with understanding of ionospheric radio propogation within the UK (primarily).
understood less on what was going on   wouldn't have been able to understand causes of ionospheric and/or oceanographic events.

Question 15 Can you identify examples of wider impacts?

	Number	%
None	19	*36.5*
Policy	11	*21.2*
Environmental	9	*17.3*
Economic	7	*13.5*
Societal	4	*7.7*
Risk assessment	3	*5.8*
Future impact expected	3	*5.8*
Indirect impact	2	*3.8*
Other	1	*1.9*
Total respondents	52	

Q15: Can you identify examples of wider impacts (e.g. on society, the economy, policy, etc.) that have resulted from your research, where data provided by NERC has played a significant role? <i>(Ask them to explain briefly)</i>
No see above.
Not at this stage
In the 1980s ODA/ BGS supported and ran Seismological data services in some areas and the history of earthquakes in some places wouldnt now be known. This lack of knowledge of seismic hazards in these areas would have greatly increased both the economic and human costs of earthquake events.   Exploration of oil in North sea wouldnt have got off the ground or been exploited as well as it is without information provided. Collection supported by third parties.
Yes Largwe number. Underpins most marine industries = oil and Gas , Marineine industries Marinwe protected areas.
Some work has been fed back into the Data Centres and adds to the sum of data in the data centre and will have an indirect impact as data is assimalated .
used alot of borehole data for carbon capture and storage projects which is a current area of international interest/research
improves engineering design and this must reduce engineering costs helps make sure we have the yield of reservoirs correctly through correct data and make sure we are not overdesigning things
no - but we use the research of others who have used the NERC datasets i.e. Natural Cavities database.
NERC data is considered to be reliable and creadible so if I can use this in my work it makes my argument more persuasive. Main impact is water usage by new development eg. housing   - using hydrology information is essential to understanding the change to ecosystems that these developments have. Long data sets help to determine the trend from the variability
n/a
NERC data has contributed to tools that have helped us to achieve our corporate objectives
none
Numerous policy areas would be much less definite on trends and biodiversity - partly due to relationship between NERC and volunteer recorders
economic impact because we are working on behalf of commercial clients who require up to date and relevant data recieving data in a timely fashion and data that is robust is important to maintain this impact
Number projects use science for policy and have had a broad impact on society
Most of my work has been academic in nature
Scottish Government policy on water resources management
the decision not to build 2.5k homes on a golf course in Oxford, which would have resulted in a significant loss of high quality habitat the maximum available water of private water supplies for National Trust tenants and properties over the next 80 years, taking in consideration climate change the design of regulated tidal exchange schemes by RSPB for saline habitat recreation and flood defence
charting progress 2 including nerc data and combining it with public agency data resulted in acomprehensive assessment of the state of the seas which is then used directly for marine policy nationallly and internationally   By BADC being the custodian of some met office data this data canb e used directly in scientific studies which otherwise wouldnt have happened and contributes to international acticities
Not right now
Preliminary assessments of risk of extreme space weather important for UK national risk assessment
Heavily cited (17) in DEFRAs of Upland Burning Code - strong policy impact.
Studies I have been involved in were reported in the news papers. Climate prediction dot net was a very important policy and knowledge transfer exercise.
objective quantification/descripion of sea level change
n/a
data from NCEO will have a big impact for policy on sea level rise and ozone hole agreements and climate change impact studies - ie change in wave height. data and tools from BADC have facilitated work on the attribution of climate change
Most impacts are indirect Air quality research using the NERC back trajectory facility at BADC. Hoep that some of this has filtered through to air quality policy
HiGEM knowledge exchange interaction with the Willis network risk assessment through high resolution coupled climate modelling   All facilitated by being able to store data at NERC data centres
I am modelling and predicting urban flooding down to the level of the man hole use of NIMROD rain radar data is hopefully going to improve prediction from 30 minutes to 3 hours.
Very important project and the data from NERC was absoloutely essential
Not yet published
CCMVal   We sucessfully participated and written a WMO ozone assessment. This participation would not have happened without the collaborative space provided by BADC
Allows informed discussion about future coal mining both opencadst and concealed coalfields and input into policy.

Energy security policy.
Enabled mapping of mid wales to be more accurate using fossils for dating . Vitally important for building and construction work
Work at the moment will have fruits in due course - benchmarking radiation emitted from the Earth. Could lead to greater understanding of anthropogenic impact of emission on climate - but that is likely to be a decade away   but at present none.   Difficult question to answer when dealing with long term trend research.
Some aspects of research have been applied on consulting on oil exporation and major engineering projects
Not yet. Using to model cloud cover wich will hopefully have impact in the future
Using fossil plants to reconstruct ancient climates and input into climate research for the future
EA data accessible to NERC has allowed other research to take place (e.g. coastal work)   also use data from BODC to look at event analysis to compare forecasting success/failure subsequent to particular events. - ie performance monitoring
Yes , input into Radioactive waste management policy and legacy management for the UK
Through her analysis, she confirmed Uk streams are not so toxic as they used to be before.
Not by NERC.   From science data in general (other sources) yes - direct impacts
No
don't know
Not applicable
Improvement and better understanding of communications and accuracy of GNNSS and importance to society is that it provides an indicator of climate change.
Yes - presented data at a conference on rainfall in Nigeria. Previously realised could not be definitive data to talk about the rainfall.
Work on critical loads (pollution) - driven by NERC data influences NE, EA on policy
No... experineces of important data given to oil industry - BODC first point of call for this.
from airborne data processing side was able to indicate that ARSF data were important to the Cumbrian floods   on international side ARSF data are used widely, e.g. Chineese users.
haven't yet passed findings on
not able to

Question 16 Has interviewee answered "yes" to QD2 (29) in online survey?

(Have you ever deposited data in any of the NERC Data Centres?)

	Number	%*
Yes	37	47.4
No	41	52.6
Total	78	100.0

Question 17 On the last occasion you deposited data, how easy was it to prepare your data for submission?

	Number	%
Very easy	13	37.1
Quite easy	13	37.1
Neither easy nor difficult	2	5.7
Quite difficult	4	11.4
Very difficult	3	8.6
Total	35	100.0

Q17 Additional information / comments:
More complex than possibly needed to be
Nice to have local specialists
Mixture of specimens material and documentation with explanatory emails
but didn't deposit myself
Very prescriptive, frustrating.
time consuming but easy
ftp limited by uni - volume issue.
hard to find out what format was needed there was not a single process for submitting data
no longer relevant as it was around 15 years ago
for our particular needs the system is set up to enable us to fully input data that is required by BAS
my postdoc did it. Tricky to transfer from pp to netCDF

but goes back about 15 years ago though
n/a it comes straight from the met office archive
relatively easy but only because I had to do it many times before. but overall it is not so easy. I have scripts set up that help me now
straight forward because we had someone from badc to help us with the submission
I uploaded software drivers for reading the data. Process was very very easy indeed, I emailed the files to the help desk and they did the rest. I can't imagine a better way of doing it. Need to moderate the data.
But that wasn't NERCs fault. rather the requirements of the project
Physical data. Metadata collected there and then.
Done many times before
delegated responsibility
standard data submission is easy. for data that would be desired to submitted that is not in standard pipeline this is not as easy, but rigorous standards are an important part of the process (i.e. rejection is possible).
Data difficult to deposit into dif stores- hugh variation between datacentres - some v time consuming
Made more difficult by data standards that were imposed
but a lot of work and it was a while ago
Requirements of data centre were very simple - min requirements were quite trivial Wanted to add extended metadata with maps/images but no function to do this.
Because BODC prepare it themselves into the format they want.
deposit a lot of data, so lot of practice. Easy from the start due to helpful data centre staff at NEODC

Question 18 How much support/guidance did you require in the deposit process?

	Number	%
None	9	26.5
Some	15	44.1
A lot	10	29.4
Total	34	100.0

Q18 If appropriate, ask for details
BADC staff very helpful
Through RAPID and BODC . Support was available to help. Would have found it difficult without and easy to not bother
Use staff delegated to the task
Spoke with staff before depositing
sent information on excel spreadsheet with covering notes and the rest was done by someone else
A little - again very prescriptive. Very muc told what to do, no flexibility.
need to know what format the data was required
wasn't clear in the guidance what format was required and I had to search that out
N/A
Support from Kevin Marsh helped to solve the problems
Only because of the support was it easy to do. They (data centre) did most of the work
n/a
None in recent times But my first time took a couple of trys before I got it accepted
We needed to set up automatic data transfer from a supercomputer to the BADC
only to know how to do it which was one email
Great, good follow-up . Hassled for return of specimens and research output, by Curator, which was exactly what was needed.
The Data Centre provided numbers for specimens
N/a
Plenty of support already given by BAS
Useful
Gave up - by passed NERC completey
But would have if needed to.
feedback required as some parts of metadata needed clarification also another stage when a new format was

proposed that needed to be reviewed formally
no particular difficulty

Question 19 If applicable, to what extent did the support /guidance received meet your needs?

	Number	%
Completely	17	60.7
Largely	6	21.4
Partly	2	7.1
Limited	2	7.1
Not at all	1	3.6
Total	28	100.0

Q19 If appropriate ask for details
Not really lack of guidance just told what to do - no opportunity to influence that.
Not applicable . Sent material to Data Centre
N/A
n/a
n/a again
I got there in the end There is quite a lot of online help but you have to go on a merry dance to get all the information you need. Guidance could be more user friendly
great, he got it working! Made what could have been difficult very easy
Totally , just what was needed
N/a
not relevant

Question 20 Has the interviewee answered "yes" to QE2.1 (38) of online survey?

(Do you have data that you think could be relevant to the environmental science community, which the NERC Data Centres could hold?)

	Number	%*
Yes	36	46.2
No	42	53.8
Total	78	100.0

Question 21 Seek more details about these data

35 of the 36 respondents provided further information

Q21: Seek more details about these data (if necessary):
Potentially have data that may be of value to the data centre. But not necessarily data produced by me
Lots of data. Mainly late Quaternary lake sediment data
Research work from a number of years ago needs to be integrated into the Data Centre , but there are time and funding constraints
There is third party data not in the data Centres that would be very valuable to hold
NGDC has to be seen as part of a continum of repositories across the UK and part of National capability . Therfore there is a choice and some data may come to BGS but other collections may go elsewhere depending on circumstances.
most of my data is given to kent and medway biological centre - I don't keep my data myself. I also give data to the british trust for onothology. Data from bird tags and also observations about ecosystem, land use and habitat change. land use change eg from rough grazing to drained land for rearing horses
biological records 10 or so years of records from north wales and possibly more Not gone to BRC because of inadequate recording schemes   generally data does not go direct to BRC but to national recording schemes so bad experiences with recording schemes are not really a true reflection on BRC
our biological species records we have might be of interest
There is likely to be data that NERC might want but that we would hold ourselves and share eg. environmental data we would need to find out whether our data is shareable we would work with DEFRA primarilly   NERC might not be the most efficient way of sharing our data
we work on protected species surveys so whenever we get a measurement of a protected species we have to submit this to the local record agency   This is a continuous process
I will have water level data at flood edges from low resolution space data (including associated uncertainties) for a number of floods and sites at the end of next year probably, which NERC's NCEO might like to hold as a freely available data set.
Electron microscopy. Specimens of research value which may be deposited through existing arrangements with a

National Museum.
generate own data on shallow boreholes, reports on sites and habitats, survey data, met data, topographical data, water levels, water quality as in original survey submission
Historical records of space weather activity. Paper records and some digital data too.
Centre for Evidence based Conservation - have worked with this group and feels they should really be depositing their data - especially as NERC funded   Bill Sutherland (Cambridge) - Evidence based Conservation - potential scope for relevant data - also NERC funded to an extent.
Palio QUMP project with bristol university about 100 model simulations with the unified model Tamsin.edwards@bristol.ac.uk
Ancient footprints, computer models, morphometric data, kinematic data.   He is unsure of the process of deposition and would welcome expert help in this.   To ask Gwyn Rees to offer advice.
NERC funded activity ready in the future Sequence, genetic & expresion data. not yet for submission   Second funded area: Gene expression data Genotyping   Initial stages of project
Large University Collections of rocks or slides. If the dept closed over 50 yrs of collections, a huge assett, would either need to go to a Museum or NGDC(BGS). Over 300 Phd and Msc theses and material held.
Working on further research and collections which will be deposited in the Data Centre (NGDC) as long as collections remain as they are
Borehole information could be deposited
Analysis of data held may be of value if another researcher requires this information
Artic geological samples , needs to ne treated like Antartica
May wish to archive from none-class A tide gauge sites - which may lack same quality of metadata as class-A sites, therefore require additional algorithms to cope with lack of full tide cycles.   Could go back 15+ years, but would depend on scoping of costs to do this.   This is a conversation that is already taking place with BODC.
Lichen data, hedgerow survey data (full details provided online)
Data to be deposited in the near future - this is in hand contaminated sites data   Noted previous problem with large paper dataset - Data centre could not cope - gave to external body to sort (5 years ago)
OMICS data, environmental measurements on local rivers, monitoring pllutants in fish
Collecting multi-beam survey acoustic data - from around Plymouth area, in new special area of conservation. This is collected and will be submitted to BGS as a MEDIN, as this given sea-bed type data (e.g. sand, rock etc).   BGS contact is - Paul Henni is already the point of contact for this.   Survey is December 2010 only.
Data generated = DNA sequences, expression data
Grey literature database that user has built up over the years containing primarily primary research and secondary studies carried out, analysis (i.e. alternative interpretations of data), as well as news items etc. covering all aspects environment sciences.   time period from around 2000 to present, and is ongoing (updated daily basis).   Focused around user's interests (energy and resource depletion)   Could be provided on disk/memory stick if wanted - approx 30-40Gb worth of storage.
Aims to deposit his data after completing his PhD at North Wyke Station
Spreadsheet rows = samples & values,   800 observation
Full waveform lidar data.   2010 onwards - new product remote sensing data (will be in a new format).   Mike Grant is best point of contact to discuss this, but already discussing this with NEODC
Dataset of Moths taken in Shropshire, few thousand records   Date coverage - last 2 years that interview Shropshire Wildlife Trust - have been recording biodiversity in the Shropshire area. Different groups have been running for different periods of time.   These records are going into the county recorder for various species. Also into national datasets are available.   Contact would be - Robin Mager @ Shropshire Wildlife Trust.
Shared data with another company - oceanographic data. At present this is in the Met Office. Have they done this by depositing this with the Met Office or should it be in the BODC.   18 months of directional wave data. collected under a contract with the Met Office and delivered to them   wave spectrum, south west approaches, Bristol Channel. 2003-2005 Sea-view sensing (company in Sheffield - maths Department Lucy Wyatt) are the people to deal with. Lucy has better knowledge how this would fit into a data centre

Question 22 What factors do you think are important in determining whether data are of long-term value to the

	Number	%
Quality of data & methods	45	58.4
Metadata	20	26.0
Length of time series	20	26.0
Accessibility	11	14.3
Everything should be kept	7	9.1
Originality / uniqueness	7	9.1
Provenance	4	5.2
Likelihood of future use	3	3.9
Raw data	3	3.9
Fitness for purpose	3	3.9
Public funding	2	2.6
Levels of use	2	2.6
Other	4	5.2
Total respondents	77	

Q22 What factors do you think are important in determining whether data are of long-term value to the environmental science community?
Model output required but not as much as in situ data which is essential.
Anything that has NERC or publicly funded staff time. My work on biodiversity - establish baseline of benthic data - very sparse records from past.
Completeness and how easily it can be accessed
Those data are of good quality. Where we are now it is difficult to predict what we need . As long as good quality data should be archived as may be needed and important in future. Should be incouraged to deposit unpublished data that may be important.
Hard to know . Seismic station thoughout UK at one time we recorded everything , computer programmes then developed only to record events . What everyone at the time thought was noise wasnt and can now be used to determine earth structure .
Their uniqueness , protected by change - time series data
The quality of the data . Data needs to be re-usable whether a specimen or data file . Need sufficient contextural metadata , the more precice and complete the more re- usable the data is.
Difficult to answer. Centres take approach that all data is valuable - may be of use in unexpected applications. So we should preserve everything.
accuracy of data metadata
accuracy, length, availability
availability data at the appropriate map scale and resolution where possible capability between mapping, map memoirs and borehole data is important but even more so is the availability of the data in the first place enormous pity that BGS no longer publish map memoris in the old style - modern lightweight memoirs are much less use
Accuracy of collecting the data A person who has surveyed the same area of land for 20 years will get better at observing changes. Would be useful if this kind of information can be captured in the metadata. Also whether more than one person is making the observations.   Historical data is important for understanding environmental indicators.
Good quality, reliable.   If it hard won it probably valuable.
So long as it is correct all data is of long term value old data tends to be a bit vague not always apparent when observations are made that it will be of long term value Level of detail - information about the data
confidence in the data eg the rigour of the checking and validation procedure relevance the data to policy and legislation
understanding how the data were created what are the limitations on the data easy access and useful file format that is easy to manipulate. knowing what the format is and making sure that it is accessible to applications that consume the data
Documentation - clear what QC has been done, what issues. Origin - in situ higher value.
Long continuity of recording.
the reliability of the data collector regularity of the updates the level of detail submitted with the record - metadata
Scope, coverage, resolution, continuity . Clear reliabiliy
To know that data was generated properly!
With regards to geospatial data - confidence in the data, indication of the errors, quality assurance.   Long-term indicator of quality.   Common data structure, consistency in structure - and across all sciences.   data that is in a format that can be used straight away.
Good quality and good provenance of the data
quality control history of the data and how it has been generated stationarity of the site
it must be by standard methodology or by a method that is reproducable and therefore has to be written in a protocol

and needs calibration to known standards
unique data sets that are non replicable part of a time series high quality with proper metadata filled in
Continuity of data Quality and robustness of data Clarity
Studies of long term effects and change in the earth system.
Whether it's stored and accessible.   How fit for purpose is it - is it long term data.   Good quality - can the quality be assessed.   raw and disaggregated data - very important.
n/a
Data that is used in more than one publication.
that standards of measurement are adhered to and public
difficult to say as requirements are policy relevant and topical requirements at the time i.e. data on volcano earlier in the year those with human environmental impact
Accessibility   Collating ability   Quality   Security
Have to be an internationally recognised geophysical parameter - satellite instrument units are less useful. being part of an international science union initiative on data preservation is good.
A full record for use in intercomparrison projects Associated ancillary data for those projects
Quality assurance - need to be able to show that data has been collected in the right manor. Metadata - can never have too much!
Data should be from Innovative from original interesting world class leading research Quality control Complete meta data Support should there be problems using the data
The integrity of the data The accuracy of the data the completeness of the data The long term availability of the data
repition, accuracy and coverage
Having clarity on survey methods In LT survey - consistancy of methodolgy & noting changes where they do arise. Retaining information eg location to enable linking of anaylsis.
Presumption that data is of imporatance as generated by a NERC funded project Assess ongoing importance of data by monitoring hits of data usage
Generic if data to be disosited needs to be indexed There can be a relunctance to deposit data as techniques to analysise data are continually being developed.   The balance of ownership of data by the funding body and the originating scientist.   The potential lack of full credit to the originator/generator of data that is put into the public arena.   Means to analyse data lagging.
Length of data set, remoteness, distance from, spatial uniqueness, Depends on the parameters. Quality of the data is critical.   Consistancy - ie in measuring temp also require relevant uncertainties, methodology.
Well documented traceable data which has an added value to it. Not all the raw data but something that has meaning and is well documented   eg. A good climatology for a model which you can refer to but you don't really want all the raw data - eg 6 hourly output on every grid point.
consistent use of techniques or methods good recording of associated data - precise provinence ie date, location
Lot of collections have been disposed of because they werent thought of value only to find later that they were of extreme importance for future research. The golden rule is to keep material for its long term research value as you never know what will be important.
In Palaeontology lots of localities disappear and new material is no longer available Historical Aspect - original specimens need to be available for verification
Should be in an easily interpretable form, compatible.
Prime factor is the accuracy of the data- i.e whether they are SI traceable   whether the data are in a format that will survive (e.g. 8 bit raw binary from satellite from 1970s - property of NASA and JAXSA interferometer spectrally resolved IR radiances from NIMBUS 4 or 7)   whether data itself lends itself for easy use in other cases -e.g. monthly means from high temporal data
part of long term dataset - long term monitoring rather than one off experiments
Need to acquire as much data as possible as you will never be sure what will be of use in the future.
Quality and traceability of data
Quality and proper storage of metadata physical specimens mathemeatical data and proper access
Main thing is that the data are accessible, but have known data quality, that algorithms that the data were prepared under have been published and linked to the data and that the metadata are provided with the data.
Data Quality
Precision of measurement   Dataset is full without missing values   Consistency of measuremenst through time
Probabally wrong question, better to incentivise - not enough scientists storing data; need more active, universal storage. Many cases where unwanted data has found a use in the future so difficult to priotise what is important eg for climate data. Metadat very important Half life of data can be measured in 100's years
Enviromental records that can be used for follow up in the future
Scale, - datasets that no one else could collect or repeat ID key research questions that could be answered - not just collecting data - determine use/application of data - looking forward 20 yrs
data that measures environemntal change, high quality, data that can be used for future projects, relevant data, base line studies

Time span - length of time database goes back.
internal consistency within the data collection or recording of how collection processes have changed. Information on the Internal quality control of the data   Data collected at the correct frequency to allow work to be carried out.   Metrics collected are of interest   Information on the platform the data are held on - i.e. how easy it would be to extract and use data for a given purpose.
Able to identify if there have been any changes in a dataset over time that can be attributed to other factors, e.g. climate change, human activities - e.g. water quality being affected by pollution etc.   The time span of the dataset needs to be sufficiently long enough to resolve long term trends. It is important to have old data to compare against with future samples/surveying.
Should be from long-tern data sets Of relevance to community
accessibity   not accessible = not usable - added complexity negates use current; updated If publishing paper - need to reference associated data
Nature of study or data   The rigour of the collection and processing methodology   How accessibly it has been processed - user means that the data are accessible, categorised and presented in a user friendly manner - i.e. searchable in a user friendly way
Consistency and accuracy of measurement. To ensure that those making measurements DO submit their data to data centres.   Apart from that it is difficult to establish what parameters are going to be important therefore it is hard to establish which parameters/measurements are not required and therefore can be discarded.
Reliablity. Has found it particularly important that he could get long-term data going back so many years for his project.
Properly described data (in 10 years time resrchers won't know what undes)
Say why collecting it! Well managed, verified, edited, needs to go through some kind of verification process both by the collector and data centre - sometimes dodgy data can get through (although happens rarely).
Uniqueness of dataset   Repeat coverage
accuracy of calibration of instruments   date and time recording need to be accurate in the data location of where the measurements are made quality control of data but also knowledge of external factors surround data acquisition
one factor would how long it takes to get the data - i.e. reproducibility of the data   How well the data have been curated - i.e. if you don't know what it is, then what is the point in keeping with it.   If you do know what it is, then does it meet the NERC strategic goals.   Cost versus use .. e.g. 80 % of data kept for 20% of cost.   usage
Very important so that people can look back over long periods for a given habitat. Therefore records have to be accurate.
if extended to environmental factors important to human health then temporal and spatial tagging is important where you can associate with point sources.   Consistency is also important - in collection, which is important for epidemological studies for example.
that the data has associated clear documentary evidence on collection practices and it's quality
all data are important for long term study. When we look back over data we find new things. You can't talways ell which dataset will produce results in the long term   If acquired it we should store it.   But make it accessible.   e.g. climate research - still alot of work to do which will take a longer timescale to do research over. E.g. are coastal ionosondes really producing different results from inland ionosondes   short term analysis manages the situation, while long term analysis gets you to the reasons for the phenomena   Used to be difficult, but no longer.

Question 23 Are there any other services that you would like to see provided by the NERC Data Centre(s)?

	Number	%
General improved functionality	18	24.7
Advice	11	15.1
Specific data sets/services	11	15.1
Portal	8	11.0
Public availability	5	6.8
Other	4	5.5
No / don't know	23	31.5
Total respondents	73	

Q23 Are there any other services that you would like to see provided by the NERC Data Centre(s)?
Handling or referral to non NERC data - one-stop shop. Use AVISO or PODAC
Sea ice distribution.
Difficult because uncertain of what is provided at present
Think data achiving and provision works best when simple. Primary function is archiving securely data in its original form.
Not specifically. Data Services will become more linked to processing and analysis because of costs of moving data

and quantities of data
When data delivered to have clear statements on usage. Particularily third party data
No
No. BODC is leading on vocabularies etc of paramount importance internationally for development of data management.
scanning of borehole logs
old style regional geologist system was invaluable even though only used occasionally
I would like you to make more public the information that you have available at NERC data centres. Also guidelines about how the data should be used
Can't really think of anything
How to deal with sensitive information. A robust central source of guidance relating to environmental data - how to manage and distribute it - that deals with the balance between making data available to planners and the impact of potential disturbance on sensitive species
a geographic interface where aproriate would be helpful
Not really. Lots of grumbles on speed of response and quality of QC and documentation.
Interdisciplinary analyses based around policy.
No
More links with researchers and information about how the data is being used and its impact.   Properly crediting researchers. Again Data Centres need to be active in making more information available so others can follow up research.
Specialists available - email address / help desk.   Single point to go to for all data   Indication on how to go about depositing data
More on-line data. Making information and images available. Linking data geographically
the opportunity for volunteers to collect data or assistance to calibrate the methods that may involve a small amount of funding or technical support   CPRE survey is an example of this
A library of presentations of work and implications which walk people through the data fairly briskly.   joining the dots to the various pieces of data guidance of where the data may be used.
Advance interfaces (APIs) to allow real time queries from scripts/programs
Specilaist support / information scientsists to help with data analysis and to track data   meta-analysts avialable? Decision modellers?
n/a
I'm pretty happy More of the same please
my needs are modest
none that can think of
data on temperature - could not hear at all what he was saying.
Still struggling to make all our data sets visible and being able to serve them to interested parties. Some way to go!
A data discovery interface that is effective. Ability to filter and extract the parts of the data I need - transform by variable/time/location important.
A directory of data available on other data repositories around the world. If data is not available on the data centres that I am not familiar with. A directory of other data centres and the kind of data they held would be very useful
In terms of HiGEM   Subsetting of data at source would be good. Something more robust than the BADC data extractor would be good.
Cross referencing of kinds of data But this is a huge question I would like lots of data on high resolution 1km grid cells at high temporal resolution. GIS terrain data for the whole of the uk. More hourly rain gauge data. Way of reporting gaps in data.
Doing okay as it is, wouldn't really like anything changed.
More communication to raise awareness of services on offer.   Collaboration with other data sets offered in other countries in Europe/ wider afield.
Pre-sumption that should be on a front end site by NERC   NERC users should be able to have notification of deposition of data within their field of specialisation.
No (not qualified to)
Priority - linking metadata with the data Ability to extract data without registering on a site   (experienced limited functionality in use of search engines compared to those used in the USA.)
We're going in the right direction in terms of sub-setting data and online plotting. A countinuous development of that is what is needed.
this would need further investigation to answer question
Most of my usage is covered
Cant think of any except cheap radiometric dates
Some kind of helpdesk
Front page that highlights new datasets that are either pending or coming soon, or recently revised.
nothing that can think of

Making more information available on-line . Not just metadata but the information itself.
Cant think of any except having everything on your desktop and easy way of finding the data you want.   Data being refreshed when you want it so you are using live up-to-date data
More uniform robust systems for researchers to use and easily accessible centralised storage
none at the moment.
No
Chemical measurements, algal data Speialst to speak to
Greater encouragement to deposit data storage, more incentive eg added value for activity (carrot rather than the stick)
Needs change, keep current He works from home - uses library services - therefore would be good to have data availability through the Internet rather than dedicated electronic routes via research institutes Restriction on data - therefore not so easy to use readily. Easier to manipulate data - held on platforms which are easily accessible eg excell or acess.
Active as community hubs, linking up of   outward facing - internal / national   Good to have help with all different data media
Page on NERC website where you can see what's on offer and how to get it.
Useul filter to find the data you need.
Not a real user of the data, so hard to comment.   Would be looking for time series of environmental variables of interest to the group. E.g. coastal and fresh water trends of chemical species, bulk flow rates and how they change over a period of years.
Nothing new that isn't already been provided for (e.g. specialist services that can be used)
No
Added value if accessible to public - outreach, educational value   Issue of analysing data - not expect NERC to analyse data but if Centres could provide support that would be good. To know expert support is available to assist in the data analysis.   Mechanism to deposit data. e.g. His own sequencing data generated - who would be able to deposit the data? - will ask Gwyn Rees to follow up with Eran.
User is always interested in interpretations of the data - access to reports on the data itself so that the user can interogate the interpretation. And links to other related papers.
don't know.
Help/training with statistics, use of data.
Case studies pointing to where data has been used in other areas.
Possibly producing condensed data sets in the form of an interactive grpahical software tool e.g. for sea surface temperatures. BODC produce a CD but it needs to be on the website.
NEODC has nice interactive map... would be good to have this developed further - visualisation and direct data access through this service (web coverage service)
most important point is a single point of contact which acts as signposting to relevant data
is there a correlating service? data management plans - uniform approach to DMPs accross NERC.
no (dont know enough about NERC data centres)
Environment and human health has changed its character. NERC were not interested in human health aspects until recently linked up with other agencies to bid for funding calls. Now look more at issues that are beyond environment state to exposure.   NERC do not look at indoor environment conditions which is consideration for health.   Food should also be looked at as environmental exposure factor.   Generally need to look more holistic approach to what impacts on health as can't just look at external environmental factors. So as NERC can provide some required data there is a need to link up with providers of other data required for this work - cross cutting data provision (e.g. more dialogue with social science community)
Could provide guidance or linkage/suggestions to other potentials sources of data if NERC data centres do not have the data
not particularly

Question 24 Other additional information / comments

	Number	%
Generally positive	15	_31.9_
Important	9	_19.1_
Publicity issues	6	_12.8_
Future development	5	_10.6_
Data deposit issues	3	_6.4_
Generally negative	1	_2.1_
Other	9	_19.1_
Total respondents	47	

Q24 Other additional information / comments:

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Do a good job - BADC have been great on big modelling project.
Positive impression - professional service. Expect to use it soon.
Really important to provide easily accessible information about what data is available and when it is available for future projects.
Importance of encouraging or 'forcing' people to deposit data. Lot of data out there that needs to be properly archived Would like NERC Palaeodata Centre as not well provided for outside RAPID.   Wouldnt know where to begin to put data at present.
NERC hold some of the key historical and current datasets related to environmental science and NGDC has done a good job in maintaining these and long may it continue.
Talking to Mark Thorley about changes in NERC data policy. Wording of new policy is very important - I hope that NERC has the courage to enforce institutes and scientists to submit - would help with Dutch work. Very good policy.
please keep the NERC data centres in NERC (not shared service)
Ideally to obtain data that is publicly funded should be free of charge or has a modest charge so that not completely inundated with requests. NERC has an ideal set up that you can access certain things online for free, but stations that are not on web can still be archived for a small charge. The Met Office for example charge an extortionate rate to get data which stops people using it.
as in Q20
I would like you to make more public the information that you have available at NERC data centres. Also guidelines about how the data should be used   - the reason for collecting the data and how it has been collected Developers tend to use a new group of experts to observe the area as a basis for dertermining the environmental impact of a development. People can be selective when they use the data.
Other than the biological record centre I am not really aware of what NERC has to offer so a guide of what is available and how to access it - perhaps a leaflet Also like to stress the importance of a central source of guidelines on how to deal with sensitive information. a central route for accessing data.
One request for all cruises at same time.
Having institutional basis for long-term store - continuity and expertise vital.
Some record centres are very good in particular Derbyshire And would like to recommend their method of work to other data centres.
I am probably not a typical user but wished to contribute as the data is important for policy making.   Are the results of the survey going to be made available? Would like to see.
Pressure whithin establishmenst to substantiate our jobs.   EIDC have been gaining staff - losing people who generate data and gaining people who are analysing it. the EIDC has no pressure to bring money in or publish. ILOs - never spoken to one since their role was invented. System is broken down.   45 people accessed the gateway in first week - half of those wre EIDC people checking system was working.   Too much money spent gateway. Too much extra admin.   Does not want his raw data put on database as it takes alot of knowldege to understand the data. Everyone is being pushed to generate datasets. His data doesn't 'fit' into the database.
Would like somoone to contact him with infor on what data is avialable, how to find it etc. Also what to do with his data as he has relevant data to deposit.
keep up the good work but would liked to have spoken to the person who designed the survey
focus on the non specialist users only useful for academics who know it's there, but not so good for people outside of this linking NERC data centres with other non NERC data centres
I am not a heavy user at the moment because it hasn't been that accessible. I am trying to illustrate the interconnectedness of issues and trying to get people from a consulting and engineering point of view to see that decisions now have a long term influence. Information that shows the certainty of implications would be very powerful. I need to be confident that when I am challenged on the data I used that it is defensible - so a data source that is authoratative is very important. Novel information used in new ways - interesting examples would really help. Interconnectedness. Role of science and politics. Who else is better equipped to advise political agenda than the scientists themselves? Need to make science findings very clearly and unambiguously to policy makers.
He thinks it's great that NERc are asking people's views and really hopes that the data centres can reach their true potential. NERC has a lot of leverage it can exploit. He strongly supports spending money on developing data centres. Link to grant applications - look at what data already exists.   Additional note: Was shocked that he was told that if he used the data in a manuscript, someone from CEH needed to see it before and okay it before submission. He noted how biased this was. He still has the letter for this (2008/09)
n/a
previously expressed view in environmental framework documentation that maintenance of these centres is increasingly important as it's the only way we can get an objective view of longer term changes.
found easy to deal with and straightforward to reach person required
Generally had a very good experience, especially as it was his first time using the data centre.
Once you know where the data is at the BADC then is very easy to retrieve. Any changes must not sacrifice ease of access for fancy web interfaces.   Over-engineered fancy interfaces can make it more difficult to get to data you know how to find.
In terms of CMIP5 Keen to encourage that BADC continue to develop their role to hold the data and allow users to

have access to it and manipulate it because CMIP5 will be an important resource for the community. NERC should put funding in place so that data centres can facilitate these sort of activities.
Thank you very much! I want to let you know how much I value the work that the data centres do.
As now using more datasets from different sources appreciates the service being offered by NERC.
Should be High on NERC priority list   Data security, controls very important
One general point - good that NERC are engaging in this manner, alot more proactive than other RC's. Should be a very useful activity. Prefers a process where there has been widespread consultation.
none
Keep them funded as they are an invaluable source of research material.
It is important for people to obtain and use their own data but if the work has been done previously then it makes sense to use that data to save duplication.   He had no idea that NERc had all this data on offer and wish he's known about before getting to the end of his PhD.
NERC Data centres are a valuable resource.
Just finding what you want quickly. The need for good metadata descriptions
BAS Centres providevery valuable support right throughout a grant and also provides relevant specialist expertise
none at the moment that is not already been raised with BODC
Apprreciate opportunity to comment
No
Why is it NERC and not a more widespread general research umbella organanisation?
As a "fringe researcher" - useful to have easily accessed data   With morass of data anything that tries to provide an easier route/process is welcomed   Is there currently or plans for the future to have links with taxanomic databases eg the Natural History Museum for identifiation of species, barcoding , geographical aspects?
Engage with other datacentres in other areas eg biosciences
Could cost into the project the cost of making sure data gets online.   Crucially important for studying things like climate change and biodiversity loss to have these databases.   Proposals that can make use of this data should be strongly encouraged.
A lot people he has spoken to find the NERC websites very difficult. He doesnt find the one'stop shop very useful, too complicated. He would rather know which data centre to approach and then go to them directly instead of having to navigate around a complicated site housing all data looking for where to go.   Very important to incentivise people to deposit but doens't think this is achieveable.NERC should invent a set of rules for depositors such as ethics and recognition for people who deposit so they know what their data is going to be used for - this will incentivise them to deposit.
not really.   Probably expect good quality data would come out of NERC. Therefore, if they were more aware of the products and services available from NERC then they would be more likely to make use of NERC data centres and the data they hold, and the services surrounding them due to the quality of the data and services that would be expected.
no
Not aware of data centres prior to request to carry out survey Therefore better communications would be benificial Where NERC gives out grants could communicate information on the data centres as part of the grant package.
none
10cm flux measurements in Canada, sun spot observations and ionosonde in Falklands have been under threat. These have all had to be fought for future maintenance, but these are vital for future work.
Not really but will says that people at Data Centre are great and it's easy to get what he needs. No real comment except appreciates all the work they have done to help him.
NERC needs to remember that these data centres to serve science, to support science not there as an end to themselve
Knows that many of services are under threat due to financial reasons, strongly hopes that ionogram service i particular is retained in its current form.   User has been a long time user of service and is very grateful for this service - multiple accesses daily. To loose the service would have major impact on hobby and science interests. This is a unique service to the UK that could not be substituted by any other data from outside the UK.   The user also wanted to note that there are lots of other amature radio users in the UK who have not filled in the survey, but do make use of the ionogram service at the UKSSDC.
Would really like to feed into stake holder process... making cross links with publishing community.
none.
in dealings with NERC there appears to be good commitment to fairness and transparency - user has been impressed that NERC takes such approach to due consideration to science.   Echoing previous comments with regards to health science and linking up multiple determinants which impact on health - often seen in funding calls, but not quite reflected in awards.
none
not really.

Frequencies

A1 Are you based in the UK?

	number	%
Yes	76	97.4
No	2	2.6
Total	78	100.0

A2 Please indicate the sector which best describes where you are based:

	number	%*
University/Higher Education	30	38.5
Research Institute/Facility	22	28.2
Other	4	5.1
Public sector	14	17.9
Voluntary/NGO	4	4.4
General public	4	4.4
Commercial/industrial	7	9.0
Total respondents	78	

*% of telephone respondents answering question A2 in the online survey

A2.1 For how long have you been involved in academic research (Including any time spent as a postgraduate student)?

	number	%
Fewer than 4 years	6	12.0
4-6 years	2	4.0
7-10 years	4	8.0
11-20 years	17	34.0
Longer	21	42.0
Total	50	100.0

A2.2 What is your main area of research?

	number	%*
Atmospheric	11	22.0
Earth	17	34.0
Freshwater	10	20.0
Marine	10	20.0
Terrestrial	13	26.0
Earth observation	10	20.0
Polar	2	4.0
Science-based archaeology	1	2.0
Total respondents	50	

*% of telephone respondents answering question A2.2 in the online survey

A2.4 Have you received any research support from NERC within the last 5 years? (e.g. grant funding or use of NERC facilities)

	number	%
Yes	37	74.0
No	13	26.0
Total	50	100.0

A3 Have you ever used data from any of the NERC Data Centres?

	Number	%
Yes	47	60.3
Not sure	6	7.7
No	25	32.1
Total	78	100.0

D2 Have you ever deposited data with any of the NERC Data Centres?

	number	%
Yes	35	44.9
No	43	55.1
Total	78	100.0

Type of user

	number	%
Deposit and use the DC	31	39.7
Use the DC but don't deposit	16	20.5
Deposit but don't use the DC	3	3.8
Don't deposit or use a DC	28	35.9
Total	78	100.0

Appendix 5 – LISU Report

Stakeholder Consultation Project:

Survey analysis

Claire Creaser, Helen Greenwood & Sonya White

February 2011

LISU Research & consultancy for performance management
Information, cultural & academic services

Loughborough University

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