



**British  
Geological Survey**

NATURAL ENVIRONMENT RESEARCH COUNCIL

Applied geoscience for our  
changing Earth

# Open Data in Science and Research

*“Raw Data Now”*

# Agenda

- Demand
- Emerging Policy
- NERC Response
- Benefits to BGS Scientists
- Risks for BGS Scientists
- The Help





# DEMAND

**“The future belongs  
to the companies and  
people that turn data  
into products.”**

Mike Loukides author of O'REILLY's  
What Is Data Science?



# Tim Berners-Lee calls for 'Raw Data Now'



In 2009, World Wide Web inventor Tim Berners-Lee stood in front of the TED Conference and made a call for 'Raw Data Now' - asking data holders to put their information on the web in accessible and open formats, rather than keeping it locked away in internal systems, or only publishing summaries in report.

# Guardian Data Store

theguardian

Your search terms... News Search

News London 2012 Sport Comment Culture Business Money Life & style Travel Environment Video Apps Offers Jobs

News Datablog A-Z Show & Tell Data search Olympics data Data journalism Twitter Flickr Facebook Tumblr Staff

## DATA STORE

Facts are sacred

Webfeed

### Latest from the Datablog



#### London 2012 Olympians visualised for the Guardian

How can you show nearly 11,000 athletes from over 200 countries? This graphic visualisation was published in today's Guardian and shows how each country breaks down

Post your comment

#### Datablog: Can you predict who will love a song?

Data science communities teamed up with EMI to find out how accurately you can predict someone's opinion of a song based on a handful of details about their general musical taste

5 comments

#### Opening ceremony London 2012: see how Twitter feels about it with Emoto

Interactive

How do we feel about the opening ceremony of London 2012? See it change live as we tweet our reactions around the world

Post your comment

### Editor's picks

London 2012

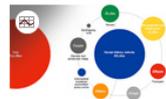
#### Every Olympic athlete: the full list



We have the full list of every athlete competing in the London Olympics - see who they are

3 comments

#### Where does the Olympic money come from - and where's it being spent?



As the games get underway, we untangle the data from the rumours

11 comments

Olympic torch relay places - how were they allocated? Get the data

Wellbeing

#### How happy are you? Find out the wellbeing score for everywhere in the UK



The first results of the national wellbeing survey are out. See what it says

11 comments

The happiness and wellbeing map of Britain

blurb In your hands in about a week.

### Highlights

Sport Olympics data



Dataviz Show & tell



UK Riot data



Facebook Social network



# Neelie Kroes

Vice-President of the European Commission



*"Taxpayers should not have to pay twice for scientific research and they need seamless access to raw data."*





# EMERGING POLICY



## transparencyhub

From our public leaders network

[Previous](#)

[Blog home](#)

### White paper heralds new era of open data and innovation

It's time to build on the raw material of our age, by taking a democratic approach to public sector information

**“more data, more easily accessible and in a readily usable form, to increase government accountability, drive improved public services, increase choice, and feed innovation and growth.”**

## Open Data White Paper

Unleashing the Potential

#opendata

@uktransparency

@cabinetofficeuk

HM Government





## Francis Maude speech to Policy Exchange - The Big Data Opportunity

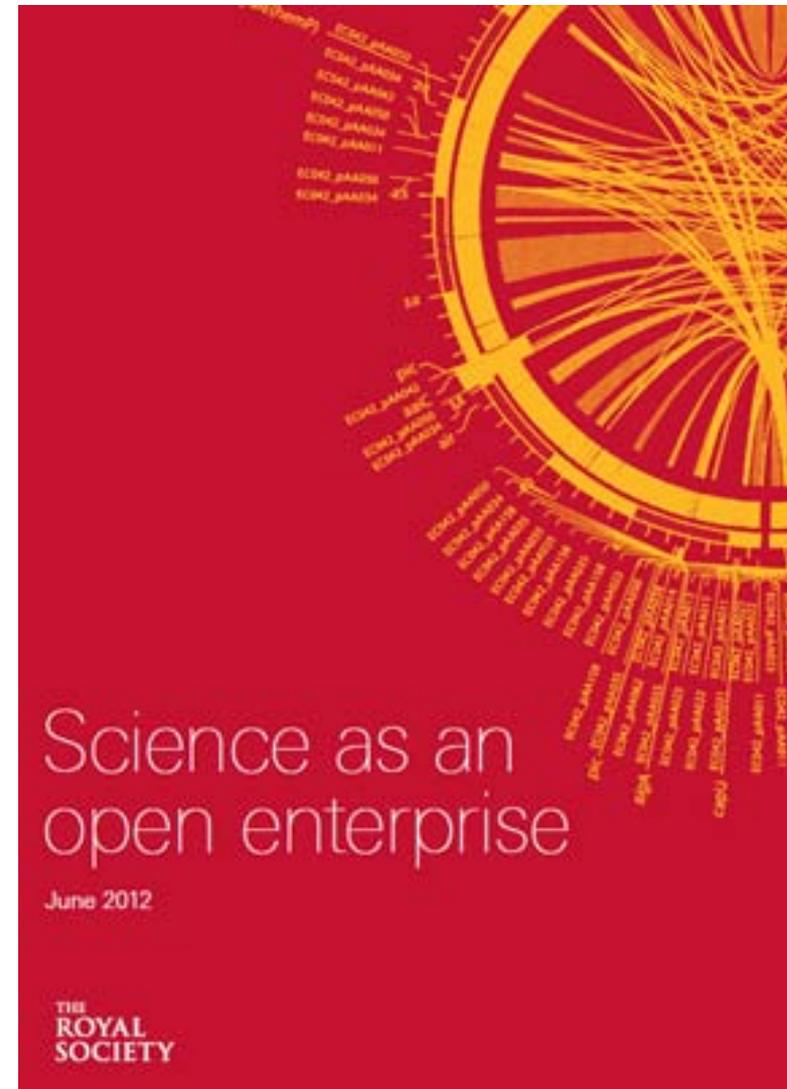
Minister for the Cabinet Office Francis Maude made a speech on Big Data to the Policy Exchange on 3 July 2012.

**"We will keep putting more data, of higher quality, into the public domain so everyone can reap the benefits of transparency and open data in the future. The prize – better public services and a more prosperous UK – is just too good to ignore."**

# SUMMARY

## The practice of science

Open inquiry is at the heart of the scientific enterprise. Publication of scientific theories - and of the experimental and observational data on which they are based - permits others to identify errors, to support, reject or refine theories and to reuse data for further understanding and knowledge. Science's powerful capacity for self-correction comes from this openness to scrutiny and challenge.





## Vince Cable touts benefits of open borders and open data

Business secretary believes we should stop moaning about the UK 'brain drain'

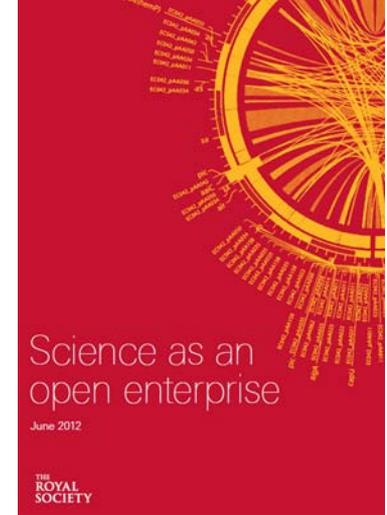
*By Anh Nguyen | Computerworld UK | Published 17:17, 13 July 12*

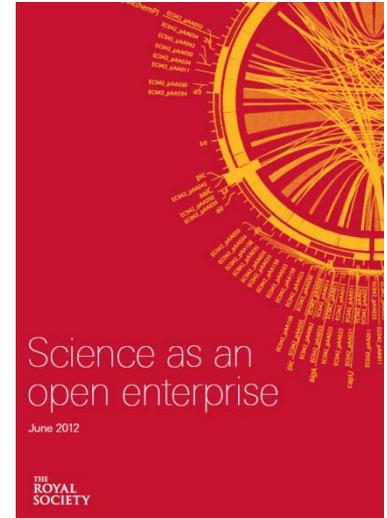
Business secretary Vince Cable has spoken out in favour of opening up borders for scientists and technologists in the ongoing debate over the offshoring of IT skills.

Speaking at a Royal Society event yesterday, Cable was keen to highlight the benefits of openness and internationalisation of UK science.

Cable said.

“Improving access to data will not only enhance transparency but fuel innovation, and we are just beginning to understand the potential of data mining to accelerate scientific breakthroughs and their translation into practical applications.”

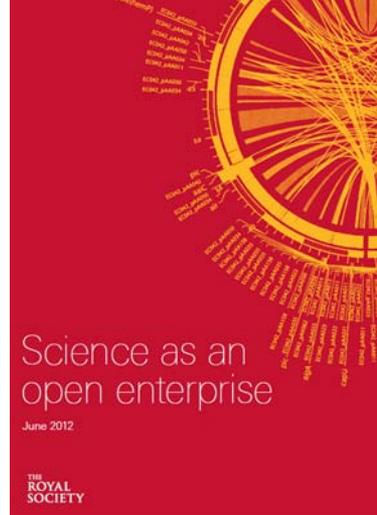




## Applicable Recommendation 1

**Scientists should communicate the data they collect and the models they create, to allow free and open access, and in ways that are intelligible, assessable and usable for other specialists in the same or linked fields wherever they are in the world. Where data justify it, scientists should make them available in an appropriate data repository. Where possible, communication with a wider public audience should be made a priority, and particularly so in areas where openness is in the public interest.**

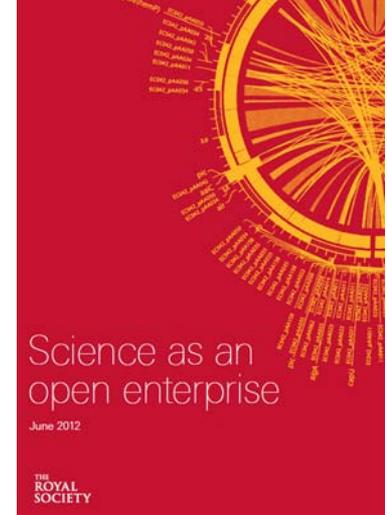




## Applicable Recommendation 2

*Universities and research institutes should play a major role in **supporting an open data culture** by: recognising data communication by their researchers as an important criterion for career progression and reward; developing a data strategy and their own capacity to curate their own knowledge resources and support the data needs of researchers; having open data as a default position, and only withholding access when it is optimal for realising a return on public investment.*

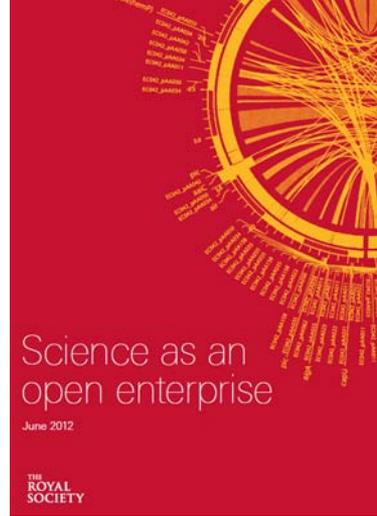




## Applicable Recommendation 3

*Assessment of university research should **reward the development of open data** on the same scale as journal articles and other publications, and should include measures that reward collaborative ways of working.*





## Applicable Recommendation 5

**Research Councils *and Charities should improve the communication of research data from the projects they fund* by recognising those who could maximise usability and good communication of their data; by including the costs of preparing data and metadata for curation as part of the costs of the research process; and by working with others to ensure the sustainability of datasets.**





# NERC RESPONSE



## Data Search

493

Results

British Geological Survey

Search

Your search: [Tag: NERC\\_DDC](#) x

## Geological Indicators of Flooding Great Britain

Publisher: [British Geological Survey](#)

Provider:

The BGS Geological Indicators of Flooding (GIF) dataset is a digital map based on the BGS Digital Geological Map of Great Britain at the 1:50,000 scale (DiGMapGB-50, BGS, 2009).  
 Current...

Formats:



## GeoIndex Geological Memoirs

Publisher: [Scottish Government Spatial Data Infrastructure](#)

Provider:

This layer of the GeoIndex shows areas covered by explanatory sheet Memoirs. The memoirs themselves provide a comprehensive and detailed account of all aspects of the geology of the areas...



## BGS Surface geology (OGC WxS)

Publisher: [British Geological Survey](#)

Provider:

Data from the DiGMap covering the whole of the United Kingdom at a scale of 1:625 000 is available in this OGC WMS service for personal, non-commercial use only. The service is a...

Formats: WMS

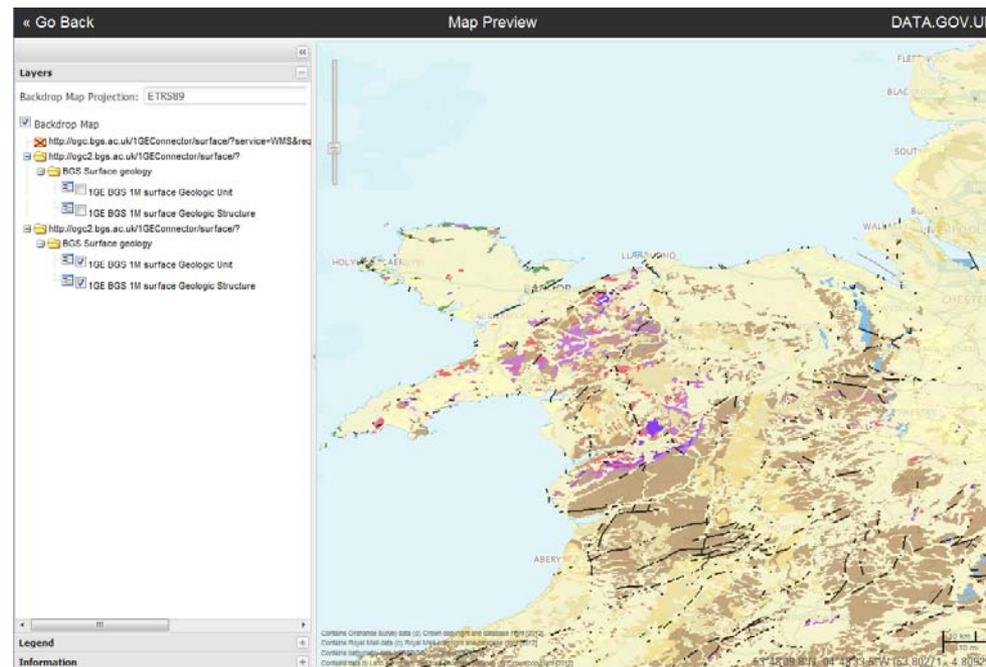
[Preview on Map](#)

[Add to Preview List](#)


SERVICE

# What does it mean?

Scientists should communicate the data they collect...



« Go Back

Map Preview

DATA.GOV.UK

Layers

Backdrop Map Projection: ETRS89

- Backdrop Map
- <http://ogc2.bgs.ac.uk/1OGCConnector/surface?service=WMS&req>
- <http://ogc2.bgs.ac.uk/1OGCConnector/surface?>
  - BGS Surface geology
  - 1GE BGS 1M surface Geologic Unit
  - 1GE BGS 1M surface Geologic Structure
- <http://ogc2.bgs.ac.uk/1OGCConnector/surface?>
  - BGS Surface geology
  - 1GE BGS 1M surface Geologic Unit
  - 1GE BGS 1M surface Geologic Structure

Legend

Information

Contains Ordnance Survey data. © Crown copyright and database right 2009.  
 Contains Royal Mail data. © Royal Mail. All rights reserved. 2009.  
 Contains GeoArchive data. © British Geological Survey. All rights reserved. 2009.  
 Contains data from the Ordnance Survey National Grid. © Ordnance Survey. All rights reserved. 2009.

51° 15' 00" N, 0° 15' 00" W (51.250000, -0.250000)

Home » Our data » NGDC information & data

**Our data**

Our products

- Opengeoscience
- National Geoscience Data Centre
- NGDC index
- Digital data
- Earth Science Academic Archive
- Materials collection
- National Hydrocarbons Data Archive
- Records and archives
- Premium data services

## National Geoscience Data Centre

**Digital Data**

Many of the BGS's most popular datasets are available to search and view online.

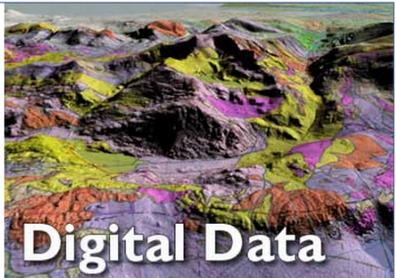
- Finding
- Using
- Depositing
- Holdings
- Legal framework
- Gallery

**Records**

**Collections**

**ESAA**

**nhda**



# Digital Data

Use the collections and information at the National Geoscience Data Centre (NGDC) to find out more about the subsurface of Great Britain, for academic or commercial purposes.

Part of the BGS, this national collection is used to support the Survey's science programmes and is the NERC-designated data centre for the Earth sciences.

The NGDC comprises data gathered or generated by the BGS or its precursors, as part of its national strategic mapping programme, in addition to data provided by external organisations.

Browse the NGDC website using the links below or contact us on: 0115 936 3143 or [enquiries@bgs.ac.uk](mailto:enquiries@bgs.ac.uk)

**Finding data**  
Find out how to find different types of data and where it sits within the NGDC

**Using data**  
Using different types of data and where you will find it within data

**Depositing data**  
How and where to deposit different types of data and where it sits within the NGDC

**Our services**

- Enquiries
- Discovery metadata
- Geolindex
- OpenGeoscience
- GeoRecords
- NORA

**See also**

- NGDC contacts
- Relocating UKCS Core

**External links**

- The Association of Geotechnical and Geoenvironmental Specialists (AGS)
- DEAL Data Registry
- International Organization for Standardization (ISO)
- The National Archives
- Nuclear Decommissioning Authority (NDA)

**Share this page**

# What does it mean?

...make them available in an appropriate data repository...

Home » Our data » NGDC information & data » Earth Science Academic Archive

**Our data**

Our products

- Opengeoscience
- National Geoscience Data Centre
- NGDC index
- Digital data
- Earth Science Academic Archive
- Materials collection
- National Hydrocarbons Data Archive
- Records and archives
- Premium data services

## Earth Science Academic Archive

The Earth Science Academic Archive has been set up as part of the National Geoscience Data Centre (NGDC) and is the place for you to deposit the results of your Earth Science research.

The ESAA will be pleased to accept the results from NERC research and any other similar research projects to ensure their long term safe keeping and future use.

The Earth Science Academic Archive is responsible for:

- liaising with principal investigators and other NERC grant holders to ensure that appropriate data are offered to the NGDC
- selection of data for inclusion in the NGDC in liaison with BGS scientists and other stakeholders
- long-term curation and preservation of analogue and digital data (including samples)
- publicising the holdings and making available information on the web

Examples of types of data submitted to the ESAA:

- research reports
- photographs
- spreadsheet data
- figures and diagrams
- 3D models



**Why deposit ESAA data?**  
Professional, advice management and long term secure storage of data and records. Increased awareness of your work and citation of datasets will give credit to your research and may bring further opportunities.



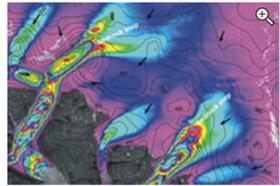
**Depositing with ESAA**  
If you hold a NERC grant and are creating data you must deposit a copy of the data with a NERC Environmental Data Centre. The ESAA is the component of the NGDC that is responsible for helping NERC grant holders working in the earth science sector.



**Finding ESAA**  
Search the ESAA for research reports, photographs, readsheet data, figures and diagrams, and 3D models.



**Using ESAA**  
Links to online applications are found here.



**Downloads**

- Guidelines for depositors 528 KB pdf
- Guidelines for preparing, donating and depositing data 1.11MB pdf
- Data management questionnaire 100KB word doc
- Data, materials and documentation transfer form 120KB word doc
- Data management plan 180KB pdf
- The principles of good data management 550KB pdf
- Quick check list 95KB word doc

**Search ESAA**

- Search ESAA data holdings
- Terms of use

**See also**

- Enquiries
- BGS downloads
- Materials collections
- Rock Classification Scheme
- Vocabularies
- NERC Open Research Archive

**NERC data**

- NERC data centres
- NERC data policy
- NERC grants on the web
- NERC data discovery service

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# What does it mean?

... supporting an open data culture...

The screenshot shows the main navigation and content of the BGS website. At the top, there are links for 'About us', 'Contact us', 'Downloads', 'Jobs', and 'Shop'. The main header includes 'Home', 'Our data', 'Our research', 'Our services', 'Our people', 'Discovering geology', 'News & Events', and 'Hosted sites'. A 'Home > Our data' breadcrumb is visible. The 'Our data' section features a data visualization graphic and a list of products: 'Opengeoscience', 'National Geoscience Data Centre', and 'Premium data services'. A 'Digital Data' image shows a landscape with a circular feature. Below this, a search bar for 'Discovery Metadata' is present, along with an 'IFTS accredited' logo. A section titled 'Free data access and tools | OpenGeoscience' describes the service and lists products: 'Our products', 'Premium data services | For commercial use', 'National Geoscience Data Centre | Managing our data', 'Working with NERC', and 'World data systems'. On the right, a '30 most viewed datasets' table lists various data types with 'Free' or 'Free to use for non-commercial purposes' status.

30 most viewed datasets	Data by category
1. Geological Map of Britain viewer	Free
2. Lexicon of Named Rock Units	Free
3. Onshore borehole logs (scans)	Free
4. Geology onshore digital maps (DIGMapGB)	Free
5. Landslides database	Free
6. Web map services	Free
7. Borehole log ordering (GeoRecords Plus+)	Free
8. Geological data reports (GeoReports)	Free
9. Ground stability data (GeoSure)	Free
10. Onshore borehole index	Free
11. Geochemical Baseline Survey Data	Free
12. Borehole Core, Rocks, Fossils, & Minerals	Free
13. Records and Archives	Free
14. Onshore Borehole Material Database	Free
15. Offshore Hydrocarbons Wells with images	Free
16. Geological photographs (GeoScenic)	Free
17. Rock classification scheme	Free
18. Groundwater level information	Free
19. Radon Potential Dataset	Free
20. London Soil Geochemistry	Free
21. Soil Portal	Free
22. Palaeontology Database (PalaeoSaurus)	Free
23. Groundwater data and information	Free
24. Ground Water Flooding Susceptibility	Free
25. Hydrogeological Database (Wellmaster)	Free
26. Rock Collection Database (BritRocks)	Free
27. Soil Parent Material Model	Free
28. Land Gravity Survey	Free
29. Marine Gravity Survey	Free
30. GB Aeromagnetic Survey	Free

This screenshot shows the 'OpenGeoscience — Free data!' page. It features a 'What is OpenGeoscience?' section with a definition: 'A free service where you can view maps, download photographs and other information.' Below this, it lists 'Explore the OpenGeoscience sections below' with a globe icon and a list of categories: 'Maps & spatial data', '3D models', 'Data collections', 'Digital images & scans', 'Education', 'Reports', and 'Smartphone apps and software'. A 'Contact us' link is provided for users who create something new and innovative.

The screenshot shows a YouTube video player with the title 'Introduction to OpenGeoscience on YouTube'. The video player interface includes a play button, progress bar, and volume controls.

This section is titled 'Who can use OpenGeoscience?'. It explains that non-commercial users can use the material free of charge for private study, research, and educational activities. Business users can use the material for innovation purposes. A large magnifying glass icon is overlaid on the text.

This section contains 'Quick links' with icons for various services and 'Recent publications' with brief descriptions of research findings, such as 'Large-scale column experiment: study of CO<sub>2</sub> porewater, rock reactions and model test case' and 'Large static correction using a hybrid optimization method in complex terrains: some experience learnt from China'.

This section features the BGS logo with the year '1835' and social media sharing options for 'Share this page', including 'Tweet', 'Share', and 'Email'. There is also a 'News and apps' link.



Coming soon – hopefully?

# What does it mean?

...reward the  
development of open  
data...



# Open Access Geoscience Data Journal Launched by Wiley

JULY 17, 2012



Geoscience Data Journal is online-only and will publish short data papers (articles describing a dataset, giving details including collection, processing, software and file formats) covering topics ranging from weather and climate, to oceanography, atmospheric chemistry and geology. All published data papers will be linked to datasets, which provide details of the collection, processing and file formatting of data.

## What does it mean?

...reward the development of open data...

## Editors include:

**Richard Hughes PhD CGeol**  
Director of Information and Knowledge Exchange  
British Geological Survey  
Keyworth, Nottinghamshire  
UK  
[rah@bgs.ac.uk](mailto:rah@bgs.ac.uk)



# Data Availability

111. ...Investigators should therefore **make sure that a NERC Designated Centre is aware** of any significant datasets to be compiled as a result of their projects, so that the long-term future of these data can be planned....

...At the end of an award Investigators are required to **offer the appropriate Data Centre a copy of any dataset generated**, so that the data can be made available for other researchers. The Intellectual Property Rights to the data need not be transferred.

## What does it mean?

...improve the communication of research data from the projects they fund...

NERC RESEARCH GRANTS AND  
FELLOWSHIPS HANDBOOK  
GRANTS AWARDED ON FULL ECONOMIC COST  
BASIS

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Edition 2012 – 2.0  
May 2012

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# NERC Open Data Statement

**From January 2011 NERC will make the environmental data in its Data Centres freely available without restrictions on use.** This is to increase the openness and transparency of the research process, and to encourage the development of new and innovative uses for these data. To help support this, **NERC will require environmental data collected from the activities it funds to be made openly available within two years of their collection.** These are just a couple of the changes that NERC will make with the introduction of its new Data Policy. The policy will be launched in October and will come into force in January 2011.



# NERC Science Information Strategy

## Headlines

The vision for the NERC SIS is to provide a world class service to deliver integrated data for earth system science.

- Providing simple and coordinated access to NERC's data and information assets.
- Using common standards to enable integrated access to all data held within NERC's data centres and the promotion of reuse and repurposing.



# NERC Science Information Strategy

## Headline Deliverables

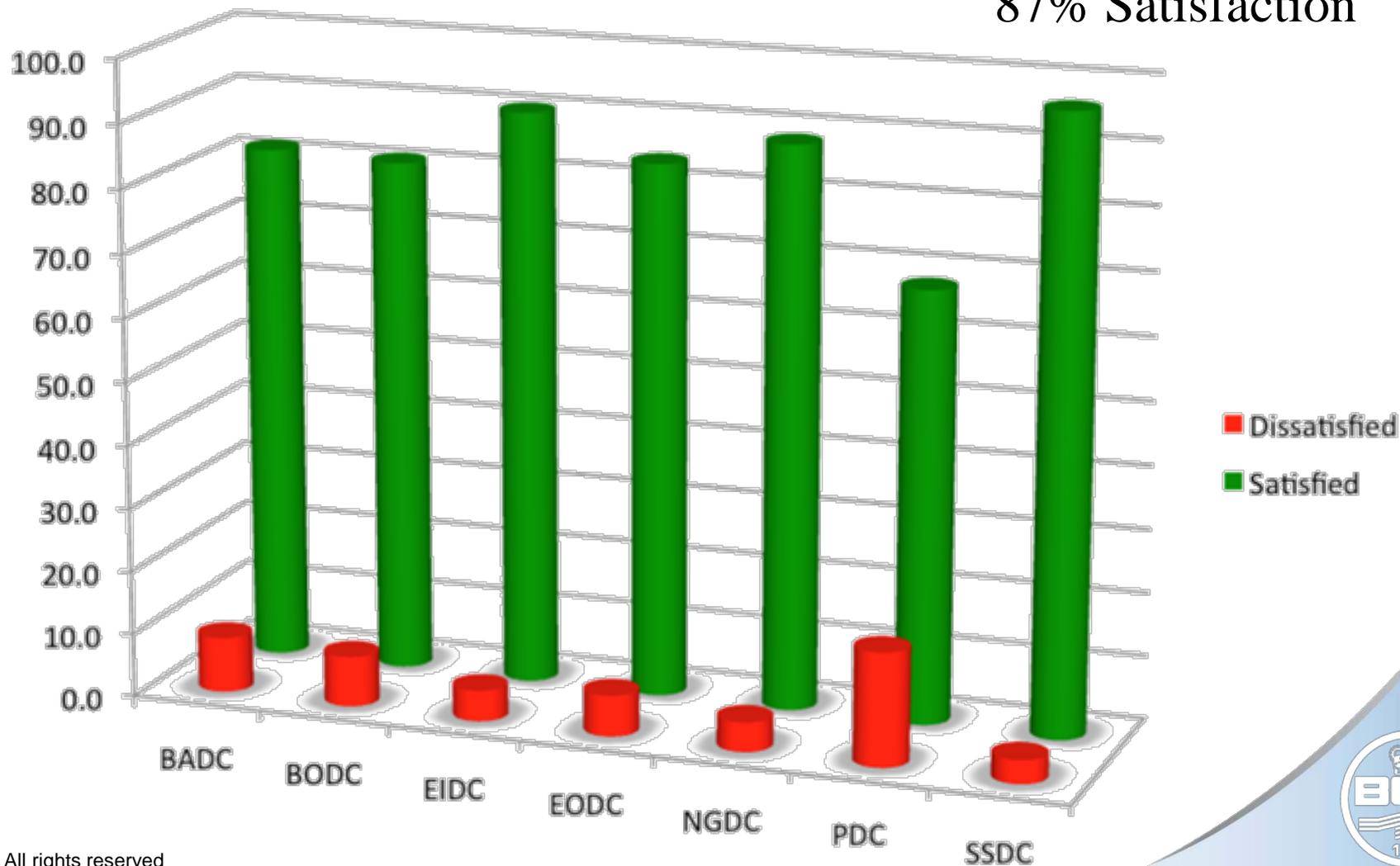
- Stakeholder Analysis
- NERC Data Policy
- Long-term Governance Model
- NERC Data Centres Roles and Responsibilities
- NERC Data Centre Metrics
- NERC Data Catalogue Service
- NERC Data Value Check List
- Digital Object Identifiers (DOI) to Support Data Publishing
- Model Code Management



# Stakeholders Analysis

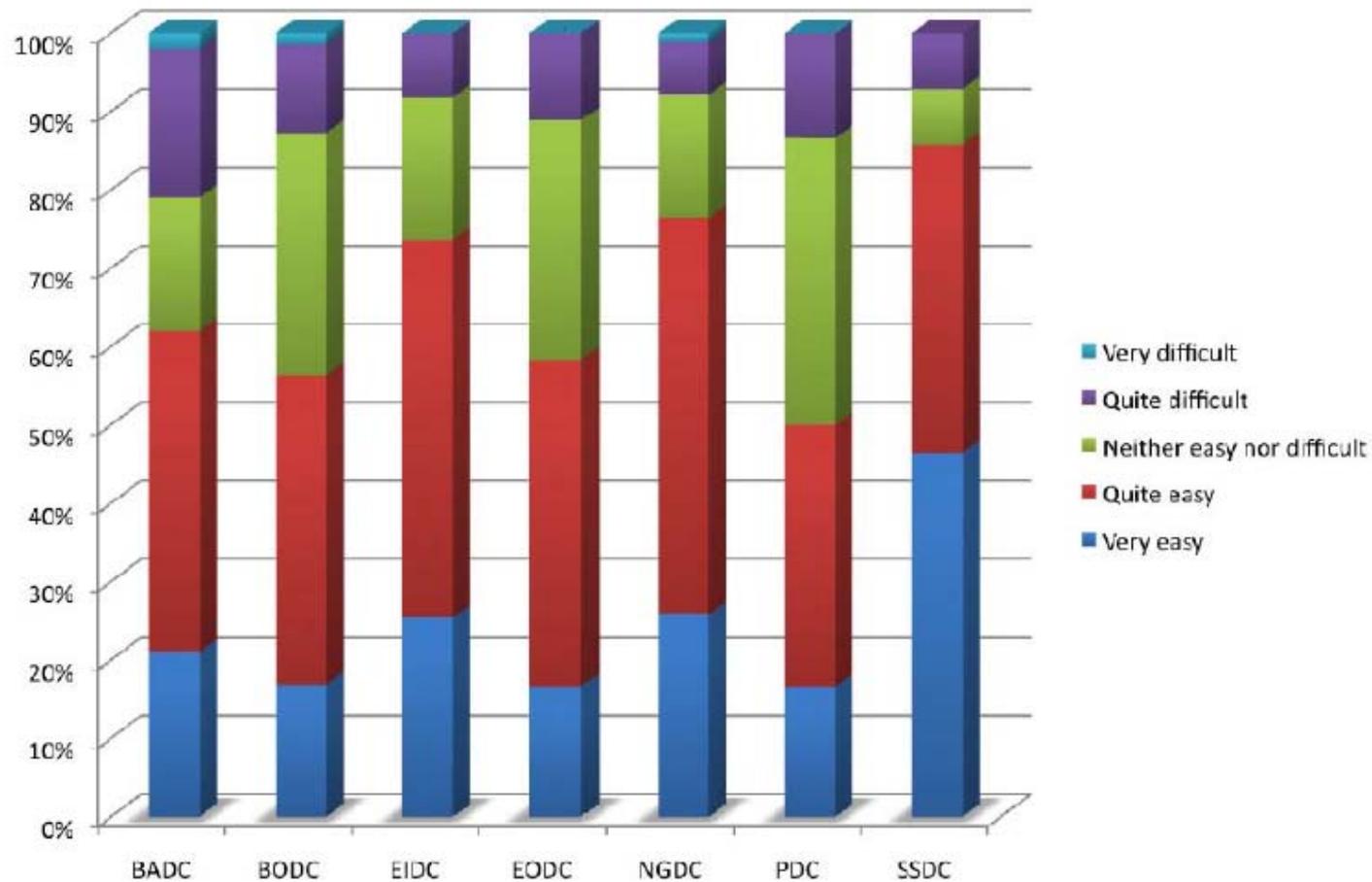
## User Satisfaction

87% Satisfaction



# Stakeholders Analysis

## Finding what you need



▶ [About us](#)

▶ [Funding](#)

▼ [Our research](#)

▶ [Research news](#)

[Introduction](#)

▶ [Science themes](#)

▶ [Research programmes](#)

▶ [National capability](#)

▼ [Centres](#)

▶ [Research centres](#)

▼ [Data centres](#)

[Atmospheric science](#)

[Earth sciences](#)

[Earth observation](#)

[Marine science](#)

[Polar science](#)

[Science-based  
archaeology](#)

[Terrestrial &  
freshwater](#)

## NERC Data Policy

The NERC Data Policy details our commitment to support the long-term management of environmental data and also outlines the roles and responsibilities of all those involved in collecting and managing environmental data. The NERC data centres provide support and guidance in data management to those funded by NERC, are responsible for the long-term management of data and provide access to NERC's holdings of environmental data.

We have created our data policy to be consistent with legal frameworks, such as the Environmental Information Regulations 2004, the INSPIRE Regulations 2009 and contractual arrangements with other bodies where, for example, NERC holds data on their behalf but does not own the intellectual property rights.

To reflect NERC's continuing commitment to openness and transparency in the research process, and in support of the government's developing agenda on open access to public data, the [NERC Data Policy](#) has been substantially revised, and this new version of NERC's Data Policy came into force

## Related links

» [NERC policies](#)

## External links

» [Environmental Information Regulations 2004](#)

» [INSPIRE Regulations 2009](#)

This page contains a downloadable file. Please visit our [plug-ins](#) page if you are having difficulty accessing the content.

# NERC Data Policy

## Key Principles

The environmental data produced by the activities funded by NERC are considered a public good and they will be made openly available for others to use. NERC is committed to supporting long-term environmental data management to enable continuing access to these data.

### NERC Data Policy Statement

NERC has a policy on data in order to:

- a. Ensure the continuing availability of environmental data of long-term value for research, teaching, and for wider exploitation for the public good, by individuals, government, business and other organisations.
- b. Support the integrity, transparency and openness of the research it supports.
- c. Help in the formal publication of data sets, as well as enabling the tracking of their usage to be tracked through citation and data licences.
- d. Meet relevant legislation and government guidance on the management and distribution of environmental information.

NERC defines **environmental data** as individual items or records (both digital and analogue) usually obtained by measurement, observation or modelling of the natural world and the impact of humans upon it. This includes data generated through complex systems, such as information retrieval algorithms, data assimilation techniques and the application of models.

This policy covers environmental data acquired, assembled or created through research, survey and monitoring activities that are either fully or partially funded by NERC. It also applies to environmental data managed by NERC where NERC was not the original funder. This policy does not cover NERC's **information products**\*.

This policy will be reviewed at regular intervals to ensure it keeps pace with scientific requirements and data management best practice.

#### Key principles

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NERC will supply the environmental data it holds for free, apart from a few special cases as detailed in the policy.

NERC requires that all environmental data of long-term value generated through NERC-funded activities must be submitted to NERC for long-term management and dissemination.

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# BENEFITS TO BGS SCIENTISTS



# Benefits to BGS Scientists

- Data is becoming a recognised output
- Easier access to other data
- Increased recognition
- Collaboration opportunities
- NGDC – supporting dataset publishing



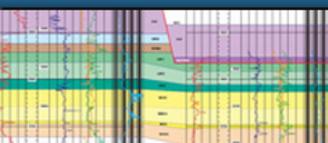
# Data is becoming a recognised output

- Emerging data journals
- Citations for datasets
- Digital object identifiers
- Website listings through DOI – ‘Landing Pages’
- Output and performance measures
- Associated with re-use and re-purposing of datasets



# Data Citations

Our data



Our products

Opengeoscience

National Geoscience Data Centre

NGDC index

Digital data

Earth Science Academic Archive

Materials collection

National Hydrocarbons Data Archive

Records and archives

Premium data services

## NGDC cited data

The rationale behind cited data:

- Get credit for your work
- Publish in data journals
- Show the value of your data
- Ensure your data will be available in future

There is increasing demand from the scientific community for a strong linkage between papers published in the scientific literature and the data upon which they are based and for a mechanism to reward data collection through citation.



## NGDC cited data catalogue

A list of all the formally cited datasets held by the NGDC showing the title, author(s) and the DOI which links to the landing page with metadata links and direct access to the data where appropriate.

- ➔ Citing datasets
- ➔ NGDC data citation process
- ➔ Data set standards
- ➔ Contacts



## Our services

- Enquiries
- Discovery metadata
- GeoIndex
- OpenGeoscience
- GeoRecords
- NORA

## See also

- NGDC cited data catalogue
- Making data a first class scientific output

## External links

- NERC Data Centres
- British Library
- DataCite
- NERC Data Policy
- BODC Published Data Library
- BADC data
- CEH Information Gateway

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# DOI – ‘Landing Page’

doi:10.5285/9df8df52-d6a5-37a8-e044-0003ba9b0d98

<http://www.bgs.ac.uk/services/NGDC/citedData/catalogue/9df8df52-d6a5-37a8-e044-0003ba9b0d98.html>

mobile site About us | Contact us | Downloads | Jobs | Shop  Search

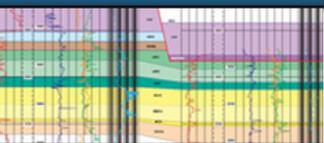
 **British Geological Survey**  
NATURAL ENVIRONMENT RESEARCH COUNCIL

*Geoscience for our changing Earth*

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Home » Our data » NGDC information & data » NGDC cited data » Cited data catalogue » DiGMapGB-625

**Our data**



Our products

- Opengeoscience
- National Geoscience Data Centre**
- NGDC index
- Digital data
- Earth Science Academic Archive
- Materials collection
- National Hydrocarbons Data Archive
- Records and archives
- Premium data services

## Digital Geological Map Data of Great Britain - 625k (DiGMapGB-625) Bedrock Version 5

Dataset title	Digital Geological Map Data of Great Britain - 625k (DiGMapGB-625) Bedrock Version 5
Dataset creators	British Geological Survey
Dataset theme	Geoscientific Information
Dataset abstract	The data shows bedrock polygons, dyke polygons and fault linear geological information, sourced from published BGS 1:625 000 scale Version 5 maps - Bedrock Geology UK South and Bedrock Geology UK North. The attributes and nomenclature match the printed maps. These V5 625k maps are based on DiGMapGB50 and DiGMapNI250 data using techniques of selection, generalisation and exaggeration. The geology is fitted to a relevant topographic base at the time of production. Full UK coverage is available. The data is available in vector format. BGS licensing terms and conditions apply to external use of the data.
Dataset content dates	1995
Dataset spatial coverage	United Kingdom
Dataset supply format	VECTOR - SHP, TAB, DGN Files
Dataset language	English-United Kingdom
Dataset discovery metadata record	Discovery Link to the dataset's BGS Discovery Metadata record. Also available as ISO19115/19139 XML.
Dataset publisher	British Geological Survey
Dataset publication	2008



**Our services**

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**See also**

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**External links**

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- Open Access
- Data Policy
- Published Data
- Information Gateway

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**News and apps**



**Tell us what you think**

[http://bgsintranet/docs/IMP/GuidelinesForScientists\\_v5\\_9May2012.pdf](http://bgsintranet/docs/IMP/GuidelinesForScientists_v5_9May2012.pdf)

Guidance document for NERC scientists wishing to have DOIs assigned to their datasets  
Version 5 – 9<sup>th</sup> May 2012

## Guidance document for NERC scientists wishing to have DOIs assigned to datasets

### Introduction:

NERC now has the ability to issue Digital Object Identifiers (DOIs<sup>1</sup>) to datasets held in its Environmental Data Centres. This is a result of collaboration between the NERC data centres, the British Library and DataCite.

This document takes the form of a set of questions and answers (with the data producers asking the questions), providing information for scientists wishing to have a DOI assigned to a dataset stored in any of the NERC environmental data centres (EDCs). Note that NERC will only mint DOIs for datasets stored in the EDCs

### Why should I get a DOI for my dataset and how does this benefit me?

The NERC EDCs are proposing dataset citation using DOIs as a method of obtaining academic credit for the work put into creating, managing and curating a dataset. With a formal citation and DOI, it becomes possible to piggy-back on existing methods for counting the impact of journal papers, providing an indication of how cited (and therefore how used) a dataset is.

# Easier access to other data

- More datasets will be made freely available which opens up research and collaboration opportunities.
- Easier discovery of datasets through the DOIs and associated 'Landing Pages'.
- These datasets will be easier to use and exploit for research.



# Increased recognition

- Datasets can now offer the same recognition opportunities as other publications.

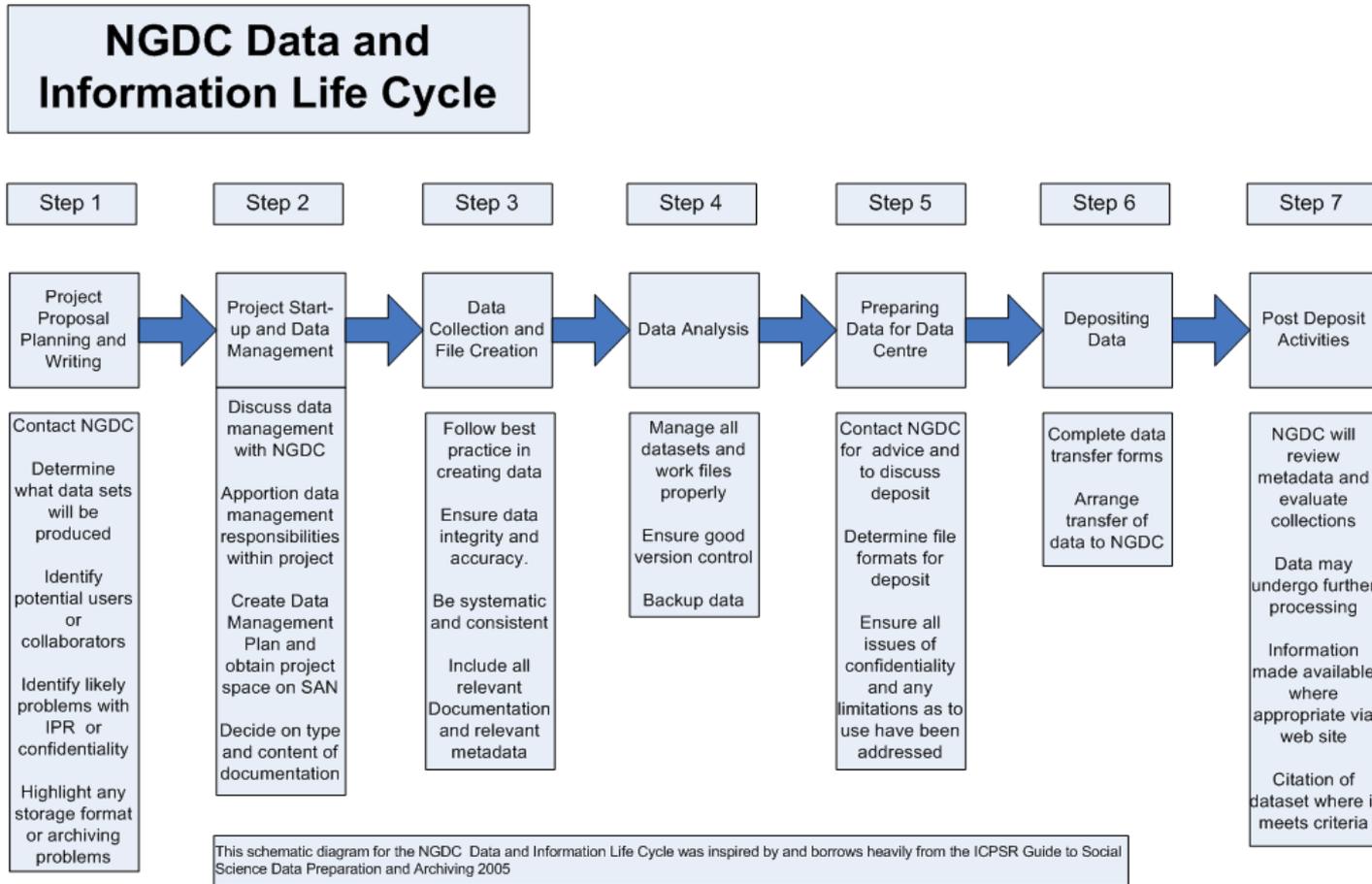


# Collaboration opportunities

- Opportunities to collaborate with other researchers creating similar datasets: creating national and regional datasets as subsequent joint publications.
- Opportunities to join teams building related datasets in other regions.



# NGDC – supporting dataset publishing





# RISKS FOR BGS SCIENTISTS



# Risks for BGS Scientists

- Two year embargo period
- Missed science opportunities
- Missed commercial opportunities



# Two year embargo period

To protect the research process NERC will allow those who undertake NERC-funded work a period to work exclusively on, and publish the results of, the data they have collected. This period will normally be a **maximum of two years from the end of data collection.**



## Access to data

It is NERC's policy that:

1. All the environmental data held by the NERC Environmental Data Centres will normally be made openly available to any person or any organisation who requests them.
2. The only restrictions on [access](#) which we will apply are those supported by the exceptions on disclosure in the Environmental Information Regulations (2004). If it is proposed to restrict access to any data we will explain why.
3. To protect the research process NERC will allow those who undertake NERC-funded work a period to work exclusively on, and publish the results of, the data they have collected. This period will normally be a maximum of two years from the end of data collection.
4. All data held by the NERC Environmental Data Centres will be supplied for free except for large or complex requests where we may charge the cost of supply, or where third-party licence conditions either prevent such free supply, or require us to make specific charges.
5. All environmental data made available by the NERC Environmental Data Centres will be accompanied by a data licence. Data originally provided to NERC by a third-party may have their own access and licence conditions which restrict how or when we can make data available to others, in which case our data licence conditions will reflect these.
6. All those who use data provided by NERC are required to acknowledge the source of the data.

# Missed science opportunities

- Others get great science out of data we collected but did not exploit.
- Loss of control
- Risk reputational loss

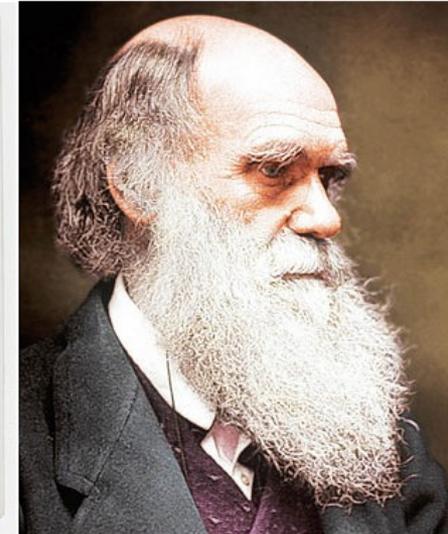
## The Telegraph

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### British scientists find 'lost' Charles Darwin fossils

British scientists have found scores of fossils the great evolutionary theorist Charles Darwin and his peers collected but that had been lost for more than 150 years.



One of the glass slides from the collection and Charles Darwin Photo: National News

7:41AM GMT 17 Jan 2012

42 Comments

Dr Howard Falcon-Lang, a paleontologist at Royal Holloway, University of London, said on Tuesday that he stumbled upon the glass slides containing the fossils in an old wooden cabinet that had been shoved in a "gloomy corner" of the massive, draughty British Geological Survey.

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# Missed commercial opportunities

- BGS creates commercial opportunities from the data we hold: e.g.
  - GeoSure dataset
  - GeoSure insurance product
- With more open raw data others create profitable products, consultancy services from 'our data'





# THE HELP

# Records

- Corporate Records Manager: Leilani Smith



- Records contacts and help:
- <http://bgsintranet/committees/dmps/records.html>



# Materials Collections

- Chief Curator Mike Howe:



- Materials Collections contacts and help:
- <http://bgsintranet/committees/dmps/collections.html>

# Who's Who

## Data Specialists

### Team Leader



**Linda Ault**  
Team Leader  
Keyworth  
Tel: KW ext: 3344

### Geophysics



**Richard Lockett**  
Edinburgh  
Tel: MH ext: 435

### Geology



**Tim McCormick**  
Keyworth  
Tel: KW ext: 4193

### Hydrogeology



**Andy McKenzie**  
Wallingford  
Tel: WL ext: 2295

### Geochemistry



**Susan Hobbs**  
Keyworth  
Tel: KW ext: 3579

### Marine Science



**Paul Henni**  
Edinburgh  
Tel: MH ext: 275

Contact these people for scientific and specialist data management advice; how to organise the storage of your project data

# Who's Who

## Records Management



**Leilani Smith**  
BGS Records  
Manager  
Keyworth  
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**Rod Bowie**  
BGS Records  
Manager  
Keyworth  
Tel: KW ext:3106



**Richard Gillanders**  
BGS Records  
Officer - NGRC (N)  
Edinburgh  
Tel: MH ext:307



# Who's Who

## Who are the Information Management SAN team?

### Team Leader



**Linda Ault**  
Team Leader  
Keyworth  
Tel: KW ext: 3344

### Guidance and Advice



**Susan Hobbs**  
Keyworth  
Tel: KW ext: 3579



**Charles Gowing**  
Keyworth  
Tel: KW ext: 3345



**Mary Mowat**  
Edinburgh  
Tel: MH ext: 280

Contact these people for general information about the SAN and Data Management Planning.  
They are responsible for the final authorisation of all Data Management Plans.

# Training available soon

## Your Data:

- Where to store it securely (and all about the SAN)
- What to do with it when your project ends
- How to advertise it
- Where the data applications are on the intranet
- How to get your data cited
- Ensuring data are reusable by others
- Document control – “Master Copies”
- Know your rights
- Who can help



# Questions



Quinag



Suilven



Loch Glencoul, thrust plane and Stac of Glencoul

Landscapes by Ben Peach (1842 – 1926)  
BGS Geologist

From the BGS Archives

