



UK- Environmental Observation Framework

Places to look for environmental data



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1. Introduction

There are many sources of environmental data and information funded and used by the UK. This document aims to list and describe major environmental and non-environmental datasets and sources of information which can be used to support environmental research and vice versa.

In this document you will find a list of sources of environmental datasets and other information types broken down by 'environmental domain' to help you find the sources of data you are looking for. The quick link list in Section 2 provides direct links and further information about the source is then given in Sections 3-5.

The suggestions in this document have been provided by members of the UK-EOF Data Advisory Group¹ and the document will be checked and updated periodically. It is accepted that this document is not exhaustive. Any comments or additional links can be sent to office@ukeof.org.uk.

[Datacite](#) is a global initiative that aims to establish easier access to research data on the internet and support data archiving for future reuse. Altogether these initiatives will help the UK and others increase the value of data through interoperability, data sharing and reuse.

¹ The UK-EOF Data Advisory Group brings together members of the UK data community to provide a neutral space to discuss and coordinate knowledge exchange between data and information initiatives.

2. Quick links

This crib sheet is intended to help locate and source datasets. This is not a definitive list but a collation of suggestions made by the data community through the UK-EOF Data Advisory Group. Any additional links can be sent to office@ukeof.org.uk to be added to the document.

Domain	Source
Large UK & EU public environmental data sources	UK public data (data.gov.uk) Scotland's environment Eurostat Office for National Statistics Publication Hub UK Data Service (UKDS)
Multi domain/funder sources	DataShare NERC Data Catalogue Service ECN Data Centre UK-EOF Environmental Observation Activity Catalogue Envirobase British Library
Agriculture, Farming and food	Attitudes to Genetically Modified Foods Genetically-modified (GM) Food Survey Farm Business Survey Foodbase
Atmosphere, weather and climate	British Atmospheric Data Centre (BADC) British Oceanographic Data Centre (BODC) DataPoint (Met Office) UK Climate and Weather Statistics EUMETSAT Data Access NOAA (USA)
Biodiversity	NBN Gateway NERC CEH Information Gateway EnvBase Data Catalogue Global Biodiversity Information Facility (GBIF)
Earth Observations (satellite data)	Group on Earth Observations (GEO) Centre for Environmental Data Archival (CEDA) NERC Earth Observation Data Centre (NEODC) NERC Earth Observation data Acquisition and Analysis Service (NEODAS) European Space Agency (ESA) NASA Climate and Environmental Monitoring from Spaces (CEMS)
Earth science	Scientific Earth Drilling Information System (SEDIS) BGS National Geoscience Data Centre (NGDC) Publishing Network for Geoscientific and Environmental data (PANGAEA)
Energy	Energy Technologies Institute UK Energy Research Centre

Freshwater	<u>Nation River Flow Archive (NFRA)</u> <u>NERC CEH Information Gateway</u>
Geospatial	<u>GoGeo portal</u> <u>ShareGeo Open</u>
Health and biomedical	<u>NHS Information Centre</u> <u>Public Health Statistics</u> <u>Small Area Health Statistics</u> <u>Hospital Episode Statistics (HES) Online</u> <u>Committee on the Medical Effects of Air Pollution (COMEAP)</u> <u>Association of Public Health Observatories</u> <u>Global Disease Atlas</u> <u>National Diet and Nutrition survey</u> <u>Public Understanding of Genomics and the Dynamics of Opinion change</u> <u>UK PubMed Central</u>
Housing and Planning	<u>Housing Statistics</u> <u>Tax information (HM Revenue and Customs)</u> <u>House Price Index</u> <u>Planning Application Statistics</u> <u>Neighbourhoods and Regeneration</u>
Marine	<u>Marine Environmental Data and Information network (MEDIN)</u> <u>UK Directory of Marine Observing Systems (UKDMOS)</u> <u>British Oceanographic Data Centre (BODC)</u>
Polar	<u>Polar Data Centre</u>
Solar system	<u>UK Solar System Data Centre (UKSSDC)</u>
Social and economic	<u>UK Data Service (UKDS)</u> <u>Office for National Statistics Publication Hub</u> <u>Archaeology Data service</u> <u>Consumer Price Indices</u> <u>Department of transport</u> <u>Global Disease Atlas</u> <u>Trade and Exports</u> <u>Work and Pensions Longitudinal Study</u>
Waste	<u>SCPinfonet</u> <u>Wastenet</u>

*Every effort will be made to check web links are working correctly. If you find a broken link please report it to the site owner and the secretariat.

3. Large UK & EU public environmental data sources

Data gov.uk Data published by UK government can be found on data.gov.uk. This includes administrative datasets, statistics, environmental data etc. as well as the spatial data published under the INSPIRE directive.

Scotland's environment <http://www.environment.scotland.gov.uk> brings together information on Scotland's environment.

Eurostat provided EU statistics which are also useful to UK data users. General European statistics for example, economy/finance; population and social conditions; industry, trade and services; agriculture and fisheries; external trade; transport; environment and energy; science and technology can be accessed through Eurostat, <http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home>.

Office for National Statistics (ONS) Publication Hub

<http://www.statistics.gov.uk/hub/index.html> is a searchable knowledge discovery tool for those looking for the latest statistics from UK government departments and first releases of National Statistics – data holdings range from Agriculture to Construction, price of materials, Employment, Crime or Travel and Transport.

UK Data Service (UKDS) <http://www.thedataservice.org.uk/> holds data previously maintained in the **UK Data Archive** and the **Economic and Social Data Service**. The UKDS an extensive range of key economic and social data including data on the economy, environment, health, labour market, population, society, travel and tourism and Census information. The UKDS is a national data service.

4. Multi domain/funder sources (research and observations)

DataShare <http://www.geostore.com/environment-agency/> makes environmental information available to inform decision making. DataShare holds freely available information from Defra, Environment Agency, Forestry Commission, Natural England, English Heritage, The UK Hydrographic Office and the Canal and River Trust.

NERC Data Catalogue Service <http://data-search.nerc.ac.uk/> provides metadata to discover long term datasets from across the NERC research centres covering a wide scope of environmental domains. The data can be stored at the data centres which can be accessed from the DCS.

Environmental Observation Activity Catalogue www.ukeof.org.uk is managed by the UK Environmental Observation Framework (UK-EOF) on behalf of UK public funders of environmental observations. The catalogue stores metadata to allow users to find information on who is collecting what, where and why. This covers over 1200 environmental observation programmes and activities and is currently improving facilities to point to the datasets.

ECN Data Centre <http://www.ecn.ac.uk/> holds data collected from the UK Environmental Change Network monitoring programme on air, soils, water and a range of animals and plants to detect changes in the UK.

Envirobase <http://www.envirobase.info/index.aspx> holds information on over 22,000 environmental research and observation activities, programmes and data sources provided by UK public sector funders and voluntary organisations. It is a public

resource from the Living With Environmental Change partnership. Note the observation programmes are primarily a duplicate of the UK-EOF catalogue.

British Library <http://www.bl.uk/science> is one of the world's foremost resources for scientific, technical and medical (STM) information. The BL are currently building a new portal, 'Envia' which will allow researchers and practitioners to discover and access government reports, journal articles, PhD theses and more.

5. Datasets by environmental domain

a. Agriculture, farming and food

Economic and Social Data Service

<http://www.esds.ac.uk/findingData/snDescription.asp?sn=6616> carry out attitudes to genetically modified foods and food surveys

<http://www.esds.ac.uk/findingData/snDescription.asp?sn=5027>

Farm Business Survey <http://www.farmbusinesssurvey.co.uk/index.html> provides information about the physical and economic performance of farms in England.

Foodbase <http://www.foodbase.org.uk/search.php> is the Food Standards Agency's open access repository for scientific results.

b. Atmosphere, weather and climate

British Atmospheric Data Centre (BADC) - <http://badc.nerc.ac.uk/home/index.html> is the NERC designated data centre for atmospheric sciences.

NERC British Oceanographic Data Centre (BODC)

https://www.bodc.ac.uk/data/online_delivery/ is a national facility for looking after and distributing data concerning the marine environment. These data include biological, chemical, physical and geophysical data sets. BODC has an online data delivery service at

https://www.bodc.ac.uk/data/where_to_find_data/ where users can directly access marine data sets from the National Oceanographic Database. Other data and information can be discovered through catalogues and inventories and can be requested via an enquiries officer.

DataPoint - <http://www.metoffice.gov.uk/datapoint> provides access to freely available data collected by the Met Office.

UK Climate and Weather Statistics

<http://www.metoffice.gov.uk/weather/uk/climate.html> are also held by the Met office and are summarised into useful figures and charts.

EUMETSAT <http://www.eumetsat.int/Home/Main/DataAccess/index.htm> plays an important role in retransmission of a variety of weather and climate data as well as satellite data, meteorological products and environmental data from other satellites.

NOAA (USA) <http://www.class.ncdc.noaa.gov/saa/products/catSearch> also provides meteorological data.

c. Biodiversity

NBN Gateway <http://data.nbn.org.uk/> acts as a “data warehouse” for biodiversity information, which can be quickly and easily accessed to understand the distribution of particular species in the UK. Individual records, covering plants, mammals, birds and invertebrates, are stored on the NBN Gateway and these can then be displayed on a map of the UK in a number of different ways.

NERC CEH Information Gateway <https://gateway.ceh.ac.uk/home> provides researchers and the wider public with access to a wide range of environmental data including data on terrestrial biodiversity. The gateway is run by NERC Environmental Information Data Centre (EIDC).

EnvBase Data Catalogue <http://nebc.nerc.ac.uk/> stores environmental 'omics data deposited through the NERC Environmental Bioinformatics Centre.

Global Biodiversity Information Facility (GBIF) has a mission <http://www.gbif.org> is to make the world's biodiversity data freely and universally available via the Internet. As a megascience initiative, GBIF aims to provide an essential global informatics infrastructure for biodiversity research and applications worldwide. Current holdings are 367,390,218 indexed records, 8,872 datasets, and 406 publishers including the UK.

Postcode plants database (Natural History Museum) <http://www.nhm.ac.uk/nature-online/life/plants-fungi/postcode-plants/index.html> provides a search facility to generate local lists of UK plants and/or animals.

ECN Data Centre (see Section 4).

d. Earth observation (satellite data)

GEO http://www.geoportal.org/web/quest/geo_about The GEO portal provides an entry point to access Earth Observation information and services and signposts to many data sources. It connects to a system of existing portals, addressing the GEO Societal Benefit Areas globally while also providing national and regional information to enhance understanding. It was developed by the European Space Agency (ESA) in collaboration with the Food and Agriculture Organization of the United Nations (FAO) as contribution to Global Earth Observation System of Systems (GEOSS). It is now the official GEO Web Portal and constitutes a main access point to worldwide information on Earth Observation capabilities and services including the ones proposed and implemented in the framework of GEO activities.

Centre for Environmental Data Archival (CEDA) <http://www.ceda.ac.uk/> provides access to atmospheric, EO, solar system and climate change data.

NERC Earth Observation Data Centre (NEODC) provides optical satellite data covering the UK which can also be accessed from the **NERC Earth Observation data Acquisition and Analysis Service (NEODAS)** <http://www.neodaas.ac.uk/>.

European Space Agency (ESA) <http://www.esa.int/esaCP/index.html> hosts an on-line archive which gives access to a wide range of data from the various ESA EO missions, including Envisat and ERS and data from Third Party Missions. For a list of what is available and how to access it see <https://earth.esa.int/web/quest/data-access/how-to-access-eo-data/earth-observation-data-distributed-by-esa>

NASA satellites provide global data and are usually freely available (<http://eospsso.gsfc.nasa.gov/>). Hundreds of datasets are available ranging from raw images to high level products.

Climate and Environmental Monitoring from Space (CEMS) <http://isic-space.com/cems/climate-and-environmental-monitoring-from-space/cems-data/> is a purpose-built facility which from late 2012 offer space-based Climate Change and Earth Observation (EO) data and services.

British Atmospheric Data Centre (BADC) see section on Atmosphere, weather and climate.

There are also **commercial satellite operators** in the UK and globally who will licence data e.g. UK [Astrium Geo-Information Services](#) provide data from amongst others SPOT, TerraSAR-X, DEIMOS and TanDEM-X.

e. Earth science

Scientific Earth Drilling Information System (SEDIS) <http://www.iodp.org/access-data-and-samples> is an integrated data and publications portal maintained by the Integrated Ocean Drilling Program (IODP). It provides access to post-moratorium data and metadata from IODP and other legacy programmes. There is also access to publications metadata and open literature in this field.

National Geoscience Data Centre (NGCD) <http://www.bgs.ac.uk/services/ngdc/home.html> hosted by NERC British Geological Survey (BGS) holds over 400 datasets including environmental monitoring data, digital databases, physical collections, records and archives.

Publishing Network for Geoscientific and Environmental Data (PANGAEA) <http://www.pangaea.de/> is a source of earth and environmental science datasets and publications including water, sediment, ice and atmosphere data from across the globe.

f. Energy

Energy Technologies Institute <http://www.energytechnologies.co.uk/Home.aspx> is a UK based company formed from global industries and the UK Government, who together carry out projects to inform the creation of secure low-carbon energy systems (for heat, power and transport) from 2020 to 2050. Some of the developing energy technology work is being carried out through scoping projects and R&D.

UK Energy Research Centre (UKERC) http://ukerc.rl.ac.uk/UCAT/cgi-bin/ucate_query.pl hosts a catalogue of publications including journal articles, research reports and workshop reports which have been funded by UKERC. UKERC carries out research into sustainable future energy systems.

g. Freshwater

National River Flow Archive (NRFA) <http://www.ceh.ac.uk/data/nrfa/> is the UK's focal point for river flow data.

NERC CEH Information Gateway <https://gateway.ceh.ac.uk/home> provides researchers and the wider public with access to a wide range of environmental data

including freshwater. The gateway is run by NERC Environmental Information Data Centre (EIDC).

h. Geospatial

GoGeo portal <http://www.gogeo.ac.uk> enables users to discover data, geospatial services and resources (books, journals, news item, learning materials), learn about geospatial metadata and create and publish standards-compliant geospatial metadata on GoGeo. The portal is aimed at those in education and research. GoGeo provides a search interface which allows users to find metadata records published on the GoGeo catalogue as well as records published on numerous national geospatial catalogues across the UK and the EU.

ShareGeo Open <http://www.sharegeo.ac.uk/> provides UK HEFE with an infrastructure for sharing and reusing derived geospatial data. The DSpace repository meets the needs of those searching for open spatial and environmental data by offering search by geography as well as by keyword. It also offers an enhanced deposit process by automatically extracting the geographic extent of the dataset being deposited.

i. Health and medical

Human Health may be useful when looking for environmental links to health issues. This list has been suggested by delegates during a UK-EOF workshop and overview project to look at social and economic datasets with relevant environmental aspects.

NHS Information Centre <http://www.ic.nhs.uk/about-us> is an authoritative source of health and social care information for decision makers.

Public Health Statistics

<http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/StatisticalWorkAreas/Statisticalpublichealth/index.htm>

Small Area Health Statistics <http://www.sahsu.org/index.php>

Hospital Episode Statistics (HES)

<http://www.hesonline.nhs.uk/Ease/servlet/ContentServer?siteID=1937>

Committee on the Medical Effects of Air Pollution (COMEAP)

<http://www.comeap.org.uk/>

Association of Public Health Observatories <http://www.apho.org.uk/>

Global Disease Atlas <http://apps.who.int/globalatlas/> gives access to the disease data.

National Diet and Nutrition survey

<http://www.food.gov.uk/science/dietarysurveys/ndnsdocuments/>

Public Understanding of Genomics and the Dynamics of Opinion change: a Panel Study, 2003-2004 (NATCEN, BMRB)

<http://www.esds.ac.uk/findingData/snDescription.asp?sn=5147>

UK PubMed Central (UKPMC) <http://ukpmc.ac.uk/> is an archive of life sciences journal literature.

j. Housing and planning

Housing Statistics

<http://www.communities.gov.uk/housing/housingresearch/housingstatistics/>

Tax information (HM Revenue and Customs)

<http://www.hmrc.gov.uk/thelibrary/national-statistics.htm>

House Price Index <http://www.landregistry.gov.uk/>

Planning Application Statistics

<http://www.communities.gov.uk/planningandbuilding/planningbuilding/planningstatistics/statisticsplanning/>

Neighbourhoods and Regeneration <http://www.data4nr.net/introduction/> for the identification and signposting of datasets available for targeting, monitoring, priority setting and performance management at a neighbourhood level.

k. Marine

Marine Environmental Data and Information Network (MEDIN) promote sharing of, and improved access to, marine data. It is an open partnership and its partners represent government departments, research institutions and private companies. MEDIN are delivering data through a network of accredited Data Archive Centres (DACs). The network is there to provide secure long-term storage of and access to marine data. The MEDIN website is at <http://www.oceannet.org> and marine data sets can be discovered at <http://portal.oceannet.org/search/full>.

UK Directory of Marine Observing Systems (UKDMOS) <http://www.ukdmos.org/> provides a new internet based tool for searching monitoring programmes with the aim of providing information to coordinate metadata across different organisations. As such UKDMOS contains metadata on parameter groups measured, frequency, start dates and other fields which can be searched spatially using GIS. UKDMOS is for the wide marine community and specifically a key output of the [UK Marine Monitoring and Assessment Strategy](#) (UKMMAS).

NERC British Oceanographic Data Centre (BODC)

https://www.bodc.ac.uk/data/online_delivery/ is a national facility for looking after and distributing data concerning the marine environment. These data include biological, chemical, physical and geophysical data sets. BODC has an online data delivery service at https://www.bodc.ac.uk/data/where_to_find_data/ where users can directly access marine data sets from the National Oceanographic Database. Other data and information can be discovered through catalogues and inventories and can be requested via an enquiries officer.

The UK Archive for Marine Species and Habitats Data (DASSH) www.dassh.ac.uk provides a focal point for access to marine biodiversity data within the UK. DASSH delivers MEDIN and Government data requirements and associated services for the biodiversity community. In addition DASSH provides a service to the data providers, acting as a custodian and ensuring data are archived in line with international best practice and current standards. DASSH acts as the marine node to the National Biodiversity Network.

l. Polar

NERC Polar Data Centre (PDC)

http://www.antarctica.ac.uk/about_bas/our_organisation/eid/pdc/index.php collate and coordinates data management for scientific research carried out in the Polar Regions.

m. Solar system

UK Solar System Data Centre (UKSSDC) http://www.ukssdc.ac.uk/data_menu.html

supports data archives for the whole UK solar system community encompassing solar, inter-planetary, magnetospheric, ionospheric and geomagnetic science. It is funded by NERC and STFC.

n. Social and economic

The main sources of a range of social, economic and environmental data/information include:

UK Data Service (UKDS) <http://www.thedataservice.org.uk/> holds data previously maintained in the **UK Data Archive** and the **Economic and Social Data Service**. Also see section 3.

Office of National Statistics (ONS) Publication Hub

<http://www.statistics.gov.uk/hub/index.html> is a searchable knowledge discovery tool for those looking for the latest statistics from UK government departments and first releases of National Statistics – also see section 3.

Archaeology Data Service

<http://archaeologydataservice.ac.uk/archsearch/browser.jsf> has access to environmental intervention resources as well as many social, historical and geophysical resources.

Consumer Price Indices <http://www.statistics.gov.uk/statbase/product.asp?vlnk=868>

Department for transport <http://www.dft.gov.uk/rmd/search.asp>

Trade and Exports

<http://customs.hmrc.gov.uk/channelsPortalWebApp/channelsPortalWebApp.portal?nfpb=true&pageLabel=pageImportTradeStats> information and statistics collected by HM Revenue and Customs.

Work and Pensions Longitudinal Study

http://statistics.dwp.gov.uk/asd/longitudinal_study/index.php?page=ic_longitudinal_study which links benefit and programme information held by DWP, with employment records from HM Revenue and Customs (HMRC).

o. Waste

SCPinfonet <http://scpinfonet.defra.gov.uk/> is a database comprised of Sustainable Consumption and Production subject relevant web items (pdf (portable document format), .doc, html files) which are hosted on organizational websites and databases.

Wastenet <http://wastenet.defra.gov.uk/About.aspx> is an online resource for the research community, providing access to relevant information about waste and resources research. The Wastenet concept was developed during 2000/2001 with Landfill Tax Credit Scheme funding donated through the Environmental Services Association Research Trust, ESART.