

Beaufort Regional Environmental Assessment (BREA)

Data and Information Management Policy

Adopted in large part from the ArcticNet Data Policy and the Canadian IPY 2007-2008 data policy.

INTRODUCTION

Purpose

The Data and Information Management Policy was developed to promote BREA data accessibility to stakeholders.

BREA

The Beaufort Regional Environmental Assessment (BREA) is a multi-stakeholder initiative that is sponsoring regional environmental and socio-economic research from 2011 - 2015. It will make historical information available and gather new information vital to the future management of the Beaufort Sea. The BREA will help ensure governments, Inuvialuit, co-management boards, and industry are better prepared for oil and gas exploration and development in the offshore by addressing regionally-relevant environmental and socio-economic information gaps that will inform regulatory processes and project-specific environmental assessments related to oil and gas activity in the Beaufort Basin. This will be achieved primarily through the implementation of a targeted research program that supports planning and regulatory decision-making. Working groups are addressing key issues in the Beaufort Sea including cumulative effects assessment, information management, regional waste management, oil spill preparedness and response, socio-economic indicators, and climate change.

BREA website (BeaufortREA.ca)

The BREA website is designed as an information portal to access data, metadata, and reports as well as provide access to other sources of information on the Beaufort Sea that is relevant to oil and gas development. The site will provide linkages to data and metadata and will store BREA reports and photos as appropriate.

The website will be a single point of access, including:

- A portal to access data and information supported through BREA;
- Linkages to products of the BREA working groups;
- Access/Linkages to existing external, pertinent information, projects, tools ;
- Linkages to historical information on the Beaufort and ongoing work with the Beaufort Sea Partnership;
- Communication on BREA news and events

BREA Investigators must follow the policies set out in this document. Failure to comply may affect project funding.

OBJECTIVES

The purpose of the data and information policy is to ensure that data and information produced as part of BREA are accessible to stakeholders. The data policy will:

- Facilitate the discovery of and access to project descriptions, metadata, data, information (reports, publications, presentations, etc) and decision support tools.
- Create linkages and synergies with other data management systems (ArcticNet, Polar Data Catalogue, International Polar Year (IPY))
- Provide provisions for open, accessible and stable long term storage of data and information at a single source

PRINCIPLES

The following principles will be adhered to in addressing the BREA data and information policy objectives:

- Encourage excellence in data collection, management and accessibility
- Use existing knowledge and infrastructure, wherever appropriate
- Promote wide and easily accessible databases to a variety of users
- Support the long term preservation of BREA data sets
- Strengthen linkages to related data management processes (especially those implemented by International Polar Year and ArcticNet)
- Respect confidentiality requirements and researcher rights to publication
- Recognize and protect privacy/confidentiality requirements for human health and sociological studies, data and information.

DATA AND INFORMATION FRAMEWORK

The Data and Information Framework outlines the types of data and information that will be generated through BREA (see Figure 1 and Table 1). Data and information will be generated by both research and working group projects. Each project will have a description and metadata associated. BREA products may consist of Data, Information, or Decision Support Tools. All three products will have associated metadata that will be stored and archived appropriately to ensure that they are accessible.

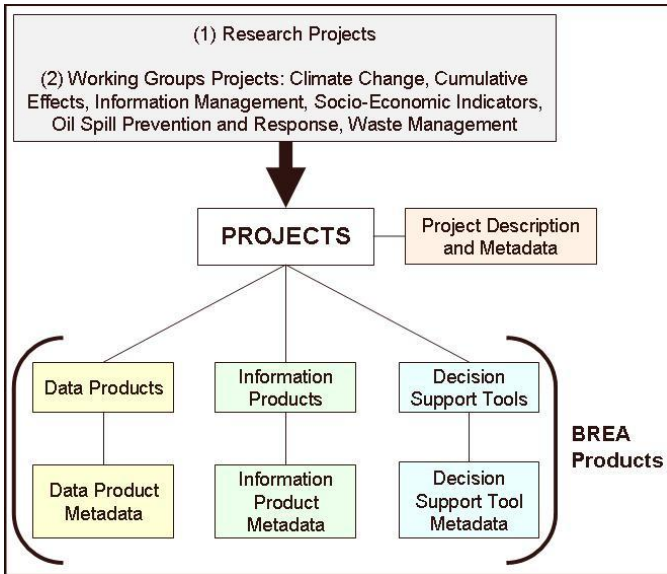


Figure 1. Data and Information Framework.

Table 1. Definition, responsibilities, storage location, and the intended/expected audience for each type of data, information or tool that will be generated as part of BREA.

Project Output	Definition	Responsibility	Location	Audience
PROJECT DESCRIPTION	A plain language description of the project which includes a description of the science question, the location, the objective, and brief explanation on contribution to regulatory efficiency.	Principal Investigator	Stored on BREA website	General/Informed Public Regulators Co-management Boards Expert Departments Industry Northerners Academia
PROJECT METADATA	Description of the project with information in the following categories: Citation information, project description, temporal coverage, project status, special information, keywords, and contract information.	Principal Investigator	Stored on Polar Data Catalogue	Informed Public Regulators Co-management Boards Industry Academia
DATA PRODUCTS	Data that is collected as part of the project. (eg. Databases, georeferenced data files)	Principal Investigator	Stored on Polar Data Catalogue*	Industry Academia
DATA PRODUCT METADATA	Details of the data product.	Principal Investigator	Stored on Polar Data Catalogue	Industry Academia
INFORMATION PRODUCTS	All forms of publications and presentations that result from data collected as part of the project. (eg. Reports, Journal Articles, Conference presentations)	Principal Investigator	Stored on the BREA website*	Informed Public Regulators Co-management Boards Industry Academia

INFORMATION PRODUCT METADATA	Details on the information product including date, authors, short description/abstract, full citation	Principal Investigator	Indexed on Hydrocarbon Impacts database	Informed Public Regulators Co-management Boards Industry Academia
DECISION SUPPORT TOOLS (DST)	Geo-referenced databases or information that use tools to collate and/or display data and information. (Eg. The Petroleum and Environment Management Tool)	Principal Investigator, AANDC	Stored on originator's website.	Regulators Co-management Boards
DST METADATA	Description of the decision support tool such as date, authors, location, origin	Principal Investigator, AANDC	Stored on originator's website.	Regulators Co-management Boards

* The master copy of data or information may be stored in an alternate location in cases where the project lead has established data and information storage protocols within their organization and if approved by the Information Management working group. The proposed storage location must be stable and provide long term archiving support. In the case of data, a copy must be submitted to the Polar Data Catalogue. In the case of information, a copy must be submitted to the BREA project management office.

DEFINITIONS

Project Output	Definition
METADATA	BREA metadata describe the projects that are undertaken and products that are produced as part of BREA.
DATA	BREA data are those data collected and generated by BREA-funded projects from 2011 to 2015.
INFORMATION	BREA information include grey literature and peer reviewed work (eg. reports, journal articles, presentations, posters) that are generated by the Primary Investigators or partners, using data collected or generated by BREA-funded projects.
POLAR DATA CATALOGUE	The Polar Data Catalogue is a database of metadata and data that describes, indexes and provides access to diverse data sets generated by Arctic and Antarctic researchers. The records use the Federal Geographic Data Committee (FGDC) standard format to allow metadata compatibility with other centers. [www.polardata.ca]
BREA WEBSITE	The BREA website is a one-stop-shop for information about the Beaufort Regional Environmental Assessment [http://www.BeaufortREA.ca]
HYDROCARBON IMPACTS DATABASE	HI Database is a website that lets you search the Hydrocarbon Impacts (HI) database, which describes 7800 publications and research projects about the environmental impacts, socio-economic effects and regulation of hydrocarbon exploration, development and transportation in northern Canada. [http://www.aina.ucalgary.ca/hi/]

RESPONSIBILITIES

All data, metadata, or information collected as part of BREA should be publicly accessible. Exceptions to this policy will be made on a case by case basis, e.g., proprietary data or data related to confidential data or information arising from human health or socio-economic studies. It is the responsibility of the Principal Investigators to ensure that all data, metadata, and information are stored and archived appropriately following the provisions set forth in this policy.

All BREA Principal Investigators must promptly provide:

- Metadata for all projects and subprojects that benefit from BREA, including those that are partially funded by BREA.
- Data for all projects and subprojects that benefit from BREA, including those that are partially funded by BREA.
- Information generated as part of all projects and subprojects that benefit from BREA, including those that are partially funded by BREA. The Principal Investigators may make arrangements for storing information on the BREA website if there are no alternate plans for the information's electronic storage.

Principal Investigators must provide to the BREA Project Management Office:

- A 250-500 word plain language summary of their research project for the BREA website
- Confirmation that project metadata was uploaded to the Polar Data Catalogue (PDC)
- Confirmation that data and associated metadata have been uploaded to the PDC
- Electronic copies of reports, publications, or presentations that result from BREA work
- Confirmation that information products have been uploaded to the PDC
- Web links to products that result from BREA work that are posted elsewhere on the internet, for example, conference proceedings or peer reviewed journal articles.

The BREA Project Management office will:

- Encourage full, free and open access to BREA data in collaboration with the Polar Data Catalogue and the Hydrocarbon Impacts Database
- Make BREA data and information available through the BREA website

HOSTING

Metadata

BREA metadata will be made available to the public and stored in the Polar Data Catalogue. Instructions on creating metadata in the Polar Data Catalogue (PDC) can be downloaded at: https://www.polardata.ca/pdc/public/PDC_Instructions_for_Creating_Metadata.pdf

Entry of metadata into the Polar Data Catalogue is made by the Principal Investigators, or by research team members assigned the responsibility by the Principal Investigator. The entries are editable by the Principal Investigator (via password protected access). It is the responsibility of each investigator to ensure the quality and accuracy of the data, and the completeness of the metadata entry to allow understanding of the nature and limitations of the data.

All metadata are accessible to the general public immediately after entry into the Polar Data Catalogue.

Data

Data collected through BREA are to be made fully, freely and openly accessible to the public upon the completion of projects.

The availability of data after its release into the public domain will be determined by the BREA Project Management Office in agreement with the data service provider. Data availability will be based upon an agreement that may include obligation by the users to contact the relevant data supplier before using the data and obligation to acknowledge the data supplier and the BREA program in any publication using these data (see the Acknowledgement section below). Various security levels can be programmed via password protection, according to dataset requirements.

Exceptions to this policy of full, free, and open access are:

- Where human subjects are involved, privacy and confidentiality must be protected. Access to personal information and human biological samples may be provided in accordance with applicable legislation, regulations, ethics approvals and policies;
- where local and traditional knowledge is concerned, rights of the knowledge holders shall not be compromised;
- where data release may cause harm, specific aspects of the data may need to be kept protected (for example, locations of nests of endangered birds or locations of sacred sites); and
- where pre-existing data are subject to access restrictions.

The International Council for Science (ICSU) 2004 defines “Full and open access” as equitable, non-discriminatory access to all data preferably free of cost, although some reasonable cost-recovery for distribution of the data is acceptable. The World Meteorological Organisation (WMO) Resolution 40 uses the term “Free and unrestricted” and defines this as a non-discriminatory and without charge. “Without charge”, in the context of this resolution, means a charge that is no more than the cost of reproduction and delivery and without charge for the data and products themselves.

Read about guidelines to facilitate effective data management in the Polar Data Catalogue’s Best Practices document: https://www.polardata.ca/pdc/public/PDC_Best_Practices_FULLL.pdf

Information

Information generated as part of a BREA project will be uploaded to the Polar Data Catalogue (PDC) by the Principal Investigator and linked to the BREA website by the BREA Project Management Office (PMO). Principal Investigators must contact the PMO to notify them that information has been uploaded to the PDC. Should information be posted on an internet site (such as conference proceedings or peer reviewed journal articles) the Principal Investigator must notify the PMO that such information is available so that it may be linked on the BREA website. All notifications to the PMO should be made as soon as practicably possible.

Reports and publications will be indexed on the Hydrocarbon Impact database, hosted by the Arctic Institute of North America.

ARCHIVING

BREA data and information will be permanently archived using existing architecture that is maintained by libraries at the University of Toronto and University of Alberta and is linked to the Polar Data Catalogue.

AUTHORSHIP AND PUBLICATIONS

Obligations of those holding data

In presentations and publications of results supported partially or fully by BREA, the author(s) shall acknowledge his or her participation in BREA.

Privacy Policy

The ArcticNet Privacy Policy (<http://polardata.ca/pdc/public/privacypolicy.ccin>) applies to BREA data and information that is stored in the Polar Data Catalogue.

Data Acknowledgement

The users of BREA data must formally acknowledge data originators, contributors, and sources. Whenever possible, this acknowledgment should be in the form of a formal citation, such as when citing a book or journal article. Where formal citation is not possible, such as with social science data, ethical policies for data collection and data use are recommended. Such models are available in Article 8(j) of the 1992 Convention on Biological Diversity.

CONFIDENTIALITY

Please notify the BREA Project Management Office of confidentiality issues; they will be dealt with on a case by case basis.

Contact Information

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