Marine Institute

Data Policy

Revision History

Date of this revision: 13th June 2017	**Date of next review: 13th June 2018**

Version Number / Revision Number	Revision Date	Summary of Changes
1.0	13-Jun-2017	Approved docuemtn

This policy shall be reviewed and updated on an annual basis.

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1 Purpose

The purpose of this policy is to state the requirements for responsible and appropriate use of the Marine Institute's data and information resources.

The Marine Institute's Vision is "A thriving maritime economy in harmony with the ecosystem" which is supported by the delivery of excellence in our services. To achieve this vision requires high-quality data and service delivery, which this document supports by providing a clear policy for how Marine Institute data should be managed and made available.

This policy defines certain mandatory elements that **must be** followed, because there is either a legal requirement to do so or because they have been identified as high priority activities, and also some elements that **should be** followed, which aren't legally required but are best practices where practical.

2 Supporting Strategies, Policies, Standards & Procedures

This document supports Marine Institute Data Strategy Objectives 1 and 2 which aim to have a clear policy that "*makes it clear how data should be managed*" and "*to ensure that MI data are categorised and handled appropriately*". Appendix II gives an overview of the Data Strategy and a full list of its objectives.

This policy also supports a number of other Marine Institute policies and guidelines including

1. Acceptable Usage Policy
2. Third-party Outsourcing Management Policy
3. Information Security Standards
4. End User Guidelines
5. Social Media Guidelines

TABLE 1 - MARINE INSTITUTE ICT DOCUMENTATION FRAMEWORK

<table>
<tr><th>Key Principles</th><th>Confidentiality</th><th>Integrity</th><th>Availability</th><th>Appropriateness</th></tr>
<tr><td>Policy Layers</td><td colspan="4">>>>>>>>>> Data Policy <<<<<<<<<<
Data Protection Acceptable Usage
Third Party Outsourcing Management</td></tr>
<tr><td>Standards Layer</td><td>Password Standards</td><td>Technical Standards</td><td>Anti-Virus Standards</td><td rowspan="2">Social Media Guidelines
End User Guidelines
(including portable device Guidelines)</td></tr>
<tr><td>Procedural Layer</td><td>User Administration
Physical Access</td><td>Change Management</td><td>Data Backup
Disaster Recovery
Incident Handling</td></tr>
<tr><td colspan="5">Physical and Logical Layers</td></tr>
</table>

3 Roles & Responsibilities

The following roles and responsibilities apply in relation to this Policy:

Role	Responsibility
Board and Executive	**Approve** this policy.
Data Strategy Steering & Technical Working Groups	**Define** the Data Policy.
Data Coordinators	**Ensure** the Data Policy is clearly understood and followed within service areas.
Data Stewards / Database Administrators	**Apply** the Data Policy to the specific datasets under their care.
Line managers	**Ensure** staff are aware of the Data Policy and adhere to it.
Data Analysts / All Data Users	**Adhere** to this Data Policy and other MI policies.

4 Scope

This policy covers all digital data, both corporate and scientific or environmental, generated and/or held by the Marine Institute. The policy applies to everyone working in Marine Institute, across all locations including full and part time employees, contractors, consultants and business partners.

In this policy the term “All users” refers to all types of users as listed above.

5 Review Period

This policy will be reviewed at least annually by the MI Data Strategy Steering Group or their nominated representatives - it can be reviewed more often than that if events or changes to legislation require it.

6 Data Policy Principles

This policy is based on a number of principles including the following:

1. The Marine Institute’s data holdings are public assets often with significant intrinsic value;
2. In accordance with Government Open Data Policy Marine Institute data will by default be made available for reuse unless restricted by classification (as described in Section 10);
3. Effective data management promotes efficient and effective use of resources and can increase the quality and impact of scientific processes, including through more effective collaboration;
4. High-quality scientific services are based on well-developed data processes and systems;
5. Data governance is critical to information security and the appropriate handling of data. This is dependent on criteria such as sensitivity, ownership or legislative responsibility e.g. Data Protection, FOI, Access to Environmental Information regulations, INSPIRE, Open Data policy.

7 Data Expertise Development

In fulfilment of Objective 4 of the Marine Institute Data Strategy “*Data and information management expertise, processes and supporting tools are continually developed*” the Marine Institute has an active

Data Expertise Development programme to ensure staff are aware of legislative requirements such as Data Protection, and to enable them to maximise the value of Institute data holdings.

The Data Expertise Development programme includes compliance elements that are mandatory for all staff working with data in the Marine Institute.

8 Categories of Data Holdings

How Marine Institute scientific and environmental data are handled and made available for reuse varies depending on the data categorisation. All data owned or held by the Marine Institute **must be** clearly categorised in accordance with this policy and handled in a manner appropriate to that categorisation.

A dataset can be in multiple categories e.g. "*Data owned by the MI*", "*Operational Data*", and / or "*Personal Data*" categories, in which case all the appropriate descriptions and related handling requirements will apply to it. Ownership Categories are mutually exclusive.

Ownership	
Owned by the Marine Institute	This will typically be data that the Marine Institute has generated or collected itself, as opposed to data that it is storing or using that has been generated by others.
Owned by Third Parties	This is data that the Marine Institute is storing or using but which it does not completely own – it includes data that the Institute might jointly own with other organisations. There will usually be specific (formal or informal) agreements between the Marine Institute and the data owner on how the data can be used.
Data Classification	
Open Data	Marine Institute data which have been appropriately processed are open by default, in line with Irish Government policy. Open data is available for anyone to use, reuse, and redistribute subject only to the requirement to attribute and/or share-alike.
Reporting Data	Some data are collected for reporting under specific legislation – in these cases there can be a legal requirement for the data to be made publically available.
Intermediate Data	This category includes day-to-day data that the Marine Institute generates, collects, or uses. These data will generally be in an intermediate state where Quality Control processes have not been fully applied or the data is raw and not yet processed. These data will generally not be released externally until they are fully processed, however they might be released to Marine Institute partners if appropriate, usually subject to a contractual arrangement.
Confidential Data	These are data which have restrictions on how they can be shared in additional to any restrictions imposed by legislation, such as data with commercial sensitivity.
Personal Data	These are data which are defined as "Personal Data" by Irish or EU Data Protection legislation. Processing of Personal Data must be compliant with this legislation and their use are restricted accordingly.
Sensitive Personal Data	These are data which falls into the "Sensitive Personal Data" category of Irish or EU Data Protection legislation. Processing of Sensitive Personal Data must be compliant with Ireland's Data Protection legislation and their use are restricted accordingly.
Environmental Data	Environmental Data specifically relates to data that meets the definition found in Ireland's "Access to Information on the Environment" (AIE) legislation.

9 Data Management & Processing

9.1 Data Management

In line with Objective 3 of the Marine Institute's Data Strategy "*The Marine Institute is a trusted source of high quality data with well-defined reproducible processes"* it is Marine Institute policy that the roles for managing and processing specific data sets **must be** defined and assigned to relevant staff, with associated processes and procedures to ensure datasets are well maintained and available for use in accordance with this policy.

9.2 Information Security & Access Control

To ensure the security of data held it is Marine Institute policy that access rights to all datasets **must be** clearly defined and controlled as appropriate based on the data's categorisation and any other specific issues relating to that particular data. This includes the cataloguing and categorising of each dataset.

9.3 Storage, Back-up and Retention

To ensure the availability of Marine Institute data it is Marine Institute policy that all data **should be** stored on centrally-managed servers and should have a defined backup and archival schedule associated with them. The time period that data and their back-ups are to be retained should be defined. The time period will depend on the dataset' categorisation, value, and importance. Resourcing **should be** clearly assigned to support the associated archiving overheads.

Due to the wide variety of data held and used by the Marine Institute it is only possible to give a general overview of the data lifecycle. The processing of specific data will usually involve some or all of the following steps: data collection, quality control, extraction, analysis, publication, re-use, archival and retention, and disposal. The details about specific data processes **should be** defined in "Data Management Plans" for that data.

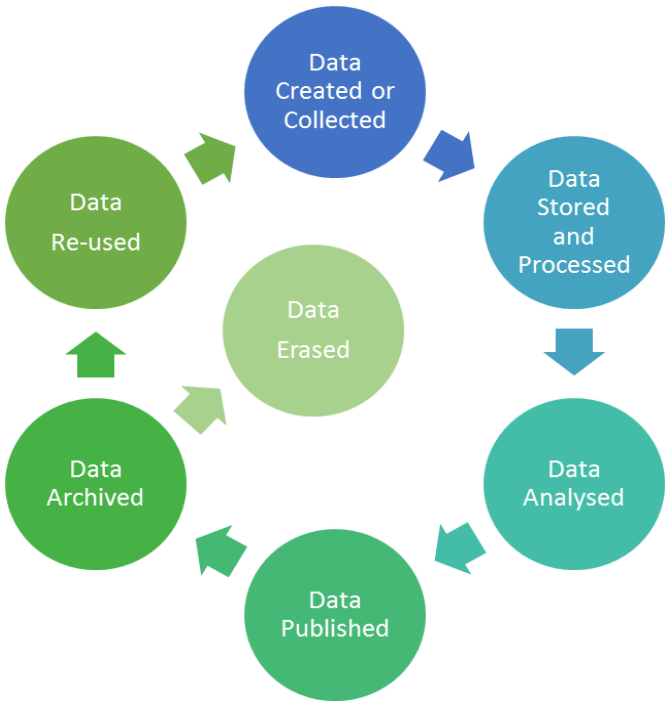

FIGURE 1 DATA LIFECYCLE

(BASED ON HTTP://WWW.LANCASTER.AC.UK/LIBRARY/RDM/WHAT-IS-RDM/PLAN/DATA-LIFECYCLE/)

10 Data Availability Policy

In line with Government Policy Marine Institute data are openly available by default. However, in practice there are considerations which may mean that certain data have restricted access.

In line with this policy availability of Marine Institute scientific and environmental data will be decided by a combination of the data ownership, data classification and the category of those wishing to access the data.

Typically, there will be four types of people who can request access to the data:

1. People internal to the Marine Institute who require it to do their job ("INTERNAL USERS - DATA REQUIRED"),
2. Other people internal to the Marine Institute ("INTERNAL USERS - OTHER") e.g. to use data for secondary purposes,
3. Partners of the Marine Institute ("PARTNERS") with a contractual requirement for the data,
4. People external to the Marine Institute ("GENERAL PUBLIC").

Table 2 identifies the availability of the different categories of data as identified above to the various categories of end-user identified by the Marine Institute's Information Security User Guidelines.

Data requests **must be** evaluated both on the category of data requested and the requestor.

Category of Data / Requestor		INTERNAL		PUBLIC	
		DATA REQUIRED	OTHER	PARTNERS	GENERAL PUBLIC
Ownership	**Owned by the Marine Institute**	No restrictions	No restrictions	Restrictions can apply	
	Owned by Third Parties	No restrictions	Restrictions can apply depending on the terms on which data are licenced to the Marine Institute		
Classification	**Environmental Data**	No restrictions	No restrictions	No restrictions	No restrictions
	Personal Data	No restrictions	Restricted	Restricted	Restricted
	Sensitive Personal Data	No restrictions	Restricted	Restricted	Restricted
	Confidential Data	No restrictions	Restrictions can apply	Restrictions can apply	Restricted
	Published Data and Open Data	No restrictions	No restrictions	No restrictions	No restrictions
	Reporting Data	No restrictions	No restrictions	No restrictions	No restrictions
	Intermediate Data	No restrictions	No restrictions	Restrictions can apply	Restricted

***TABLE 2** GENERAL DATA AVAILABILITY*

If a dataset falls into a number of categories, then the most restrictive availability policy will apply unless there are legal reasons for this not to be the case. For example, if a dataset is classified as both Confidential and Environmental then there may be grounds for releasing it to external requesters upon receipt of a relevant AIE request.

1.

11 Data Access

Marine Institute data holdings **should be** made available in a controlled manner, using centralised managed services where practical. Centralised services including online data access systems and the Marine Institute Data Request service are available through the Institute's website at www.marine.ie.

12 Data Licensing

In general, when data are shared with external parties, Marine Institute data **should be** licensed using the Creative Commons CC-BY 4.0 license (https://creativecommons.org/licenses/by/4.0/). Where specific conditions are required to be attached to the use of the data the Marine Institute data license should be used.

More specifically for the following data categories the appropriate license is indicated.

Category of Data / Requestor		PUBLIC	
		PARTNERS	GENERAL PUBLIC
Ownership	**Owned by the Marine Institute**	**CC-BY 4.0 / Marine Institute License**	**CC-BY 4.0 / Marine Institute License**
	Owned by Third Parties	**As directed by data owner**	**As directed by data owner**
Classification	**Environmental Data**	**CC-BY 4.0**	**CC-BY 4.0**
	Personal Data	**Not made available**	**Not made available**
	Sensitive Personal Data	**Not made available**	**Not made available**
	Confidential Data	**Marine Institute license**	**Not made available**
	Open Data	**CC-BY 4.0**	**CC-BY 4.0**
	Reporting Data	**CC-BY 4.0**	**CC-BY 4.0**
	Intermediate Data	**Marine Institute License**	**Not made available**

TABLE 3 GENERAL DATASET LICENSING GUIDELINES

Appendix 1: Data Access Services

Marine Institute data holdings are generally available through online access systems including the following:

- The Marine Institute's online data download site at http://data.marine.ie/;
- Ireland's Marine Atlas at http://atlas.marine.ie
- The Irish Spatial Data Exchange data discovery site which lists all Marine Institute externally available data at www.isde.ie;
- The Institute's Open Access Repository for publications at http://oar.marine.ie/;
- The Shellfish Safety Data site at https://www.marine.ie/Home/site-area/data-services/interactive-maps/latest-shellfish-safety-data?language=en;
- Irelands Digital Ocean portal for broad-based data and information at http://www.digitalocean.ie/;

There are also a number of other services available for programmable access (APIs) or for specific types of data e.g. oceanographic models.

Where data are not already available through online mechanisms data may be requested through the manual central Data Request Service at https://www.marine.ie/Home/marine-institute-request-digital-data.

12.1.1 Other Specific Access Methods

Access to data is also facilitated to comply with data-related legislation, including the following:

2. Access to Information on the Environment (AIE): In the case of AIE requests the procedure is described at http://www.marine.ie/Home/site-area/online-policies/access-information;
3. Freedom of Information (FOI): Details about the Marine Institute's Freedom of Information procedures can be found here: http://www.marine.ie/Home/site-area/online-policies/freedom-information;

The procedures for provision of information to members of the Oireachtas are found at http://www.marine.ie/Home/sites/default/files/MIFiles/Docs/Comms/Procedures%20for%20Provision%20of%20Information%20to%20Members%20of%20the%20Oireachtas.pdf.

Appendix 2: Marine Institute Data Strategy (2017-2020) High-Level Overview

Data and information are at the core of the Marine Institute's activities, with data infrastructures processes and services supporting the Institute's strategic goals.

The Institute's Data Strategy has been established so that we can:

- Know what data the Marine Institute holds
- Make relevant the Institute's data policy
- Comply with legislation
- Categorise the Institute's data appropriately
- Enable sharing and reuse of appropriate data across the Institute
- Develop the Institute's expertise in data-related matters
- Connect the Institute's data to national and international networks

The Data Strategy is focussed on developing data skills and communications; data processes and systems; and data policy and governance. In order to advance these areas, the Data Strategy has six objectives—each of which has a number of actions associated with it. The Data Strategy objectives are:

1. **Policy** Making it clear how Marine Institute data should be managed
2. **Governance** Ensuring Marine Institute data are categorised and handled appropriately
3. **Quality** Defining process to ensure the Marine Institute delivers high-quality, reproducible data
4. **Capability** Developing data expertise, processes and tools
5. **Connectivity** Connecting Marine Institute data to national and international networks
6. **Coordination** Facilitating national data contributions to global programmes