EPOS DATA POLICY

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1 – DEFINITIONS

Core Services	Both ICS and TCS (see definitions below)
Creative Commons (CC) Licences	See https://creativecommons.org/
Data, Data Products, Software and Services (DDSS).	Measurements and/or observations of physical and chemical parameters, collections thereof, and information derived from such measurements and/or observations. Data and Data Products distributed by EPOS are provided by Suppliers to EPOS Integrated Core Services (ICS) and Thematic Core Services (TCS) and are accessible by Users. Data and data products are grouped in 4 levels: raw or basic data (level 0), data products coming from (nearly) automated procedures (level 1), data products resulting from scientific investigations (level 2), integrated data products resulting from complex analysis (level 3). Software are Computer programs or any other processing, visualization and analysis tools for treatment of Data and Data Products, also including methods and workflows or their description. Tools and Software are made available and/or accessible in EPOS through specific EPOS Services. They may be made available as software packages, libraries, or descriptions for download, and/or be made accessible for execution.
Integrated Core Services (ICS)	Services provided by EPOS as integrated services reaching across the scientific themes/disciplines of EPOS, focusing on advanced ICT infrastructures (e-infrastructures) for discovery of and access to DDSS generation of multidisciplinary products and services, development and execution of workflows.
Metadata	Information about provenance, description, quality, processing, maturity level, and collection/generation context, which supports interoperability across disciplines. Metadata associated with Data and Data Products and Tools and Software in EPOS shall meet or exceed applicable national or European requirements.
Service Providers	Entities in charge of aggregating, collecting and ensuring access to DDSS. They feed the EPOS Core Services (ICS and TCS) with DDSS from one or more Suppliers.
Suppliers	Entities allowing distribution of their DDSS through EPOS by signing a letter of intent (see Appendix 1).
Thematic Core Services (TCS)	Thematic groups of Service Providers are organized in and coordinated by Thematic Core Services which provide the scientific expertise for EPOS and interact in close connection with the user community.

2 – GENERAL INTRODUCTION

The purpose of the European Plate Observing System (EPOS) is to create a pan-European research infrastructure for solid Earth science to support state-of-the-art cross-disciplinary research activity il aill fields of Solid Earth Science and to foster a safe and sustainable society.
EPOS strongly depends on the cooperation with Suppliers as most of the data are available in distributed national data repositories and not in dedicated repositories owned and operated by EPOS. Suppliers produce and deliver the data upon which the EPOS catalogue of DDSS is built. The Thematic Core Services (TCS) organize and coordinate the Service Providers. The contractual link for service provision will take the form of service contracts between EPOS and Service Providers (SP).

In order to foster open, free and easy access to DDSS from the Service Providers, EPOS needs a common data policy. The EPOS data policy applies directly to the DDSS managed by EPOS through ICS. The detailed data management plans specific to each Service Provider must state compliancy with the EPOS data policy. EPOS data policy shall respect national and European legislation which are primary regulations.

3 – GUIDING PRINCIPLES

Through its policy EPOS aims to promote:

- Innovation: by encouraging diversity of analysis and opinion to facilitate evaluation of alternative hypotheses and to permit the coordinated application of scientific, social, and business knowledge to generate solutions to complex challenges.
- Collaboration: among diverse disciplines to foster greater productivity and creativity.
- Efficiency: by preventing duplication of effort and by enabling secondary analyses and enhancement of existing data, permits the redirection of resources to the most promising endeavours to maximize the impact of investments.
- Accountability: by encouraging independent verification.
- Capacity Strengthening: by facilitating the education of new researchers, and enabling broader access to data for secondary analysis and stimulation of bold and innovative ideas, which is of particular importance to researchers in developing countries.

It is generally recognized that throughout Europe various scientific communities are at different stages of implementing data sharing and use different methods of data distribution. EPOS intends to work closely with Suppliers and users to ensure their diverse models and needs are accommodated. EPOS will adopt this flexible approach in recognition that one size does not fit all. This will help to reinforce open science inquiry, encourage diversity of analysis and opinion, and promote new research, all important OECD principles.

EPOS will provide transnational and interdisciplinary services that will simultaneously integrate and support

national and regional infrastructures. Where there are differences in policies relating to data sharing, EPOS will encourage a culture of openness and sharing of research data within public research communities and within member countries and beyond.

EPOS intends to adopt the following key principles:

- to disseminate data and knowledge through Open Access;
- to make DDSS available in a timely manner, without undue delay and preferably free of charge taking in due account the need to differentiate between virtual and remote access and physical access;
- to follow the OECD principles for research data from public funding;
- to utilize a widely accepted community licensing scheme, e.g. Creative Commons.

4 – EUROPEAN LEGAL FRAMEWORK RELATED TO ENVIRONMENTAL DATA, INFORMATION AND DATABASES

The EPOS data policy takes into account the overall European legal framework related to environmental data, information and databases. The most important regulatory documents which also impact EPOS data policy are:

- *Aarhus Convention* (access to environmental data),
- *INSPIRE Directive* (sharing of the spatial information among public sector organizations and access to the spatial data),
- *Database Directive* (protection of the databases),
- *Software Directive* (protection for computer programs) and
- *PSI Directive* on the re-use of the public sector information

EPOS data policy also recognizes relevant international observation system initiatives and national policies and legislation with the aim of full and open exchange of data, metadata and elaborated data products to be made available with minimum time delay and at minimum and whenever possible no-costs.

5 – ACCESS TO EPOS DATA, DATA PRODUCTS, SOFTWARE AND SERVICES

5.1 OPEN ACCESS

EPOS supports the European Commission's approach regarding data policy: "As open as possible, as closed as necessary". Reasonable restrictions that are still in line with open access principles may therefore be

implemented for specific data sets, especially when their divulgation could jeopardize a potential industrial/commercial use, violate the rules on personal data protection or on confidentiality for security reasons; or for any other legitimate reason given by a Supplier. Wherever possible EPOS will support the wishes and conditions placed by Suppliers on the way in which the DDSS can be used.

Procedures to accept restrictions and embargo conditions will be handled by a dedicated EPOS committee. Information on restriction and embargo conditions shall be available to the user in a clear and transparent way. In the case of an admitted exception, EPOS provides the user with access under the same terms and conditions as the original Supplier.

Within the EPOS Data Policy, users, with regard to access rights and restrictions, are classified as follows:

- ***Anonymous**:* Access without any identification or accreditation is not allowed at the ICS level. However, if the TCS decide to allow anonymous access, they should provide alternative mechanisms to track users and purposes of DDSS use;
- ***Registered**:* Identified access requiring prior registration, which may differ from specific EPOS services;
- ***Authorized**:* Identified and authenticated access requiring specific permissions for particular DDSS or EPOS services to identified user group(s). Only a Registered user can become an Authorized user.

Within the EPOS Data Policy, "Access to DDSS", with regard to access rights and restrictions, is classified as follows:

- ***Open**:* DDSS freely available/accessible to User either for download or for direct use within an EPOS Service.
- ***Restricted**:* DDSS that are available under the conditions set out by the Service Providers. Restrictions may also mean that fees could be charged. Restrictions to specific user categories, specific type of, if any, should be limited to specific datasets.
- ***Embargoed**:* DDSS that are available only after a predefined limited time (embargo period) has passed since collection/generation. Once the embargo period has passed, they may become either Open or Restricted.

Metadata (and DDSS descriptions) are always free and available at any time, even for restricted and embargoed data.

Software disseminated via EPOS can take one of three forms:

- ***Acquired Software***, acquired for use by EPOS or users.
- ***Contributed Software***, which may be contributed by another research infrastructure and which may have restrictions on use.
- ***Generated Software***, which will be generated within EPOS.

5.2 LICENSING

5.2.1 DDSS licensing

For an effective rights management, all the DDSS distributed by EPOS shall have a license affixed to them. EPOS is aiming to grant one default licenses set for all the DDSS, Creative Commons 4.0, with two allowed licenses, CC:BY and CC:BY:NC. Services Providers shall ensure that they are allowed by the Suppliers to affix licenses on unlicensed data on their behalf in case the supplied DDSS don't include a license.

5.2.2 Metadata licensing

To ensure a wide dissemination and a vast publicity for EPOS DDSS, it is essential that their metadata are easily and freely accessible at any time, with as few restrictions as possible. In order to achieve this, Suppliers will be encouraged to affix open licenses, preferably Creative Commons 4.0 CC:BY, to their metadata. The machine-readable version of this licence will allow the users to identify the relevant datasets through search engines licences filters.

5.3 QUALITY CONTROL

The quality control of the data rests with the Supplier. The Service Providers are responsible for checking the quality parameters of the metadata descriptions that provide information for discovery, contextualisation and action and on provenance and traceability.

EPOS disseminates good practices and shall provide a mechanism to obtain users feedback on DDSS quality. EPOS will ensure a continuous process of review and assessment to verify that the EPOS DDSS provision is operating as envisioned, finding out improvements and preventing identified problems. EPOS will especially control the quality of the services provided (response time, number of successful requests, number of peer reviewed publications…).

External audit on quality assurance and quality control is also foreseen through an external advisory scientific board.

5.4 LIABILITY

- EPOS users register and in so doing agree to relieve EPOS of any liability for any use of the EPOS DDSS.
- EPOS is not liable for any misuse of DDSS or associated metadata.
- EPOS does not relieve Service Providers and Suppliers from their legal responsibilities.

5.5 PRIVACY

- EPOS complies with International, European and national legislation regarding the protection of personal data and privacy.

6 –INTELLECTUAL PROPERTY RIGHTS

Rights to intellectual property of any DDSS shall remain with the entity or person that has generated it or holds these rights at the time of submission of the DDSS to EPOS, except in case where these rights have been explicitly waived by the original generator or holder.

The Suppliers are in charge of checking that the DDSS they provide do not infringe any third party intellectual property rights, and ensure that third party interests are fully acknowledged.

7 – MANAGEMENT FOR THE EPOS DATA POLICY

Failure of implementing EPOS data policy shall be reported to the EPOS head office which will inform an ad hoc committee, whose statutes, missions and composition will be defined by EPOS General Assembly. The committee will then take a decision accordingly.
The responsibility of the implementation and monitoring of the Data Policy falls to the Service Providers. This implies that there shall be a dedicated Data Management Plan for every Service Provider, and that every Service Provider needs to ensure the proper DDSS delivery. In addition, the Service Providers need to make sure the Suppliers are informed and agree that EPOS distributes their DDSS (see Appendix 1).

8 – POLICY REVIEW

This document is subject to revision according to the needs and strategy changes of EPOS, as well as according to the evolution of the legislation. The reviewed policy shall be approved by the EPOS general assembly.