



Joint European Research Infrastructure network for Coastal Observatory –
Novel European eXpertise for coastal observaTories - **JERICO-NEXT**

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Approvals				
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1. Acknowledgement

This policy was developed using data policies from other organisations and initiatives, largely the Common FixO3 data policy MoU and IOC Oceanographic Data Exchange Policy. Many JERICO-NEXT partners are IOC member states and hence have agreed to follow the IOC Data Policy (See Annex Chapter 6.2). Since JERICO-NEXT is not the custodian of any data, this Data policy has been adopted to suit JERICO-NEXT and its partners. As many of the existing data policies deal with marine scientific data and have a number of identical issues, many aspects of this policy is naturally similar to the studied policies.

The data policy is generally consistent with the policies of a number of international bodies and projects. Most data under the JERICO-NEXT data policy are, and will continue to be, fully accessible through other means i.e. EuroGOOS ROOSs, EMODnet, SeaDataNet and CMEMS also after the project has been finalised.





2. Executive Summary

The main message of the JERICO-NEXT data policy is that data produced within the project is free and unrestricted with no charge for third parties.

The JERICO-NEXT Data Policy provides recommendations on ownership, to which data these recommendations are applied, DOI, data citation and the main recommendations on data sharing and dissemination principles.

3. Introduction

Deliverable 5.1 is embedded within Work Package 5 (Data management). One main objective of this Work Package is to provide procedures and methodologies to enable data collected through the project to comply with international standards regarding their quality and metadata.

The timely, free and unrestricted exchange of oceanographic observation data is essential for the efficient acquisition, integration and use of ocean observations gathered by the projects and countries of the world for a wide variety of purposes including the prediction of weather and climate, the preservation of life, the mitigation of human impact to the marine and coastal environment, as well as for the advancement of scientific understanding that makes them possible.

JERICO-NEXT WP5 aims to make accessible and freely available on internet as much marine data as possible from the project – via the JERICO-NEXT website and existing initiatives and data portals such as EuroGOOS ROOSs, EMODnet and SeaDataNet; and hence making the data available to any possible user. This document presents a guide to the JERICO-NEXT partners on how the open data policy could be managed.

Data policies are often seen as complicated. In the past, data policies were often very complex with numerous clauses. Nowadays, data policies tend to be rather recommendations and are kept short and non-complicated. During the JERICO-NEXT 2017 General Assembly it was agreed to keep the policy as simple as possible, without the requirement of signatures from the data providers, to be aligned with existing data policies and consisting of a small number of agreed statements.

Recognizing the vital importance of an open and free data policy exchange within the JERICO-NEXT project, the partners agree that the statements presented in this document shall frame the JERICO-NEXT recommendations on the data policy exchange of oceanographic data and its associated metadata.

The policy will also ensure that data and data providers are given maximum visibility, with data and metadata made available through the main marine data infrastructures including the EuroGOOS ROOSs and SeaDataNet's network of NODCs, as well as being accessible via CMEMS and EMODnet and its thematic portals.

Metadata records from JERICO-NEXT partners will be provided and visualized via the JERICO-NEXT catalogue (Deliverable 5.2: Release of a JERICO-NEXT catalogue, comprising data and products based on Task 5.3: (Platform registration and metadata management system output).

4. Recommendations on a free and open data access policy

In this document, we present the recommendations on a free and open data access policy. Some main definitions are first clarified and discussed on the ownership and custodianship of the data is presented. The





data for which these recommendations are applied are presented. Digital Object Identifiers, DOI, are also introduced. Finally, the clauses for the Data Policy are presented.

4.1. Preliminary Definitions

- “*Free and unrestricted*” means non-discriminatory and without charge.
- “*Without charge*”, in his context means the data are free to any user without any charge for the data and products themselves.
- “*Data*” consists of oceanographic observation data, its derived data and, if applicable, gridded analysed fields.
- “*Metadata*” is “data about data” describing the content, quality, condition, and other characteristics of the data.

4.2. Data policy overview

All data provided to JERICO-NEXT are unencumbered, i.e. freely accessible at no charge to third parties. It is highly requested that all provided data is adequately documented with enough metadata in order to enable interoperability with data aggregators such as EMODnet and CMEMS INSTAC; and that all necessary arrangements are made for data held by custodian organisation for long term access, after the life of the project.

JERICO-NEXT encourages parties to use well established metadata standards, e.g. SeaDataNet standards, or as an alternative, any other agreed standard that can be cross-walked into required format. JERICO-NEXT seeks that all original metadata will be stored by the custodian organisation or an agreed alternate organisation.

Data and metadata generated within JERICO-NEXT are stored with the originating institute/organisation. JERICO-NEXT does not host any data or metadata. All data made available will be made publicly available.

Institutes and data originators within JERICO-NEXT will ensure that they:

- Comply with the JERICO-NEXT data policy recommendations;
- Store appropriate metadata records for the datasets.

4.3. Ownership of JERICO-NEXT data

Data provided from JERICO-NEXT partners are owned by the data originator organisation. JERICO-NEXT is only aiming to make third parties aware of the existence of the data produced within the project and to provide direct access to the underlying data.

Datasets that eventually have some restrictions placed on them may also, in some cases, be made available. However, it's up to the custodian to specify these restrictions in the metadata record associated with the data. JERICO-NEXT will not be responsible for limiting access to these data.

Users of the data are free to:

- *Share/copy and redistribute* the material in any medium of format;





- *Adapt/remix, and build upon* the material for any purpose, even commercially under the following term:
 - *Attribution*: You must give appropriate credit to the data originator

4.4. Custodianship/data originator

A data custodian is an individual that can provide information about the specific dataset to any interested party – i.e. someone who is familiar with how the data was generated and/or have a long-term interest in the data. It's recommended that each metadata record related to a particular dataset includes the information of who is the custodian for the dataset. A custodian can also be a data assembly centre or a data unit.

It is the responsibility of the custodians to ensure that all their data is appropriately documented through a metadata record and that these data are available in an appropriate format.

4.5. What are the data of interest for JERICO-NEXT

JERICO-NEXT data are those data generated under the auspices of the JERICO-NEXT project. These recommendations applies specifically to those data and includes physical, chemical and biological parameters.

In particular, data identified in deliverable D5.16, *Adapting JERICO-NEXT activities to a Virtual Access infrastructure*, are of interest together with data collected within WP4, *JRA2 - Valorisation through applied joint research* and data identified in Task 5.3, Platform registration and metadata management system, and other tasks within WP5 as well as data already available in the JERICO-NEXT data portal. See table below.

In case there are additional data deemed to be available by the JERICO-NEXT consortia they should be made available under the same recommendations.

The following table summarizes the JERICO-NEXT infrastructures in WP6, Virtual access and used by Task 5.8 D5.16: *Adapting JERICO-NEXT activities to a Virtual Access infrastructure: Survey on the existing technologies - Needs and requirements for the adaptation to which these recommendations are applied.*

Organisation	Contact	Name	Website
SYKE	Jukka Seppala	real-time monitoring	http://www.finmari-infrastructure.fi/ferrybox/
		algaline	http://www.syke.fi/en-US/Research_Development/Research_and_development_projects/Projects/Real_time_algal_monitoring_in_the_Baltic_Sea_Alglime
AZTI	Julien Mader	HFR	http://www.euskoos.eus/en/basque-ocean-meteorological-network/high-frequency-coastal-radars/
			http://www.emodnet-physics.eu/map/platinfo/piradar.aspx?platformid=10273&60days=false
Cefas	Joanna Wittel	Cefas data Hub	https://www.cefas.co.uk/cefas-data-hub/





Ifremer	Guillaume Garcia	coastal Coriolis	http://www.coriolis-cotier.org/
HGZ	Klas Ove Möller	COSYNA	http://www.cosyna.de
CNRS	Laure Rousseau	EOL	http://www.obs-vlfr.fr/data/view/eol/surface/
			http://www.obs-vlfr.fr/data/view/eol/ctd/
			http://www.obs-vlfr.fr/data/view/eol/meteo/buoy/
			https://spiarcbase.epoc.u-bordeaux1.fr/
ISMAR-CNR-IT	Carlo Mantovani, Lorenzo Corgnati	LISO-HFR	http://radarhf.ismar.cnr.it
IH	Joao Vitorino	MONICAN	http://monican.hidrografico.pt/
IO-BAS	Violeta Slabakova	NOMOS	http://www.bgodc.io-bas.bg
HCMR	Leonidas Perivoliotis	POSEIDON	http://www.poseidon.hcmr.gr
SMHI	Johanna Linders	Shark	http://www.sharkdata.se/
		opendata	http://opendata-catalog.smhi.se/explore/
SOCIB	Christian Munoz	SOCIB Data Centre Multi Platform Observatory	http://www.socib.es
FMI	Lauri Laakso	UTO	http://swell.fmi.fi/Uto/latest.html
NIVA	Kai Sorensen	NIVA Research Station (NRS)	http://www.niva.no/en/om-niva/kontorer-og-avdelinger/forskningsstasjon-solbergstrand
		NorFerry	http://www.niva.no/en/miljoedata-pa-nett/ferrybox-og-satellitdata

4.6. DOI

Digital Object Identifiers (DOIs) are character strings which allow an electronic object to be uniquely identified. JERICO-NEXT is now in a position to issue DOIs for datasets via the SEXTANT tool developed by IFREMER, France, <http://sextant.ifremer.fr/en>. Any user of JERICO-NEXT data should use the issued DOI for citation purposes.

A DOI will be assigned to archived data sets at an interval agreed by the data originator. A single DOI will be provided for the dataset at the finalisation of the project covering the full project duration. This activity will take into account that data originators possibly already have assigned a DOI for the dataset. In this case a link to that DOI should be provided.





4.7. Recommended Data Policy

Data sharing and dissemination principles

JERICO-NEXT data sharing and dissemination principles for data collected during the project timeline are the following:

- Research infrastructures under the umbrella of JERICO-NEXT support free, open access to data and metadata produced by their facilities and are committed to working towards the implementation of this principle;
- Data and metadata generated during the project will be made available via free and open access without any restrictions and available at no cost to third parties;
- Appropriate controlled dictionaries such as the BODC vocabularies (https://www.bodc.ac.uk/resources/vocabularies/parameter_codes/), also used in SeaDataNet are recommended to be used within JERICO-NEXT metadata descriptions;
- Data and associated metadata may be subject to long-term archiving, typically at National Data Centres (NODCs);
- A metadata catalogue on JERICO-NEXT derived data shall be made accessible via the JERICO-NEXT website (D5.2: Release of a JERICO-NEXT catalogue comprising data and products based on task 5.3 output);
- Data will be provided by JERICO-NEXT partners to ongoing projects and initiatives such as EMODnet, SeaDataNet and CMEMS INSTAC. These data will also be visualised and downloadable via the JERICO-NEXT website and portal.

Use of data

- Data interpretation is solely the responsibility of data user;
- Data sources shall be acknowledged, preferably using a formal citation (See data citation section below).

Contribution of data

- The general responsibility for data sets that have been made available remains with the contributing institution/custodian/data originator;
- The quality assurance of data is the responsibility of the custodian/data originator;
- Data providers are requested to inform of any national policies that may place special conditions on the redistribution of data;
- Metadata shall be provided for each data set following, as far as possible, agreed standards within BODC and SeaDataNet.

Data Citation





- Data citations should facilitate giving credit to all contributors to the data;
- Where DOIs are available these should be used, otherwise the following citation guidelines should be used;
- If you use JERICO-NEXT data, please acknowledge the use of these data with one of the following statements:
 - In applications or websites:
“Data products used in this application were obtained from JERICO NEXT - European Commission’s Horizon 2020 Research and Innovation programme under grant agreement No 654410 (<http://www.jerico-ri.eu/>)”
 - In publications:
“Data used in this work were obtained from JERICO-NEXT (<http://www.jerico-ri.eu/>)”





5. Annexes and references

5.1. Links to a selection of data policies

- IOC Oceanographic Data Exchange Policy: http://www.jodc.go.jp/ioc_policy.htm
- WMO Data Policy (resolution 40): https://library.wmo.int/pmb_ged/wmo_837_en.pdf#page=18
- ICES Data Policy: <http://ices.dk/marine-data/guidelines-and-policy/Pages/ICES-data-policy.aspx>
- SeaDataNet Data Policy: <https://www.seadatanet.org/Data-Access/Data-policy>
- Ocean Networks Canada Usage Policy: <http://www.oceannetworks.ca/data-tools/data-help/policy/additional-data-policy-information>
- OceanSITES Data Policy: <http://www.oceansites.org/data/>
- US IOOS, <https://ioos.noaa.gov/>
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5.2. IOC Oceanographic Data Exchange Policy

Clause 1

Member States shall provide timely, free and unrestricted access to all data, associated metadata and products generated under the auspices of IOC programmes.

Clause 2

Member States are encouraged to provide timely, free and unrestricted access to relevant data and associated metadata from non-IOC programmes that are essential to the following applications. These applications are the preservation of life, beneficial public use and protection of the ocean environment, the forecasting of weather, the stationary forecasting of the marine environment, the monitoring and modelling of climate and sustainable development in the marine environment.

Clause 3

Member States are encouraged to provide timely, free and unrestricted access to oceanographic data and associated metadata, as indicated in the above in Clauses 1 and 2, for non-commercial use by the research and education communities, provided that any products or results available as a result of such use shall be published in the open literature without delay or restriction.

Clause 4

With the objective of encouraging the government and non-government involved in gathering marine data to participate in the international oceanographic data exchange and maximizing the contribution of oceanographic data from all sources, this policy acknowledges the right of Member States and data producers to determine the terms of such exchange, provided that in case an applicable international data is available, it is required to agree with the manner of the convention.

Clause 5

Member States shall, to the best practicable degree, use data centers linked to IODE's NODC and WDC networks as the long-term repositories for oceanographic data and associated metadata. IOC programmes shall co-operate with data contributors to ensure that data can be accepted into the appropriate systems and can meet quality requirements.





Clause 6

Member States shall enhance the capacity in developing countries to obtain and manage oceanographic data and information and assist them to benefit fully from the exchange of oceanographic data, associated metadata and products. This shall be achieved through the transfer of technology and knowledge with no-gap using appropriate means, including IOC's Training Education and Mutual Assistance (TEMA) programme and through other relevant IOC programmes.

