OpenAIRE infrastructure & services
ADVANCING OPEN SCIENCE

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(OpenAIRE Support & Training Manager)

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OpenAIRE Advance
From OpenAIRE project to OpenAIRE Advance... who we are, what we do.

OpenAIRE Infrastructure
A key and sustainable technical & human infrastructure for OS in Europe and beyond.

OpenAIRE Provide
Interoperability guidelines, OA broker, metrics, content providers dashboard

OpenAIRE Connect
Open Science as-a-service, research communities, other research outputs.
From OpenAIRE to OpenAIRE Advance
WHO WE ARE

- In 24x7 operation since Dec 2010
- EC funding (2009-2020)
  - OpenAIRE (2009-2012)
  - OpenAIREplus (2012-2014)
  - OpenAIRE2020 (2015-2018)
  - OpenAIRE Advance (2018-2020)
- Consortium of 50+ partners
- A legal entity in 2018
WHAT WE DO

Support – Accelerate – Monitor Open Science

Train for Open Science
- Deploy services to embed Open Science into researcher daily workflows
- Build global common standards for linking and contextualizing all research

Monitor Open Science in Europe
- Monitor Open Science in Europe

Implement and align Open Science policies across Europe and the world
- Foster innovation for added value services based on open research

OpenAIRE
IT'S ABOUT SERVICES

- Monitor
  - Open Science
  - Research outcomes
- Accelerate
  - Interoperability
  - Exchange
- Support
  - Open Science Helpdesk
  - RDM services

For funders, institutions, RIs, initiatives
For Content providers, RIs
For Researchers, ...
OpenAIRE INFRASTRUCTURE
Two faceted e-Infrastructure

Human Network

- 34 expert nodes all over Europe: Open Science training & support, OA policy alignment, Technical assistance...

Integrated Scientific Information System with access to:
- 24,010,035 publications;
- 697,225 datasets;
- 1,142 data providers,
- 900K publications linked to projects from 19 funders

Digital Network
Behind the Scene

Our pan-European network is our power.
National Open Access Desks (NOADs)

Research is global, support is local
What we support

OS policies:
- Harmonization for policy makers
- Training
- Support

Infrastructure:
- Interoperability
- Setup
- Connectivity
- Repositories

Open Research Data:
- FAIR
- Open data
- Tools
- Legal
- Compliance

OA to publications:
- Guides
- Tools/repositories
- Licenses
- Compliance
A pan European Support & training service for Open Science

HELPDESK
Ask a question
FAQs

TRAINING
Webinars
Workshops
Online courses

RESOURCES
Guidelines
H2020 factsheets
Guides & Primers

CONSULTATION
Legal
Policy
Technical
OpenAIRE’s e-infrastructure Commons

**KEY STAKEHOLDERS SERVICES**

- **Funders, research admins, research communities**
  - Research impact
  - Project reporting and monitoring
  - Open Access trends

- **Content providers**
  - Repository validation
  - Repository notification broker
  - Repository analytics and usage stats

- **Researchers**
  - Claim publications, datasets, software
  - Deposit publications, datasets, software
  - Search & browse: interlinked publications, datasets, projects
  - Open Access & DMP Helpdesk
  - End-User feedback

**INFO SPACE SERVICES**

- Cleaning
- De-duplication
- Validation
- Enrichment By inference

**CONTENT PROVIDERS**

- Publications repositories
- Research Data repositories
- CRIS systems
- Registries (e.g. projects)
- OA Journals
- Software Repositories

**INFO SPACE SERVICES**

- Funding
- Organization
- Project
- initiative
- Result
- Publication
- Data
- Software

**CONTENT PROVIDERS**

- Funder
- Funding
- Result
- Publication
- Data
- Software
Move from Open Access

... to Open Science
Open Science

Not just about open access to publications...
Open/FAIR research data
Open software
Open methodologies/protocols
Open educational resources
Open processes (peer review)
Opening up science to non-researchers

All linked together
Our goals

1. Place Open Science in the agenda of every funder and research performing organization.

1. Provide standards, tools and services for Open Science implementation and ensure their uptake on a global level.
Listen to end users

... and Re-packaging existing services
Content Providers
Research Communities
Funders & Research Admins
Researchers
3rd parties & Innovators
Researchers - all
Research Communities
Content Providers
Funders & Research Admins
Re-packaging existing services
Support beyond the national nodes

... to thematic domains (RIs)
Research Community Dashboard

A window to community’s research: Open Science as a Service

• A VRE to gather-view-monitor all research outcomes
• Customized training and support for open science
• Work with RIs at national node level
Towards a Scholarly Commons

... work in trenches
Towards a “scholarly commons”

Guidelines
For ALL research artifacts
Global

Next generation repositories
From theory to reality

Publishing models
Studies for informed decisions
Global synergies

... integrating services with other e-Infrastrutures and RIs
Global OA Scholarly Comm Infrastructure

• Align regional repository networks
  • Working with LA Referencia

• Pilots with more regions
  • Japan, Canada, US, Africa

• Liaise with global fora
  • Force11, RDA, Codata...

Linked to infras around the world
Support open science not only for researchers

... but also for society
Open Innovation

- OpenAIRE Acceleration Programme
- Open Innovation events
- Training Bootcamp
- Guided by experts
  - Corallia – an Athena RC unit that provides a structured and systematic management and development of innovation clusters for Greece
- Open calls with 360.000 Euros

Citizen science

“Beyond the lab”

- Reach out to 1,000 schools in Europe
- Gateway to open science
- Lessons learnt for future (local) engagement
- Guided by experts
“Building” EOSC

... integrating services with other e-Infras and RIs
Collaboration agreement with EOSC Hub

• **Service interoperation**
  - Use of common protocols, OpenAIRE services by Ris, development/deployment of common services

• **Support, training and communication**
  - Open Science, FAIR data, Open data, common services, ...

• **Governance**
  - Identify gaps and overlaps in existing structures and see possibility of future “project merging”
AGENDA

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From OpenAIRE project to OpenAIRE Advance... who we are, what we do.

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a key and sustainable technical & human infrastructure for OS in Europe and beyond.

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Content providers
Dashboard

Service for validation, registration, content enrichment and metrics.

One Stop Shop for Repository managers
Register
Register data sources in the OpenAIRE infrastructure

Validate
Validate data sources against OpenAIRE guidelines

Notifications
View notifications to enrich the metadata and the content

Metrics
View aggregated, cleaned usage statistics for repository access
COMPATIBILITY – Validator, Validation History, Collection Monitor

- A service that processes metadata and validates according to a predefined metadata schema (e.g. OpenAIRE guidelines)
- Configurable for other schemas
CONTENT – Events, Notifications (Enrichments, Additions, Alerts)

- Enrichments: Extra information about records they already have
- Additions: New metadata records they were unaware of
- Alerts: Wrong information in the records they already have
OpenAIRE Broker service

INFO SPACE SERVICES
- Cleaning
- De-duplication
- Validation
- Enrichment By inference

CONTENT PROVIDERS
- Publications repositories
- Research Data repositories
- CRIS systems
- Registries (e.g. projects)
- OA Journals
- Software Repositories

OpenAIRE Notification Broker

Subscriptions
Notifications

Sending events
Interactive selection notifications of interest

Types & numbers of notifications for a repository
METRICS – Enable usage stats, Views and downloads

- Use of a common exchange format for usage data
- Use Matomo (piwik) backend
- Process usage data, COUNTER code of practice
Research Community Dashboard

A window to community’s research.

Open Science as a Service
Blowing on the fire of Open Science

Facilitate Research Communities adoption of Open Science publishing principles by supporting artefact publishing tools as-a-Service.

Facilitate Content Providers at moving towards Open Science publishing by supporting notification-based research communication as-a-Service.
Open Science as-a-Service

RESEARCHERS

Search-Navigate-Monitor-Research Impact

Research Community Dashboard & Research Initiative (Impact) Dashboard

Software Packages

Projects

Data

Articles

Catch-All-Notification Broker

Subscription & Notification

Articles

Software

Data

REPOSITORIES
Moving towards Researchers
Research Community Dashboard

Publishing via RCD and APIs
Accessing via RCD and APIs
Research Community Dashboard

Your view to open science

Fisheries and Aquaculture Management
Conservation of marine resources for sustainable development

Elixir-GR

European Marine Science
OpenAIRE Research Communities - status

Fishery and Acquaculture
Marine Environmental Science
Neuroinformatics
PARTHENOS
Environment and Economy
EGI
INSTRUCT
AgInfra+
CLARIN
RDA

On board

Bootstrapping
ELIXIR
OpenRiskNet
Ecology and Evolution
EGA
DARIAH
SoBigData.eu
EPOS
which repositories to use (pubs, data, software...).
which text mining rules to use for inference.
how to structure community (e.g., ontologies).
which statistics and reports to produce.

Community experts configure the dashboard

Moderate end-users actions.
Govern the service.
OpenAIRE takes over aggregation, cleaning, inferring, statistics, reporting, APIs...
Use of interoperability standards by default.

Communities are “owners” of the Dashboard
# Research Community Dashboard

**European Marine Science**

<table>
<thead>
<tr>
<th>Marine</th>
<th>Ocean</th>
<th>Fish</th>
<th>Aqua</th>
<th>Sea</th>
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Curated by: spesant, mirimaz, argirokokogiannaki, pedropinipe, alessia.bardi, andrevieira  
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Members: 8

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<tr>
<th>Publications</th>
<th>Research Data</th>
<th>Software</th>
<th>Projects</th>
<th>Content Providers</th>
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<td>45</td>
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## Recent Publications

**THE DEEP WESTERN BOUNDARY CURRENT IN THE LABRADOR SEA FROM OBSERVATIONS AND A HIGH-RESOLUTION MODEL**

Haimann, Patricia; Fischer, Jürgen; Visbeck, Martin; Karstensen, Johannes; Biastoch, Arne; Böning, Claus W.; Patara, Lavinia (2018)

Long-term observations from a 17 year long mooring array at the exit of the Labrador Sea at 53°N are compared to the output of a high-resolution model.

**SCIENTIFIC RATIONALE AND INTERNATIONAL OBLIGATIONS FOR PROTECTION OF ACTIVE HYDROTHERMAL VENT ECOSYSTEMS FROM DEEP-SEA MINING**


## Recent Research Data

**MASS AND MORPHOLOGY OF EMILIANIA HUXLEYI COCCOLITHS IN THE MEDITERRANEAN SEA: MEDSEA AND METEOR M84/3 CRUISE SAMPLES (MAY 2013, APRIL 2011)**

Barbara D’Amario; Patrizia Ziveri; Michael Greinert; Angela Maria Oriedo (2018)

**ENVIRONMENTAL CHARACTERISTICS AND E. HUXLEYI COCCOLITHS MASS AND MORPHOLOGY IN THE MEDITERRANEAN SEA DURING MEDSEA AND METEOR M84/3 CRUISES (MAY 2013, APRIL 2011)**

Barbara D’Amario; Patrizia Ziveri; Michael Greinert; Angela Maria Oriedo (2018)

## Recent Software

**LOCALISEZ: OFFLINE SEA-LEVEL LOCALIZATION CODE FOR KOPP ET AL. (2014)**

This MATLAB code is intended to help end-users who wish to work with the sea-level rise projections of Kopp et al. (2014) in greater detail.

**SOURCE CODE FOR JUNG ET AL.; GMD: PERFORMANCE EVALUATION OF ROMS V3.6 ON A COMMERCIAL CLOUD SYSTEM**

Roms ver. 3.6 (revision 783) &nbsp; source code &nbsp; accompanying the manuscript for &nbsp; GMD &nbsp; Performance evaluation of ROMS v3.6 o...

**CESL-STHM-GP: SPATIO-TEMPORAL HIERARCHICAL MODELING OF SEA-LEVEL DATA WITH GAUSSIAN PROCESSES**

This code is intended to be used to generate Gaussian process-based, spatio-temporal...
Research Community Dashboard

- Community Profile
  Edit community information, change logo url, add community managers or subjects related to community.
  Edit Community Profile

- Manage community content
  Manage projects and content providers that are related to the research community.
  Manage Projects
  Manage Content Providers
  Manage Subjects

- Statistics & Charts
  Manage statistical numbers & charts that will be displayed in the dashboard and monitor pages.
  Manage Statistics & Charts

- Claims
  Manage user claims related to the research community.
  Manage Claims

- Help texts
  Add or edit help text in research community pages.
  Add Help Texts in Pages
  Add Help Texts in Classes

OpenAIRE CONNECT
OpenAIRE-connect guidelines

Guidelines for Software Repository Managers

Provide orientation for software repository managers to define and implement their local software management policies according to the requirements of the OpenAIRE.

Intended to provide indications on how to cite software products in order to make them first citizens of the scholarly communication ecosystem.


Guidelines for Other Research Products Repository Managers

Provide orientation for repository managers to define and implement their local management policies according to the requirements of the OpenAIRE.

These guidelines are intended to provide indications on how to cite ORPs products.


Thank you!

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