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REGISTRY OF RESEARCH DATA REPOSITORIES

Rolle und Perspektive von re3data.org bei der Förderung von Open Science

Heinz Pampel, Deutsches GeoForschungsZentrum GFZ
Maxi Kindling, Humboldt-Universität zu Berlin
Frank Scholze, Karlsruher Institut für Technologie (KIT)

103. Deutscher Bibliothekartag, Bremen, 04.06.2014

GFZ Helmholtz-Zentrum Potsdam
Humboldt-Universität zu Berlin
KIT Karlsruhe Institute of Technology
DINI Medienzentren Bibliotheken Rechenzentren Wissenschaft
DFG Deutsche Forschungsgemeinschaft

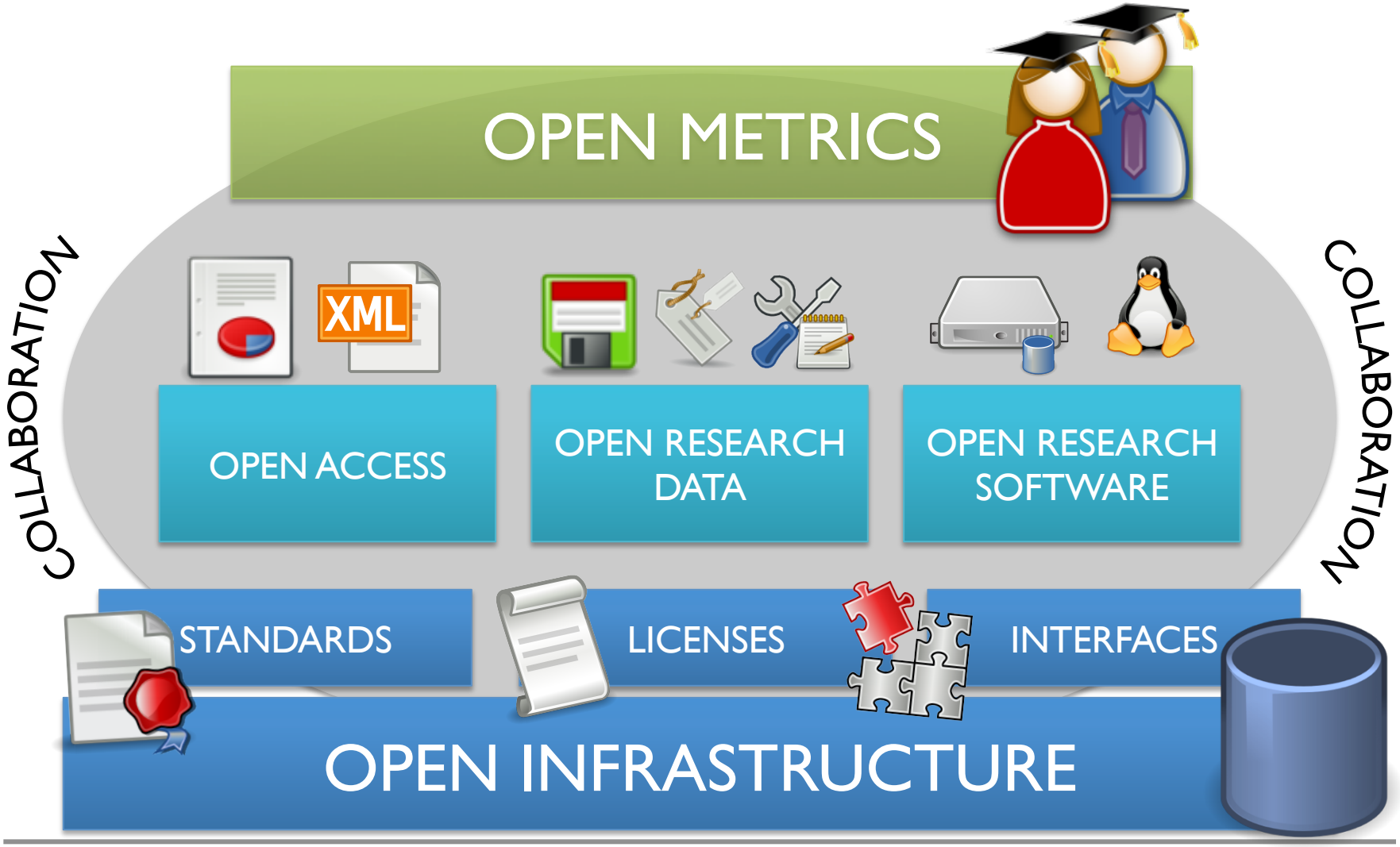
AGENDA

- Hintergrund
- re3data.org
- Kooperationen
- Perspektive

AGENDA

- **Hintergrund**
- re3data.org
- Kooperationen
- Perspektive

OPEN SCIENCE



RRZE Icon Set (CC: BY-SA)

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G8 SCIENCE MINISTERS STATEMENT

- „We are committed to openness in scientific research data to speed up the **progress** of scientific discovery, create **innovation**, ensure that the results of scientific research are as widely available as practical, enable **transparency** in science and **engage the public** in the scientific process.“

G8 Science Ministers. (2013). G8 Science Ministers Statement London UK, 12 June 2013. Retrieved from https://www.gov.uk/government/publications/g8-science-ministers-statement-london-12-june-2013

G8 SCIENCE MINISTERS STATEMENT

i. To the greatest extent and with the fewest constraints possible publicly funded scientific research data should be open, while at the same time respecting concerns in relation to privacy, safety, security and commercial interests, whilst acknowledging the legitimate concerns of private partners.

ii. Open scientific research data should be easily discoverable, accessible, assessable, intelligible, useable, and wherever possible interoperable to specific quality standards.

iii. To maximise the value that can be realised from data, the mechanisms for delivering open scientific research data should be efficient and cost effective, and consistent with the potential benefits.

iv. To ensure successful adoption by scientific communities, open scientific research data principles will need to be underpinned by an appropriate policy environment, including recognition of researchers fulfilling these principles, and appropriate digital infrastructure.

DATA POLICIES: FÖRDERER

- HORIZON 2020

29.3 Open access to research data

***[OPTION for actions participating in the open Research Data Pilot**: Regarding the digital research data generated in the action ('**data**'), the beneficiaries must:*

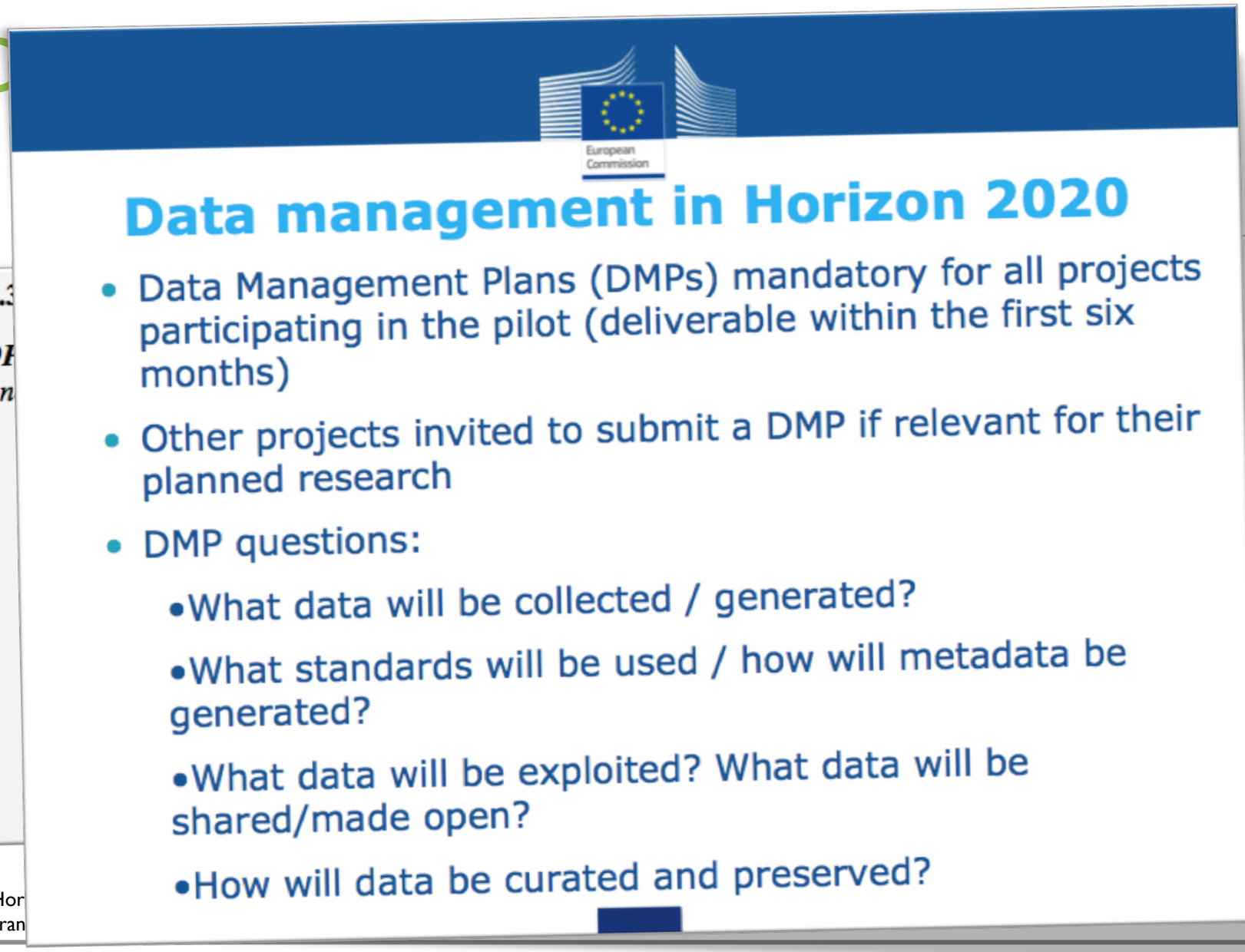
(a) deposit in a research data repository and take measures to make it possible for third parties to access, mine, exploit, reproduce and disseminate — free of charge for any user — the following:

(i) the data, including associated metadata, needed to validate the results presented in scientific publications as soon as possible;

*(ii) other data, including associated metadata, as specified and within the deadlines laid down in the '**data management plan**' (see Annex 1);*

(b) provide information — via the repository — about tools and instruments at the disposal of the beneficiaries and necessary for validating the results (and — where possible — provide the tools and instruments themselves).

Horizon 2020 Annotated Model Grant Agreements. Version 1.6. 2 May 2014. Retrieved from http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/amga/h2020-amga_en.pdf



Spichtinger, D & Ramjoué, C. (2014): Open Access and the Open Research Data Pilot in H2020. EC Seminar. Retrieved from http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?action=display&doc_id=4602

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DATA POLICIES: JOURNALS

- Nature
  - „Data sets must be made freely available to readers from the date of publication, and must be provided to editors and peer-reviewers at submission, for the purposes of evaluating the manuscript.“
- PLOS
  - „When submitting a manuscript online, authors must provide a Data Availability Statement describing compliance with PLOS's policy.“

Nature Policy: http://www.nature.com/authors/policies/availability.html;
Nature: Reporting Checklist For Life Sciences Articles: http://www.nature.com/authors/policies/checklist.pdf
PLOS Policy: http://www.plos.org/data-access-for-the-open-access-literature-ploss-data-policy/
PLOS Editorial and Publishing Policies: http://www.plosone.org/static/policies#sharing

HINTERGRUND

Investigators are expected to share their data!

funders

research data repositories

Underlying data must be accessible!

journals

Where can I store my data?

Where can I find data?

scientists

Should we offer repositories for all disciplines?

universities and research labs

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REGISTRY OF RESEARCH DATA REPOSITORIES

Agenda

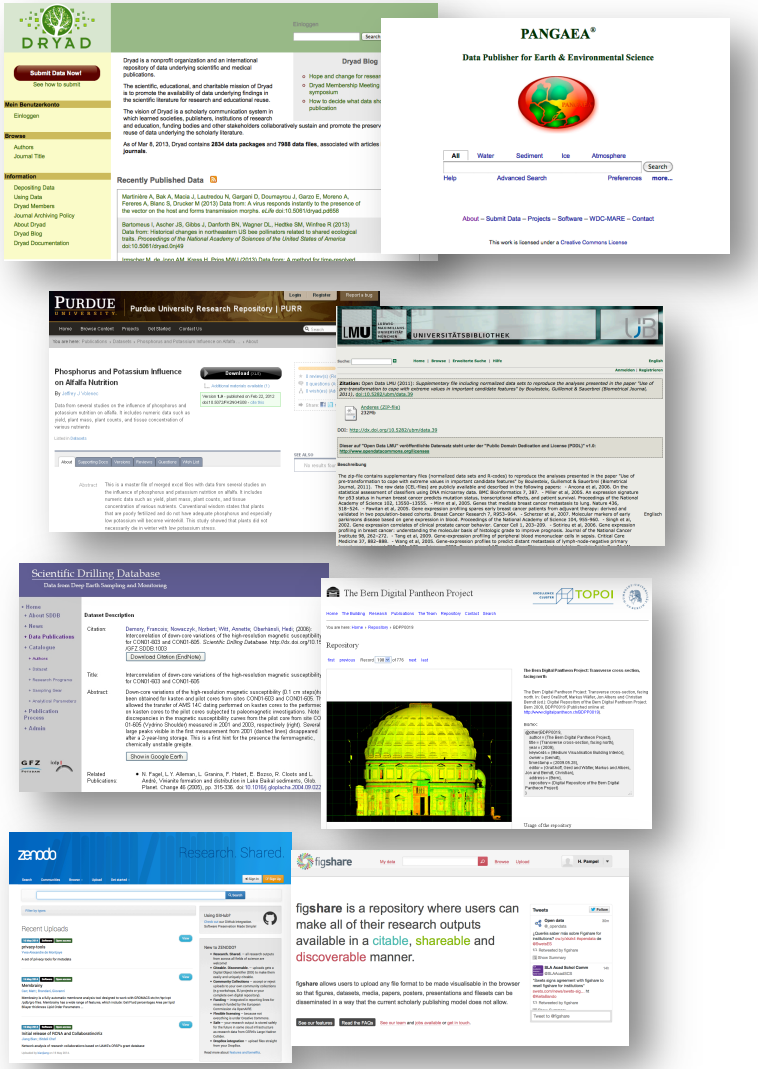
- Hintergrund
- **re3data.org**
- Kooperationen
- Perspektive

HINTERGRUND

- Die Landschaft der Forschungsdaten-Repositorien ist äußerst heterogen.
- Es gibt deutliche Unterschiede zur Landschaft der OA-Repositorien, die durch die Open Archives Initiative (OAI) geprägt ist.
- Forschungsdaten-Repositorien sind häufig durch Fach-Communities und deren Infrastrukturanbieter geprägt.
- Ein Forschungsdaten-Repositorium ist eine Informationsinfrastruktur, die das Ziel verfolgt, Forschungsdaten möglichst dauerhaft zugänglich zu machen.
- Ausrichtung und Services variieren stark

TYPEN VON DATEN-REPOSITORIEN

- Disziplinäre Repositorien
- Institutionelle Repositorien
- Projekt Repositorien
- Multidisziplinäre Repositorien



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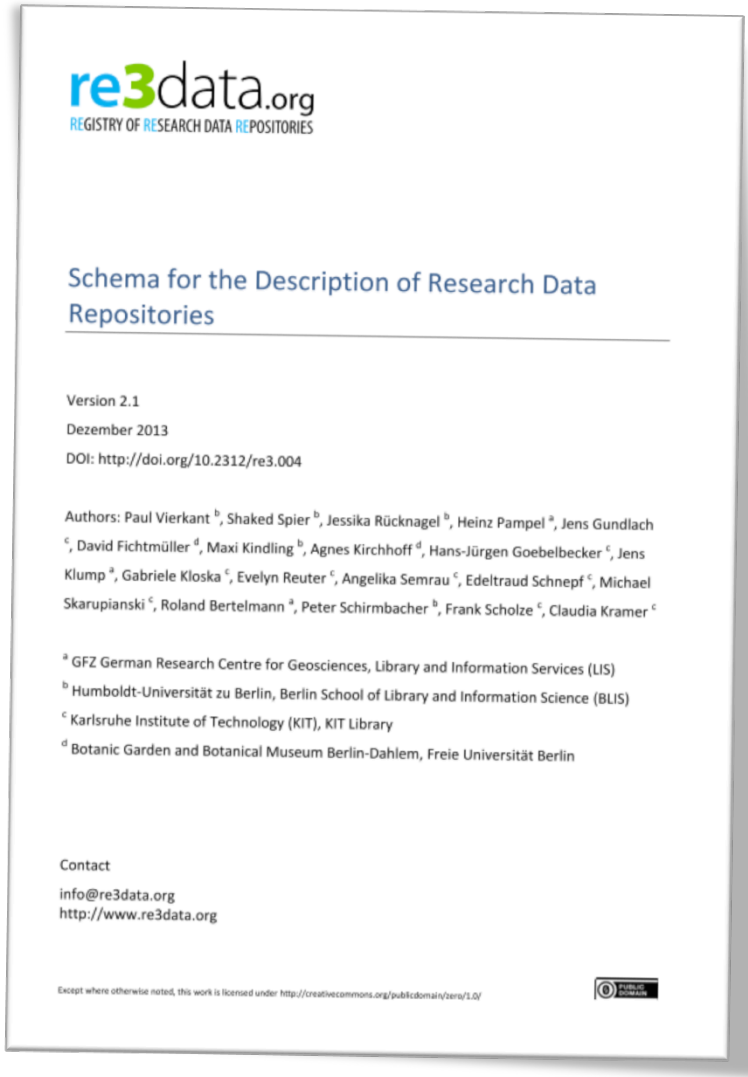
SCHEMA

- Version 1.0 (2012)
  - Resultat einer Bestandsaufnahme
  - http://doi.org/10.2312/re3.001
- Version 2.0 (2012)
  - Ergebnis einer öffentlichen Konsultation
  - http://doi.org/10.2312/re3.002
  - http://www.re3data.org/schema/2-0/
- Version 2.1 (2013)
  - Zusammenarbeit mit Kooperationspartnern
  - http://doi.org/10.2312/re3.004
  - http://www.re3data.org/schema/2-1/
- Neue Version in Arbeit (2014)



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Schema for the Description of Research Data Repositories

Version 2.1

Dezember 2013

DOI: http://doi.org/10.2312/re3.004

Authors: Paul Vierkant [b], Shaked Spier [b], Jessika Rücknagel [b], Heinz Pampel [a], Jens Gundlach [c], David Fichtmüller [d], Maxi Kindling [b], Agnes Kirchhoff [d], Hans-Jürgen Goebelbecker [c], Jens Klump [a], Gabriele Kloska [c], Evelyn Reuter [c], Angelika Semrau [c], Edeltraud Schnepf [c], Michael Skarupianski [c], Roland Bertelmann [a], Peter Schirmbacher [b], Frank Scholze [c], Claudia Kramer [c]

[a] GFZ German Research Centre for Geosciences, Library and Information Services (LIS)
[b] Humboldt-Universität zu Berlin, Berlin School of Library and Information Science (BLIS)
[c] Karlsruhe Institute of Technology (KIT), KIT Library
[d] Botanic Garden and Botanical Museum Berlin-Dahlem, Freie Universität Berlin

Contact

info@re3data.org
http://www.re3data.org

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Vierkant, P., et al. (2013). Schema for the Description of Research Data Repositories. Version 2.1. doi:10.2312/re3.004

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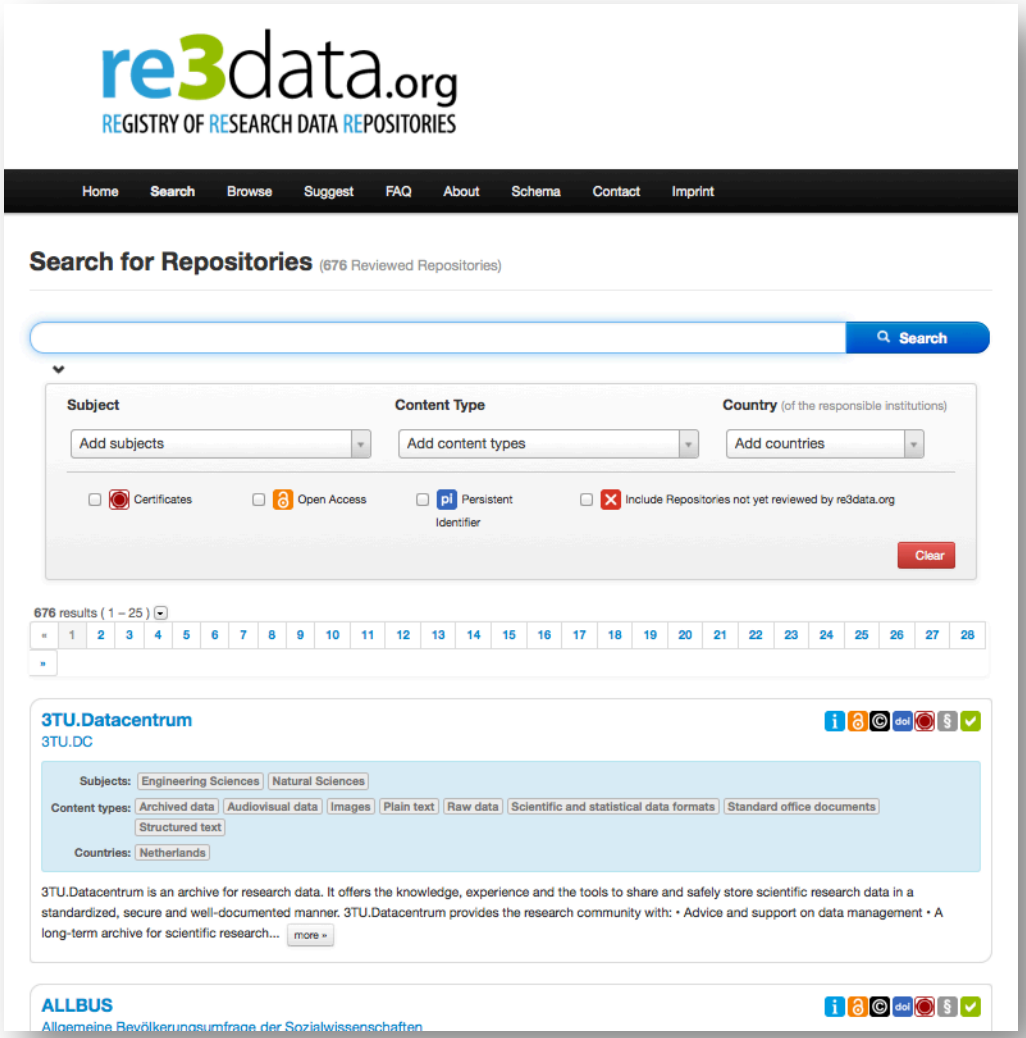
REGISTRY: SEARCH



Pampel, H. et al. (2013). Making Research Data Repositories Visible: The re3data.org Registry. PLOS ONE, 8(11), e78080. doi: 10.1371/journal.pone.0078080

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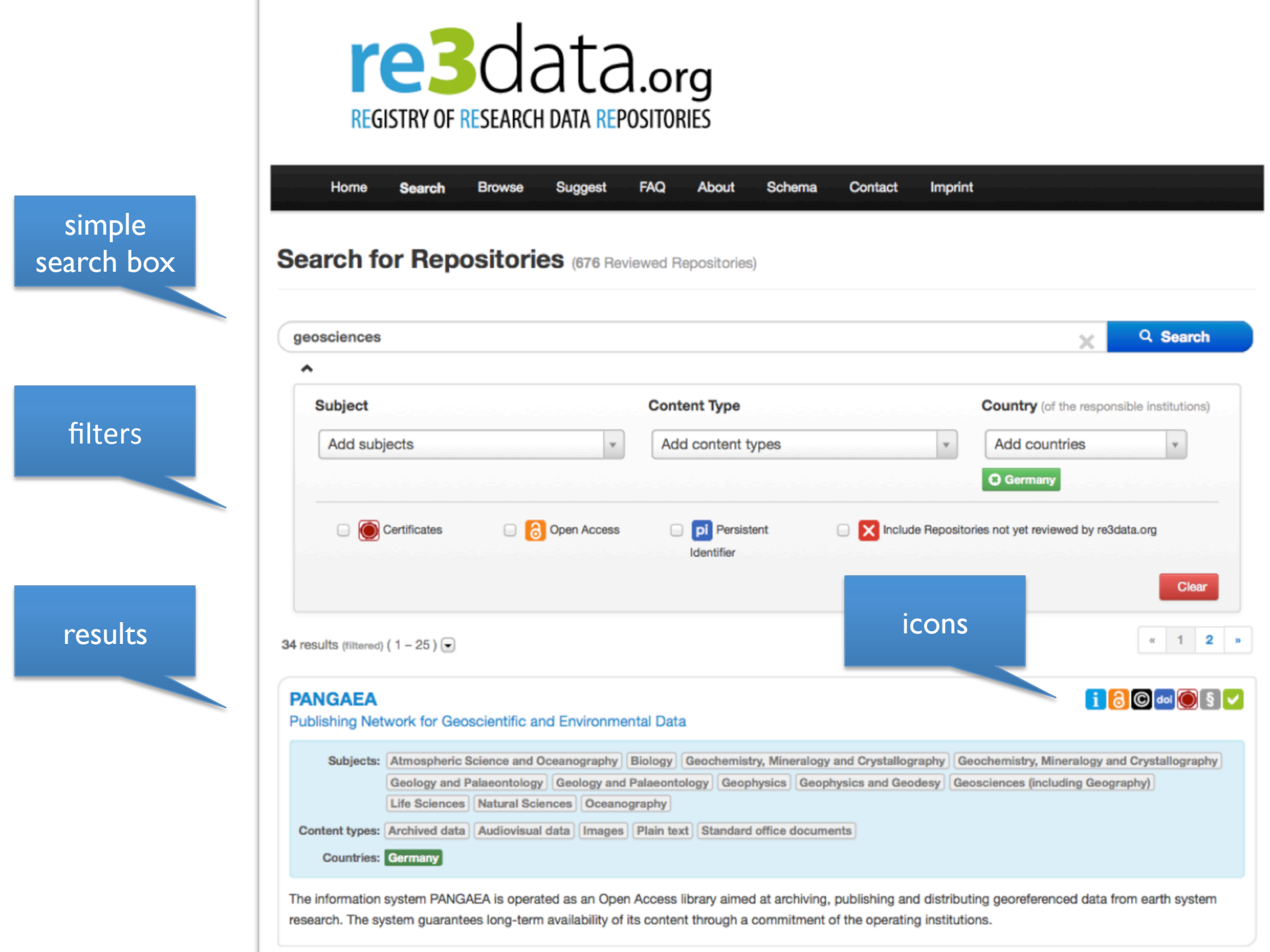
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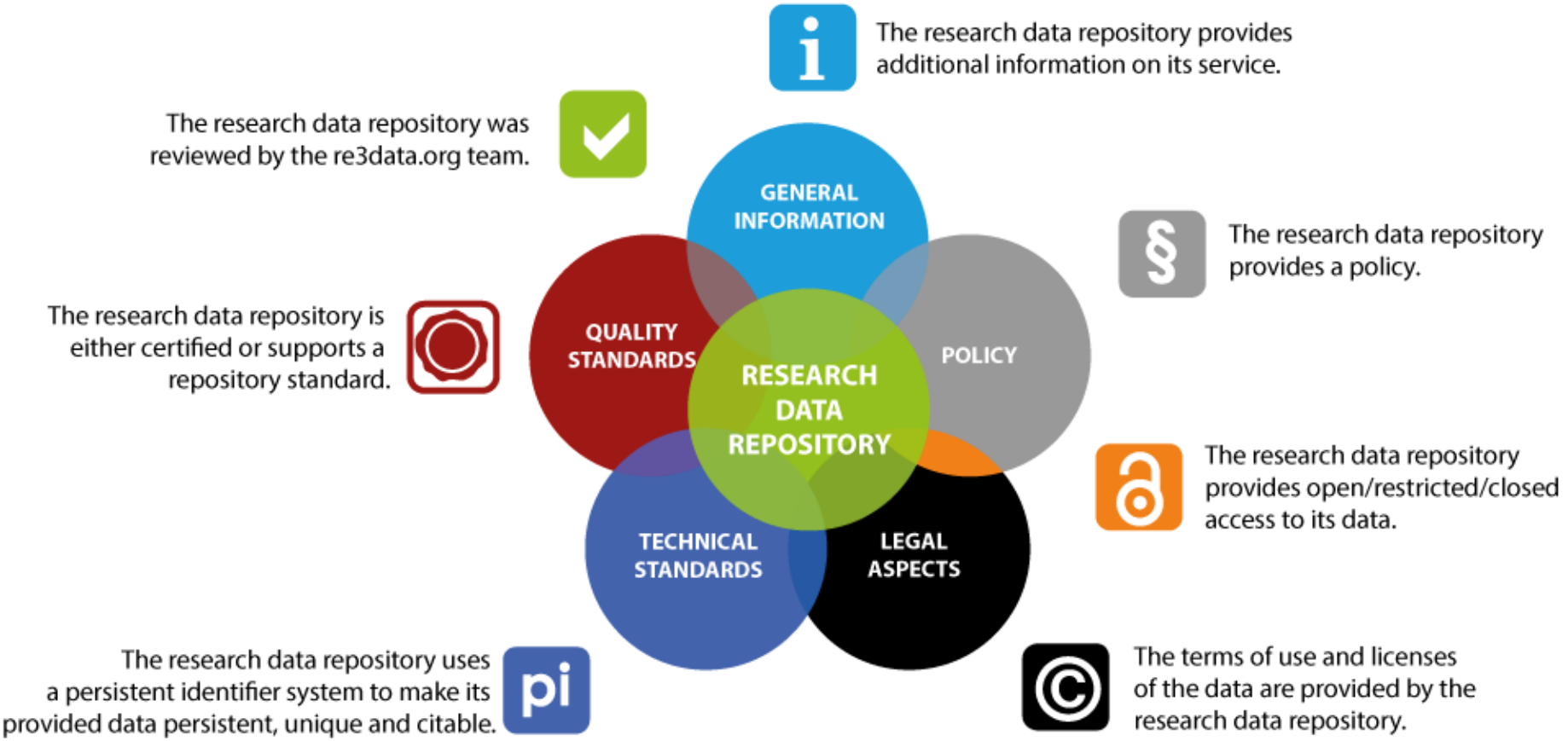
Imprint
Search for Repositories (676 Reviewed Repositories)
geosciences
Search
Subject
Add subjects
Content Type
Add content types
Country (of the responsible institutions)
Add countries
Germany
Certificates
Open Access
Persistent Identifier
Include Repositories not yet reviewed by re3data.org
Clear
34 results (filtered) (1 – 25)
« 1 2 »
PANGAEA
Publishing Network for Geoscientific and Environmental Data
Subjects: Atmospheric Science and Oceanography | Biology | Geochemistry, Mineralogy and Crystallography | Geochemistry, Mineralogy and Crystallography | Geology and Palaeontology | Geology and Palaeontology | Geophysics | Geophysics and Geodesy | Geosciences (including Geography) | Life Sciences | Natural Sciences | Oceanography
Content types: Archived data | Audiovisual data | Images | Plain text | Standard office documents
Countries: Germany
The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.
simple search box
filters
results
icons

ASPEKTE & ICONS



Pampel, H. et al. (2013). Making Research Data Repositories Visible: The re3data.org Registry. PLOS ONE, 8(11), e78080. doi:10.1371/journal.pone.0078080

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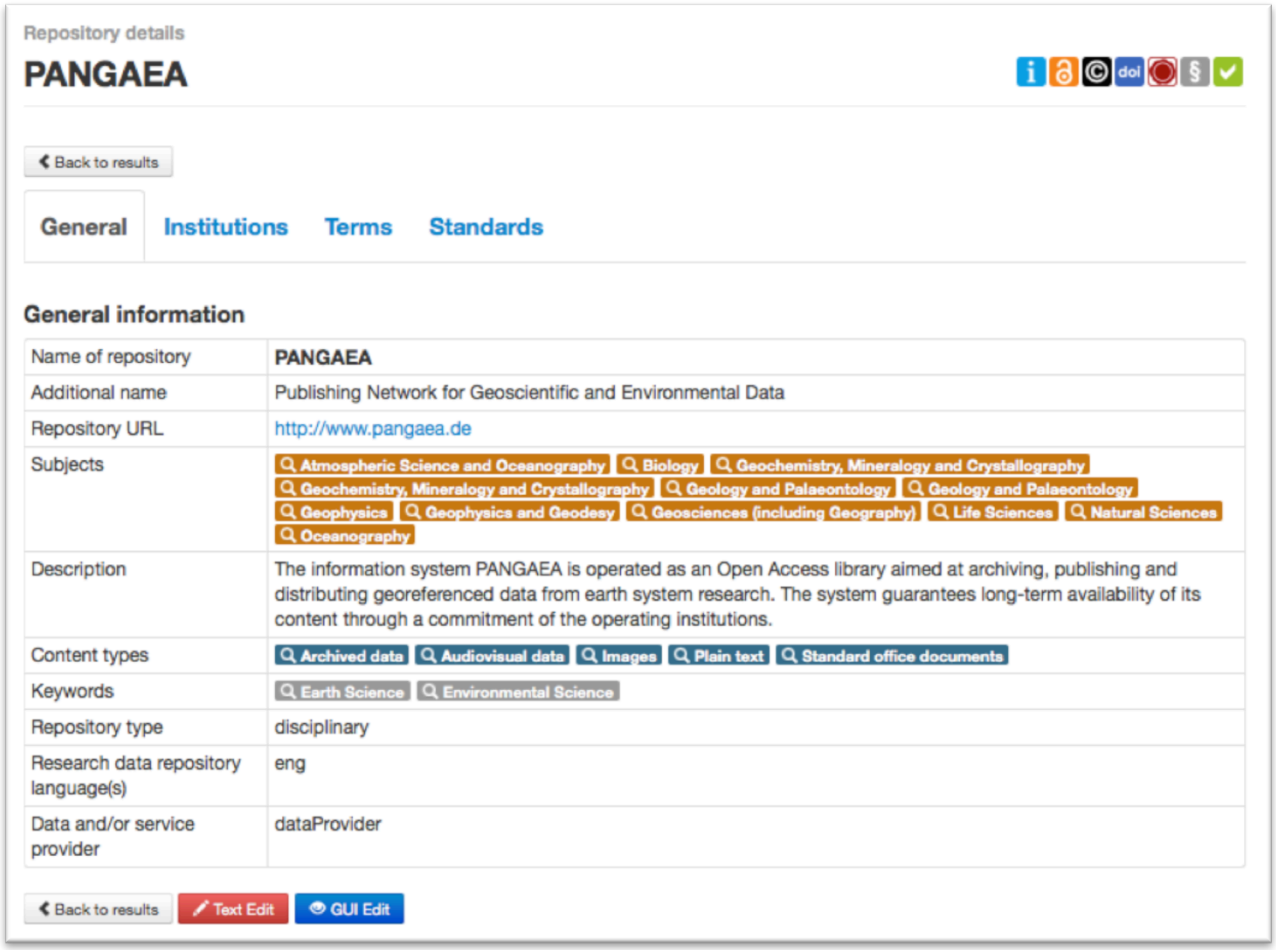
QUALITÄT

- Requirements
  - be run by a legal entity, such as a sustainable institution (e.g. library, university)
  - clarify access conditions to the data and repository as well as the terms of use
  - have an English graphical user interface (GUI)
  - have focus on research data

Vierkant, P., et al. (2013). Schema for the Description of Research Data Repositories. Version 2.1. doi:10.2312/re3.004

REGISTRY: DETAILED DESCRIPTION



Repository details

PANGAEA

Back to results

General | Institutions | Terms | Standards

General information

Name of repository	**PANGAEA**
Additional name	Publishing Network for Geoscientific and Environmental Data
Repository URL	http://www.pangaea.de
Subjects	Atmospheric Science and Oceanography; Biology; Geochemistry, Mineralogy and Crystallography; Geochemistry, Mineralogy and Crystallography; Geology and Palaeontology; Geology and Palaeontology; Geophysics; Geophysics and Geodesy; Geosciences (including Geography); Life Sciences; Natural Sciences; Oceanography
Description	The information system PANGAEA is operated as an Open Access library aimed at archiving, publishing and distributing georeferenced data from earth system research. The system guarantees long-term availability of its content through a commitment of the operating institutions.
Content types	Archived data; Audiovisual data; Images; Plain text; Standard office documents
Keywords	Earth Science; Environmental Science
Repository type	disciplinary
Research data repository language(s)	eng
Data and/or service provider	dataProvider

Back to results | Text Edit | GUI Edit

Repository details

PANGAEA

Back to results

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Research data repository language(s)	eng
Data and/or service provider	dataProvider

Back to results | Text Edit | GUI Edit

Repository details

PANGAEA

Back to results

General | Institutions | Terms | Standards

Responsible institutions (2)

Institution name	**Alfred Wegener Institute for Polar and Marine Research**
Additional name	AWI Alfred-Wegener-Institut Helmholtz-Zentrum für Polar- und Meeresforschung
URL	http://www.awi.de/en/home/
Contact	hgrobe@pangaea.de
Country	Germany
Type(s) of responsibility	general technical
Type of institution	non-profit

Institution name	**Center for Marine Environmental Sciences (MARUM)**
URL	http://www.marum.de/
Contact	mdiepenbroek@pangaea.de
Country	Germany
Type(s) of responsibility	general
Type of institution	non-profit

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Repository details

PANGAEA

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General | Institutions | Terms | Standards

Terms (1)

Policy name	**Data policy of the information system PANGAEA**
URL	http://www.pangaea.de/curator/files/pangaea-data-policy.pdf

Legal aspects

Database access

Type of access to research data repository	open

Data access

Type of access to data	open

Data licences (1)

License name	**CC**
License URL	http://wiki.pangaea.de/wiki/License

Data upload

Type of data upload	restricted
Data upload restriction type	registration
Data upload license name	Data Submission
Data license URL	http://wiki.pangaea.de/wiki/Data_submission

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Repository details

PANGAEA

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General | Institutions | Terms | Standards

Standards

Name of the repository software	other
Versioning	yes
Persistent identifier system	DOI
Data citation guideline	http://wiki.pangaea.de/wiki/Citation
Quality management	yes
Certificates and Standards	WDS

Application programming interfaces (1)

API type	OAI-PMH
URL	http://ws.pangaea.de/oai/

Alerting services (1)

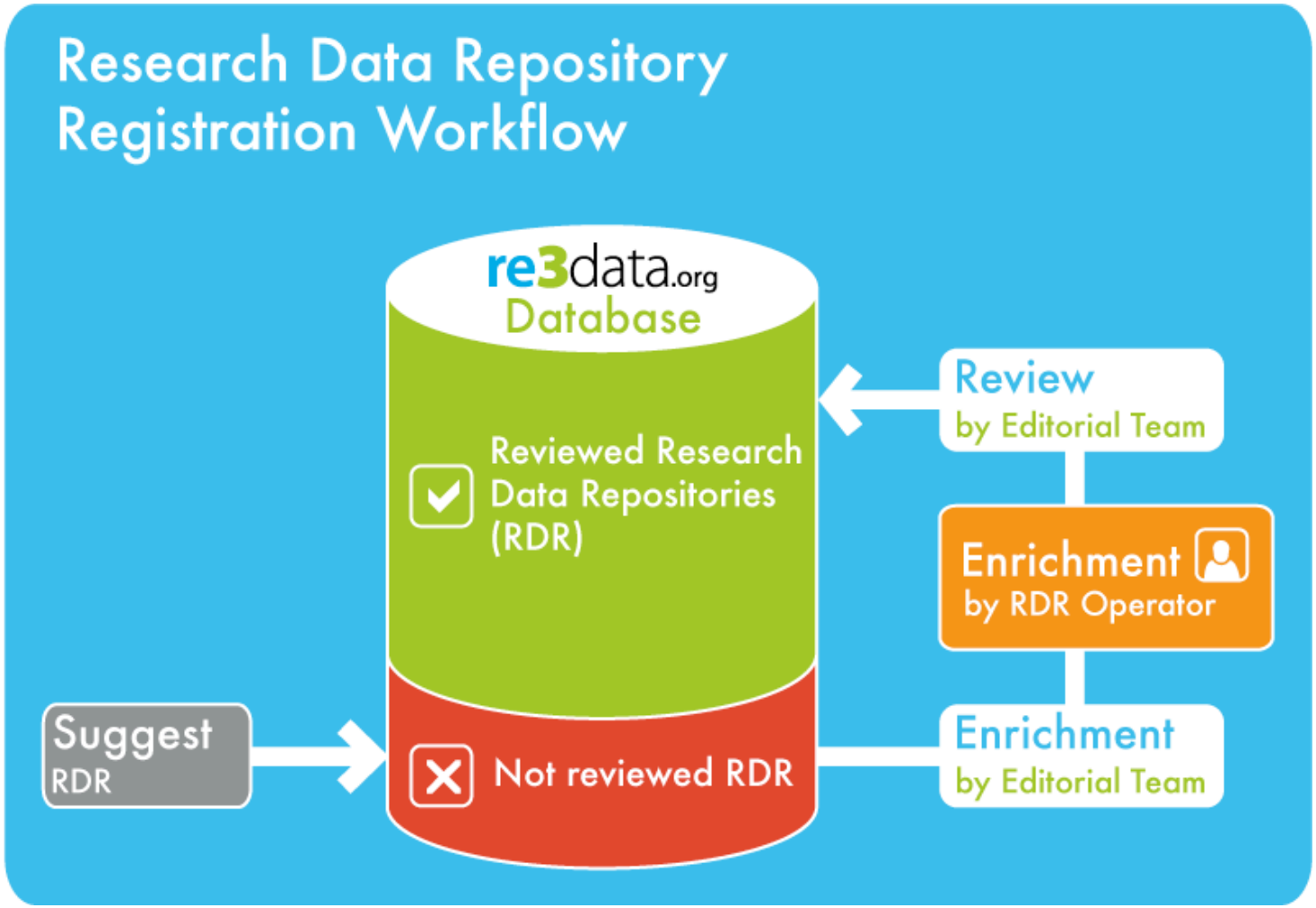
Type of alerting service	RSS
Alerting service	http://www.pangaea.de/tools/latest-datasets.rss

Remarks

Remarks	Data of World Data Center for Marine Environmental Sciences (WDC-MARE) are available via the data library PANGAEA which will be operated as a member of the new WDS (World Data System)
Entry date	2012-07-16
Last update	2014-04-14

Back to results | Text Edit | GUI Edit

WORKFLOW



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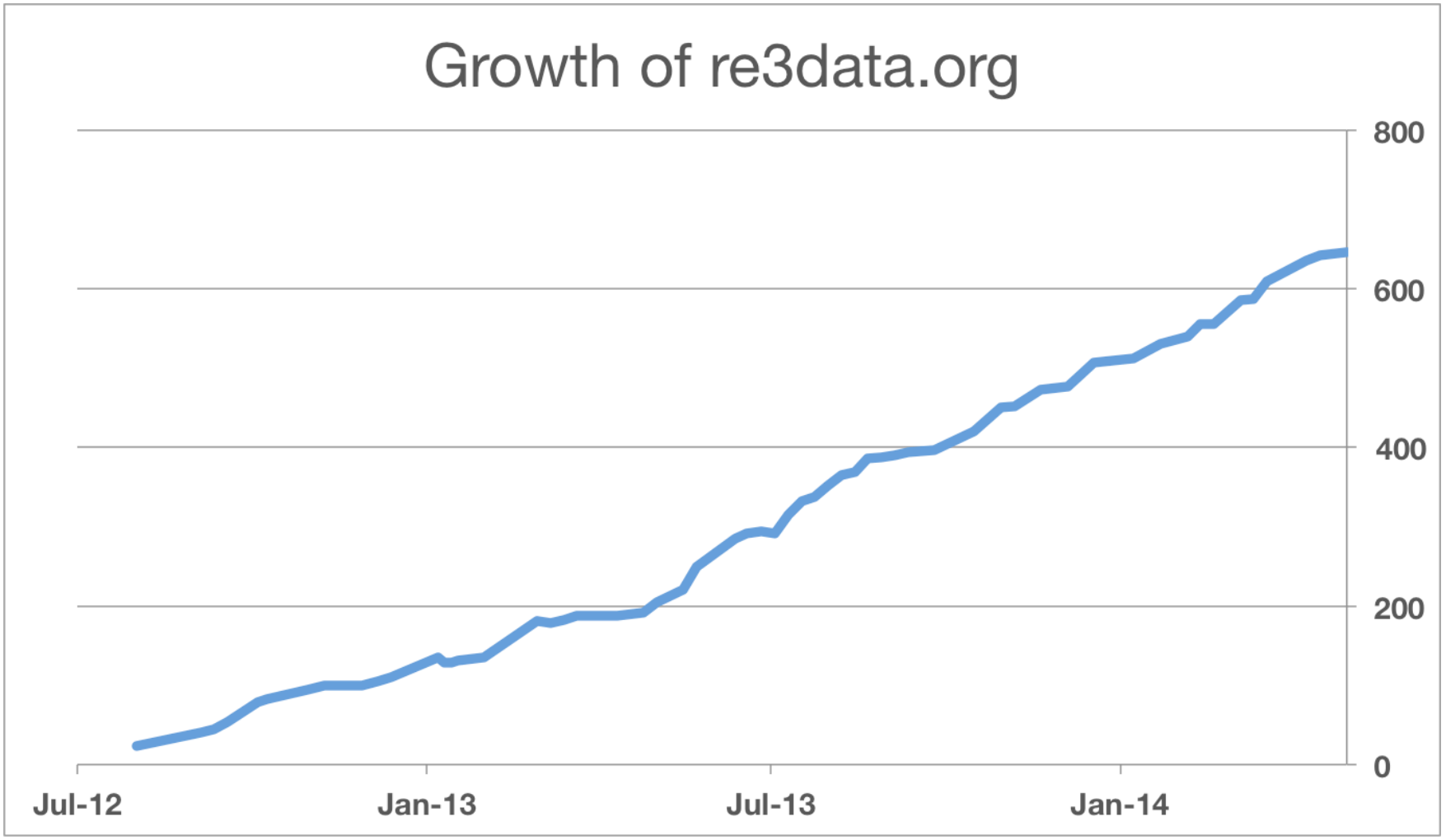
WACHSTUM

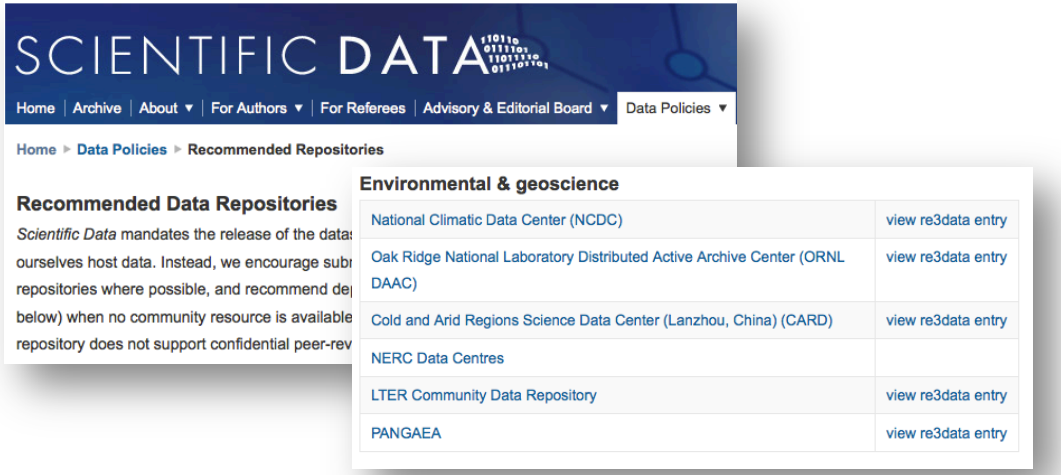

Growth of re3data.org
800
600
400
200
0
Jul-12
Jan-13
Jul-13
Jan-14

AGENDA

- Hintergrund
- re3data.org
- **Kooperationen**
- Perspektive

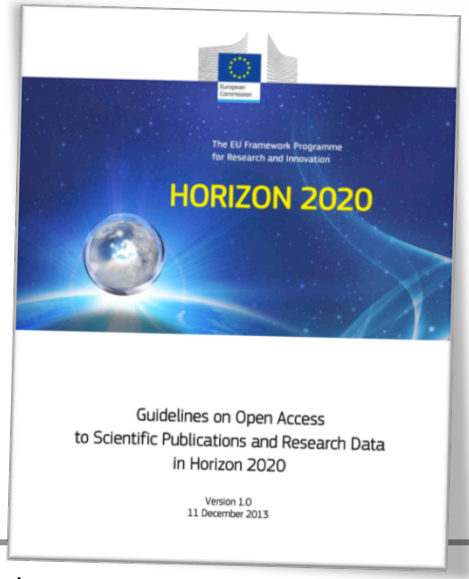
VERANKERUNG IN DATA POLICIES

- Journals
  - Copernicus Publications
  - PeerJ
  - Nature
  - Springer



http://www.nature.com/sdata/data-policies/repositories

- Institutionen und Förderer
  - EC: HORIZON 2020
  - Diverse Hochschulen
  - FWF
  - Gouvernement du Québec



European Commisson. (2013). Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020. Retrieved from http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

VERANKERUNG IN DATA POLICIES

- Journals
  -
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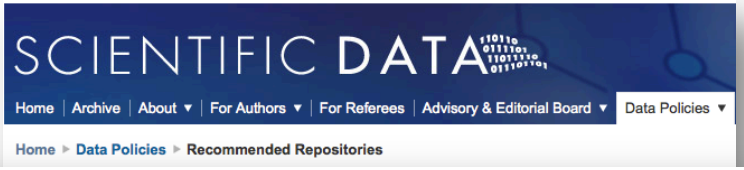
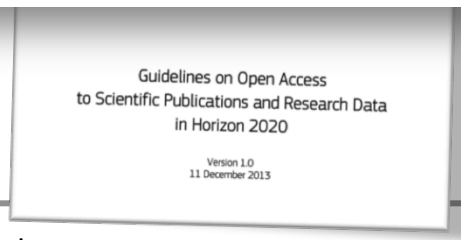
- In
  -
  -
  - FWF
  - Gouvernement du Québec



Environmental & geoscience

National Climatic Data Center (NCDC)	view re3data entry
Oak Ridge National Laboratory Distributed Active Archive Center (ORNL DAAC)	view re3data entry
Cold and Arid Regions Science Data Center (Lanzhou, China) (CARD)	view re3data entry
NERC Data Centres	
LTER Community Data Repository	view re3data entry
PANGAEA	view re3data entry


Guidelines on Open Access
to Scientific Publications and Research Data
in Horizon 2020

Version 1.0
11 December 2013

European Commisson. (2013). Guidelines on Open Access to Scientific Publications and Research Data in Horizon 2020. Retrieved from http://ec.europa.eu/research/participants/data/ref/h2020/grants_manual/hi/oa_pilot/h2020-hi-oa-pilot-guide_en.pdf

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REGISTRY OF RESEARCH DATA REPOSITORIES

PARTNER

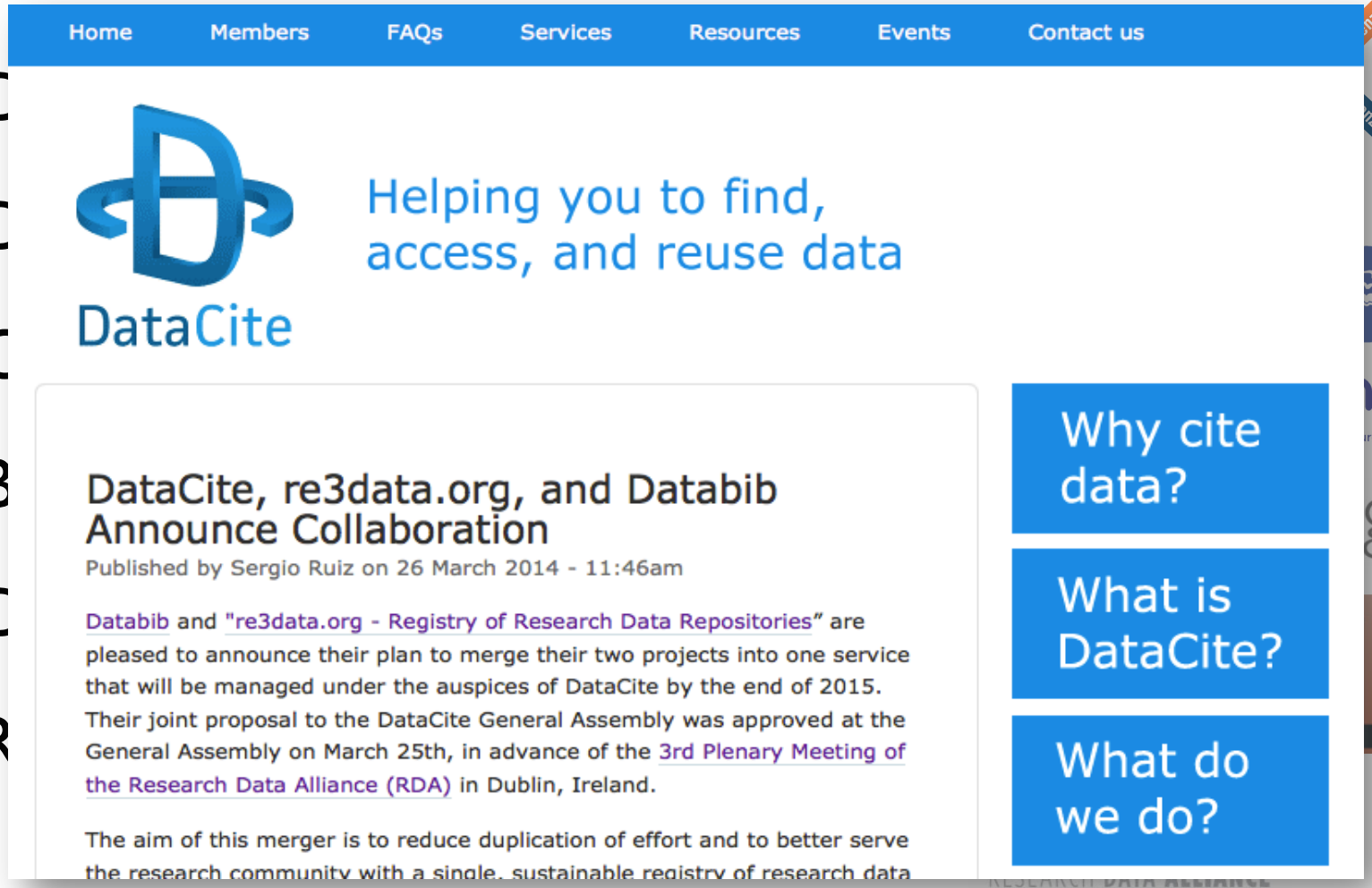
- Deutsche Initiative für Netzwerkinformation
- DataCite (MoU, April 2012)
- OpenAIRE (MoU, Oktober 2013)
- BioSharing (MoU, November 2013)
- Databib (MoU, März 2014)
- RDA/WDS IG on Certification

OpenAIRE
Open Access Infrastructure for Research in Europe

biosharing

PARTNER

- D
- D
- C
- B
- D
- R



Databib und re3data.org

- Fünf Prinzipien der Zusammenarbeit
  1. Openness
  2. Optimal quality assurance
  3. Development of innovative functionalities
  4. Shared leadership
  5. Sustainability
- Kooperation unter dem Dach von DataCite

http://www.re3data.org/2014/03/datacite-re3data-org-databib-collaboration/

AGENDA

- Hintergrund
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- Kooperationen
- **Perspektive**

NÄCHSTE SCHRITTE

- Zusammenschluss mit Databib unter dem Dach von DataCite
- Einbindung des Databib Editorial Boards
- Technischen Unterstützung des gesamten Workflows
- Entwicklung von Schnittstellen (u.a. RESTful API)
- Weitere Indexierung von Repositories
- Entwicklung von Guidelines für Repositorienbetreiber
- Weiterentwicklung des Wikis Forschungsdaten.org

BETEILIGTE PERSONEN

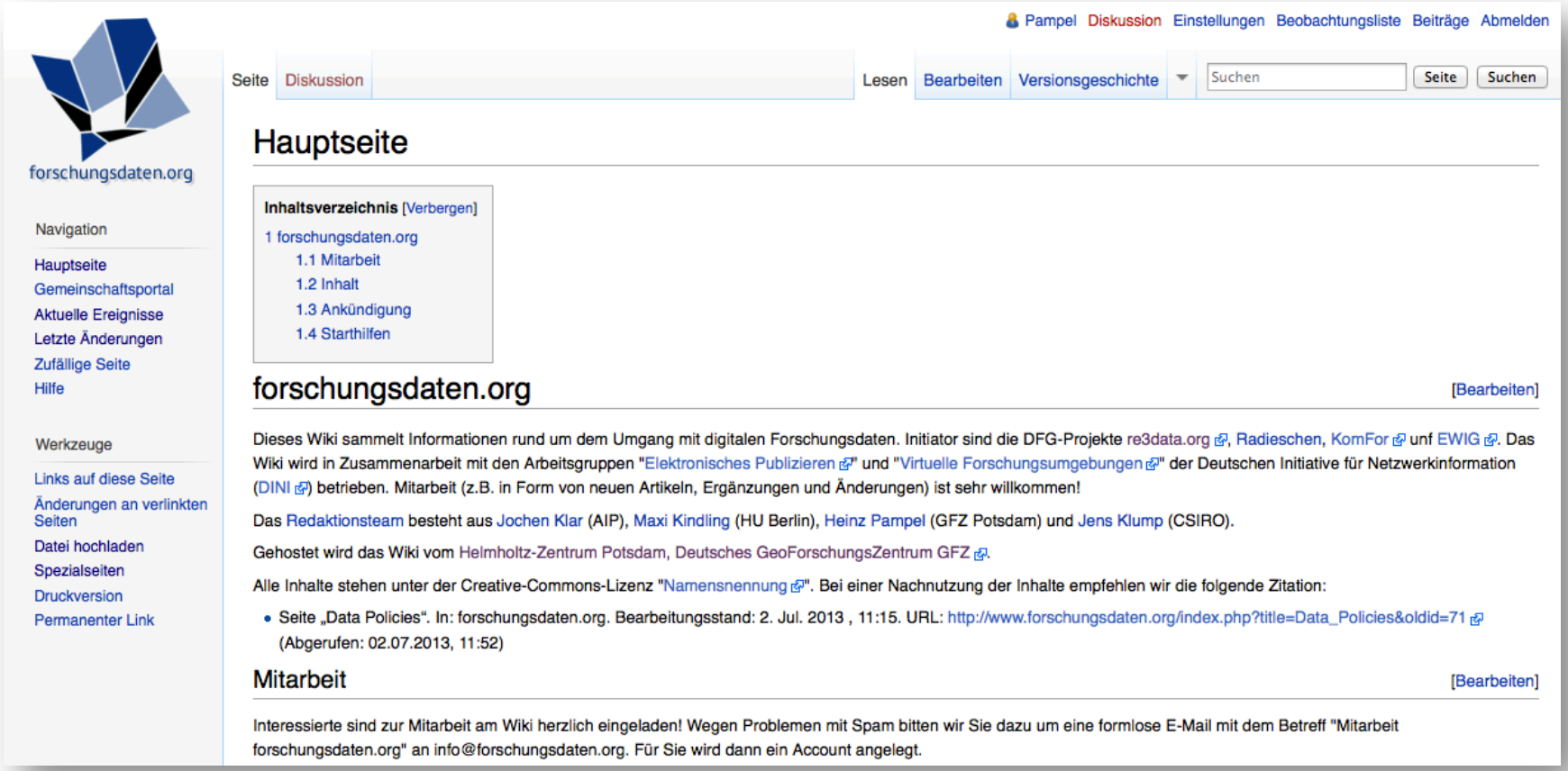
- Bertelmann, R. [a]; Goebelbecker, H.-J. [c]; Gundlach, J. [c]; Kindling, M. [b]; Kloska, G. [c]; Klump, J. [a]; Kramer, C. [c]; Pampel, H. [a]; Reuter, E. [c]; Rücknagel, J. [b]; Schirmbacher, P. [b]; Schnepf, E. [c]; Scholze, F. [c]; Semrau, A. [c]; Skarupianski, M. [c]; Spier, S. [b]; Vierkant, P. [b]; Witt, M. [d]

a GFZ German Research Centre for Geosciences, Library and Information Services (LIS)

b Humboldt-Universität zu Berlin, Berlin School of Library and Information Science (BLIS)

c Karlsruhe Institute of Technology (KIT), KIT Library

d Purdue University, Distributed Data Curation Center (D2C2)



http://www.forschungsdaten.org

Danke für Ihre Aufmerksamkeit!

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DINI

DFG Deutsche Forschungsgemeinschaft