Forschungsergebnisse dauerhaft zugänglich machen

Strategien und Erfahrungen am GFZ

e-Infrastructures Austria Workshop
Österreichische Akademie der Wissenschaften
Wien, 08.06.2015

Heinz Pampel
Dr. Kirsten Elger
Deutsches GeoForschungsZentrum GFZ

AGENDA

- Deutsches GeoForschungsZentrum GFZ
- Publikationsmanagement & Verlagsdienstleistungen
- Publikation von Forschungsdaten
- Fazit

GFZ

- Deutsches GeoForschungsZentrum GFZ
- Mitglied der Helmholtz-Gemeinschaft
- Stiftung des öffentl. Rechts
- Gegründet 1992
- 1.180 Beschäftigte (03/2015)
- Jahresbudget 85 Mio. EUR (2014)

GFZ-KERNKOMPETENZEN

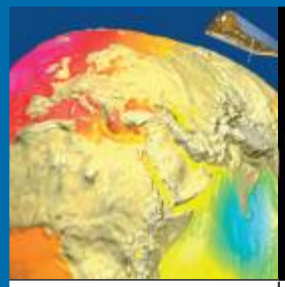
- Erdsystem-Analyse (inkl. Experimente, Modelle)
  - Geodäsie und Fernerkundung
  - Physik der Erde
  - Geologische Systeme
  - Chemie der Erde
  - Geomorphologie, Geohydrologie und Paläoklimatologie
- Erdsystem-Beobachtung (inkl. Datenzentren)
  - MESI (Modular Earth Science Infrastructure)
  - Erdsystem-Observatorien (z. B. Chile, Zentralasien, TERENO-Nordost)
- Erdsystem-Management (Technologietransfer)
  - Zentrum für geologische Speicherung
  - Internationales Geothermiezentrum
  - Zentrum für Frühwarnsysteme
  - Zentrum für Geoinformationstechnologie

HELMHOLTZ-ZENTRUM

Energy	**Earth and Environment**	Health	Key Technologies	Structure of Matter	Aeronautics, Space and Transport

Programmes within research field „Earth and Environment"

Renewable Energies

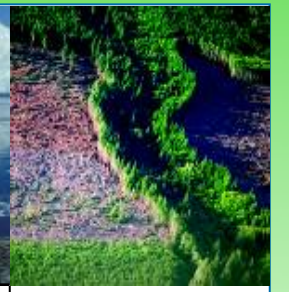


Geosystem: The Changing Earth

Atmosphere and Climate

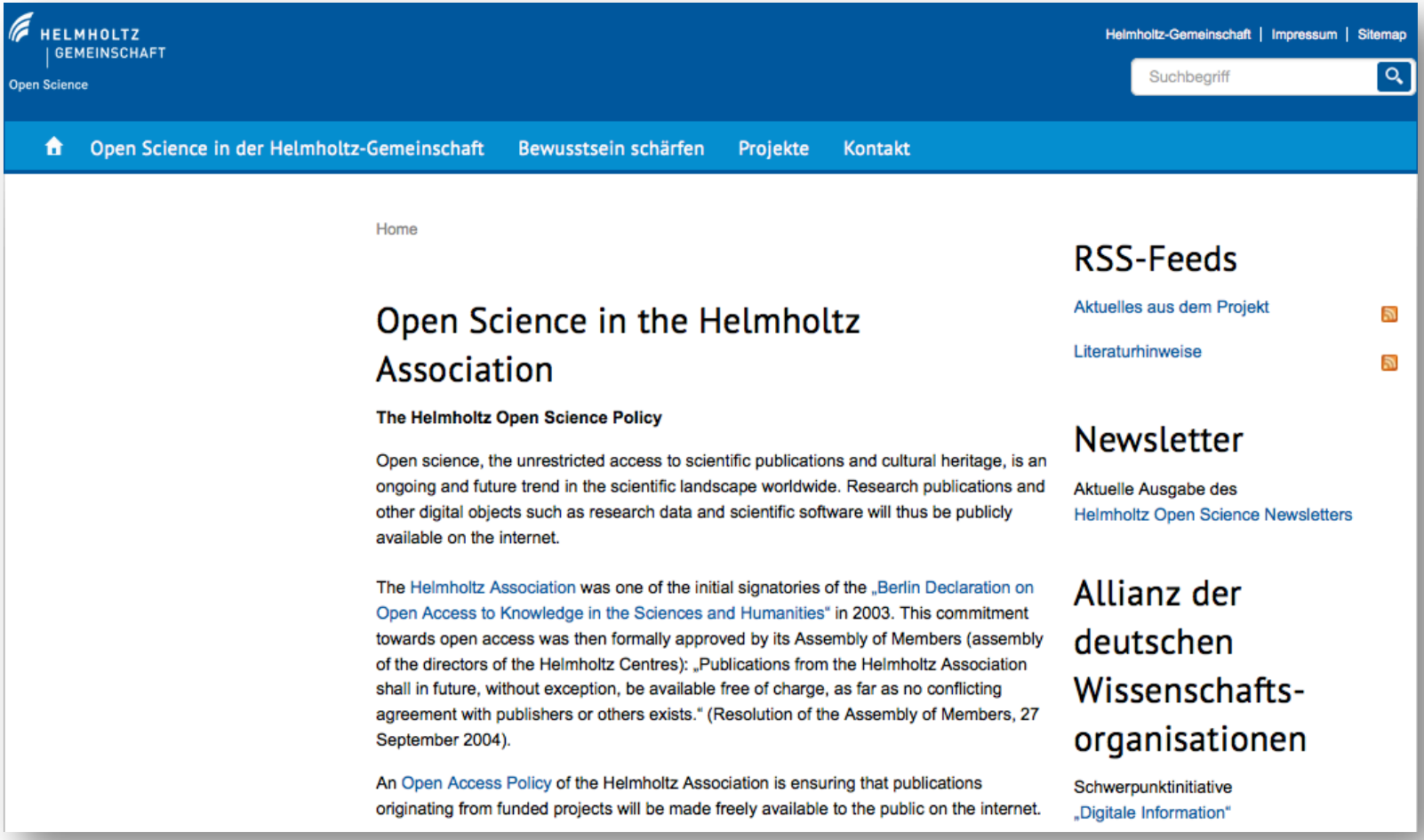
Oceans

Marine, Coastal and Polar Systems



Terrestrial Environment

HELMHOLTZ-ZENTRUM



DATEN AM GFZ

GFZ
Helmholtz-Zentrum
POTSDAM

Volltextsuche

Startseite | | | Datenschutz | Impressum | Intranet/Profil | English

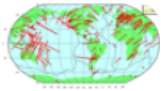
Helmholtz-Zentrum Potsdam
Deutsches
GeoForschungsZentrum

Zentrum | Forschung | Wissenschaftliche Infrastruktur | Karriere | Medien & Kommunikation

- Überblick
- Daten & Instrumente (ME-SI)
  - Instrumentensysteme
  - Datensysteme
- Observatorien
- Labore
- Bohranlage InnovaRig
- Trainingszentrum GeoLab
- Rechenzentrum
- Zentralwerkstatt

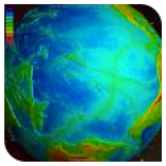
Startseite ▸ Wissenschaftliche Infrastruktur ▸ Daten & Instrumente (MESI) ▸ Datensysteme

Datensysteme



Internationale GNSS-Dienste, IGS

Das das GFZ betreibt ein Analysezentrum des "International GNSS Service (IGS)". Die erzeugten Daten eines global verteilten Netzes von mehr als 200 Stationen dienen einer Vielzahl von wissenschaftlichen und operationellen Anwendungen und der Bereitstellung und Aufrechterhaltung des "Internationalen Terrestrischen Referenzsystem (ITRF)". Dieses System bildet die Basis für alle Geo-Referenzierungen, für die Überwachung von tektonischen Bewegungen (einschließlich Meeresspiegeländerungen), die Erfassung des Erdrotationsparameters (ERPs) und das Atmosphären-Monitoring. Derzeit werden die Navigationssysteme GPS, GLONASS und Galileo in die Analysen einbezogen.
Zum IGS>>



Internationales Zentrum für Globale Erdmodelle, ICGEM

Die Hauptaufgabe des "International Centre for Global Earth Models" (ICGEM) Hauptaufgabe des ICGEM besteht darin, alle globalen Schwerefeldmodelle der Erde, sowohl die historischen als auch die neuesten, allgemein zugänglich zu machen. Die Modelle liegen in Form von Kugelfunktionskoeffizienten vor und werden in einem standardisierten Format bereit gestellt. Sie können von der ICGEM-Seite heruntergeladen werden und auch per interaktivem Visualisierungstool sowie in einem speziellen Service zur Berechnung verschiedener Funktionale des Schwerefeldes genutzt werden.
Zum ICGEM>>

Internationaler Laser Ranging Dienst, ILRS

Das GFZ betreibt ein Analysezentrum des „International Laser Ranging Service" (ILRS). Routinemäßig

COPDESS STATEMENT

COPDESS

Coalition on Publishing Data in the Earth and Space Sciences

Search ...

RECENT POSTS

COPDESS Statement of Commitment

RECENT COMMENTS

COPDESS Statement of Commitment | COPDESS on Links to Author & Grantee Instructions, Data Policies, and Position Statements

Xiaogang Ma on COPDESS Statement of Commitment

Peter Baumann on Coalition for Publishing Data in the Earth

COPDESS Statement of Commitment

Statement of Commitment from Earth and Space Science Publishers and Data Facilities

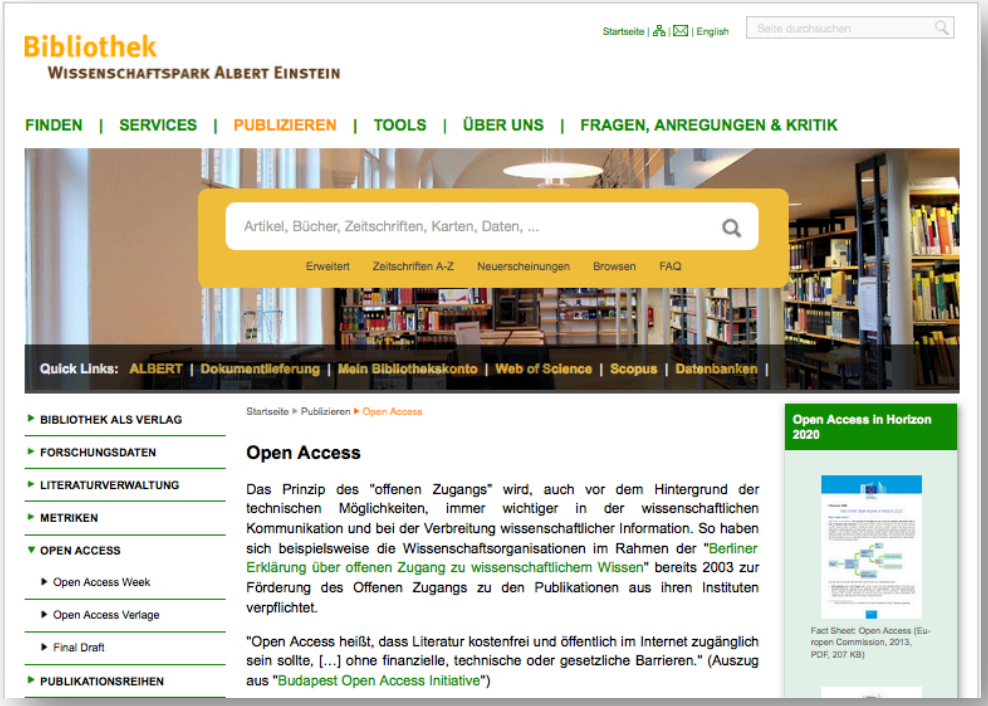
Coalition on Publishing Data in the Earth and Space Sciences

Earth and space science data are special resources, critical for advancing science and addressing societal challenges – from assessing and responding to natural hazards and climate change, to use of energy and natural resources, to managing our oceans, air, and land. The need for and value of open data have been encoded in major Earth and space science society position statements, foundation initiatives, and more recently in statements and directives from governments and funding agencies in the United States, United Kingdom, European Union, Australia, and elsewhere. This statement of commitment signals important progress and a continuing commitment by publishers and data facilities to enable open data in the Earth and space sciences.

http://www.copdess.org/statement-of-commitment/

LEITBILD

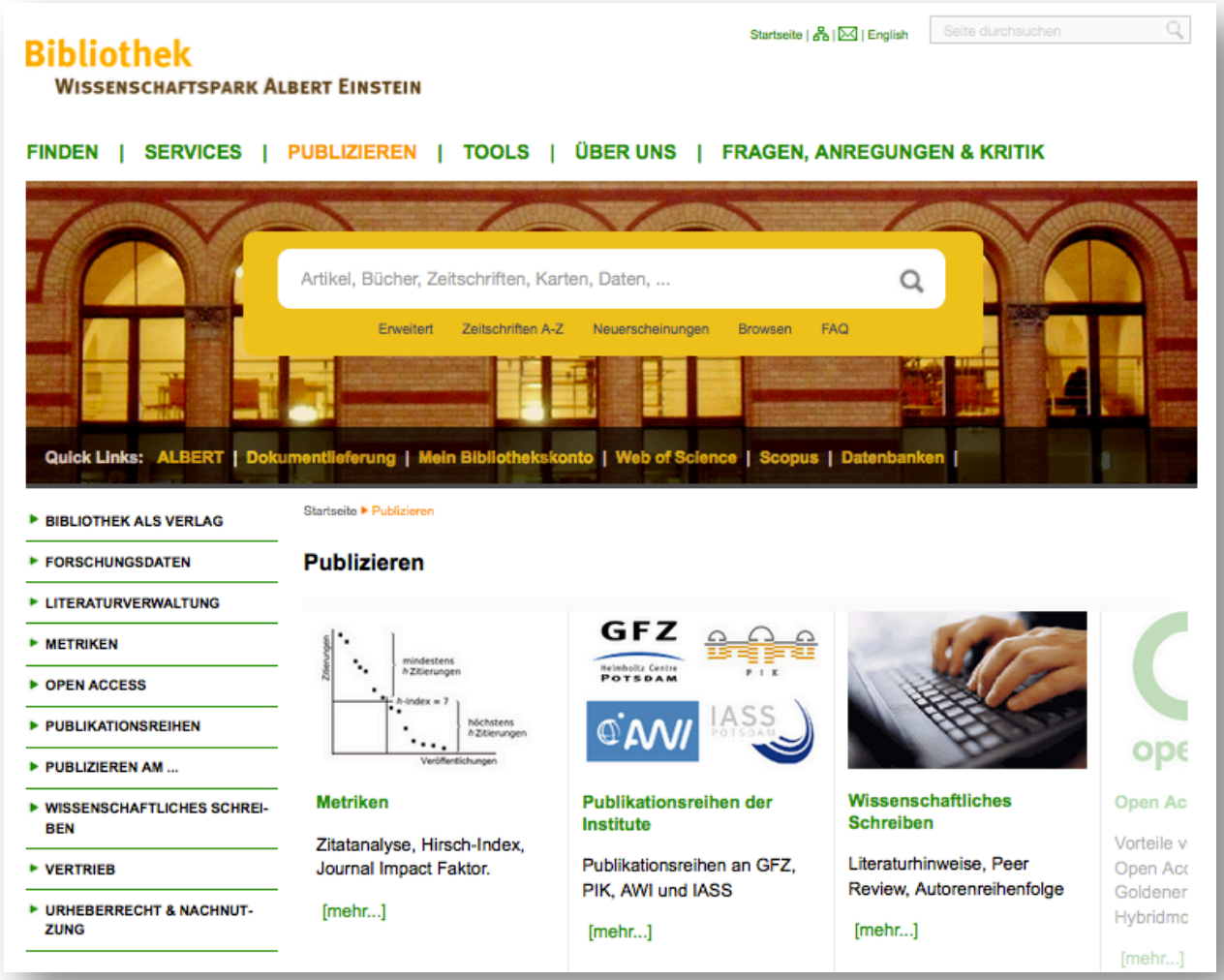
- Auszug:
  - „Wir bekennen uns zu den Prinzipien eines offenen Umgangs mit Wissen, Ergebnissen und Technologien.“



POLICY

- Richtlinien für wissenschaftliche Veröffentlichungen
  - Offener Zugang zu wissenschaftlichem Wissen
    - „Das GFZ unterstützt die ‚Berliner Erklärung über den offenen Zugang zu wissenschaftlichem Wissen'."
  - Dokumentation und weitere Publikation
    - „Die Erfassung der Metadaten der Veröffentlichungen erfolgt durch die Sektionen mittels der dazu eingerichteten Datenbank der Bibliothek. "
    - „Die elektronischen Publikationen des GFZ werden frei zugänglich unter einer Creative-Commons-Lizenz publiziert."
    - „Forschungsdaten sollen so offen wie möglich zugänglich gemacht werden. Wo immer möglich soll der Weg der zitierbaren Datenpublikation genutzt werden."

PUBLIKATIONSMANAGEMENT

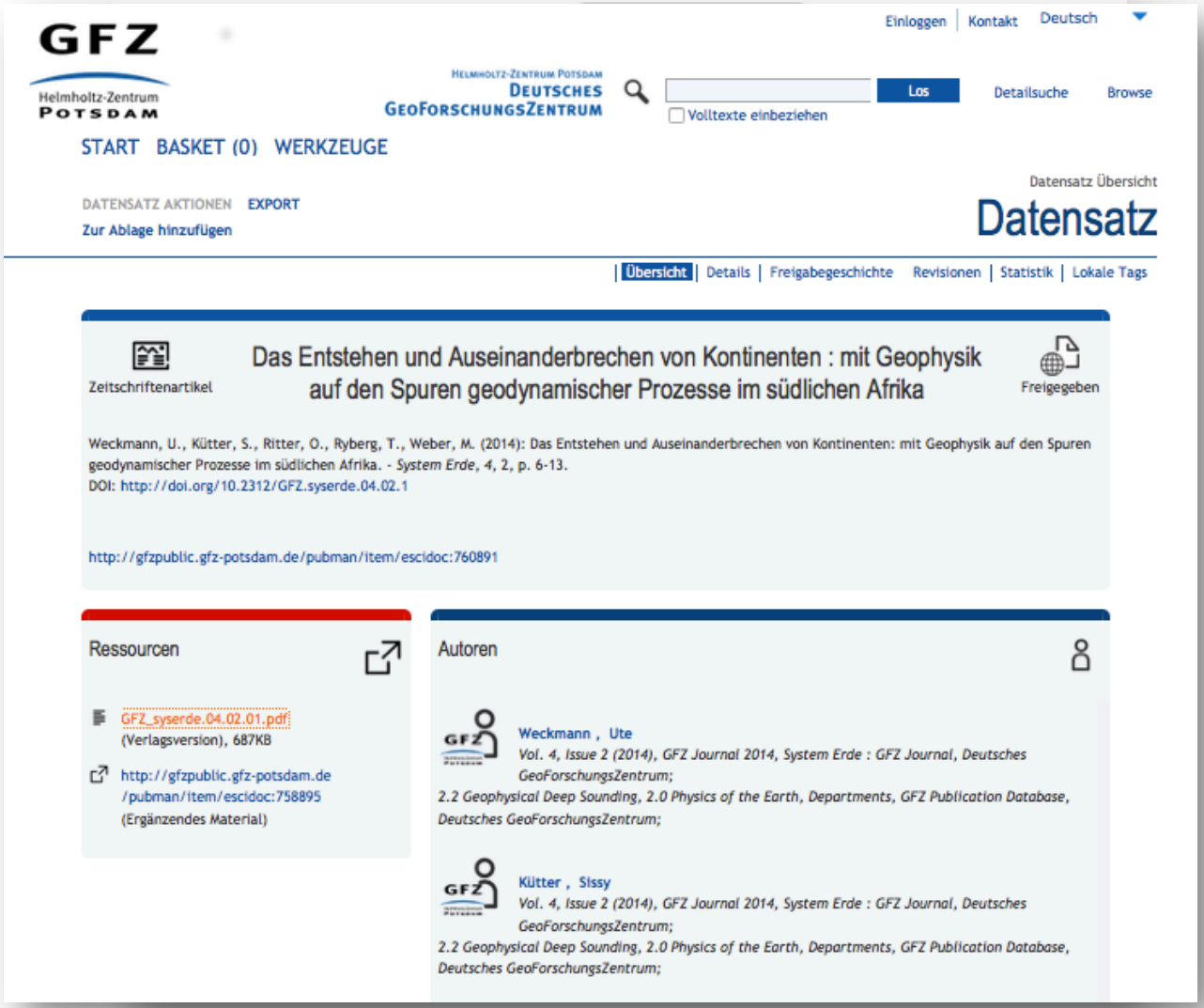


ROLLE DER BIBLIOTHEK

- Ansprechpartner für Forschende rund um alle Angelegenheiten des Publizierens
- Publikationsmanagement
  - Dokumentation und Sichtbarmachung aller Veröffentlichungen
- Dienstleistungen rund um Open Access
  - Open-Access-Repository
  - Open-Access-Verlag
  - Umgang mit Open-Access-Publikationsgebühren (APCs)
- Kompetenzentwicklung im Rahmen von diversen Drittmittelprojekten
- Mitarbeit und Interessenvertretung in internationalen, nationalen und disziplinären Gremien

OPEN-ACCESS-VERLAG

OPEN-ACCESS-VERLAG



http://doi.org/10.2312/GFZ.syserde.04.02.1

OPEN-ACCESS-VERLAG

GFZ
Helmholtz-Zentrum
POTSDAM

START BASKET

DATENSATZ AKTIONE
Zur Ablage hinzufüge

Zeitschriftenartikel

Weckmann, U., Kütte
geodynamischer Proz
DOI: http://doi.org/1

http://gfzpublic.gfz-p

Ressourcen

GFZ_syserde.04.0
(Verlagsversion),

http://gfzpublic.
/pubman/item/e
(Ergänzendes Mat

Deutsch

Detailsuche Browse

Datensatz Übersicht

atensatz

Statistik | Lokale Tags

Freigegeben

f den Spuren

atabase,

atabase,

Das Entstehen und Auseinanderbrechen von Kontinenten

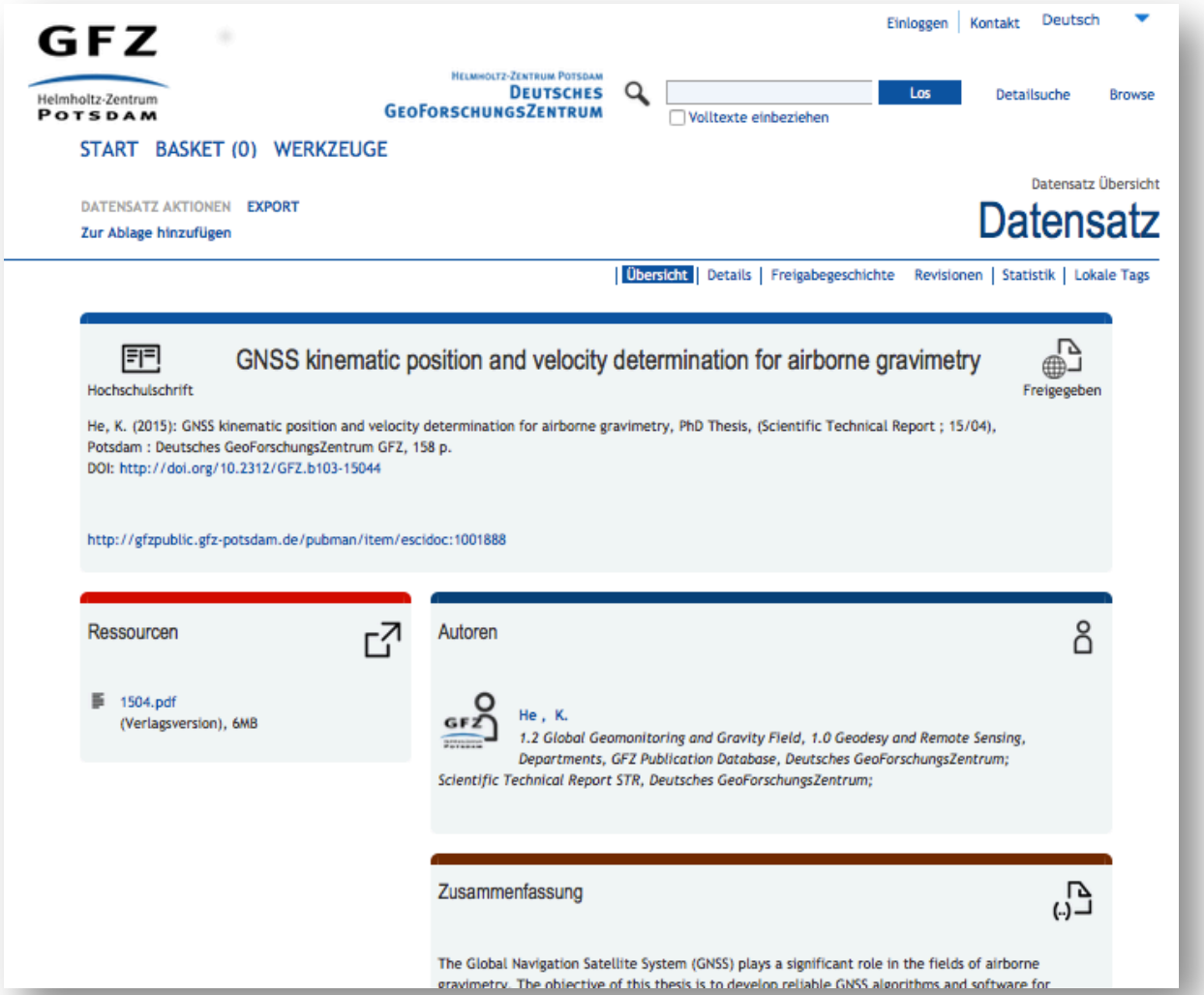
Mit Geophysik auf den Spuren geodynamischer Prozesse im südlichen Afrika

Ute Weckmann, Sissy Kütter, Oliver Ritter, Trond Ryberg, Michael Weber
Deutsches GeoforschungsZentrum GFZ, Potsdam

Southern Africa in particular is a very special natural laboratory for a journey through the Earth's geo-archive. We can study tectonic processes on Early Earth as well as continental collision and breakup; and we learn how and why the African continent was blessed with mineral resources, such as diamonds or gold. With the beginning of the 20th century, geoscientists have started to set up observatories in South Africa to record earthquakes (since 1910) or conduct magnetic national surveys (Beattie, 1909). In Africa these geo-scientific pioneers found an ideal environment to study different tectonic units such as Cratons – ancient nuclei of continents, younger fold and orogenic belts as well as sediment basins and to investigate and classify their physical properties. The physical parameters applied were (i) elastic properties of rocks, which can be resolved using seismic and seismological observations and which allow to infer density information of rock formations, (ii) electrical conductivities which can be sensed using geo-electric, magnetotelluric (MT) und magnetometer-array measurements, (iii) magnetic properties, i.e. the ability of rocks to get magnetized, und (iv) the density of rocks which can directly be measured using gravity. The geophysics groups of the German Research Centre for Geosciences (GFZ) have been very active in South Africa since 2004 and have studies imprints of past continental collisions in the Earth crust and mantle along several traverses.

http://doi.org/10.2312/GFZ.syserde.04.02.1

OPEN-ACCESS-VERLAG

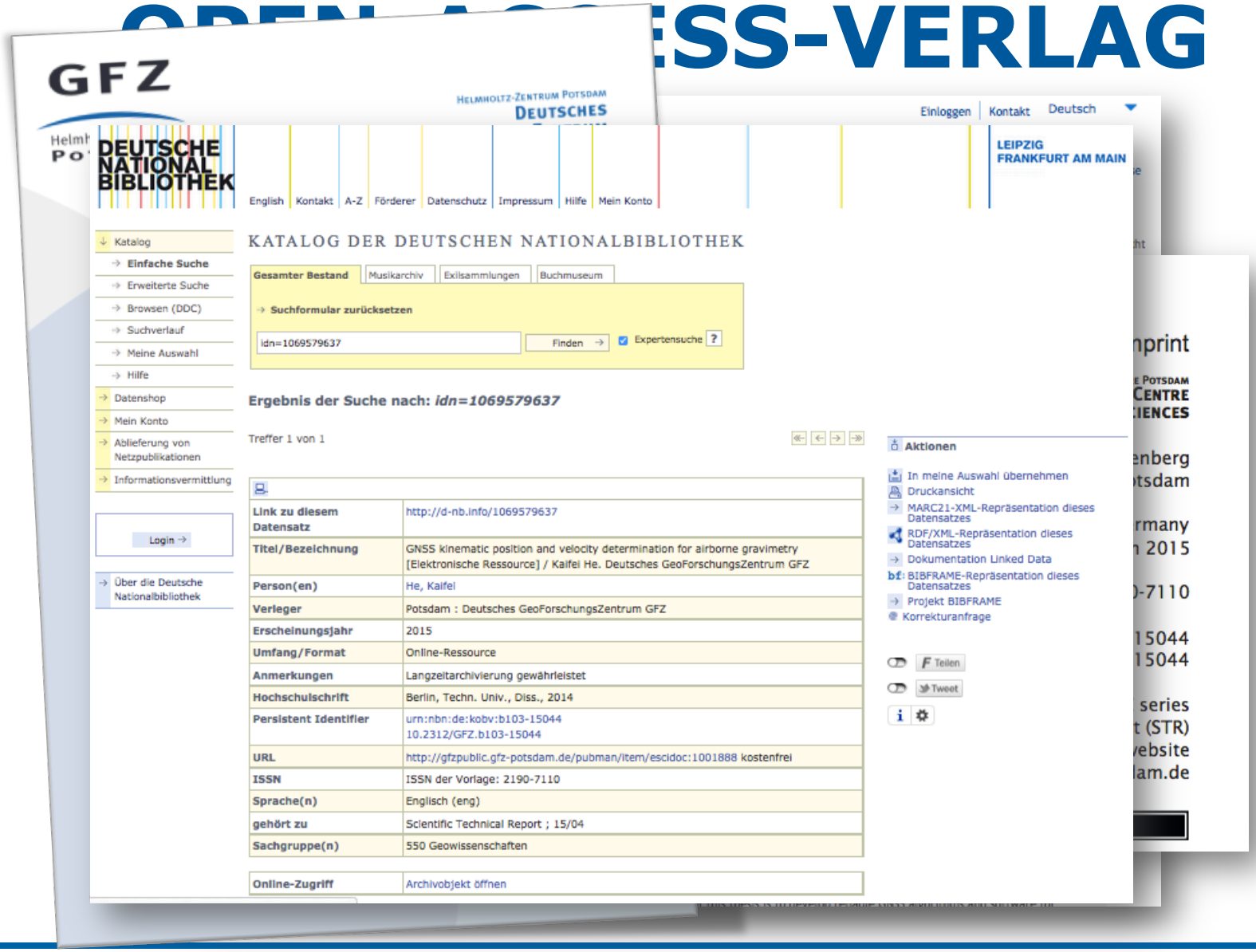


OPEN ACCESS-VERLAG

http://doi.org/10.2312/GFZ.b103-15044

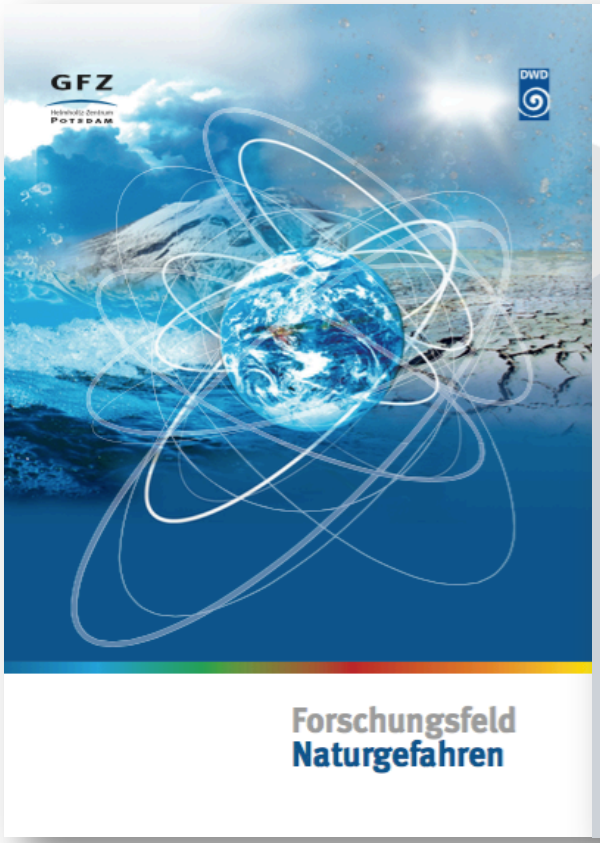
OPEN ACCESS-VERLAG

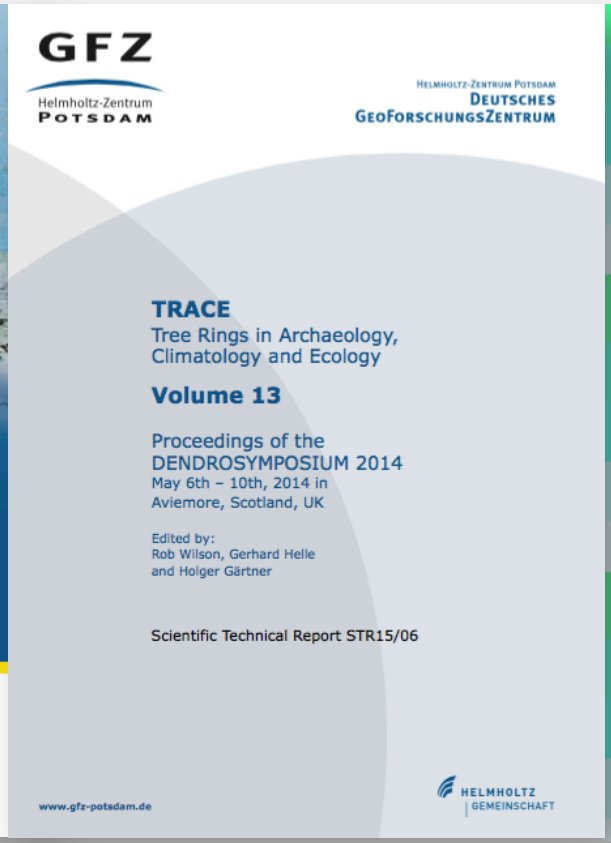
OPEN ACCESS-VERLAG

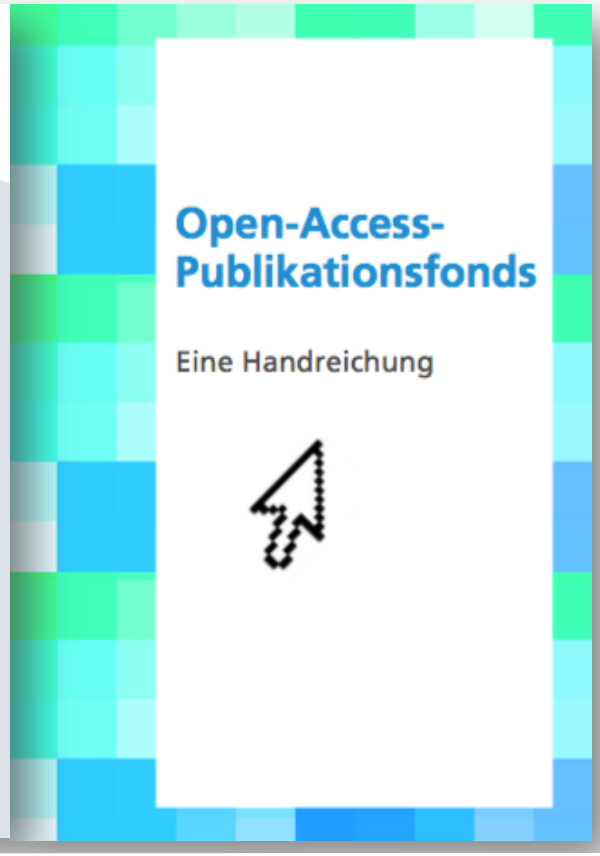


http://doi.org/10.2312/GFZ.b103-15044

OPEN-ACCESS-VERLAG







http://doi.org/10.2312/GFZ.2014.005

http://doi.org/10.2312/allianzoa.006

http://doi.org/10.2312/GFZ.b103-15069

SCHNITTSTELLEN

OAI-PMH

Die frei zugänglichen Volltexte und ihre Metadaten sind über den Standard OAI-PMH (Version 2) maschinell aus den Publikationsdatenbanken abrufbar und können so in entsprechende Harvester eingebunden werden. Dieser Standard ist elementar, um Institutional Repositories im Sinn des Offenen Zugangs zu wissenschaftlichem Wissen (Berliner Erklärung) anzubieten.

Publikationsdatenbank des GFZ "GFZpublic":
OAI-PMH-Schnittstelle http://escidoc.gfz-potsdam.de/escidoc-oaiprovider/?verb=ListRecords&metadataPrefix=oai_dc&set=context_escidoc_221615

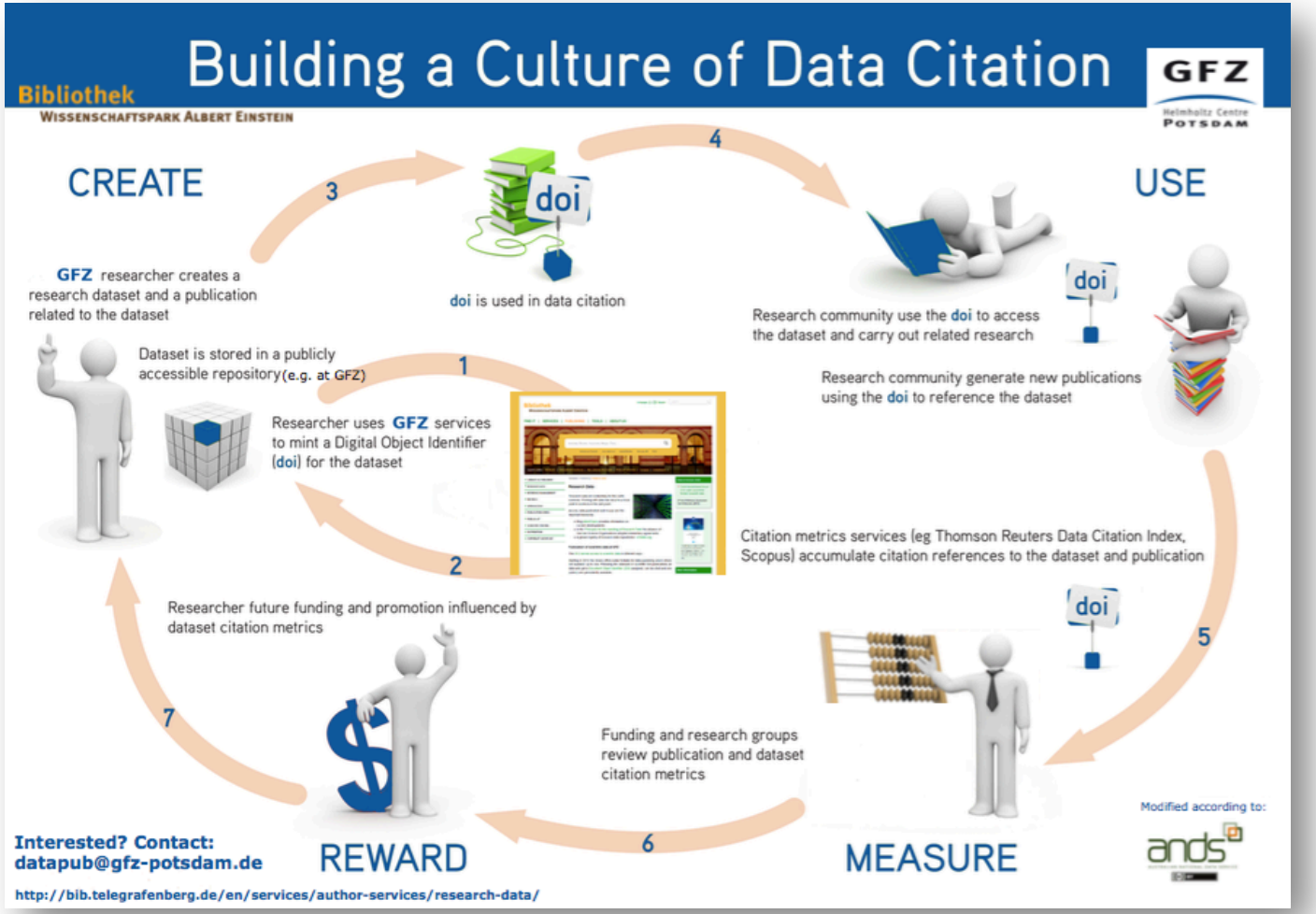
GFZ Collections (ehemals ebooks):
OAI-PMH-Schnittstelle http://escidoc.gfz-potsdam.de/escidoc-oaiprovider/?verb=ListRecords&metadataPrefix=oai_dc&set=context_escidoc_persistent3

Publikationsdatenbank des PIK:
OAI-PMH-Schnittstelle http://bib-app.gfz-potsdam.de/pik/oai.php

Publikationsdatenbank des AWI:
OAI-PMH-Schnittstelle http://rep.awi.de:8080/oaiprovider/

Publikationsdatenbank des IASS:
OAI-PMH-Schnittstelle http://escidoc.gfz-potsdam.de/escidoc-oaiprovider/?verb=ListRecords&metadataPrefix=oai_dc&set=context_escidoc_76811

PUBLIKATION VON FORSCHUNGSDATEN



ROLLE DER BIBLIOTHEK

- Ansprechpartner für Forschende rund um die dauerhafte Zugänglichkeit von Forschungsdaten
- Vielfältige Dienstleistungen rund um die Publikation von Forschungsdaten
- Kooperationen mit relevanten Akteuren
- Kompetenzentwicklung im Rahmen von diversen Drittmittelprojekten
- Mitarbeit und Interessenvertretung in internationalen, nationalen und disziplinären Gremien

GFZ UND DATACITE

Michaela Mundt 02.10.1998

Weiterbildung zur Wissenschaftlichen Dokumentarin

Feldseminar im Daten- und Rechenzentrum des Geoforschungszentrums Potsdam

20. Juli-2. Oktober 1998

Der DOI (digital object identifier)

ein verlagsorientiertes Indexierungswerkzeug auch anwendbar auf Datensätze?

Internetstudie zur möglichen Anwendbarkeit des DOI

für die im ICDP-Clearinghouse angebotenen Daten

Mundt, M. (1998). Der DOI (digital object identifier) ein verlagsorientiertes Indexierungswerkzeug auch anwendbar auf Datensätze? : Internetstudie zur möglichen Anwendbarkeit des DOI für die im ICDP-Clearinghouse angebotenen Daten. Potsdam. DOI: http://doi.org/10.2312/GFZ.misc.370184

GFZ UND DATACITE

forschungsdaten.org

Pampel Diskussion Einstellungen Beobachtungsliste Beiträge Abmelden

Seite Diskussion | Lesen Bearbeiten Versionsgeschichte | Suchen Seite Suchen

Navigation

Hauptseite
Gemeinschaftsportal
Aktuelle Ereignisse
Letzte Änderungen
Zufällige Seite
Hilfe

Werkzeuge

Links auf diese Seite
Änderungen an verlinkten Seiten
Datei hochladen
Spezialseiten
Druckversion
Permanenter Link

STD-DOI

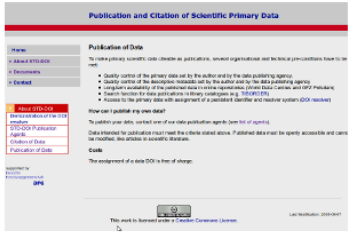
Publikation und Zitierbarkeit von Primärdaten (STD-DOI)

Das Projekt "Publikation und Zitierbarkeit von Primärdaten" wurde von 2004 bis 2009 von der DFG gefördert. Im Rahmen des Projekts werden Verfahren entwickelt, mit denen digitale Forschungsdaten im Internet zu veröffentlichen und zitierbar zu machen. Als persistente Identifikatoren für Internet-Ressourcen werden hier Digital Object Identifier (DOI) und Universal Resource Names (URN) genutzt.

Seit 2006 ist die Technische Informationsbibliothek Hannover internationale Registrierungsstelle für Datenpublikationen im System der International DOI Foundation. Das GFZ Potsdam ist einer von mehr als einem dutzend Publikationagenten, die Datenveröffentlichungen mit ihren DOI an der TIB Hannover anmelden.

Als Ergebnis dieses Projektes entstand der DataCite e.V. als internationaler Verbund von Bibliotheken für die Veröffentlichung von Daten aus Naturwissenschaften, Medizin und Technik.

Projekt	
STD-DOI	
Publikation und Zitierbarkeit von Primärdaten (STD-DOI)	
Zeitraum:	bis
Beteiligt:	TIB Hannover, GFZ Potsdam, MARUM Uni Bremen, DKRZ, DLR-DFD
gefördert von:	Deutsche Forschungsgemeinschaft (DFG)
Website:	Projekt-Webseiten



Bildschirmfoto der STD-DOI Startseite. Die Seite ist heute in KOMFOR aufgegangen.

Im Rahmen dieses Projekts wurden die erste DOI für Daten veröffentlicht.[1]

Literatur [Bearbeiten]

1. ↑ DataCite: 10th Anniversary of minting DOI for data. http://www.datacite.org/node/121

Brase, J. (2004), Using Digital Library Techniques - Registration of Scientific Primary Data, in Research and Advanced Technology for Digital Libraries, vol. 3232, edited by M. Jones et al., pp. 488–494, Springer-Verlag, Heidelberg, Germany. doi:10.1007/b100389.

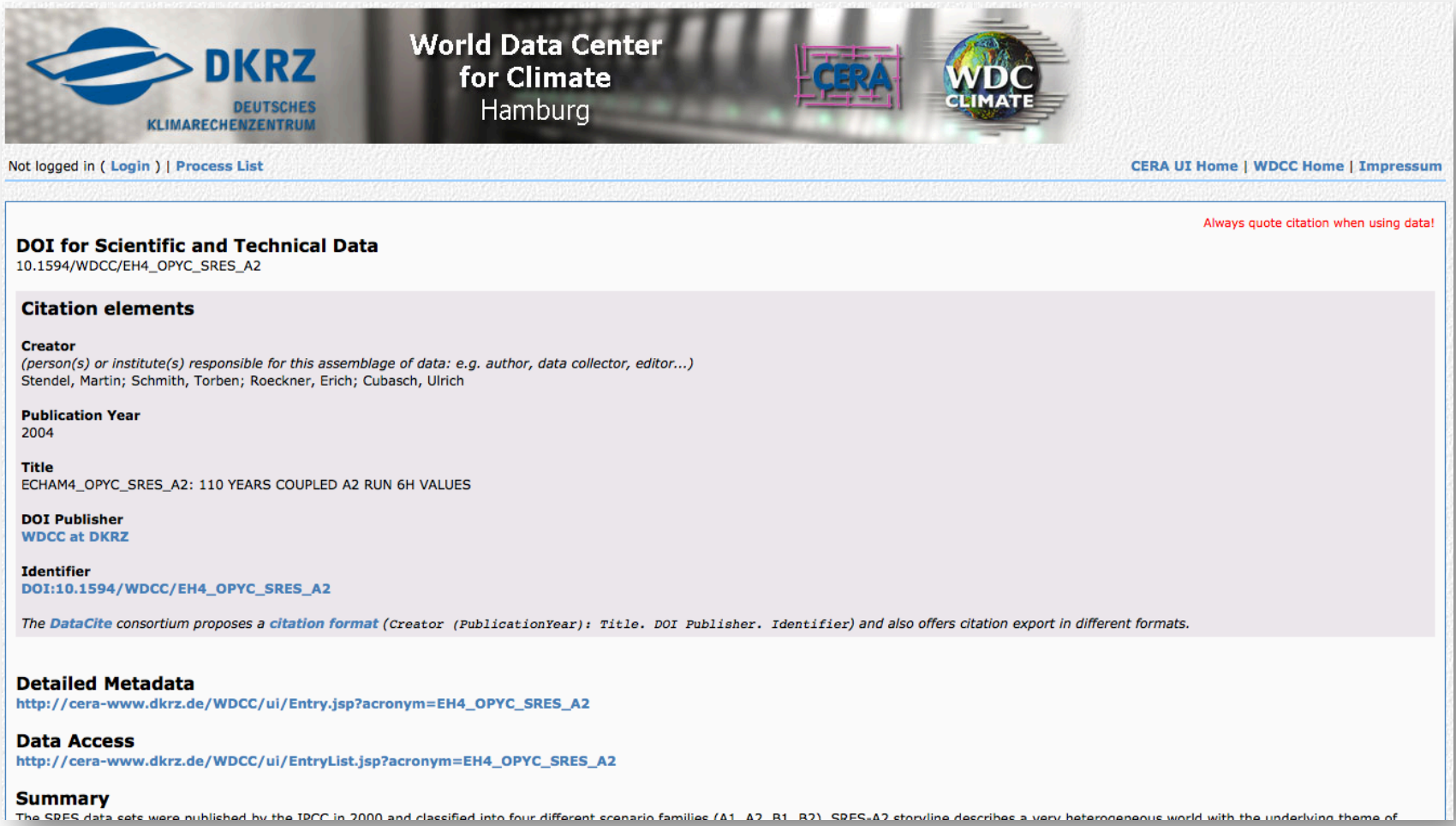
Brase, J., and J. Klump (2007), Zitierfähige Datensätze: Primärdaten-Management durch DOIs, in WissKom 2007 : Wissenschaftskommunikation der Zukunft ; 4. Konferenz der Zentralbibliothek, Forschungszentrum Jülich, 6. - 8. November 2007, vol. 18, edited by R. Ball, pp. 159–167, Forschungszentrum Jülich, Jülich, Germany. http://edoc.gfz-potsdam.de/gfz/10493

Klump, J., R. Bertelmann, J. Brase, M. Diepenbroek, H. Grobe, H. Höck, M. Lautenschlager, U. Schindler, I. Sens, and J. Wächter (2006), Data publication in the Open Access Initiative, Data Science Journal, 5, 79–83, doi:10.2481/dsj.5.79.

Kategorien: Data Publishing | Standards | Technik | Projekte

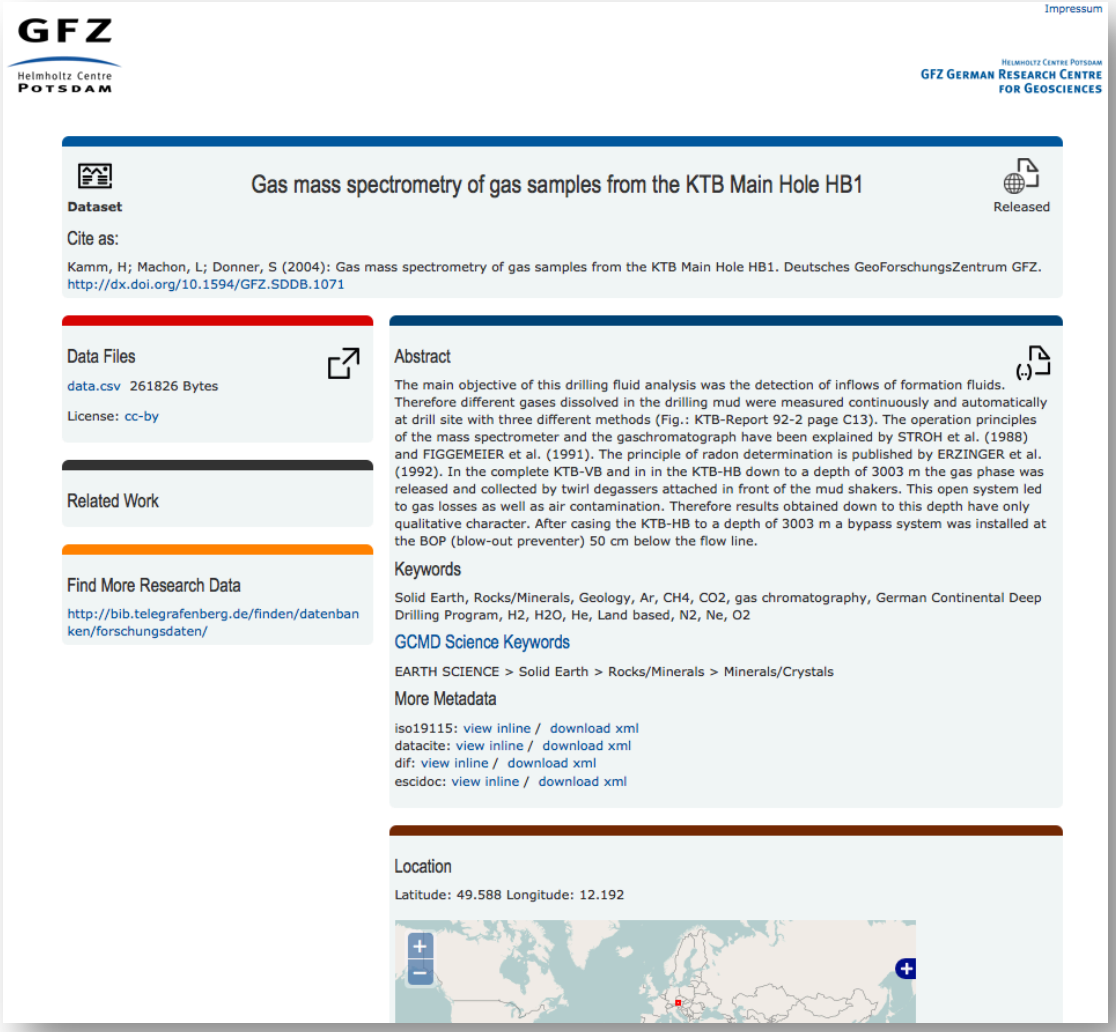
Seite „STD-DOI". In: forschungsdaten.org. Bearbeitungsstand: 11. Mai 2015, 15:27. URL: http://www.forschungsdaten.org/index.php/STD-DOI (Abgerufen: 04.06.2015, 15:32)

ERSTE SCHRITTE



Erster Datensatz mit einer DOI im Rahmen von STD-DOI: http://doi.org/10.1594/WDCC/EH4_OPYC_SRES_A2
Registriert am 18. März 2004

ERSTE SCHRITTE



GFZ Helmholtz Centre Potsdam

Impressum

Helmholtz Centre Potsdam GFZ German Research Centre for Geosciences

Dataset

Gas mass spectrometry of gas samples from the KTB Main Hole HB1

Released

Cite as:

Kamm, H; Machon, L; Donner, S (2004): Gas mass spectrometry of gas samples from the KTB Main Hole HB1. Deutsches GeoForschungsZentrum GFZ. http://dx.doi.org/10.1594/GFZ.SDDB.1071

Data Files

data.csv 261826 Bytes

License: cc-by

Related Work

Find More Research Data

http://bib.telegrafenberg.de/finden/datenbanken/forschungsdaten/

Abstract

The main objective of this drilling fluid analysis was the detection of inflows of formation fluids. Therefore different gases dissolved in the drilling mud were measured continuously and automatically at drill site with three different methods (Fig.: KTB-Report 92-2 page C13). The operation principles of the mass spectrometer and the gaschromatograph have been explained by STROH et al. (1988) and FIGGEMEIER et al. (1991). The principle of radon determination is published by ERZINGER et al. (1992). In the complete KTB-VB and in in the KTB-HB down to a depth of 3003 m the gas phase was released and collected by twirl degassers attached in front of the mud shakers. This open system led to gas losses as well as air contamination. Therefore results obtained down to this depth have only qualitative character. After casing the KTB-HB to a depth of 3003 m a bypass system was installed at the BOP (blow-out preventer) 50 cm below the flow line.

Keywords

Solid Earth, Rocks/Minerals, Geology, Ar, CH4, CO2, gas chromatography, German Continental Deep Drilling Program, H2, H2O, He, Land based, N2, Ne, O2

GCMD Science Keywords

EARTH SCIENCE > Solid Earth > Rocks/Minerals > Minerals/Crystals

More Metadata

iso19115: view inline / download xml
datacite: view inline / download xml
dif: view inline / download xml
escidoc: view inline / download xml

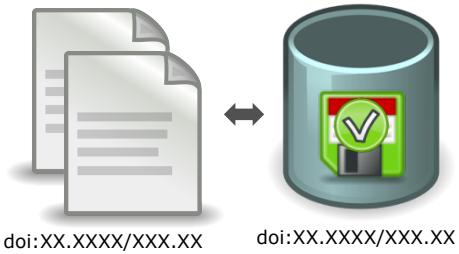
Location

Latitude: 49.588 Longitude: 12.192

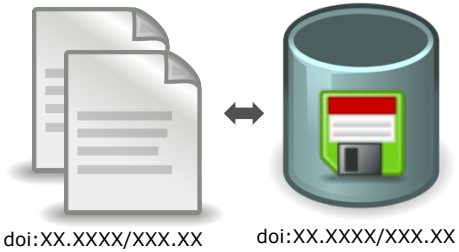
PUBLIKATIONSSTRATEGIEN

- Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repositorium

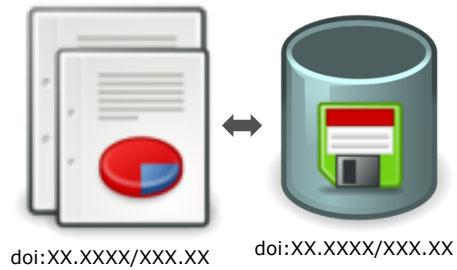
- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines begutachteten „Data Papers“ in einem „Data Journal“



- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines „Data Reports“



- Veröffentlichung der Forschungsdaten in einem Repositorium als Ergänzung zu einem begutachteten Artikel („data supplement“ oder „enhanced publication“)



Siehe dazu auch: Pampel, H., & Dallmeier-Tiessen, S. (2014). Open Research Data: From Vision to Practice. In S. Bartling & S. Friesike (Eds.), Opening Science. The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing (pp. 213–224). Heidelberg: Springer. doi:10.1007/978-3-319-00026-8

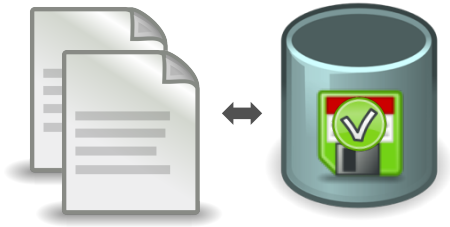
BEISPIELE

PUBLIKATIONSSTRATEGIEN

- **Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repositorium**

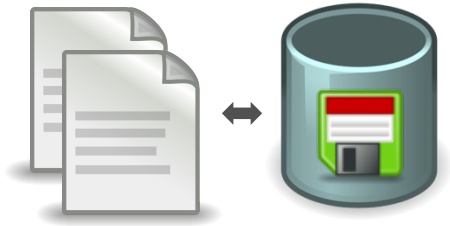
doi:XX.XXXX/XXX.XX

- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines begutachteten „Data Papers“ in einem „Data Journal“



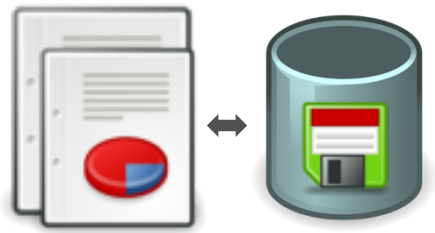
doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines „Data Reports“



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

- Veröffentlichung der Forschungsdaten in einem Repositorium als Ergänzung zu einem begutachteten Artikel („data supplement“ oder „enhanced publication“)



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

Siehe dazu auch: Pampel, H., & Dallmeier-Tiessen, S. (2014). Open Research Data: From Vision to Practice. In S. Bartling & S. Friesike (Eds.), Opening Science. The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing (pp. 213–224). Heidelberg: Springer. doi:10.1007/978-3-319-00026-8

GEOFON

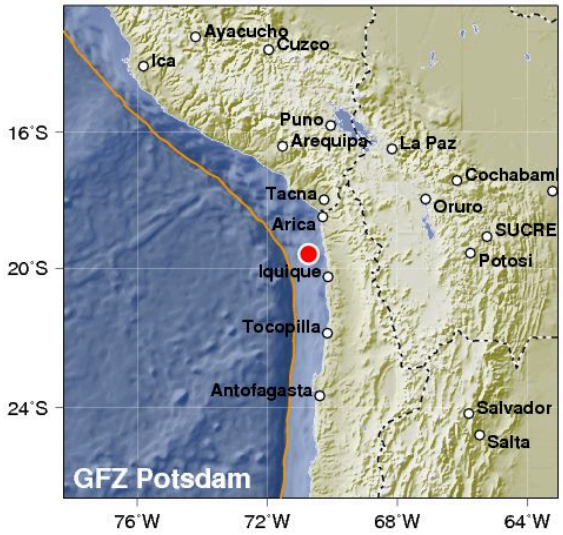
GFZ Helmholtz-Zentrum Potsdam

GEOFON Program

Helmholtz-Zentrum Potsdam Deutsches GeoForschungsZentrum

Mission | Earthquake Info | Waveform Access | Software | Contribute | Contact | Home

F-E Region: **Near Coast of Northern Chile**
Time: **2014-04-01 23:46:49.9 UTC**
Magnitude: **8.1 (Mw)**
Epicenter: **70.73°W 19.59°S**
Depth: **34 km**
Status: **M - manually revised**



- **Additional information about this event**
- Moment tensor solution
- Epicenter location in Google Maps
- The DOI for this event is 10.5880/GEOFON.gfz2014gkgf

This is a product of the GEOFON Extended Virtual Network (GEVN) and credit belongs to all involved institutions.

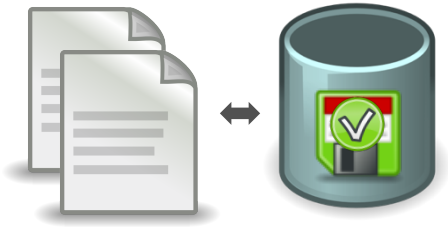
Back to the earthquake list

PUBLIKATIONSSTRATEGIEN

- Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repositorium

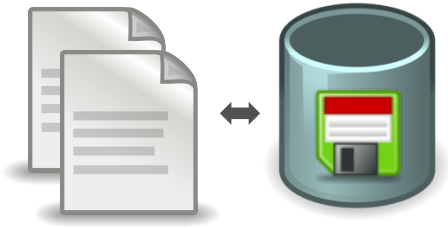
doi:XX.XXXX/XXX.XX

- **Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines begutachteten „Data Papers" in einem „Data Journal"**



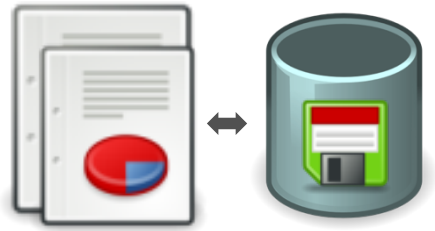
doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines „Data Reports"



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

- Veröffentlichung der Forschungsdaten in einem Repositorium als Ergänzung zu einem begutachteten Artikel („data supplement" oder „enhanced publication")



doi:XX.XXXX/XXX.XX doi:XX.XXXX/XXX.XX

Siehe dazu auch: Pampel, H., & Dallmeier-Tiessen, S. (2014). Open Research Data: From Vision to Practice. In S. Bartling & S. Friesike (Eds.), Opening Science. The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing (pp. 213–224). Heidelberg: Springer. doi:10.1007/978-3-319-00026-8

DATA JOURNAL ESSD

Earth Syst. Sci. Data, 3, 19–35, 2011
www.earth-syst-sci-data.net/3/19/2011/
doi:10.5194/essd-3-19-2011

Open Access Earth System Science Data

Simulation of the time-variable gravity field by means of coupled geophysical models

Th. Gruber[1], J. L. Bamber[2], M. F. P. Bierkens[3], H. Dobslaw[4], M. Murböck[1], M. Thomas[4], L. P. H. van Beek[3], T. van Dam[5], L. L. A. Vermeersen[6], and P. N. A. M. Visser[6]

[1]Institute of Astronomical and Physical Geodesy, Technical University Munich, Munich, Germany
[2]Bristol Glaciology Centre, University of Bristol, Bristol, UK
[3]Department of Physical Geography, Utrecht University, Utrecht, The Netherlands
[4]Deutsches GeoForschungsZentrum Potsdam, Potsdam, Germany
[5]University of Luxembourg, Luxembourg
[6]Delft Institute of Earth Observation and Space Systems, Delft University of Technology, Delft, The Netherlands

Received: 7 June 2011 – Published in Earth Syst. Sci. Data Discuss.: 7 July 2011
Revised: 6 October 2011 – Accepted: 7 October 2011 – Published: 31 October 2011

Abstract. Time variable gravity fields, reflecting variations of mass distribution in the system Earth is one of the key parameters to understand the changing Earth. Mass variations are caused either by redistribution of mass in, on or above the Earth's surface or by geophysical processes in the Earth's interior. The first set of observations of monthly variations of the Earth gravity field was provided by the US/German GRACE satellite mission beginning in 2002. This mission is still providing valuable information to the science community. However, as GRACE has outlived its expected lifetime, the geoscience community is currently seeking successor missions in order to maintain the long time series of climate change that was begun by GRACE. Several studies on science requirements and technical feasibility have been conducted in the recent years. These studies required a realistic model of the time variable gravity field in order to perform simulation studies on sensitivity of satellites and their instrumentation. This was the primary reason for the European Space Agency (ESA) to initiate a study on "Monitoring and Modelling individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites". The goal of this interdisciplinary study was to create as realistic as possible simulated time variable gravity fields based on coupled geophysical models, which could be used in the simulation processes in a controlled environment. For this purpose global atmosphere, ocean, continental hydrology and ice models were used. The coupling was performed by using consistent forcing throughout the models and by including water flow between the different domains of the Earth system. In addition gravity field changes due to solid Earth processes like continuous glacial isostatic adjustment (GIA) and a sudden earthquake with co-seismic and post-seismic signals were modelled. All individual model results were combined and converted to gravity field spherical harmonic series, which is the quantity commonly used to describe the Earth's global gravity field. The result of this study is a twelve-year time-series of 6-hourly time variable gravity field spherical harmonics up to degree and order 180 corresponding to a global spatial resolution of 1 degree in latitude and longitude. In this paper, we outline the input data sets and the process of combining these data sets into a coherent model of temporal gravity field changes. The resulting time series was used in some follow-on studies and is available to anybody interested.

1 Introduction

The primary goal of the recently completed European Space Agency (ESA) study entitled "Monitoring and Modelling individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites" (see Acknowledgements) was to find the most advantageous approach for using satellites to track the individual components of mass redistribution in the Earth System. The method chosen to solve the problem was to develop, as precisely as possible, a realistic Earth model with time variable mass variations due to

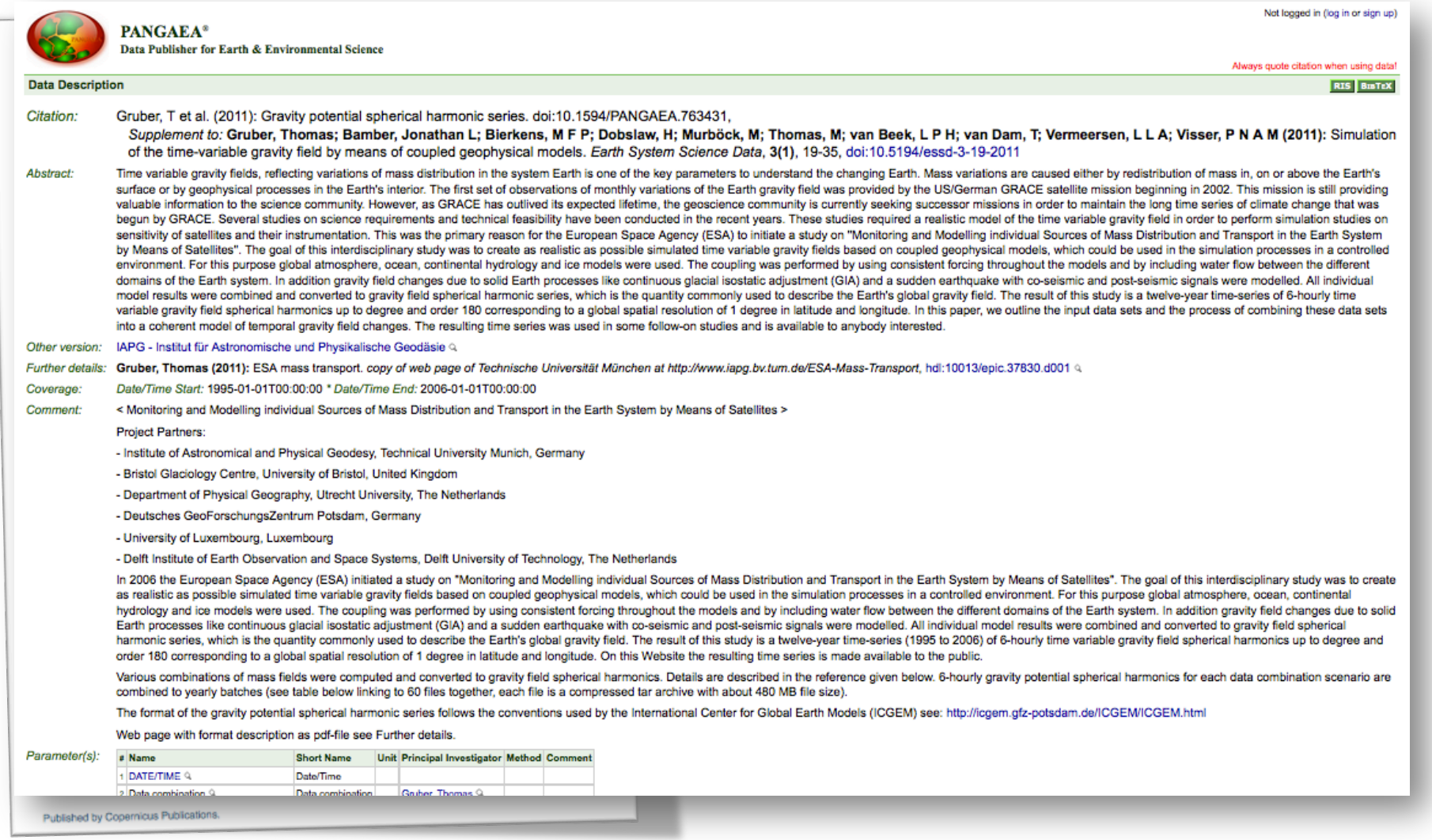
Correspondence to: Th. Gruber (thomas.gruber@tum.de)

Published by Copernicus Publications.

Data access

All gravity potential spherical harmonic series including a detailed data format description are available at: http://dx.doi.org/10.1594/PANGAEA.763431 or alternatively at http://www.iapg.bv.tum.de/ESA-Mass-Transport.

DATA JOURNAL ESSD



PANGAEA®
Data Publisher for Earth & Environmental Science

Not logged in (log in or sign up)

Always quote citation when using data!

Data Description RIS BibTeX

Citation: Gruber, T et al. (2011): Gravity potential spherical harmonic series. doi:10.1594/PANGAEA.763431,
Supplement to: **Gruber, Thomas; Bamber, Jonathan L; Bierkens, M F P; Dobslaw, H; Murböck, M; Thomas, M; van Beek, L P H; van Dam, T; Vermeersen, L L A; Visser, P N A M (2011):** Simulation of the time-variable gravity field by means of coupled geophysical models. *Earth System Science Data*, **3(1)**, 19-35, doi:10.5194/essd-3-19-2011

Abstract: Time variable gravity fields, reflecting variations of mass distribution in the system Earth is one of the key parameters to understand the changing Earth. Mass variations are caused either by redistribution of mass in, on or above the Earth's surface or by geophysical processes in the Earth's interior. The first set of observations of monthly variations of the Earth gravity field was provided by the US/German GRACE satellite mission beginning in 2002. This mission is still providing valuable information to the science community. However, as GRACE has outlived its expected lifetime, the geoscience community is currently seeking successor missions in order to maintain the long time series of climate change that was begun by GRACE. Several studies on science requirements and technical feasibility have been conducted in the recent years. These studies required a realistic model of the time variable gravity field in order to perform simulation studies on sensitivity of satellites and their instrumentation. This was the primary reason for the European Space Agency (ESA) to initiate a study on "Monitoring and Modelling individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites". The goal of this interdisciplinary study was to create as realistic as possible simulated time variable gravity fields based on coupled geophysical models, which could be used in the simulation processes in a controlled environment. For this purpose global atmosphere, ocean, continental hydrology and ice models were used. The coupling was performed by using consistent forcing throughout the models and by including water flow between the different domains of the Earth system. In addition gravity field changes due to solid Earth processes like continuous glacial isostatic adjustment (GIA) and a sudden earthquake with co-seismic and post-seismic signals were modelled. All individual model results were combined and converted to gravity field spherical harmonic series, which is the quantity commonly used to describe the Earth's global gravity field. The result of this study is a twelve-year time-series of 6-hourly time variable gravity field spherical harmonics up to degree and order 180 corresponding to a global spatial resolution of 1 degree in latitude and longitude. In this paper, we outline the input data sets and the process of combining these data sets into a coherent model of temporal gravity field changes. The resulting time series was used in some follow-on studies and is available to anybody interested.

Other version: IAPG - Institut für Astronomische und Physikalische Geodäsie

Further details: **Gruber, Thomas (2011):** ESA mass transport. *copy of web page of Technische Universität München at http://www.iapg.bv.tum.de/ESA-Mass-Transport*, hdl:10013/epic.37830.d001

Coverage: *Date/Time Start:* 1995-01-01T00:00:00 * *Date/Time End:* 2006-01-01T00:00:00

Comment: < Monitoring and Modelling individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites >

Project Partners:

- Institute of Astronomical and Physical Geodesy, Technical University Munich, Germany
- Bristol Glaciology Centre, University of Bristol, United Kingdom
- Department of Physical Geography, Utrecht University, The Netherlands
- Deutsches GeoForschungsZentrum Potsdam, Germany
- University of Luxembourg, Luxembourg
- Delft Institute of Earth Observation and Space Systems, Delft University of Technology, The Netherlands

In 2006 the European Space Agency (ESA) initiated a study on "Monitoring and Modelling individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites". The goal of this interdisciplinary study was to create as realistic as possible simulated time variable gravity fields based on coupled geophysical models, which could be used in the simulation processes in a controlled environment. For this purpose global atmosphere, ocean, continental hydrology and ice models were used. The coupling was performed by using consistent forcing throughout the models and by including water flow between the different domains of the Earth system. In addition gravity field changes due to solid Earth processes like continuous glacial isostatic adjustment (GIA) and a sudden earthquake with co-seismic and post-seismic signals were modelled. All individual model results were combined and converted to gravity field spherical harmonic series, which is the quantity commonly used to describe the Earth's global gravity field. The result of this study is a twelve-year time-series (1995 to 2006) of 6-hourly time variable gravity field spherical harmonics up to degree and order 180 corresponding to a global spatial resolution of 1 degree in latitude and longitude. On this Website the resulting time series is made available to the public.

Various combinations of mass fields were computed and converted to gravity field spherical harmonics. Details are described in the reference given below. 6-hourly gravity potential spherical harmonics for each data combination scenario are combined to yearly batches (see table below linking to 60 files together, each file is a compressed tar archive with about 480 MB file size).

The format of the gravity potential spherical harmonic series follows the conventions used by the International Center for Global Earth Models (ICGEM) see: http://icgem.gfz-potsdam.de/ICGEM/ICGEM.html

Web page with format description as pdf-file see Further details.

Parameter(s):

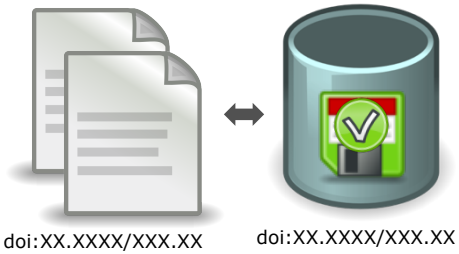
#	Name	Short Name	Unit	Principal Investigator	Method	Comment
1	DATE/TIME	Date/Time				
2	Data combination	Data combination		Gruber, Thomas		

Published by Copernicus Publications.

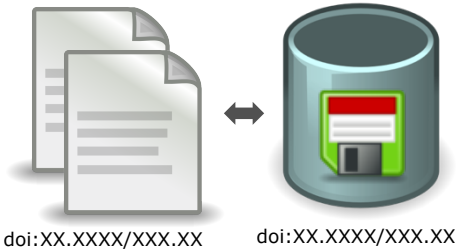
PUBLIKATIONSSTRATEGIEN

- Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repositorium

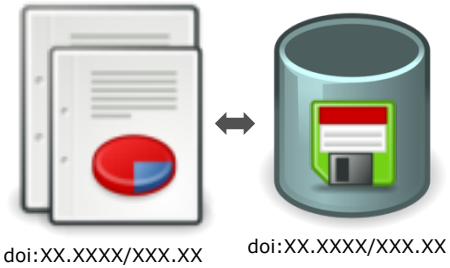
- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines begutachteten „Data Papers“ in einem „Data Journal“



- **Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines „Data Reports“**

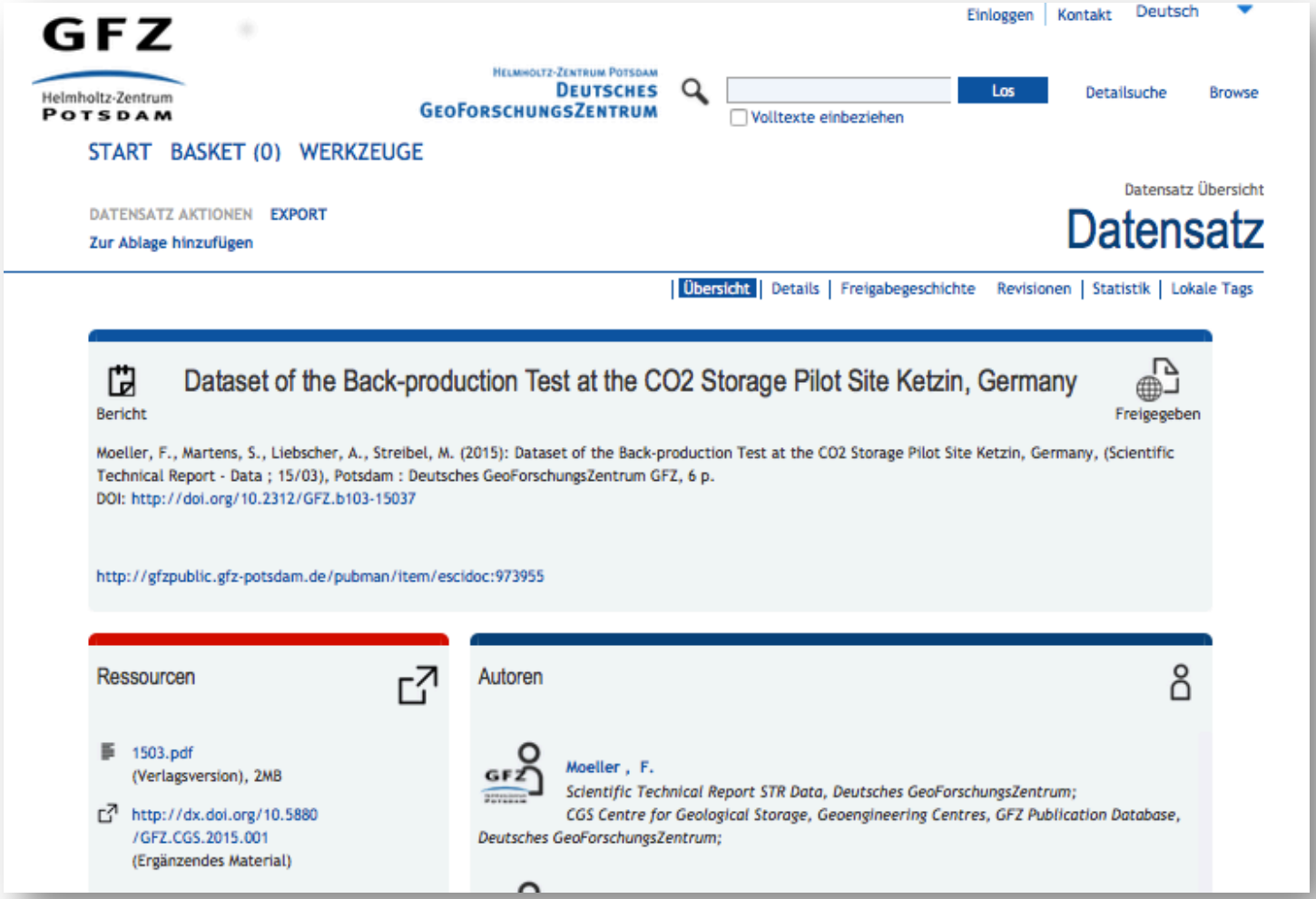


- Veröffentlichung der Forschungsdaten in einem Repositorium als Ergänzung zu einem begutachteten Artikel („data supplement“ oder „enhanced publication“)



Siehe dazu auch: Pampel, H., & Dallmeier-Tiessen, S. (2014). Open Research Data: From Vision to Practice. In S. Bartling & S. Friesike (Eds.), Opening Science. The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing (pp. 213–224). Heidelberg: Springer. doi:10.1007/978-3-319-00026-8

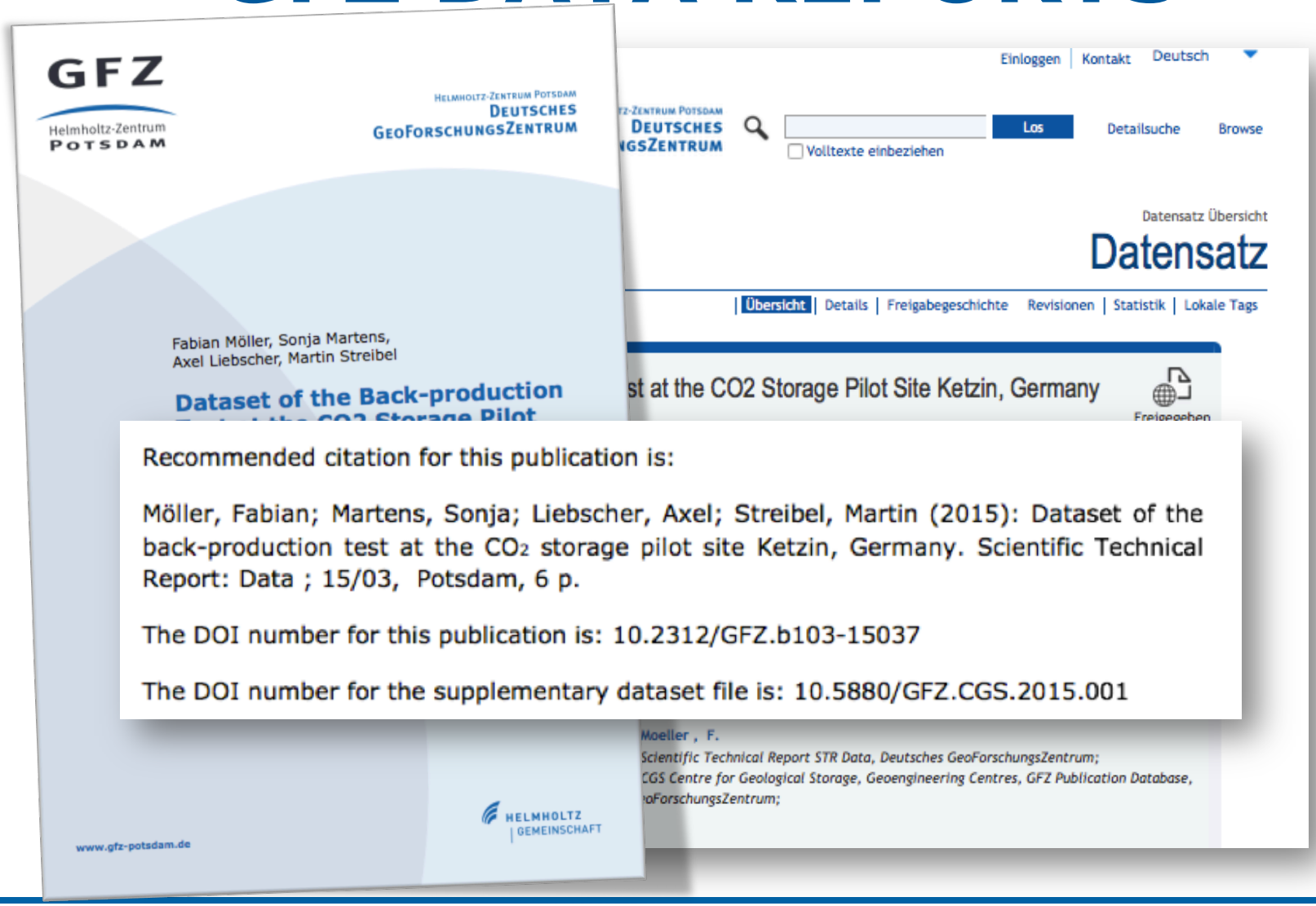
GFZ DATA REPORTS



GFZ DATA REPORTS

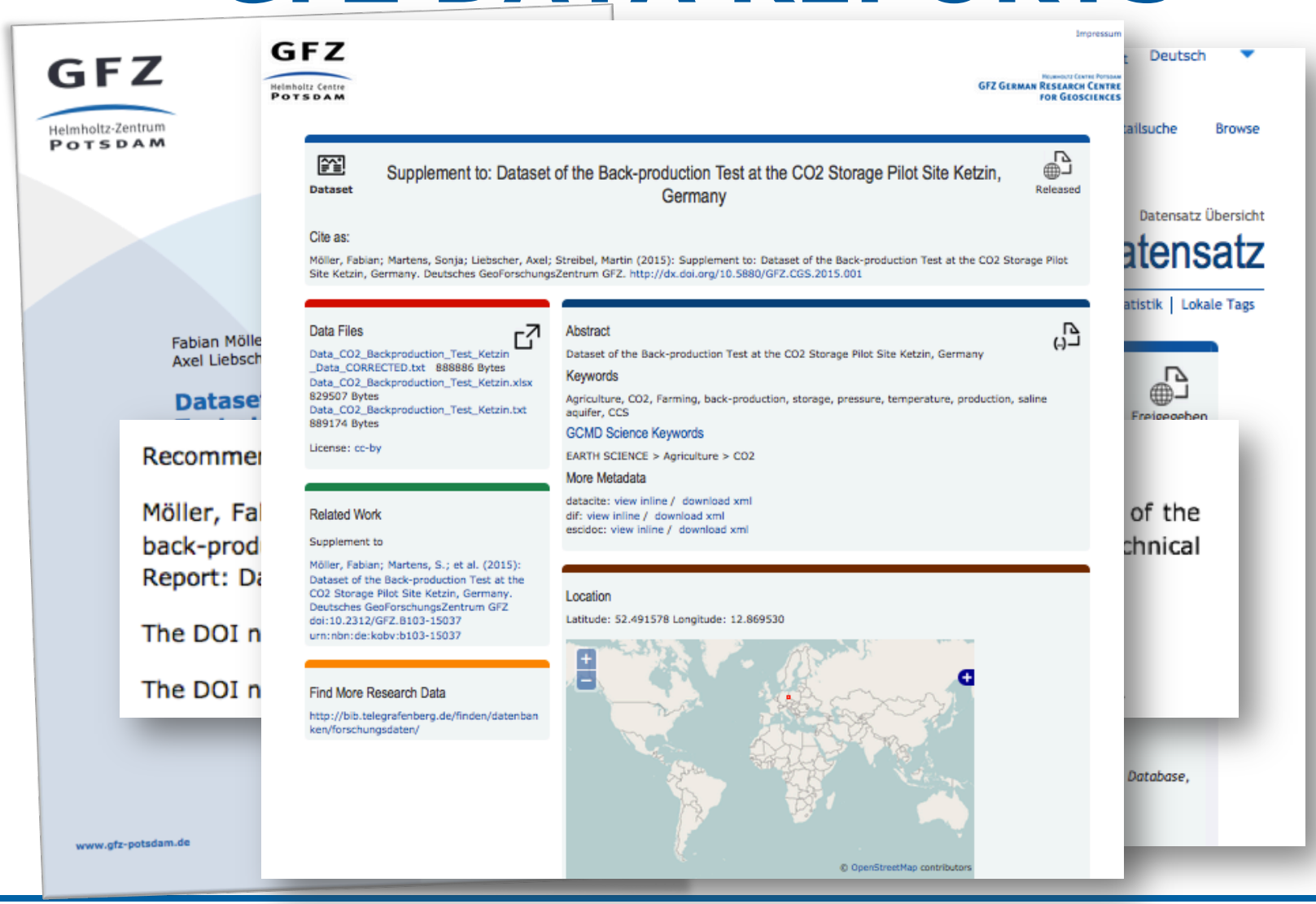
http://doi.org/10.2312/GFZ.b103-15037

GFZ DATA REPORTS



http://doi.org/10.2312/GFZ.b103-15037

GFZ DATA REPORTS

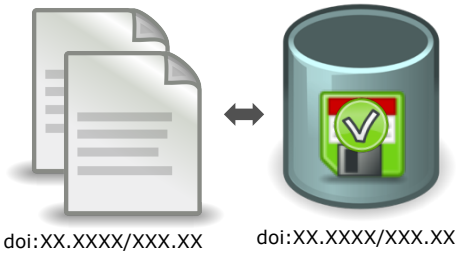


http://doi.org/10.5880/GFZ.CGS.2015.001

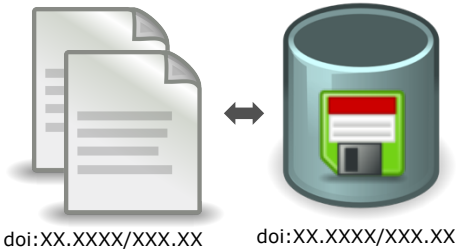
PUBLIKATIONSSTRATEGIEN

- Veröffentlichung der Forschungsdaten als eigenständiges Informationsobjekt in einem Daten-Repositorium

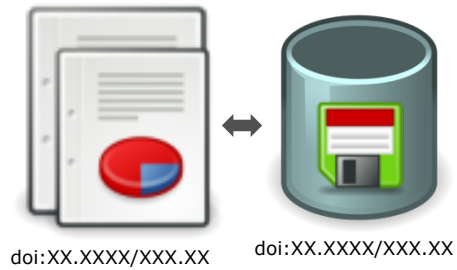
- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines begutachteten „Data Papers“ in einem „Data Journal“



- Veröffentlichung der Forschungsdaten in einem Repositorium und Dokumentation im Rahmen eines „Data Reports“



- **Veröffentlichung der Forschungsdaten in einem Repositorium als Ergänzung zu einem begutachteten Artikel („data supplement“ oder „enhanced publication“)**



Siehe dazu auch: Pampel, H., & Dallmeier-Tiessen, S. (2014). Open Research Data: From Vision to Practice. In S. Bartling & S. Friesike (Eds.), Opening Science. The Evolving Guide on How the Internet is Changing Research, Collaboration and Scholarly Publishing (pp. 213–224). Heidelberg: Springer. doi:10.1007/978-3-319-00026-8

DATA SUPPLEMENT

Hydrol. Earth Syst. Sci., 17, 895–911, 2013
www.hydrol-earth-syst-sci.net/17/895/2013/
doi:10.5194/hess-17-895-2013

Hydrology and Earth System Sciences
Open Access

Data expansion: the potential of grey literature for understanding floods

S. Uhlemann[1,2], R. Bertelmann[3], and B. Merz[1]
[1]GFZ German Research Centre for Geosciences, Section Hydrology, Potsdam, Germany
[2]University of Potsdam, Institute of Earth and Environmental Science, University of Potsdam, Potsdam, Germany
[3]GFZ German Research Centre for Geosciences, Library and Information Services, Potsdam, Germany

Correspondence to: S. Uhlemann (uhlemann@gfz-potsdam.de)

Received: 17 September 2012 – Published in Hydrol. Earth Syst. Sci. Discuss.: 27 September 2012
Revised: 22 January 2013 – Accepted: 12 February 2013 – Published: 4 March 2013

Abstract. Sophisticated methods have been developed and become standard in analysing floods as well as for assessing flood risk. However, increasingly critique of the current standards and scientific practice can be found both in the flood hydrology community as well as in the risk community who argue that the considerable amount of information already available on natural disasters has not been adequately deployed and brought to effective use. We describe this phenomenon as a failure to synthesize knowledge that results from barriers and ignorance in awareness, use and management of the entire spectrum of relevant content, that is, data, information and knowledge. In this paper we argue that the scientific community in flood risk research ignores event-specific analysis and documentations as another source of data. We present results from a systematic search that includes an intensive study on sources and ways of information dissemination of flood-relevant publications. We obtain 186 documents that contain information on the sources, pathways, receptors and/or consequences for any of the 40 strongest trans-basin floods in Germany in the period 1952–2002. This study therefore provides the most comprehensive metadata collection of flood documentations for the considered geographical space and period. A total of 87.5 % of all events have been documented, and especially the most severe floods have received extensive coverage. Only 30 % of the material has been produced in the scientific/academic environment, and the majority of all documents (about 80 %) can be considered grey literature (i.e. literature not controlled by commercial publishers). Therefore, ignoring grey sources in flood research also means ignoring the largest part of knowledge available on single flood events (in Germany). Further, the results of this study underpin the rapid changes in information dissemination of flood event literature over the last decade. We discuss the options and obstacles of incorporating this data into the knowledge-building process in light of the current technological developments and international, interdisciplinary debates for data curation.

1 Introduction

Sophisticated methods have been developed and become standard in analysing extremes in time series, i.e. in estimating the frequency and magnitude of natural events. However, different process types hamper the assumptions of the classical frequency analysis. For the field of flood research, Merz and Blöschl (2008a, b) have called for "a shift away from solving the estimation problem to hydrological understanding". They argue that the existing formal methods for flood frequency statistics need to be accompanied by hydrological reasoning, i.e. need to reflect the hydrological processes. They specifically argue that the hydrological knowledge gained in the past century is often unduly respected and highlight how the systematic combination of a maximum of relevant information from different complementary sources can help to adjust quantitative estimates from formal methods. Likewise, recently, several international and interdisciplinary groups (International Council for Science, ICSU; International Social Science Council, ISSC; and the UN International Strategy for Disaster Risk Reduction, UN-ISDR) stated that the considerable amount of information already available on natural disasters has not been adequately

Published by Copernicus Publications on behalf of the European Geosciences Union.

http://ddoi.org/10.5880/GFZ.5.4.2012.001

DATA SUPPLEMENT

Hydrol. Earth Syst. Sci., 17, 895–911, 2013
www.hydrol-earth-syst-sci.net/17/895/2013/
doi:10.5194/hess-17-895-2013

Hydrology and Earth System Sciences
Open Access

Data expansion: the potential of grey literature for understanding floods

S. Uhlemann[1,2], R. Bertelmann[3], and B. Merz[1]
[1]GFZ German Research Centre for Geosciences, Section Hydrology, Potsdam, Germany
[2]University of Potsdam, Institute of Earth and Environmental Science, University of Potsdam, Potsdam, Germany
[3]GFZ German Research Centre for Geosciences, Library and Information Services, Potsdam, Germany
Correspondence to: S. Uhlemann (uhlemann@gfz-potsdam.de)

Received: 17 September 2012 – Published in Hydrol. Earth Syst. Sci. Discuss.: 27 September 2012
Revised: 22 January 2013 – Accepted: 12 February 2013 – Published: 4 March 2013

Abstract. Sophisticated methods have been developed and become standard in analysing floods as well as for assessing flood risk. However, increasingly critique of the current standards and scientific practice can be found both in the flood hydrology community as well as in the risk community who argue that the considerable amount of information already available on natural disasters has not been adequately deployed and brought to effective use. We describe this phenomenon as a failure to synthesize knowledge that results from barriers and ignorance in awareness, use and management of the entire spectrum of relevant content, that is, data, information and knowledge. In this paper we argue that the scientific community in flood risk research ignores event-specific analysis and documentations as another source of data. We present results from a systematic search that includes an intensive study on sources and ways of information dissemination of flood-relevant publications. We obtain 186 documents that contain information on the sources, pathways, receptors and/or consequences for any of the 40 strongest trans-basin floods in Germany in the period 1952–2002. This study therefore provides the most comprehensive metadata collection of flood documentations for the considered geographical space and period. A total of 87.5 % of all events have been documented, and especially the most severe floods have received extensive coverage. Only 30 % of the material has been produced in the scientific/academic environment, and the majority of all documents (about 80 %) can be considered grey literature (i.e. literature not controlled by commercial publishers). Therefore, ignoring grey sources in flood research also means ignoring the largest part of knowledge available on single flood events (in Germany). Further, the results of this study underpin the rapid changes in information dissemination of flood event literature over the last decade. We discuss the options and obstacles of incorporating this data into the knowledge-building process in light of the current technological developments and international, interdisciplinary debates for data curation.

1 Introduction

Sophisticated methods have been developed and become standard in analysing extremes in time series, i.e. in estimating the frequency and magnitude of natural events. However, different process types hamper the assumptions of the classical frequency analysis. For the field of flood research, Merz and Blöschl (2008a, b) have called for "a shift away from solving the estimation problem to hydrological understanding". They argue that the existing formal methods for flood frequency statistics need to be accompanied by hydrological reasoning, i.e. need to reflect the hydrological processes. They specifically argue that the hydrological knowledge gained in the past century is often unduly respected and highlight how the systematic combination of a maximum of relevant information from different complementary sources can help to adjust quantitative estimates from formal methods. Likewise, recently, several international and interdisciplinary groups (International Council for Science, ICSU; International Social Science Council, ISSC; and the UN International Strategy for Disaster Risk Reduction, UN-ISDR) stated that the considerable amount of information already available on natural disasters has not been adequately

Published by Copernicus Publications on behalf of the European Geosciences Union.

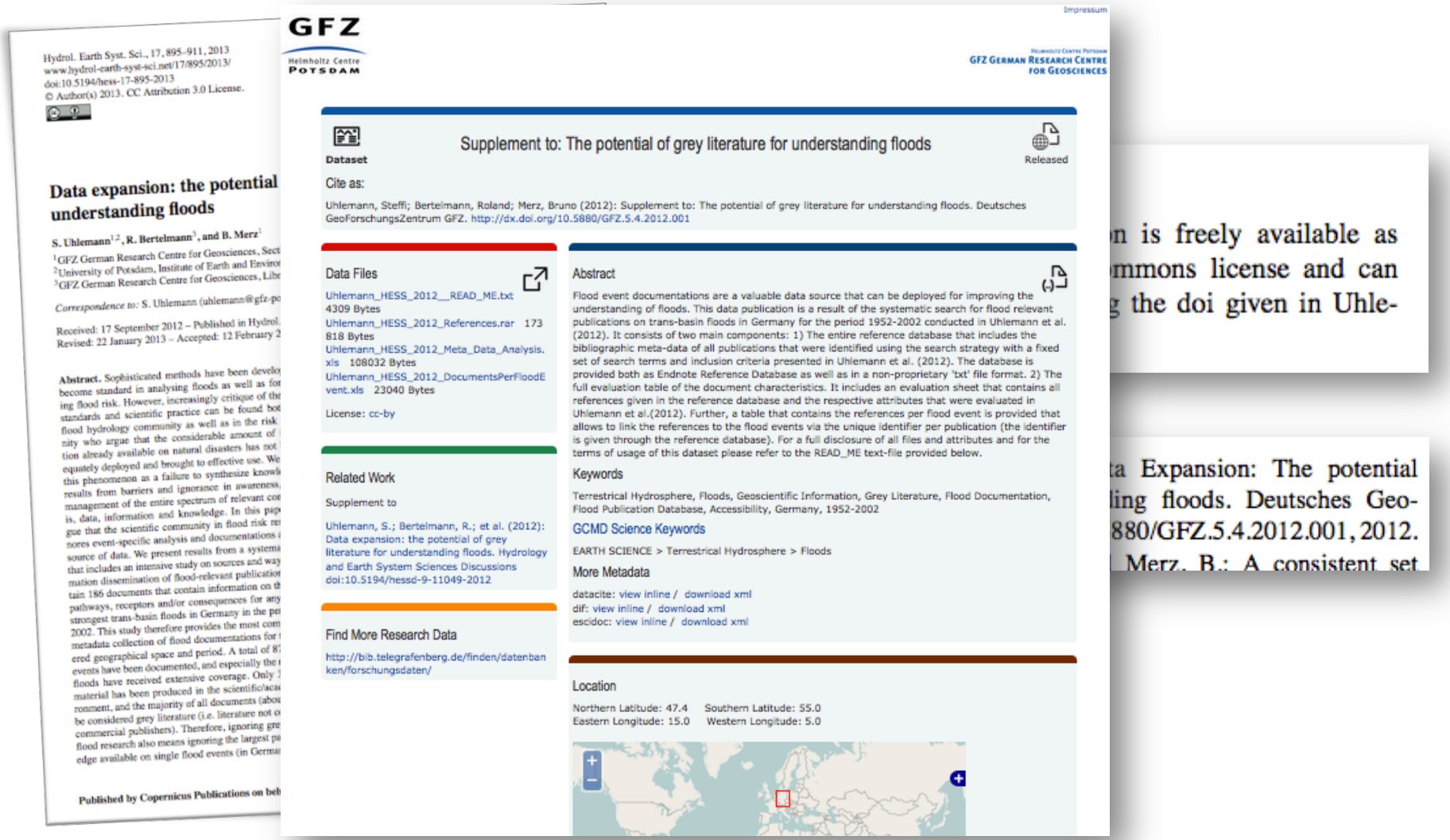
Data description

The data used for this publication is freely available as Supplement under the creative commons license and can be permanently accessed following the doi given in Uhlemann (2012).

2007.
Uhlemann, S.: Supplement to: Data Expansion: The potential of grey literature for understanding floods. Deutsches GeoForschungsZentrum GFZ, doi:10.5880/GFZ.5.4.2012.001, 2012.
Uhlemann, S., Thieken, A. H., and Merz, B.: A consistent set

http://ddoi.org/10.5880/GFZ.5.4.2012.001

DATA SUPPLEMENT



Hydrol. Earth Syst. Sci., 17, 895–911, 2013
www.hydrol-earth-syst-sci.net/17/895/2013/
doi:10.5194/hess-17-895-2013
© Author(s) 2013. CC Attribution 3.0 License.

Data expansion: the potential
understanding floods

S. Uhlemann[1,2], R. Bertelmann[3], and B. Merz[1]

[1]GFZ German Research Centre for Geosciences, Sect
[2]University of Potsdam, Institute of Earth and Environ
[3]GFZ German Research Centre for Geosciences, Libe

Correspondence to: S. Uhlemann (uhlemann@gfz-po

Received: 17 September 2012 – Published in Hydrol.
Revised: 22 January 2013 – Accepted: 12 February 2

Abstract. Sophisticated methods have been develo
become standard in analysing floods as well as for
ing flood risk. However, increasingly critique of the
standards and scientific practice can be found bot
flood hydrology community as well as in the risk
nity who argue that the considerable amount of
tion already available on natural disasters has not
equately deployed and brought to effective use. We
this phenomenon as a failure to synthesize knowl
results from barriers and ignorance in awareness,
management of the entire spectrum of relevant con
is, data, information and knowledge. In this pap
gue that the scientific community in flood risk re
nores event-specific analysis and documentations
source of data. We present results from a systema
that includes an intensive study on sources and way
mation dissemination of flood-relevant publicatio
tain 186 documents that contain information on th
pathways, receptors and/or consequences for any
strongest trans-basin floods in Germany in the pe
2002. This study therefore provides the most com
metadata collection of flood documentations for
ered geographical space and period. A total of 8
events have been documented, and especially the
floods have received extensive coverage. Only
material has been produced in the scientific/aca
ronment, and the majority of all documents (abou
be considered grey literature (i.e. literature not c
commercial publishers). Therefore, ignoring gre
flood research also means ignoring the largest pa
edge available on single flood events (in Germa

Published by Copernicus Publications on beh

GFZ Helmholtz Centre Potsdam

Impressum

GFZ German Research Centre for Geosciences

Dataset

Supplement to: The potential of grey literature for understanding floods

Released

Cite as:

Uhlemann, Steffi; Bertelmann, Roland; Merz, Bruno (2012): Supplement to: The potential of grey literature for understanding floods. Deutsches GeoForschungsZentrum GFZ. http://dx.doi.org/10.5880/GFZ.5.4.2012.001

Data Files

Uhlemann_HESS_2012__READ_ME.txt 4309 Bytes
Uhlemann_HESS_2012_References.rar 173 818 Bytes
Uhlemann_HESS_2012_Meta_Data_Analysis.xls 108032 Bytes
Uhlemann_HESS_2012_DocumentsPerFloodEvent.xls 23040 Bytes

License: cc-by

Related Work

Supplement to

Uhlemann, S.; Bertelmann, R.; et al. (2012): Data expansion: the potential of grey literature for understanding floods. Hydrology and Earth System Sciences Discussions doi:10.5194/hessd-9-11049-2012

Find More Research Data

http://bib.telegrafenberg.de/finden/datenbanken/forschungsdaten/

Abstract

Flood event documentations are a valuable data source that can be deployed for improving the understanding of floods. This data publication is a result of the systematic search for flood relevant publications on trans-basin floods in Germany for the period 1952-2002 conducted in Uhlemann et al. (2012). It consists of two main components: 1) The entire reference database that includes the bibliographic meta-data of all publications that were identified using the search strategy with a fixed set of search terms and inclusion criteria presented in Uhlemann et al. (2012). The database is provided both as Endnote Reference Database as well as in a non-proprietary 'txt' file format. 2) The full evaluation table of the document characteristics. It includes an evaluation sheet that contains all references given in the reference database and the respective attributes that were evaluated in Uhlemann et al.(2012). Further, a table that contains the references per flood event is provided that allows to link the references to the flood events via the unique identifier per publication (the identifier is given through the reference database). For a full disclosure of all files and attributes and for the terms of usage of this dataset please refer to the READ_ME text-file provided below.

Keywords

Terrestrical Hydrosphere, Floods, Geoscientific Information, Grey Literature, Flood Documentation, Flood Publication Database, Accessibility, Germany, 1952-2002

GCMD Science Keywords

EARTH SCIENCE > Terrestrical Hydrosphere > Floods

More Metadata

datacite: view inline / download xml
dif: view inline / download xml
escidoc: view inline / download xml

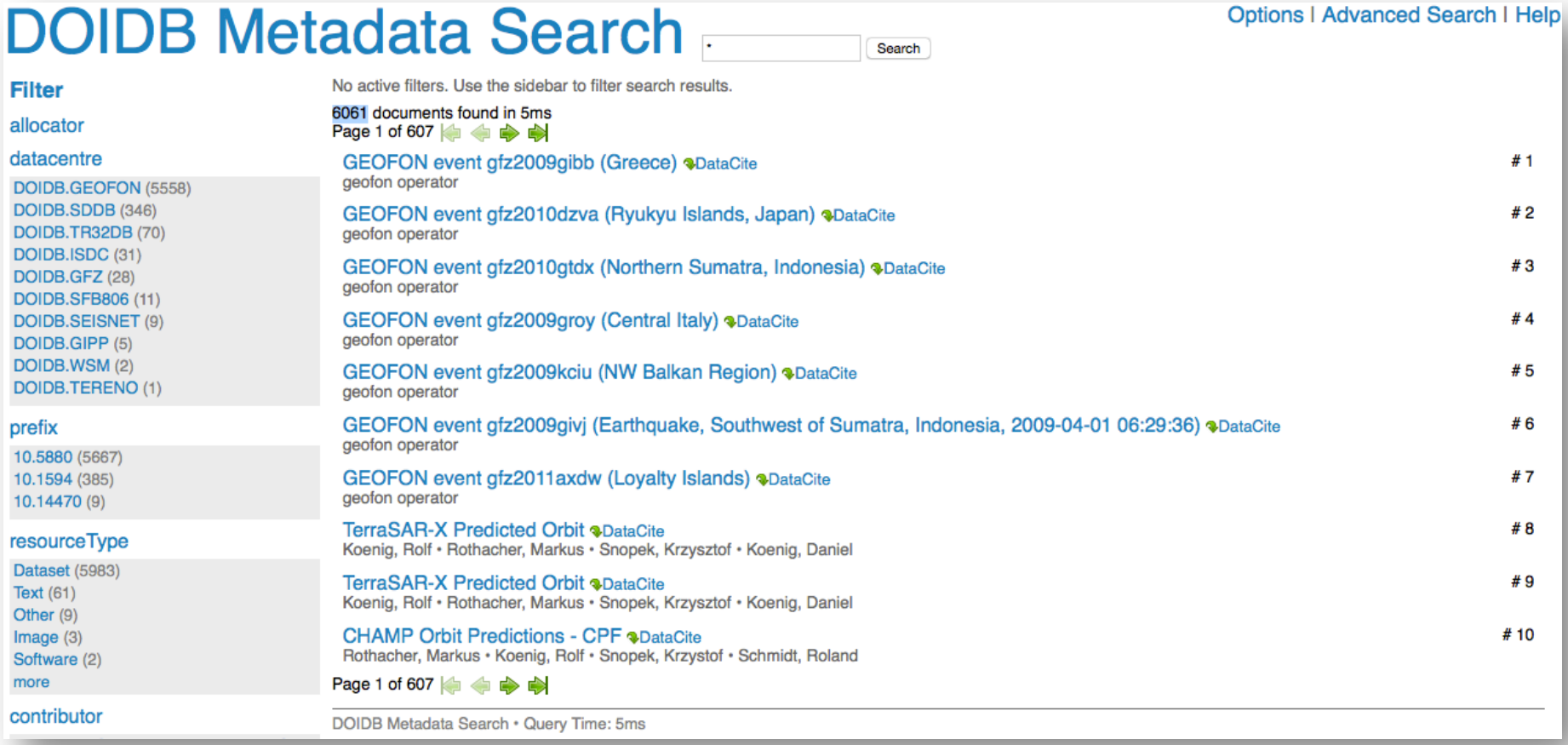
Location

Northern Latitude: 47.4 Southern Latitude: 55.0
Eastern Longitude: 15.0 Western Longitude: 5.0

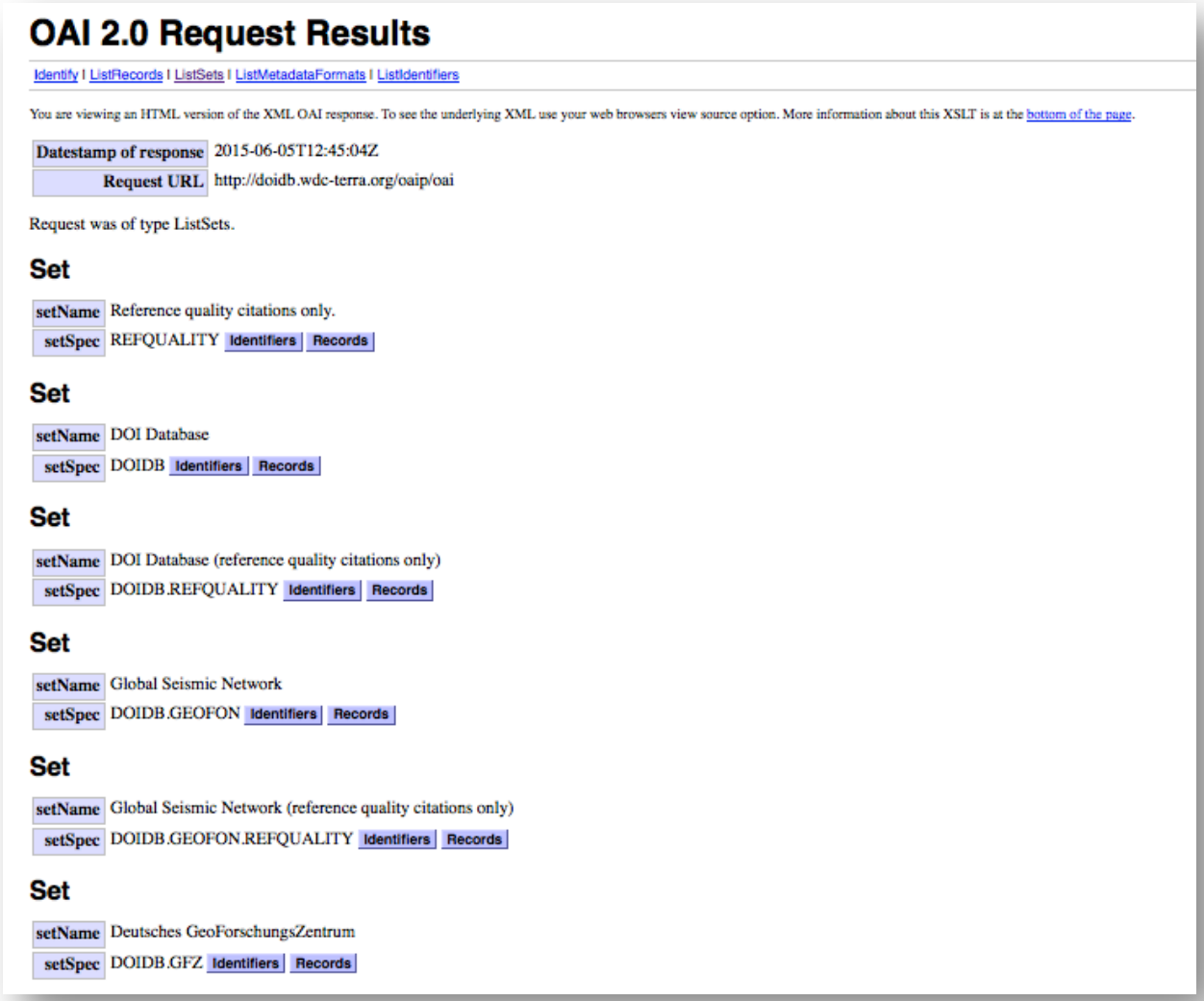
n is freely available as
mmons license and can
g the doi given in Uhle-

a Expansion: The potential
ling floods. Deutsches Geo-
880/GFZ.5.4.2012.001, 2012.
Merz, B.: A consistent set

METADATA STORE



SCHNITTSTELLEN



OAI 2.0 Request Results

Identify | ListRecords | ListSets | ListMetadataFormats | ListIdentifiers

You are viewing an HTML version of the XML OAI response. To see the underlying XML use your web browsers view source option. More information about this XSLT is at the bottom of the page.

Datestamp of response	2015-06-05T12:45:04Z
Request URL	http://doidb.wdc-terra.org/oaip/oai

Request was of type ListSets.

Set

setName	Reference quality citations only.
setSpec	REFQUALITY **Identifiers** **Records**

Set

setName	DOI Database
setSpec	DOIDB **Identifiers** **Records**

Set

setName	DOI Database (reference quality citations only)
setSpec	DOIDB.REFQUALITY **Identifiers** **Records**

Set

setName	Global Seismic Network
setSpec	DOIDB.GEOFON **Identifiers** **Records**

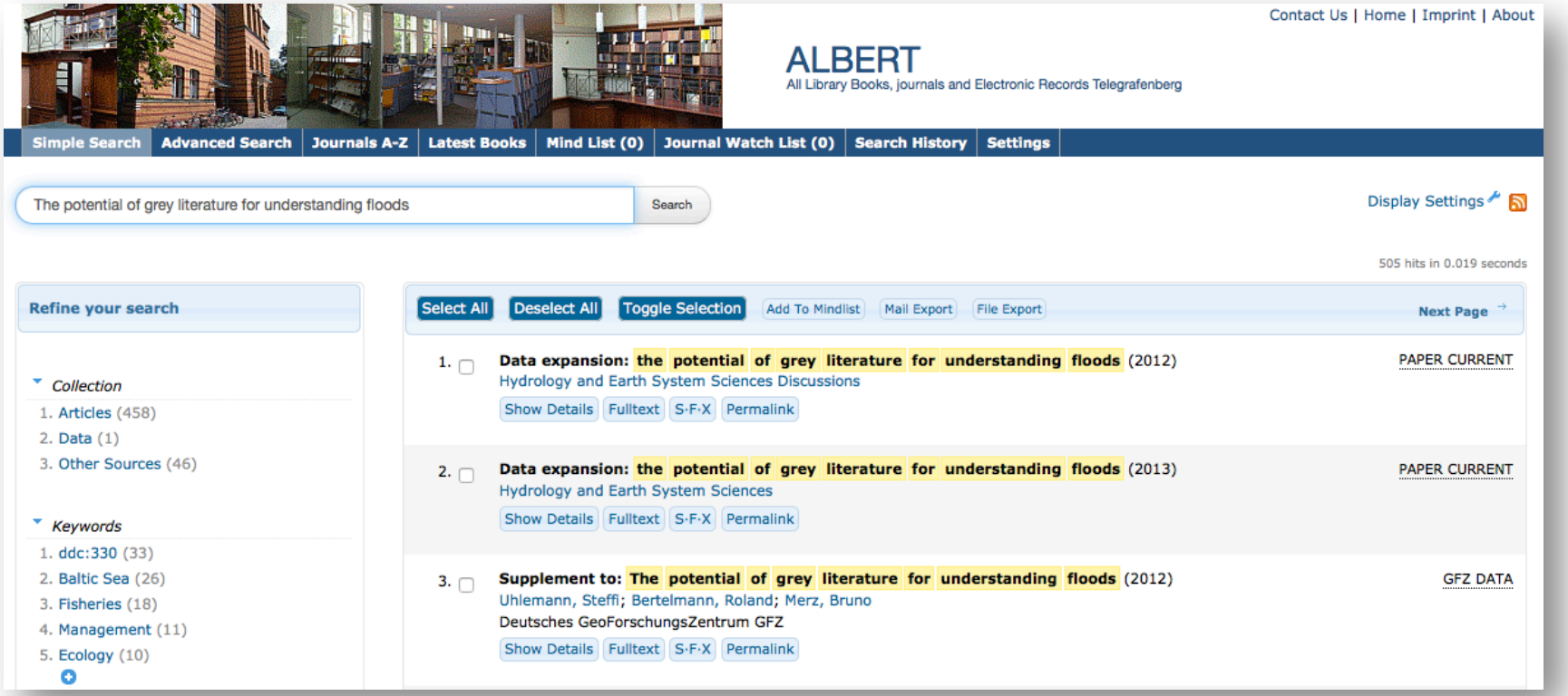
Set

setName	Global Seismic Network (reference quality citations only)
setSpec	DOIDB.GEOFON.REFQUALITY **Identifiers** **Records**

Set

setName	Deutsches GeoForschungsZentrum
setSpec	DOIDB.GFZ **Identifiers** **Records**

SCHNITTSTELLEN



FAZIT

- Beratung und Services fördern die Sichtbarkeit, Zugänglichkeit und Nachnutzung der Forschungsergebnisse
  - Policies, AnsprechpartnerInnen und Infrastrukturen
- Nachfrage nach Publikationsdienstleistungen wächst
  - Weiterentwicklung der Services und Infrastrukturen
- „Connectivity" zwischen Objekten und Infrastrukturen gewinnt an Bedeutung
  - Persistente Identifikatoren für Objekte und Infrastrukturen
- Standards müssen angewendet und weiterentwickelt werden
  - Metadaten, Persistente Identifikatoren und offene Schnittstellen
- Kooperationen auf allen Ebenen sind nötig
  - DataCite ist ein verlässlicher Partner für die Vergabe von DOI

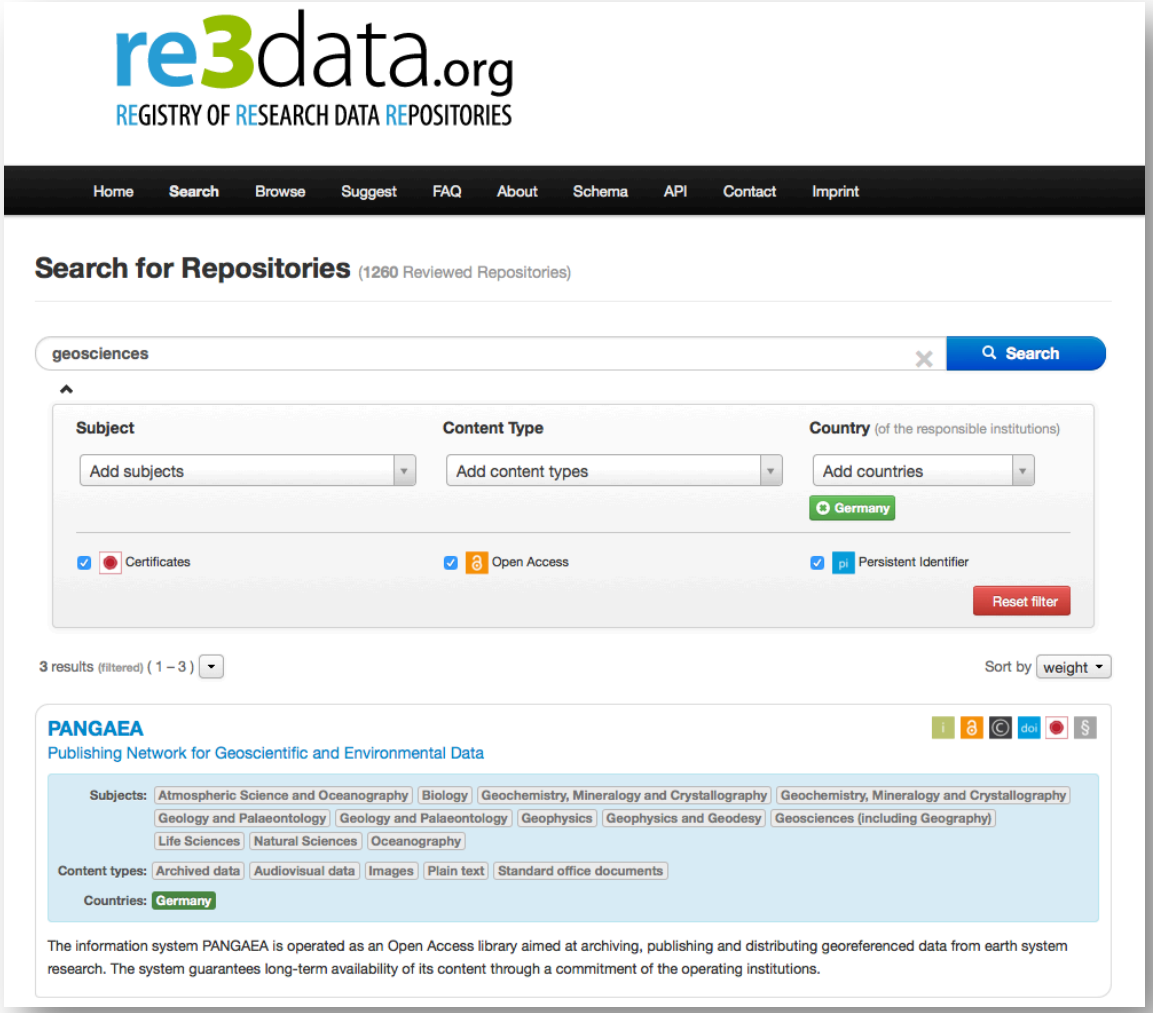
VIELEN DANK FÜR IHRE AUFMERKSAMKEIT

Kontakt:

heinz.pampel@gfz-potsdam.de

kirsten.elger@gfz-potsdam.de

RE3DATA.ORG



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

FORSCHUNGSDATEN.ORG