# INSPIRE@ZAMG

*Harald Bamberger*                    *29th October 2014*

INSPIRE · Infrastructure for Spatial Information in Europe

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Zentralanstalt für
Meteorologie und
Geodynamik

# Overview

- Getting started

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- Current Implementation

  - Overview

  - Metadata-Catalog

  - View-Service

  - Download-Service

- Status, INSPIRE Roadmap / Requirements until 2015 and 2020

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    - Setup

    - Modifications GeoNetwork

  - Internal Project 2015

    - GeoServer Application Schema

    - Download Service

- ReUse for other obligations? WIS/GEOSS/GCOS/Copernicus

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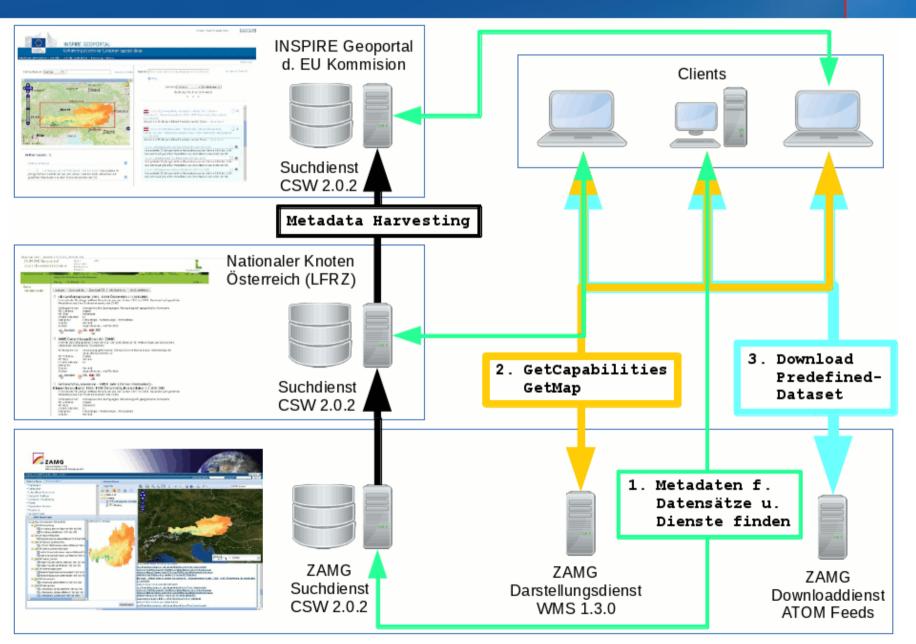Zentralanstalt für
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# Getting Started

INSPIRE and ZAMG (Appointments, Woking Group)

- ZAMG is a Data-Provider according to the INSPIRE-Directive

- Datasets Annex II (GE) und III (AC-MF and EF)

- ZAMG is since December 2009 registered as Legally Mandated Organisation (LMO) at EC-INSPIRE

- Participation from May 2010 until May 2012 in Data Specifications Thematic Working Group AC-MF (Erwin Petz)

- In House Working Group INSPIRE::ZAMG since January 2013

- Project 2014: Metadatacatalog for ZAMG Data

- Appointments

  - 3rd December 2013: Metadata Annex III, non-harmonised Data as View- and Download-Service

  - 21st October 2015: newly created or restructured Geodata Annex II and III

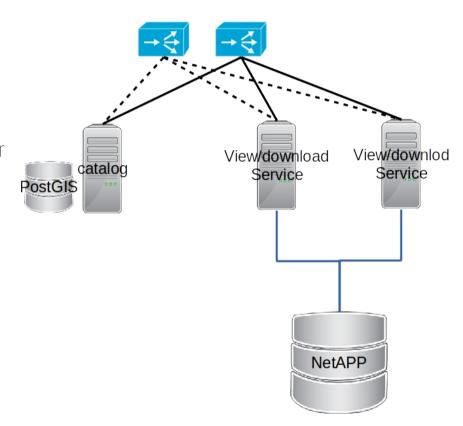  - 21st October 2020: all Datasets Annex II and III

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# Current Implementation - Overview

# Current Implementation - Overview

- Virtual Machines

  - Catalog 2 CPUs, 4 GB RAM

  - View/Download Service
    4 CPUs, 8 GB RAM

    - serve also BaseMaps for our Products

- ZAMG-Catalog http://catalog.zamg.ac.at
  - Open-Source Software GeoNetwork
    - Version 2.10
  - Alternatives considered
    - Hosting at National Node
    - ESRI Geoportal and ArcGIS for INSPIRE
  - Metadatasets for Services and Datasets
- National Node LFRZ http://geometadaten.lfrz.at
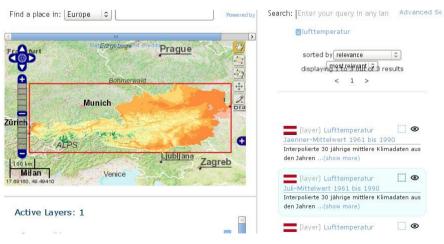- EU INSPIRE Geoportal http://inspire-geoportal.ec.europa.eu

## View-Service

- MapServer 6.4.0
  OGC compliant WMS 1.3.0

- INSPIRE Extensions
  Capabilities Documents

  – References to Metadata

  – Language Code

  – Built in in Mapserver

- Climate Reference Dataset

  – Dataformat GeoTiff

  – No Time Dimension

- Time Dimension is supported through Tileindex (e.g. using PostGIS)

# Current Implementation

## Download-Service

- INSPIRE Technical Guidances describe several Variants

  – ATOM Feed

  – WFS 2.0 Stored Queries

  – WFS 2.0 Filter Encoding

  – WCS still to come

- ZAMG Download-Service mit ATOM Feeds

  – Dataformat: GeoTIFF (zipped)

  – 5 Projections (incl. EU: epsg:3035, epsg:4258)

  – Almost manually generated

  – Rudimentary Opensearch Implementation using PHP

- ~~3rd December 2013: Metadata Annex III, non harmonised Data as View- and Download Service~~

  ✔ Discovery-, View-, Download-Service f. Klimareferenzkarte 1961-1990

  ✔ Data is not harmonised

  ⊘ Metadata for all relevant Datasets

  ⊘ Techn. Monitoring

- 21st October 2015: newly created or restructured Geodata Annex II and III

- 21st October 2020: all  Datasets Annex II and III

## Internal Project 2014 – Metadata-Catalog – Goals

- We have to build a Catalog for INSPIRE relevant Datasets

- Additional benefit for internal use

- Create a central Metadata-Catalog

  - INSPIRE relevant Datasets

  - All other datasets useful for ZAMG tasks

- Make it easier to find datasets that exist in the organisation

- Support from italian Company GeoSolutions S.A.S.

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## Internal Project 2014 – Architecture

- Metadata is created and edited in the internal Catalog

- INSPIRE relevant Metadata is marked and harvested by the external Catalogs

- Modification: Customize Harvesting with XSLT that injects organizational contact and drops individual contact

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## Internal Project 2014 – Modifications GeoNetwork



- Users were "scared" by GeoNetwork Metadata Editing
  - Create simpler Edit Form
    - Reduce fields, Use defaults

- Change LDAP behavior not to overwrite Rolemapping on login

- Add possibility to create keyword search fields for certain thesauri – see next slide
  - Stationdata, gridded
  - Measured, modelled
  - Parameters
  - Are there Thesauri to use?

1. Search form

There should be only 1 available search.
The advanced search should be
the default search.

**Search**

WHAT?
Any - with one of these words
Title
Abstract
Keywords
Parameters
Station and grid data
Processed and model data
⊞ Map type
⊞ Search accuracy
WHERE?

lat (max)
long (min)    long (max)
lat (min)
Type    overlaps
Region
- Any -
⊞WHEN?
⊞INSPIRE SEARCH OPTIONS

Search
Reset
⊞ Restrict to  ⊞ Options

3 new fields for 3 custom ZAMG
keyword groups should be added.

For every keyword group
there should be
an own customizable thesaurus.

The 3 new keyword groups are:
**parameters,
gridded/station data,
processed/model data**

**Search**

WHAT?
Any - with one of these words
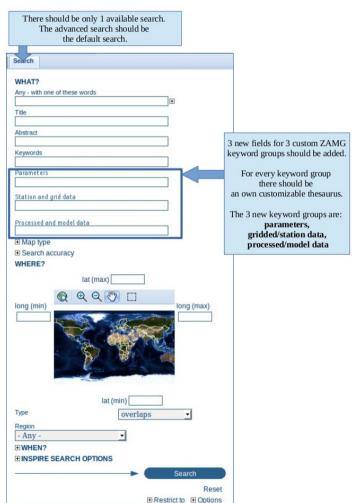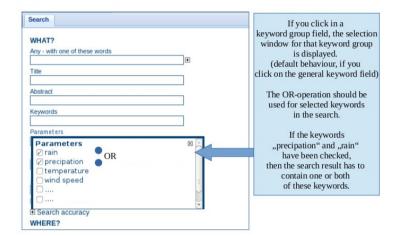Title
Abstract
Keywords
Parameters
**Parameters**
☑ rain
☑ precipitation        OR
☐ temperature
☐ wind speed
☐ ....
☐ ....
⊞ Search accuracy
WHERE?

If you click in a
keyword group field, the selection
window for that keyword group
is displayed.
(default behaviour, if you
click on the general keyword field)

The OR-operation should be
used for selected keywords
in the search.

If the keywords
„precipation" and „rain"
have been checked,
then the search result has to
contain one or both
of these keywords.

**Search**

WHAT?
Any - with one of these words
Title
Abstract
Keywords
climatology
Parameters
rain                    AND
Station and grid data   AND
Processed and model data AND
⊞ Map type
⊞ Search accuracy
WHERE?

The AND-operation should be
used for keyword groups
in the search.

If the normal keyword
„climatology" and the parameter
keyword „rain" have been defined,
then the search result has to
contain at least one keyword
from every
keyword group.

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# Under Development

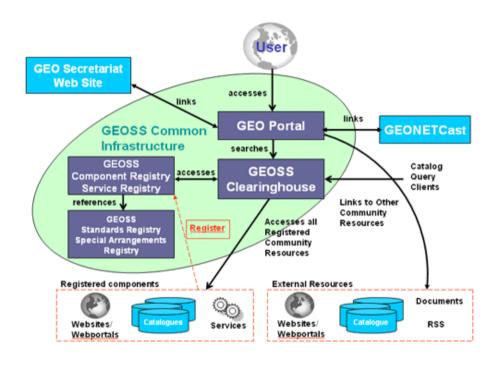## Internal Project 2015 – Plans

- Make Catalog Setup from 2014 Project operational advertise it, get people to use it

- Use GeoServers Application Schema Plugin

  - Station Metadata Annex Theme EF

    - WMO Essential Data

- Improve Download Service

  - Generate Atom Feeds from Metadata Records

  - Experiment with WCS

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# ReUse for other obligations?

## WIS/GEOSS/GCOS/Copernicus

- At least based on the same Technologies as INSPIRE
    - ISO Metadaten Standards als Basis
    - OGC WebServices

- GeoPortals (ESA , COMPUSULT, ESRI)

- Projekt EuroGEOSS

- Is it sufficient to comply to Inspire to satisfy the others?

# Feedback / Questions

Thank you.


Feedback/Questions

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