



L'utilizzo dei dati e dei risultati attraverso la data platform del progetto ORIENTGATE

The use of data results through the data platform of the ORIENTGATE project

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1. *The ORIENTGATE data platform: main objective*
2. *Climate datasets*
3. *Impact indicator datasets*
4. *Main services and exploitation examples*



ORIENTGATE data platform: main objective

Service Registry

Data Browsers

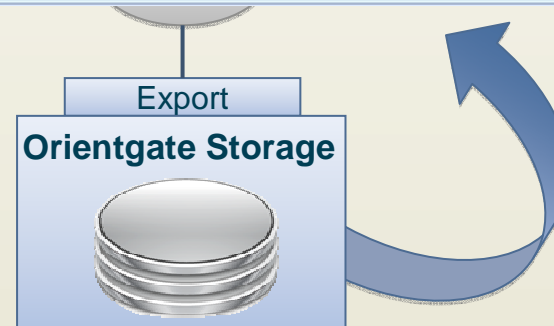
FTP THREDDS GEONETWORK GEOSERVER

Port: 21

Indice di ftp://orientgate02.cmcc.it/impacts/

Vai alla cartella superiore

Nome	Dimensione	Ultima modifica
adaptivecapacity_IPCC-AR4		11/10/13 00:00:00
exposure_IPCC-AR4		23/04/14 16:30:00
exposure_UN-DRR		30/04/14 08:53:00
hazard_UN-DRR		30/04/14 09:16:00
potentialimpact_IPCC-AR4		18/12/13 00:00:00
risk_UN-DRR		11/10/13 00:00:00
sensitivity_IPCC-AR4		11/10/13 00:00:00
vulnerability_IPCC-AR4		11/10/13 00:00:00
vulnerability_UN-DRR		18/12/13 00:00:00





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Enter keywords...

Thematic Centres < Forestry & Agriculture < Drought, Water & Coasts < Urban Adaptation & Health

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Service Registry

Data Browsers

FTP THREDOS GEONETWORK GEOSERVER

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potentialimpact_IPCC-AR4		18/12/13 00:00:00
risk_UN-DRR		11/10/13 00:00:00
sensitivity_IPCC-AR4		11/10/13 00:00:00
vulnerability_IPCC-AR4		11/10/13 00:00:00
vulnerability_UN-DRR		18/12/13 00:00:00

Contacts

INTEGRATING CLIMATE KNOWLEDGE INTO PLANNING

SOUTH EAST EUROPE

EUROPEAN UNION

Urban Adaptation & Health

Events

planning

approaches 19

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Climate datasets

Climate datasets are output of climate simulations within the Work Package 3 and they will be taken in input by the pilot studies.

A dataset is composed by a series of NetCDF files, one for each year of simulation, and are encoded following the rules that we know:

institutenam_ forcinginfo_ modelinginfo_ geographicalinfo_ resolution_ temporalsubset

Example of dataset:

RHMSS_ERA40_NMMB_Balkan_8km_1971-2000



Dataset

Dataset
acp
acp_2000.nc
acp_1999.nc
acp_1998.nc
acp_1997.nc
acp_1996.nc
acp_1995.nc
acp_1994.nc
acp_1993.nc
acp_1992.nc
acp_1991.nc
acp_1990.nc
acp_1989.nc
acp_1988.nc



Impact indicator datasets

Impact indicator datasets, instead, are the output of the pilot studies and consist of different kind (vector or raster, excel, table, netcdf, etc.) of files related to a specific indicator.

Notice that more than one dataset can refer to a single indicator.

Similarly to climate datasets, impact indicators are uniquely identified.

They are encoded in the following way:

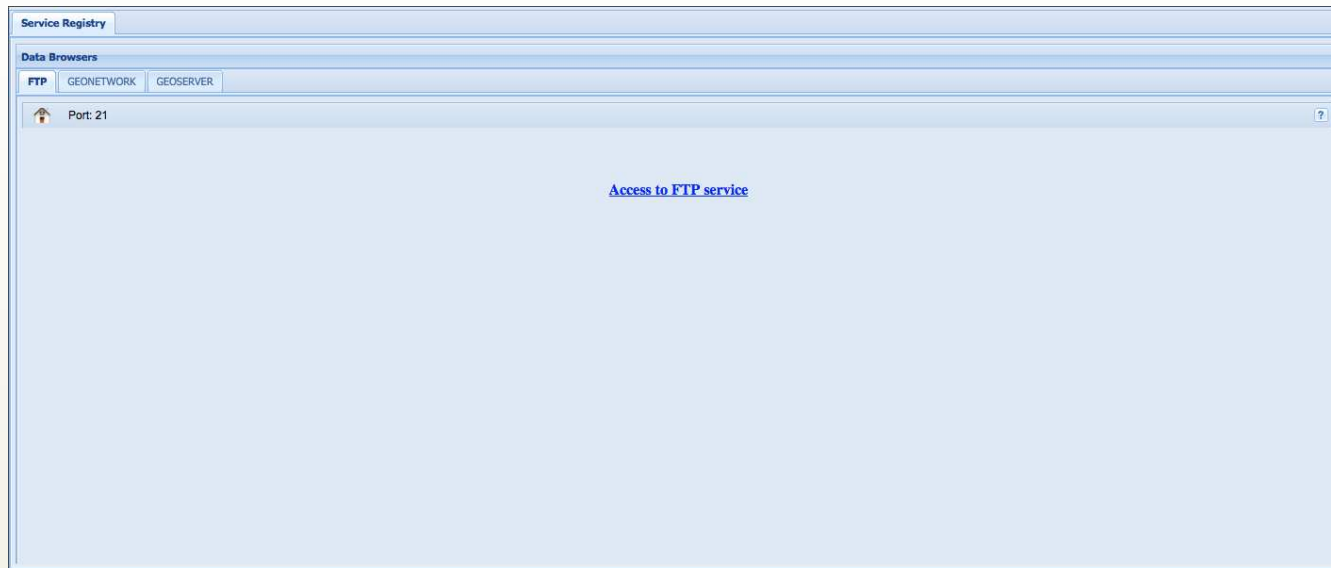
<indicator_identifier>_<time_frequency>_<spatial_resolution>_<temporal_subset>

Example:

APA_30y_8km_19762005



1. FTP (File Transfer Protocol)





1. FTP (File Transfer Protocol)

Service Registry

Data Browsers

FTP GEONETWORK GEOSERVER

Port: 21

Indice di ftp://orientgate02.cmcc.it/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/SDI_30y_300000_19762070/

[Vai alla cartella superiore](#)

Nome	Dimensione	Ultima modifica
SDI_30y_300000_19762005_BASE		20/09/14 13:41:00
SDI_30y_300000_20212050_RCP45		20/09/14 13:42:00
SDI_30y_300000_20212050_RCP85		20/09/14 19:40:00
SDI_30y_300000_20412070_RCP45		20/09/14 19:42:00
SDI_30y_300000_20412070_RCP85		20/09/14 19:43:00



1. FTP (File Transfer Protocol)

Service Registry

Data Browsers

FTP GEONETWORK GEOSERVER

Port: 21

Service Registry

Data Browsers

FTP GEONETWORK GEOSERVER

Port: 21

Service Registry

Data Browsers

FTP GEONETWORK GEOSERVER

Port: 21

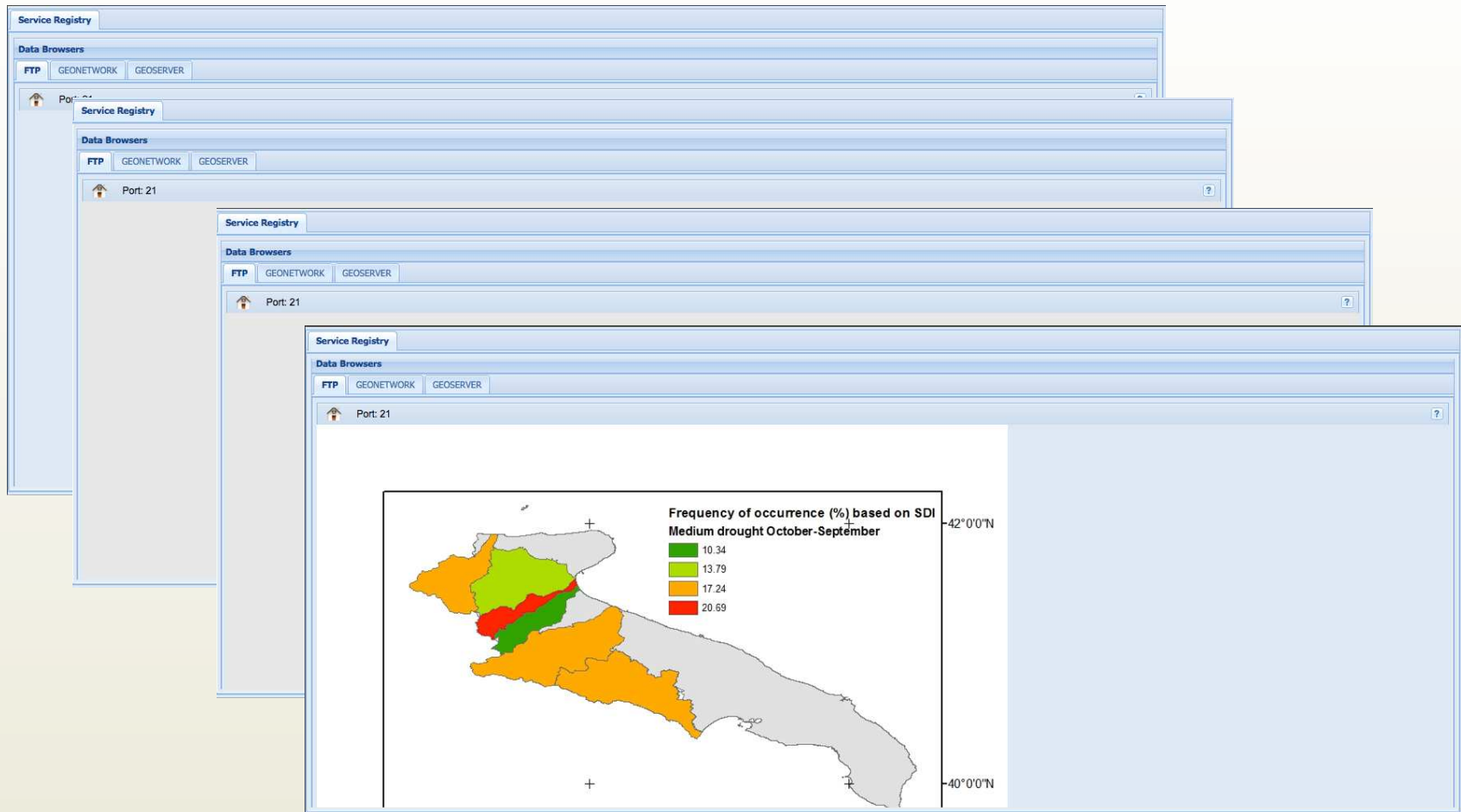
Indice di ftp://orientgate02.cmcc.it/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/SDI_30y_300000_19762070/SDI_30y_300000_19762005_BASE/

Vai alla cartella superiore

Nome	Dimensione	Ultima modifica
SDI_30y_300000_19762005_BASE.jpg	112 KB	20/09/14 13:41:00
SDI_30y_300000_19762005_BASE.zip	235 KB	20/09/14 13:41:00



1. FTP (File Transfer Protocol)




2. GeoNetwork

GeoNetwork is a catalog application to manage spatially referenced resources.

It provides:

- *Search&Discovery in multiple catalogs through a website*
- *Data download*
- *Users and Group management*
- *Access to interactive maps*
- *Support for multiple metadata standards*
- *Metadata editing tool*



ANNUAL TEMPERATURE CHANGE 2021-2030

Identification info

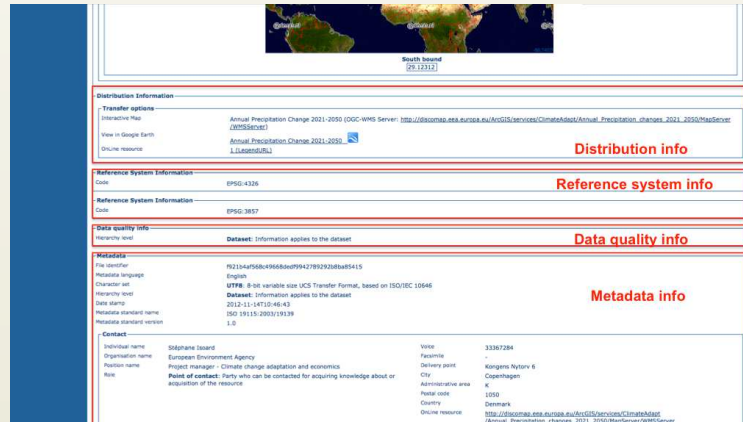
Title: Annual Temperature Change 2021-2030
Date: 2021-02-24T14:10:48
Date last modified: 2021-02-24T14:10:48
Keywords: Date identifies when the resource was examined or re-queried and improved or amended
Temporal changes in annual mean surface temperature (°C) under A1B scenario, high model ensemble mean for the time period 2021-2050 relative to 1981-1995 mean. High presents changes using ensemble mean of several regional climate models (RCMs), run by different climate modeling communities, in the frame of the EU FP6 Integrated Project ENSEMBLES (Contract number 505539). Data are presented as changes in relative terms (percentage) by 1981-1995 period in a grid resolution of approximately 2.5 km.

Point of contact info

Individual name: Stigshane Isarid
Organization name: European Environment Agency
Position name: Project manager - Climate change adaptation and economics
Role: Project manager - Climate change adaptation and economics
Voice: 33307284
Delivery point: Kongens Nytorv 6
City: Copenhagen
Administrative area: K
Postal code: 1050
Country: Denmark
Online resource: http://discomaps.eea.europa.eu/arcGIS/arcswp/ClimateAdapt/Annual_Temperature_Change_2021_2030/MapServer/0705Server

Geographical info

Geographic bounding box: West bound [22.8702], South bound [56.12312], East bound [13.37881], North bound [57.47302]



ANNUAL PRECIPITATION CHANGE 2021-2050 (DCC-WMS Server)

Distribution information

Transfer options:
Interactive map: Annual Precipitation Change 2021-2050 (DCC-WMS Server) http://discomaps.eea.europa.eu/arcGIS/arcswp/ClimateAdapt/Annual_Precipitation_Change_2021_2050/MapServer/0705Server/
View in Google Earth: Annual_Precipitation_Change_2021_2050.gz
Online resource: http://discomaps.eea.europa.eu/arcGIS/arcswp/ClimateAdapt/Annual_Precipitation_Change_2021_2050/MapServer/0705Server

Reference system information

Code: EPSG:4326

Reference System Information

Code: EPSG:3857

Data quality info

Dataset: Information applies to the dataset

Metadata info

File identifier: 70213a49558a496880099427892920ba85415
Metadata language: English
Character set: UTF8 - 8-bit variable size UCS Transfer Format, based on ISO/IEC 10646
Resource level: Dataset: Information applies to the dataset
Date stamp: 2012-11-14T10:46:43
Metadata document name: ISO 19115:2003/19139
Metadata standard version: 1.0

Contact

Individual name: Stigshane Isarid
Organization name: European Environment Agency
Position name: Project manager - Climate change adaptation and economics
Role: Project manager - Climate change adaptation and economics
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- Physical Samples
- Registers
- Z3950 Servers

 **GeoRSS**

- SDI_30y_300000_19762005_BASE
- SDI_30y_300000_20212050_RCP45
- SDI_30y_300000_20212050_RCP85
- SDI_30y_300000_20412070_RCP45
- SDI_30y_300000_20412070_RCP85

FIND INTERACTIVE MAPS, GIS DATASETS, SATELLITE IMAGERY AND RELATED APPLICATIONS





IDENTIFICATION INFO

Title	SDI_30y_300000_19762005_BASE
Date	2014-09-19T13:00:00
Date type	Creation: Date identifies when the resource was brought into existence

Cited responsible party

Individual name	Monia Santini
Organisation name	Centro Euro-Mediterraneo sui Cambiamenti Climatici
Position name	Researcher
Role	Author: Party who authored the resource

Presentation form: **Digital map:** Map represented in raster or vector form

Abstract: This dataset represents the frequency of classes of the Streamflow Drought Index (SDI; Nalbantis and Tsakiris 2008) calculated for six significant hydrographic basins in Puglia (IT), namely Fortore, Candelaro, Cervaro, Carapelle, Ofanto, Bradano. The frequency was calculated for multi-month periods (3, 6, 9, 12 months) along a 30-year time frame from 1976 to 2005 being the baseline of Pilot 3. Streamflow data were derived from...

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2. GeoNetwork



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- Registers
- Z3950 Servers

GeoRSS

- SDI_30y_300000_19762005_BASE
- SDI_30y_300000_20212050_RCP45
- SDI_30y_300000_20212050_RCP85
- SDI_30y_300000_20412070_RCP45
- SDI_30y_300000_20412070_RCP85

ftp://orientgate02.cmcc.it/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/SDI_30y_300000_19762070/SDI_30y_300000_19762005_BASE/

West bound East bound

South bound

DISTRIBUTION INFORMATION

Name	Shapefile
Transfer options	
Transfer size	0.234
Transfer options	
OnLine resource	ftp://orientgate02.cmcc.it/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/SDI_30y_300000_19762070/SDI_30y_300000_19762005_BASE/



3. THREDDS (Thematic Realtime Environmental Distributed Data Services)



The THREDDS service aims at bridging the gap between data providers and data users.

The goal is to simplify the discovery and use of scientific data and to allow scientific publications and educational materials to reference scientific data.

Dataset

- CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000
 - z0.nc
 - wso/
 - wnow/
 - wi/
 - vmax10m/
 - v10m/
 - u10m/
 - tas/
 - tnow/
 - ta/
 - totprec/
 - tmin2m/
 - tmax2m/
 - sd2m/
 - t2m/
 - soiltvp.nc
 - runoffa/
 - runoffn/

Initial TDS Installation

THREDDS Data Server

Catalog http://orientgate02.cmcc.it:8080/thredds/catalog/orientgate/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/catalog.html

Dataset: wso/wso_2000.nc

- Data size: 64.21 Mbytes
- Data type: GRID
- ID: orientgate_catalog/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/wso_2000.nc

Access:

- OPENDAP: /thredds/dodsC/orientgate/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/wso_2000.nc
- HTTPServer: /thredds/fileServer/orientgate/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/wso_2000.nc
- WMS: /thredds/wms/orientgate/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/wso_2000.nc
- NetcdfSubset: /thredds/netcdf/orientgate/drought_water_coasts/pilot_study3/CMCC_ERA40_COSMOCLM_italy-apulia_8km_1971-2000/wso/wso_2000.nc

Dates:

- 2013-11-11 11:48:07Z (modified)

Viewers:

- Integrated Data Viewer (IDV) (webstart)
- NetCDF-Java ToolsUI (webstart)
- Godiva2 (browser-based)



3. THREDDS (Thematic Realtime Environmental Distributed Data Services)

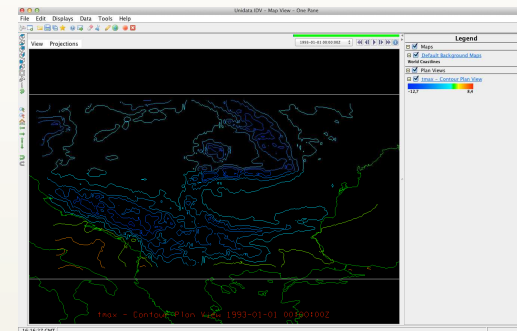
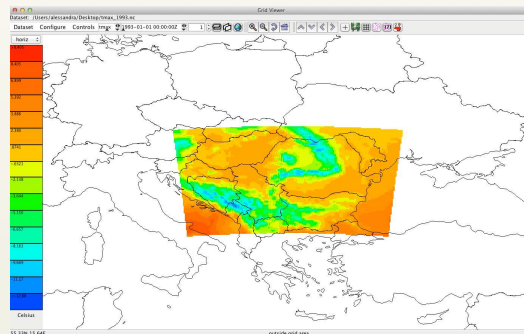
THREDDS is a web server providing features of metadata and data access using:

- **HTTP**, to download the data using a web browser
- **OPeNDAP** protocol, to subset data with the web browser without downloading the entire file
- **WMS** and **WCS**, XML file to be used by visualization tools
- **NetCDF subset service**, a web service for subsetting data in order to allow partial download of huge climate datasets and permit users to get exactly what they need.

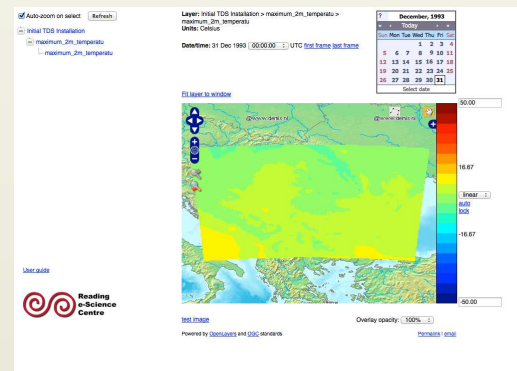
THREDDS also offers the possibility to visualize the data, through some integrated viewers:

IDV (Integrated Data Viewer)

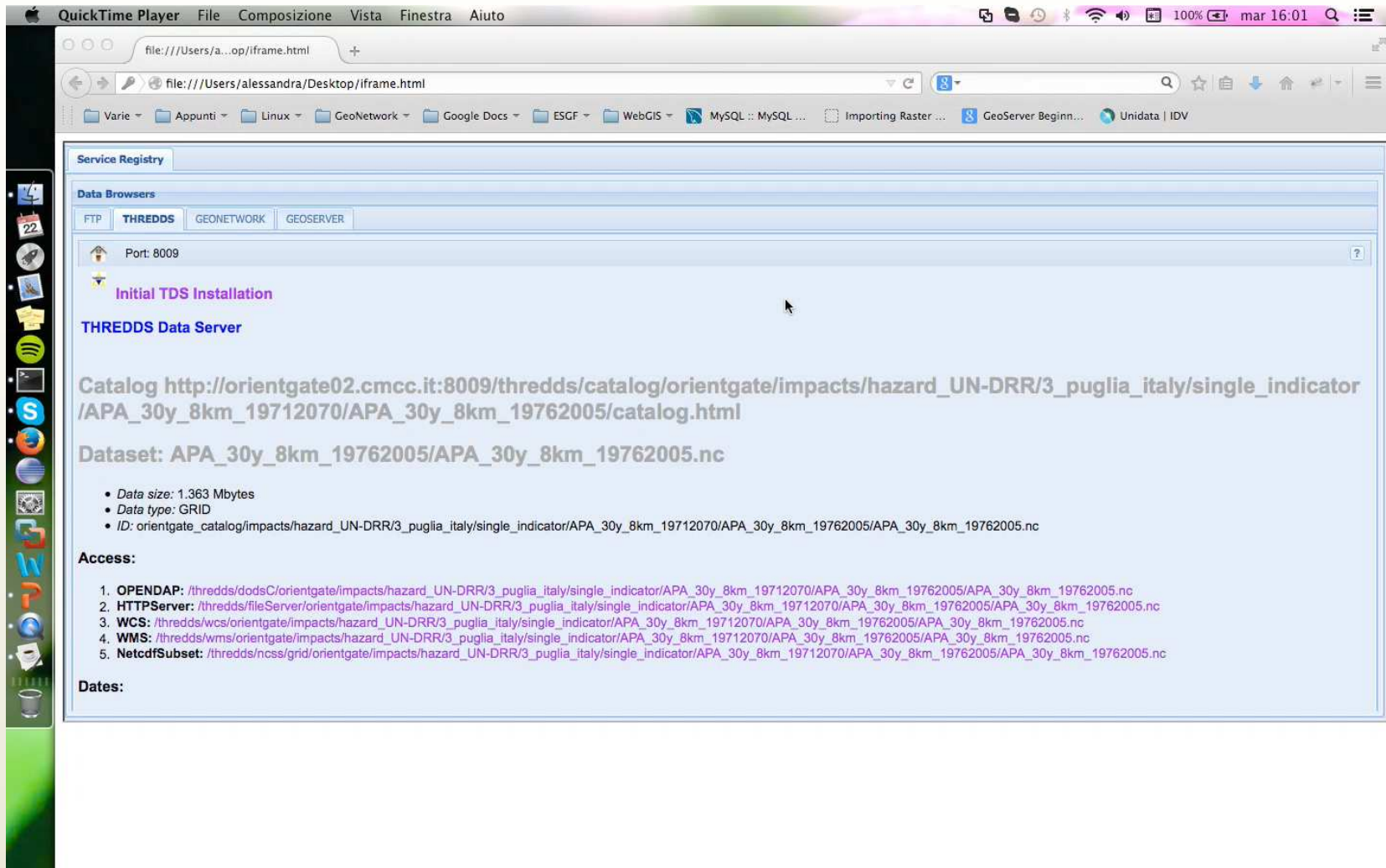
Java Tools UI



GODIVA 2



THREDDS viewers example



QuickTime Player File Composizione Vista Finestra Aiuto

file:///Users/a...op/iframe.html

file:///Users/alessandra/Desktop/iframe.html

Varie Appunti Linux GeoNetwork Google Docs ESCF WebGIS MySQL :: MySQL ... Importing Raster ... GeoServer Beginn... Unidata | IDV

Service Registry

Data Browsers

FTP **THREDDS** GEONETWORK GEOSERVER

Port: 8009

Initial TDS Installation

THREDDS Data Server

Catalog http://orientgate02.cmcc.it:8009/thredds/catalog/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/catalog.html

Dataset: [APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)

- Data size: 1.363 Mbytes
- Data type: GRID
- ID: orientgate_catalog/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc

Access:

- OPENDAP:** [/thredds/dodsC/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)
- HTTPServer:** [/thredds/fileServer/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)
- WCS:** [/thredds/wcs/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)
- WMS:** [/thredds/wms/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)
- NetcdfSubset:** [/thredds/netcdf/orientgate/impacts/hazard_UN-DRR/3_puglia_italy/single_indicator/APA_30y_8km_19712070/APA_30y_8km_19762005/APA_30y_8km_19762005.nc](#)

Dates:



4. GeoServer

GeoServer is an open-source software allowing users to share, process and edit geospatial data.

It allows data publication from any major spatial data source using open standards, such as WMS (Web Map Service), WFS (Web Feature Service) and WCS (Web Coverage Service)

- GeoServer reads a variety of data formats, including:
 - Shapefile
 - GeoTIFF
 - GTOPO30
 - ECW, MrSID
 - JPEG2000
 - Post GIS
 - MySQL
 - DB2
 - ArcSDE
 - Oracle Spatial
- Output formats: KML, GML, Shapefile, GeoRSS, PDF, GeoJSON, JPEG, GIF, SVG, PNG and other more formats.
- Integrated OpenLayers client for previewing data layers.
- Efficient publishing of geospatial data to Google Earth, using KML language.





Orientgate

GeoServer example



Service Registry

Data Browsers

FTP GEONETWORK **GEOSESERVER**

Port: 8081

GeoServer Username Remember me Login

Layer Preview

List of all layers configured in GeoServer and provides previews in various formats for each.

<< < | > >> Results 1 to 5 (out of 5 items) Search

Type	Name	Title	Common Formats	All Formats
	orientgate:SDI_30y_300000_19762005_BASE	SDI_30y_300000_19762005_BASE	OpenLayers KML GML	Select one
	orientgate:SDI_30y_300000_20212050_RCP45	SDI_30y_300000_20212050_RCP45	OpenLayers KML GML	Select one
	orientgate:SDI_30y_300000_20212050_RCP85	SDI_30y_300000_20212050_RCP85	OpenLayers KML GML	Select one
	orientgate:SDI_30y_300000_20412070_RCP45	SDI_30y_300000_20412070_RCP45	OpenLayers KML GML	Select one
	orientgate:SDI_30y_300000_20412070_RCP85	SDI_30y_300000_20412070_RCP85	OpenLayers KML GML	Select one

<< < | > >> Results 1 to 5 (out of 5 items)

Service Registry

Data Browsers

FTP | GEONETWORK | **GEOSERVER**

Port: 8081

GeoServer Remember me

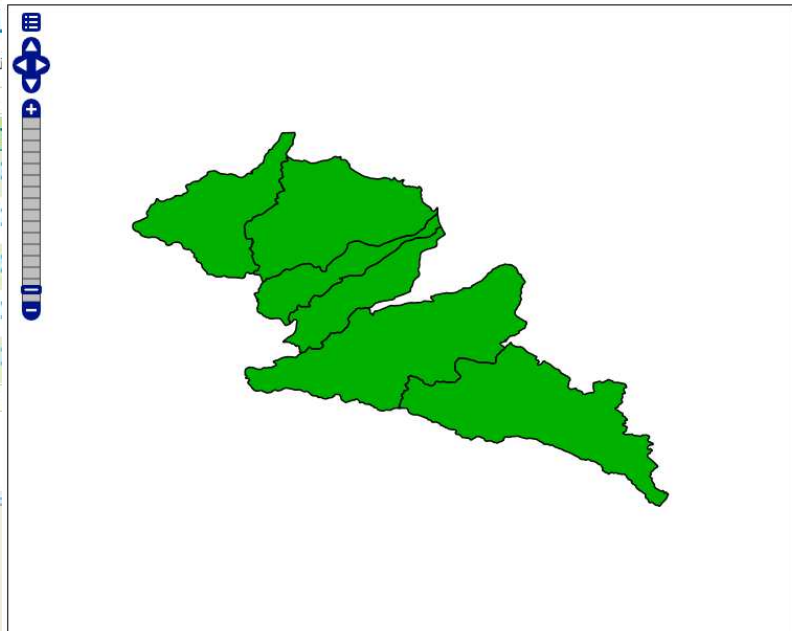
About & Status

- About GeoServer

Data

- Layer Preview

Demos



Scale = 1 : 2M 16.34132, 41.05338

SDI_30y_300000_19762005_BASE

fid	NOME	area_km2	SDI1_N	SDI1_L	SDI1_M	SDI1_H	SDI1_E	SDI2_N	SDI2_L	SDI2_M	SDI2_H	SDI2_E	SDI3_N	SDI3_L	SDI3_M	SDI3_H	SDI3_E	SDI4_N	SDI4_L	SDI4_M	SDI4_E	
SDI_30y_300000_19762005_BASE.4	Ofanto	3117.80043091	43.33	56.67	0.0	0.0	0.0	48.28	37.93	10.34	3.45	0.0	44.83	34.48	20.69	0.0	0.0	44.83	37.93	17.24	0.0	0.0



Thank you!

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