



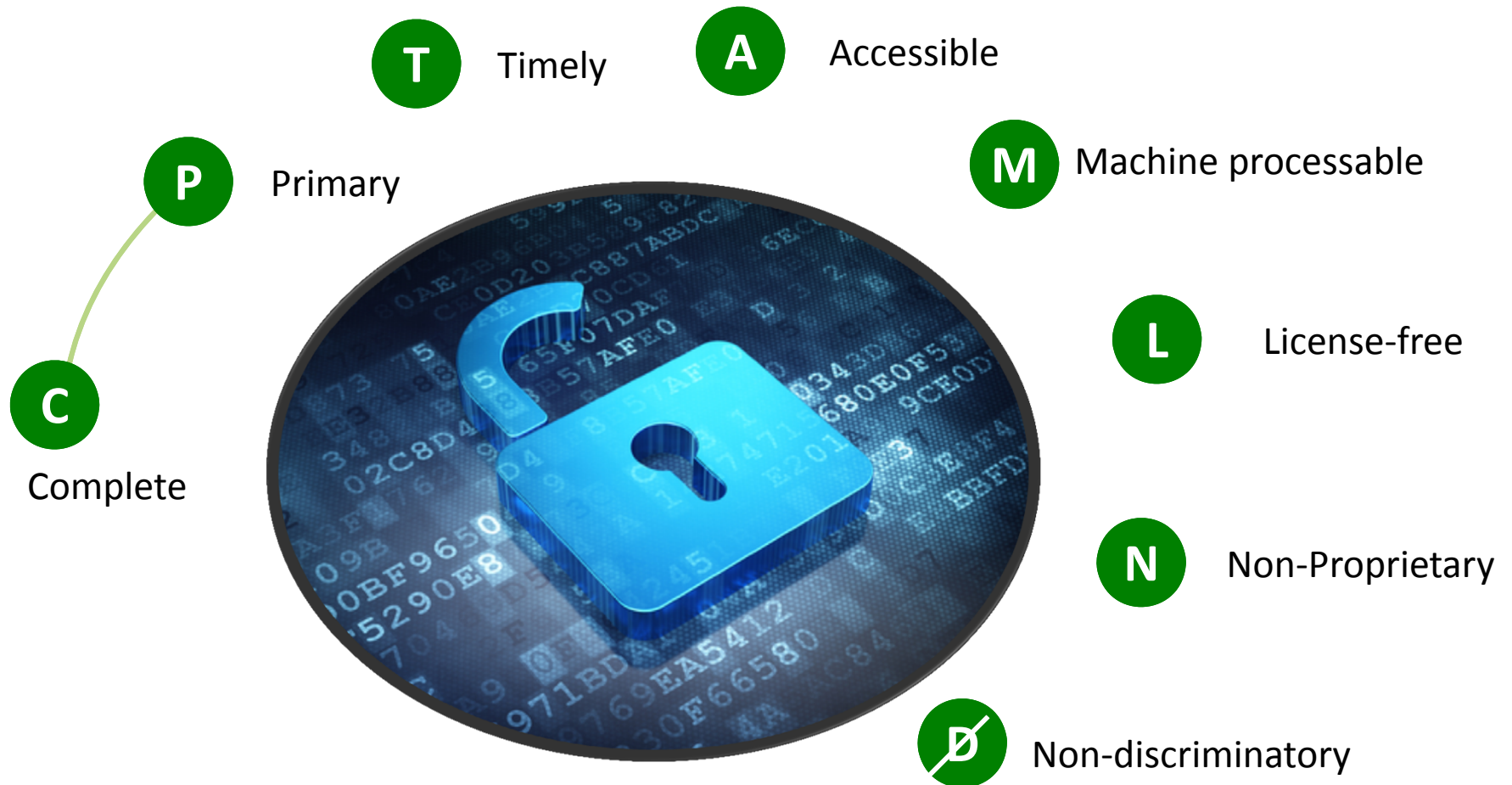
**GRID**  
GENEVA

# GRID-Geneva's contributions to open data solutions

Pascal Peduzzi,  
Technical Workshop on Selecting Indicators for the State  
of Regional Seas 30 June – 02 July 2014, Geneva,  
Switzerland



# Open data: what is it?



# Advantages



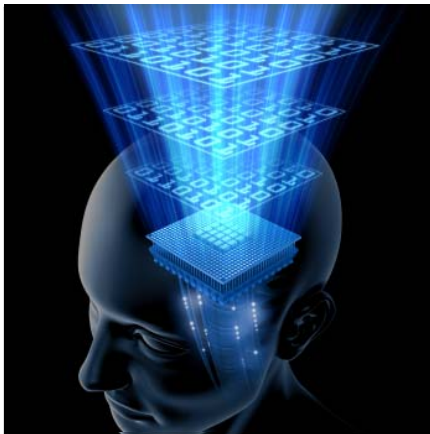
Transparency & democracy



Participation



Combination of data leads to new products and services



New knowledge

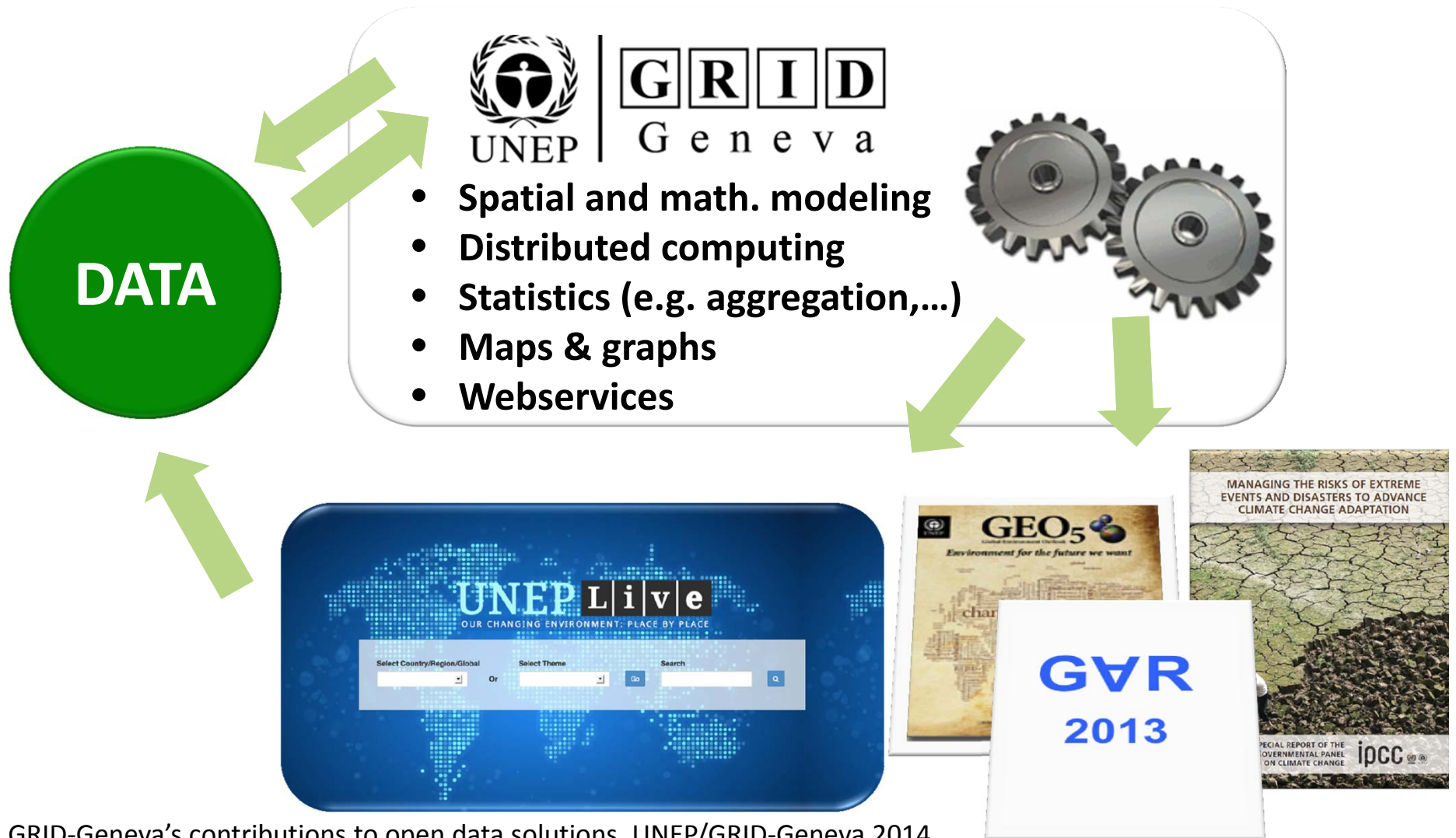


Innovation & efficiency



Self-Empowerment

# From Open Data to Assessment



GRID-Geneva's contributions to open data solutions, UNEP/GRID-Geneva 2014

# 14 GRID-Geneva platforms



- EDE
- PREVIEW
- RAMSAR
- ClimVar
- ECOWREX
- TWAP
- SIDS / EbA
- EOPower
- Jason
- AfroMaison
- EnviroGRIDS
- EcoArm2ERA
- ARPEGEO
- GRID broker

solutions to open data solutions, UNEP/GRID-Geneva 2014

# Environment Data Explorer



UNEP

DEWA

GEO

Environmental Data Explorer



United Nations Environment Programme  
environment for development

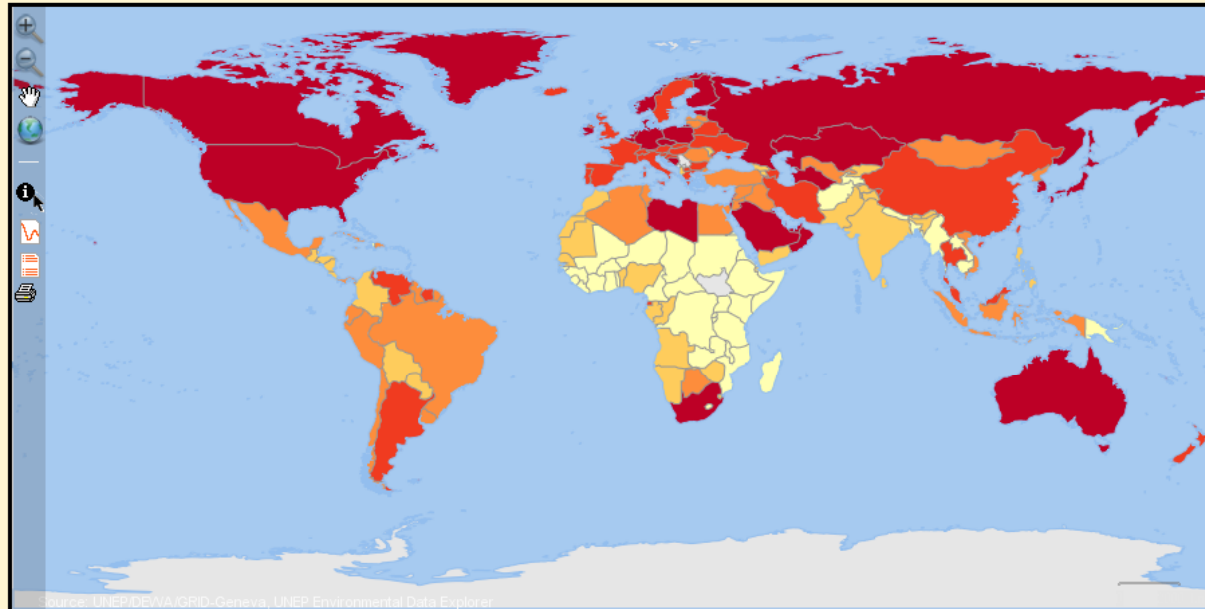


Environmental Data Explorer

English | Français | Contact | Help | System sign in

Map Graph Table Metadata Download

## Emissions of CO<sub>2</sub> - from Fossil Fuels - Total (CDIAC) [2010] [per Capita]



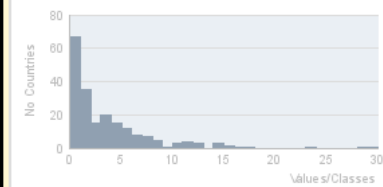
### LEGEND

International Boundaries

Units: Gigagrams of CO<sub>2</sub>

- no data
- 0.00001 to 0.00046
- 0.00046 to 0.00167
- 0.00167 to 0.00445
- 0.00445 to 0.00797
- 0.00797 to 0.04034

### HISTOGRAM



### Basic STATISTICS

<b>0.00001</b> minimum	<b>0.00509</b> average
<b>0.04034</b> maximum	<b>0.00643</b> st dev
<b>206</b> no countries	<b>1.04762</b> sum

define years

- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004
- 2003
- 2002

Select all

submit

define dataset

link to map

General Symbology Classification Trend Analysis

General Background Query Boundaries Layers

- Equal Interval (on selected year)
- Equal Interval (on all years)
- Quantiles

Theme

update map

View

This menu gives you access to the "View".  
Change the **mapsize**, select the **background** layer, define the **query** layer etc.  
Just click on the tags above to make your selection.

For some map examples see gallery.

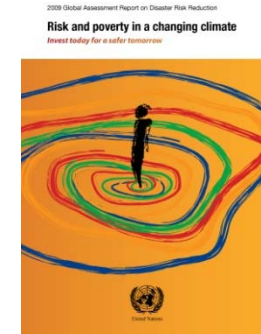
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

Help

# PREVIEW Global Risk Data Platform



## The PREVIEW Global Risk Data Platform



IPCC SREX



**GAR**  
**2013**

<http://preview.grid.unep.ch>

# RAMSAR – Sites Information Service



The screenshot displays the Ramsar Sites Information Service portal. At the top, there is a navigation bar with the Ramsar logo and the text "Ramsar Sites Information Service". Below this, there are search and filter options. The search bar contains the text "Ramsar". The filter options include "Filter by country" (listing Afghanistan, Albania, Algeria), "Filter by Region", "Filter by Site Name", "Filter by wetland category", "Filter by Ramsar criteria", and "Filter by designation date".

The main content area shows the details for the "Becher Point Wetlands" in Australia. The area is 52,023 km<sup>2</sup> and the coordinates are 32°23' S, 115°44' E. The site is located near Rockingham in south-west Western Australia. The overview text states: "The Becher Point Wetlands Ramsar site is a system of about sixty small wetlands located near Rockingham in south-west Western Australia. The wetlands are made up of chains of small linear, ovoid or irregular shaped basins arranged in five groups, each roughly parallel to the coast and separated by sand ridges."

There are buttons for "Download RIS", "Map download", and "GIS download". A map of the site is shown on the right, with an inset map of Australia. The map labels include "The Licks Kennedy Bay", "Port Kennedy", "Karnup", "Stakehill Rd", "Kwinana Freeway", "Lake Walyungup", "Baldivis", "Secret Harbour", "Golden Bay", "Singleton", "Marapana Wildlife World", and "Lake Amarillo".





## EOPOWER project Earth Observation for economic emPOWERment

2013 - 2015 (13 partners)

Coordinator: N. Ray

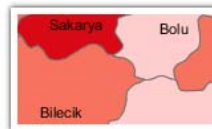
Manager: G. Giuliani

WP leader: Y. Guigoz

<http://eopower.eu>

GRID-Geneva's contributions to open data soluti

Promotion of interoperability and data sharing for Earth Observation through pilot studies, success stories, and capacity building



**Turkey**  
Health security

[Link to map](#)



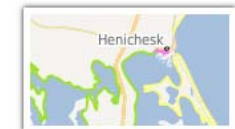
**Turkey 2**  
Land use/cover change detection in GNEADA, TURKEY

[Link to map](#)



**Azov Sea Salinity**  
Changes in the ecosystem structures of the Azov Sea, on the example of monitoring of ichtyocoenoses.

[Link to map](#)



**Azov Coastal transform.**  
Current transformation of coastal biotopes in the Azov - Black sea region

[Link to map](#)



**Coastal dynamics**  
Coastline dynamics of the marine edge of the Danube Delta

[Link to map](#)



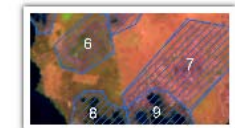
**(Intra-)Zonal ecosystems**  
Changes in zonal and intrazonal ecosystems (meadow, steppe and plavni communities)

[Link to map](#)



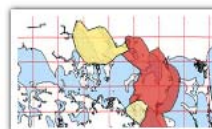
**Ukraine**  
Changes in the ecosystem structures of the Azov Sea, on the example of monitoring of ichtyocoenoses.

[Link to map](#)

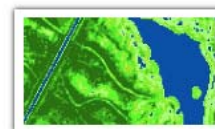


**Salt marshes**  
Monitoring results of salt marshes basing on remote sensing data

[Link to map](#)



**Birds of dry steppe zone**  
Changes in the structure of bird communities in zonal and intrazonal ecosystems of dry ...



**Reed associations**  
Results of monitoring of areas of reed associations in the Danube Delta basing on ...

[Link to map](#)



**Accumulative formations**  
Results of monitoring of accumulative formations and water surface area of ...

[Link to map](#)



**Pnovice**  
Monitoring ground water level for optimised drawing.

[Link to map](#)

# ClimVar Meditteranea

## Integrated Coastal Zones Management (GEF)



**Partners:** UNEP/MAP, Plan bleu, GWP-Med

### **Objective:**

Integration of Climatic Variability and Change into National Strategies to Implement the ICZM Protocol in the Mediterranean (UNEP/MAP).

### **Roles of GRID-Geneva towards Open data:**

- Generation of the Mediterranean Integrated Climate Information Platform (MedICIP) to receive and serve 11 countries.
- Capacity building workshops (3) to train dedicated staff from 11 countries on SDI technologies.



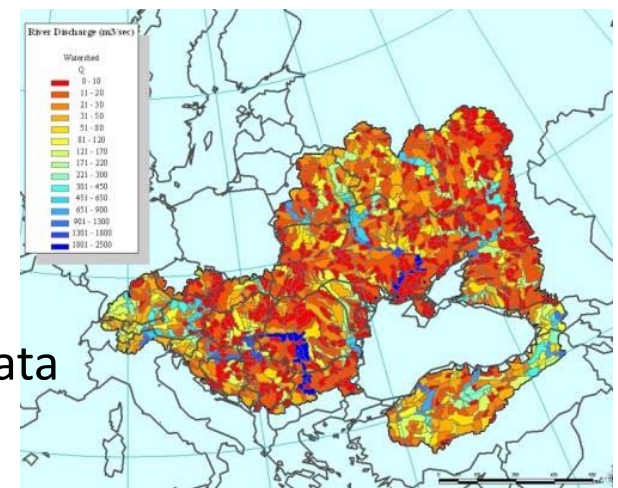
## Building Capacity for a Black Sea Catchment Observation and Assessment System supporting Sustainable Development



2009-2013, 30 partners, 8.2 mio. € budget, coordinated by UNIGE/GRID-Geneva

### Achievement

- build capacity on GEO/GEOSS participation, data sharing and standardization in many Black Sea countries
- a gap analysis on availability of data/services
- spatially-explicit scenarios of changes in land cover, climate and demography for 2050
- high-resolution hydrological model of the Black Sea watershed
- Grid-enabled Spatial Data Infrastructure
- Innovative tools to visualize, interpret and analyze data



# ECOWREX 2

“Mapping Renewable Energy in West Africa” (EU, ACP)



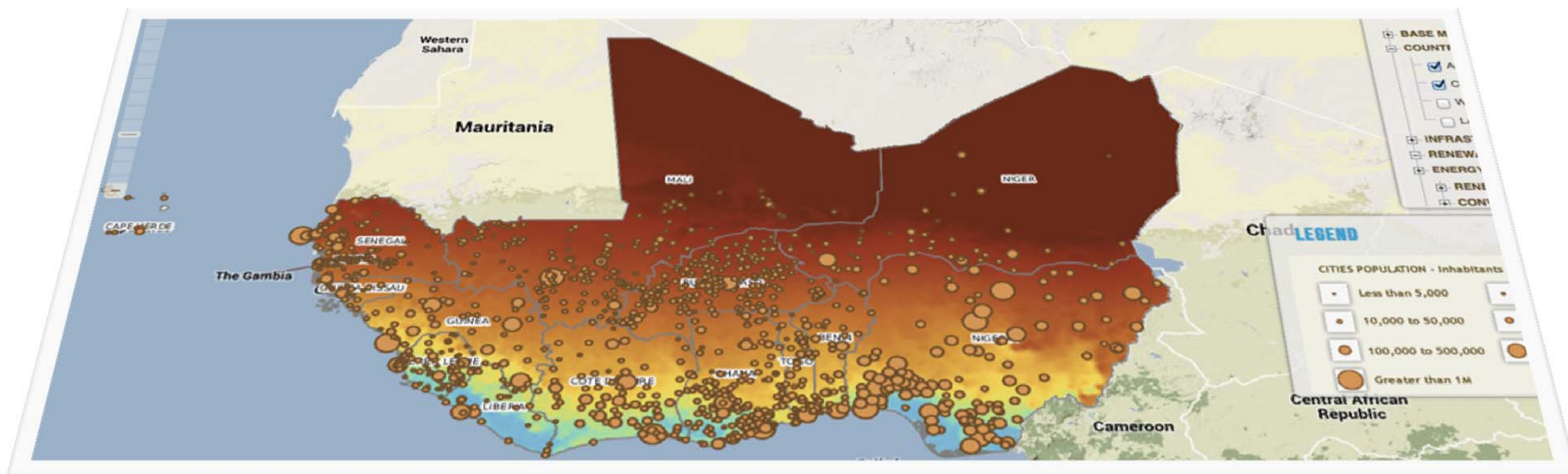
**Partners:** (ECREE, KNUST, Ministry of Cape Verde, Noveltis).

## Objectives:

- Promoting sustainable energy access through Geospatial technologies
- Support policies and plans for improving access to sustainable energy.

## Roles of GRID-Geneva towards Open data:

- GIS modelling on renewable energy (solar, wind, biomass, geothermia, waves, hydro) production vs energy demand in West Africa: 15 countries.
- Development of a new platform for data visualiasation and sharing.
- Capacity building to staff from 15 countries and to ECREE (SDI + GIS)



GRID-Geneva's contributions to open data solutions, UNEP/GRID-Geneva 2014

# TWAP

## Transboundary Water Assessment Programme (GEF)



### Objectives:

Improve management of transboundary waters for addressing environmental issues

### Role of GRID-Geneva towards Open data:

- GRID-Geneva responsible for SDI => need of existing core data + production of data  
=> all data openly shared and redistributed in the SDI

### Open data produced:

- Extended Large Marine Ecosystems, Continental shelves, Ocean governance regimes
- Rivers, watersheds

**TWAP**  
TRANSBOUNDARY WATERS ASSESSMENT PROGRAMME

**TWAP DATA PORTAL:**  
AN AUTHORITATIVE CLEARING HOUSE  
FOR GLOBAL TRANSBOUNDARY WATER  
DATA AND INDICATORS

UNEP GEF UNEP-DEWA CENTRE FOR WATER AND ECOSYSTEMS

Simple Search | Advanced Search

Free Text Search

Geographical Search

Thematic Search

Administrative units

Climate

Find interactive maps, tabular data, GIS datasets and other data

The long-term goal of the Transboundary Waters Assessment Project (TWAP) is to promote real investment in management of transboundary water systems through strong stakeholder engagement. The TWAP Data Portal will be an important tool for reaching this goal. The TWAP Data Portal is a dedicated platform for integrating data from various sources and providing a tool for visualising the main TWAP assessment results. This platform allows to easily share geographically referenced thematic information between different organizations. For more information please contact [pierre.lacroix@unepgrid.ch](mailto:pierre.lacroix@unepgrid.ch)

The TWAP Data Portal is based on GeoNetwork technology. GeoNetwork's purpose is:

- To improve access to and integrated use of spatial data and information
- To support decision making
- To promote multidisciplinary approaches to sustainable development
- To enhance understanding of the benefits of geographic information

This data portal is powered by [UNEP/DEWA/GRID-Geneva](#)

<http://twapgeoportal.grid.unep.ch/geonetwork>

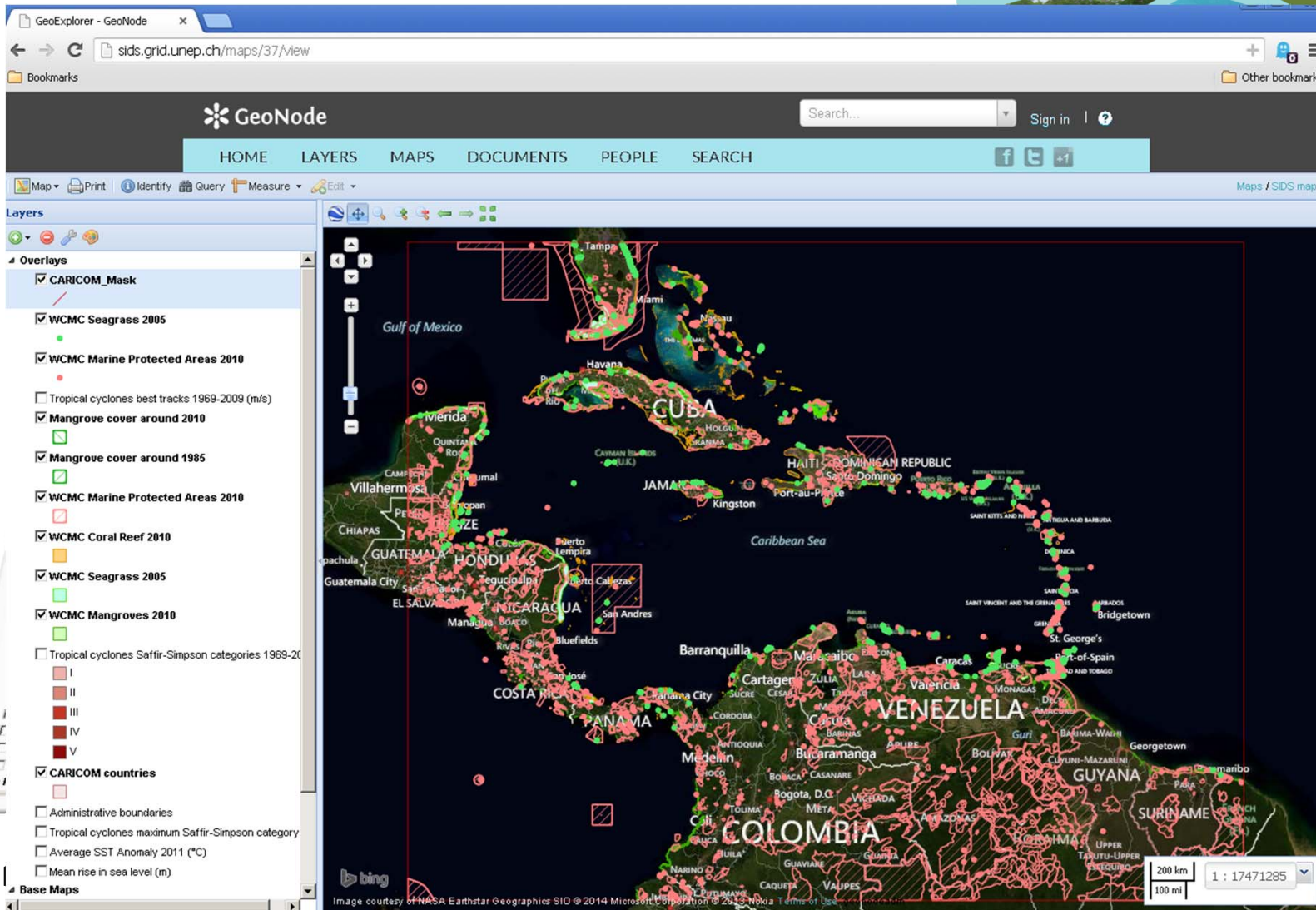
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# SIDS data on EbA for CCA



## The SIDS portal in support to GEO SIDS

UNIVERSITÉ DE GENÈVE GRID Geneva

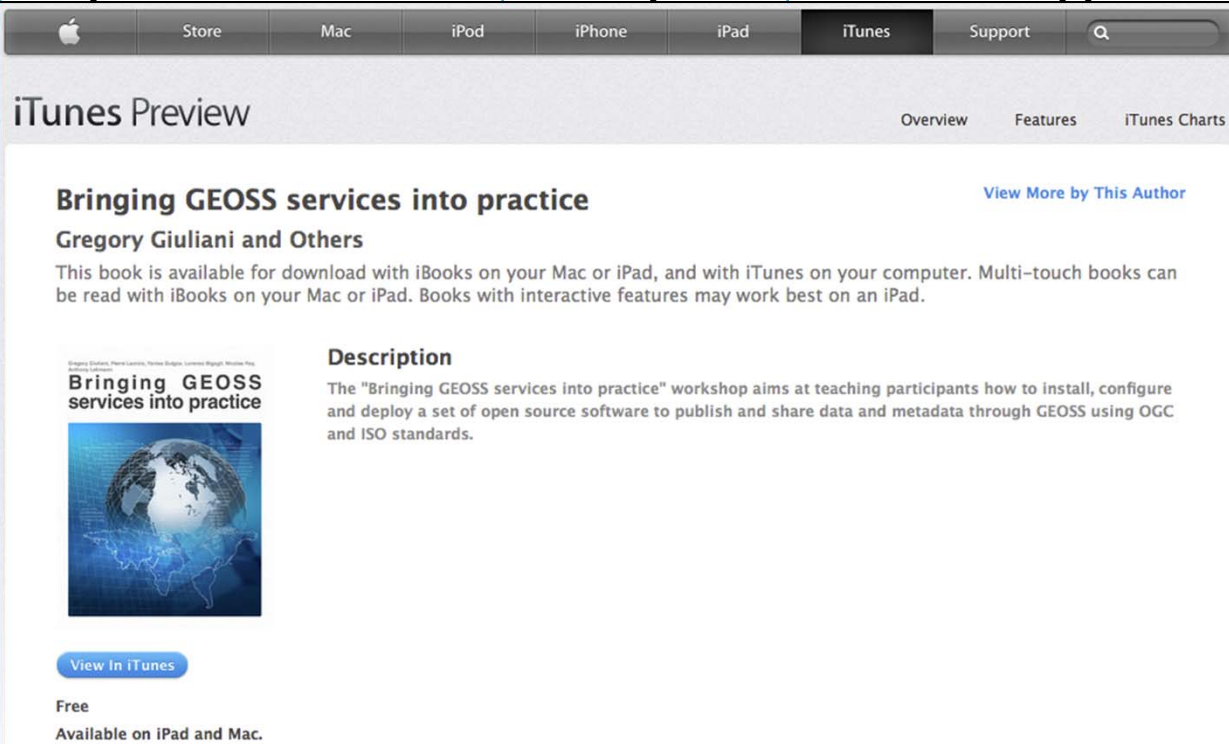


Marine Ecology )

# Capacity Building

## Using Open Data



Project	Participants	Countries Supported
 <p><b>Bringing GEOSS services into practice</b> Gregory Giuliani and Others</p> <p>This book is available for download with iBooks on your Mac or iPad, and with iTunes on your computer. Multi-touch books can be read with iBooks on your Mac or iPad. Books with interactive features may work best on an iPad.</p> <p><b>Description</b> The "Bringing GEOSS services into practice" workshop aims at teaching participants how to install, configure and deploy a set of open source software to publish and share data and metadata through GEOSS using OGC and ISO standards.</p> <p>Free Available on iPad and Mac.</p>	<b>&gt; 800</b>	<b>&gt; 50</b>
<b>Total</b>		

Gregory Giuliani, Pierre Lacroix, Yaniss Guigoz, Lorenzo Bigagli, Nicolas Ray, Anthony Lehmann

## Bringing GEOSS services into practice



- + workshop downloadable through internet
- + workshop available as e-book
- => Large Capacity Building outreach

GRID-Geneva's contributions to open data solutions, UNEP/GRID-Geneva 2014

# Capacity Building (RiVAMP)

On Ecosystems Based Adaptation Using Open Data

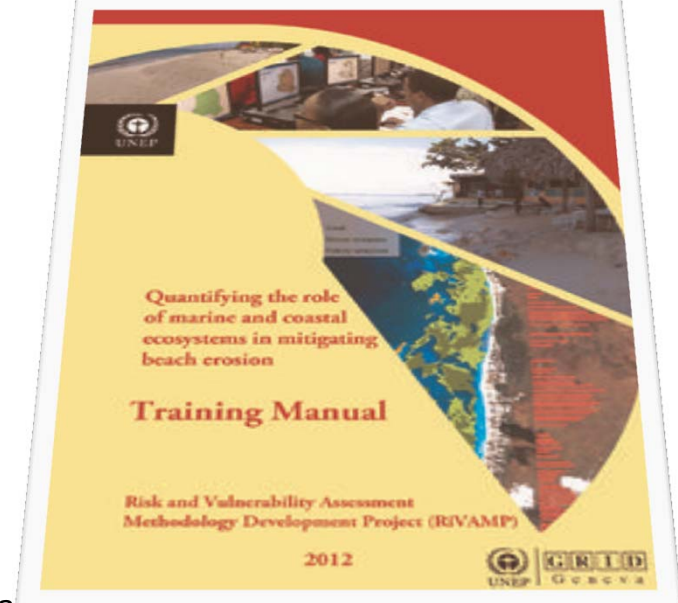


RiVAMP (using EbA for DRR and CCA)

- Open Data
- Training Manual
- OpenSource Software (GIS, Stats; + coastal erosion modelling software)

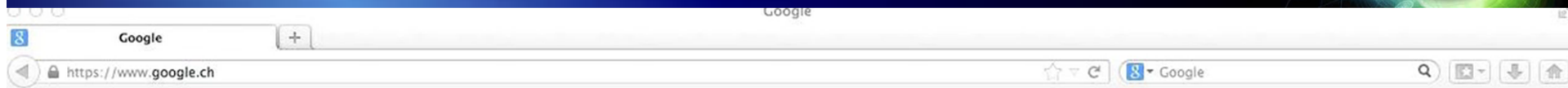
Trained: 21 people (Jamaica)

On-line trainings: > 7170 downloads (2 years)





# PREVIEW Global Risk Data



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# Thank you

[Http://www.grid.unep.ch](http://www.grid.unep.ch)

