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?

- **T** Timely
- **A** Accessible
- **M** Machine processable
- **L** License-free
- **N** Non-Proprietary
- **Ø** Non-discriminatory
- **P** Primary
- **C** Complete

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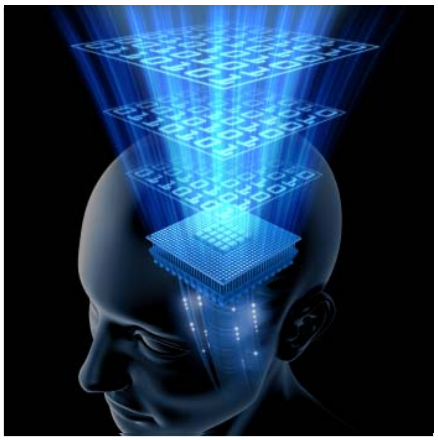
Advantages

Transparency & democracy

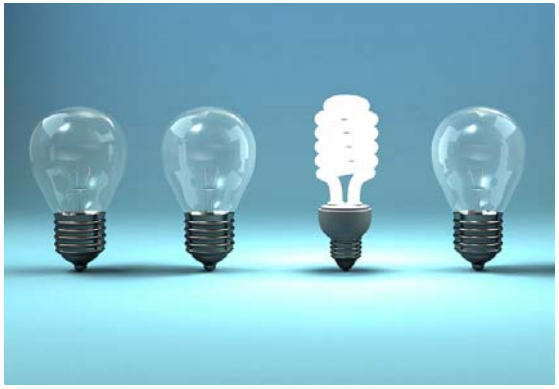
Participation

DATA is being used

Combination of data leads to new products and services



New knowledge



Innovation & efficiency

Self-Empowerment

From Open Data to Assessment

DATA

UNEP | GRID Geneva

- Spatial and math. modeling
- Distributed computing
- Statistics (e.g. aggregation,…)
- Maps & graphs
- Webservices

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14 GRID-Geneva platforms

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

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Environment Data Explorer

UNEP | DEWA | GEO | Environmental Data Explorer

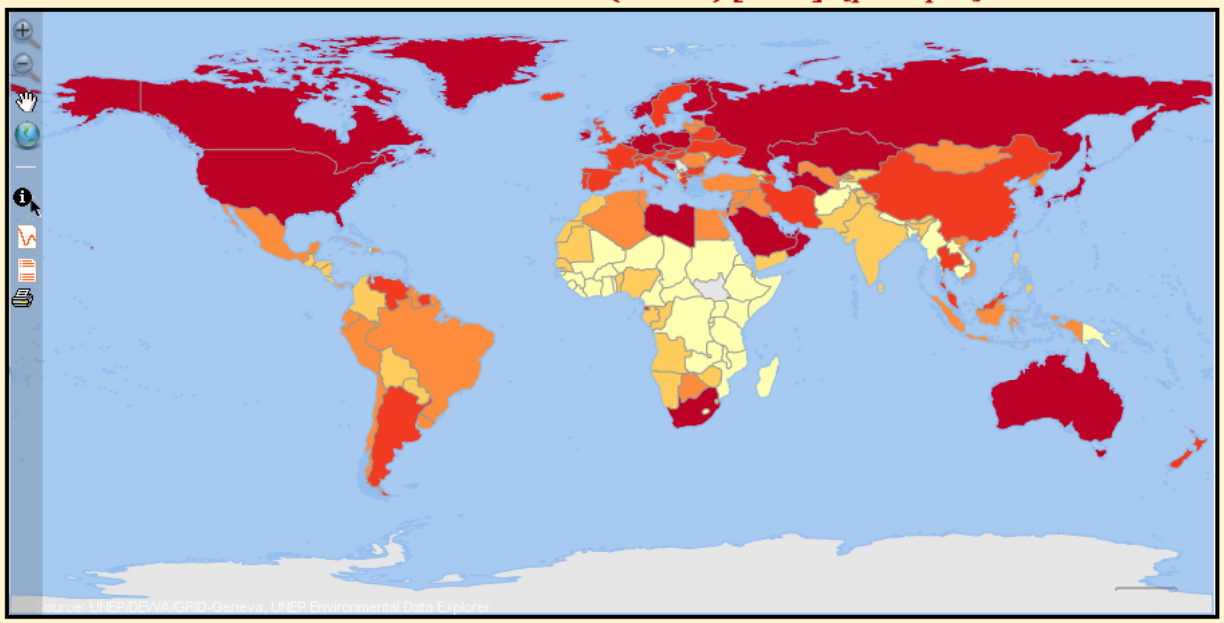
United Nations Environment Programme
environment for development

Environmental Data Explorer

English | Français | Contact | Help | System sign in

Map | Graph | Table | Metadata | Download

Emissions of CO2 - from Fossil Fuels - Total (CDIAC) [2010] *[per Capita]*

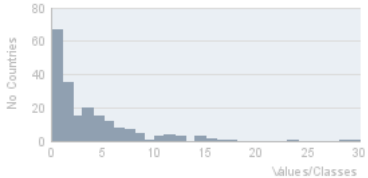


LEGEND

International Boundaries

Units: Gigagrams of CO2
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

0.00001 minimum	0.00509 average
0.04034 maximum	0.00643 st dev
206 no countries	1.04762 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

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

Theme

update map

General | Background | Query | Boundaries | Layers

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.

View

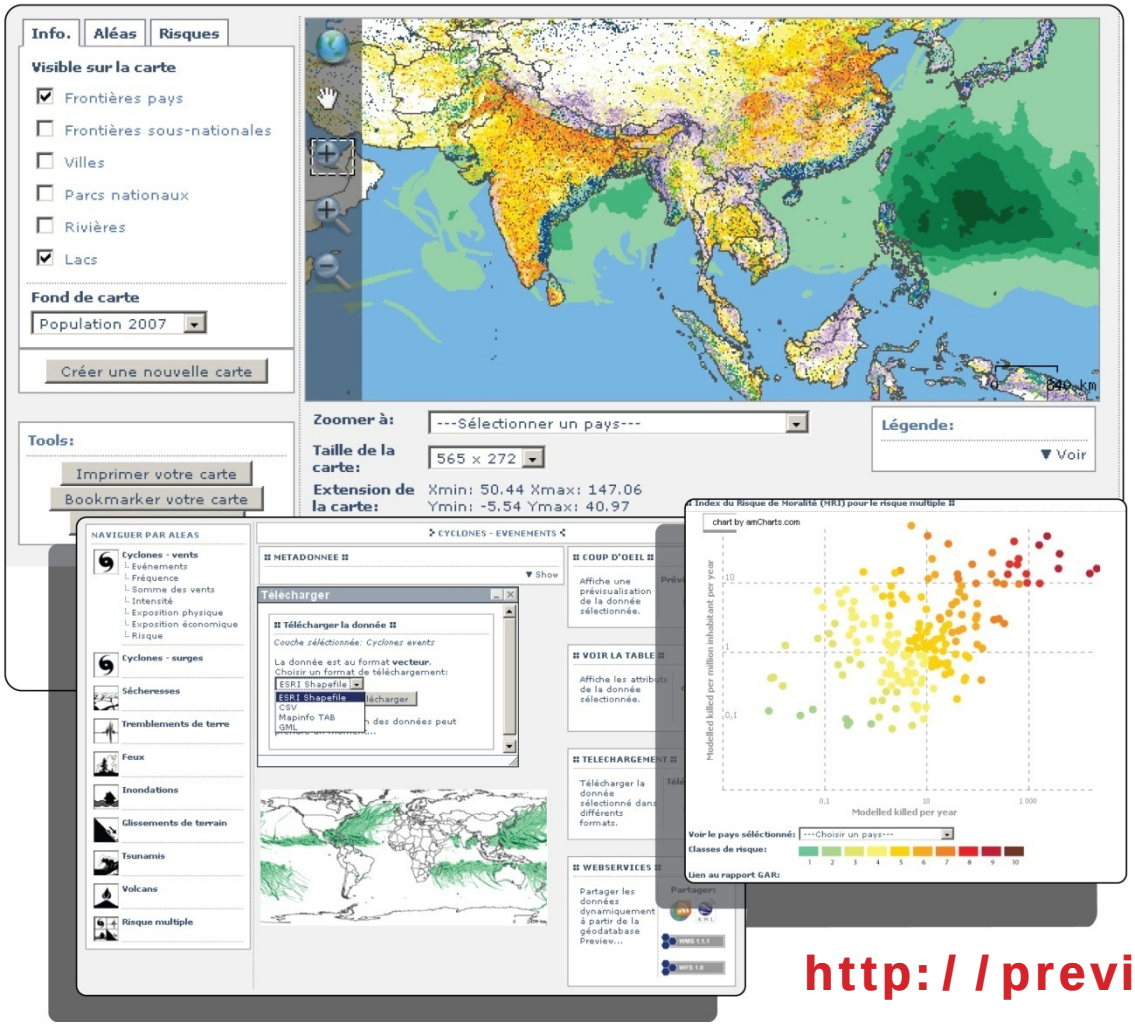
For some map examples see **gallery**.

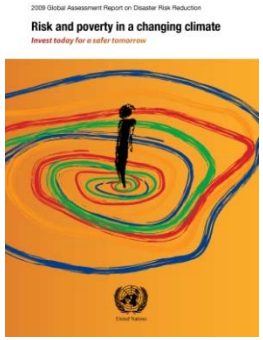
The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of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

Help

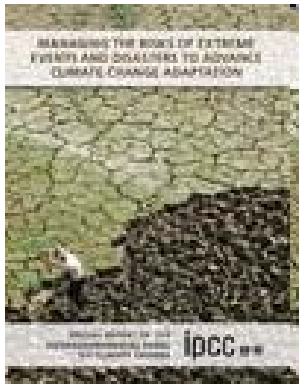
PREVIEW Global Risk Data Platform

The PREVIEW Global Risk Data Platform





IPCC SREX



GAR 2013

http://preview.grid.unep.ch

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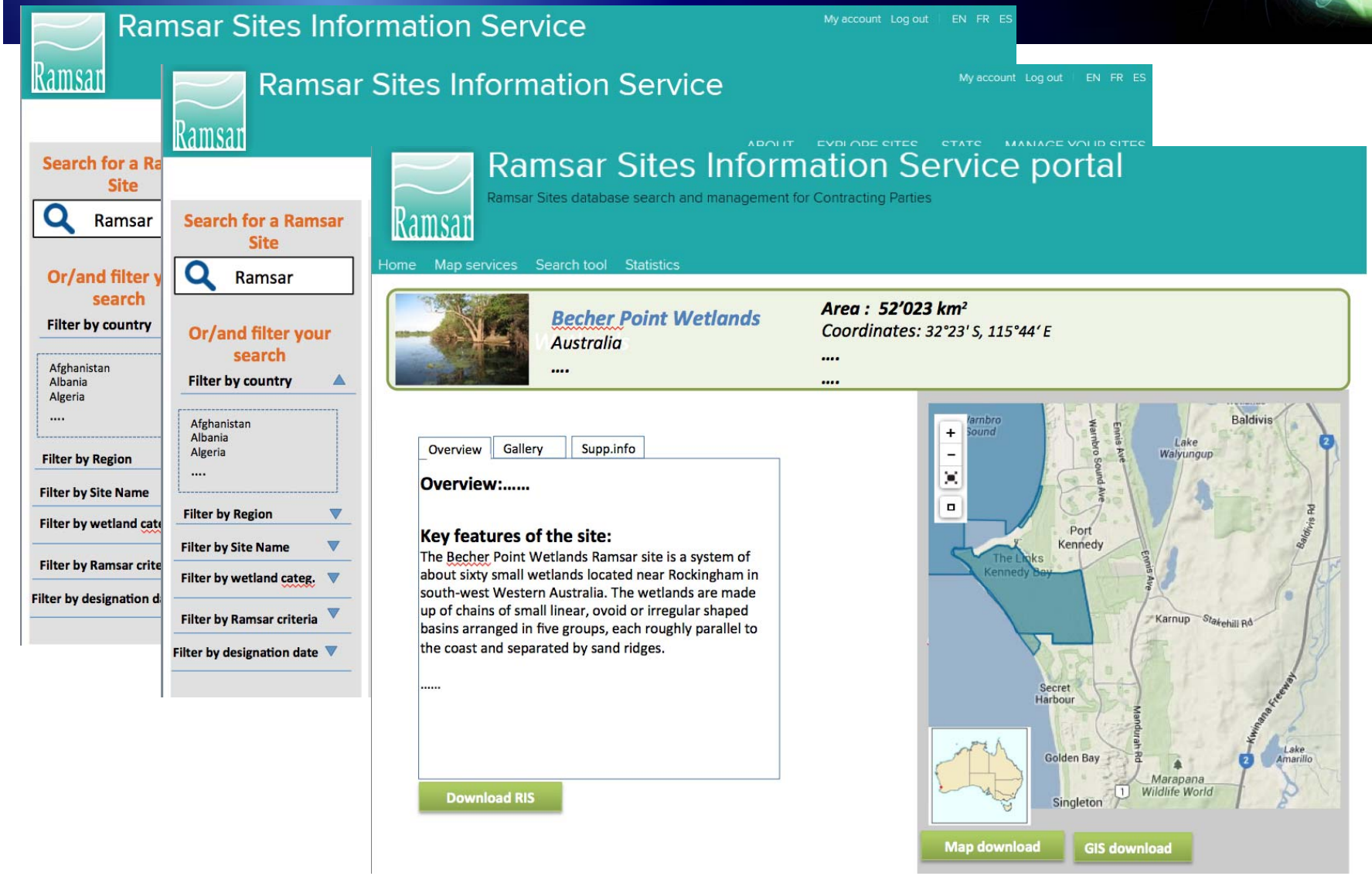
RAMSAR – Sites Information Service



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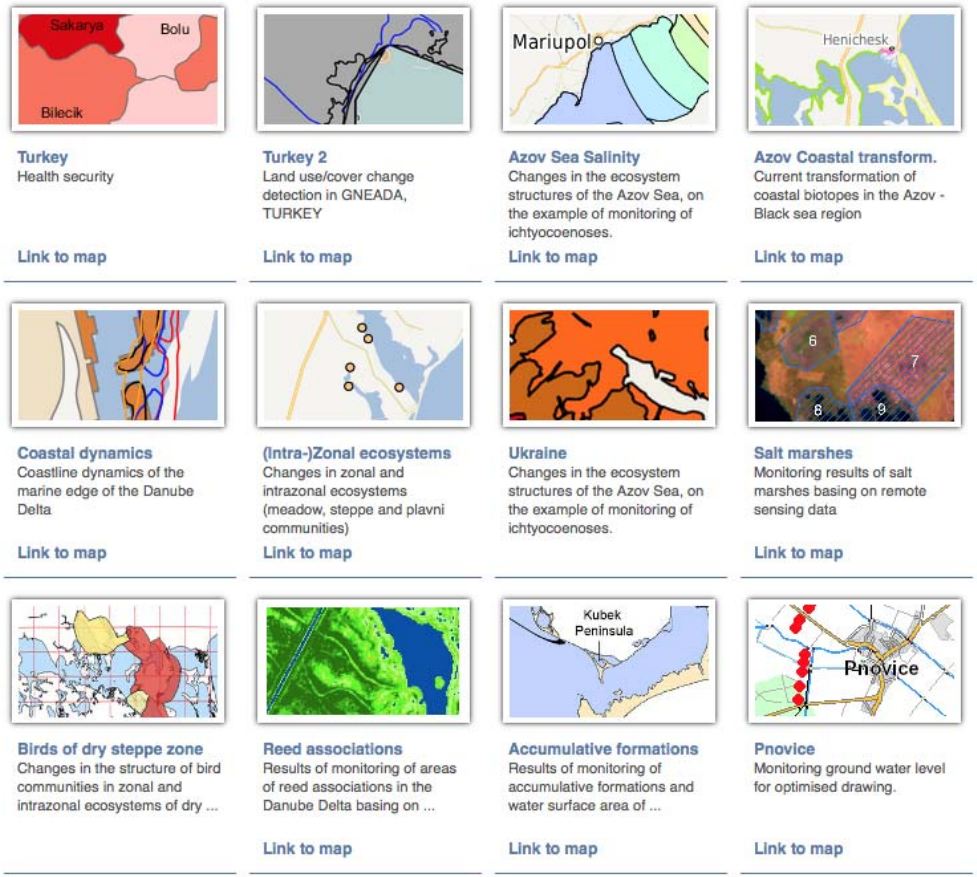
EO Power project

EU/FP7 project coordinated by UNIGE/GRID

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.

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

EOPOWER project

Earth Observation for economic emPOWERment

2013 - 2015 (13 partners)
Coordinator: N. Ray
Manager: G. Giuliani
WP leader: Y. Guigoz

http://eopower.eu

ClimVar Mediterranea
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.

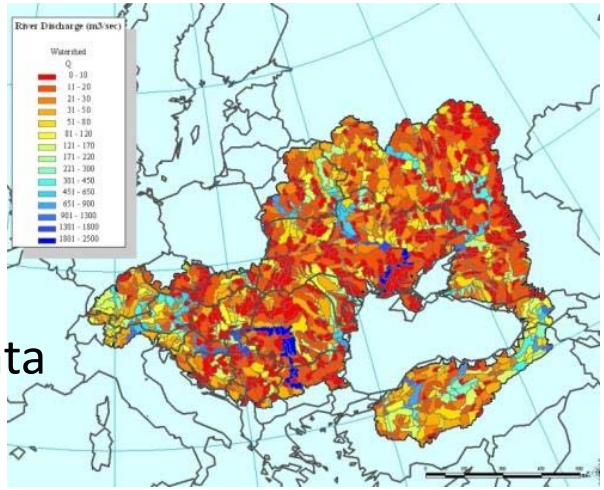
EnviroGRIDS

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



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ECOWREX 2

"Mapping Renewable Energy in West Africa" (EU, ACP)

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

Objectives:

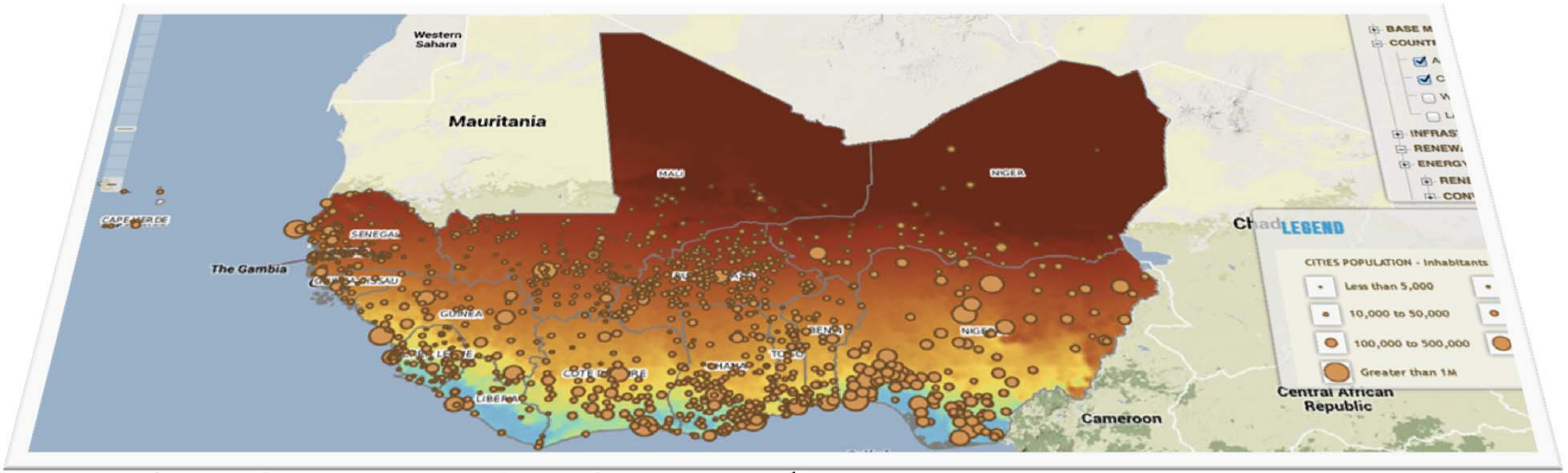
- Promoting sustainable energy access through Geospatial technologies
- Support policies and plans for improving access to sustainable energy.

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)



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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

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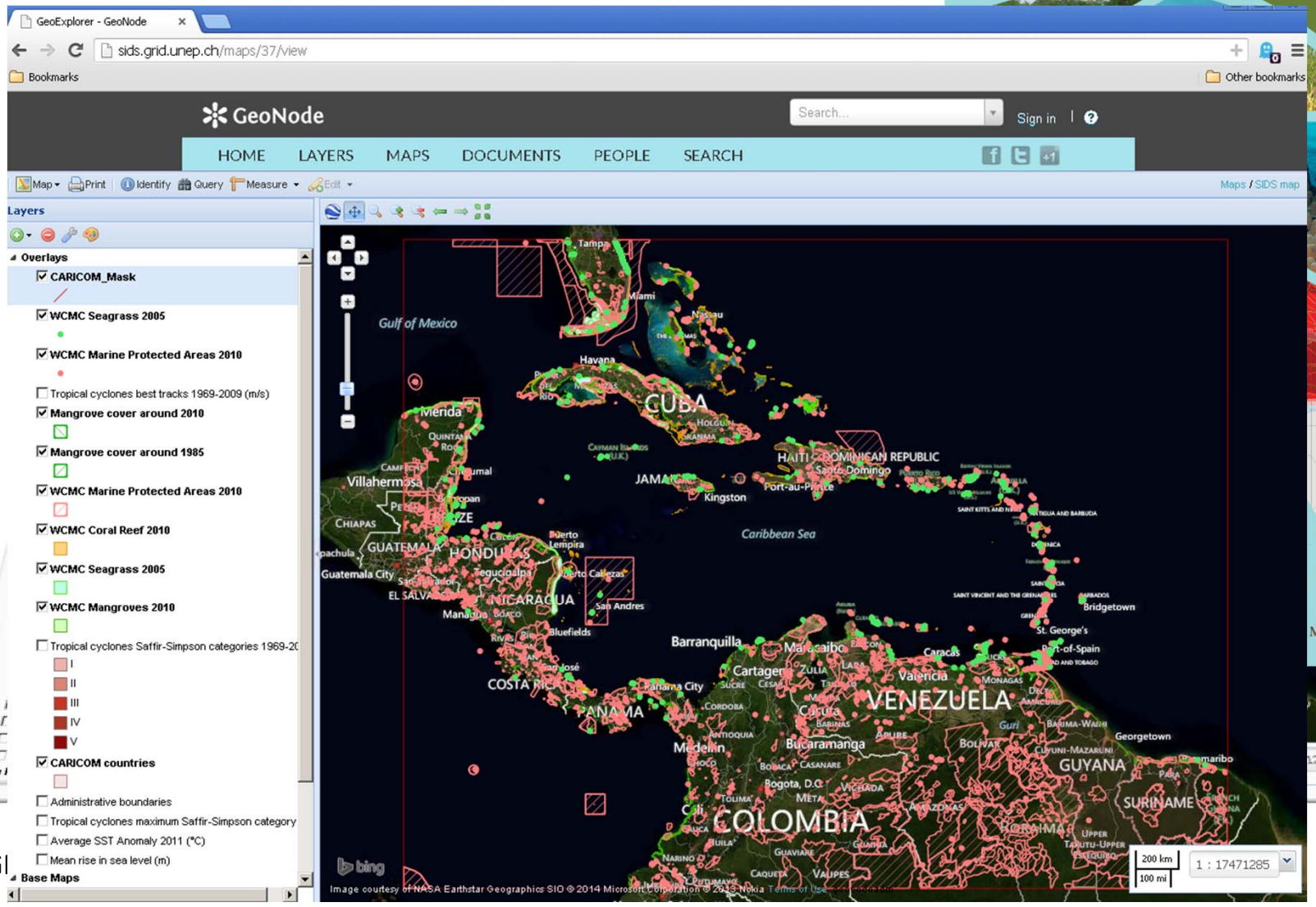
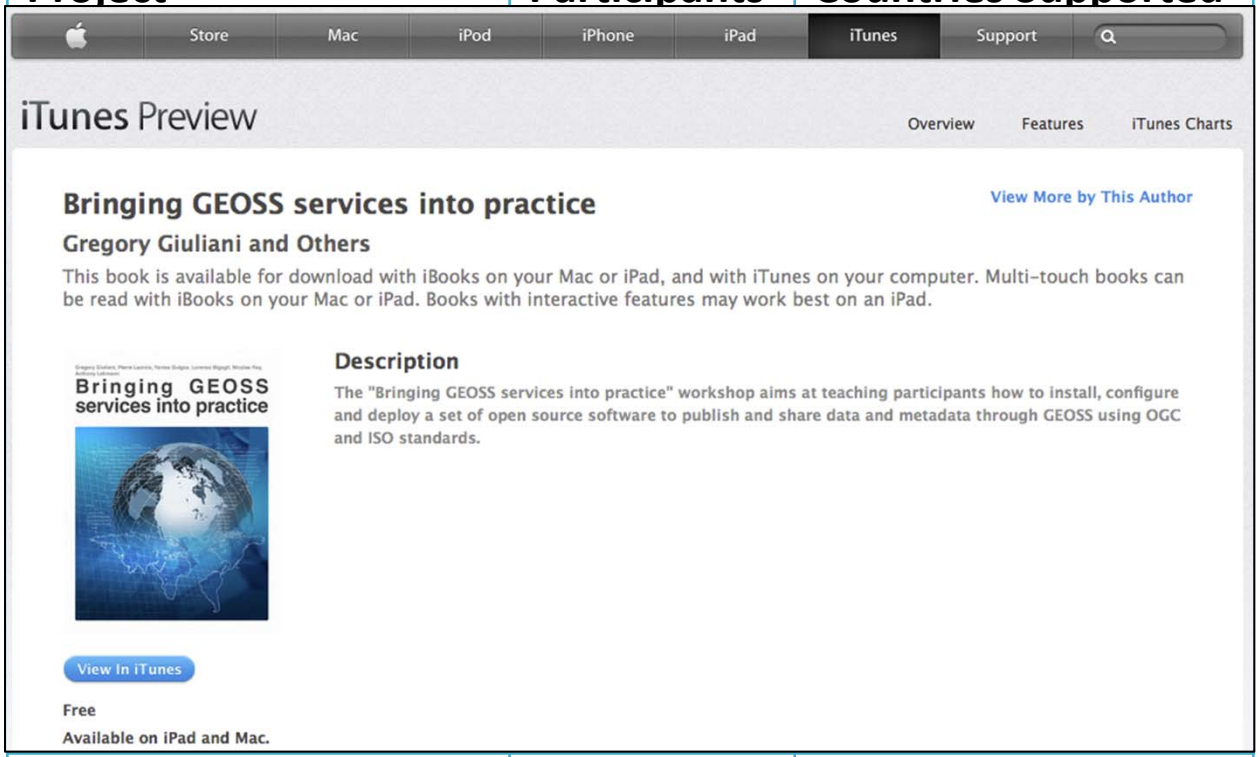
SIDS data on EbA for CCA

The SIDS portal in support to GEO SIDS



Capacity Building

Using Open Data

Project	Participants	Countries Supported
		
Total	**> 800**	**> 50**

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

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Capacity Building (RiVAMP)

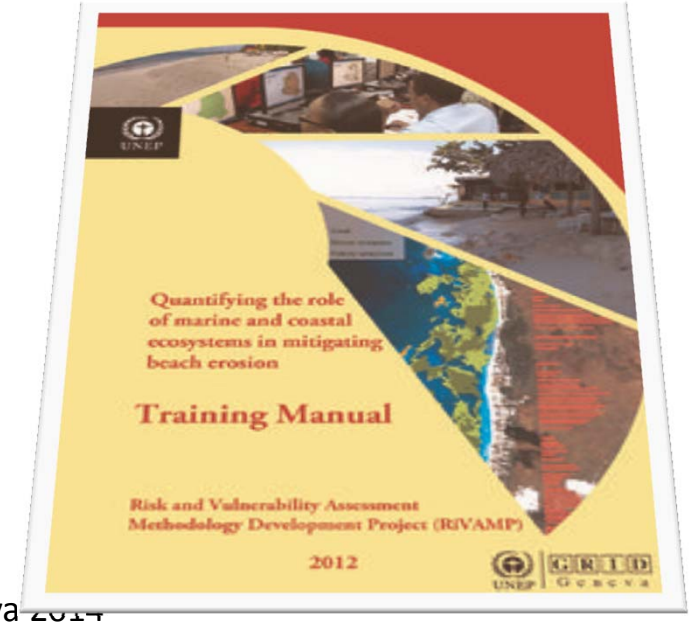
On Ecosystems Based Adaptation Using Open Data

RiVAMP (using EbA for DRR and CCA)

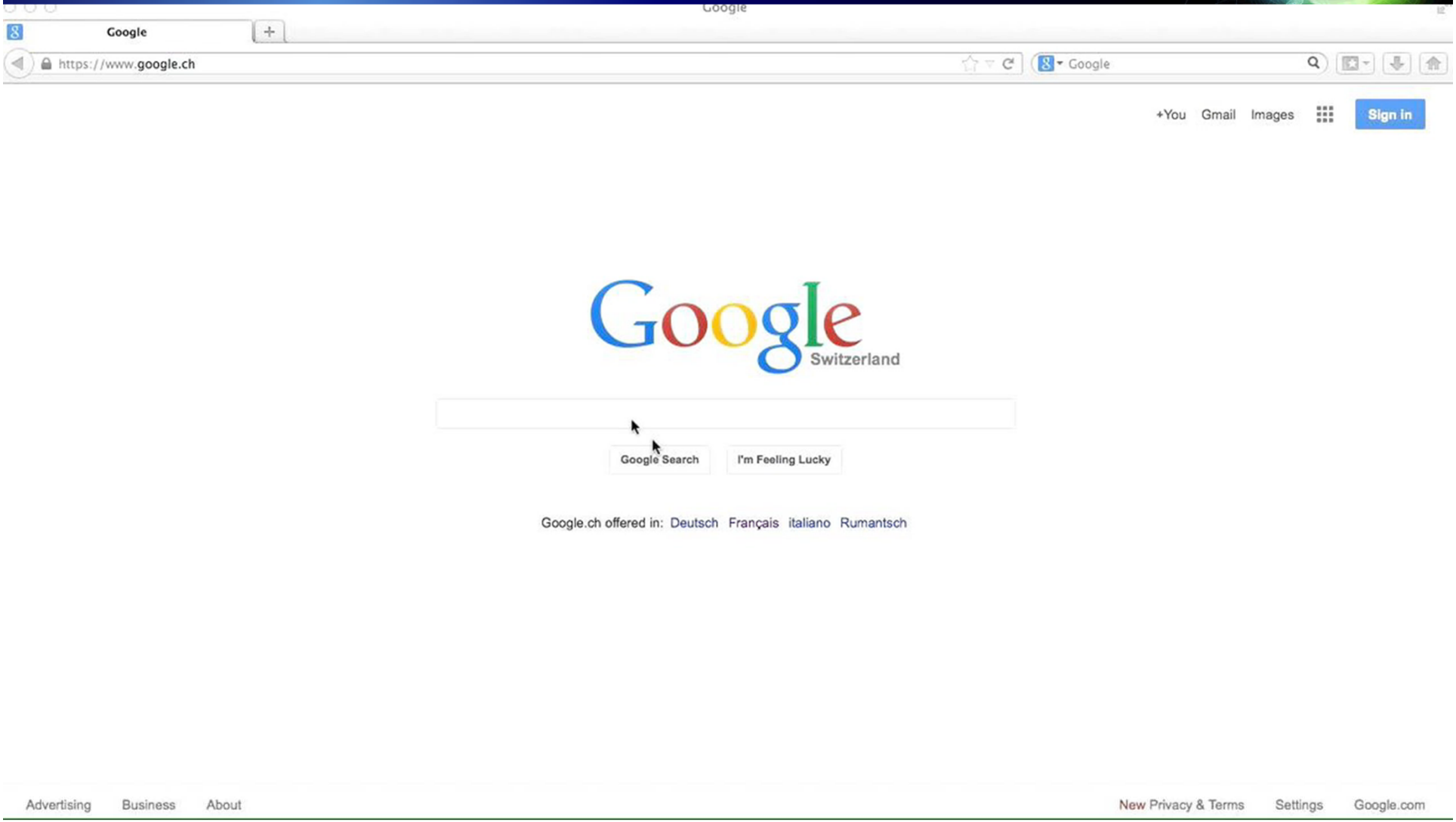
- Open Data
- Training Manual
- OpenSource Software (GIS, Stats; + coastal erosion modelling software)

Trained: 21 people (Jamaica)

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



PREVIEW Global Risk Data



Thank you

Http://www.grid.unep.ch