



Coastviewer

A tool to enable the visualization of marine and coastal data

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- OpenEarth
- The Coastviewer

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Background

www.deltares.nl

- *Deltares is a leading, independent, Dutch-based research institute and specialist consultancy in matters relating to water, soil and the subsurface.*

From handcrafted file formats, exchanged through FTP servers for small communities to a web of open data sources that provide data in easy consumable services

- **Organization**
- **Data architecture**
- **Share of functions and models**

Data management

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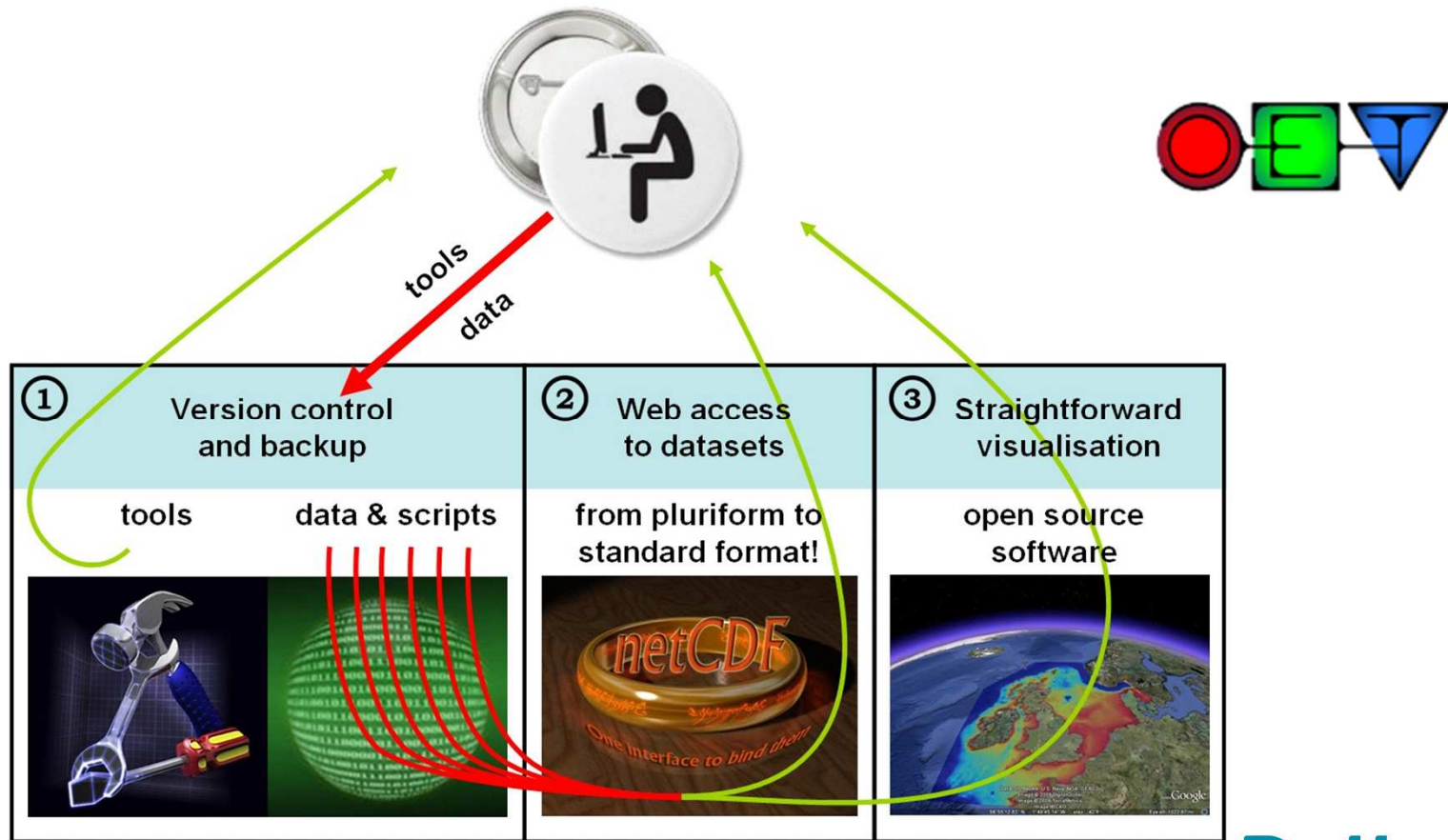
A tool to enable the visualization of coastal and marine data

The OpenEarth experience (openearth.eu)

1. Tools/Repository

2. Standard data

3. Visualization



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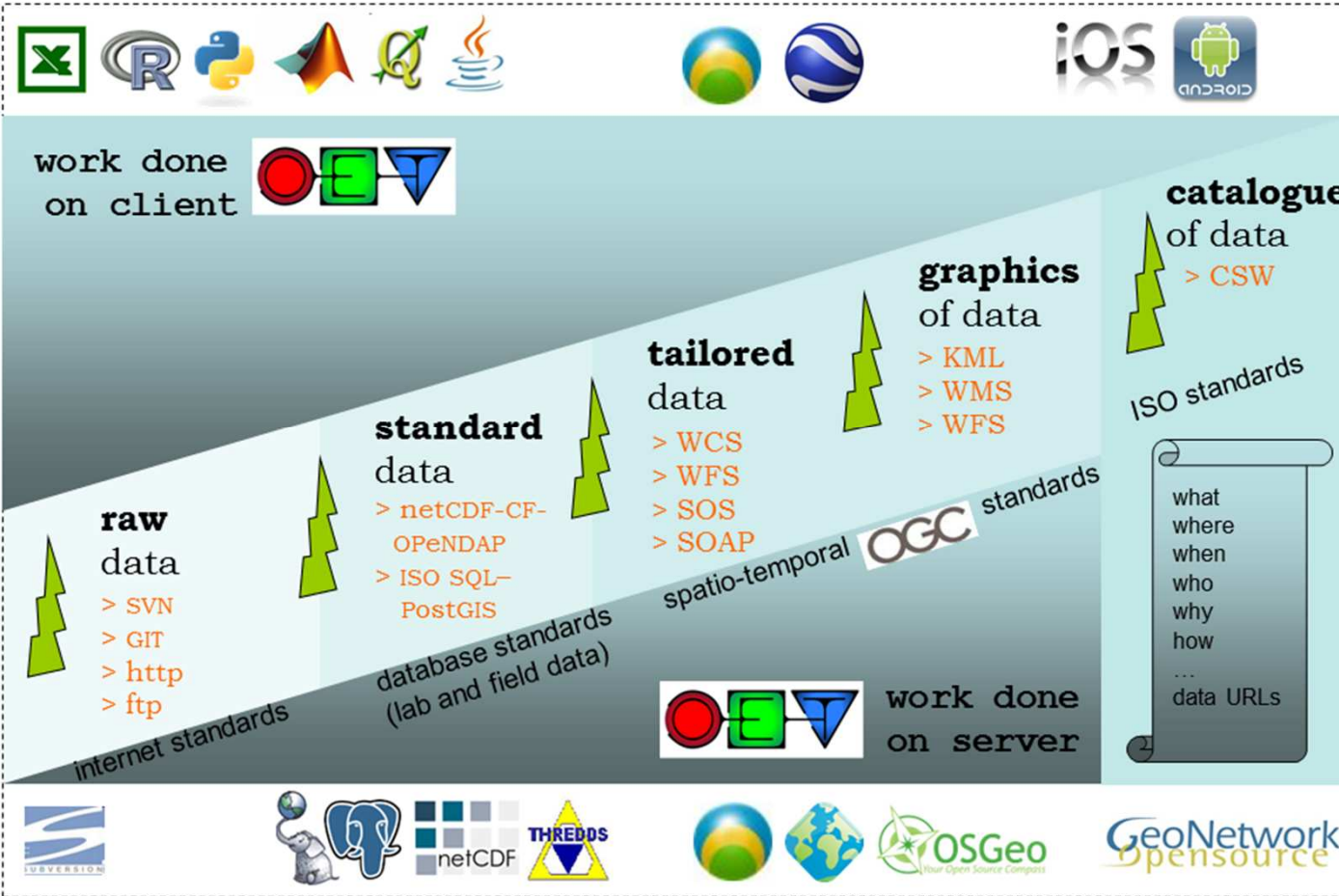
The OpenEarth experience



scientists

professionals

smart phone & tablet users



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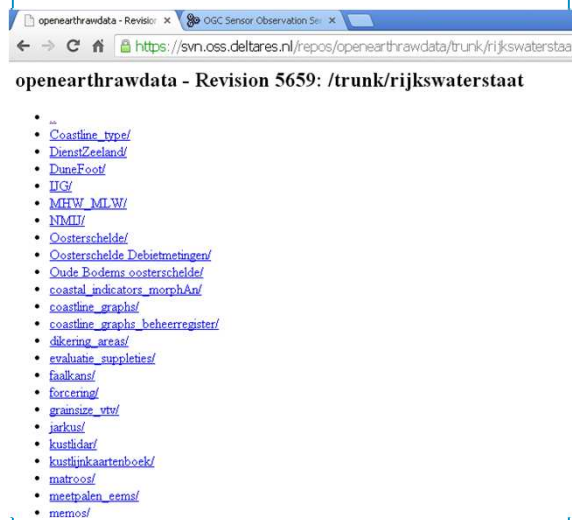
The OpenEarth experience



1. Repository, Models and Tools

Raw data (SVN)

- Guidelines for a structure
- Any format
- Any specific function
- Project based / Research



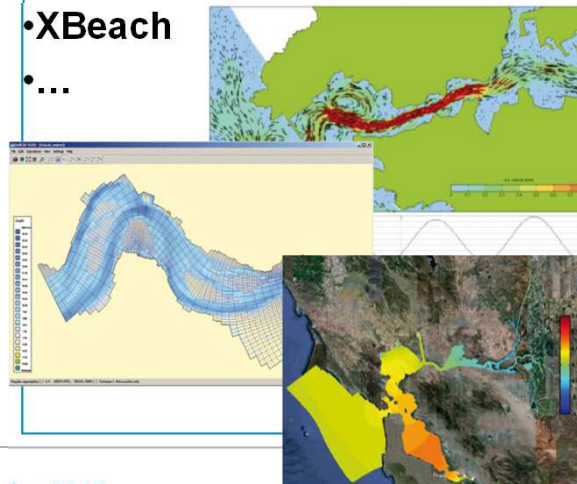
Models (SVN)

- Dune erosion
- Statistical models
- Probabilistic graphic models
- ...

• DELFT3D

• XBeach

• ...



Tools (SVN)

• Functions of:

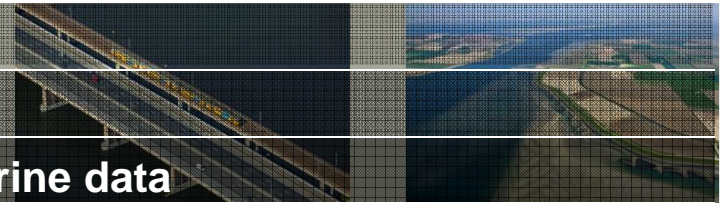
- Any programming language
- Standardization
- Visualization



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The OpenEarth experience

2. Standard data

- Interoperability
- Open and efficient access



<https://publicwiki.deltares.nl/display/OET/Tech+Notes>



OGC netCDF-CF-
OPeNDAP-server



PostgreSQL-
PostGIS database



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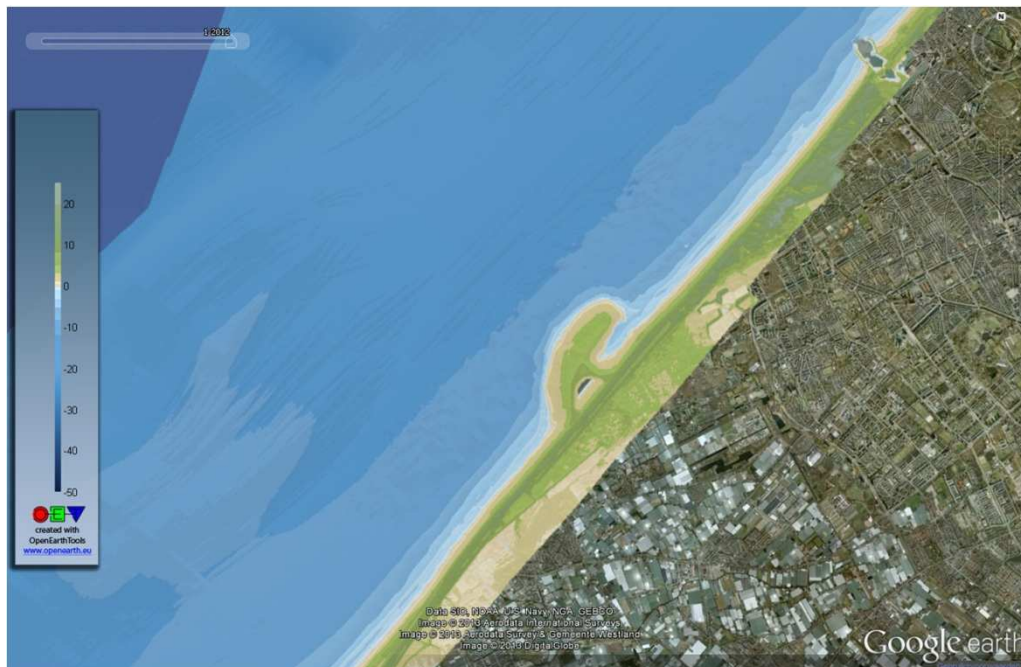
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The OpenEarth experience



3. The interface: OGC KML



Dutch government

- Open access
- Tool for decision makers
- Layers linked to different sources

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The OpenEarth experience



Standard data to standard visualization

<http://publicwiki.deltares.nl/display/OET/KML+Screenshots>

<http://kml.deltares.nl/kml/rijkswaterstaat/>



DELTARES + Nelen & Schuurmans
WEB framework (Pyramid) - Opendap netCDF

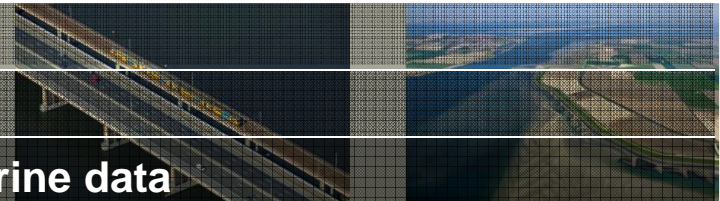


The Coastviewer

Support the decision making of coastal managers and building of expert advice by scientists and engineers.

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The screenshot shows the Coastviewer web application interface. The browser address bar displays `test.kustviewer.lizard.net/kml/`. The interface includes a navigation menu on the left with categories like 'Kaartlagen' (Map layers) and 'Jarkus'. The main area shows a satellite map of a coastal region. A 'CamStudio' window is overlaid on the bottom left, indicating recording. The bottom of the screen shows the Windows taskbar with the Start button, taskbar icons for 'Kustviewer - Lizard - Goo...', 'CamStudio', and 'My Documents', and the system tray showing the time as 23:47.

Disclaimer

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Home → Kustviewer

Afspeelsnelheid: Jaarspanne grafieken: 100 %

Kaartlagen

- Morfodynamiek
- Grenzen kustbeleid
- Kaarten Kustlijnen (MKL, TKL, BKL)
- Kaarten Waterlijnen (LW, HW, DV)
- Grafieken Water- & Kustlijnen
- Ingrepen
- Functies - Natuurwetgeving
- Recreatie (Decisio, 2011)
- VECTORS

Jarkus

Voorbeeld

CamStudio

File Region Options Tools Effects View Help

Record to AVI

CamStudio™
RECORDER

CamStudio.org

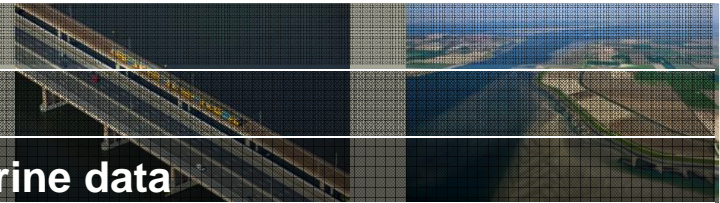
Image Landsat
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth
Gebruiksvoorwaarden

Start Kustviewer - Lizard - Goo... CamStudio My Documents NL 23:47

Coastviewer

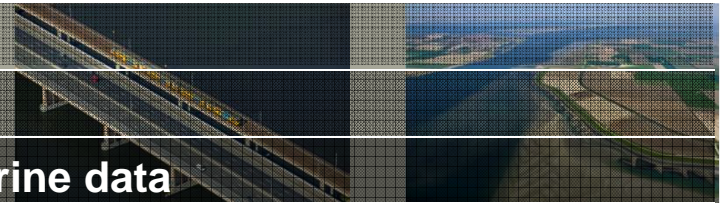
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The screenshot displays the Coastviewer web application interface. At the top, there is a navigation bar with a "Disclaimer" link, a logo for "Deltares Enabling Delta Life", and a "Home" link. Below this is a control bar with a play/pause button, a speed slider, and a "Jaarspanne grafieken:" (Time span graphs) section. The main content area features a 3D topographic map of a coastal region, with a color scale for "Altitude [m]" ranging from -50 to 20. A "Kaartlagen" (Map layers) panel on the left lists various data layers, including "Morfodynamiek", "Vaklodningen", "Jarkus", "Kusthoogte (Lidar)", and "Grenzen kustbeleid". A "CamStudio" recording window is overlaid on the bottom left, showing the "CamStudio RECORDER" logo and a "Record to AVI" button. The bottom of the screen shows a Windows taskbar with the Start button, several open applications (Kustviewer - Lizard, CamStudio), and a system tray with the time 23:50.




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Kustviewer - Lizard

test.kustviewer.lizard.net/kml/

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> Home → Kustviewer

Afspeelsnelheid:  Jaarspanne grafieken:  100 %

Kaartlagen

- ▷ Morfodynamiek
- ▷ **Grenzen kustbeleid**
- ▷ Kaarten Kustlijnen (MKL, TKL, BKL)
- ▷ Kaarten Waterlijnen (LW, HW, DV)
- ▷ Grafieken Water- & Kustlijnen
- ▷ Ingrepen
- ▷ Functies - Natuurwetgeving
- ▷ Recreatie (Decisio, 2011)
- ▷ VECTORS

Jarkus

Voorbeeld




Image Landsat
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Google earth
Gebruiksvoorwaarden

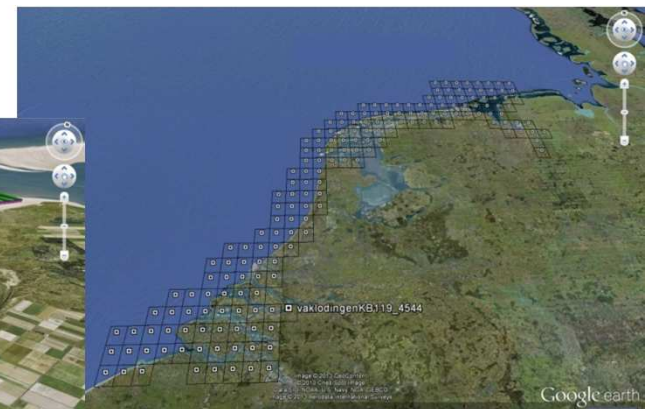
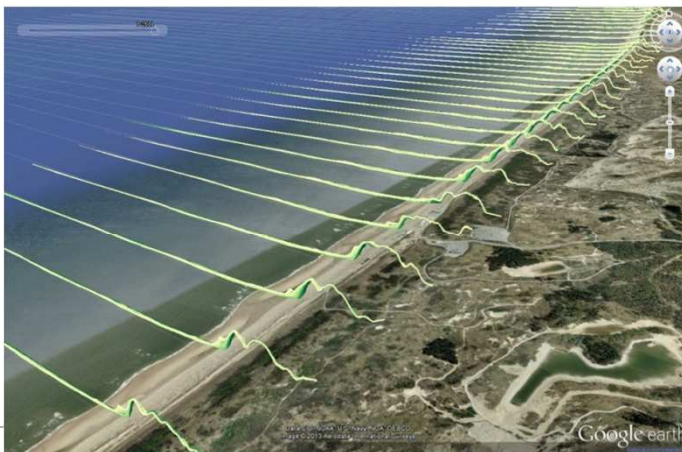
Start | CamStudio | Flashing | Kustviewer - Lizard - ... | NL | 0:08

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Conclusions

- OpenEarth has had a successful experience over the years, confirmed by the still growing number of users. Users and developers can use OpenEarth at different technical level.
- OpenEarth services potentially allow to use data from different systems.
- OpenEarth organizes several Sprint Sessions and hand-on Workshops during the year.
- Coastviewer allows to combine different sources, available from Opendap.



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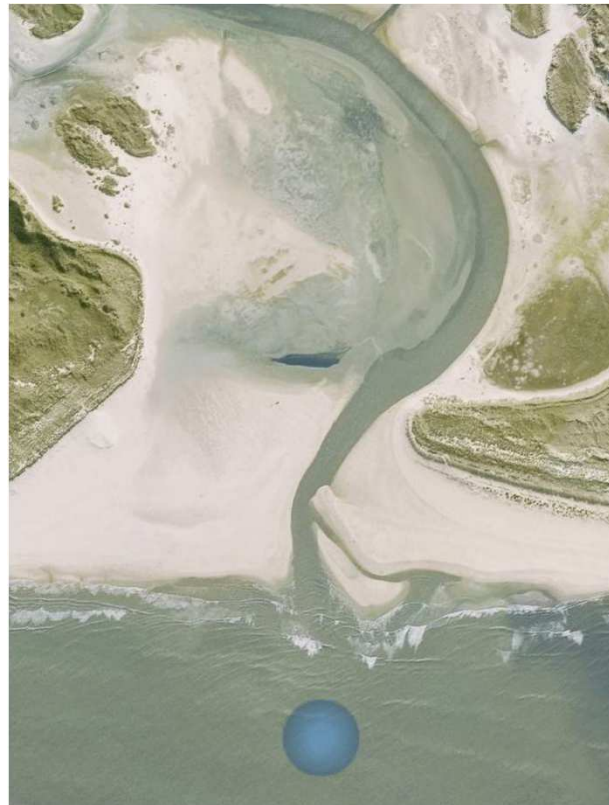
Work in progress...

- Extend on-the-fly functionality to other indicators. Direct link to the Opendap server. Get the visualization from NetCDF.
- More user interaction with the viewer.
- Aiming at *full* conformity with the ISO meta-data standards (ncISO)
- Usage of additional sources. Capability to show different layers for quick and easy dissemination.
- Building Web Applications, Apps, ...

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openearth.eu



Thank you.
Questions