



Second High Level Forum on Global Geospatial Information Management  
Exchange Forum with the Geospatial Industry - Doha, Qatar, 3 February 2013

## Session 2 - Focus issue: Monitoring place



<http://www.eyeonearth.org>

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*Head of Programme*



# Providing timely, targeted, relevant and reliable information about Europe's environment



## EEA coverage

- Member countries
- Cooperating countries
- ENP East
- ENP South
- Russia

\* Kosovo under UNSCR 1244/99

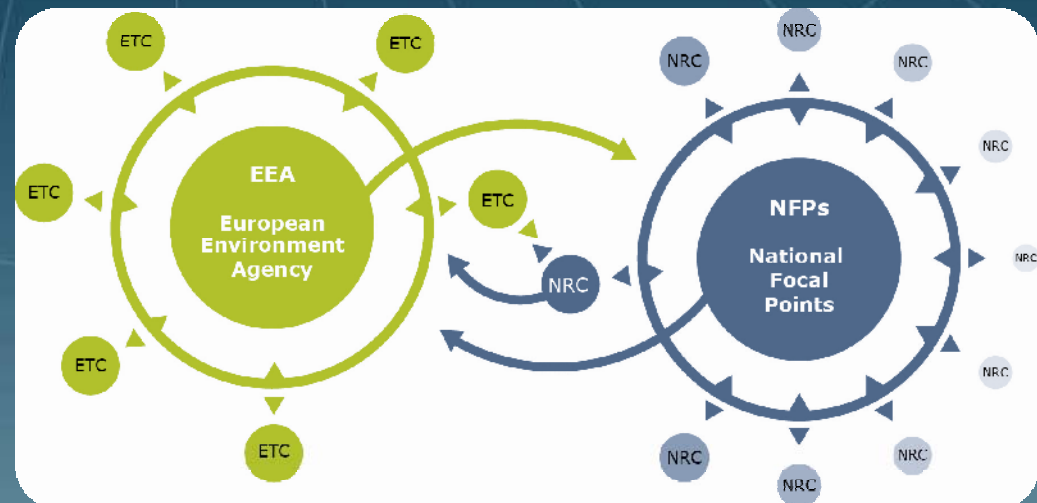
European Environment Agency



# The European Environment Information and Observation Network

Cooperating with the EEA to provide sound, independent information on the environment through:

- Coordinating national data/information flows
- Providing country-level expertise and advice
- Linking EEA to member country sources and vice versa
- Promoting EEA activities and outputs at national and international level





# Providing environmental information services

The screenshot shows a web browser window displaying the European Environment Agency Data Service. The browser's address bar shows the URL <http://mapshelf.eea.europa.eu/#>. The page header includes the EEA logo, the text "European Environment Agency Data Service", a "Find / Sort" dropdown menu, and a "Search" button. The main content area is a grid of 18 service tiles, each with a representative image and a title:

- Eye On Earth
- Europe's Ozone
- Environmental Atlas
- Urban Waste Water
- Land Cover
- Env. Technology atlas
- Urban Atlas
- Bathing Water
- Ground Water
- Protected Areas
- Conserv. Status Habitats
- Conserv. Status Species
- EPRTR
- Surface Water
- Noise Viewer
- Water bodies no risk
- Bathing water - tabular
- Discomap Activity



# Framework for providing policy relevant information



# Air Quality





# Sensor-enabled situational awareness

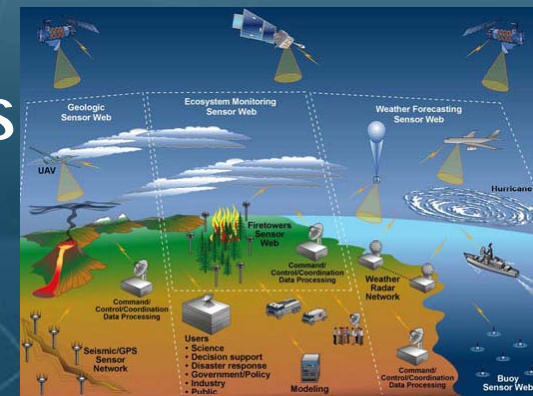
- Cheap sensor technology
- Smartphone used as gateway
- Read results on smartphone and share on the web
- Example Air quality

pollutants which can be measured:

- CO
- NOx
- CO2
- O3 (Ozone)
- PM

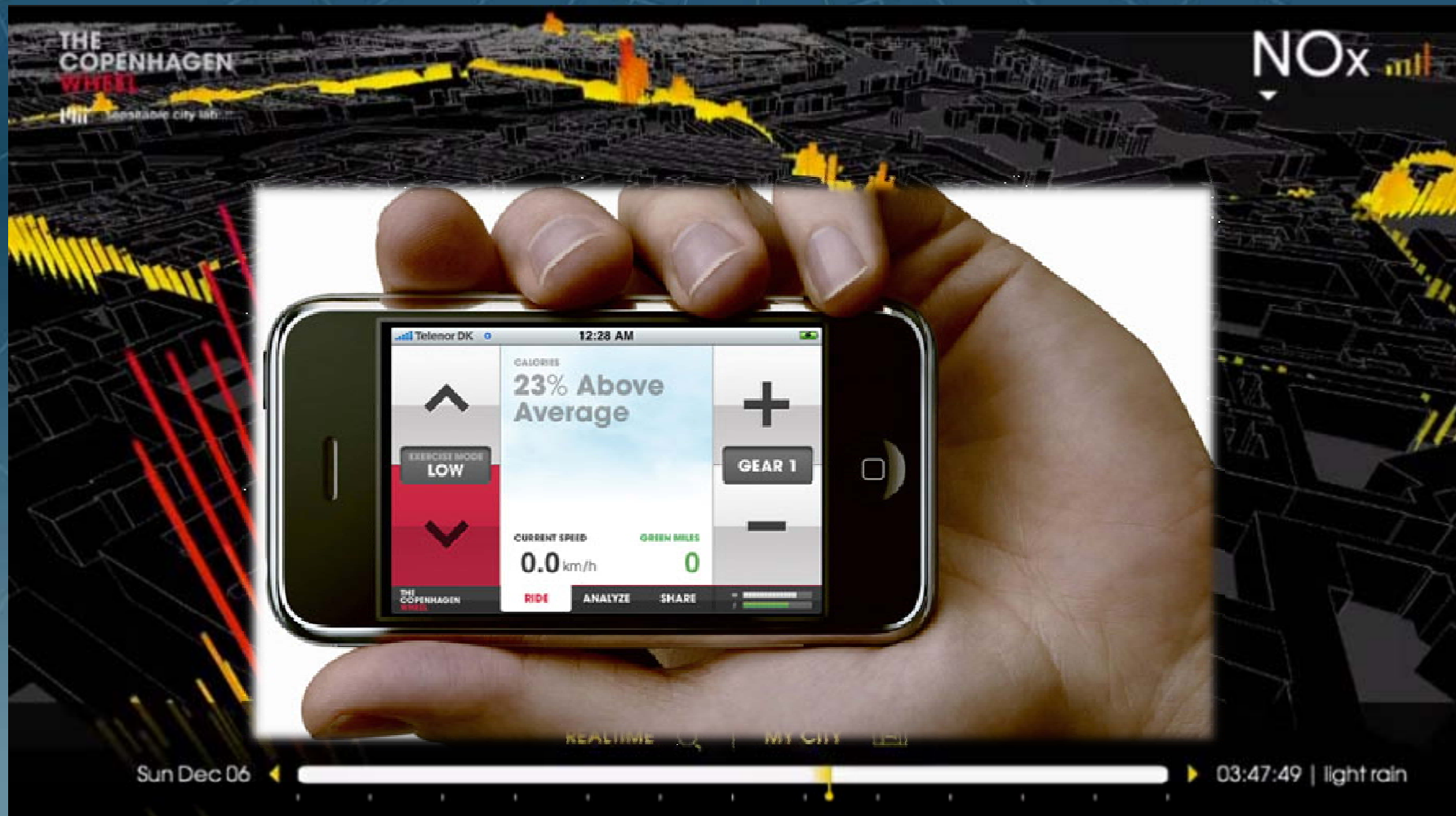
Other measures:

- Noise (dB)
- Radiation
- UV
- Humidity
- Temp
- ...





# The Copenhagen wheel







# Copernicus dedicated missions - Sentinels



## Sentinel-1 (A/B) – SAR imaging

All weather, day/night applications, interferometry

2013 /2015



## Sentinel-2 (A/B) – Multi-spectral imaging

Land applications: urban, forest, agriculture,...  
Continuity of Landsat, SPOT

2014 /2016



## Sentinel-3 (A/B) – Ocean and global land monitoring

Wide-swath ocean color, vegetation, sea/land  
surface temperature, altimetry

2014/2017



## Sentinel-4 (A/B) – Geostationary atmospheric

Atmospheric composition monitoring, trans-  
boundary pollution

2019/2027



## Sentinel-5 precursor/ Sentinel-5 (A/B) – Low-orbit atmospheric

Atmospheric composition monitoring

2015/2020/2027



## Jason-CS (A/B) – Low inclination Altimetry

Sea-level, wave height and marine wind speed

2018/2023

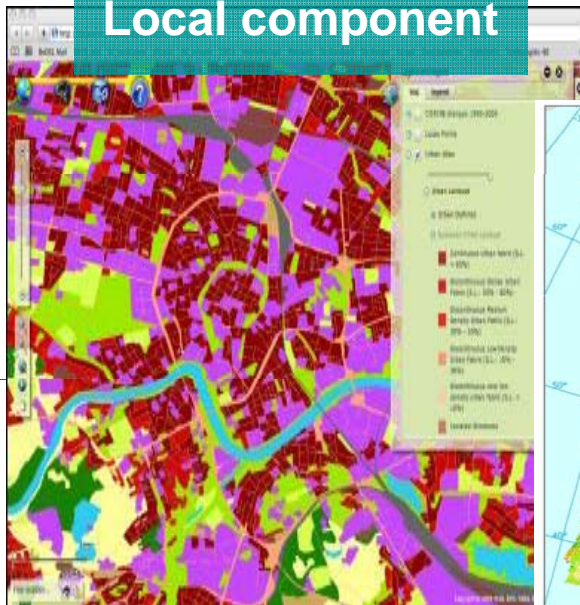




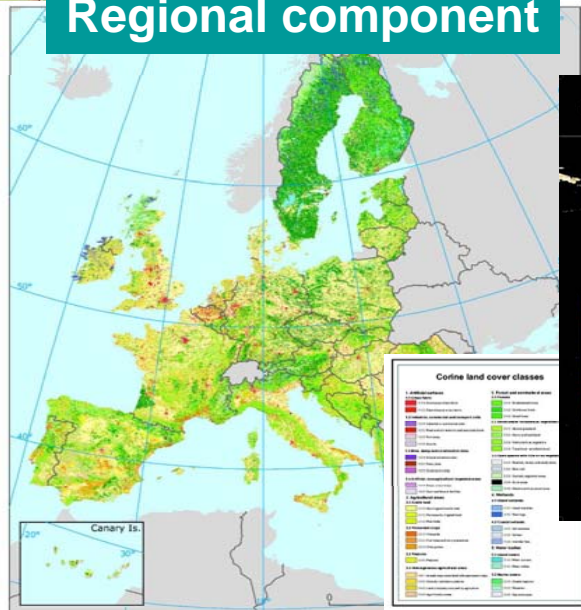
# Copernicus Land Monitoring Service



Local component



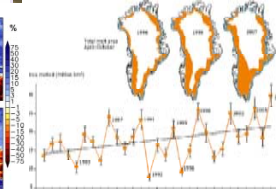
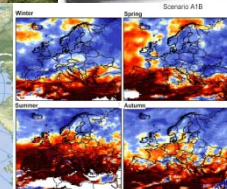
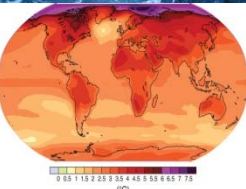
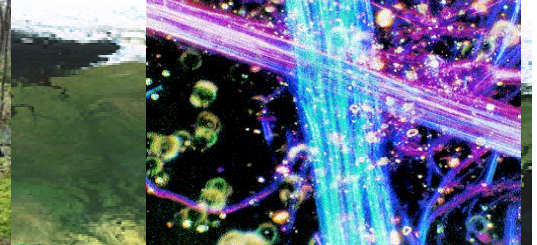
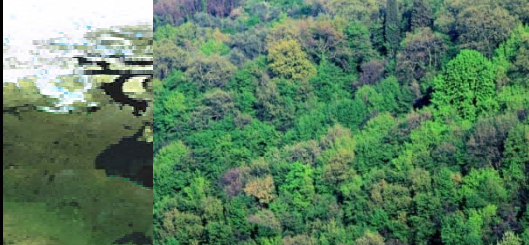
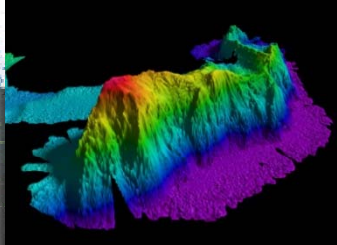
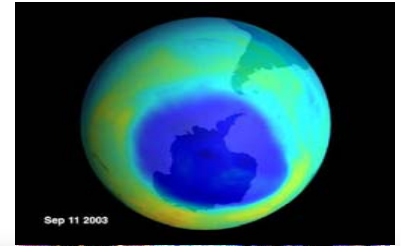
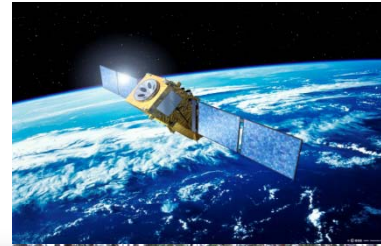
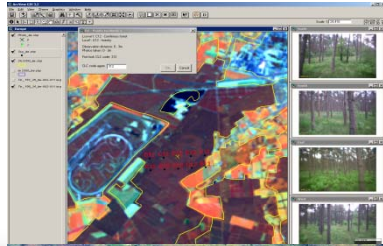
Regional component



Global component















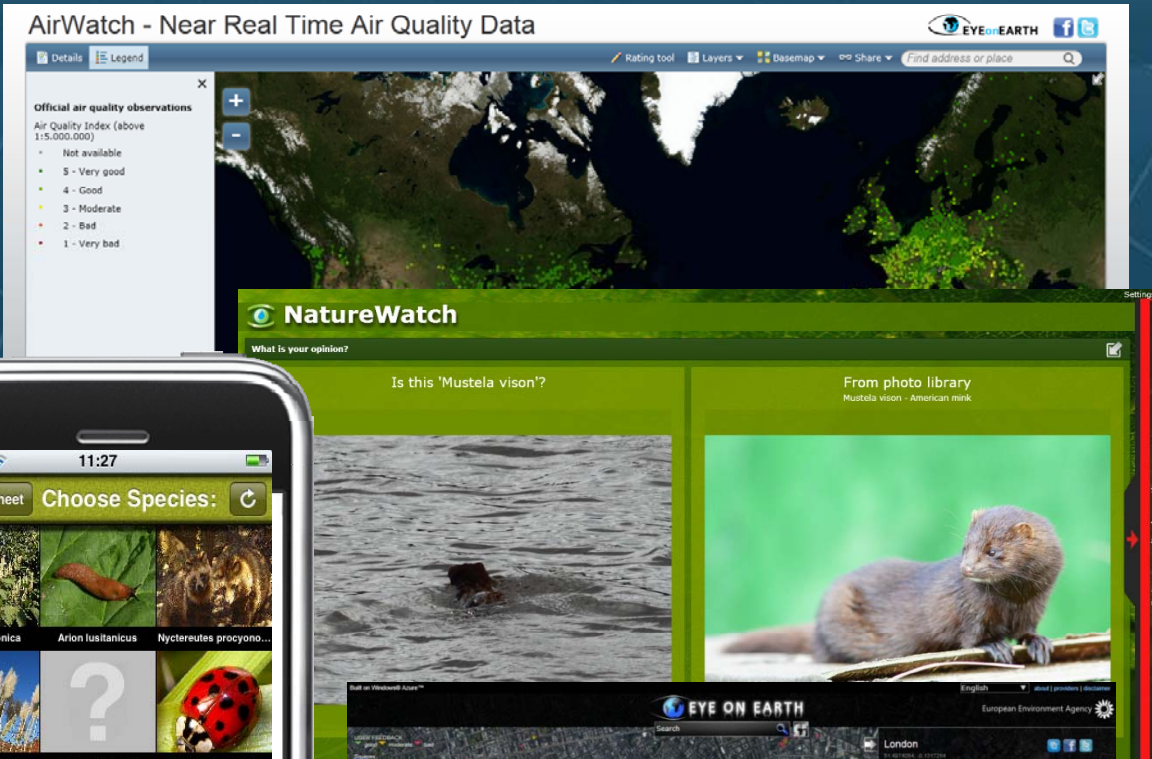


# Building a Global Citizen Observatory

## EEA Watches

-  AIR 
-  WATER 
-  NOISE 
-  NATURE 

- Near real time
- Citizens science
- Crowd sourcing
- Modelled data
- Social media
- Mobile technology
- Cloud computing
- Open access



**AirWatch - Near Real Time Air Quality Data**

Official air quality observations  
Air Quality Index (above 1:5.000.000)

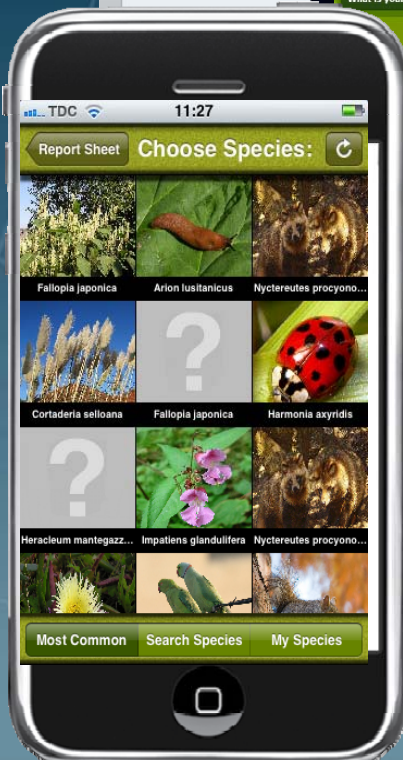
- Not available
- 5 - Very good
- 4 - Good
- 3 - Moderate
- 2 - Bad
- 1 - Very bad

**NatureWatch**










What is your opinion?

Is this 'Mustela vison'?


From photo library  
Mustela vison - American mink



Report Sheet Choose Species:

 Fallopia japonica	 Arion lusitanicus	 Nyctereutes procyono...
 Cortaderia selloana	 Fallopia japonica	 Harmonia axyridis
 Heracleum mantegazz...	 Impatiens glandulifera	 Nyctereutes procyono...

Most Common Search Species My Species



**EYE ON EARTH**

European Environment Agency

London

OUR RATING: 2 good

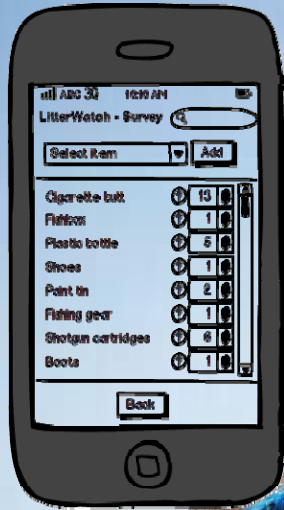
COMMUNITY RATING: 1 good

OUR RATING: 2 moderate

OUR RATING: 1 good



# Marine LitterWatch



Marine litter database

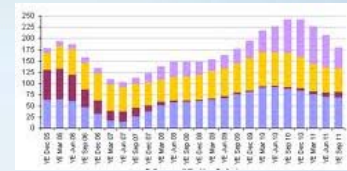


National databases

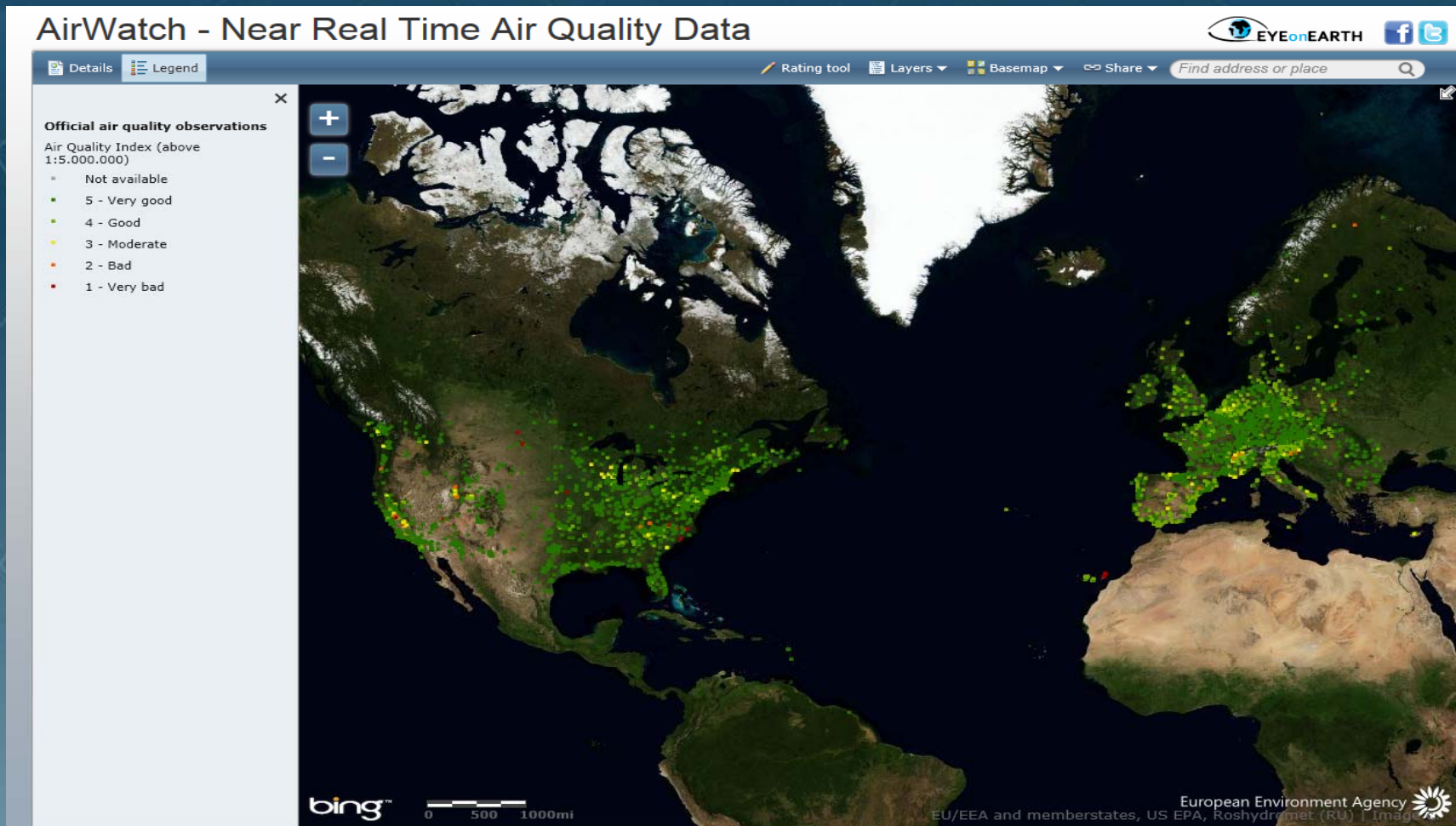


Eye on Earth

Marine Strategy Framework Directive Dataset

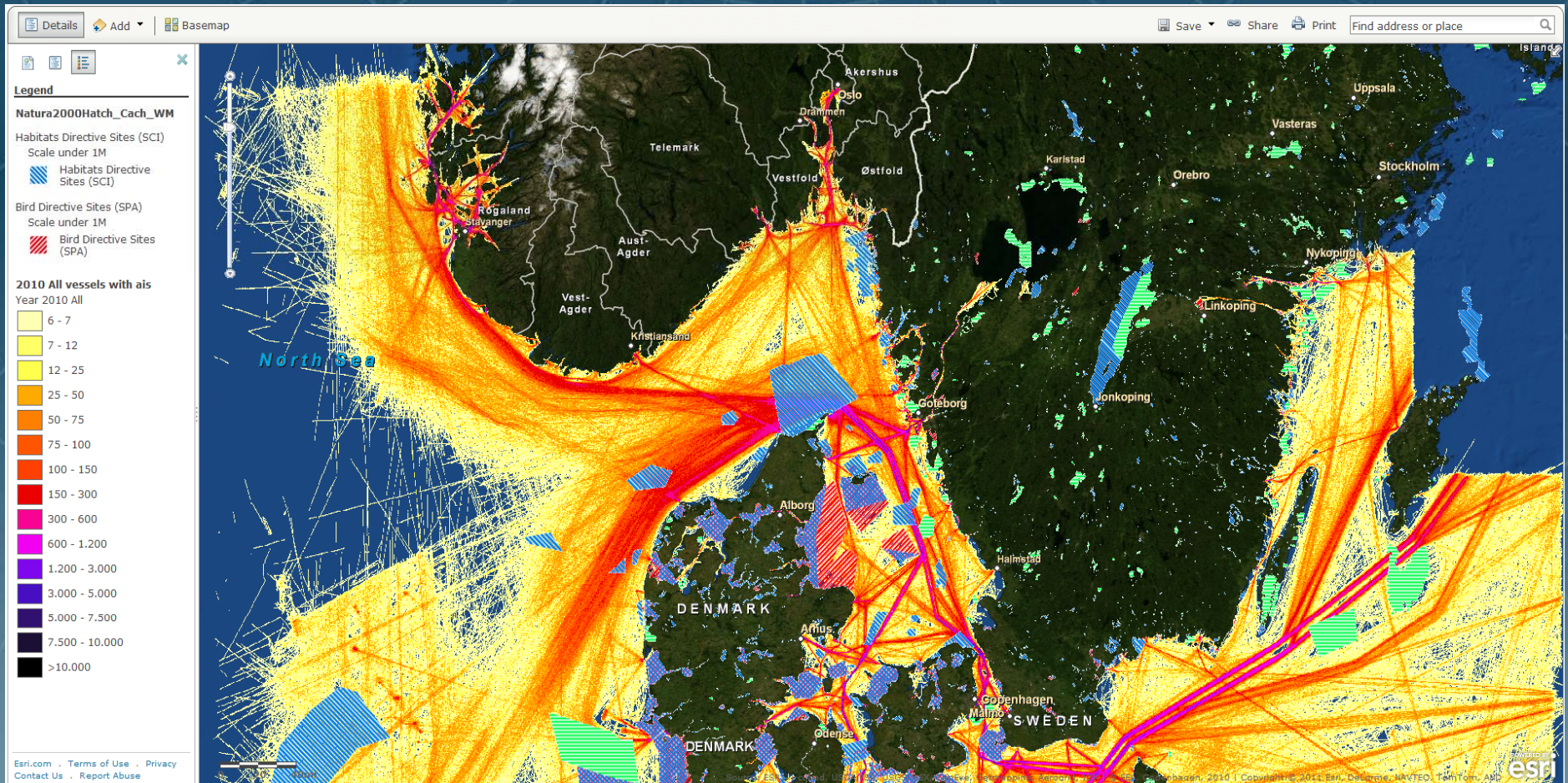


# A Global Public Information Sharing Platform





# Mash-ups geospatial data and information





# Towards a Global Network of Networks

A collage of various web portals and maps associated with the Eye on Earth network. The central element is a large map of a coastal area with labels like "Westland", "Naaldwijk", and "Maasvlakte". Overlaid on this are several smaller screenshots of web interfaces, including:

- A "Welcome!" page with the text "This is a global information service."
- A "NoiseWatch" interface with a map of a river area.
- A "Microsoft" interface with a map of Europe.
- A "United Nations Environment Programme" (UNEP) interface with a navigation menu (HOME, REPORTS, MAPS, DATA & INDICATORS, EMERGING ISSUES, SOE LIVE, MY COUNTRY) and sections for "Find Reports", "Find Maps", "Find Indicators", "Identify Emerging Issues", and "Track State of the Environment Live".
- Other smaller maps and data visualizations.


# Eye on Earth Network Special Initiatives

Under the patronage of The President His Highness **Sheikh Khalifa Bin Zayed Al Nahyan.**

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Home > Beyond 2011



Special Initiatives

- Eye on Water Security
- Eye on Oceans & Blue Carbon
- Eye on Biodiversity
- Eye on Community Sustainability & Resiliency
- Eye on Disaster Management
- Eye on Access for All
- Eye on Environmental Education
- Eye on Global Network of Networks
- Download SciDev Report







## SPECIAL INITIATIVES

The following summarises the 'Foundation' Special Initiatives. This general category covers those facets that are seen as essential parts of an underlying information infrastructure framework that is needed to support effective environmental and societal information networking. The Special Initiatives outlined in this section address those parts of the Foundation conceptual framework that were chosen for special attention in 2011, and for which there is sufficient direct and compelling support to move forward. Stakeholder commitment is currently being solicited from both the local and international audience to ensure delivery and implementation of these initiatives.

### } Eye On Global Network Of Networks



There is significant interest in the Eye on Earth community to explore further alignment of various existing and planned local, national, regional and global networks. Information and communication technologies, as well as the social networking and crowd-sourcing capabilities that these facilitate, are recognised as key to support other environmental and socio-economic information and knowledge. The current challenge is that many of these networks which directly or indirectly address



