

# EEA Briefing

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## Eye on Earth

**Summary:** *Eye on Earth* is a 'social data website' for creating and sharing environmental information. All are invited to participate in the new and dynamic online 'environmental community' facilitated by EEA, technology leaders, cutting-edge innovations and cloud technology. It represents a good practice for implementing the principles of a Shared Environmental Information System (SEIS) for Europe. EEA will use *Eye on Earth* to support its expanding role as an agent of change that facilitates information sharing, and to strengthen its effectiveness and efficiency in collecting and providing environmental information. Users can choose to share information with closed groups or everyone. Data and information will come in a variety of formats such as maps, graphs and tabular spreadsheets, alongside various tools. Maps can be viewed, created, interacted with, manipulated and shared. EEA will also use *Eye on Earth* to engage citizens.

### What is *Eye on Earth*?

*Eye on Earth* is a 'social data website' for creating and sharing environmental information. Examples of the wide range of potential users include policy makers, environmental organizations, emergency responders, GIS professionals, communities and citizens. All are invited to participate in the new and dynamic online 'environmental community' facilitated by EEA, technology leaders, cutting-edge innovations and cloud technology.

*Eye on Earth* represents one of EEA's many initiatives which apply the principles of a 'Shared Environmental Information System (SEIS)' for Europe. SEIS aims to improve the collection, exchange and use of environmental data and information and is based on SEIS principles such as: managing information as close as possible to its source; collecting information once, and sharing with others for many purposes; and using open software standards for sharing.

EEA will use *Eye on Earth* to support its expanding role as an agent of change facilitating information sharing. The website will also significantly strengthen EEA's effectiveness and efficiency in collecting and providing environmental information, by reducing resource needs and integrating functions and products. It won't replace all that EEA does now, but it will definitely make information production, use and dissemination easier.

The website first appeared in May 2008 through the launch of *WaterWatch*, an online interactive map of Europe that presents the latest available official water quality data from 28 countries. This was followed in November 2009 with the launch of *AirWatch* providing near real-time air pollution data from 32 European countries. In 2010, progress continued on the development of new *Watches*, such as for noise and nature. The new version's launch is expected by end-2011.

### How does *Eye on Earth* benefit information sharing?

Information will be available to everyone through open standards. A user will be able to visit *Eye on Earth*, explore information, and then embed, for example, a map in an email, application, website, blog or mobile device. A user can also choose to share it back through *Eye on Earth*, either through defined and closed groups, or to everyone – as with YouTube – allowing access to a potential audience of millions. An institution can have its own group, space and 'face' with its own style. Other users within a shared system can also then opt to use the information and add to it according to their interests, opening the door to countless and subsequent uses of the same source information (thereby strengthening SEIS).

Because of the power of built-in web services speaking in real time, any change made to environmental information in one location will lead to an automatic update of the same information found in other locations on the website. For example, if an EU country changes its figure for greenhouse gas emissions, then that would automatically change the overall figures for Europe (i.e. as calculated by EEA).

At the same time, users will be able to know the source of information. And users who have provided information will themselves be able to track who has used their information and in what way – as with Wikipedia.

### How will Eye on Earth be used?

Data and information will come in a variety of formats such as maps, graphs and tabular spreadsheets, alongside various tools. An 'intelligent map' service will allow users to view, create, interact with, manipulate and share maps.

Users can either simply use the information provided through the website as is, or they can choose to manipulate or add to it to create new information and knowledge. If it's the latter, then the user can apply their own tools (e.g. stored in their computer), or they can use one or more of the many web tools that will be offered online, and for free, through Eye on Earth. For example, a national agricultural institution will be able to transform an Excel table listing soil quality and location into a map. In this way, Eye on Earth provides a service for creating new maps, as Powerpoint does the same for creating a new Powerpoint presentation – with no additional need for an expert software developer along the way.

**Figure 1:** A recent example of use was overlaying an EEA map of Natura 2000 protected areas in Europe with a map of high shipping activity at sea. The result was new information showing that the highest volume of traffic is going right through protected areas.



### How can Eye on Earth facilitate citizen participation?

Citizens are currently engaged in the *Watches* through their: feedback about Eye on Earth; and personal *ratings* of environmental quality at specific locations (e.g. beaches). In the future, citizens will be able to provide their own data to the *Watches* through *citizen science* activities, defined as: Public involvement in projects or on-going programmes of scientific work by which individual volunteers or networks of volunteers, many of whom may have no specific scientific training, perform or manage research-related tasks such as observation, measurement or computation. EEA's vision here is to engage the public in the observation and reporting of environmental data and information to fill important gaps in our knowledge of Europe's environment. For example, citizen scientists will be able to track invasions of alien species by submitting observations, pictures and sounds with smart phone applications. EEA further hopes that Eye on Earth will increase the environmental awareness and positive environmental behaviour of citizens who continue to engage in these activities.