

# OneGeology

31 July 08

Have you ever wondered what our world would look like stripped bare of all plants, soils, water and man-made structures? Well wonder no longer; images of the Earth as never seen before have been unveiled in what is the world's biggest geological mapping project ever.

**OneGeology** is supported by UNESCO and six other international umbrella bodies and is the flagship project for UN International Year of Planet Earth 2008. The key results of this project are:

1. Geological maps from around the globe are accessible on the World Wide Web;
2. A new web language has been written for geology which allows nations to share data with each other and the public;
3. The know-how to do this is being exchanged so that all nations across the world, regardless of their development status, can take part and benefit

Explaining the significance of this project, **Ian Jackson**, Chief of Operations at the British Geological Survey, who is coordinating OneGeology explained: *“Geological maps are essential tools in finding natural resources e.g. water, hydrocarbons and minerals, and when planning to mitigate geohazards e.g. earthquakes, volcanoes and radon. Natural resources are a crucial source of wealth for all nations, especially those that need to develop and build their economies. Identifying geohazards is often a matter of life or death. Other challenges facing all nations in the 21st century include rising sea levels, management of waste (nuclear or domestic) and storage of carbon. Knowledge of the rocks that we all live on has become increasingly important and sharing that knowledge at a time of global environmental change is crucial”.*

**François Robida**, Deputy Head of Division, Information Systems and Technologies at the Bureau de Recherches Géologiques et Minières, France, explained; *“Today you can go to the OneGeology website and get geological maps from across the globe — from an overview of our entire planet, to larger scale maps of the rocks of individual nations. You also have the ability to hop from this web site to higher resolution applied maps and data on linked national web sites. Participating nations are contributing to a legacy for humankind; by acting locally they are thinking globally”.*

## What

- Geological maps from around the globe are accessible on the World Wide Web;
- A new web language has been written for geology which allows nations to share data with each other and the public;
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## Why

We all need clean water, fuel and materials to build and heat our homes, schools, workplaces and hospitals. We need civil engineering that won't fall down; safe and sustainable places to live and manage our waste and store our carbon. It's crucial that we know what the rocks are beneath our feet. Our changing climate means the need for this information is even more urgent. Until now geological map data has not been easy to find, access or use; OneGeology will change this.

**Who**

79 nations around the world are currently participating in OneGeology. Each nation is represented by its Geological Survey. OneGeology is supported by UNESCO and six other international umbrella bodies and is the flagship project for International Year of Planet Earth.

**How**

A world first — delivering digital geological map data from its source in participating nations using cutting edge Web Map Service technology — unlike Google Earth this is a distributed, dynamic and sustainable model, leaving the data where it is best looked after and upgraded - with the provider nations.

**What's Next**

Next there will be a more sophisticated query system allowing searching and integration of the rock units. Several OneGeology partners are also working on making applied data and 3- and 4-dimensional models available too.

**When**

OneGeology was initiated in March 2007 and the OneGeology web portal & launched on 6 August 2008 at the 33rd International Geological Congress in Oslo, Norway.

**Data**

OneGeology accesses over 170 years of continuous scientific survey and research data and knowledge; from the industrial revolution at the beginning of the 19th century to the digital revolution of the 21st century.

**Rocks**

OneGeology maps thousands of rock units from the oldest (more than 3000 million years ago) to those rocks forming today.

**Scientists**

This is the world's biggest geological mapping project ever — accessing data and expertise from 97 organisations which employ over 15,000 earth scientists worldwide.

**Reaction**

Simon Winchester Author of 'The Map That Changed the World'

*"The idea of producing a digital map of our living planet's sinews and muscles — of the Earth's largely invisible structure, the support for all living creatures, humankind included — has a grand nobility and poetic elegance to it.*

Aubrey Manning TV presenter and Professor of Biology

*"This planet is our common home, it's the only place we've got and we'd better use it wisely.*

**OneGeology**  
[www.onegeology.org](http://www.onegeology.org)