

SCIENCE & TECHNOLOGY

Monitoring the environment

The pulse of the planet

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A new source of data about the global environment

FINDING useful environmental data on the world wide web is as hard as obtaining anything else from it. What you are looking for may exist; locating it is another matter. And if you want a set of compatible results from different sources, forget it. Navigating the myriad providers of ocean temperatures, wind speeds, rates of deforestation and so on is well nigh impossible. The information comes from different organisations, is stored in diverse formats and may well be out of date.

That is a pity, for a one-stop shop of important environmental data would be useful to policymakers, businessmen and researchers. So an intergovernmental organisation called the Group on Earth Observations (GEO) has designed one.

The result, GEONETCast, was unveiled this week at a meeting held by GEO in Bonn. It combines a wide variety of freshly collected data about the planet and broadcasts them over a network of satellites to anyone who wants to use them, at no charge. This satellite network—run by a consortium of the European Organisation for the Exploitation of Satellites, the World Meteorological Organisation and the governments of America and China—also enables different sets of data to be combined in novel ways. So, just as the internet is a “network of networks”, GEONETCast aims to be a “system of systems” that includes data on agriculture, forestry, air and water quality, and ocean conditions.

Three GEONETCast centres around the world—in America, Europe and China—receive these environmental data from the outfits that collect them. They then send the data to satellites which, in turn, broadcast them back to Earth just as they would a television channel. This makes the data accessible even in places that lack reliable links to the internet. All you need to do is point a dish at the nearest satellite.

A regional version of GEONETCast is already operating in North America, Europe and Africa. A system covering Asia is poised go live in December, and a fully global version, including South America, should be working within a year. The early versions are being put to a variety of uses. South Africa, for example, employs the local network to look at vegetation cover across the country. That helps the government with agricultural-planning decisions and drought monitoring. It even allows it to forecast outbreaks of insect-borne diseases such as malaria.

The system has commercial uses, too. Insurance companies could employ it to look for environmental trends that will help them understand the risks they face in unfamiliar places, and stockmarket analysts will be able to factor environmental conditions into their assessments of how particular companies will perform. Such globalised environmental data will surely find a growing global market.