

# Breakthrough in environmental monitoring from space

December 17 2004

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Scientists working at the Joint Research Centre of the European Commission have developed a new way to interpret data from satellites observing the earth. The satellites monitor the nature, state and evolution of the earth's vegetation. This enhanced monitoring capacity will make it more possible to determine the impact of major climatic events, such as the severe drought and heatwave in Western Europe in 2003. The new method involves the use of practical algorithms to interpret remote sensing data collected by sensors in satellites.

"As our world faces greater environmental degradation and accelerating climate change, a new development like this ensures that policy decisions in Europe and throughout the world are made on the basis of sound scientific advice. And that's the best way to get the right decisions" said Janez Potočnik , Commissioner for Science and Research.

The practical usefulness of this innovative approach was amply demonstrated during the drought of Spring/Summer 2003. This was the hottest summer in 500 years, 35,000 casualties were attributed to the heatwave and economic damages estimated at over 10 billion Euros. Analysis of the data leading up to, during and after the drought period carried out on the basis of this new method shows that indications were detectable as early as March 2003 in some agricultural regions (Northern France, Benelux and Germany for example). This methodology could therefore be used in the future to monitor effects of such climatic events.

A prototype methodology was developed and tested, including with international partners. This methodology was then transferred to the European Space Agency for implementation. It will be used to propose new indicators of environmental stress for monitoring by the European Environment Agency.

Nadine Gobron, a young scientist associated with the development of these new methods, has received the Joint Research Centre award for "Best Young Scientist 2004" for her outstanding scientific contribution.

Citation: Breakthrough in environmental monitoring from space (2004, December 17) retrieved 6 May 2024 from <https://phys.org/news/2004-12-breakthrough-environmental-space.html>

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