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**47 Countries Agree To Take “Pulse of the Planet”
Milestone Summit Launches Plan to Revolutionize Understanding
Of How Earth Works**

Recognizing that Earth’s most pressing problems know no geographic boundaries, ministers of 47 nations and the European Commission agreed yesterday to develop pioneering global architecture that will, over the next decade, revolutionize our understanding of how Earth works. At the international Earth Observation Summit held April 25 in Tokyo, ministers set forth a visionary Communique committed to scientifically connecting the world for the benefit of people and economies around the globe.

Underscoring his Earth Day message, EPA Administrator Mike Leavitt, said, “Our environment knows no boundaries. We all breathe the same air and drink the same water. We all cause pollution – every one of us. And working together, we can find the solutions and effect the changes needed to protect our planet.”

Leavitt led the U.S. delegation to the Summit, which included Dr. John Marburger, the president’s science adviser, and Retired Navy Vice Admiral Conrad C. Lautenbacher, Ph.D., under secretary of commerce for oceans and atmosphere and administrator of NOAA, the National Oceanic and Atmospheric Administration. “Collectively we’re pioneering the framework of a comprehensive Global Earth Observation System of Systems that will be as interrelated as the planet it observes, predicts and protects,” Lautenbacher said. “The result will be sound science on which sound policy must be built.”

Lautenbacher is one of four co-chairs of the Group on Earth Observations. Other co-chairs are Dr. Achilleas Mitsos, director general for research, European Commission; Mr. Akio Yuki, deputy minister of education, culture, sports, science and technology, Japan; and Dr. Rob Adam, director-general of the department of science and technology, South Africa.

Right now many thousands of separate technological assets are demonstrating their value around the globe, in estimating crop yields, monitoring water and air quality, improving airline safety, and forecasting life-threatening natural hazards. But this technology is not set up to talk to each other. Once linked as a *system of systems*, the societal and economic benefits will be enormous. By launching the development of a 10-year implementation plan at the summit, the ministers committed to make people and economies throughout the world healthier, safer and significantly better prepared to manage the basic needs of daily life.

The ocean, for example, is the memory of the global climate system and the key to climate variability. Since the highest incidence of solar radiation occurs near the Equator, measuring what heat is doing in the Equator is a good indicator of what it is doing elsewhere. As warming water moves, it can send strong signals, telling us that some parts of the world will be drier, wetter, colder or warmer. If rainfall is heavier, water may pool, increasing the chance that there will be more breeding grounds for mosquitoes, some of which may carry life-threatening diseases. Some fish also follow ocean temperature, and this information is key to sustaining healthy fisheries.

Since people and economies would benefit all over the globe, there is urgency in developing a comprehensive global system. In the U.S. alone, forecasting weather with just one degree (F) more accuracy could save at least \$1 billion annually in energy costs. At a cost of \$4 billion annually, weather is responsible for about two-thirds of aviation delays -- \$1.7 billion of which would be avoidable with better observations and forecasts. An estimated 300-500 million people worldwide are infected with malaria each year and about one million people die from this largely preventable disease. Since studies show that the malaria cycle intensifies during El Nino events, improved forecasting is key to mitigation. Over 90 per cent of natural disaster-related deaths occur in developing countries.

The benefits of a connected system are about as wide as the planet. Among them:

- more accurately knowing how severe next winter's weather will be;
- pinpointing where the next outbreak of SARS or West Nile virus, or malaria is likely to hit;
- benefiting from air quality monitoring that will provide real-time information as well as accurate forecasts that, days in advance, will enable us to mitigate the effects of poor quality through proper transportation and energy use;
- benefiting from ocean instrumentation that, combined with improved satellite Earth observing coverage, will provide revolutionary decadal worldwide and regional climate forecasts – we could predict the years of drought and years of plenty; and
- benefiting from real-time monitoring and forecasting of the water quality in every watershed and accompanying coastal areas, giving agricultural interests immediate feedback and forecasts of the correct amount of fertilizers and pesticides to apply to maximize crop generation at minimum cost and helping to support healthy ecosystems and greatly increased fishery output and value from coastal tourism

The summit in Tokyo fulfills a commitment made last year by the G-8, builds on the first Earth Observation Summit hosted by the United States last July, and will feed directly into the G-8 meeting in June in Georgia, all of which underscore Earth observations as a priority action item.

<http://earthobservations.org>