

Statement of Dr. Gary Foley
Director of the National Exposure Research Laboratory
Office of Research and Development
United States Environmental Protection Agency
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Introduction

Good afternoon Chairman Whitfield, Ms. DeGette, and Members of the Subcommittee. Thank you for the opportunity to appear before this Subcommittee to discuss the role of the Environmental Protection Agency (EPA) in the Global Earth Observation System of Systems (GEOSS). EPA's mission is to protect human health and to safeguard the natural environment, and therefore we have an important, continuing role to play in GEOSS. It is my pleasure to discuss this role with you this afternoon.

EPA's Unique GEOSS Role in Earth Observation Linkages

As previous speakers have said, GEOSS is an excellent example of science serving society. Over time, GEOSS will provide important scientific information for sound policy and decision making in every sector of society. EPA recognized immediately that GEOSS aligned with our mission and that we could potentially make a significant contribution.

The "2003-2008 EPA Strategic Plan: "Direction for the Future" emphasized that EPA's mission is clear: to protect human health and to safeguard the natural environment. The vision for GEOSS is to realize a future wherein decisions and actions are informed by coordinated, comprehensive, and sustained Earth

observations and information. By comparing the Goals and Objectives in EPA's Strategic Plan with the Societal Benefit areas identified in the Strategic Plan for the U.S. Integrated Earth Observation System (IEOS), it is clear that GEOSS has the potential to make a significant contribution to environmental protection. EPA recognized this in 2003 as the first Earth Observation Summit (EOS-I) was being planned, and has joined with other Agencies to be an active contributor and leader in both the interagency and international effort.

Under the authority of numerous environmental statutes, EPA strives to implement environmental protection as science and technology continuously advance. As an agency, EPA depends on observational data to assist in environmental decision making, as well as to increase our understanding of environmental problems and how best to address them. EPA has traditionally partnered with other Federal Agencies to access and share data and information for other programs. For example, in air quality, EPA and National Oceanic and Atmospheric Administration (NOAA) continue to benefit from a partnership that started 50 years ago by the Public Health Service and the Weather Service. In water quality, EPA, NOAA, the U.S. Fish and Wildlife Service, and the U.S. Geological Survey have worked together for the last decade assessing U.S. coastal conditions. This effort recently produced a second National Coastal Condition Report. In recent years, there has been an effort across all agencies to strengthen these partnerships, which have become the backbone of both IEOS and GEOSS. It is important to emphasize that the IEOS is the U.S. contribution to GEOSS.

EPA brings to GEOSS experience in scientifically sound environmental policy and decision making. Over time, opportunities to link information from GEOSS observations to environmental decision making may be numerous, and some of these links are underway now. EPA faces the challenge of addressing environmental problems at different geographic scales and of improving environmental performance in a holistic manner. Compounding this challenge is the need to be flexible enough to embrace innovative

approaches to demonstrate improved environmental performance at less cost. Addressing these challenges can require harmonizing our own and others' vast environmental data resources. For data to be useful to the broad community of stakeholders to inform their environmental decisions and to measure their success, the systems of different observations, models, and decision support tools all need to be interoperable. EPA has been actively encouraging and facilitating the development of interoperable systems, both working with the Federal community, as well as with the state, tribal, and other environmental agencies.

EPA as a GEOSS Leader

In November of 2003, former Administrator Michael Leavitt arrived at EPA with his "Enlibra Principles," an awareness of GEOSS, and the desire to play a leadership role along with the heads of other Agencies. Administrator Leavitt led the U.S. delegation to Tokyo, Japan for the second Earth Observation Summit in April 2004, where he combined his recognition of Earth Day with the adoption of the GEOSS Framework Document, remarking that GEOSS "will give us the pulse of the planet."

From the very beginning, at both the international and U.S. levels, EPA has been one of the leaders of GEOSS. Acting EPA Administrator Marianne Lamont Horinko as she closed the first Earth Observation Summit on July 31, 2003, remarked about the historic, unprecedented, and huge challenges before all of us. Horinko emphasized, "You are building a global partnership to protect the global community. You're strengthening the human ties that link all people everywhere. Through information, you will inspire a deeper understanding of who we are and where we live."

Also, EPA became a co-chair of the international "User Requirements and Outreach" subgroup formed under the ad hoc Group on Earth Observations (GEO). One of the principal tasks of this group was to draft the Societal Benefit areas, to come up with compelling rationale for the importance of the benefits,

and to then draft a broad "first cut" of the observational requirements to meet these Societal Benefits.

This concept was emphasized by EPA Administrator Michael Leavitt in Tokyo 2004. "The tools provided by GEOSS will aid us in managing our watersheds, improving our drinking water, protecting our food supply and ensuring a safe transportation system. It will help us avoid disease outbreaks and secure a reliable energy supply. GEOSS will help us sustain people, promote prosperity and protect our planet. The potential benefits are limited only by our imaginations." Under the U.S. Interagency Working Group on Earth Observations (under the Committee on Environment and Natural Resources of the National Science and Technology Council), EPA continues to play a role as the agencies develop and begin to implement the opportunities under the Societal Benefit areas. EPA's leadership role is being reaffirmed by the Administrator nominee, Stephen L. Johnson, who recently said, "I am thrilled with the promise of GEOSS. It can provide us with better information to use in decision-making, producing better decisions that are better informed with more data points. If confirmed as EPA's administrator, I hope to help make the promise of GEOSS a reality."

The identification of user requirements is an ongoing and dynamic effort that many Agencies and countries are undertaking. In concert with our stakeholders, we at EPA continue to identify additional scientific gaps that GEOSS could address and how best to fill these gaps. At this point, our users include the breadth of stakeholders concerned about using the information available to make the best possible environmental decisions.

Also, because of EPA's effort to develop a Report on the Environment, EPA is in a good position to provide information and guidance on human health and environmental indicators that meet user needs. In addition, EPA's Air Now Program is a "trail blazer" in providing meaningful air quality indicators to the public in real-time. Partnerships have been established with NOAA and the National Aeronautics and

Space Administration (NASA) to further develop models and observations to improve the indicators and forecasts that states, tribes and local agencies can use.

Implementing environmental protection across our country has become a network of state and tribal partnerships. With the evolution of GEOSS, this partnership network will expand across countries.

Achieving and Measuring Environmental Progress

Like GEOSS, EPA in partnership with Federal, state, tribal and local environmental agencies, collects many kinds of environmental monitoring data, and develops and validates environmental models that support decisions about the environment.

At the same time, EPA is helping state, tribal, and local environmental agencies and their decision makers address the challenge of defining and tracking "environmental stewardship" with outcome-based performance metrics. EPA is a leader in using data to measure and evaluate environmental progress.

To improve accountability, EPA made a commitment in our Strategic Plan to measure our performance. As part of this commitment, EPA published our first "Draft Report on the Environment" in 2003, providing the first EPA national look at the condition of human health and the environment. The Draft Report on the Environment also served as a capstone report on the state of the science of environmental health indicators, identifying gaps and limitations and starting EPA down a path towards comprehensive real-time environmental health indicators that will be widely accepted and used.

In addition to our strong network with state, tribal and local environmental agencies, EPA also has a strong international network. Consistent with the notion that the Earth is one integrated interoperable system and that the environment knows no political boundaries, GEOSS will require concerted and

long-term international cooperation to achieve many of the internationally shared health and environmental goals. EPA has a history of international environmental partnerships, where the transfer of technology and knowledge benefits all parties.

At EOS-II in Japan 2004, EPA Administrator Michael Leavitt put the GEOSS efforts in a familiar context. "The world is beginning to intuitively organize itself into networks. Similar to the way we communicate with computer networks, we will solve environmental problems best by connecting multiple disciplines and finding a common language. Doing this well is the new frontier in productivity." In my view, GEOSS will help facilitate a common language and understanding by building the technical and social networks, improving our ability to monitor and predict changes, and enabling citizens and policy makers to make more informed decisions affecting their environment.

EPA stands ready and willing to further its already strong support on the implementation of GEOSS with all our partners. For example, EPA has an advanced monitoring initiative in the FY 2006 President's Budget, which is part of GEOSS. This initiative will enable pilot efforts to demonstrate how new data and information can be quickly brought into environmental applications and make a difference. Thank you for the opportunity to speak with you today. I look forward to your questions.