

Earth Observation Summit
July 31, 2003
Fact Sheet

- This Earth Observation Summit is being held to generate strong, top-level international support to link thousands of individual technological assets into one comprehensive global Earth observation system. The purpose of the system is to provide the tools needed to substantially improve our ability to identify and address critical environmental, economic and societal concerns.
- Around the globe, individual systems have already demonstrated their value – in estimating crop yields, monitoring water and air quality, improving airline safety, and forecasting El Nino six months in advance.
- But gaps or “blind spots” in understanding Earth and its complex systems severely limit our knowledge of how to address many concerns, such as drought, disease outbreaks, stronger agricultural production, and energy and transportation challenges. Relevant tools are required to address the scientific uncertainties.
- The challenge is international. Earth’s systems respect no borders. For example, El Nino and the storms and droughts it generates are part of a climate system that affects every corner of the world.
- Over thirty countries and 20 international organizations are participating in the one-day Summit, which is taking place at the Ministerial level. Ministers are invited to adopt a Summit Declaration, which recognizes the need to support development of an comprehensive, coordinated Earth observation system for multiple uses.
- Department of Commerce Secretary Evans, Secretary of State Powell and Secretary of Energy Abraham are hosting the event. Dr. John Marburger, the President’s science advisor, and James Connaughton, chair of the White House Council on Environmental Quality, will speak.
- International representatives will include Secretary General Obasi, of the World Meteorological Organization.
- The one-day Summit will be immediately followed by a two-day working session in which representatives of participating countries will launch work on an international plan for a comprehensive system that will ultimately yield services and products that go far beyond what we have today. The first step will be development of a conceptual framework by spring 2004.
- The need to answer these questions and the recognized benefits of global observations have created a global mandate. International calls for greater integration of earth observation systems were made at the World Summit on Sustainable Development last year and at the 2003 G-8 Summit in Evian, France. The G-8 Action Plan on Science and Technology for Sustainable

Development called for strengthening international cooperation on global observations.

- **There is demonstrated payoff in developing a comprehensive global system.**

Farmers get about \$15 of value from every dollar spent on weather forecasting.

El Nino forecasts generate a 13-26% economic return to the U.S. economy. As two examples, a significant portion of the \$1.1 billion decrease in storm losses in California during the 1997-98 El Nino event as compared with the 1982-83 El Nino is attributed to heightened preparedness; and benefits to U.S. agriculture from altering planting decisions are estimated at \$265 - \$300 million. Benefits to Mexican agriculture range from \$10 – 25 million per year.

Internationally, weather, water and climate services provided by national institutions contribute about \$20-40 billion annually to their national economies.

Worldwide agricultural benefits of better El Nino forecasts are at least \$450 to \$550 million per year.

- **The need is critical:**

Weather and climate sensitive industries, both directly and indirectly, account for about one-third of the nation's GDP, or \$3 trillion, ranging from finance, insurance and real estate to services, retail and wholesale trade and manufacturing.

Population is expected to double in the next few decades, primarily in coastal areas. Improved, up-to-date environmental data is needed to plan for environmentally and economically sound growth and to develop more sustainable practices to protect fragile coastal ecosystems. Coastal crowding brings increased vulnerability to such natural hazards as flooding, hurricanes and tsunamis.

Governments and decision-makers around the globe now understand that large science questions are linked to pressing social and economic concerns, such as water and air quality, energy use and food shortages.

For over four decades, Earth scientists and other experts around the world have worked to build different weather systems – both space and surface-based (*in situ*) - to observe and measure various aspects of the Earth. These systems have evolved to allow us today to forecast weather five days in advance, give a six-months' heads-up on El Nino, estimate crop yields, monitor water and air quality, and improve airline safety and operations, among many other benefits. Now nations are faced with larger questions about how the Earth functions and what the implications

are for society, such as climate change. This calls for international collaboration in integrating technology now working around the globe.

- **Timeline of Key Bush Administration Initiatives**

June 2001

President Bush announces action on climate change in a Rose Garden speech at the White House. The Administration committed more resources and established an integrated management structure led by Cabinet Secretaries of Commerce and Energy.

This first-ever Summit is a major advance in his commitment to “provide resources to build climate observation systems in developing countries and encourage other developed nations to match our American commitment.”

Since 1990, U.S. has invested \$20 billion in climate change science and technology. U.S. now invests \$4.5 billion a year in climate research and technology

February 2002

President Bush announces \$25 million in funding for observing systems and capacity building in developing countries

August 2002

At the World Summit on Sustainable Development in Johannesburg, South Africa, U.S. and international partners promote need for a comprehensive global observing system, underscoring the critical link between global observations which link space and *in situ* or surface-based observations across land, sea and air and sustainable development.

During the Summit, the 500th ARGO float was deployed. This event marked an international milestone in the creation of a global ocean observing system that provides information on weather and ocean phenomena critical to safety and the economy.

June 2003

U.S. promotes global observations at G-8 Summit, where G-8 Partners agree to Cooperative Action on Science and Technology for Sustainable Development.

July 24, 2003

Bush Administration announces new climate change science strategic plan with a special emphasis on global observations. The plan represents the most comprehensive effort ever undertaken by the U.S. government to address the scientific uncertainties associated with climate change. The Administration also announced \$103 million two-year federal initiative to accelerate the deployment of new global observation technologies.

July 31, 2003 in Washington, DC

U.S. hosts first Earth Observation Summit