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To: "Dr. Baruch Fischhoff - Chair, National Academy of Sciences Study on Social & Behavioral Science and Improving Intelligence for National Security" <baruch@cmu.edu>

From: Lloyd Etheredge <lloyd.etheredge@policyscience.net>

**Subject: A Perfect & Exciting Example of DNI Data-Sharing: From the physical environment to content analysis**

Dear Dr. Fischhoff and Colleagues:

I am enclosing a story that will appear in tomorrow's New York Times about renewed agreements, by the intelligence community, for sharing of global physical/environmental data with scientists.

It is a perfect and exciting example of what the DNI and intelligence community can do, re sharing content analysis data and analysis tools, to help scientists to understand the social environment!

Lloyd Etheredge

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January 5, 2010

## **C.I.A. Is Sharing Data With Climate Scientists**

By WILLIAM J. BROAD

The nation's top scientists and spies are collaborating on an effort to use the federal government's intelligence assets \_ including spy satellites and other classified sensors \_ to assess the hidden complexities of environmental change. They seek insights from natural phenomena like clouds and glaciers, deserts and tropical forests.

The collaboration restarts an effort the Bush administration shut down and has the strong backing of the director of the Central Intelligence Agency. In the last year, as part of the effort, the collaborators have scrutinized images of Arctic sea ice from reconnaissance satellites in an effort to distinguish things like summer melts from climate trends, and they have had images of the ice pack declassified to speed the scientific analysis.

The trove of images is “really useful,” said Norbert Untersteiner, a professor at the University of Washington who specializes in polar ice and is a member of the team of spies and scientists behind the effort.

Scientists, Dr. Untersteiner said, “have no way to send out 500 people” across the top of the world to match the intelligence gains, adding that the new understandings might one day result in ice forecasts.

“That will be very important economically and logistically,” Dr. Untersteiner said, arguing that Arctic thaws will open new fisheries and sea lanes for shipping and spur the hunt for undersea oil and gas worth hundreds of billions of dollars.

The monitoring program has little or no impact on regular intelligence gathering, federal officials said, but instead releases secret information already collected or takes advantage of opportunities to record environmental data when classified sensors are otherwise idle or passing over wilderness.

Secrecy cloaks the monitoring effort, as well as the nation’s intelligence work, because the United States wants to keep foes and potential enemies in the dark about the abilities of its spy satellites and other sensors. The images that the scientific group has had declassified, for instance, have had their sharpness reduced to hide the abilities of the reconnaissance satellites.

Controversy has often dogged the use of federal intelligence gear for environmental monitoring. In October, days after the C.I.A. opened a small unit to assess the security implications of climate change, Senator John Barrasso, Republican of Wyoming, said the agency should be fighting terrorists, “not spying on sea lions.”

Now, with the intelligence world under fire after the attempted airliner bombing on Christmas Day, and with the monitoring program becoming more widely known, such criticism seems likely to grow.

A senior federal official, who spoke on the condition of anonymity, defended the scientific monitoring as exploiting the intelligence field quite adroitly.

Ralph J. Cicerone, president of the National Academy of Sciences and a member of the monitoring team, said the program was “basically free.”

“People who don’t know details are the ones who are complaining,” Dr. Cicerone said.

About 60 scientists \_ mainly from academia but including some from industry and federal agencies \_ run the effort’s scientific side. All have secret clearances. They obtain guidance from the National Academy of Sciences, an elite body that advises the federal government.

Dr. Cicerone said the monitoring effort offered an opportunity to gather environmental data that would otherwise be impossible to obtain, and to do so with the kind of regularity that can reveal the dynamics of environmental change.

“It’s probably silly to think it will last 50 years,” he said of the program in an interview. “On the other hand, there’s the potential for these collections to go on for a long time.”

The C.I.A. runs the program and arranges for the scientists to draw on federal surveillance equipment, including highly classified satellites of the National Reconnaissance Office.

Officials said the effort to restart the program originated on Capitol Hill in 2008 after former Vice President Al Gore argued for its importance with Senator Dianne Feinstein, Democrat of California, who was then a member of the Senate Intelligence Committee; she became its chairwoman in early 2009.

The Obama administration has said little about the effort publicly but has backed it internally, officials said. In November, the scientists met with Leon E. Panetta, the C.I.A. director.

“Director Panetta believes it is crucial to examine the potential national security implications of phenomena such as desertification, rising sea levels and population shifts,” Paula Weiss, an agency spokeswoman, said.

The program resurrects a scientific group that from 1992 to 2001 advised the federal government on environmental surveillance. Known as Medea, for Measurements of Earth Data for Environmental Analysis, the group sought to discover if intelligence archives and assets could shed light on issues of environmental stewardship.

It is unclear why Medea died in the early days of the Bush administration, but President George W. Bush developed a reputation for opposing many kinds of environmental initiatives. Officials said the new body was taking on the same mandate and activities, as well as the name.

“I’m extremely pleased with what’s been happening,” said Michael B. McElroy, an atmospheric scientist at Harvard University and a senior member of the group. “It’s really first-rate.”

Among the program’s first responsibilities has been to assess earlier Medea projects to see which, if any, produced valuable information and might be restarted or expanded.

Dr. Untersteiner of the University of Washington said that in June the government posted some imagery results from that assessment on the Web sites of the United States Geological Survey in an area known as the Global Fiducials Library, which advertises itself as an archive of intelligence images from scientifically important sites.

Among other things, the online library displays years of ice imagery from six sites inside the Arctic Circle, including the Fram Strait, the main route for icebergs moving from the Arctic basin into the North Atlantic.

Scientists consider the Arctic highly sensitive to global warming and are particularly interested in closely monitoring its changes as possible harbingers.

In July, the National Research Council of the National Academy of Sciences released a report that praised the monitoring.

“There are no other data available that show the melting and freezing processes,” the report said. “Their release will have a major impact on understanding effects of climate change.”

Dr. Untersteiner said the federal government had already adopted one of the report’s recommendations \_ have reconnaissance satellites follow particular ice floes as they drift through the Arctic basin rather than just monitoring static sites.

For this summer, Dr. Untersteiner said he had asked that the intelligence agencies start the process sooner, “so we still see the snow cover, maybe in early May.”

Such research, Dr. Untersteiner said, promised to promote understanding of the fundamental forces at work in global climate change, including the endless whorls and gyres of polar ice.

“We still have a problem with ice mechanics,” he said. “But the dynamics are very revealing.”

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