ing the photochemical reactions that both produce and consume OH are of critical importance to an assessment of changes in the oxidizing power of the troposphere. This understanding is currently sketchy, in part, because instrumentation for measuring OH has only recently become available.

A recognition of the current importance of tropospheric OH has played a critical role in environmental policy, notably in the replacement of chlorofluorocarbons with products amenable to oxidation by OH in the troposphere.

The PEM-Tropics A flew at the end of the dry season in the southern Pacific. A key discovery from this flight was that the South Pacific is covered by a blanket of biomass-burning pollution transported 10,000 miles or more from agricultural and forest fires in South America and southern Africa. This biomass burning has a profound impact on ozone and aerosols over the South Pacific with likely implications for climate. Scientists expect to take a closer look at pollution flowing from Asia next spring with NASA's Trace-P project. —REBECCA RENNER

Homing in on the missing sink

At a packed session on carbon sequestration held during the American Geophysical Union's (AGU) meeting in June, Pieter Tans of the National Oceanic and Atmospheric Administration (NOAA) presented new evidence that appeared to strengthen previous research attributing a strong CO_2 sink to North America. The session also made clear that important differences persist between estimates of the size of what many researchers call the "missing sink."

Tans, who is chief scientist at NOAA's Climate Monitoring and Diagnostics Laboratory, has yet to publish his new work, which is based on an analysis of the average concentration differences of CO_2 and CO observed at sampling sites over the North Atlantic and North Pacific basins. Much of Tans's work has focused on assessing atmospheric levels of CO_2, and he was the first researcher to posit that North America harbors a large sink for absorbing the compound. Research to date has shown that large water bodies, forests, and agriculture absorb CO_2.

"Since the air tends to move from west to east at these temperate latitudes, one would expect to see a small increase in the concentrations of CO_2 as well as CO during the crossing of the North American continent," Tans explained. "That would have to be caused by the burning of fossil fuels which produces both CO_2 and CO. The average emissions per square kilometer are large over that continent. We see an average increase in CO, but a decrease in CO_2."

To verify the new measurements, Tans said he is currently looking at other trace gases, such as SF_6 (all of which is anthropogenic in origin) and the isotopic ratios of CO_2. "The latter has the potential to distinguish between oceanic as opposed to terrestrial and fossil fuel sources of CO_2," he said.

Tans's work, as well as that of Ralph Keeling of the Scripps Institution of Oceanography in California, added to the growing body of evidence from atmospheric measurements that there is a large, as-yet unidentified carbon sink on land in northern temperate latitudes, according to Eric Sundquist, a research geochemist with the U.S. Geological Survey who co-organized the session.

Government Watch

Climate change switch

In a dramatic change of tone, the Chinese government has offered "strong support" for international efforts to combat global climate change under the Kyoto Protocol, the international pact to reduce greenhouse gas emissions. China is the world's second largest CO_2 emitter, but as a developing country, officials there have argued that the protocol will limit China's economic growth. After three years of discussions with U.S. and other country officials, Chinese officials now say that projects designed to abate greenhouse gases can encourage economic growth, as well as help China address its own serious local air pollution problems, a U.S. State Department official said. However, China did not agree to reduce CO_2 emissions.

For the first time, China publicly states plans to "increase significantly" its reliance on renewable energy sources, greatly expand natural gas in its energy supply, increase the use of coal-bed methane and clean coal technologies, and to work with other countries to reach agreement on Kyoto pact provisions that will give developed countries credit for emissions reductions achieved by sponsoring energy-efficient projects in developing countries. China's climate change pledge is part of a joint U.S.–China statement on cooperative environmental protection and sustainable development efforts, signed in Beijing in mid-May.

Diesel takes a hit

In a landmark action, southern California air regulators in June adopted the first in a series of rules designed to ban diesel-powered transit buses, garbage

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