Geophysical Research Abstracts
Vol. 12, EGU2010-14502, 2010
EGU General Assembly 2010

Towards a Global Greenhouse Gas Information System (GHGIS)

Riley Duren (1), James Butler (2), Doug Rotman (3), Charles Miller (1), Phil DeCola (4), Edwin Sheffner (5), Compton Tucker (6), John Mitchiner (7), Karl Jonietz (8), and Paul Dimotakis (1)

(1) Jet Propulsion Laboratory, California Institute of Technology, Pasadena, United States (riley.m.duren@jpl.nasa.gov), (2) NOAA Earth System Research Laboratory, (3) Lawrence Livermore National Laboratory, (4) Office of Science and Technology Policy, (5) NASA Ames Research Center, (6) NASA Goddard Space Flight Center, (7) Sandia National Laboratories, (8) Los Alamos National Laboratory

Over the next few years, an increasing number of entities ranging from international, national, and regional governments, to businesses and private land-owners, are likely to become more involved in efforts to limit atmospheric concentrations of greenhouse gases. In such a world, geospatially resolved information about the location, amount, and rate of greenhouse gas (GHG) emissions will be needed, as well as the stocks and flows of all forms of carbon through terrestrial ecosystems and in the oceans.

The ability to implement policies that limit GHG concentrations would be enhanced by a global, open, and transparent greenhouse gas information system (GHGIS). An operational and scientifically robust GHGIS would combine ground-based and space-based observations, carbon-cycle modeling, GHG inventories, meta-analysis, and an extensive data integration and distribution system, to provide information about sources, sinks, and fluxes of greenhouse gases at policy-relevant temporal and spatial scales.

The GHGIS effort was initiated in 2008 as a grassroots inter-agency collaboration intended to rigorously identify the needs for such a system, assess the capabilities of current assets, and suggest priorities for future research and development. We will present a status of the GHGIS effort including our latest analysis and ideas for potential near-term pilot projects with potential relevance to European initiatives including the Global Monitoring for Environment and Security (GMES) and the Integrated Carbon Observing System (ICOS).