

# **Transboundary air pollution in the Amazonia region of Peru**

**L. Suarez** (1,2), L. Castillo 2, L. Rimac (2), M. Marin (2), G. Carrillo (2), J. Pomalaya 2 and R. Menacho (2)

(1) Research Institute for Technological Development, Huancayo, Junin, Peru, (2) Research and Management Group for Air Quality, National University of the Center of Peru, Calle Real 160, Huancayo, Junin, Peru. (doctorozono@yahoo.com / Fax: +51 – 64 – 219065 / Phone: +51 – 64 – 9325381)

Biomass burning in the tropics is an important source of pollution to the atmosphere with different and not well understood consequences to the climate and the atmospheric chemistry. Burning over Amazonia is related mainly to land use cover change. During the dry season (May to November) high amount of fires are produced in Amazonia. The resulting pollutants under some conditions could produce tropospheric ozone, which reaches long distances far from the sources, the same occurs with aerosols (particulate matter with diameter smaller than 10  $\mu\text{m}$ ) , both could be detected by ground and satellite measurements covering big areas of South America and this could implicate different changes in the climate of the region.

The work focused on the transboundary air pollution between Brazil and Peru during the last years. In this sense, this research determined the seasonal variations and the spatial coverage of this pollution in Peruvian region. We used satellite data and ground measurements to make a detailed evaluation of the transport and production of pollutants (tropospheric ozone and aerosols) related to biomass burning, in order to quantify the levels of pollution. Also, we evaluated the climatology of fires detected by satellites.

It is expected that the results will provide basic information to policy makers about the magnitude of the adverse effects in air quality of biomass burning in Amazonia of Peru. Also, we will propose the basis for the implementation of inter-institutional agreement of the National Program for Prevention of Forest Fires.