

Use of passive air samplers in South America: a balance between global and local sources of persistent organic pollutants (POPs)

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At present, persistent organic pollutants (POPs) are widely distributed, remain in the environment, bioaccumulate through the food chain and show toxic effects. In the effort to reduce these emissions, about 100 passive air samplers (PAS) will be installed to cover latitudinal gradients (from Ecuador to Antarctica) and longitudinal gradients (from the

west to the east coast), in urban, rural and remote areas of South America and Antarctica.

The project proposes the establishment of permanent regional air monitoring network of polycyclic aromatic hydrocarbons and other persistent organic pollutants such as chlorinated pesticides, polychlorinated biphenyls (PCBs) and polybrominated diphenyl ethers (PBDEs) by passive samplers and pine needles as bioindicators. The advantages offered include low cost of network installation and maintenance, in addition to the significant increase in spatial and temporal distribution. In this way, contributing to global studies that monitor the effectiveness of decisions established by the Stockholm Convention is expected.

In Peru, the PUCP already installed passive samplers at the *Estación Meteorológica Hipólito Unánue* (Hipólito Unánue Weather Station), *Estación Científica de la PUCP en Tambopata* (the PUCP Research Station in Tambopata) and the *Centro Piloto de Crianza de Sajino de la Universidad Nacional de la Amazonía Peruana* (Pilot Center of Sajino Breeding of the National University of the Peruvian Amazon.) Likewise, working on identifying representing sampling points transected in Lima and other regions is in process. Finally, as an activity derived from the project, the intercalibration between research laboratories for the analysis of these pollutants is being conducted.