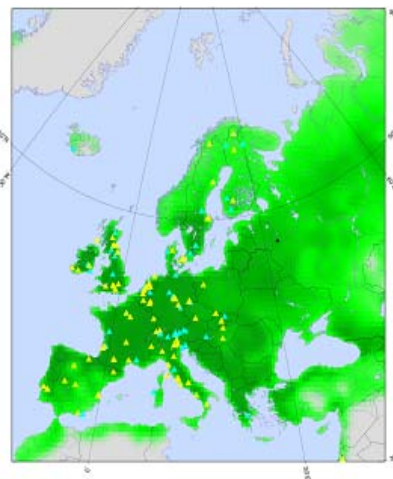


Laboratoire des Sciences du Climat et de l'Environnement/ ICOS

The LSCE is a mixed unit of research (UMR 1572) between the CNRS, the CEA and the University of Versailles Saint-Quentin (UVSQ), located at two sites (Saclay and Gif-sur-Yvette, France). With 250 staff including 150 permanent employees, the LSCE is part of the Institute Pierre Simon Laplace (IPSL).

Three research axis

- the study of the mechanisms of the natural variability of the climate on various scales of time and interactions between human activity, environment and climate,
- the study of the processes intervening in the cycle of key components such as carbon, gases for purpose of greenhouse and the aerosols which interact with the climate
- geochronology and analysis of geo markers, based on a pallet of techniques applied to the study last and present of the geosphere and of its relationships to the climate



The LSCE is associated with the Nobel Peace Prize of 2007. The former American vice-president Al Gore and the IPCC (Intergovernmental Panel on Climate Change), jointly obtained the Nobel Peace prize in 2007, for their efforts in the collection and dissemination of knowledge on the climatic changes caused by man and to have asked the bases for necessary measurements to guard against these changes. Numerous researchers at the LSCE took part either as principal authors or editors in the drafting of the last report of the IPCC.

ICOS

The ICOS Research Infrastructure was selected by the European Strategy Forum for Research Infrastructures ([ESFRI](#)) roadmap in October 2006 as one of the vital new European Research Infrastructures for the next 20 years. ICOS was initiated by successful developments of the research tools and capacity building at the European level necessary to quantify and understand the sources and sinks of greenhouse gases at regional and continental scales (see [CARBOEUROPE](#), [NITROEUROPE](#), and [CARBOOCEAN](#)).

ICOS contributes to the implementation of the Integrated Global Carbon Observation System ([IGCO](#)). At the same time, ICOS fulfils the monitoring obligations of Europe under the United Nations Framework Convention on Climate Change ([UNFCCC](#)).

Mission statement

- To provide the long-term observations required to understand the present state and predict future behavior of the global carbon cycle and greenhouse gas emissions
- To monitor and assess the effectiveness of carbon sequestration and/or greenhouse gases emission reduction activities on global atmospheric composition levels, including attribution of sources and sinks by region and sector

What we do and how

ICOS is a new research infrastructure created to quantify the greenhouse gas balance of Europe and adjacent regions. ICOS consists of a harmonized network of ecosystem long-term observation sites and a network of atmospheric greenhouse gas concentration sites. The networks will be coordinated through a set of central facilities, including atmospheric, ecosystem, and oceanic thematic centers, a central data center and an analytical lab.

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Implementation strategy

The implementation of ICOS will take place in two steps:

- During the Preparatory Phase starting in 2008 until 2011, the funding commitments will have been endorsed by the governments and mother institutions, the building of the central facilities will be initiated, and the project will be technically developed up to the level of a demonstration year of full operation, but with a reduced number of observational sites.
- During the follow-up Operational Phase from 2012 until 2031, after the full scale deployment of the network, it will be run in an operational mode, and greenhouse gas concentrations and fluxes will be determined on a routine basis.

European Partnerships

The ICOS preparatory phase includes 16 research laboratories and SME's from 12 EUROPEAN countries: CEA (France), MPG (Germany), UNITUS (Italy), UHEI-IUP (Germany), VUA (Netherlands), UHEL (Finland), UEDIN (United Kingdom), CNRS (France), ULUND (Sweden), RISEO (Denmark), SJ BERWIN (Belgium), UA (Belgium), CEAM (Spain), ISBE (Czech Republic), ETH Zurich (Switzerland), INRA (France).

For further information, please visit www.icos-infrastructure.eu

