Job opportunity to work on the GLOBAL METHANE BUDGET

Seeking a dynamic and communicative data expert to support the coordination and production of the Global Methane Budget

Context:

The Global Carbon Project (https://www.globalcarbonproject.org/) is a Global Research Project of Future Earth and a research partner of the World Climate Research Programme. It encourages the international scientific community to establish a common and mutually agreed knowledge base to support policy action aimed at slowing down and ultimately engage the reduction in greenhouse gases emissions needed to tackle climate change. Methane (CH_4), the second anthropogenic greenhouse gas after carbon dioxide, is a major player of the ongoing climate change.

Under the umbrella of the Global Carbon Project, a Global Methane Budget (GMB) has been regularly published under a living review updated since 2013 (Kirschke et al., 2013 ; Saunois et al., 2016 ; 2020 ; 2024). This budget gathers a unique ensemble of estimates of the different sources and sinks of CH_4, highlights consistency or discrepancies between approaches and studies, assesses the uncertainties at the global, regional and sectorial scales, and provides recommendations to the scientific community on remaining questions. These publications are the results of the collaboration of hundreds of researchers from 66 organizations in 15 countries, co-led by the *Laboratoire des Sciences du Climat et de l'Environnement* in France, near Paris.

Over the past decade, the understanding of, and the attention to CH_4 have grown. The scientific community has gained maturity on the description of the various methane sources and sinks and has increased its capacity to track their evolution over time. On the political side, methane has been integrated in the analyses and plans of governments, the Global Methane Pledge being a prominent example. Society's expectations have also grown, prompting governments to take more concrete actions against climate change. In this context, the GMB activity is standing at a turning point and is aiming at releasing a budget integrating all recent developments and data with a lower latency compared to the previous ones, and closer to the current expectation of the scientific community, of the society and of policy makers. This evolution requires to increase the human resources working on the project.

Job description:

The recruited candidate will support the coordination and production of the GMB coordinated by the core team and Pr Marielle Saunois. The candidate will make a major contribution to the commitment of the international community. He/she will help framing the contours of the next GMB, and help identifying the salient aspects to develop over the years.

The following tasks are expected:

- Help on the coordination of the international group (setting up meetings, gathering data, circulating protocols and information)
- Analyze the data for the production of the GMB
- Produce the files necessary for the dissemination of the data at the time of publication of the results
- Stimulate and follow submissions of contributing groups
- Contribute to the revision of the GMB paper (content and structure)

The position requires programming skills to analyze the ensemble of data (using existing codes and developing new ones), excellent capabilities of synthetizing results and writing skills. The working language is English.

The successful candidate will be hired for 12 months (renewable) and work in Saclay (20 km South of Paris), France, under the guidance of Pr Marielle Saunois and within the SATINV team at LSCE, which includes some thirty people dedicated to the modelling of greenhouse gases and precursors, through remote sensing applications, and top-down approaches (atmospheric inversion).

Education and Experience:

- Ms or PhD in Atmospheric Sciences, Applied Mathematics, Scientific Computing, or a related physical or applied science.

Knowledge, Skills and Abilities:

- A good knowledge of at least one of the following fields will be appreciated: atmospheric modelling, atmospheric physics and chemistry, data assimilation, biogeochemical cycles. CH_4 will be an asset.
- Computer skills and interest in programming is requested (Python, Shell)
- Organizational and communication skills
- Oral and writing communications in English. French will be appreciated but is not mandatory.

Location:

Laboratoire des Sciences du Climat et de l'Environnement, Orme des Merisiers, 91 191 Gif Sur Yvette

Salary and benefits: depending on curriculum.

The position is opened as soon as possible from June 2025.

Contact:

Please contact Dr. Marielle Saunois (marielle.saunois@lsce.ipsl.fr)