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Horizon2020@recherche.gouv.fr

**Partner search**

**Date (DD-MM-YY)**

* **(\*) Indicate numbers of relevant topics for Green Deal call:**

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| **LC-GD-7-1-2020-Restoring biodiversity and ecosystem services** |

* **Quick description of the project**

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| **(describe the objectives, activities, partners requested and their skills)** |

* **(\*) Do you intend to apply as ? :**

**Coordinator: No**

**Participant: Yes**

**(\*) Either Description of the expertise requested (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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| **Xxxxxxxxx**  **+ key words :** |

**Or Description of the expertise proposed (up to 1000 characters) - *specify which points of the "expected impact" of the call you are targeting***

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| * At [DRF/JACOB/ Genoscope](http://jacob.cea.fr/drf/ifrancoisjacob/english/Pages/Departments/Genoscope.aspx): **Monitoring the genetic diversity of microscopic ecosystems** on seas and lands at all scales, from species to strains, and from viruses to macroorganisms. **Functional assessment of organisms’activities in complex ecosystems**. Targets :   1/provide **testing at large scale of support actions to the EU commitment** to reduce emissions by 50-55% by 2030 and become climate-neutral by 2050 (European Green Deal), the EU Biodiversity Strategy and the EU Nature Directives, the Farm-to-Fork Strategy, the Climate Law, the Bioeconomy Strategy and Action Plan, the EU Covenant of Mayors, EU Adaptation Strategy (2013), the UN Decade on Ecosystem Restoration and the UN Sustainable Development Goals.  2/ **pilot and identify urgent, suitable innovative systems and methodologies for the ecological restoration of carbon sinks**, with a view to significantly reducing the carbon and environmental footprint of Europe whilst helping with the implementation of EU climate, energy, biodiversity, agricultural, forestry and fisheries policies;  *Main contact person: Patrick WINCKER*[**patrick.wincker@cea.fr**](mailto:patrick.wincker@cea.fr)   * At[DRF/ LSCE/Archives&Traceurs](https://www.lsce.ipsl.fr/en/Phocea/Vie_des_labos/Ast/ast_service.php?id_unit=50)**: soil science and 14C as a tool** to evaluate the **state of soil health** (assessment of soil carbon stock and long-term storage capacities), the **soil history** and to assess the **efficiency over time of restoration methods and/or sustainable agriculture**.   **14C as a tool to evaluate carbon transfer time from atmosphere to trophic level** (heterotrophic plant, badly known trophic network that includes insects and microorganisms) : **before and after restoration**  *Main contact person:* *Christine HATTÉ* [**christine.hatte@lsce.ipsl.fr**](mailto:christine.hatte@lsce.ipsl.fr)   * At[DRF/ LSCE/Archives&Traceurs](https://www.lsce.ipsl.fr/en/Phocea/Vie_des_labos/Ast/ast_service.php?id_unit=50)**:** Using **tropical and cold water corals to monitor at high resolution** (monthly, yearly, etc.) **past environments** (temperature, pH & Carbon cycle, local released pollutants like heavy metals, nutrients, micro- plastics) **over the last 5 centuries and beyond**. Study the **impact of these global change** (global warming, ocean acidification, human pressure) **on corals and their resilience to global changes** using **biogeochemical observations** (chemical elements, isotopes, growth parameters of corals, etc.).Main objectives of such expertise are consistent with:   - the Sustainable Development Goals 13 “Take urgent action to combat climate change and its impacts” and 14 “Conserve and sustainably use the oceans, seas and marine resources for sustainable development”, specifically target 14.3 “Minimize and address the impacts of ocean acidification, including through enhanced scientific cooperation at all levels”.  - with the European objectives that focus on the protection of the biodiversity (<https://biodiversity.europa.eu/>).  - many Australian, UK and USA labs are working on the same topics but only a few in Europe and further European projects or initiatives could better structure and organize such kind of research in Europe.  *Main contact person: Eric DOUVILLE* [**eric.douville@lsce.ipsl.fr**](mailto:eric.douville@lsce.ipsl.fr)   * At[DRF/ LSCE/Cycle&Transfert/MOSAIC](https://www.lsce.ipsl.fr/en/Phocea/Vie_des_labos/Ast/ast_groupe.php?id_groupe=55)**:** **Improve large scale vegetation models** to better represent **ecosystems adaptation to climate change** (plasticity of functional traits) and **impact of biodiversity richness on ecosystems services**.Targets:   1/**enhance natural carbon sinks** and **reduce greenhouse gas emissions**, **locally reverse the degradation of ecosystems**, **increase connectivity**, and i**mprove the delivery of a range of ecosystem service**s  2/ provide **testing at large scale of support actions to the EU comm**itment to reduce emissionsby 50-55% by 2030 and become climate-neutral by 2050  *Main contact person: Nicolas VIOVY* [**nicolas.viovy@lsce.ipsl.fr**](mailto:nicolas.viovy@lsce.ipsl.fr)   * At I2BC([DRF/JOLIOT/I2BC](https://www.i2bc.paris-saclay.fr/spip.php?rubrique36)), the “Biochemistry, Biophysics and Structural Biology**”** department is involved in the following activities: **Photosynthetic organism**; **Bioremediation**;   **Removal of toxic heavy metals from soil or polluted water**; **Monitoring (heavy metals +PFAS+herbicides)** via alterations of photosynthesis; **Plants- soil;** Alage aquatic freshwater + marine  Moss lichens : air; Chlorophyll fluorescence, **advanced spectroscopy**; **Antioxydant system (ROS EPR, enzymatic activities, biochemistry)**; **Photosynthetic apparatus/light reactions**  *Main contact person: Anja KRIEGER-LISZKAY* [**anja.krieger-liszkay@cea.fr**](mailto:anja.krieger-liszkay@cea.fr)  **+key words :** |

**Organisation information**

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| **Organisation and country:**  **The French Alternative Energies and Atomic Energy Commission (CEA), France** |
| **Type of organisation:**  **□ Enterprise □ SME ⌧ Academic ⌧ Research institute ⌧ Public Body □ Other: Association** |
| **Former participation in FP European projects?**  **⌧ Yes □ No** |
| **Web address:**  [**http://www.cea.fr/english**](http://www.cea.fr/english) |
| **Description of the organisation:**  The French Alternative Energies and Atomic Energy Commission (CEA) is a key player in research, development and innovation in four main areas: defense and security, low carbon energies (nuclear and renewable energies), technological research for industry, fundamental research in the physical sciences and life sciences. |

**(\*) Contact details**

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| **Contact person name** |  |
| **Telephone** |  |
| **E-mail** |  |
| **Country** |  |

**(\*) –Mandatory**