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## Partner search

Date (21-06-20)

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

LC-GD-7-1-2020

- Quick description of the project

(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

XXXXXXXXXX

+ 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

**General Competences description:** Pleiade is an interdisciplinary research team dedicated to understanding the diversity and functions of organisms in ecosystems. A strong focus of the team is modeling the functional role of microbial communities composed of thousands of distinct species and strains, in natural and in biotechnological conditions. **We develop and apply mixed computational and biological methods to model metabolism**, decipher interactions within microbiomes or controlled communities of microorganisms, and design reduced synthetic consortia based on metagenomics data. Pleiade is a joint project-team of Inria, INRAE, and CNRS **composed of computer scientists, biologists, and mathematicians.**

**More information here:** <https://team.inria.fr/pleiade/>

**Specific contribution to the call : 7 Restoring biodiversity and ecosystem services**

Natural ecosystems are shaped by the interactions occurring within the wide diversity of microorganisms living in the environment. Evaluating these interactions by molecular analysis of environmental samples is a current best practice in ecosystem monitoring but scaling up downstream functional models is a challenge due to the number of organisms and increasing complexity of their interactions. Our methods enable the metabolic modelling of large communities, and the identification of key members while addressing the scaling-up challenge brought by metagenomics.

Phrases of the call in our scope:

- "It should show how restoration activities enable a shift of social and behavioural patterns towards increased benefits for biodiversity"  
→ Our methods can monitor the changes at the scale of metabolism by building functional models of the microbial diversity in the environment.



**Targeted impact :** “  
 increased restoration through uptake of public-private partnerships and (voluntary) market-based incentives for business and individuals within restoration initiatives, including as the result of trans-disciplinary research and stakeholder engagement to help identify co-funding for long-term maintenance and buy-in from the private sector;

**+key words :** bioinformatics, systems biology, microbiome, functions.

**Organisation information**

**Organisation and country:** Inria – Institut national de recherche en informatique et automatique. France

**Type of organisation:**  
 Enterprise  SME  Academic  Research institute  Public Body  Other: Association

**Former participation in FP European projects?**  
 Yes  No

**Web address:** www.inria.fr

**Description of the organisation:**  
 Inria is the French national research institute for digital science and technology. World-class research, technological innovation and entrepreneurial risk are its DNA. In 200 project teams, most of which are shared with major research universities, more than 3,500 researchers and engineers explore new paths, often in an interdisciplinary manner and in collaboration with industrial partners to meet ambitious challenges. As a technological institute, Inria supports the diversity of innovation pathways: from open source software publishing to the creation of technological startups (Deeptech).

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**(\*) –Mandatory**