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FRANCE 2030

RESEARCH PROGRAM

NATURE BASED SOLUTIONS

INNOVATING WITH NATURE FOR POSITIVE IMPACTS ON BIODIVERSITY, SOCIETY AND THE ECONOMY

Journées Magellan 2025, Living Lab Magellan, Guyane | © Isabella Lamos

Nature-based Solutions

Climate change and the decline of biodiversity are driving rapid transformations in socio-ecosystems, which are becoming increasingly difficult to adapt to. Faced with these challenges, our societies are being compelled to reinvent themselves. The search for solutions capable of integrating the dynamics of socio-ecological systems and addressing major societal challenges has become a priority.

In this context, Nature-based Solutions (NbS) have emerged over the past decade as integrated and innovative approaches. **They draw on ecosystems—protecting, restoring, or sustainably managing them—in order to address various societal challenges** (such as adaptation to climate change, natural risk reduction, water management, food security, and human health). These actions simultaneously generate **multiple environmental, social, economic, and biodiversity co-benefits.**

Grounded in the natural functioning of ecosystems, NbS can complement, or even replace, more conventional engineering solutions, often at **lower costs in the medium and long term**. As a result, they are attracting growing interest from numerous stakeholders, particularly local and regional authorities and certain economic sectors.

A French national research program on Nature-based Solutions

The effectiveness of Nature-based Solutions in addressing current environmental and societal challenges has highlighted the need to structure a dedicated scientific community, capable of producing high-level research and facilitating its uptake by all stakeholders, thereby fostering informed decision-making based on robust scientific data and proven results. It is with this aim that the national research program on Nature-based Solutions (SOLU-BIOD) was launched.

Co-led by CNRS and INRAE, the program seeks to promote scientific approaches that support the design, implementation, and evaluation of NbS. It also aims to foster the emergence of a new economic sector with strong social and environmental benefits.

The French national research program is funded under the France 2030 investment plan to the tune of €44.2 million over a nine-year period (2023-2032). It is carried out in close collaboration with the public research community and a wide range of societal stakeholders.

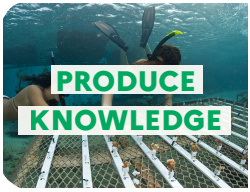
Targeted environments

The program's actions

The SOLU-BIOD program develops innovative research on NbS through several strategic areas: the production of new knowledge, the structuring and coordination of the scientific community in connection with local and regional stakeholders, the rigorous evaluation of the effectiveness of NbS through a network of living labs deployed across the country, as well as the strengthening of academic and professional training.

The work produced by the community aims to better understand the impacts of NbS, to assess their effectiveness and resilience, to analyze the conditions for their deployment at small, medium, and large scales in varied territorial and institutional contexts, and to anticipate their evolution in the face of global change through forward-looking approaches.

The program aims to inform decision-making through evidence-based data, while supporting the ongoing structuring of Nature-based Solutions. These will progressively establish themselves as a major field of research and as a key component of climate change adaptation strategies and the ecological transition in France.

Challenges of the program	Objectives	Means of action
	Build up the capacity of the research community Foster and communicate within the community	**Living labs** **EQUIP** *Mapping*
	Take into account the vision of genetic and functional diversity in NbS Identify social processes Evaluate the performance of NbS Anticipate plausible scenarios	**Knowledge hubs** **Crescendo** *Projets vers une intégration systémique des SfN*
	Facilitate access to scientific information Promote university and professional training	**CHAIRS** **REACH** **E_SfN**

Governance

- **Program Management Team** CNRS - INRAE
- **Pilots Committee** CNRS - INRAE
- **Institutional Committee**
- **International Scientific Committee**
- **Stakeholders Committee**
- **Thematic Expert Groups**

The partnership ecosystem

Program leads

cnrs INRAE

Partners

Partners involved in shaping the program

Ifremer IRD Institut de Recherche pour le Développement FRANCE Muséum National d'Histoire Naturelle

Aix*Marseille université Socialement engagée Université de Lyon Sorbonne Université UGA Université Grenoble Alpes Université de Montpellier

Actors in society

Les Agences de l'Eau L'Institut Paris Region ARB Agence Régionale de la Biodiversité CDC Biodiversité Conservatoire du littoral Les Eco Maires

egis epe entreprises pour l'environnement itsap Institut de l'abeille LPO Agir pour la biodiversité Métropole Grand Lyon Montpellier

OFB Office Français de la Biodiversité Parcs naturels régionaux de France UICN Comité Français IRE UPGE Union Professionnelle du Génie Ecologique

Stay in touch

contact@pepr-solubiod.fr

www.pepr-solubiod.fr

Programme de recherche SOLU-BIOD - Solutions fondées sur la Nature

Les parcs d'aquaculture de grossissement d'holothuries géré par la Fédération des rahui à Teva I © Guillaume Marchand