



École Pratique
des Hautes Études

PSL 

An International Think Tank for a Sustainable Pacific Ocean

Université PSL, a leading Paris-based university, wishes to launch a think tank for the Pacific in French Polynesia, in order to study the effects of global warming, particularly devastating for both corals and local populations.

The Pacific facing climate change

Climate change leads to an erosion of biodiversity on a worldwide scale.

The Pacific Region is particularly vulnerable to these changes.

Scientists are facing **4** main issues :

Coral mortality is increasing each year



Threat to **marine biodiversity**



Complexity of **converting** fishermen to agriculture



Complexity of transferring scientific knowledge with regard to the **traditions** of island societies



1/4

marine species live in coral reefs

14%

of corals have died worldwide

50%

of corals died in French Polynesia in 2019*

More than ever, we have to question and rebuild the relationship between man and nature in order to provide fast-acting and appropriate solutions.

Valeriano Parravicini, Coordinator of Sustainable Pacific Ocean (SPO)



"The Anthropocene can be described as the era in which mankind has dominant influence on the planet and its ecological and biogeochemical processes. universit  PSL is committed to the research of solutions to the climate change."

Director of studies @EPHE - PSL ; Strategic Program Manager for Functional Ecology & Ecosystem Services @Centre of Island Research and Environmental Observatory (CRIOBE)

Creation of an International Think Tank for the Pacific

Our ambition

Driving a new vision for the development of the Pacific of tomorrow

Our goal

To be an accelerator of fast-acting and appropriate solutions to the climate issues faced by Pacific populations

Our approach

- Promoting a **dialogue between disciplines** : ecology, biodiversity, anthropology, ecotoxicology, climatology
- Crossing viewpoints by bringing together an **international scientific community**
- Drawing **local actors** closer to the latest scientific advances

Our means

- Bringing value to the existing **research work**
- Mobilising **collected data** at the global level

« In Polynesia, resilience in the face of climate change requires a dialogue between culture, science and collective commitment. »

- Interview by Doriane Blottière,
Compteurs Biodiversité Outre-Mer, published February 28, 2024

Tamatoa Bambridge,
Research director in anthropology,
CRIOBE-EPHE-PSL

Why in the Pacific ?

Oceans are the guardians of today's biodiversity and regulators of the global climate. The **Pacific Ocean shelters the largest coral reefs on the planet.**

The urgency to face climate threats in the Pacific is the reason why PSL is proposing itself as a driving force of innovation to imagine the vision of the Pacific of tomorrow.

PSL Université Paris aims to become a hub for scientists in the Pacific, an area where many leading universities are already located.

The think tank will be housed at the **CRIOBE.**

The CRIOBE, under the authority of the EPHE - PSL, provides infrastructure (work spaces, documentation spaces, accommodation and catering spaces) in Mo'orea, French Polynesia. **The CRIOBE has been conducting studies on coral reefs for 50 years.** The researchers will carry out field studies and local site visits.



The concept

Bringing together a community of international researchers around a societal issue to provide practical actions :

Organisation by **study groups** (SG) and topics

Meetings of researchers in the Pacific and fields studies

Organising **short stay** for internationally renowned researchers

Recruiting one post-doctoral fellow per SG who will have a local integration

Collecting, sharing, analysis and use of existing **data** to respond to societal issues



Dissemination, accessibility and **popularization** of scientific results among local population (exhibitions, workshops, visits, books)

Collaboration with local actors (associations, schools, local authorities etc.)

Research-action axes

Research 1 - The Vulnerability of Coastal Fisheries Due to Coral Loss in the Pacific Ocean

This research group combine ecology, geography, and oceanographic modeling to quantify the vulnerability of local fisheries and propose solutions to maintain high productivity in the face of ongoing climate change.

Renato Morais (Scientific lead)

Post-doctoral research fellow in environmental sciences, CRIIBE - EPHE - PSL



Jodie Schlaefer (International pair)

Post-doctoral research fellow, James Cook University, Queensland; Researcher, CSIRO (Commonwealth Scientific and Industrial Research Organisation)



Research 2 - Supporting the Development and Implementation of Rāhui or Managed Marine Resource Areas in French Polynesia, Integrating Climate and Social Issues

This research group will foster dialogue between modern science and traditional knowledge to implement Polynesian resource management within Marine Protected Areas - the Rāhui.

Tamatoa Bambridge (Scientific lead)

Research Director in anthropology, CRIIBE - EPHE - PSL



Alexander Mawyer (International pair)

Anthropologist, Associate Professor, University of Hawaii; Director of CPIS (Center for Pacific Islands Studies)



Jean Wencélius (Scientific co-lead)

Environmental Anthropologist, ethnobiologist, CRIIBE - CNRS



Research 3 - Deep Coral Reefs: Are They Refuges for Corals in the Face of Climate Change?

This research group will focus on mesophotic coral ecosystems in order to determine their potential role as a refuge in face of ever-increasing climatic disturbances.

Laetitia Hédouin (Scientific lead)

Research fellow,
CRIOBE - EPHE -PSL;
Scientific Co-Director of Deeplife
(oceanographic exploration programme)



Vianney Denis (International pair)

Associate professor,
National Taiwan
University



Research 4 - Sea Level Rise in French Polynesia

This research group will collect all available data in French Polynesia to study the interaction between corals and sea level rise, in order to enhance our ability to predict the risks associated with sea level rise

Edouard Bard (Scientific lead)

Professor, Collège de France;
Chairholder of the "Climate and Ocean
Evolution"
Member of Academy Science



Nadine Hallmann (International pair)

Researcher, European Center Research
and Teaching in Geosciences (CEREGE);
Assistant Director of the ECORD



Research 5 - Coral Adaptation in the Pacific

This research group will collect all available samples from paleo-corals to understand how corals responded to past climatic oscillations and varying environmental variables (temperature, salinity, pH) in order to estimate the eco-evolutionary response of corals to ongoing global change.

Régis Ferrière (Scientific lead)

Professor, Biology;
Institut - ENS -PSL;
Director of iGLOBES
(Interdisciplinary Global Environmental Studies)



Diane Thompson (International pair)

Assistant Professor, Geosciences,
University of Arizona;
Director of Marine Research Biosphere 2



Located in the heart of Paris, PSL Université inspires dialogue among and between all areas of knowledge, innovation, and creativity. Ranked among the top 50 universities in the world, it draws directly from current research to train researchers, entrepreneurs, artists, and managers who are aware of their individual and collective social responsibility.

As a leading International University, PSL's ambition is demonstrated through its commitment to the future of our society, particularly to research and sustainable development.

Key figures

- **#33** in Shanghai Ranking 2024
- **1st** Young Universities Rankings 2022 and Millennial Universities (THE) since 2018
- **2 900** researchers
- **17 000** students
- **140** laboratories
- **10** incubators



Contribute to creating an innovative model of research-action



Respond to the urgency of climate threats and their impact on vulnerable populations



Allow France to play a key role in developing the vision for the Pacific of tomorrow

Several levels of funding



Pacific Circle

=

Fund 2 study groups

Per year

€334,000

Over 3 years

€1 million



Polynesia Circle

=

Fund 1 study group

€167,000

€500,000



Business Club

=

Cross-functional participation in the project

€84,000

€250,000

€17,000

€50,000



Become a partner and gain access to the ecosystem of PSL Université

- Gain direct access to top-level scientists
- Associate your image with an internationally renowned university
- Participate in the major events of the project and in the life of PSL

Contact

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The PSL Foundation

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