### Scientific Research in Antarctica: why, how?

Scientific symposium during the 43rd Antarctic Treaty Consultative Meeting

Saturday June 19, 2021, 9:15 am-5pm.

Palais de la Mutualité, 24 rue Saint Victor, Paris Ve (Métro Maubert-Mutualité)

Online broadcast (connection link to come)

In French with simultaneous translation in English

From 14 to 24 June 2021, the 43rd Antarctic Treaty Consultative Meeting will take place in Paris, with France holding the presidency. On the occasion of this international event, various actors working in Antarctica have decided to organise an event for the general public: the Centre national de la recherche scientifique (CNRS), the Terres australes et antarctiques françaises (TAAF), the Office français de la biodiversité (OFB), the Institut polaire français Paul-Émile-Victor (IPEV), and the Muséum national d'Histoire naturelle (MNHN). All are active in the Antarctic and sub-Antarctic areas. They will highlight their scientific research work and describe the conditions of access, work and life in this extreme environment.

### Program

#### 9h15: Introduction

Guillaume Lecointre, Professor MNHN, Researcher in zoology, Scientific advisor to the president of the MNHN.

Walter Mác Cormack, Director of the Argentine Antarctic Institute.

## 9h30 – 10h45: Antarctica, an observatory continent for a diversity of scientific disciplines

Antarctica and the sub-Antarctic are regions of the globe that seem extreme in terms of the conditions that prevail there, and rich in lessons for science. Beyond the advancement of scientific knowledge, why should these regions be monitored over the long term? We talk about observatories: which scientific disciplines need such "observatories" and why? What do these 'observatories' witness? Research and exploration have been going on there for a long time: what heritage do they leave us, and how can it be preserved, or even kept alive?

Moderator: Mireille Raccurt, Doctor in Biology, retired from CNRS and ex-President of the Comité national français des recherches Arctiques et Antarctiques.

• Astronomy: Isabelle Vauglin, Doctor of Astrophysics, Lyon Astrophysical Research Center, Lyon Observatory.

- HSS/ ethnology: Frédérique Chlous, Professor of Anthropology, Head of department Human & environment, MNHN.
- Geopolitical and legal aspects of regulations: Anne Choquet, lecturer and researcher in law at Brest Business School, associate researcher at UMR Aménagement des Usages des Ressources et des Espaces marins et littoraux (AMURE).
- Geophysics: Dimitri Zigone, Head of the French seismological observatories in TAAF, teacher researcher in École et Observatoire des Sciences de la Terre de Strasbourg (EOST).
- Fishing used by scientists: Clara Peron, Lecturer at the MNHN, Biologie des organismes et écosystèmes aquatiques (BOREA).

#### 11h – 12h15: Humans in Antarctica

Getting to Antarctica or the sub-Antarctic domain is a human adventure. Who goes? What age groups? According to what criteria? How are the selections made? How is society transported there? Who enforces the law? How do the participants cope with wintering? Before the web era? After the web era? What impact does the Antarctic society have on the media? Management, technical and scientific activities are shown in schools, films, documentaries, comics, books, blogs, artworks, educational projects... How are the projects selected? Just as there are veterans' associations, there are also associations of Antarctic veterans: what brings them together? Why promote Antarctica? What is the place of Antarctica in culture: the last frontier?

Moderator: Denis Duclos, Director of International and European Affairs, Director of the French overseas Departments' Affairs, Muséum national d'Histoire naturelle

- Administrative supervision: Alain Quivoron, Station Leader (Wintering), Antarctic base Dumont-d'Urville.
- Promote Antarctica l'APECS: Coline Marciau, PhD candidate in penguin ecology.
- Wintering at Concordia: Vitale Stanzione, Consiglio Nazionale delle Ricerche (CNR), expeditions to Antarctica as part of the Programma Nazionale Ricerrche in Antartide (PNRA).
- Distribution to all audiences: Aude Sonneville, Director of the communication department of the French Polar Institute (IPEV).
- Extreme medicine and recruitment: Claude Bachelard, Ex-TAAF and IPEV Chief medical officer, retired.

#### 14h – 15h15: Climate change and anthropogenic pressures in Antarctica

How do glaciology, oceanology and atmospheric sciences inform us about anthropogenic pressures on the Antarctic continent and ocean and climate change? Is there a distinction between global disturbances (warming, ocean acidification, pollution) and local disturbances? What is the pressure of tourism and its impacts? What can be done to limit these impacts, and to limit the local pollution caused by human presence? With regard to scientific bases, how is waste managed? Is the notion of an eco-responsible base becoming more widespread internationally?

Moderator: Sylvie Dufour, Research Director at CNRS, MNHN, Ocean Institute - Alliance Sorbonne University.

- Glaciology: Vincent Favier, Assistant Physicist, Lecturer, at the Institut des Géosciences de l'Environnement (IGE).
- Oceanology: Marie-Noëlle Houssais, Senior scientist at CNRS, Oceanographer at Laboratoire d'Océanographie et du Climat (LOCEAN).
- Atmospheric Sciences: Christophe Genthon, CNRS research Director, Dynamic Meteorology Laboratory, specialized in polar meteorology.
- Tourism, pollution, how to limit the impacts: Guillaume Cottarel, Legal advisor Antarctic et european affairs officer, TAAF.

• Eco-responsible bases and waste management: Eric Morbo, Head of the technical department, TAAF.

# 15h30 – 16h45: Fragility of Antarctic ecosystems, including terrestrial and marine / fishing included

How are Antarctic and sub-Antarctic flora and fauna original? What research is being carried out on this biodiversity? How are Antarctic and sub-Antarctic ecosystems, whether terrestrial or marine, fragile? What protection is there? What is the fishing pressure in the southern seas? What means are available to enforce the law?

Moderator: Phénia Marras, Marine Adviser and International Cooperation, French Biodiversity Agency (OFB).

- Benthic fauna: Elie Poulin, Professor at the University of Chile in Santiago.
- Ice-Polynyas: Sara Labrousse, postdoctoral Researcher in polar ecology, Sorbonne Université, LOCEAN.
- Subantarctic terrestrial environment: Marc Lebouvier, Research Engineer, CNRS.
- Predators: Yan Ropert-Coudert, Research Director at the CNRS, member of the French delegation to the RCTA, President of Comité national français des recherches Arctiques et Antarctiques (CNFRA).
- Antarctic marine biodiversity: Philippe Koubbi, Professor in Marine ecology in Sorbonne University, Invited Researcher in the Institut français de recherche pour l'exploitation de la mer (IFREMER).

#### 16H45 – 17H : Conclusions

Pierre Dubreuil, Director General of Office français de la biodiversité.

Guillaume Lecointre, Professor MNHN, researcher in zoology, Scientific advisor to the president of the MNHN.

To register or request additional information, Please contact Florian Guignandon

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