

Biodiversities in OHM

An introduction

Alejandro Salazar Burrows, Damien Davy, Armelle Decaulne, Pascal-Jean Lopez

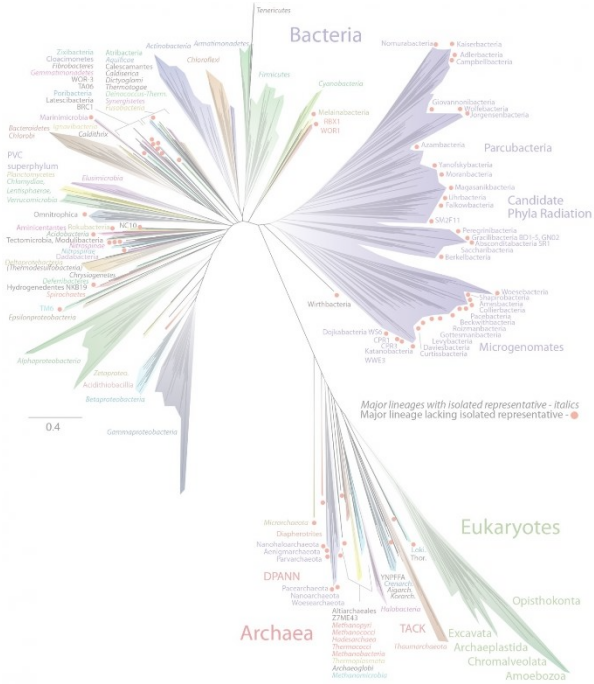
Biodiversity: origin, semantics, frameworks and tools

➤ The term 'biodiversity', a contraction of the phrase "biological diversity," was coined in 1985 by Dr Walter G. Rosen.

The Convention on Biological Diversity (CBD) (Rio de Janeiro, en 1992) is the international legal instrument for "the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources" that has been ratified by 196 nations (France: ratify in 1994).

Article 2. Use of Terms: "*Biological diversity*" means the **variability among living organisms** from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity **within species, between species and of ecosystems**.

The conservation of biodiversity is a common concern of humankind. The Convention on Biological Diversity covers biodiversity at all levels: ecosystems, species and genetic resources.



Total bacteria Earth :	1.2x10 ³⁰
Depp ocean subsurface:	4x10 ²⁹
Depp continental subsurface:	3x10 ²⁹
Soil:	3x10 ²⁹
Open ocean:	1x10 ²⁹
Groundwater:	5x10 ²⁷
Phyllosphere:	2x10 ²⁶
Termites:	6x10 ²³
Total human:	4x10 ²³
Atmosphere:	2x10 ²³

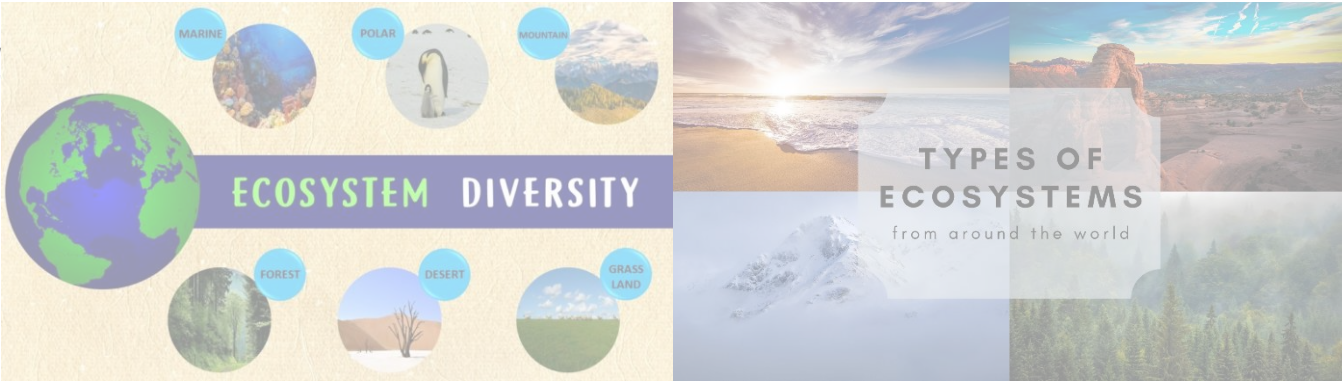


- **28 Nov – 4 Dec. 1994: The First Conference of the Parties (BIOCOP1)**
- 2011-2020: UN Decade on Biodiversity (2021-2030: UN Decade on Ecosystem Restoration)
- **7-19 December 2022 : UN Biodiversity Conference (COP 15)**

What took place at COP 15:

- Adoption of an equitable and comprehensive framework matched by the resources needed for implementation
- Clear targets to address overexploitation, pollution, fragmentation and unsustainable agricultural practices
- A plan that safeguards the rights of indigenous peoples and recognizes their contributions as stewards of nature
- Finance for biodiversity and alignment of financial flows with nature to drive finances toward sustainable investments and away from environmentally harmful ones

- 22 May 2023: International Day for Biological Diversity
- **COP16 on Biodiversity, planned in 2024**



➤ <https://environment.ec.europa.eu/strategy/biodiversity-strategy-2030>

PAGE CONTENTS

Objectives

Actions

Implementation

Timeline

Policy areas

Related strategies

Documents

Factsheets

Media

Objectives

The biodiversity strategy aims to put Europe's biodiversity on the path to recovery by 2030 for the benefit of people, climate and the planet.

In the post-COVID-19 context, the strategy aims to build our societies' resilience to future threats such as

- the impacts of climate change
- forest fires
- food insecurity
- disease outbreaks - including by protecting wildlife and fighting illegal wildlife trade

Actions

The strategy contains specific commitments and actions to be delivered by 2030.

Establishing a larger EU-wide network of protected areas on land and at sea

The EU will enlarge [existing Natura 2000 areas](#), with strict protection for areas of very high biodiversity and climate value.

Launching an EU nature restoration plan

Through concrete commitments and actions, the plan is for EU countries to put in place effective restoration measures to restore degraded ecosystems, in particular those with the most potential to

<https://biodiversite.gouv.fr/>

Biodiversity is the living fabric of our planet. It covers all natural environments and life forms (plants, animals, fungi, bacteria, etc.) and their interactions.

It comprises three interdependent levels:

- the **diversity of living environments on all scales**: from oceans, meadows and forests to the contents of cells (think of the parasites that can live there), from the pond at the bottom of your garden to the green spaces in the city;
- the **diversity of species** (including humans) living in these environments;
- the **genetic diversity** of individuals within each species: in other words, we're all different!



Stratégie nationale biodiversité 2030

Partager

Tweeter

Publier

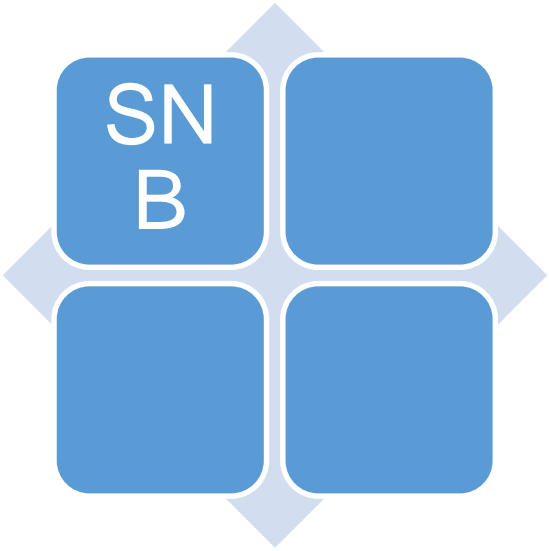
Imprimer

Le Mardi 17 janvier 2023

The National Biodiversity Strategy 2030 (SNB) reflects France's commitment to the Convention on Biological Diversity.

It covers the years 2022 to 2030, and follows on from the first two strategies, which covered the periods 2004-2010 and 2011-2020 respectively.

Its aim is to reduce pressures on biodiversity, protect and restore ecosystems, and bring about far-reaching changes to reverse the decline in biodiversity.



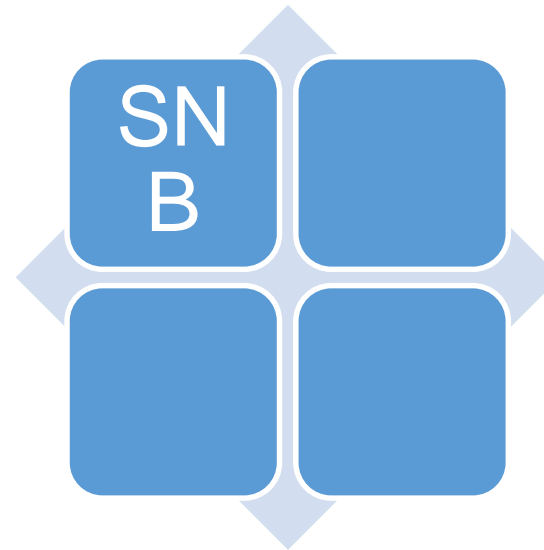
Stratégie nationale biodiversité 2030

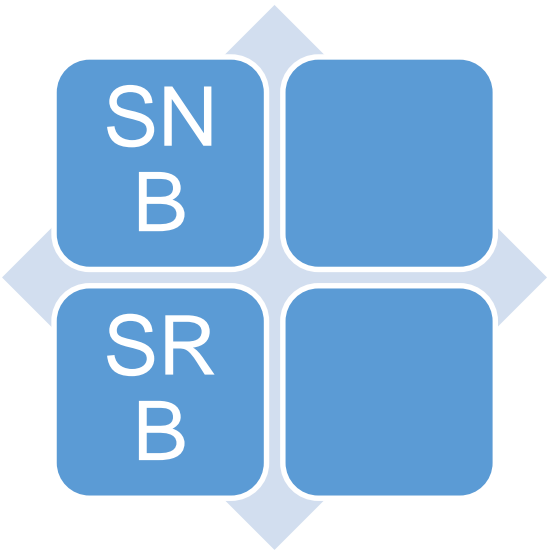
[Partager](#) [Tweeter](#) [inPublier](#) [Imprimer](#)

Le Mardi 17 janvier 2023

The first three priorities are to:

- protecting and restoring nature, ecosystems and species, combating invasive alien species, deploying protected areas covering 30% of our territory, including 10% with strong protection ;
- use natural resources and ecosystem services sustainably and equitably: support the ecological transition of human activities to reduce pollution and the artificialization of land, promote nature-based solutions, develop environmentally-friendly production and consumption methods;
- raise awareness, train and mobilize society as a whole: citizens, especially young people, businesses and the public sector.



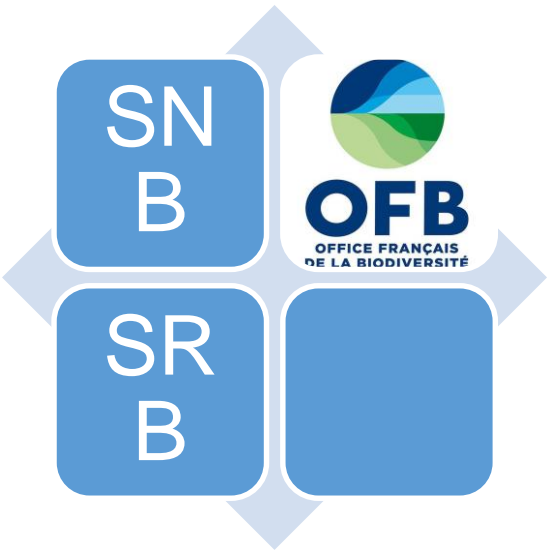


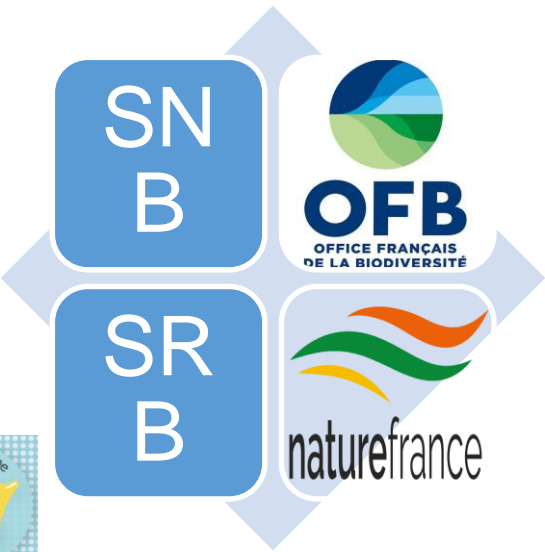
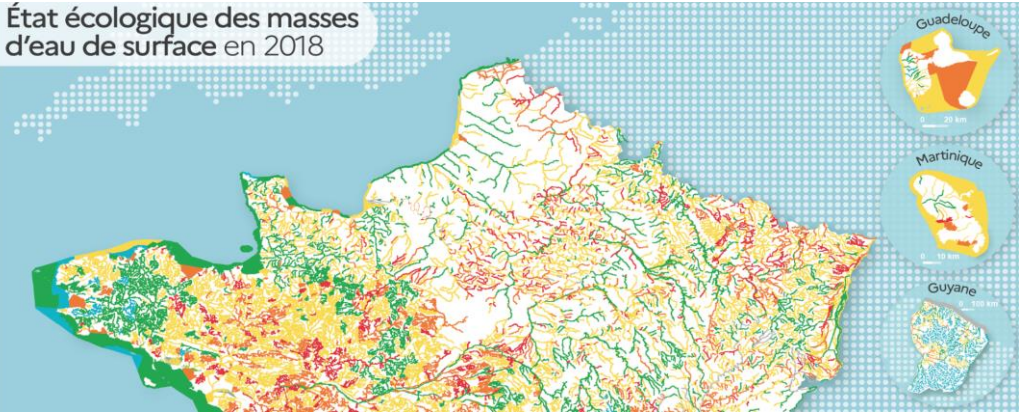
The law for the reconquest of biodiversity, nature and landscapes, (law no. 2016-1087 of August 08, 2016 - art. L110-3), has entrusted the regions with the role of biodiversity leader and the responsibility of drawing up regional strategies for biodiversity (SRB) taking into account the national strategy for biodiversity.

It also stipulates that regional biodiversity agencies are to support the development of these strategies and monitor their implementation.

The OFB is responsible for 5 complementary missions:

- environmental and wildlife health policing
- knowledge, research and expertise on species, environments and their uses
- support for the implementation of public policies
- management and support for managers of natural areas
- support for stakeholders and social mobilization





MILIEUX

COUVERTURE GÉOGRAPHIQUE

PRESSION

POLITIQUES

TYPE D'INDICATEUR

MOTS CLÉS

[Filtrer](#) [Tous les indicateurs](#)

6
taxons
sur la période 2005-2015

Diversité spécifique des vers de terre
18 mai 2016 | **Métropole**
On trouve en moyenne 6 grand types de vers de terre dans les sols de métropole.



[voir l'indicateur](#)

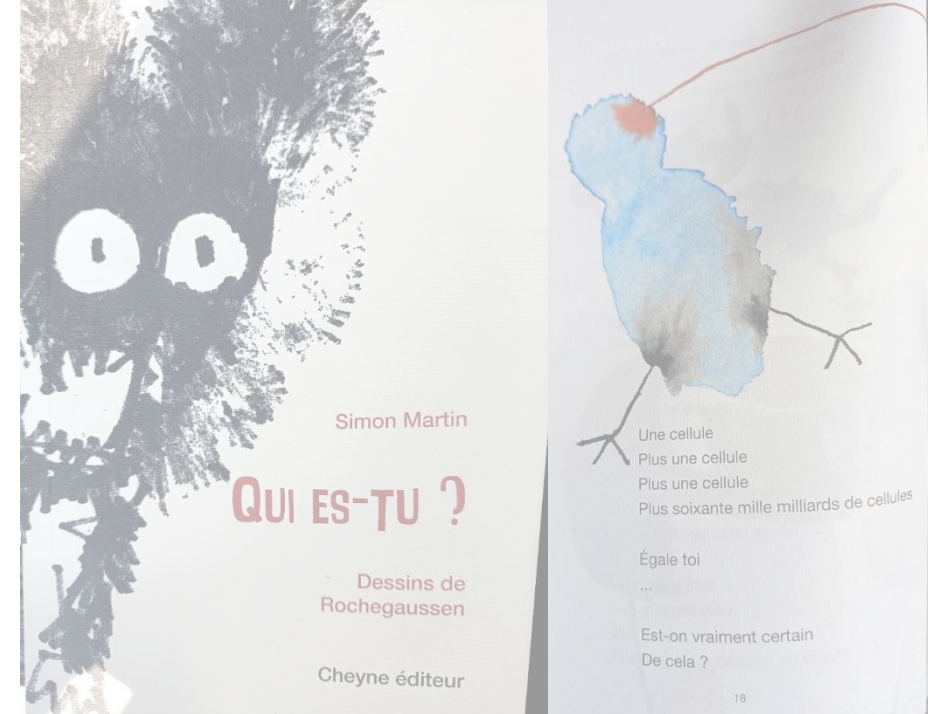


What are the biodiversity indicators and valuation used by OHM/OHMi?

Should we set up some comparative approaches within our OHM/OHMi?

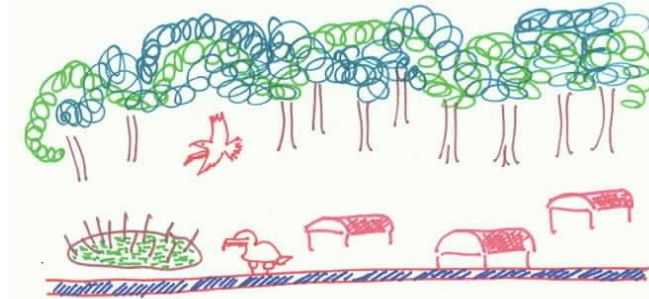
How to perform reliable assessment and comparison of biodiversity in space and time?

Are biodiversity perceptions and attitudes context dependent?



Perceptions of biodiversity and territory in OHM (1)

- *Different points of view, different perceptions: biodiversity as a social and cultural construction*
- *Questioning ways of being in the World, of composing Worlds (cf Descola-2005's 4 Ontologies; Viveiros de Castro's Perspectivism).*
- *OHM enable to question these proposals locally and to show the importance of the dynamics and historicals underway*
- *Biodiversity or biodiversities (plurivers?): indigenous peoples, activists, citizens, children, etc.*



Urubus word by Wayãpi (from Grenand 1989)

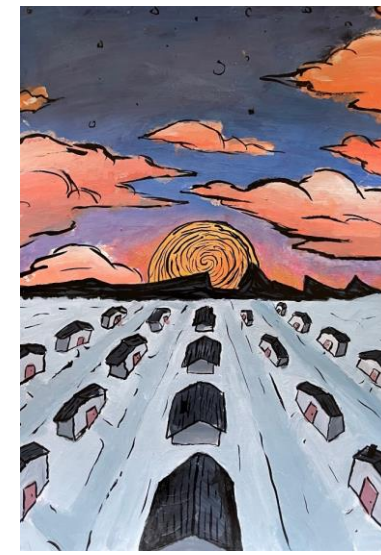
Perceptions of biodiversity and territory in OHM (2)

- ***Biodiversity and schoolchildren - example of EVOLUM: perception of the mangrove by schoolchildren in Saint-Georges and Guadeloupe: between sensitive reality and learned biodiversity***



Perceptions of biodiversity and territory in OHM (2)

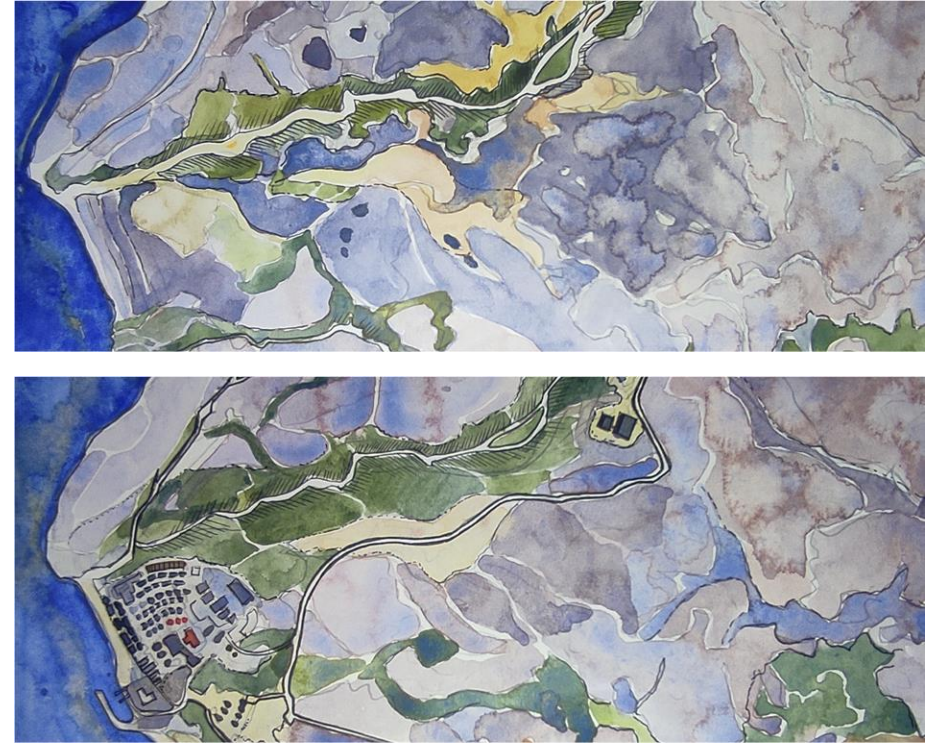
- ***Biodiversity and pupils - example of EVOLUM: perception of the mangrove by schoolchildren in Saint-Georges and Guadeloupe: between sensitive reality and learned biodiversity***
- ***Biodiversity seen through Montreal pupils drawing 'the North'***



56% Forest	40% Houses
54% Snow	13% Fishing
40% Water	1% Hunting
35% Mountains	1% Forest cutting
15% Ice	1% Mining

Perceptions of biodiversity and territory in OHM (2)

- *Biodiversity and pupils - example of EVOLUM: perception of the mangrove by schoolchildren in Saint-Georges and Guadeloupe: between sensitive reality and learned biodiversity*
- *Biodiversity seen through Montreal pupils drawing 'the North'*
- *Sedentary human presence seen as destructive to nature (village, river, fishes in Umiujaq, Nunavik)*



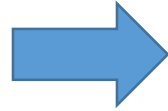
Perceptions of biodiversity and territory in OHM (2)

- *Biodiversity and pupils - example of EVOLUM: perception of the mangrove by schoolchildren in Saint-Georges and Guadeloupe: between sensitive reality and learned biodiversity*
- *Biodiversity seen through Montreal pupils drawing 'the North'*
- *Sedentary human presence seen as destructive to nature (village, river, fishes in Umiujaq, Nunavik)*
- *Territory, environment, oecumene (locality), way of life (mode d'habiter): sources of different perceptions and feelings*

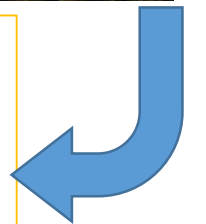
Studying biodiversity knowledge in OHM?

Context

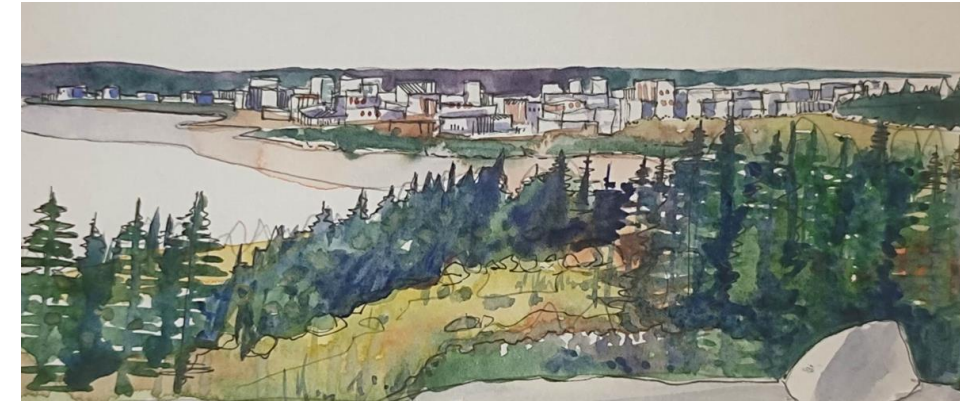
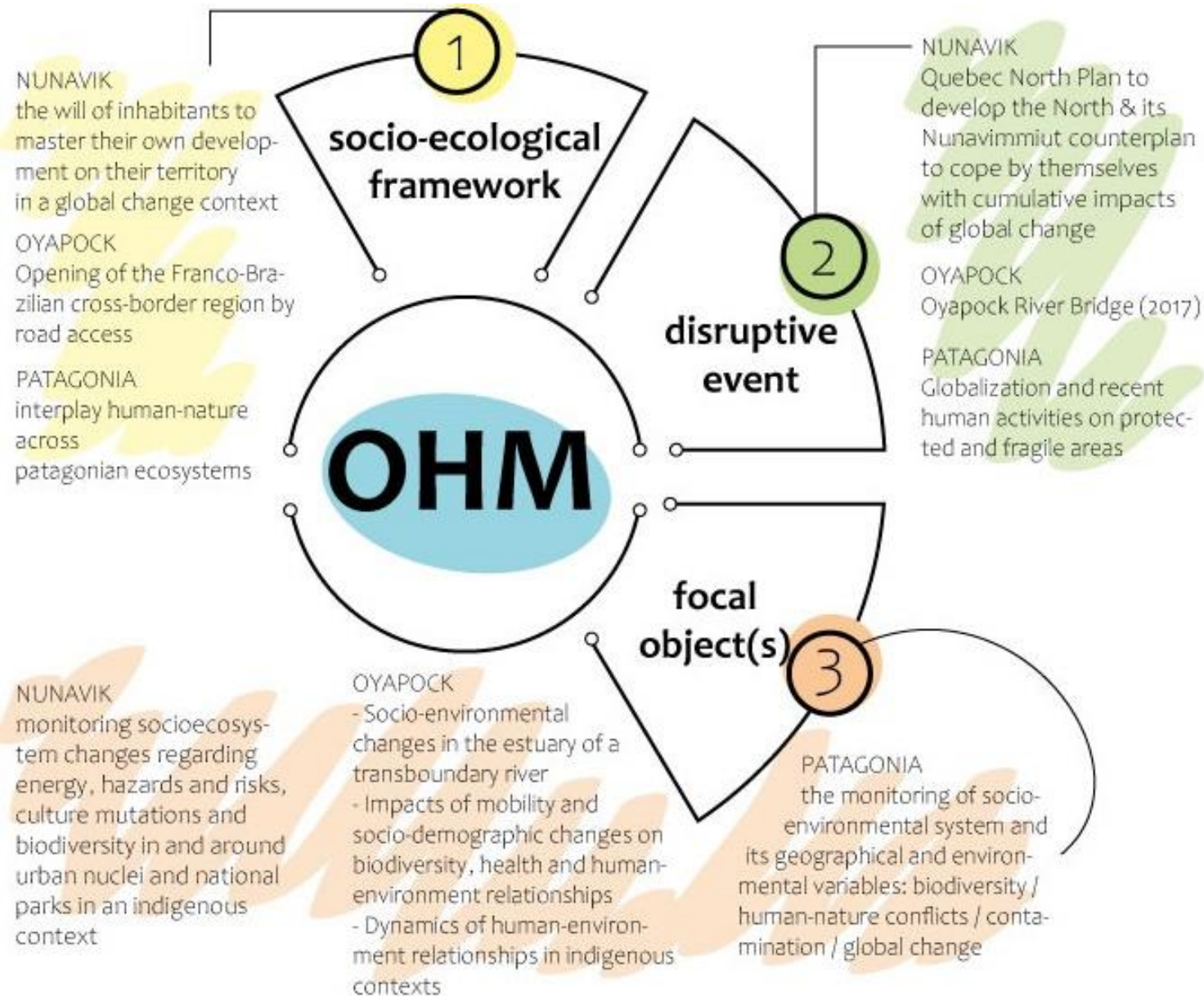
- Climate crisis and variation of environmental conditions
- Biological invasions and local extensions
- Socio–environmental conflicts
- Pollution (*e.g.*, microplastics, antibiotics)



- Citizen science
- Molecular biology (*i.e.*, species identification, Métabarcoding)
- Invasive species impact monitoring
- Ecosystem functioning monitoring (*i.e.*, decomposition and nutrient recycling)



Biodiversity and OHM ternary bases



© Orsane Rousset

Biodiversity and OHM ternary bases



Camera traps



Reconyx HyperFire

Audio traps



SM4

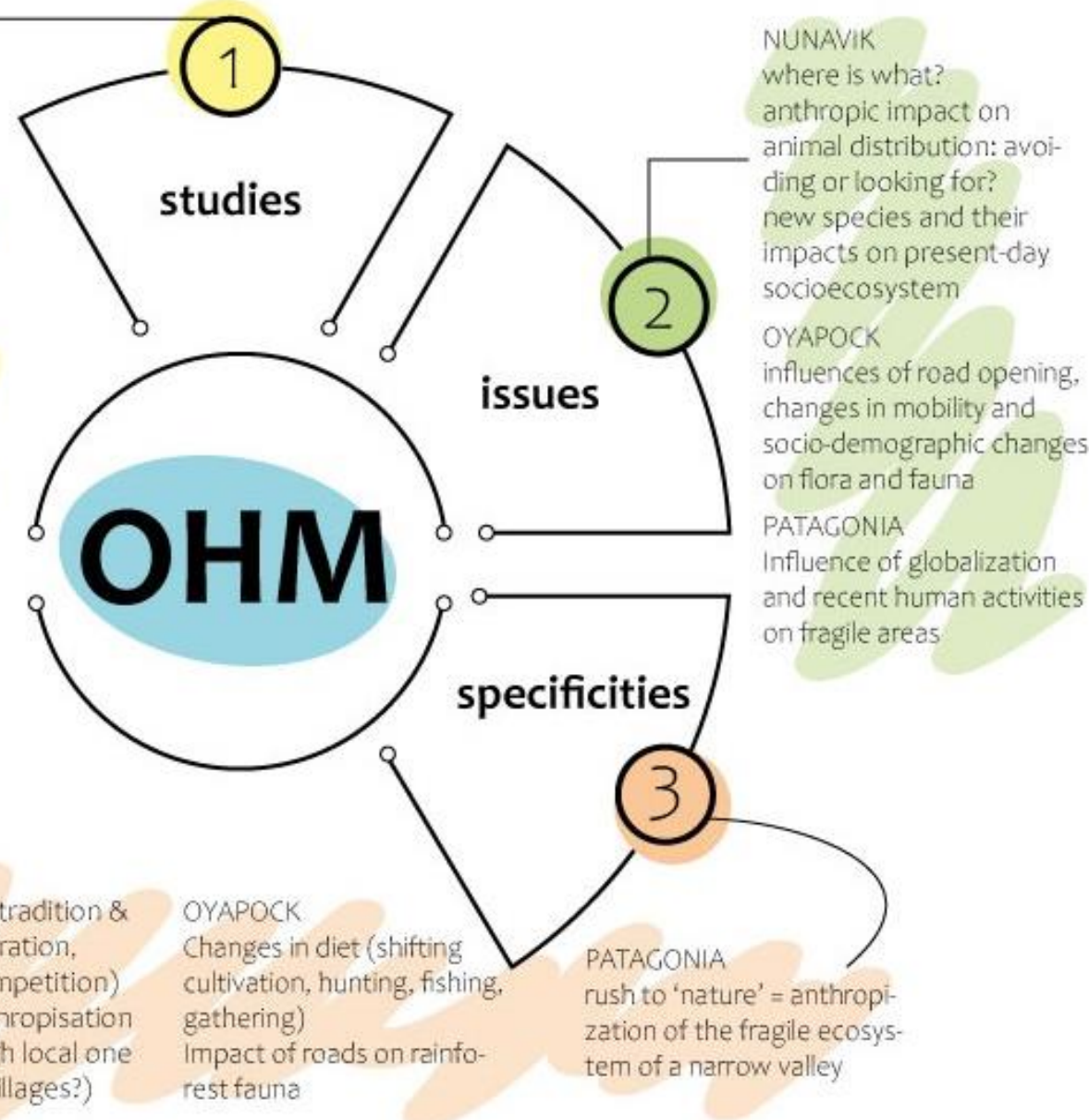


studies

NUNAVIK
Flora and fauna distribution
Food resources

OYAPOCK
Human-nature relationships
in the context of the
different ecosystems of the
lower-Oyapock

PATAGONIA
interplay human-nature
across patagonian
ecosystem



PRESENTATIONS FROM OHM

Pays de Bitche : Origine(s) et trajectoire(s) rétrospective(s) de la biodiversité du Pays de Bitche : un socle de connaissances au service d'enjeux territoriaux - Vincent Robin, Damien Ertlen, Pierre-Alexis Herrault, Pascale Ruffaldi, Anne-Véronique Walter-Simonnet, Annik Schnitzer, Xavier Rochel

Patagonia : Identification de l'entomofaune entre crise de biodiversité et crise de la taxonomie. Retour d'expériences de OHMi Patagonie (Chili) - Paul Amouroux

Fessenheim : Le metabarcoding d'ADN environnemental, une méthode alternative pour l'inventaire de la biodiversité des grand milieux - Armando Espinosa Prieto, Laurent Hardion, Jean-Nicolas Beisel