# Product Biodiversity Footprint

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## Introduction & Objectives

One of the main drivers of biodiversity loss around the world is the consumption of various products from global value chains. As biodiversity is an essential element of our natural capital, many indicators have been developed in the recent years to measure biodiversity degradation.

**Project objective is to "Co-develop a method and a tool crossing biodiversity studies and companies' data to quantify the impacts of a product on biodiversity all along the product's life cycle stages in order to provide recommendations for changes".**

### Discriminating capacity

An eco-design objective for products : the method aims to distinguish **between the variants of a product the one with lower impacts on biodiversity**

### LCA ecosystem

The method is integrated in the LCA « world » **: it includes biodiversity knowledge in the LCA framework and can be connected to LCA database**

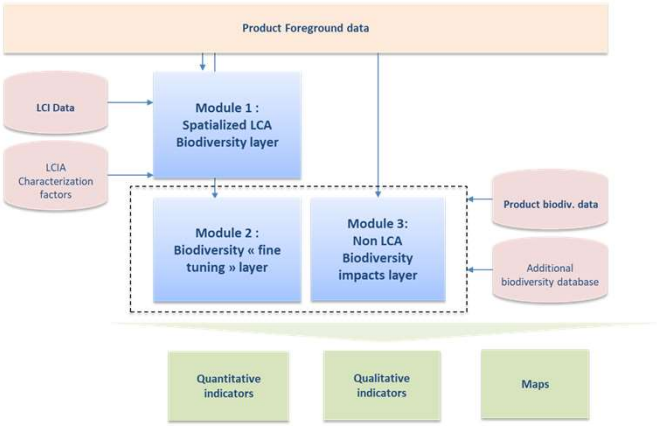
### Large scope

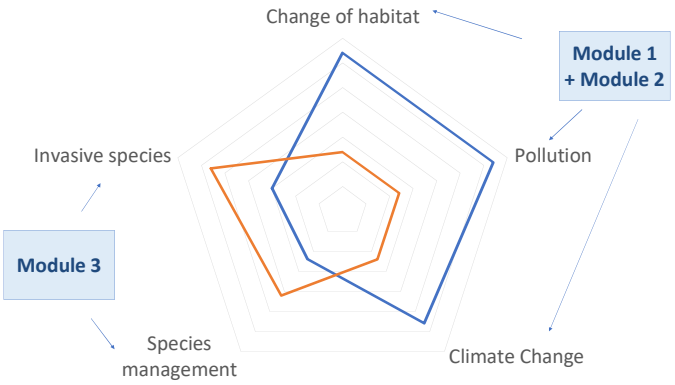
The method aims to **cover the 5 pressures on biodiversity** (Millennium Ecosystem Assessment)

## Material & Methods

***3 modules to apprehend different aspects of biodiversity***

Several scientific challenges are associated with this project, especially regarding the definition of relevant indicators for each pressure and relevant spatial scales, and the use of heterogeneous data. Thus, the PBF architecture is organized around 3 complementary modules to offer quantitative and qualitative results to support decisions.




**The developed approach will be tested through 3 case studies with private companies involved in the project (food, textile and cosmetics)**

**Towards a PBF Global score to cover the 5 main pressures on biodiversity (Millennium Ecosystem assessment, 2005)**

## Next steps and outlook

Coupling LCA and ecological data and methods is an emerging challenge to develop a reliable biodiversity footprint along the value chain. This project is a major step in helping companies to trace their impacts on biodiversity and to determine potential improvements. Also, several scientific challenges are associated with this project, especially regarding **the definition of relevant indicators for each pressure** and relevant spatial scales, and the use of heterogeneous data. Thus, the PBF project is expected to gather available data and offer quantitative results to support decisions (risk analysis, purchasing policy, evaluation of certified raw materials, eco-design, etc.). **The publication of the method is expected for February 2018**.

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Short Presentation
Niels Jungbluth

November 2017

# 3 specific objectives for PBF

**1**

**Discriminating capacity**

An ecodesign objective for products : the method aims to distinguish **between the variants of a product the one with lower impacts on biodiversity**

- while producing the total footprint of the product (absolute value)
- In the long run : to allow to compare different products or different sectors at larger scales (like every LCA method).

**2**

**LCA ecosystem**

The method has to be integrated in the LCA « world » **: it needs to include biodiversity knowledge in the LCA framework**

- Use LCA data
- If necessary, the LCA historical framework can be modified
- Product tests : results will be compared to current methods results

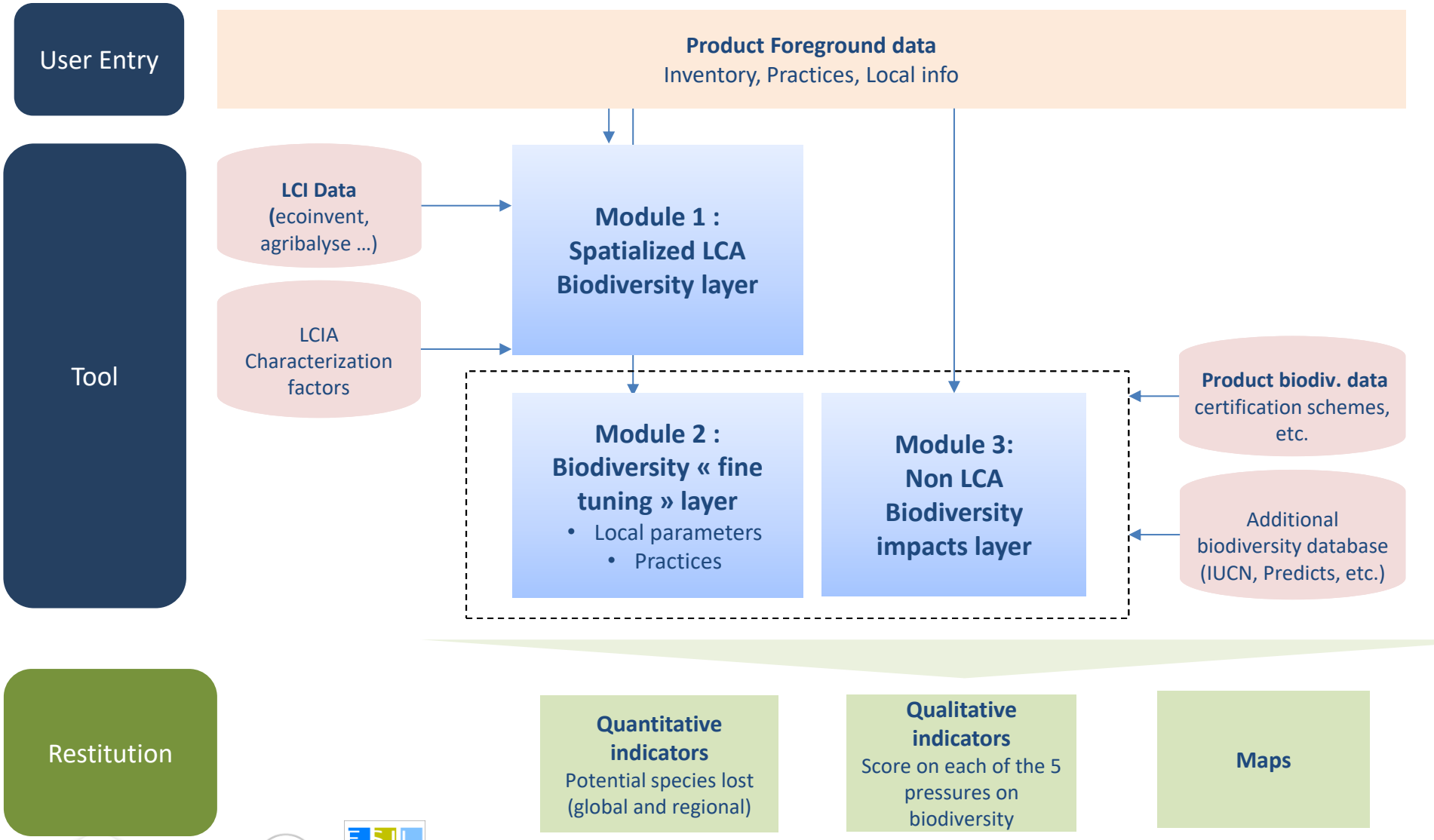
**3**

**Large scope**

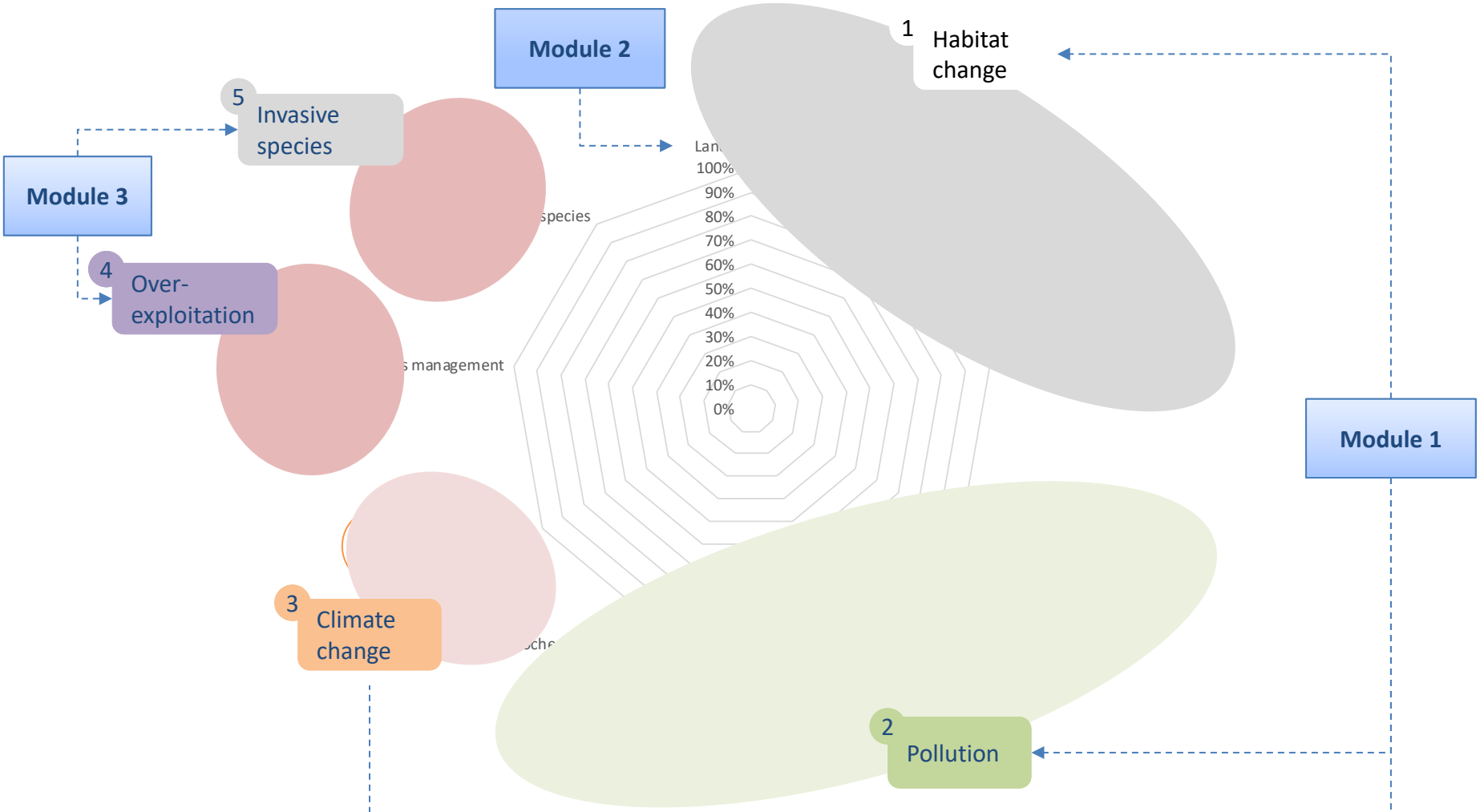
The method aims to **cover the 5 pressures on biodiversity** (Millenium Ecosystem Assesment)

- Based on ecological publications
- With a precision level depending on the level of impact on biodiversity

# PBF architecture



# 9 resulting indicators covering the 5 MEA pressures to compare biodiversity impact of products



# A multi-stakeholder project, crossing expertise, at French & international level

| | Biodiversity | | LCA & eco-design |
|---|---|---|---|
| **Steering committee** | French Ministry of Environment<br>French Agency for Biodiversity | KERING<br>Avril<br>L'ORÉAL | ADEME<br>INVESTISSEMENTS D'AVENIR |
| **Scientific committee** | National Natural History Museum<br>*R. Julliard*<br>AgroParisTech<br>*N. Frascaria H. Levrel*<br>INRA<br>*X. Le Roux* | | SCORE LCA<br>*P. Osset*<br>IRSTEA – Pôle ELSA<br>*R. Rosenbaum*<br>UN Environment<br>*L. Mila i Canals* |
| **Collaborative experts** | Natural Capital Project<br>WWF<br>IUCN<br>Conservation International<br>Cambridge Institute for Sustainability Leadership<br>EpE<br>CDC Biodiversité<br>Orée | | UN – 10 YFP Sustainable Food Systems<br>FAO<br>EC-JRC (TBC) |

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