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Product Biodiversity Footprint

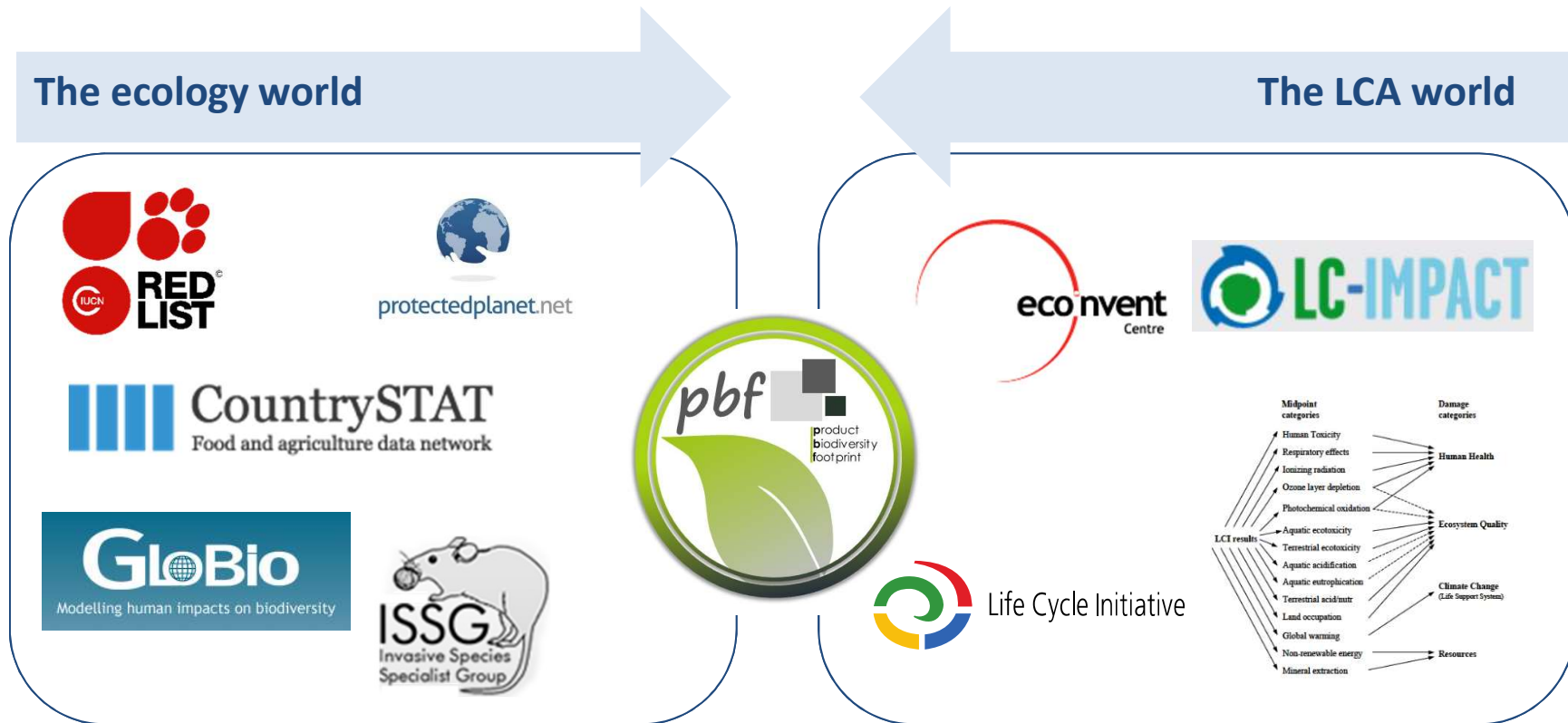
avniR 7 November 2018

[avniR] conference

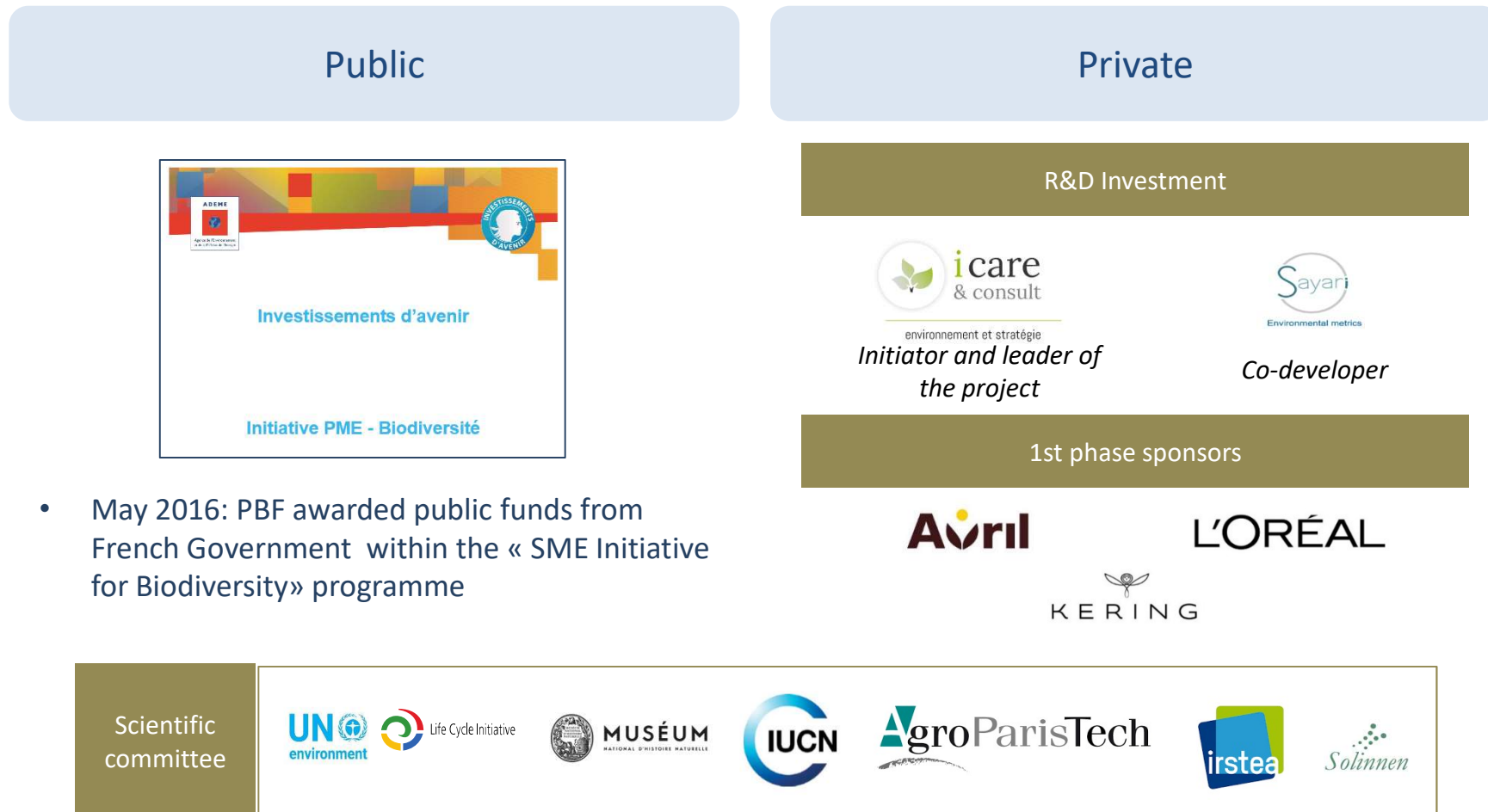
8th edition 7&8th November 2018, Lille, France



PBF way: find a proper trade-off between Ecology & Life Cycle Assessment experts



2016: launch of Product Biodiversity Project Phase 1 : a public-private initiative



PBF Objectives & Features

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**

2

LCA based
approach

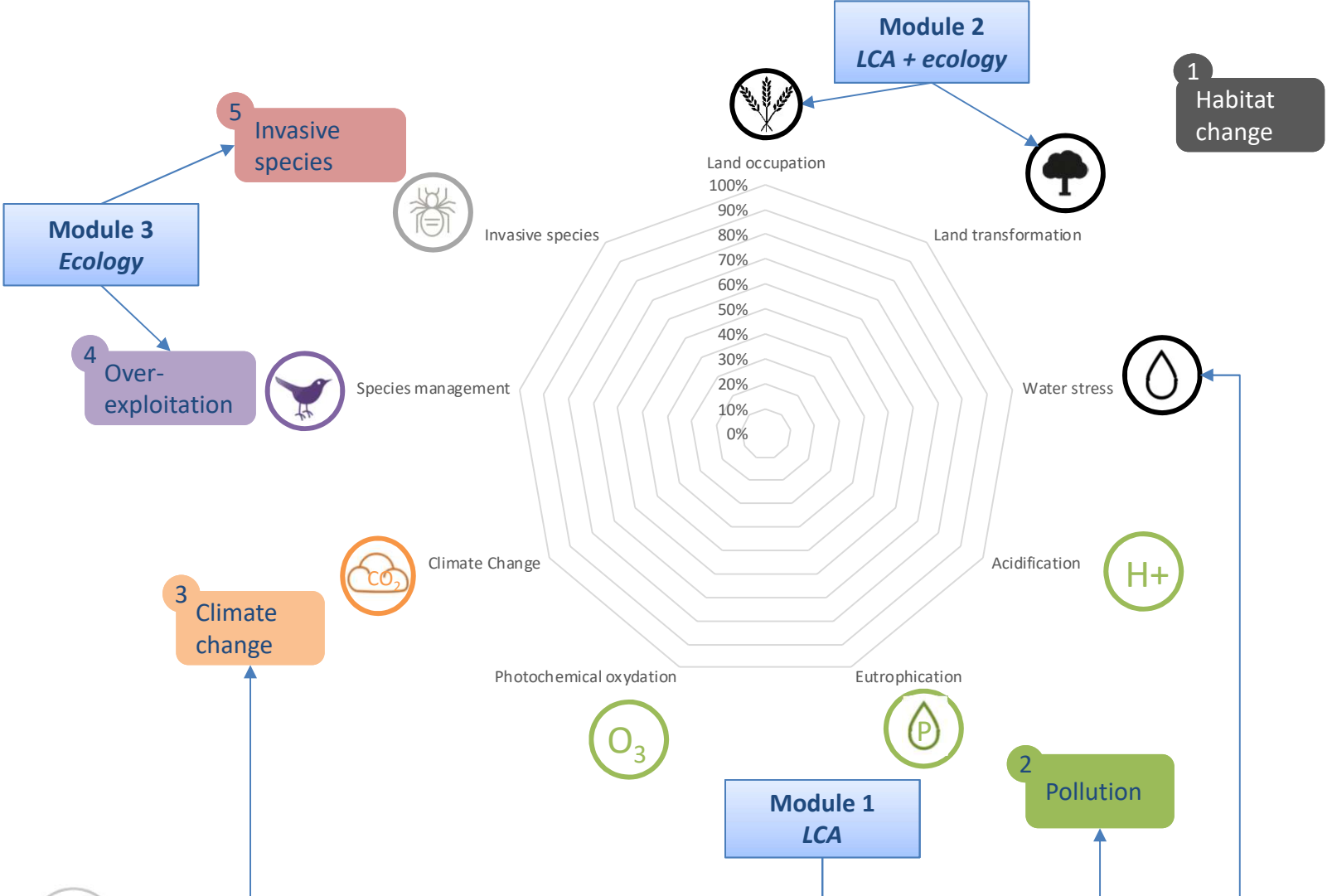
Enriching LCA model (s) with biodiversity/ecology knowledge

3

MEA scope

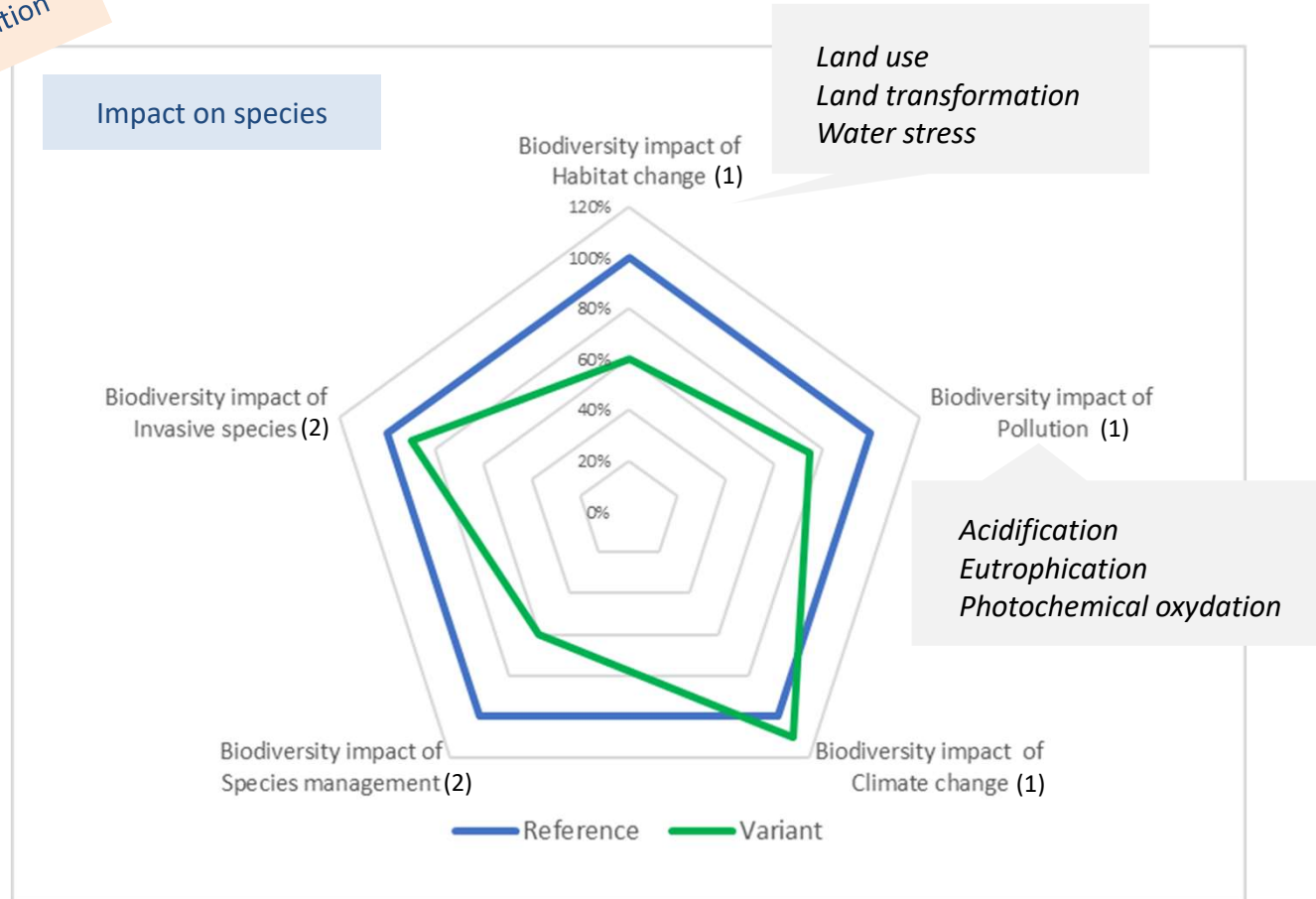
Covering the 5 drivers on biodiversity (Millenium Ecosystem Assessment)

Product Biodiversity Footprint : 9 indicators



PBF result: a comparative impact on the 5 pressures on biodiversity

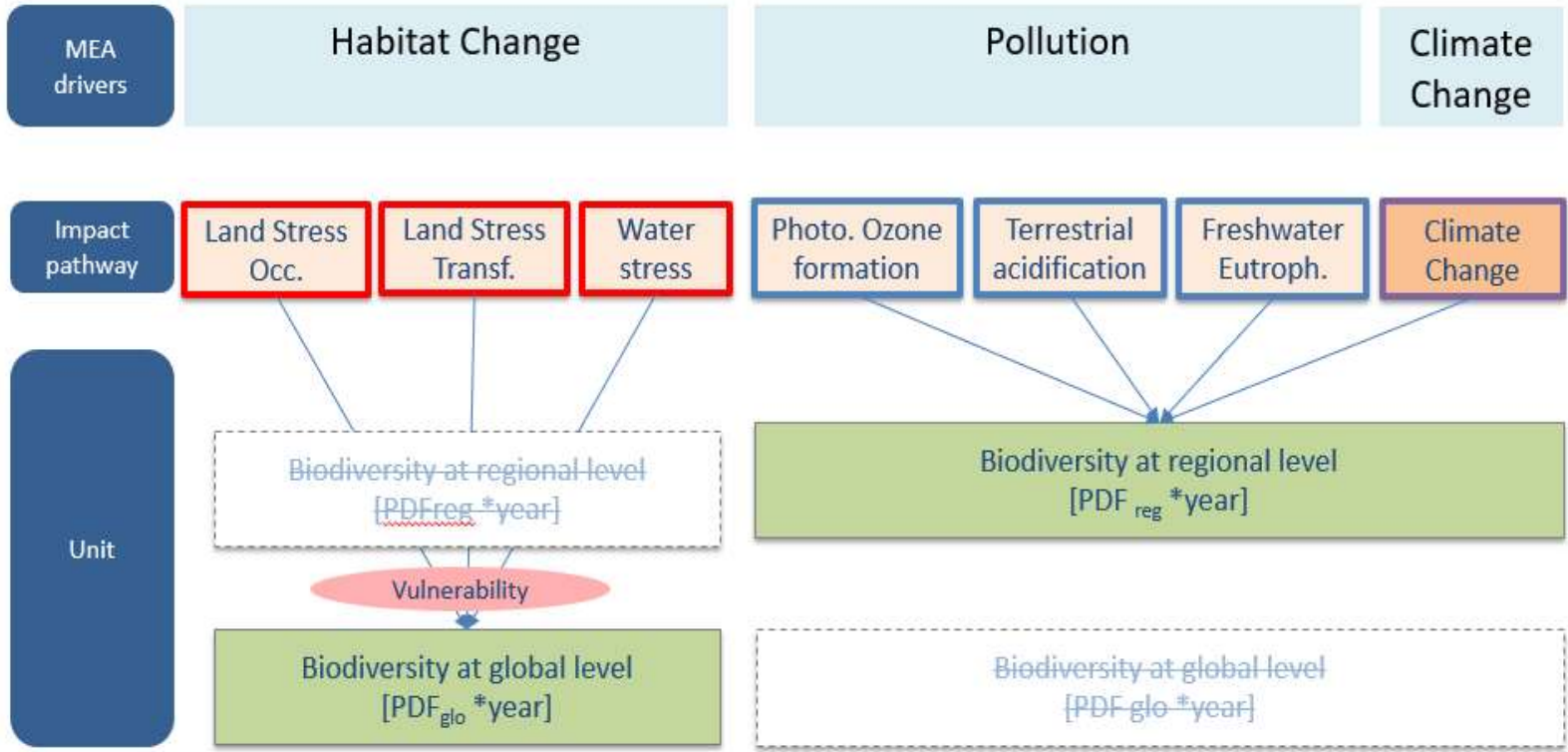
Illustration



(1) Impact assessed on pdf.year: Potential Disappeared Fraction of species per year

(2) Impact assessed on qualitative score

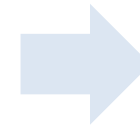
Module 1 : based on LC-Impact[®]



- LC Impact spatial - Change of Habitat - Vulnerability included
- LC Impact spatial- Pollution- Vulnerability not included
- LC Impact non spatial – Climate Change – Vulnerability not included

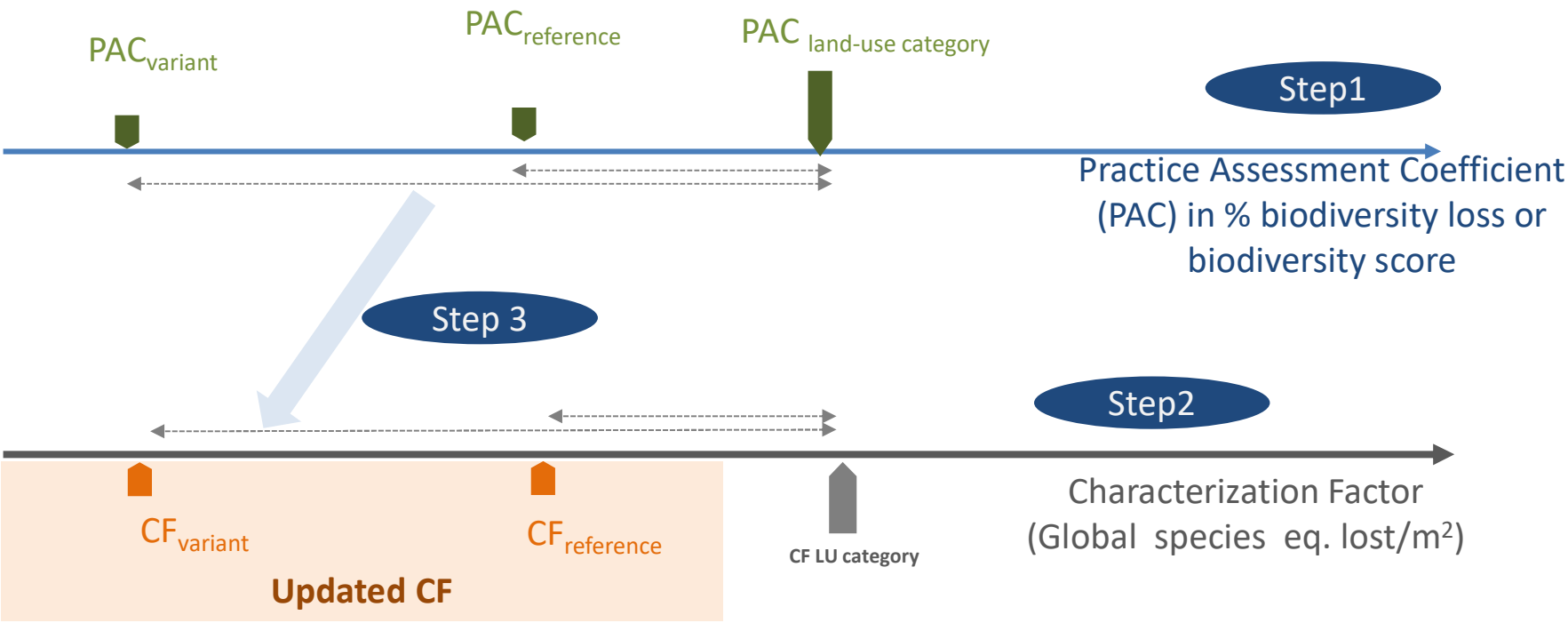
Module 2 : improve the CF used in module 1 for land occupation and transformation

CF category for module 1	CF category for module 2	
Land use type	Case study	Variants on LU Practices
Forest, used, extensive		
Forest, used, intensive		
Pasture/ meadow	Cashmere	Standard/ specific Kering
Agriculture, arable	Rapeseed	Standard/ "fleur de Colza"
Agriculture, permanent crops	Palm oil	Standard/ SPOTS project
Artificial areas, urban	Factory/ transport	



Refine CF to distinguish between variants

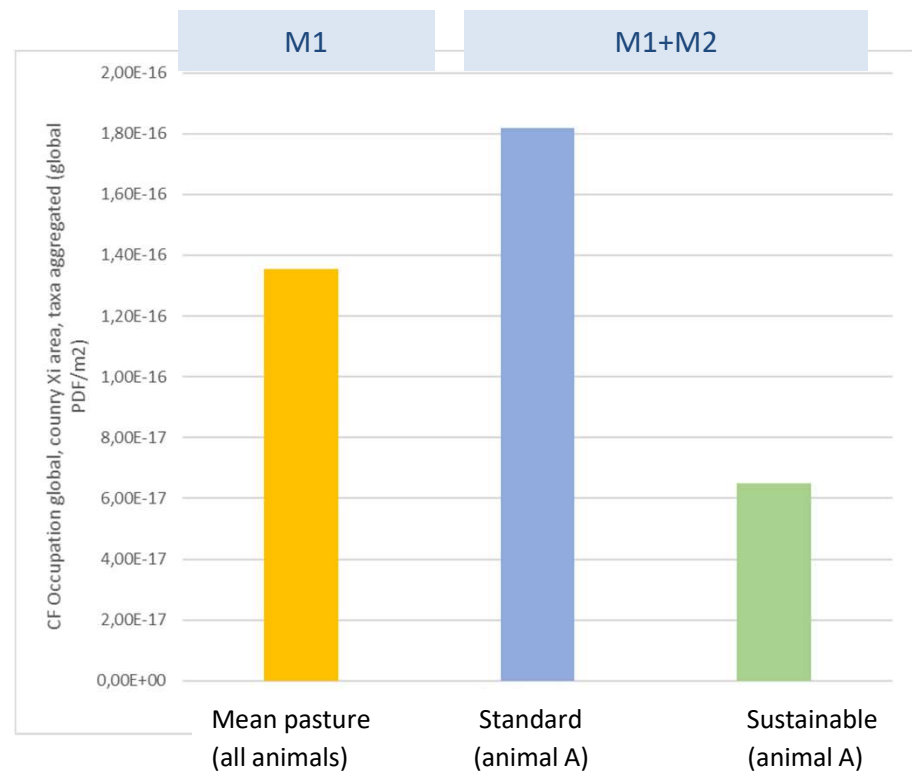
Module 2: assessment of updated CF with Practice Assessment Coefficient (PAC)



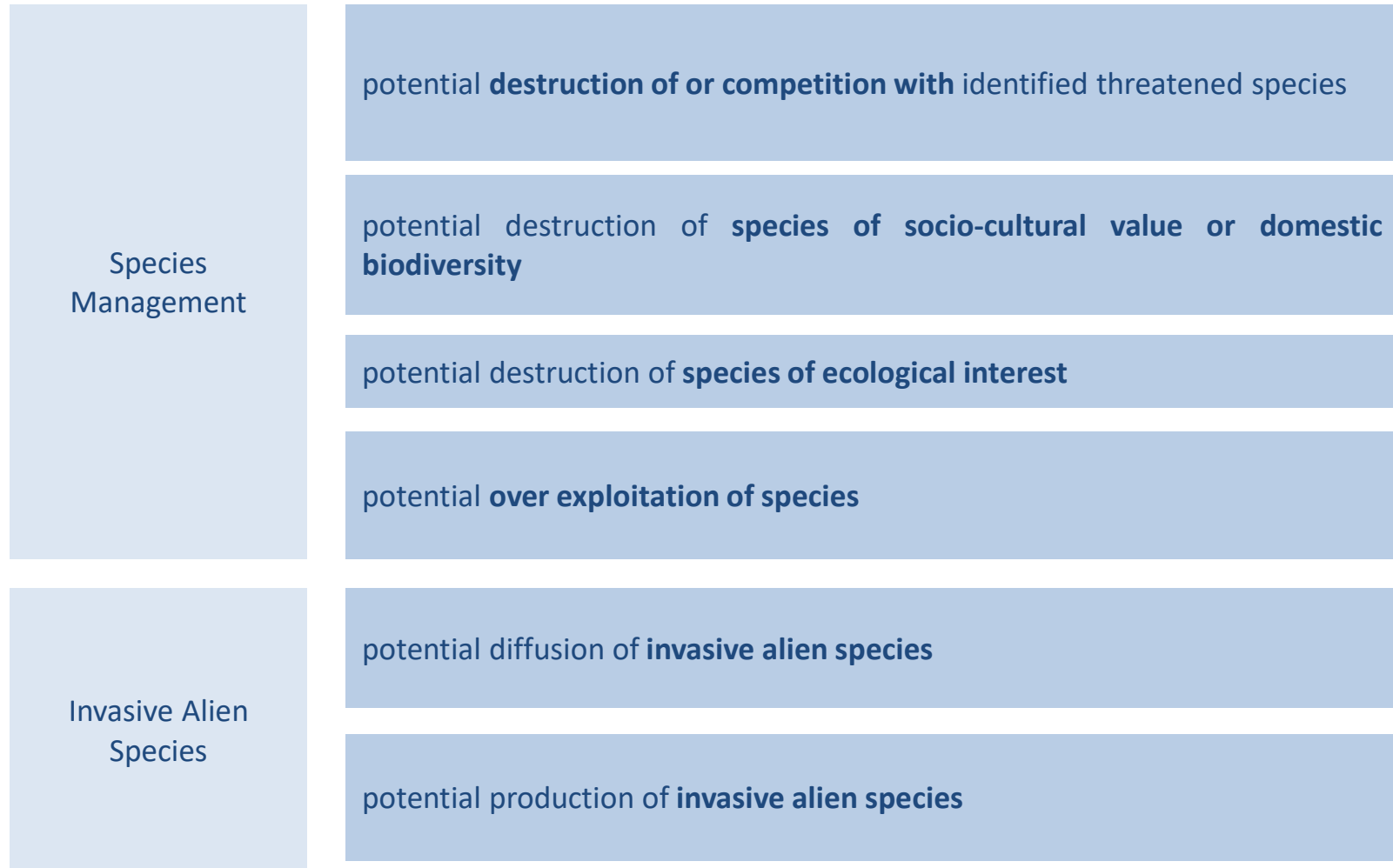
$$CF_{reference} = CF_{LU\ category} * PAC_{reference} / PAC_{LU\ category}$$

$$CF_{variant} = CF_{LU\ category} * PAC_{variant} / PAC_{LU\ category}$$

Example on pasture fictive case



M3 - Two additional indicators with sub-indicators



Case study

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Product case study

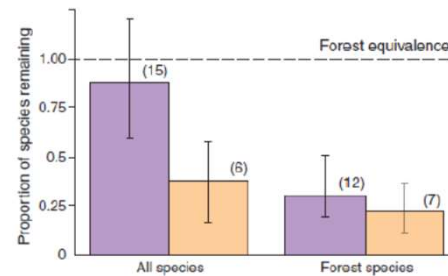
Ecological literature mobilized to assess impact of practices on biodiversity

1 bottle of 200 ml of shower gel (15 uses), cradle to gate perimeter



- Variant in agricultural phase : Culture of palm oil in Malaysia
 - ✓ **Sustainable** Palm oil culture, from **SPOTS project (biodiversity practices and lower yield)** versus standard culture

Use of studies which report palm oil impact on species richness in palm oil plantation compared to primary forest in Malaysia (Azhar et al., 2011; Fitzherbert et al., 2008; Yaap et al., 2010).



Yaap et al., 2010

Key take-aways from the company

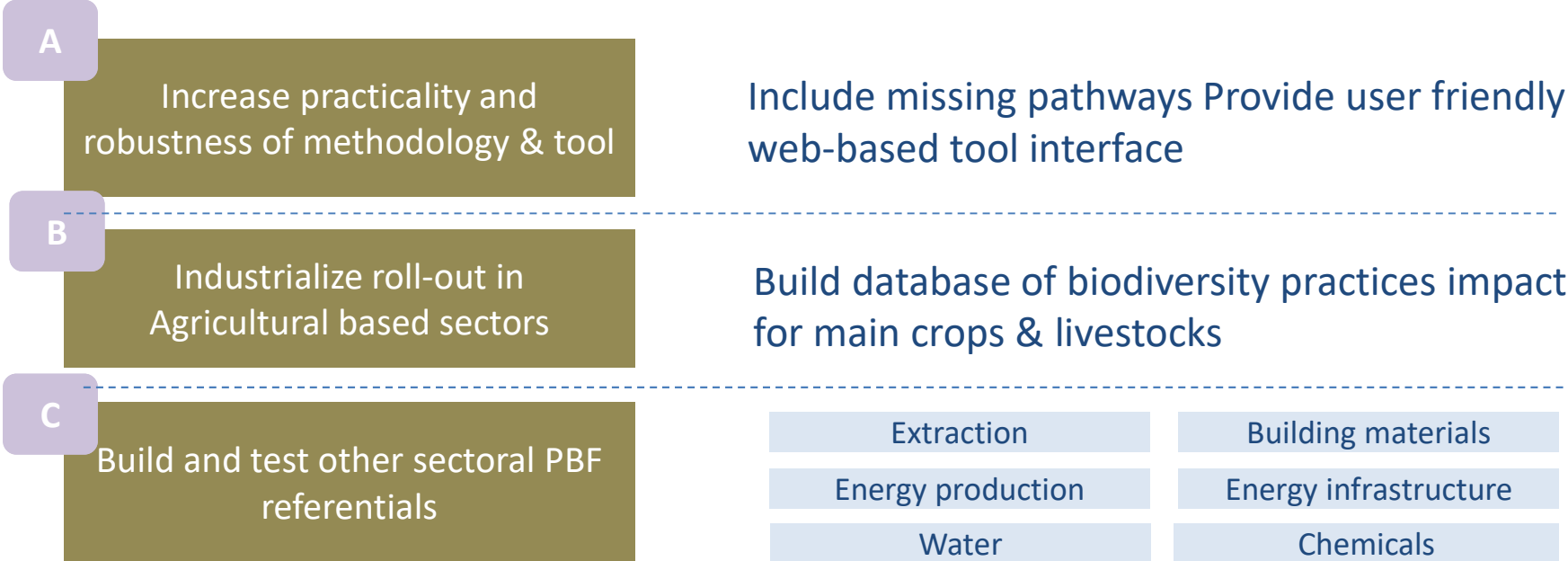
Today

- PBF method useful to compare the potential benefit for biodiversity of a sustainable variant scenario relative to a standard one
- compare 2 actual scenarii | 1 actual scenario to 1 virtual one to guide eco-design


Expected tomorrow

- Increase robustness of the method with further impacts (*e.g.* ecotoxicity)
- Towards a single score to facilitate interpretation/communication of results and decision-making
- An streamlined use of module 2 and 3 use through :
 - database compiling impacts from practices (literature)
 - User guidelines
 - User-friendly tool embedded in company decision support toolkit

Phase 2 to start end 2018 - three main workpackages




Liaison with European Commission (PEF, B@B)



Liaison with UN One planet Network



Environmental metrics



environnement et stratégie

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Case studies recruitment still open for phase 2

THANK YOU!

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