



environnement et stratégie



Circular Economy & Natural Capital

Session of March 6th, 2019



Product Biodiversity Footprint : an operational tool
for companies to measure and protect Natural Capital

Common opinion: Natural Capital is too complicated to be integrated in Circular Economy paradigm and tools

Natural Capital is related to all aspects of Circular Economy ...



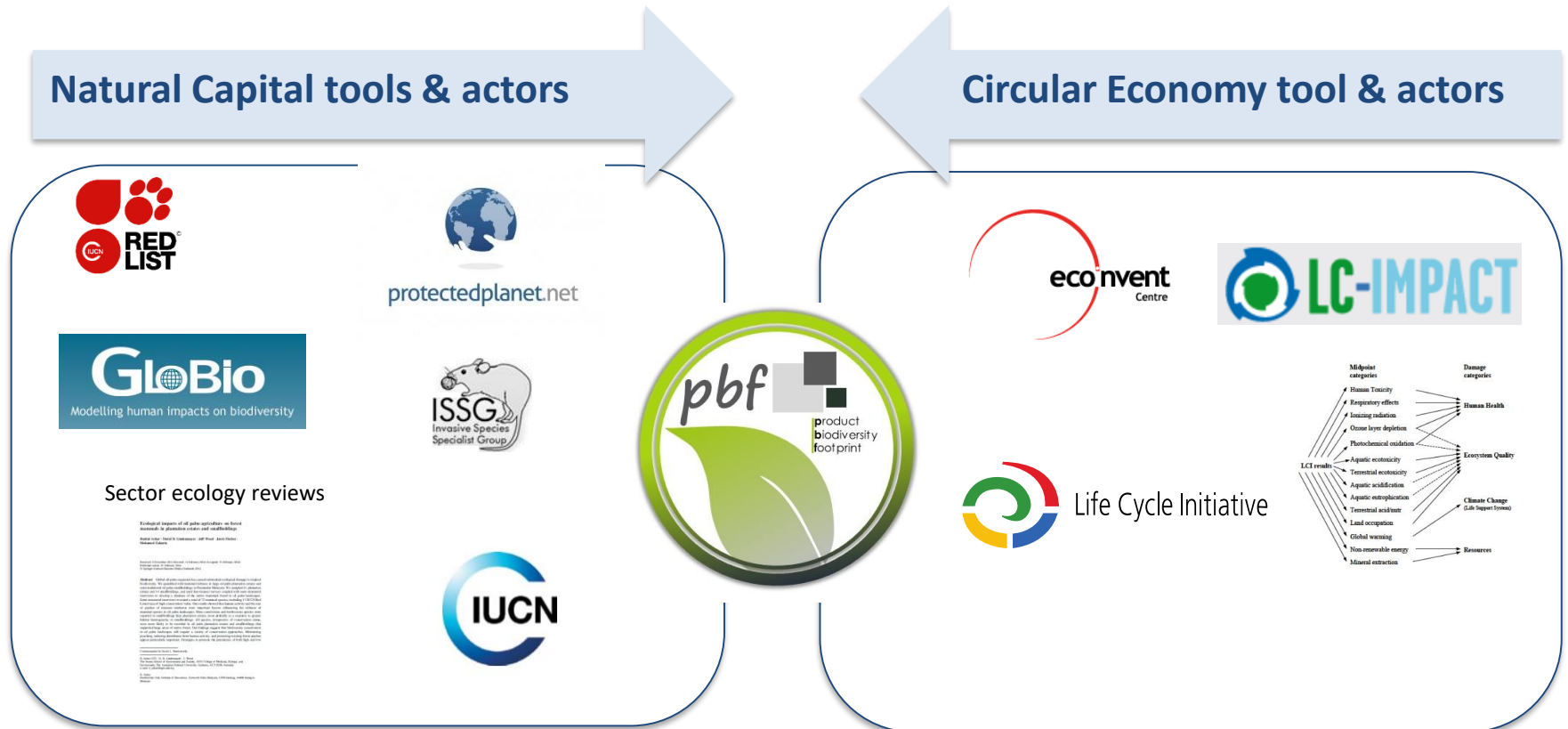
... but current tools not providing enough granularity to integrate key Natural Capital

Species richness and ecosystem vulnerability

Biodiversity friendly practices



Objective of Product Biodiversity Footprint (PBF): align Natural Capital methodologies with Circular Economy methodologies



PBF: An initiative supported by public authorities, academics and companies

Public



French Environment Agency /
French Biodiversity Agency

Private

R&D Investment



*Initiator and leader of
the project*



Co-developer

1st phase sponsors & 3 case studies



Scientific
committee



Expert Panel



PBF output: one simple spider comparative impact on the 5 pressures on Natural Capital



What is the difference in terms of biodiversity impacts between a **reference** and a **variant product** on whole life cycle ?



Biodiversity impact is expressed with **5 indicators corresponding to the 5 five main pressure on biodiversity**, and 9 sub-indicators



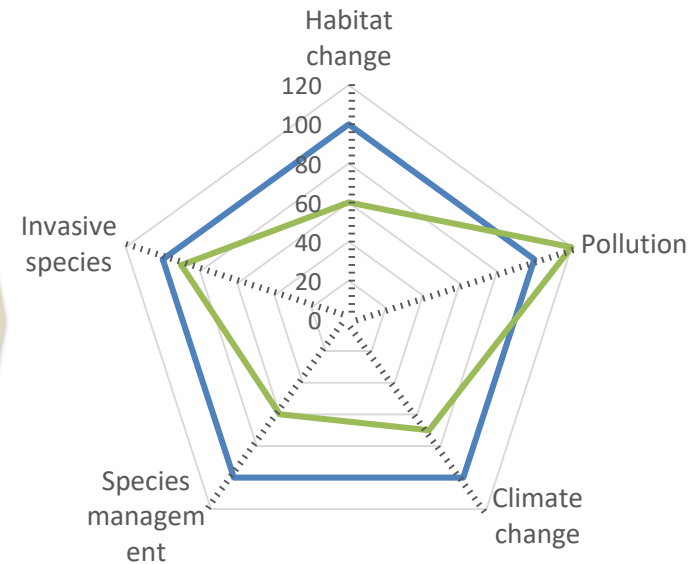
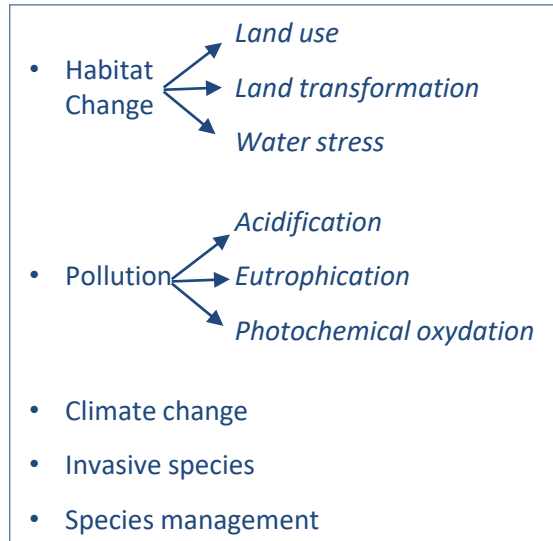
The **relative difference** between the two products is expressed in %

Reference product

Variant product

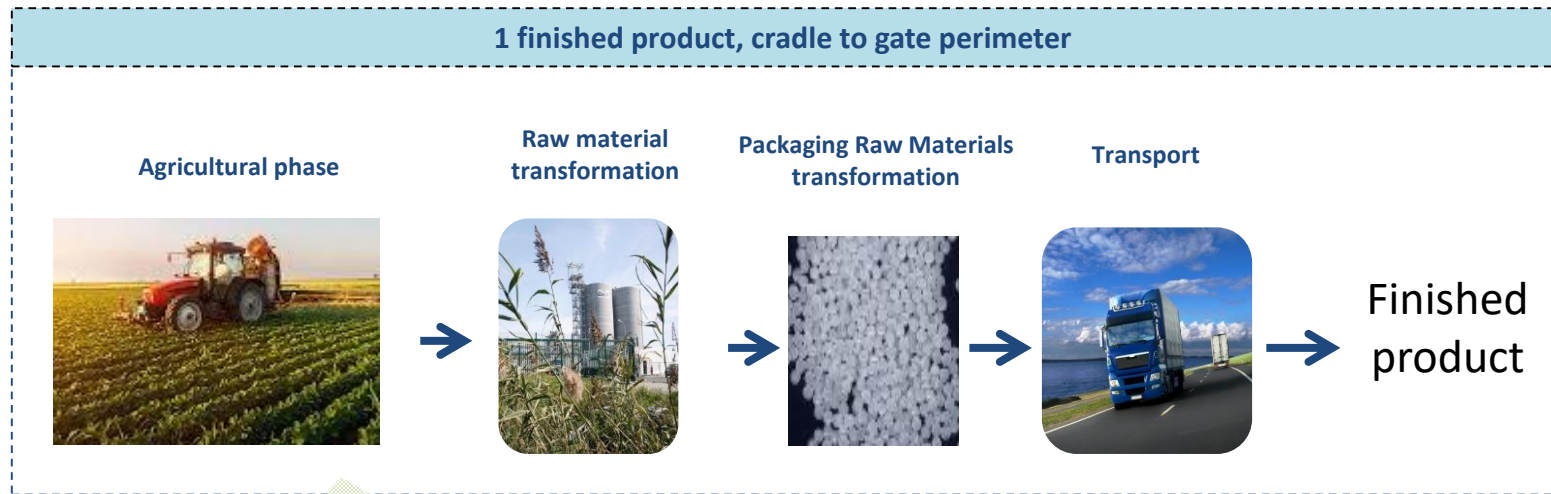


?



(100% is the value of the indicator for the reference product)

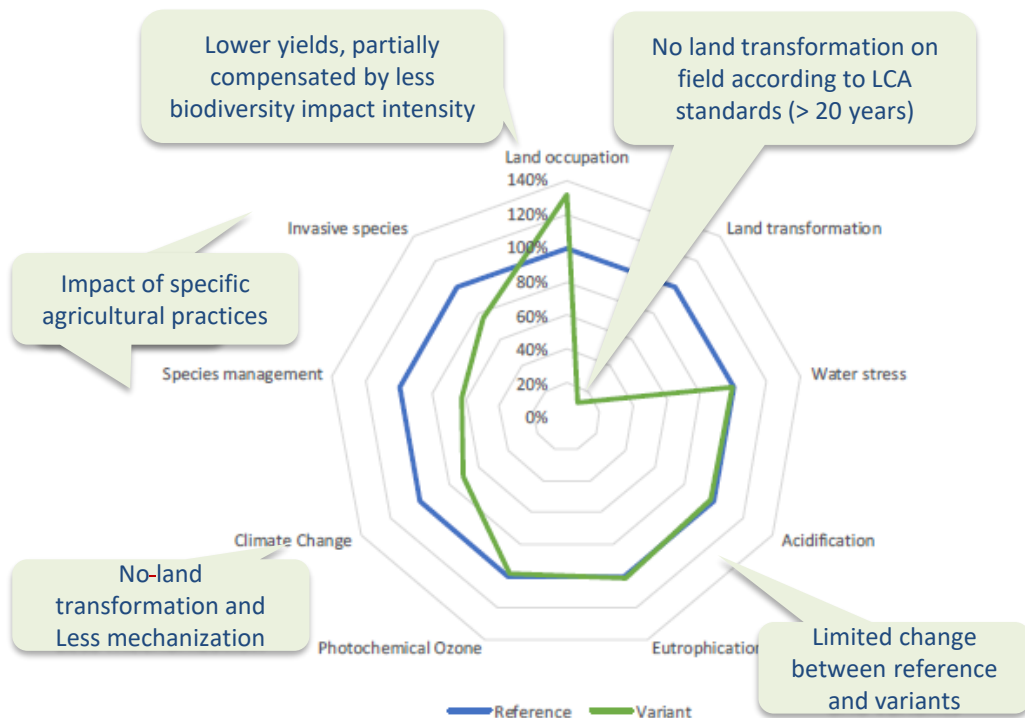
Objective : integrate Natural Capital concerns within product Eco-design tools



- Illustration: Test and evaluate the specific impact of sustainable practices at agricultural phase
 - ✓ **Reference:** standard culture
 - ✓ **Variant :** Sustainable culture

PBF: a tool to assess impact of better Natural Capital practices

Simulation by PBF tool on specific case study

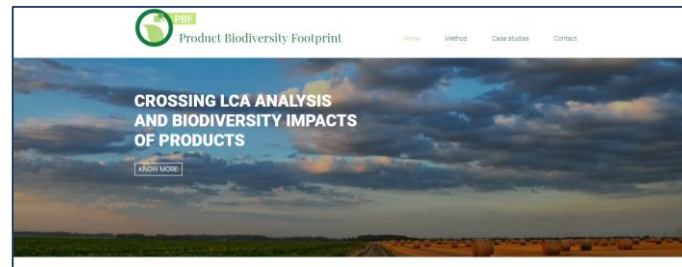


Reference and variant systems evaluated with the PBF methodology (cradle-to-gate perimeter)

Key take aways for the company

- Relative to the result of the simulation
 - ✓ Need to confirm on the ground the result of the simulation
 - ✓ Strong effect of the yield on the results – a good **optimum between yield and biodiversity friendly practices** has to be found
- Relative to the tool
 - ✓ Useful to compare in a **quantitative way** the potential benefit for Natural Capital of a sustainable variant scenario
 - ✓ First step to embed this method in company innovation process (**eco-design**)
 - ✓ Help to determine key parameters to collect on the ground for each sustainable project

Next steps: industrialize integration of Natural Capital into LCA and extend scope



Industrialize

- Scan major commodities and biodiversity practices to integrate PBF database
- Automate tools for a simpler integration

Extend scope

- Build sectoral frameworks for key sectors
 - ✓ Electricity
 - ✓ Construction Materials
 - ✓ Water & Waste



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