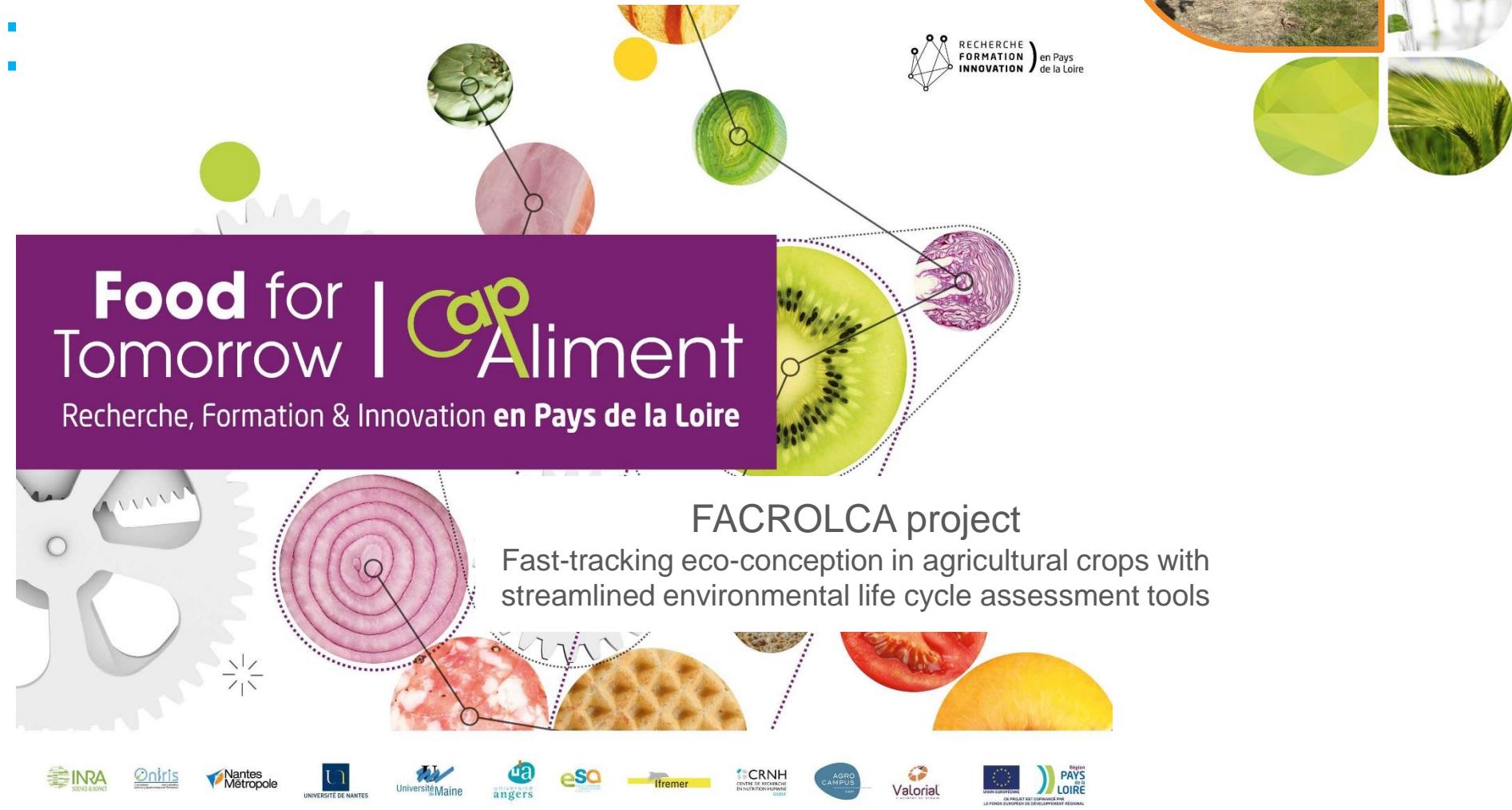


# Customised LCA tool for viticulture (VitLCA) for identifying environmental improvement opportunities

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Supported by:



The image features the 'Food for Tomorrow | Cap Aliment' logo, which includes a purple banner with white text and a background of various food items like a kiwi, an onion, and a tomato. To the right, there's a circular graphic with a network of nodes connected by lines, and text that reads 'RECHERCHE FORMATION INNOVATION en Pays de la Loire'. Below the banner, the text 'FACROLCA project' is displayed, followed by a description: 'Fast-tracking eco-conception in agricultural crops with streamlined environmental life cycle assessment tools'. At the bottom, there are logos for various partners including INRA, Oniris, Nantes Métropole, Université de Nantes, Université Maine, esa, Ifremer, CRNH, Agro Campus, Valorial, and Région Pays de la Loire.

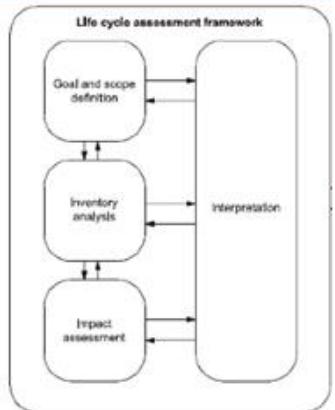
**Food for Tomorrow | Cap Aliment**  
Recherche, Formation & Innovation en Pays de la Loire

**FACROLCA project**  
Fast-tracking eco-conception in agricultural crops with streamlined environmental life cycle assessment tools

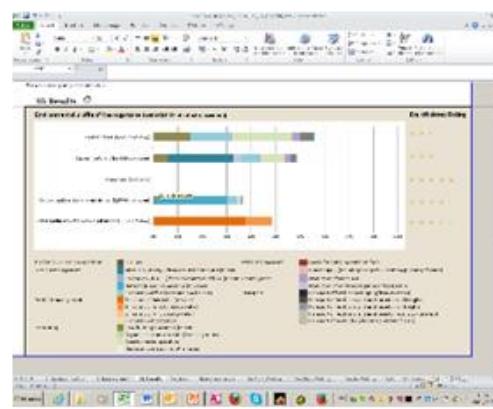
INRA  
Oniris  
Nantes Métropole  
Université de Nantes  
Université Maine  
esa  
Ifremer  
CRNH  
Agro CAMPUS  
Valorial  
Région PAYS de la LOIRE

## Customised agricultural LCA tools

LCA methods /  
practitioners



Customised agricultural  
LCA tools



Tool use by  
agriculturalists



Decisions about  
agricultural practices



Eco-  
efficiency

# VitLCA development history



CaneLCA Eco-Efficiency Calculator  
for Australian sugarcane producers  
(Version 1.03)

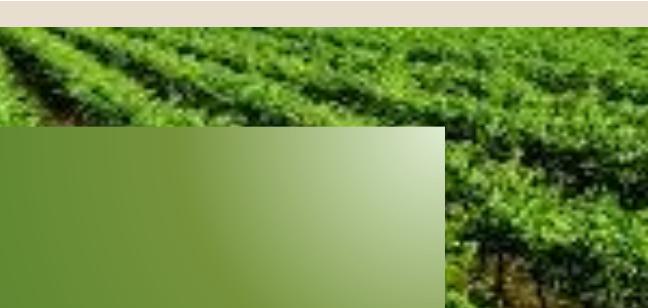


An existing Excel  
tool was adapted  
for viticulture

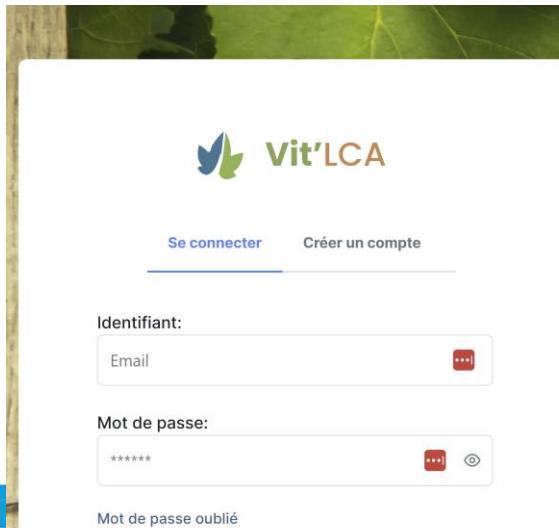


© ESA 2017

VitLCA Eco-Efficiency Calculator  
for viticulture  
(Version 1.02)

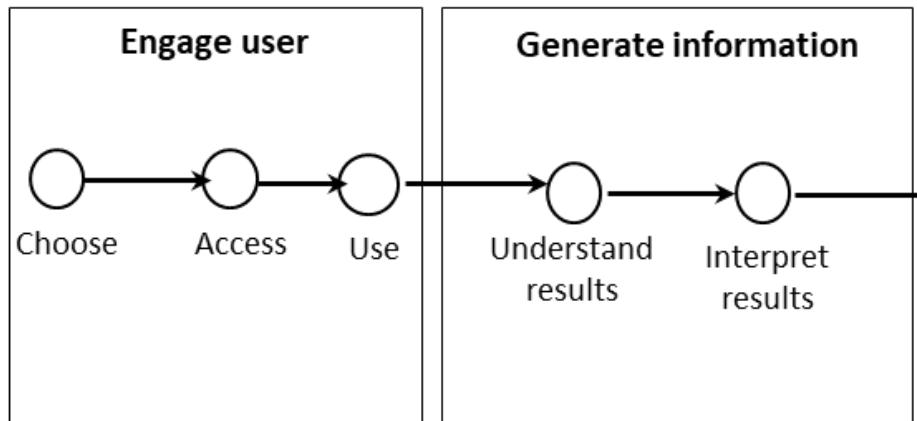


Vit'LCA  
developed as  
an online tool



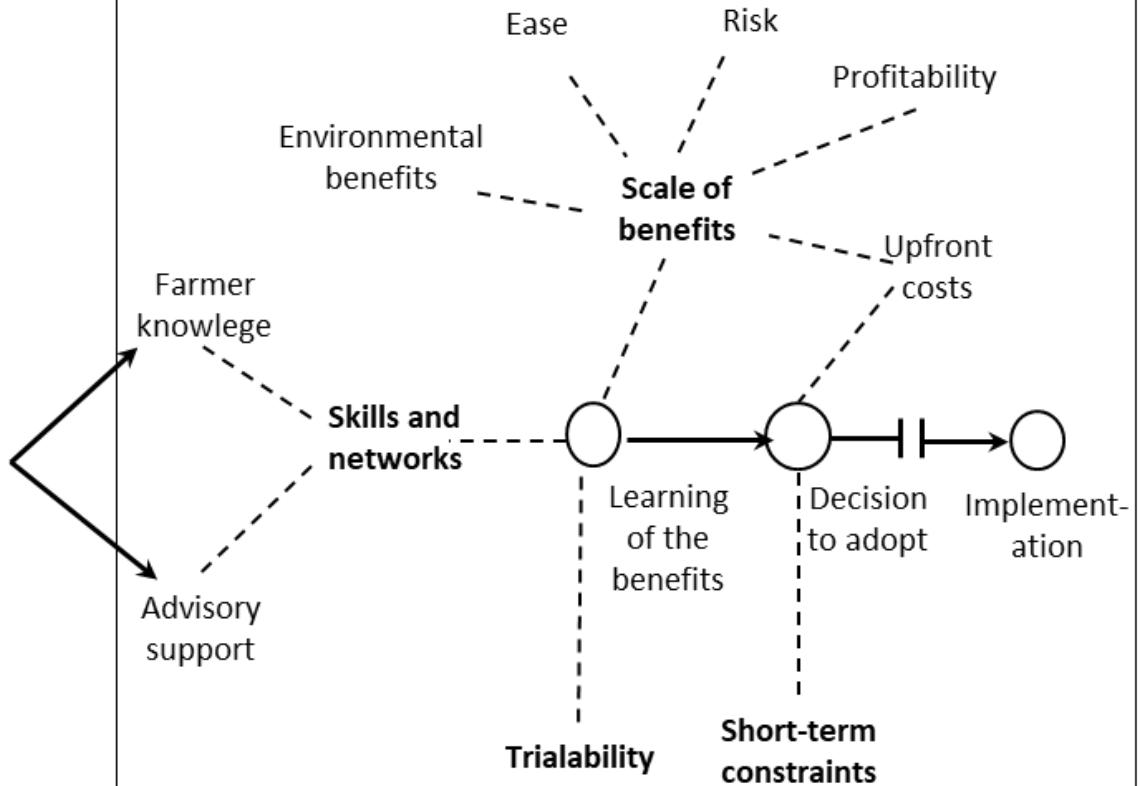
# Some theory behind this tool concept

**Source:** Renouf, M. A., C. Renaud-Gentie, A. Perrin, H. M. G. van der Werf, C. Kanyarushoki and F. Jourjon (2018).  
**Effectiveness criteria for customised agricultural life cycle assessment tools.**  
 Journal of Cleaner Production 179: 246-254.

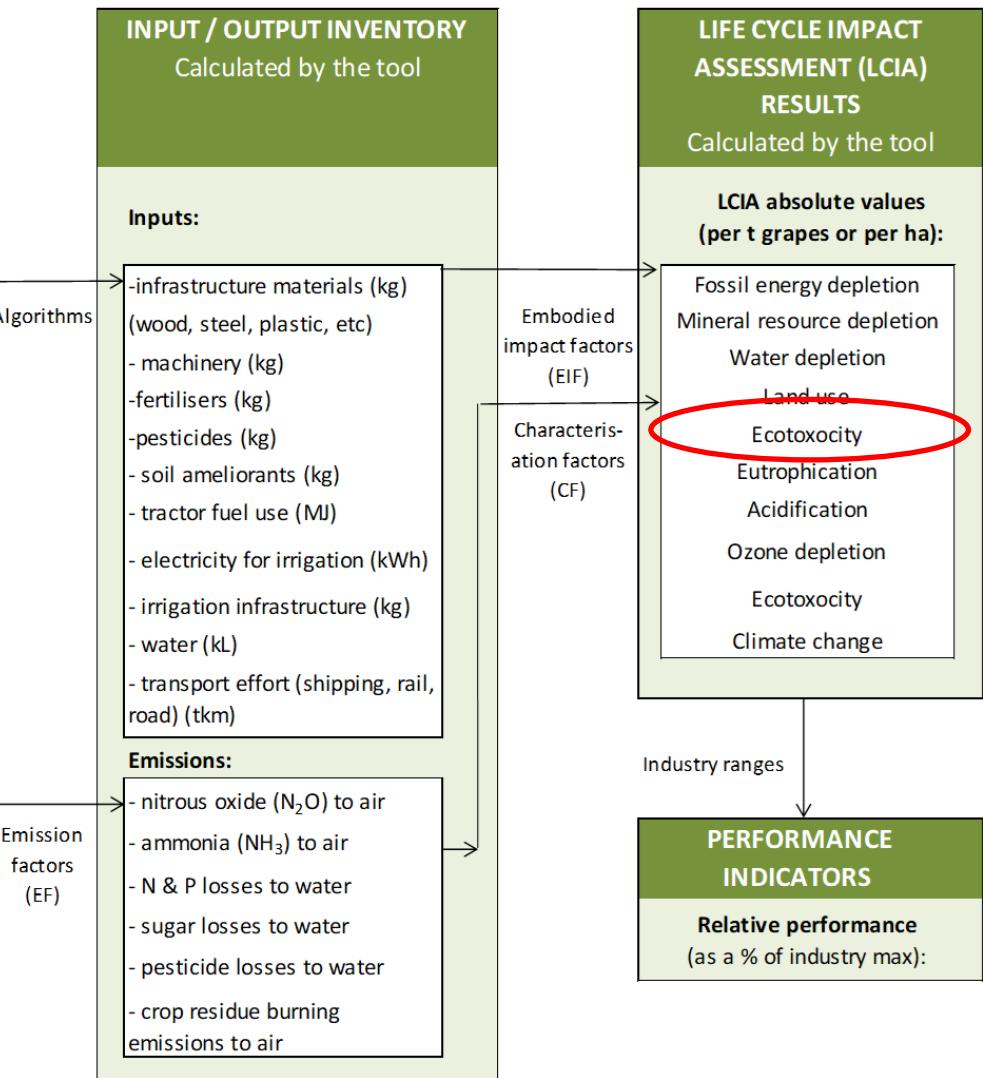
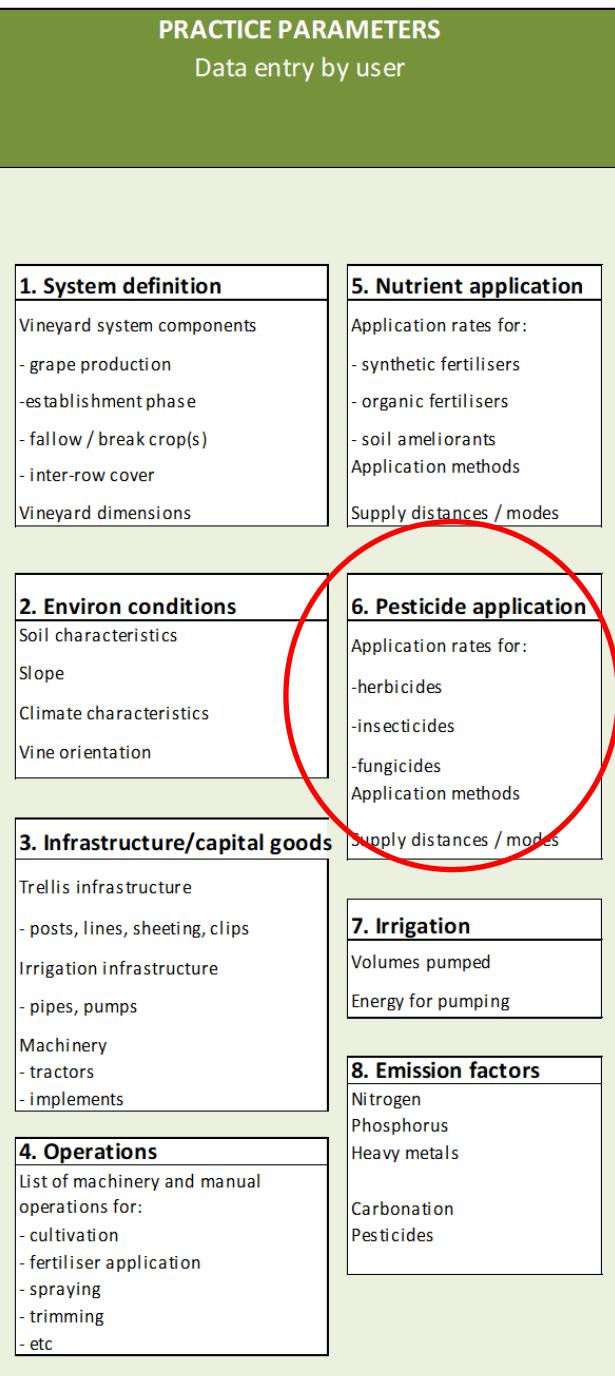


Information generated by LCA tools

**Framework of factors influencing practice adoption in agriculture (adapted from Kuehne et al., 2017)**



Kuehne et al., Predicting farmer uptake of new agricultural practices: A tool for research extension and policy. Journal of Agricultural Systems 156, 115-125



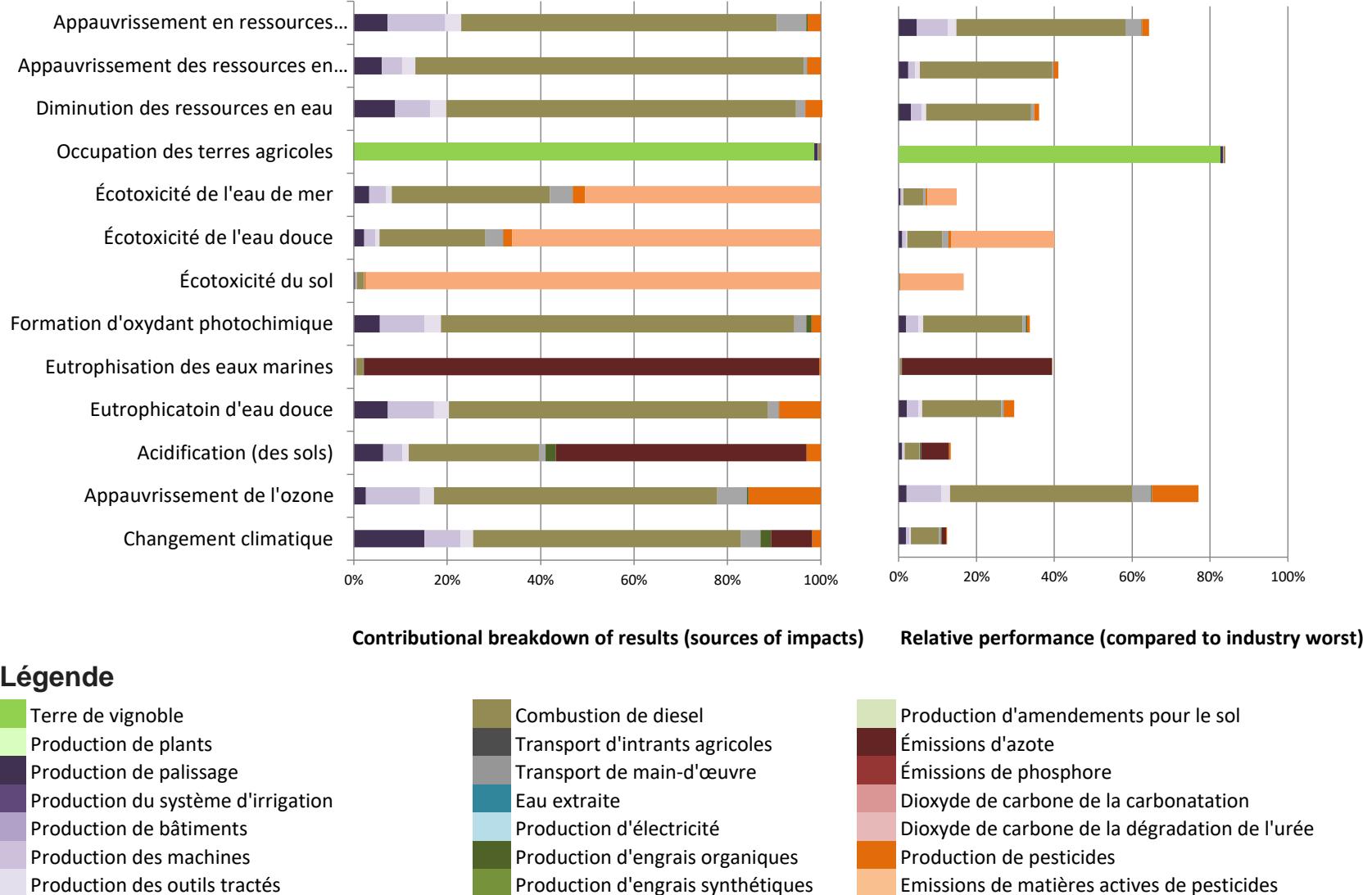
# Underlying Method

## Features:

- More detailed examination of pesticides (Pest LCI)
- More impact categories
- Compare 3 alternative systems

# Example results output

**Source:** Renouf, M. A., Renaud-Gentie, C., Perrin, A., Garrigues-Quere, E., Rouault, A. & Julien, S. (2018). VitLCA®, un nouvel outil pour tester les améliorations environnementales en viticulture (A new tool for testing environmental improvements in viticulture). Revue suisse Viticulture, Arboriculture, Horticulture, 50 (3): 168–173. ([https://www.revuevitiarbohorti.ch/en/archives-2/?id\\_heft=98&jahr\\_heft=2018](https://www.revuevitiarbohorti.ch/en/archives-2/?id_heft=98&jahr_heft=2018))



- This style of customised LCA tools for agriculture are getting use in agriculture
- Support eco-design by enabling variation of practice parameters
- Support (but don't replace) the important interaction between farmers and advisors when planning changes to farming systems
- Complexity is still an issue
  - reached the limit of the usefulness of MS-Excel
  - need to be online
- Potential to be applied to other ag systems for informing change at farm scale