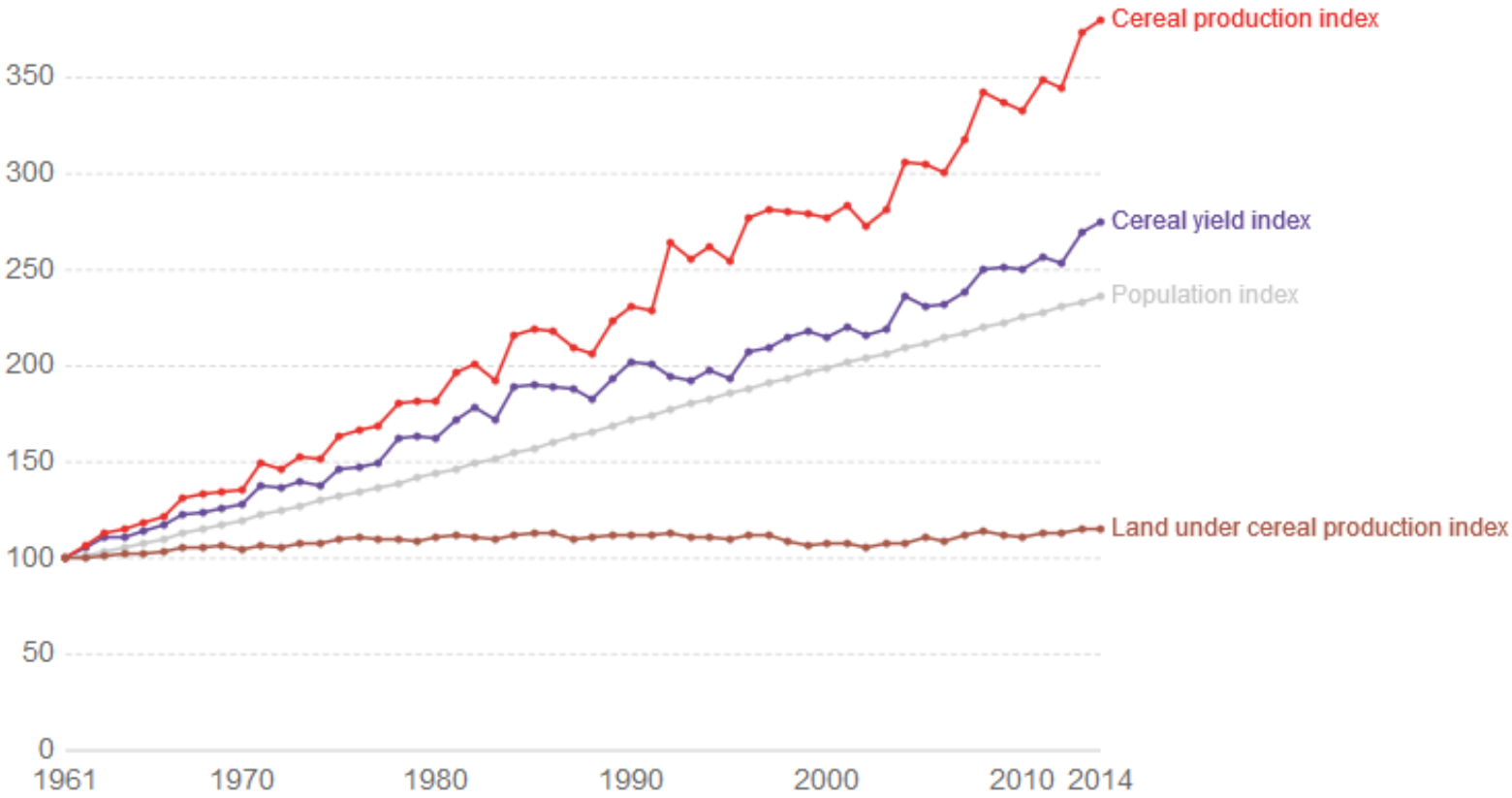
New agricultural models and innovative agrifood products, what are the environmental impacts?

Introduction

Food and agriculture are currently at a crossroads

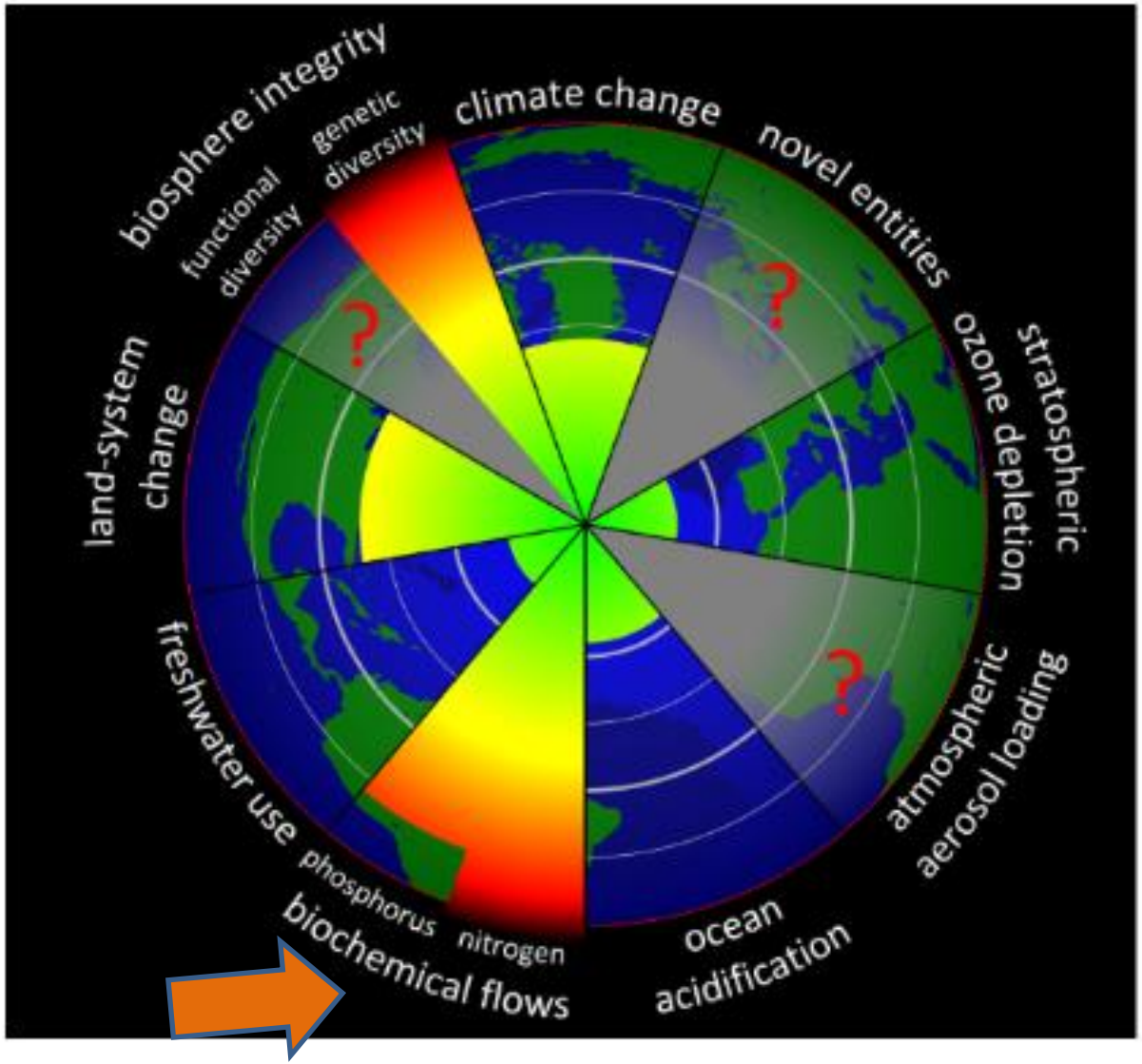
Index of cereal production, yield and land use, 1961-2014, World

The index of total cereal production (measured in metric tonnes), cereal yield (kilograms per hectare), and land used for cereal production (hectares). The index is calculated as the production, yield and land use in any given year divided by that in the year 1961 (i.e. 1961 = 100). The index of total population (all ages and genders) relative to 1961 is also shown. Trends for individual countries can be viewed using the "change country" wheel.



Source: OWID based on World Bank, World Development Indicators (WDI)

[avniR]
Life Cycle Assessment Platform
By ecoinvent



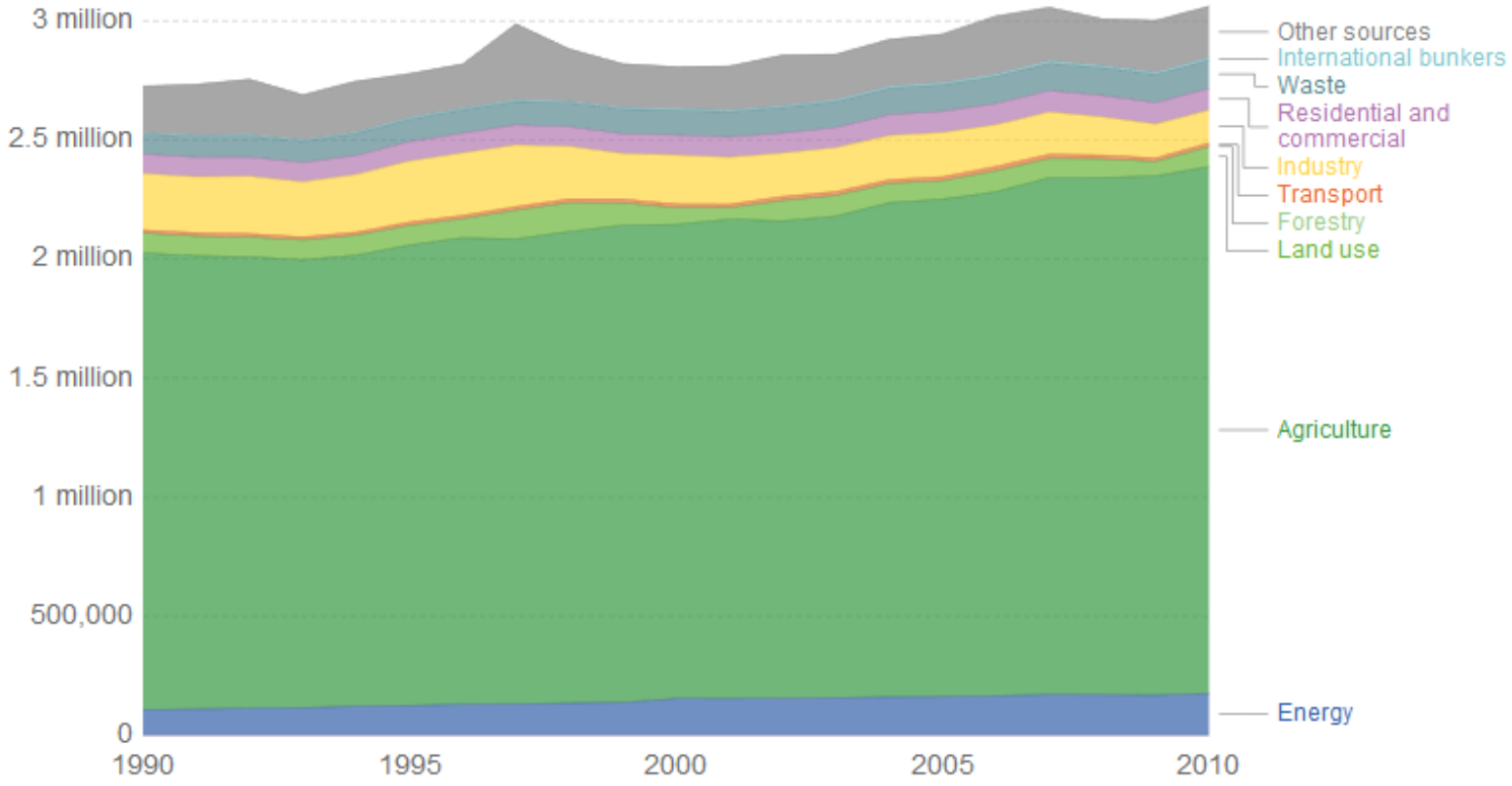
Steffen & al. 2015.

[avniR] Life Cycle Assessment Platform By cdse

Nitrous oxide emissions by sector (Gg CO_2e), World

Our World in Data

Breakdown of total global nitrous oxide (N_2O) emissions by sector, measured in gigagrams of carbon-dioxide equivalents (CO_2e). Carbon dioxide equivalents measures the total greenhouse gas potential of the full combination of gases, weighted by their relative warming impacts.



Source: UN Food and Agricultural Organization (FAO)

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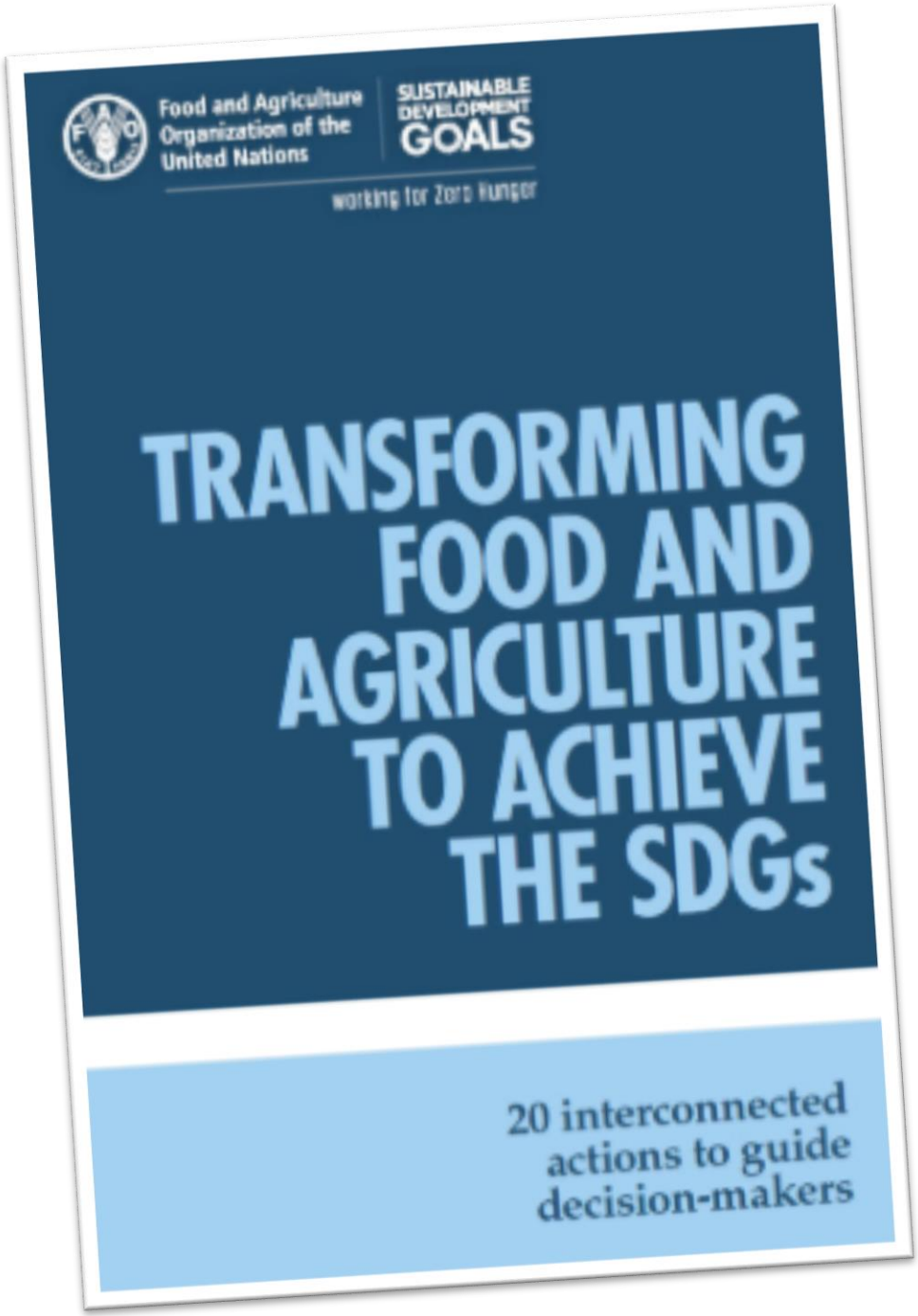
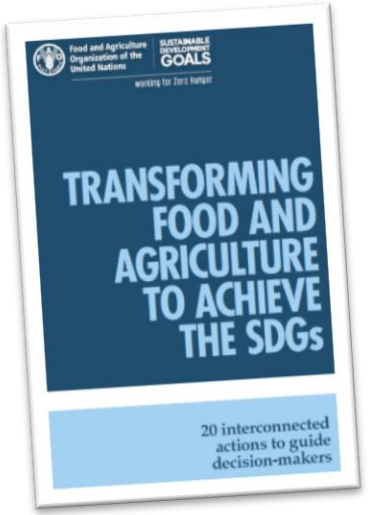
Life Cycle Assessment Platform
By cd2e

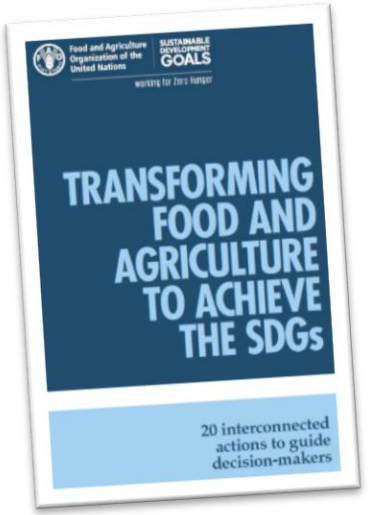
[avniR] Life Cycle Assessment Platform By cd2e





Agriculture, covering crops, livestock, aquaculture, fisheries and forests, is the world's biggest employer, largest economic sector for many countries, while providing the main source of food and income for the extreme poor.

Sustainable food and agriculture have great potential to revitalize the rural landscape, deliver inclusive growth to countries. A future where the focus is not solely on the end goal but also on the means used to achieve it.



Properly nourished, children can learn, people can lead healthy and productive lives and societies can Prosper

By nurturing our land and adopting sustainable agriculture, present and future generations will be able to feed a growing population

FAO guide presents 20 actions to speed up the transformation to sustainable food and agriculture

A2. Connect smallholders to markets
A3. Encourage diversification of production and income
A5. Enhance soil health and restore land
A6. Protect water and manage scarcity
A7. Mainstream biodiversity conservation and protect ecosystem functions
A8. Reduce losses, encourage reuse and recycle, and promote sustainable consumption
A12. Improve nutrition and promote balanced diets
A15. Address and adapt to climate change
A16. Strengthen ecosystem resilience

OUR CHALLENGE

HOW LIFE CYCLE ASSESSMENT STUDIES CAN HELP TO ACHIEVE FAO SUSTAINABLE DEVELOPMENT GOALS IN FOOD AND AGRICULTURAL SECTOR?

SCHEDULE

Presentation : 15 min
(+ 5 min for questions)

9h00 - 9h05 : Introduction

9h05 - 9h25 : Joachim BOISSY, Agro Transfert Ressources et Territoires
The establishment of agroforestry systems as a means of mitigating Greenhouse Gas Emissions

9h25 - 9h45 : Mirjam BUSCH, Institut für Energie- und Umweltforschung Heidelberg, Allemagne
Environmental impacts of innovative and modern vegetable meat alternatives and traditional animal-based food products

9h45 - 10h05 : Magdalena CZYRNEK-DELETRE, Ecole Supérieure d'Agricultures
LCA for ecodesign in agriculture : methodological issues of the transition from the plot to the exploitation

10h05 - 10h25 : Alessandra MONTEIRO, Animine
Evaluating the sustainability of zinc source in animal nutrition: case study for Hizox®

10h25 - 10h30 : Conclusion