



PetFood LCA

invivo

Au cœur de nos métiers. le vivant



Context of the study

French national experimentation of the environmental display of mass consumption products

→ Consortium for the *Exigence* petfood labelling

= 1 agricultural cooperative + 1 food-processor + 1 distributor



NÉODIS



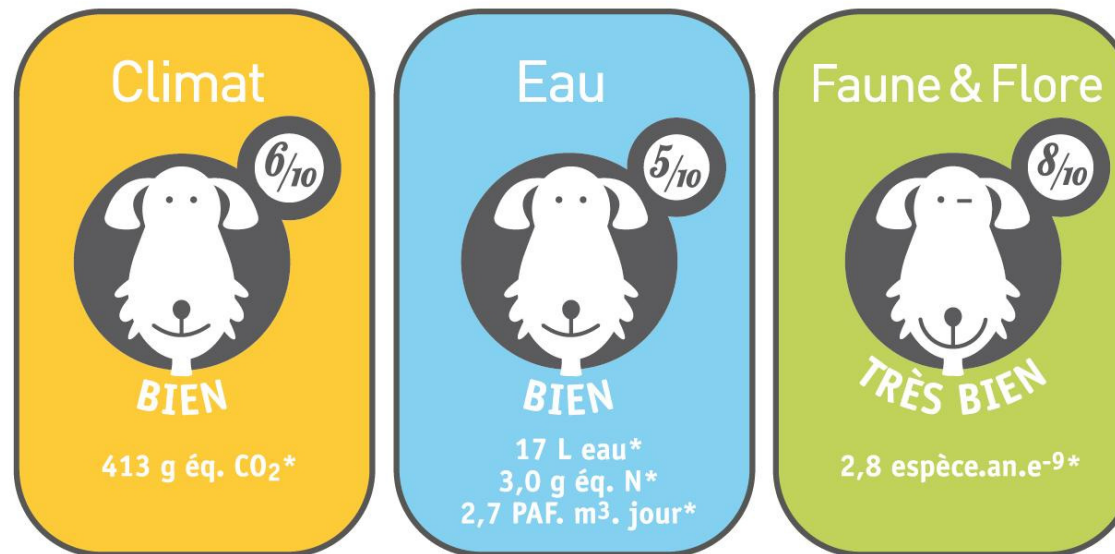
inVIVO
AgroSolutions



Context of the study

Bon pour lui, bon pour l'environnement

EXIGENCE s'engage au quotidien pour minimiser son impact environnemental à chaque étape de la fabrication de ses croquettes, de la sélection des ingrédients jusqu'en magasin.



* par ration de croquettes








in vivo
AgroSolutions



Environmental impacts indicators studied



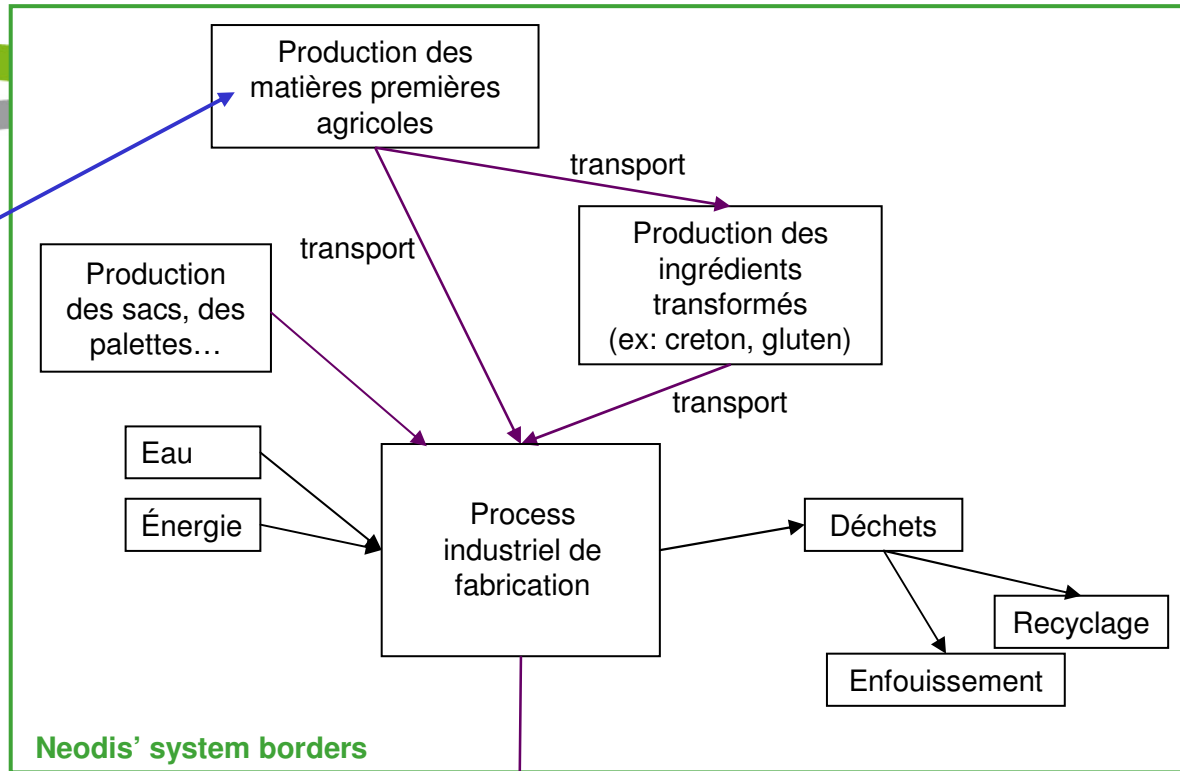
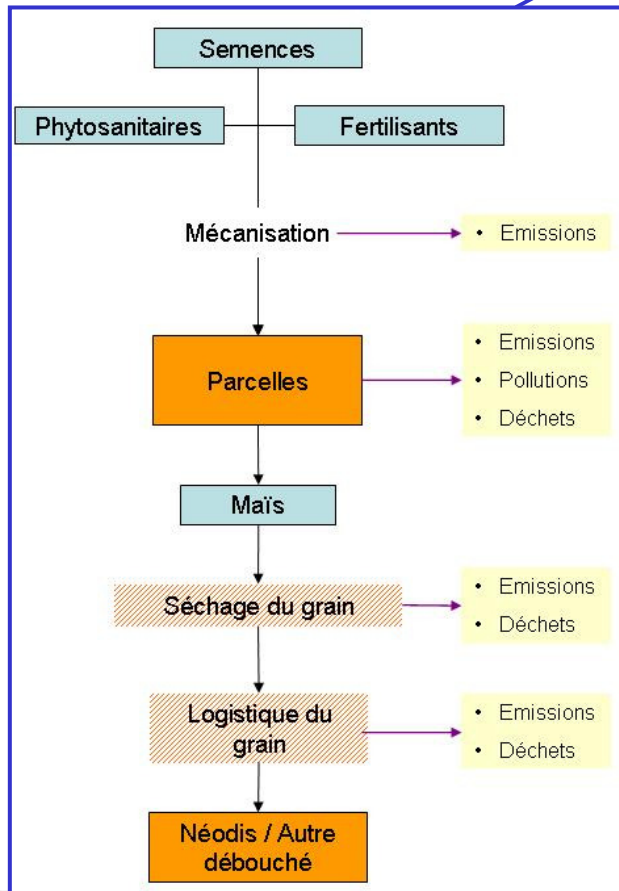
	Climate change		
	Greenhouse gases emissions	kg eq. CO ₂ (carbon dioxide)	IPCC Method
	Ressources consumption		
	Water depletion	m ³	Flow indicator
	Water pollution		
	Marine eutrophication	kg eq. N (nitrogen)	ReCiPe Method
	Toxical impact		
	Aquatic ecotoxicity	PAF. m ³ .day	Usetox Method
	Biodiversity		
	Agricultural occupation	Species.year	Recipe Method



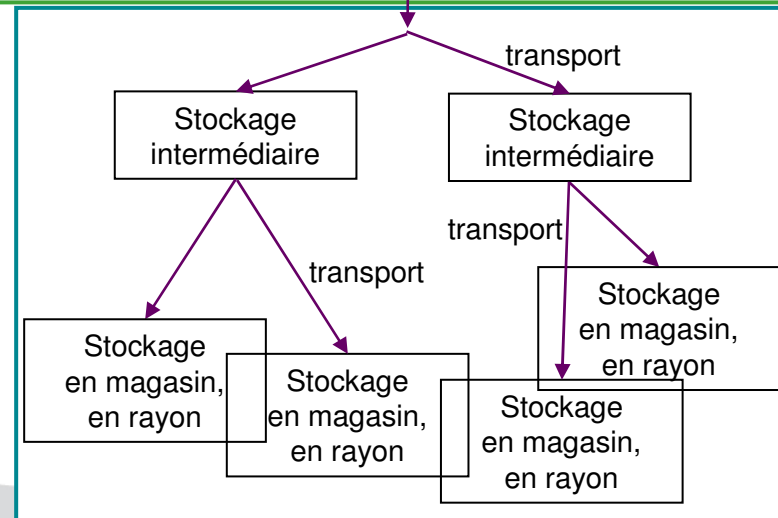


Studied system

Corea's system borders



Neodis' system borders

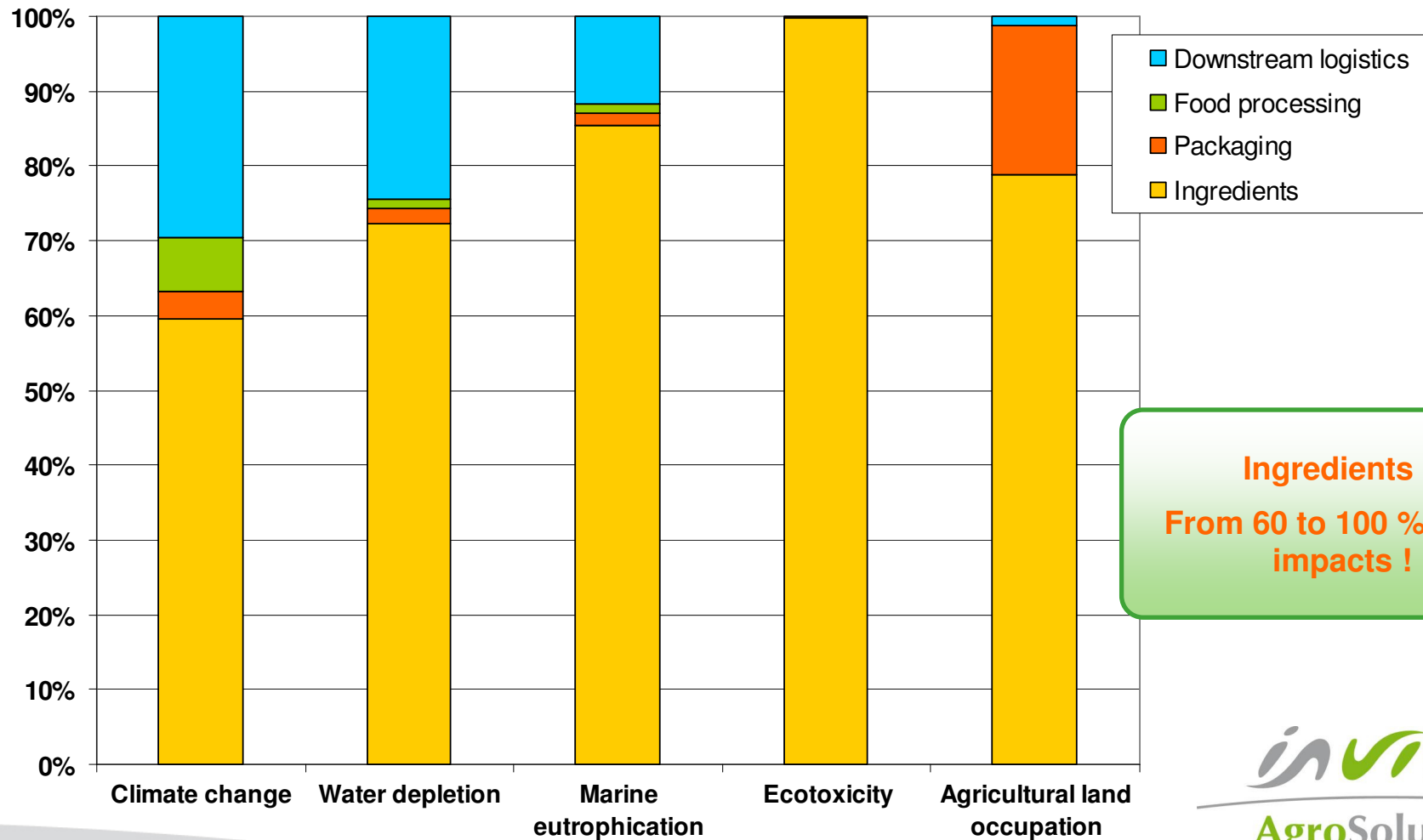


GammVert's system borders





Results: all the impacts indicators



**Ingredients =
From 60 to 100 % of the
impacts !**





Inventory

Main methodological choices

Ingredients :

For all:

- Economical allocation
- Transport considered

Maize

- 45 % maize = Corea's primary data

Animal and vegetal co products :

- If waste: not considered (most often the case of the animal co products)
- Not enough information
- Huge heterogeneity

Non-agricultural ingredients

- Generic inventories





Inventory

Main methodological choices

Methodology adopted

1. Primary data

- Corea's maize

2. Documented LCA inventory (such as Ecoinvent data)

- Gluten
- Beetroot pulp, kaolin

2bis. Make-up from documented LCA inventory (such as Ecoinvent data)

- Maize lake crack : Ecoinvent inventories = [Maize production] * [(oat) Flaking process]
- Egg powder : [Egg = InVivo inventory] * [(milk) Powdering process = Ecoinvent inventory]

2ter. Partial documented LCA inventory (such as Ecoinvent data)

- Rice crack (no data on rice processing)

3. Bad-documented LCA inventory (such as LCA food DK data)

- Chicken meal, fish meal, pork fat... = ["blood bones and meat meal" inventory]

3.bis. Non-specific but documented LCA inventory (such as some Ecoinvent data)

- Dicalcium phosphate, potassium chloride
- Vitamin, Taurin, Flavoring
- Premix (make-up from this kind of data)

3.ter. Partial data from bibliographical study

- Yeast





Inventory

Main methodological choices

Main difficulties when no access to primary data:

- Lack and/or failure of secondary data
 - Reliable
 - Documented
 - Matching the reality / the needs
(geographical, technological representativeness)

- Data from published studies:
 - Often too specific
 - No well documented: system studied & borders, hypothesis, **figured results**
 - Impacts indicators choice

→ DATA HETEROGENEITY !!



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