

Sustainable agricultural production and the related societal challenges



Vision paper - 30/09/24

Contributing research departments : Biosystems, Earth & Environmental Sciences (inc. Bio-economy), Biology, Geography, Law (inc. Ethics)

[Metaforum] Food production (in Belgium) must consider more the climate, the environment, the biodiversity and the human health

- The hypothesised keys for the agricultural sector to achieve this are:
 1. Innovation of agricultural practices
 2. Protein transition
 3. Concentration and compartmentalisation of agricultural land use
 4. A revenue-model for nature-inclusive agriculture

- Framework for research questions, projects, programmes
- Focus for (internal, KU Leuven) funding programmes

1. Innovation of agricultural practices



2. Protein transition

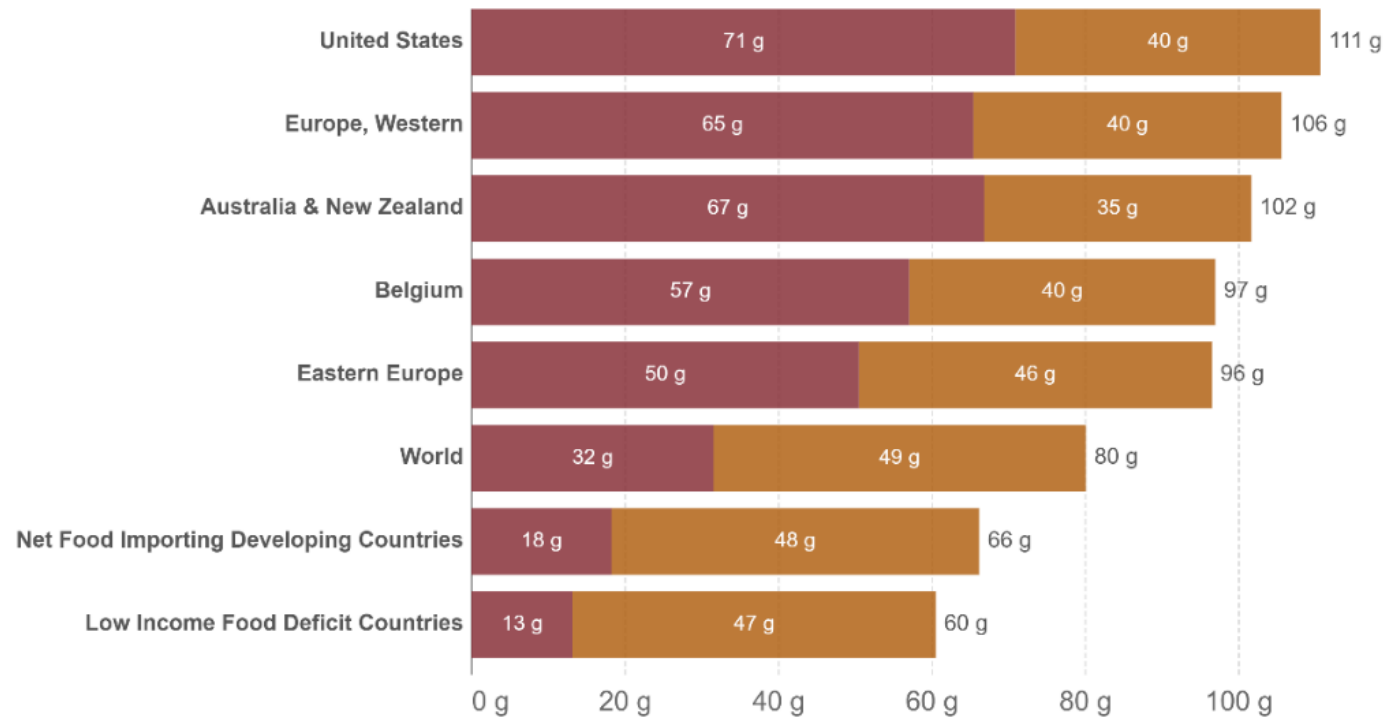
Current consumption of proteins versus optimal consumption (60-70g proteins/day: 1/3 animal based, 2/3 plant-based)

Daily protein supply from animal and plant-based foods, 2010

Our World
in Data

Daily per capita protein supply is measured in grams per person per day. Protein of animal origin includes protein from all meat commodities, eggs and dairy products, and fish & seafood.

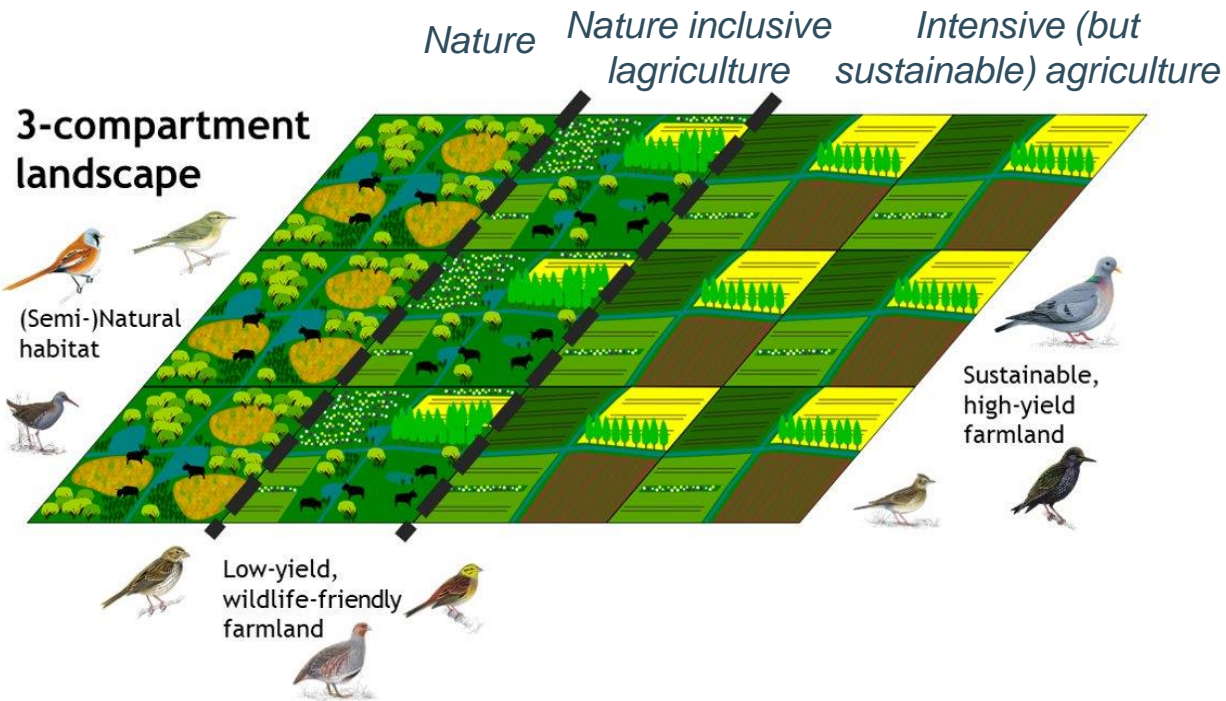
■ Animal protein ■ Plant protein



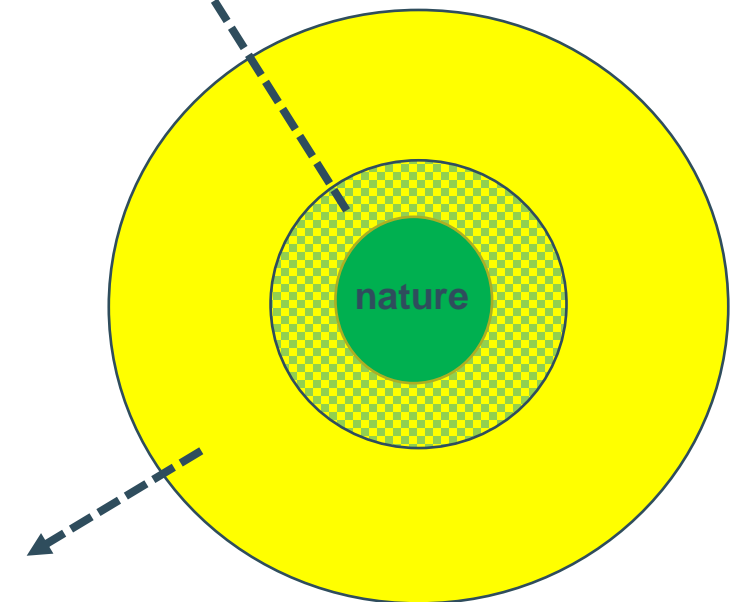
Source: Food and Agriculture Organization of the United Nations

OurWorldInData.org/diet-compositions • CC BY

3. Compartmentalisation to allow Concentration Towards a 3-compartment landscape



- **Nature inclusive agriculture**
 - Oriented towards biodiversity conservation
 - Concentration of agri-environmental measures
 - Need for a revenue model



- **Intensive but (more) sustainable agriculture**
- General species provide major part of Ecosystem Services. Only few and simple measures are necessary. *Win-Win* for agriculture and biodiversity must be found

4. Revenue model for nature-inclusive agriculture