

Challenges for food security: creating just, healthy, sustainable food systems globally in a changing world



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Food and nutrition in the 21st century

Warsaw

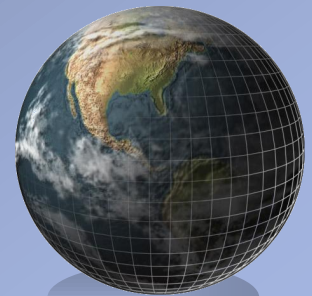
9 September 2011

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Key challenges

- Climate change
 - Unintended consequence
- Marginalisation of the majority world
 - Inequality increased in most countries

Sources: Abbott, Rogers and Sloboda, Oxford Research Group; Richard Jolly; Malcolm Dando



Global wealth distribution, 2000

- 10% of adults own 86% global household wealth
- 50% own barely 1%
- Average person in top 10% owns nearly 3000 times wealth of average person in bottom 10%



Source: WIDER Angle, 2/2006



Key challenges

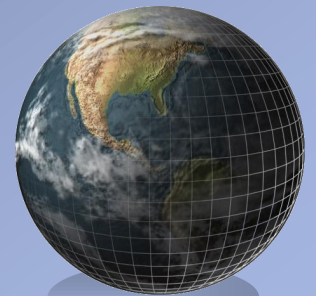
- Competition over resources
 - Energy, land, minerals, fresh water
- Global militarisation
 - BTWC, dual use & bio-weapons
 - US DOD - \$2bn to synbio, biotech, nanotech etc in 2012

Sources: Abbott, Rogers and Sloboda, Oxford Research Group; Richard Jolly; Malcolm Dando



Food security - FAO 1996

- A situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life
- Sustainability
- Equity
- Power, control



From production and products



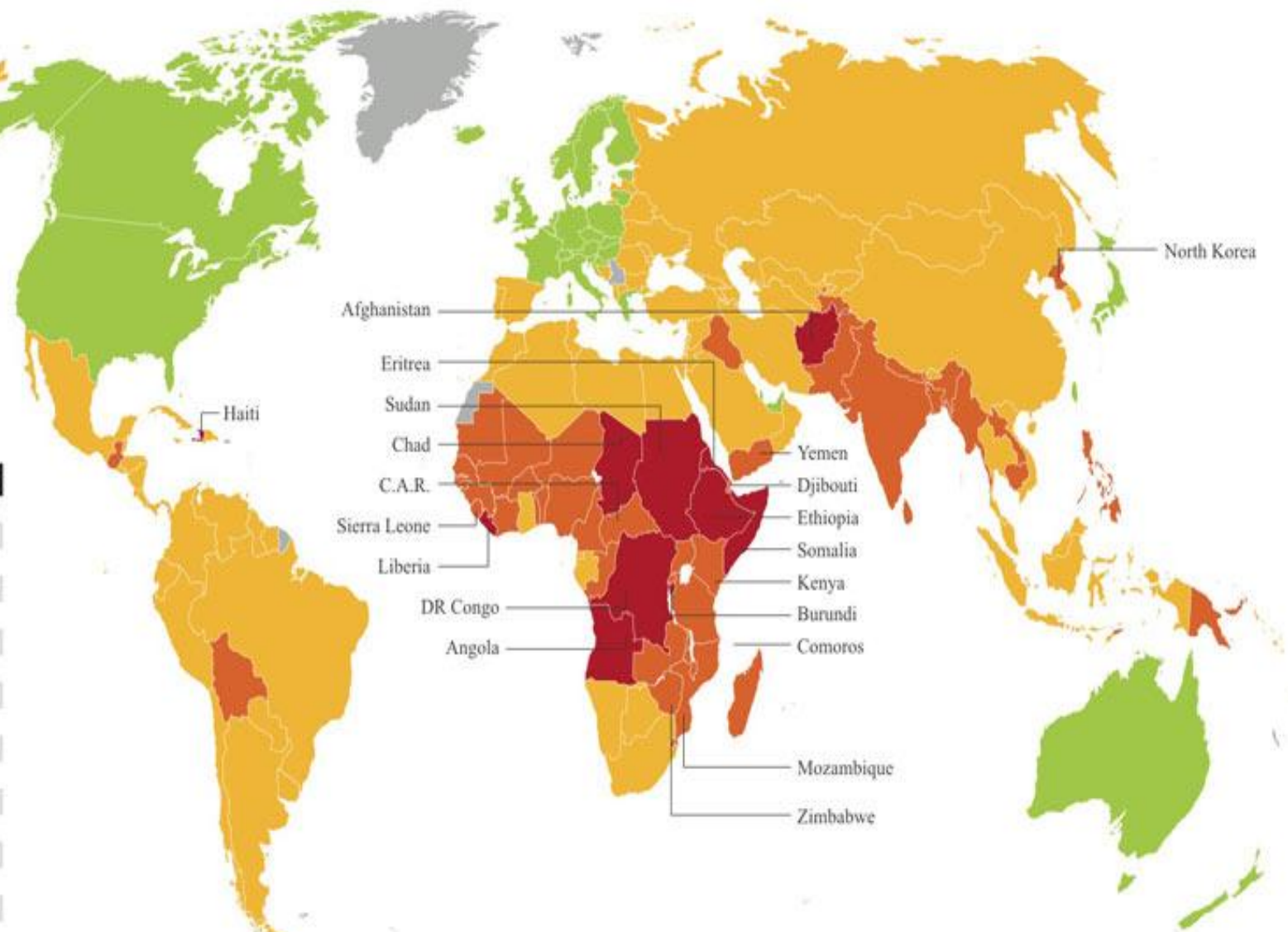
Power,
processes and
thinking about systems
- and how to change
them

See: Donella H. Meadows, *Thinking in Systems - A Primer*, Earthscan, 2009

Food Security Risk Index 2011

- Extreme risk ■
- High risk ■
- Medium risk ■
- Low risk ■
- No Data ■

Rank	Country	Category
1	DR Congo	extreme
1	Somalia	extreme
3	Burundi	extreme
4	Eritrea	extreme
5	Angola	extreme
6	Chad	extreme
7	Ethiopia	extreme
7	Haiti	extreme
9	Afghanistan	extreme
9	Liberia	extreme
11	Comoros	extreme
12	Sudan	extreme
13	C.A.R.	high
14	Djibouti	high
15	Zimbabwe	high
16	Yemen	high
17	Sierra Leone	high
18	Mozambique	high
19	North Korea	high
20	Kenya	high



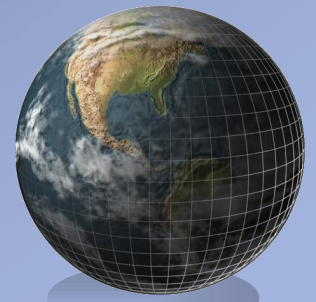
Alternative futures - differing narratives

- Productivity
 - techno-fix, economic growth, demand exogenous
- Sufficiency
 - ecological balance / diversity / equity
- Bifurcation
 - richest 1.5-2 bn enhance / maintain their lifestyles, rest contained by technologies of control or suffer adverse consequences)



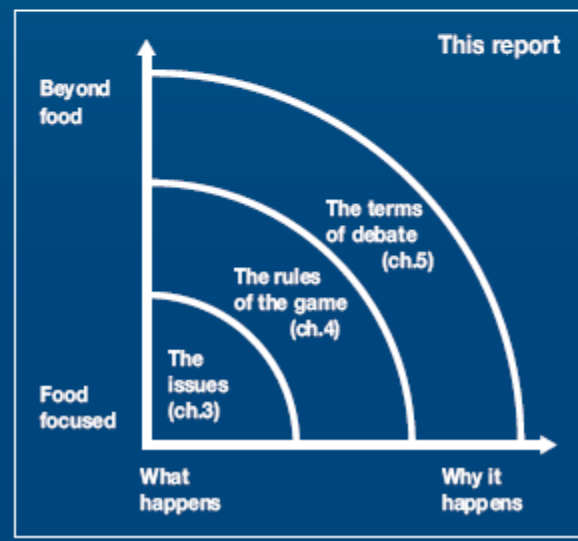
What kind of innovation do we need to secure our future food?

- local / institutional / political / social / economic / legal
- not just technological / production
- Sustainable production, sustainable and equitable consumption



Food Justice

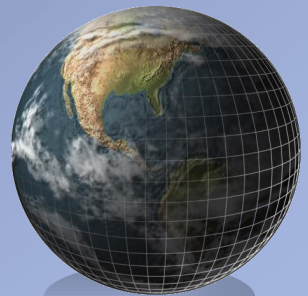
The report of the Food and Fairness Inquiry



Fair shares

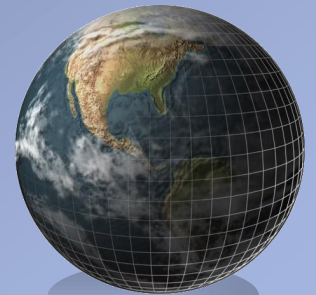
Fair play

Fair say



Questions of historical & contemporary responsibility

- GHG emissions
- Ecological debt



Excess innovation?

We are in our current fix because of an excess of financial innovation, driven by ever-increasing thirst for short-term profit.

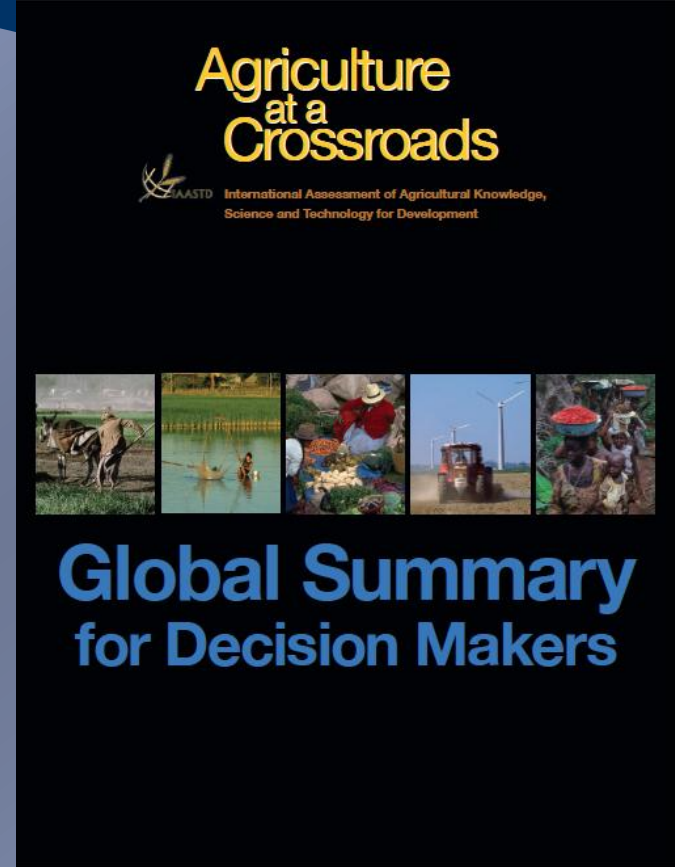
.... We now need to rewrite the rules of finance and global business.

Angel Gurría,
OECD Secretary General,
27 January 2009,



Changing paradigms & practices

- To agro-ecological farming from industrial, fossil fuel based model
 - IAASTD
 - Millennium Ecosystem Assess
 - National Academy of Sciences

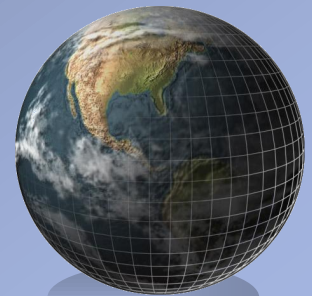


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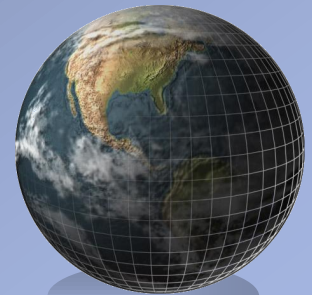
'Intellectual Property' Reality

- monopoly (or exclusionary) privileges given for societal benefits
- Embedded in WTO / hard law
- Patents regime facilitates form of private taxation

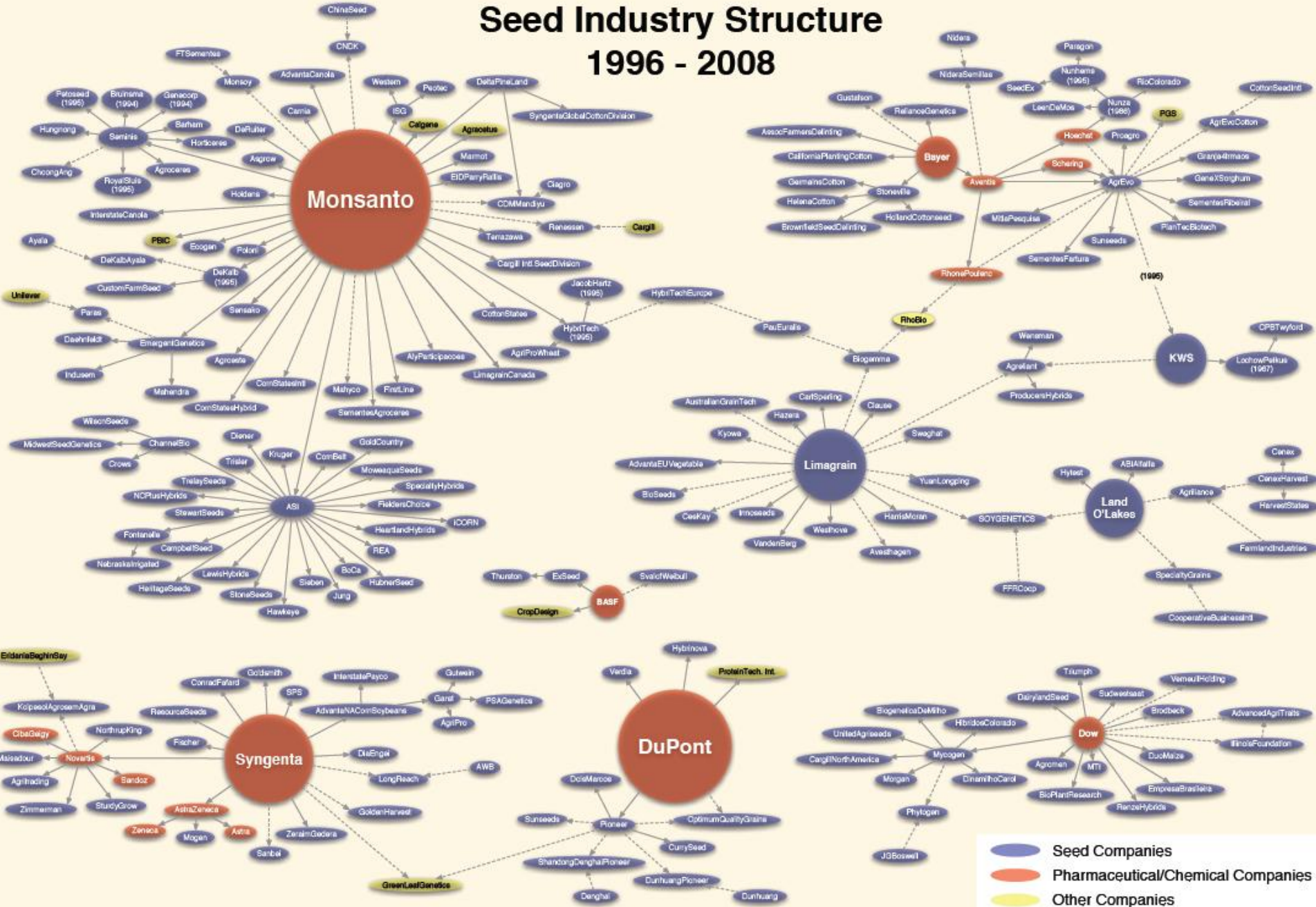


Changing face of research and development

- Access to knowledge
- Freedom to operate
- Skewing questions asked, solutions sought
- Going the wrong way?
 - Open access, distributed innovation, ecologically supportive or the pharma model



Seed Industry Structure 1996 - 2008



Size proportional to global seed market share

Phil Howard, Assistant Professor, Michigan State University
<http://www.msu.edu/~howardp>

- Seed Companies
- Pharmaceutical/Chemical Companies
- Other Companies
- Full Ownership
- - - Partial Ownership

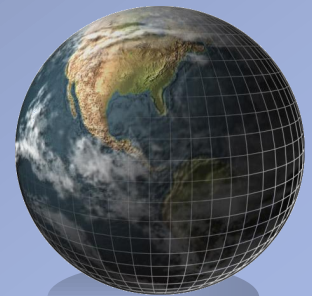
Rewriting rules, laws, incentives

- Governance systems
 - Multilateral, regional national & local
 - Committee on Food Security
 - Commodity trading - food price speculation
 - Stocks - grain reserves
 - TNCs - transparency, accountability
 - Corporate law



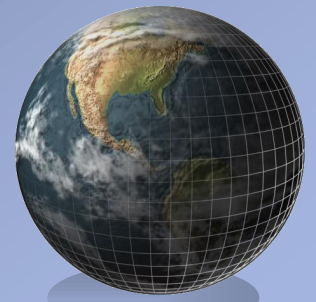
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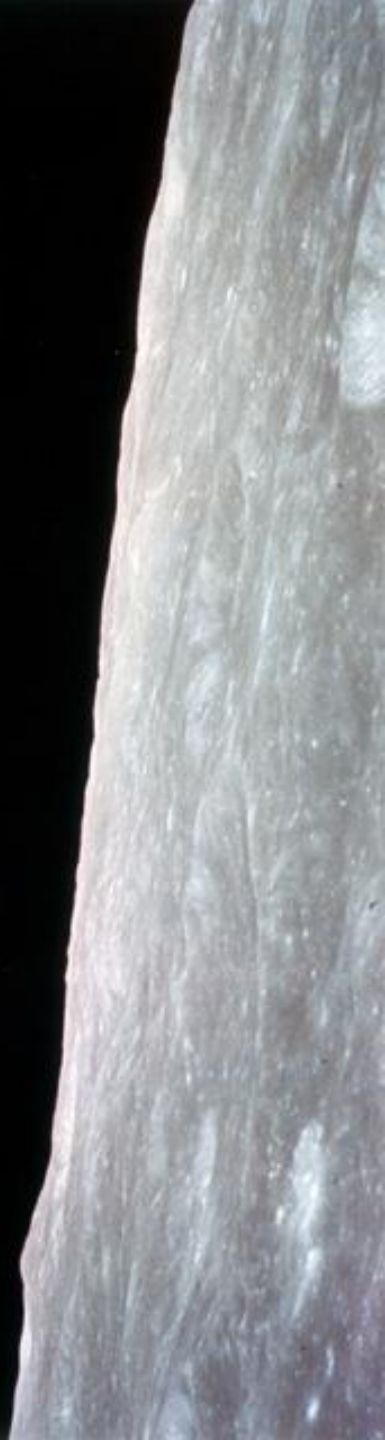
- Linking nutritional well-being to farming
 - Marketing and advertising
 - Waste
 - Priority setting



Beyond current assumptions

- In the future will we in Europe be able to eat / consume whatever we want?
- Should we be able to?





Future horizons connect

Sustainability

Climate change

Health

Equity / Social Justice

Gender

Conflict / cooperation

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