
Food Systems and Climate Change

The need to manage demand

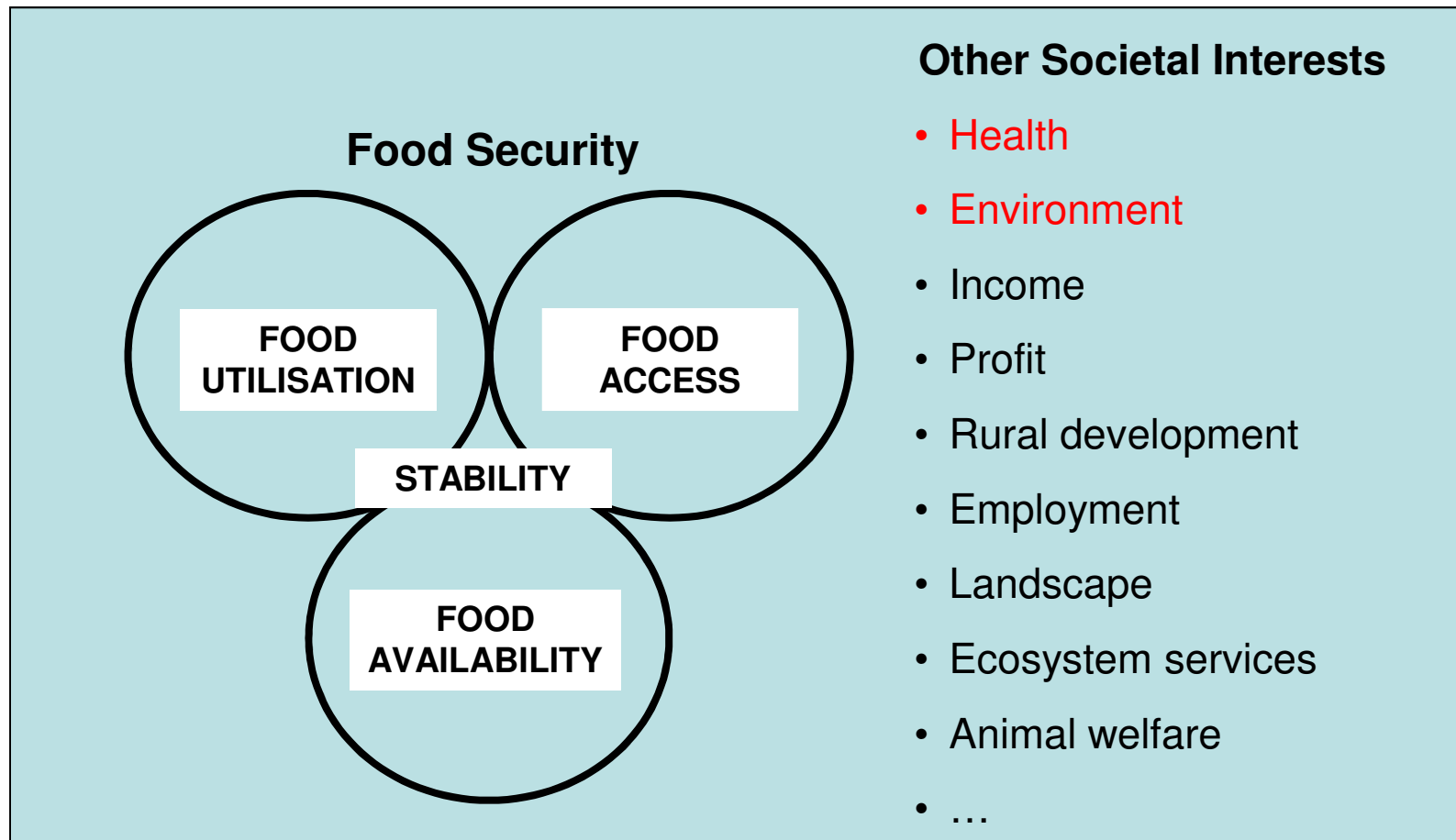
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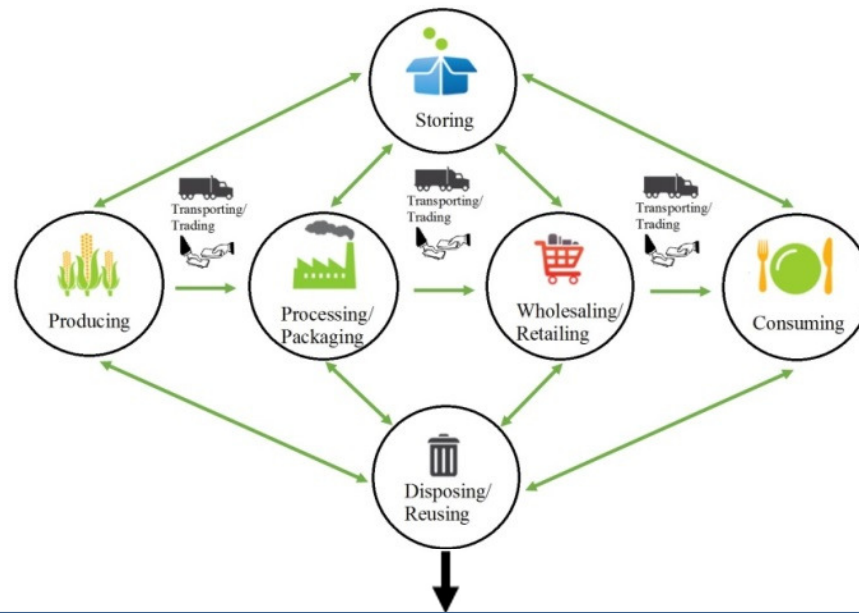
Environmental Change Institute



So what do we want from Food Systems?



'Activities' and 'Outcomes': Balancing the 'What We Want' with the 'What We Do' and the 'What We Get'

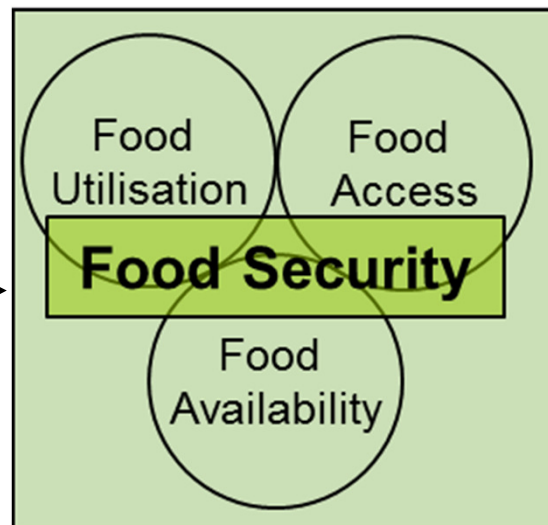


Trade-offs to be aware of!

Synergies to exploit!

Socioeconomic Outcomes

- **Health**
- Employment
- Wealth
- Social capital
- Human capital
- Equity
- ...



Environmental Outcomes

- **Climate change**
- Water availability
- Water quality
- Biodiversity
- Biogeochemistry
- Soil degradation
- ...

We know the current impact of food system activities the global environment

- Soil 33% degraded
- Fresh water 20% aquifers overexploited
- Biodiversity 60% of loss
- Marine resources 29% over-fished; 61% fully-fished

And pollution: chemicals, plastics, litter, ...



ARTICLES

<https://doi.org/10.1038/s43016-021-00225-9>

nature
food

Check for updates

Food systems are responsible for a third of global anthropogenic GHG emissions

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So what's coming down the track and for whom?



More
or
Less
?

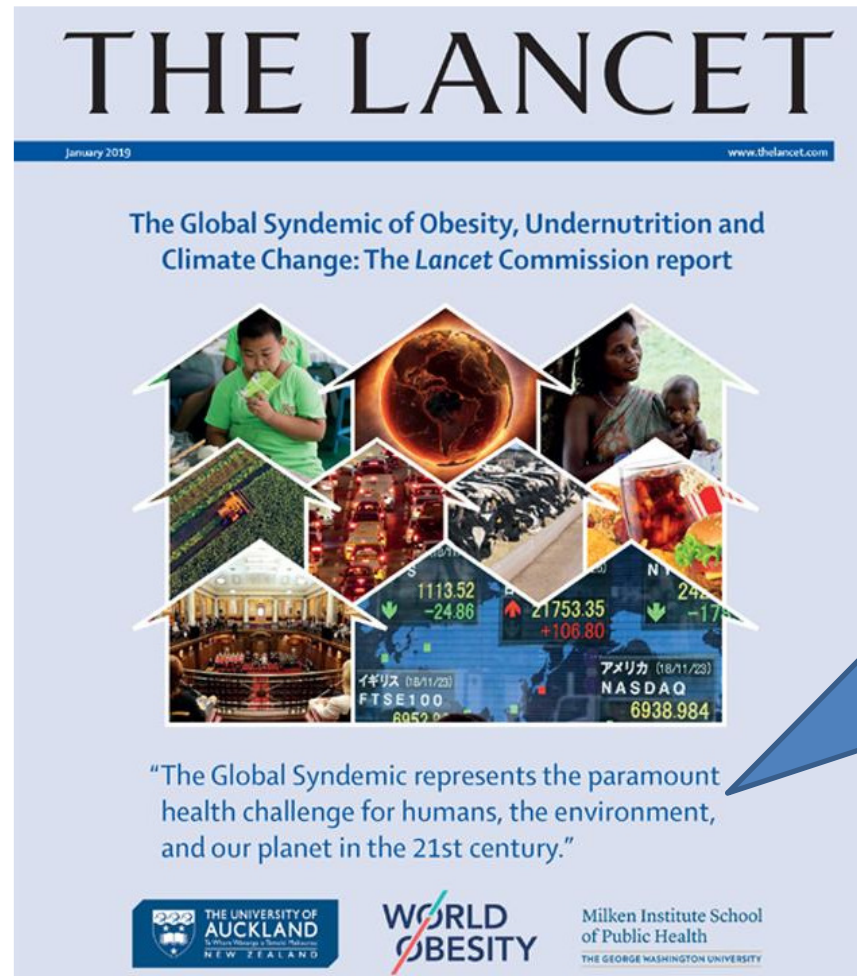


How will Interacting Stresses and Shocks Impact the Food System?

Stress <i>pressure or tension exerted on a system</i>	Shock <i>sudden surprising event affecting a system</i>
Climate change	Extreme weather
Social & cultural norms	Election and Referenda results
Natural resource degradation	Food scares
Demography	Trade wars
Urbanisation	Geophysical events
Automation	Pandemics
Science & technology	
Geopolitics	

The 'Syndemic'

Obesity, Undernutrition and Climate Change



"The Global Syndemic represents the paramount health challenge of humans, the environment and our planet for the 21st century"

Looking ahead...

Extrapolated calorie consumption

(indicative; not to scale)

