

*Recipes for Food
Insecurity*

University of Texas
Hot Science - Cool Talks
@_RajPatel

Outline

The Imperfect Food System and a Need For Change

Understanding and Undoing the Plough

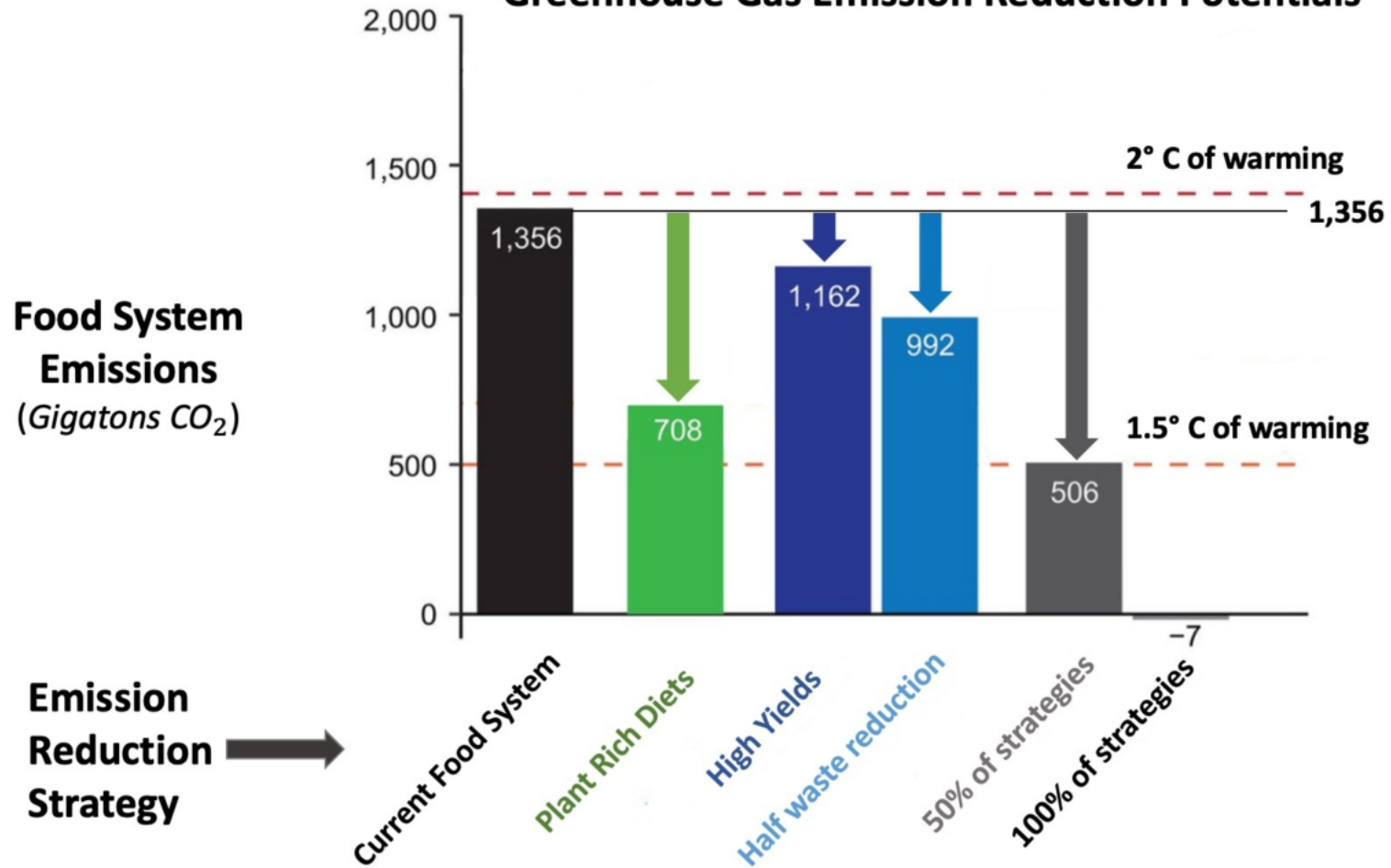
True Cost of the Food System

Is There Such a Thing as a Sustainable Food Industry?

Who'll have it the worst?

Hope for the Future

Greenhouse Gas Emission Reduction Potentials



Clark et al.,(2020)

“When jobs are scarce,
men should have more right
to a job than women”

- Sweden 2%
- United States 5.7%
- India 52%
- Egypt 99.6%

Ploughs

Alesina, Alberto, Paola Giuliano,
and Nathan Nunn. 2013. "On the
**Origins of Gender Roles: Women
and the Plough.**" *The Quarterly
Journal of Economics* 128
(2):469-530. doi: 10.1093/qje/
qjt005.



Who Will Undo
The Plough?



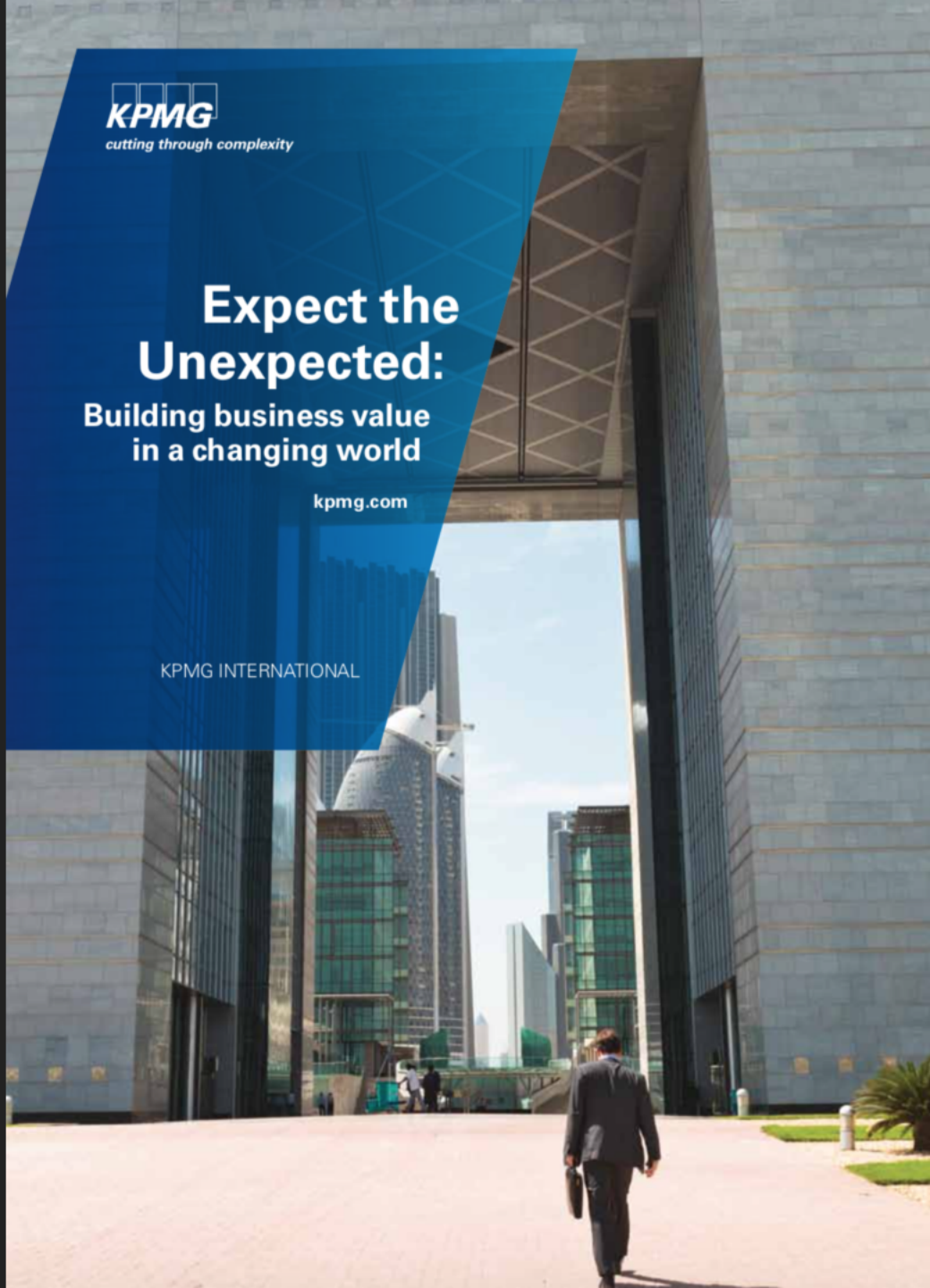
cutting through complexity

Expect the Unexpected:

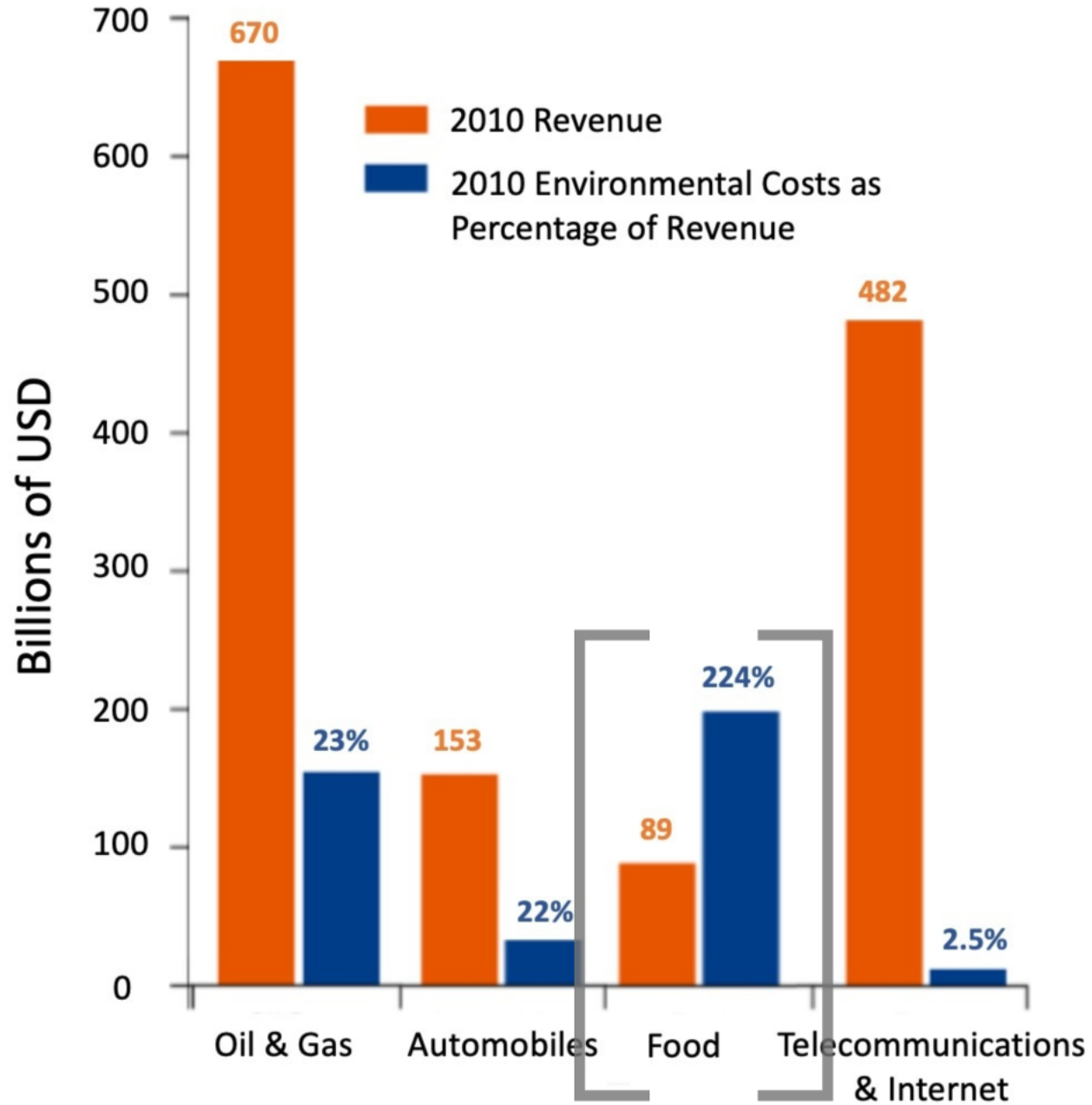
Building business value
in a changing world

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Negative Environmental Externalities Across 4 Sectors



A bar chart with two bars. The first bar is on the left, labeled 'Current National Expenditure on Food²', with a value of '~1.1T' written above it. The second bar is on the right, labeled 'Additional costs from quantitative metrics across 5 impact areas³', with a value of '~2.1T' written above it. A horizontal line is drawn across the chart, serving as a baseline for the bars.

~1.1T

**Current National
Expenditure on
Food²**

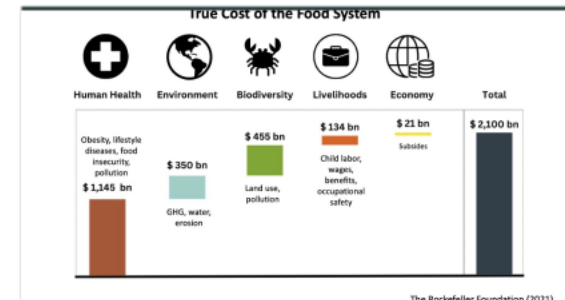
~2.1T

**Additional costs
from quantitative
metrics across 5
impact areas³**

~1.1T

Current National
Expenditure on
Food²

~2.1T



Additional costs
from quantitative
metrics across 5
impact areas³

True Cost of the Food System



Human Health



Environment



Biodiversity

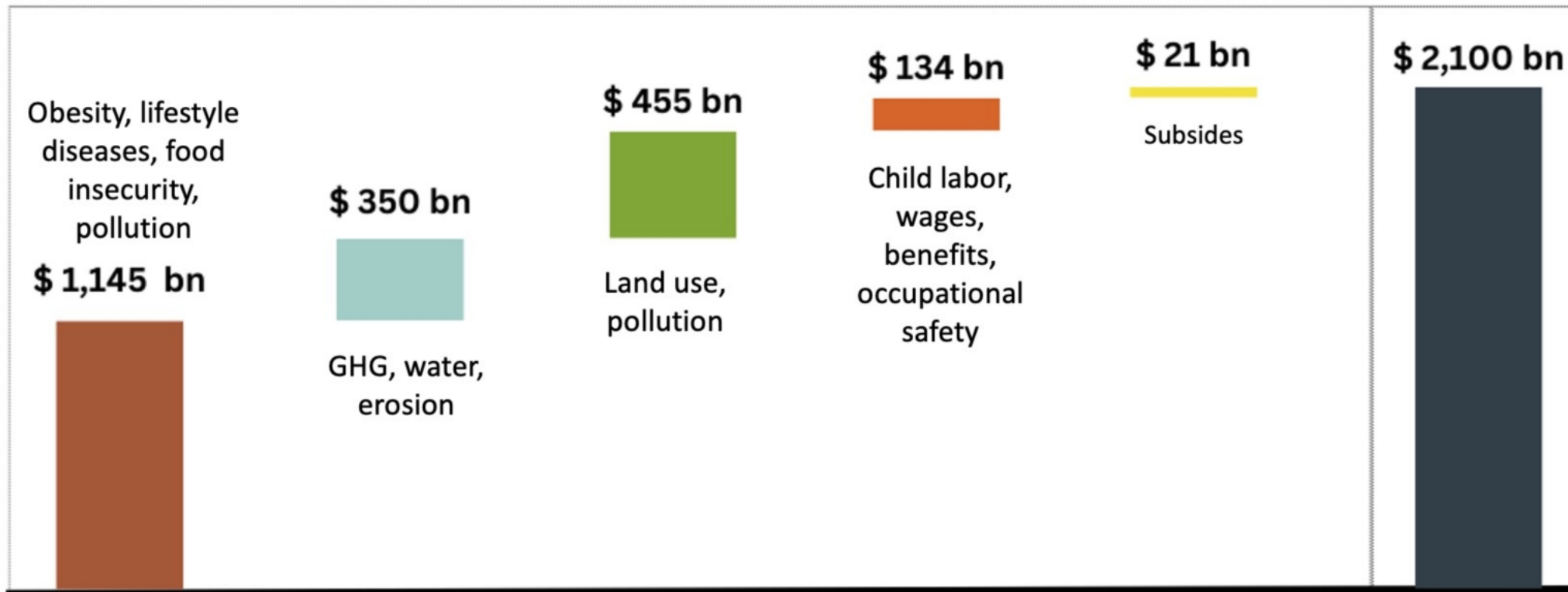


Livelihoods



Economy

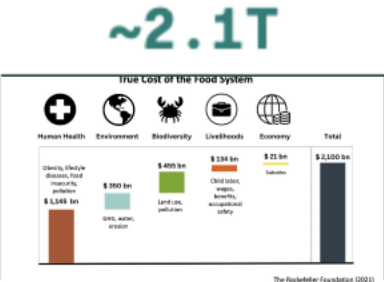
Total



ESTIMATED TRUE COST OF FOOD IN THE U.S., ANNUAL (T USD)



Current National Expenditure on Food²



Additional costs from quantitative metrics across 5 impact areas³



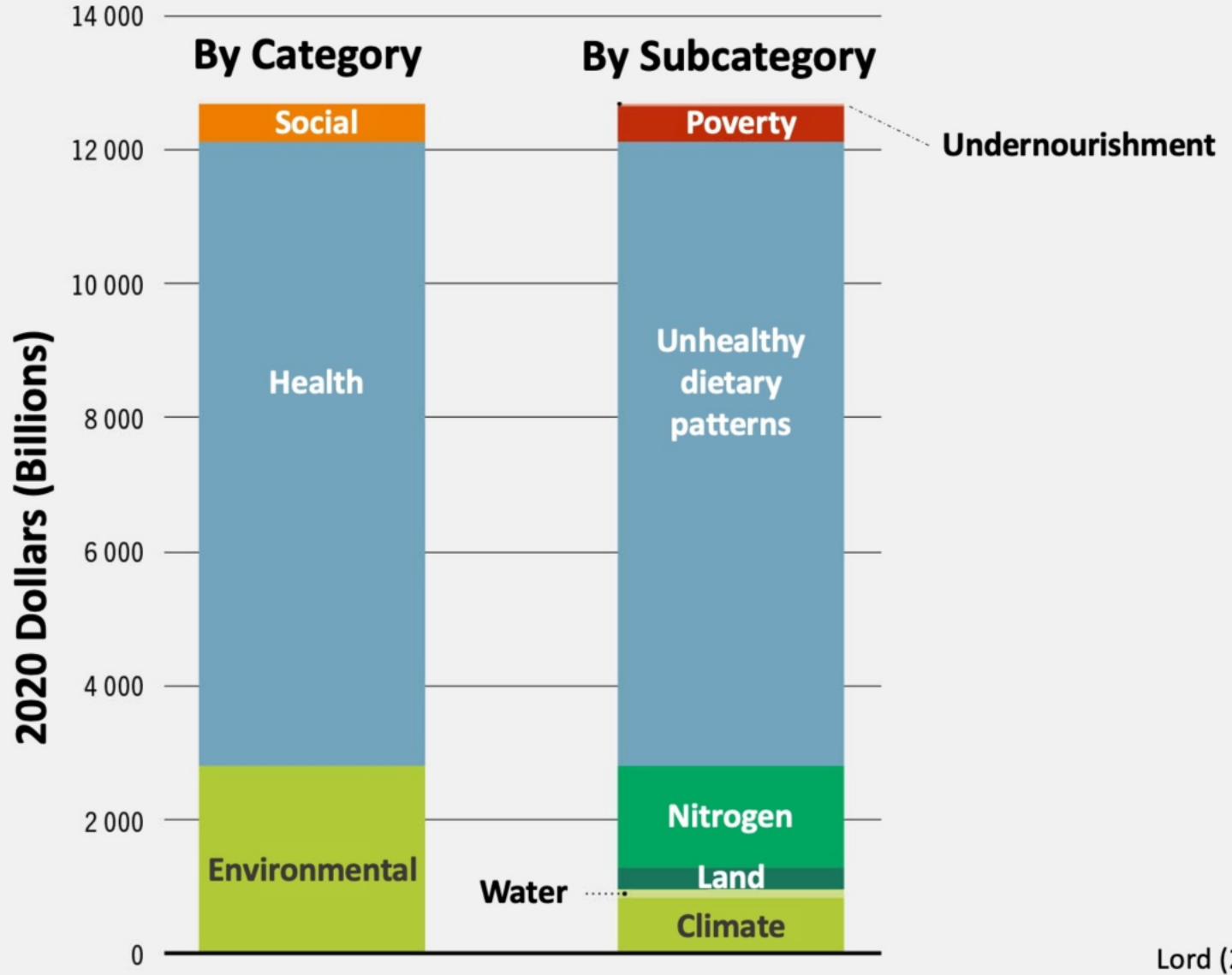
True cost of food

Qualitative impact— not measured in monetary terms

~3.2T

Quantified Hidden Costs of Agrifood Systems

2020 Dollars adjusted for currency differences between countries



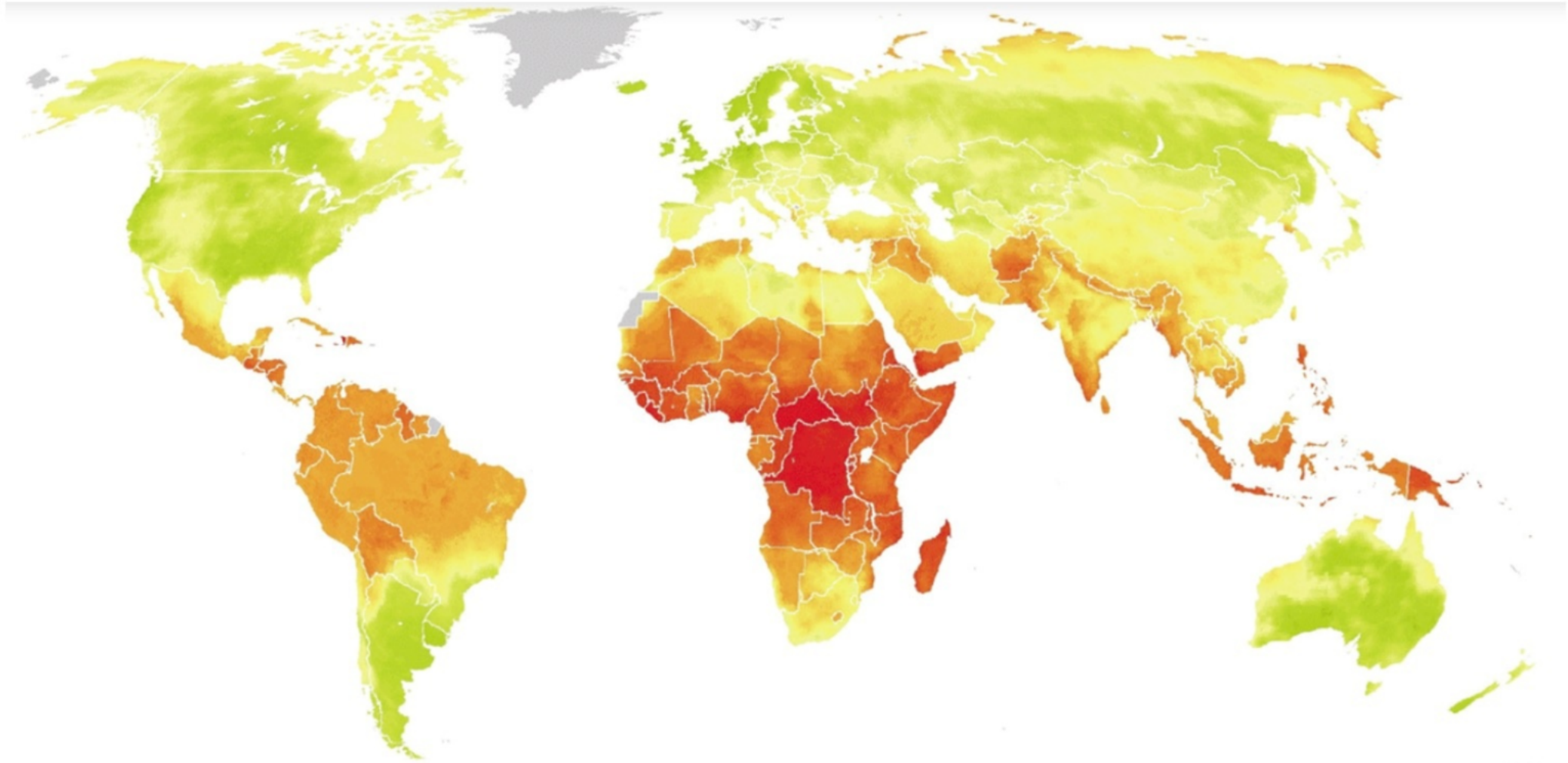
There's no
such thing as a
sustainable food
industry



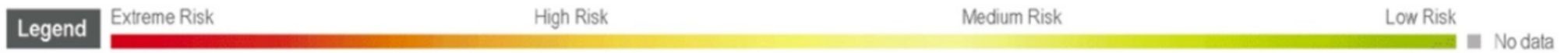




Climate Vulnerability Map



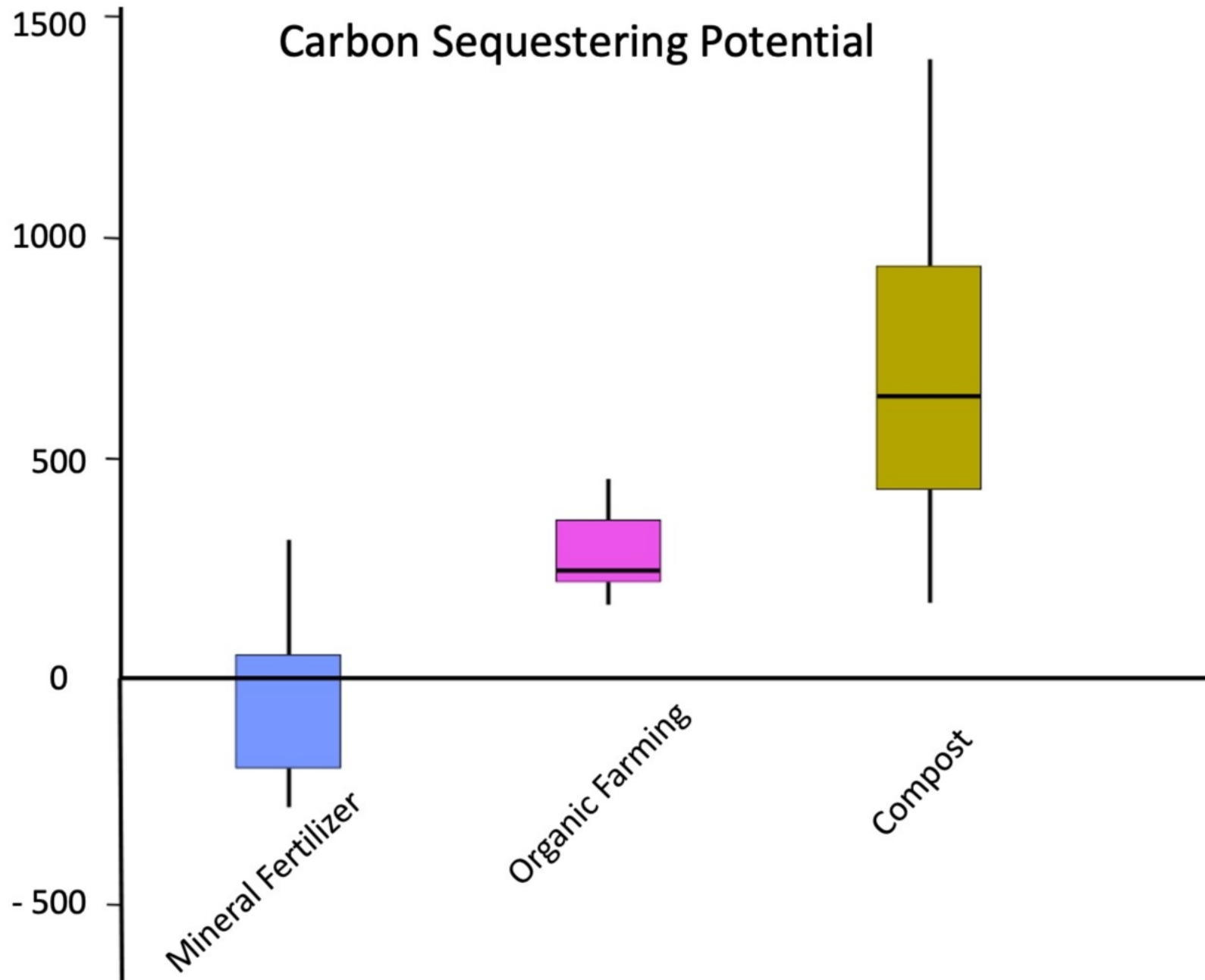
© Verisk Maplecroft 2016



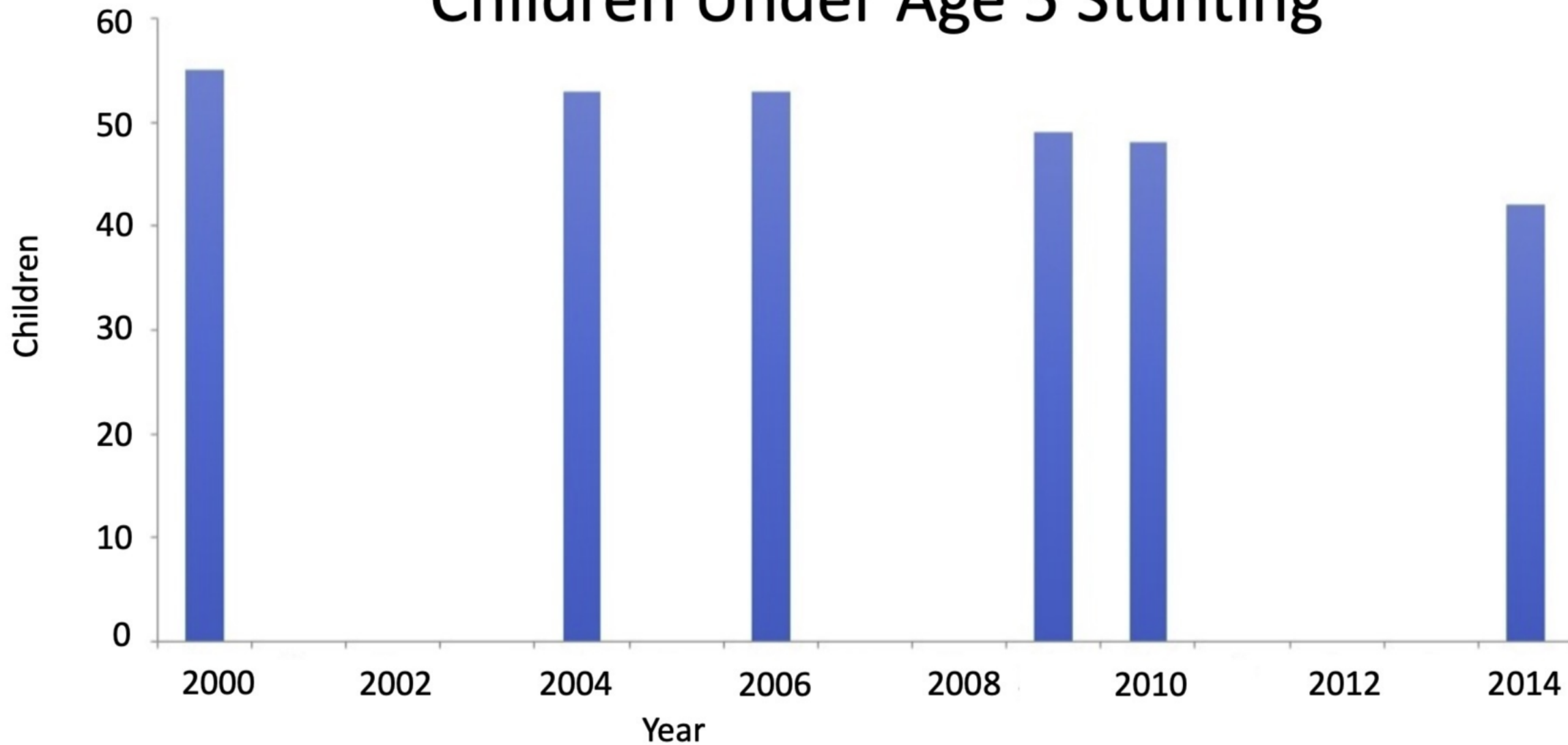


Carbon Sequestering Potential

Carbon Sequestering Potential (kg C / (ha y))

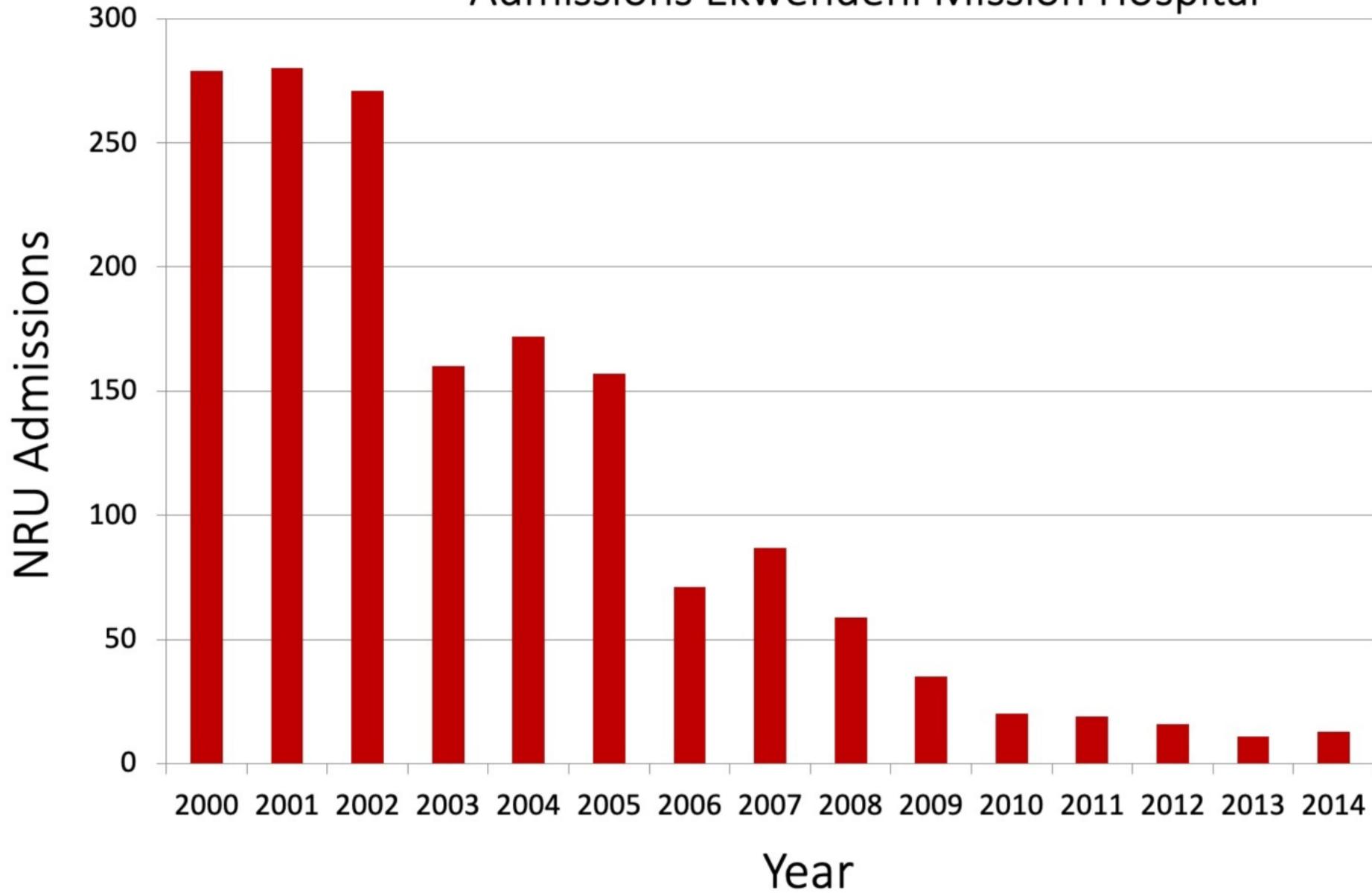


Children Under Age 5 Stunting



(Unicef/WHO/World Bank)

Neonatal Rehabilitation Unit (NRU) Admissions Ekwendeni Mission Hospital



Takeaways

Food system is responsible for a third of the world's green house gas (GHG) emissions but the true cost of the food system goes way beyond GHG.

We know what to do to take action against climate change

We can be humble in looking for new solutions

It's never too late to do the right thing

Thank you

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