



# **The Future of Food—Final Remarks**

## **The Challenge of 2025 and Beyond**

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**28 April 2010**



**“You can’t wake a person who’s  
pretending to sleep”**

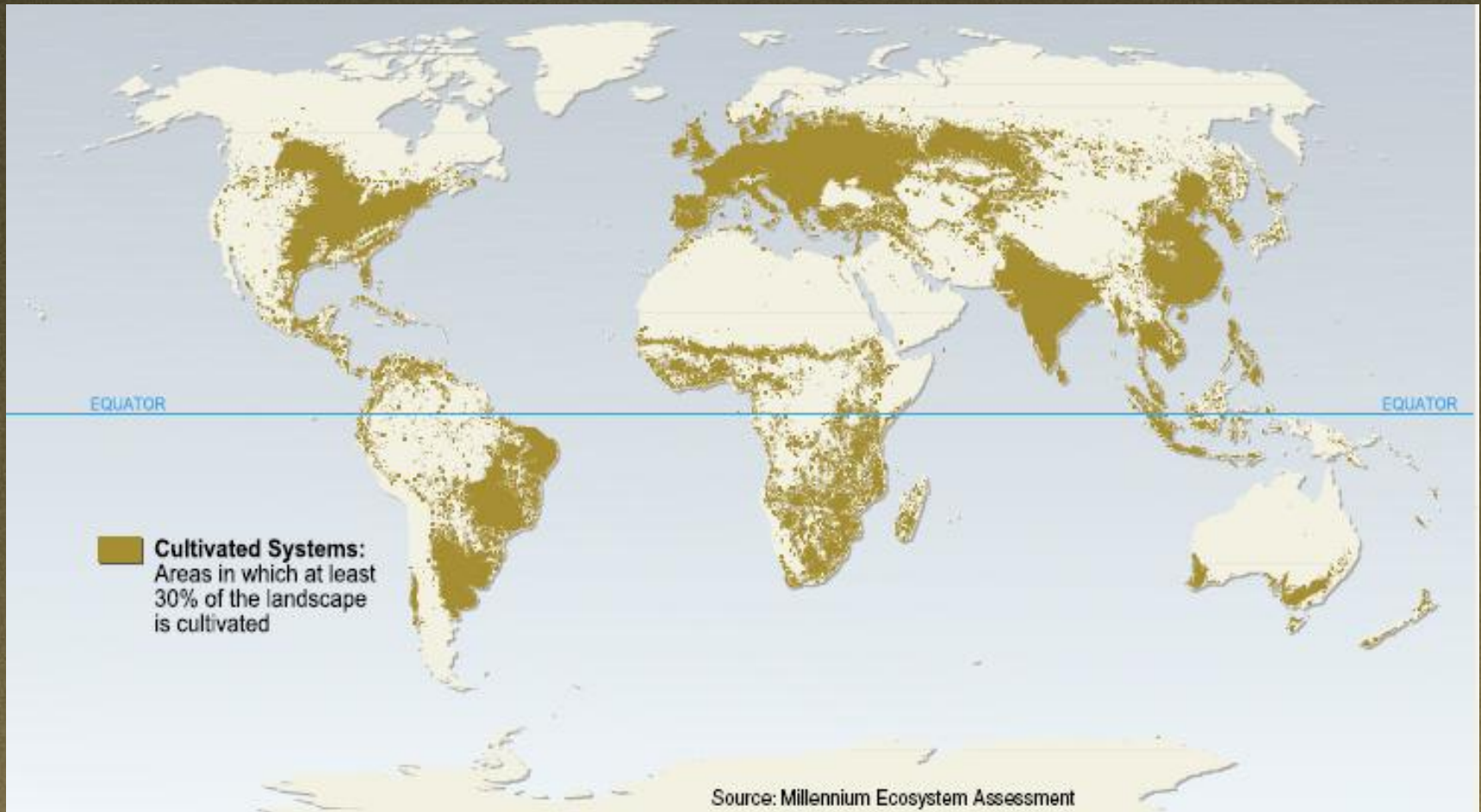
**Oromo Proverb**

**population x consumption  $\neq$  planet**



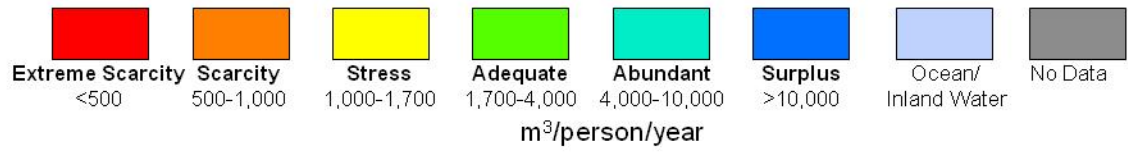
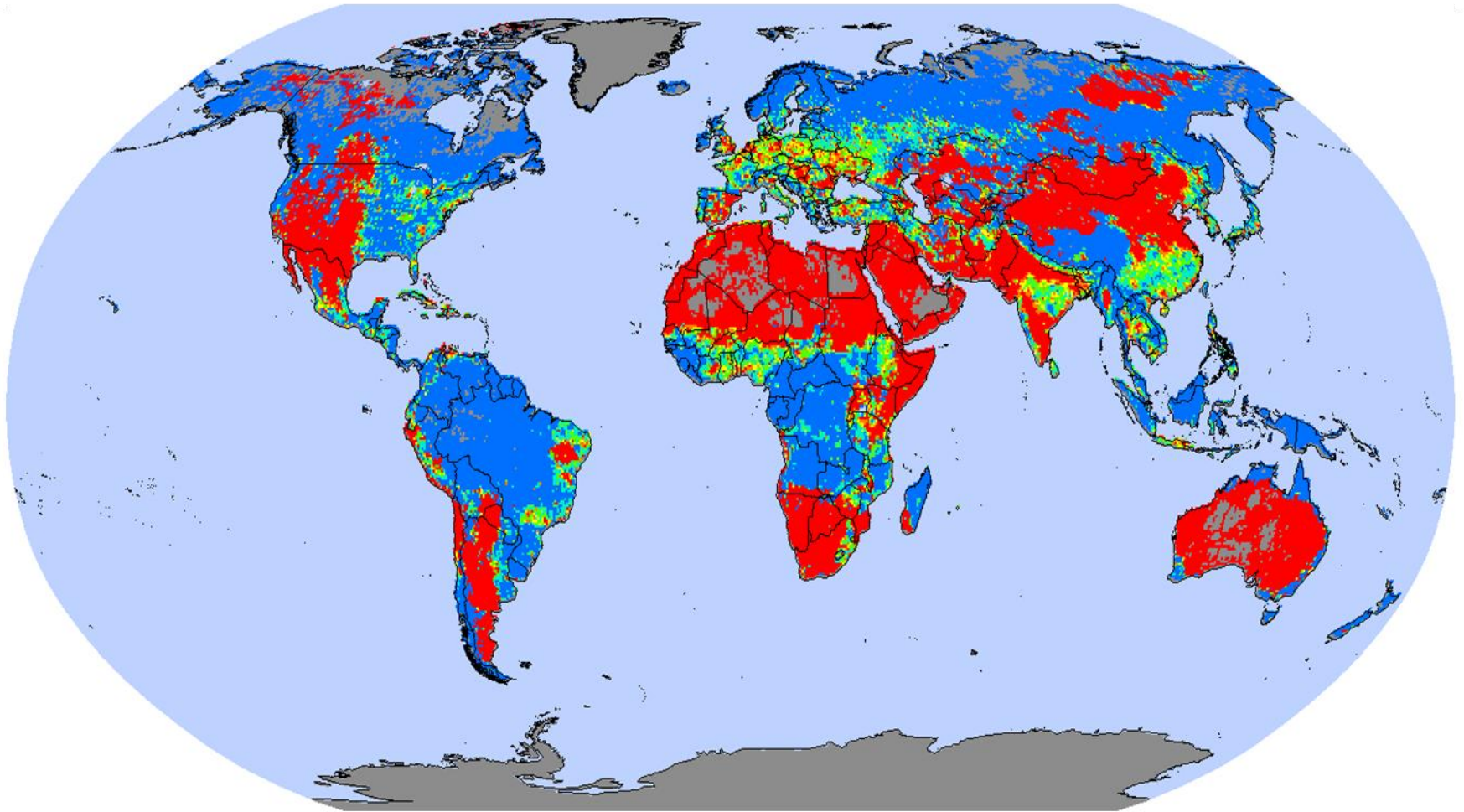
Should consumers have a choice  
about sustainable products?

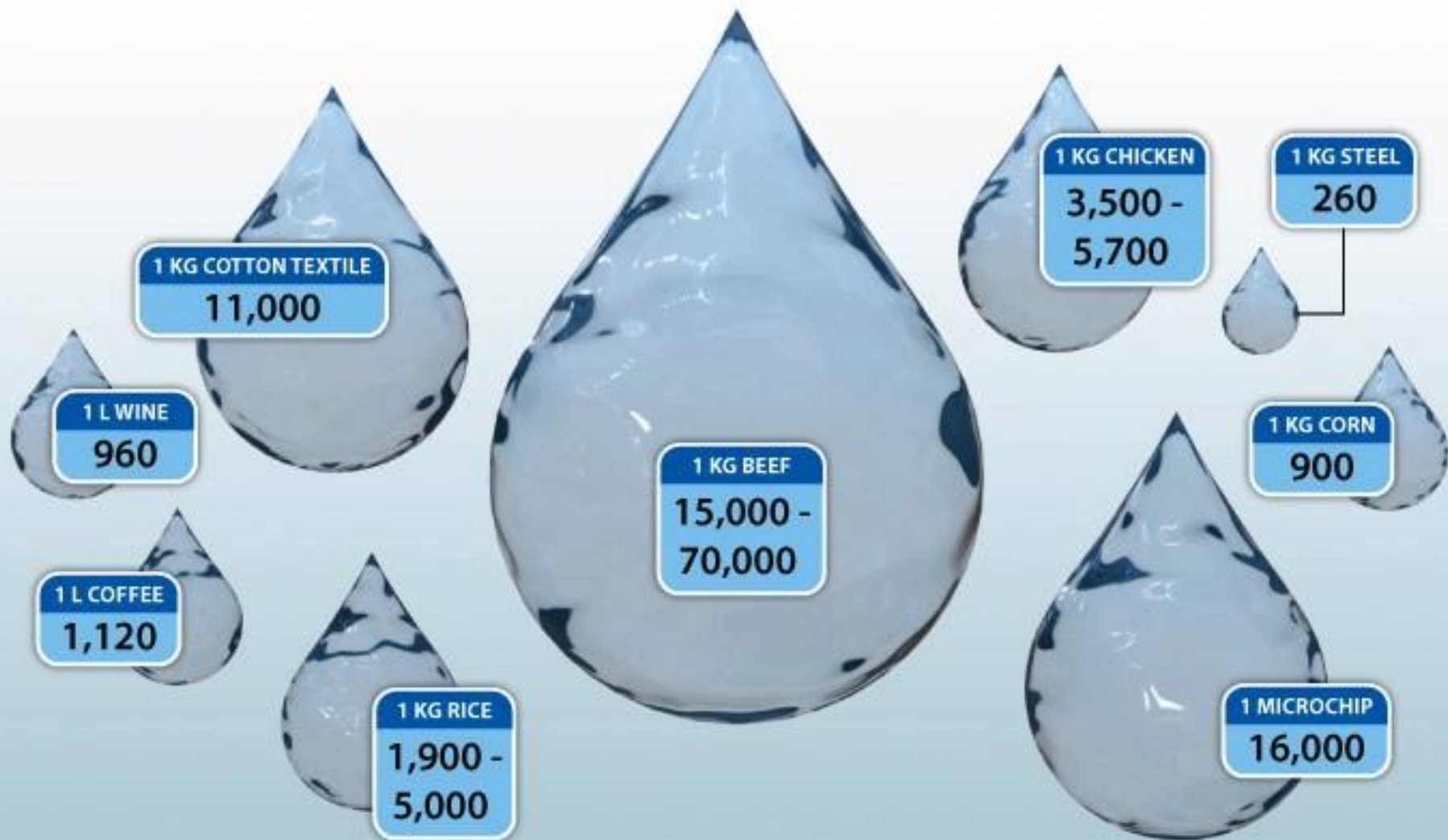
# Agriculture's Global Footprint



33% of Earth's surface in crops or grazing but 55% of habitable area

# Global Water Scarcity





(Liters)





**How much water does it take to make a 12-oz can?**



**How much rainforest does it take?**

## Selected Products, Water Use and Farmer Income

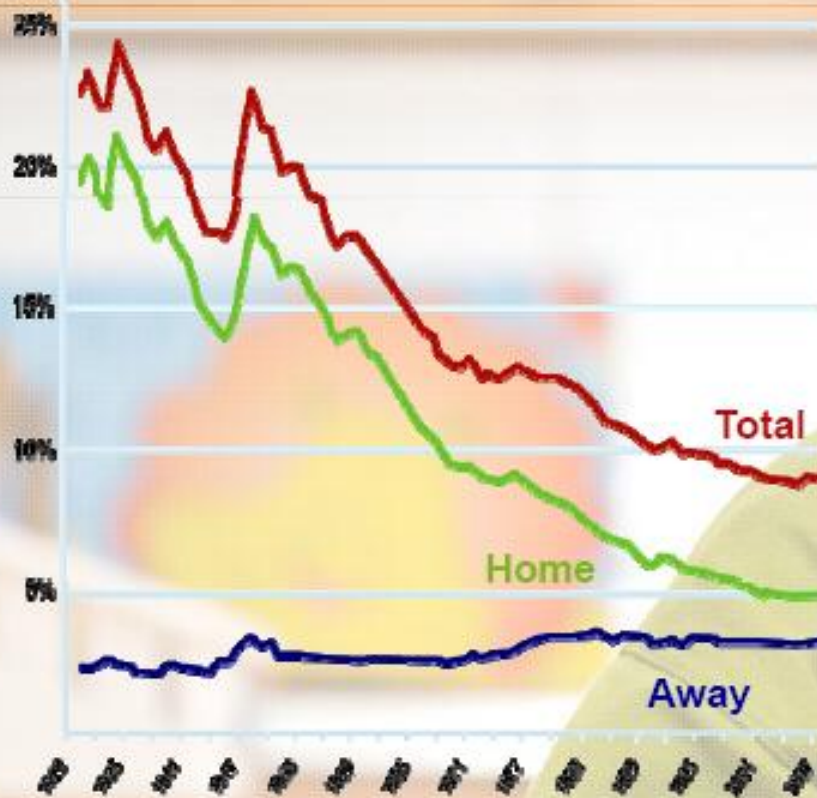
	Raw material input	Water to produce input	Farm gate price
1 Cotton T-shirt	4 oz ginned	500 to 2,000 liters of water	US\$0.20 (Aust.)
1 liter of soda	6 T sugar	175-250 liters of water	US\$0.006 (Brazil)
1 oz. slice of cheese	6 oz milk	40 liters of water	US\$0.03 (US)
1 double quarter-pounder	8 oz hamburger	3,000 to 15,000 liters of water	US\$0.25 (US)




# Is Food Too Expensive?

Pacific Ethanol, Inc.

U.S. Food Expenses  
Percent of Household Income



Yet, today, 1 billion don't have enough food.

The background is a dark, textured olive-green color. At the bottom, there is a silhouette of a mountain range with several peaks of varying heights. The text is centered in the upper half of the image.

And, about half of the world's farmers aren't able to feed themselves.

# Social Impacts of Business as Usual in this Context

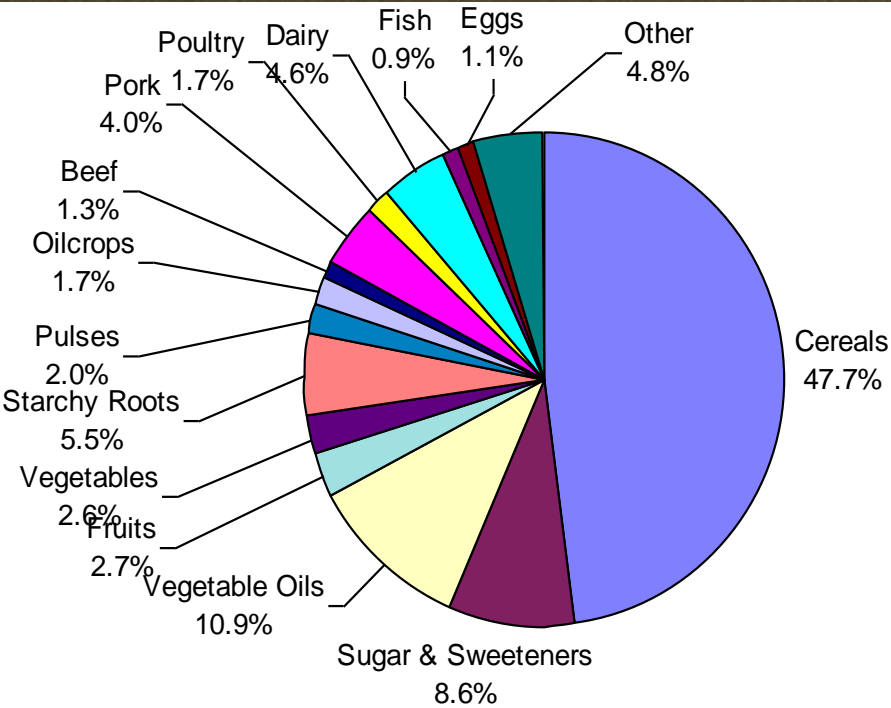
- Rise of infant mortality
- Increase in children who do not achieve their mental potential
- Increase in disease and the severity of disease
- Development held hostage to food shortages
- Social conflict, famines, food refugees and failed states

## Global Trends by 2050

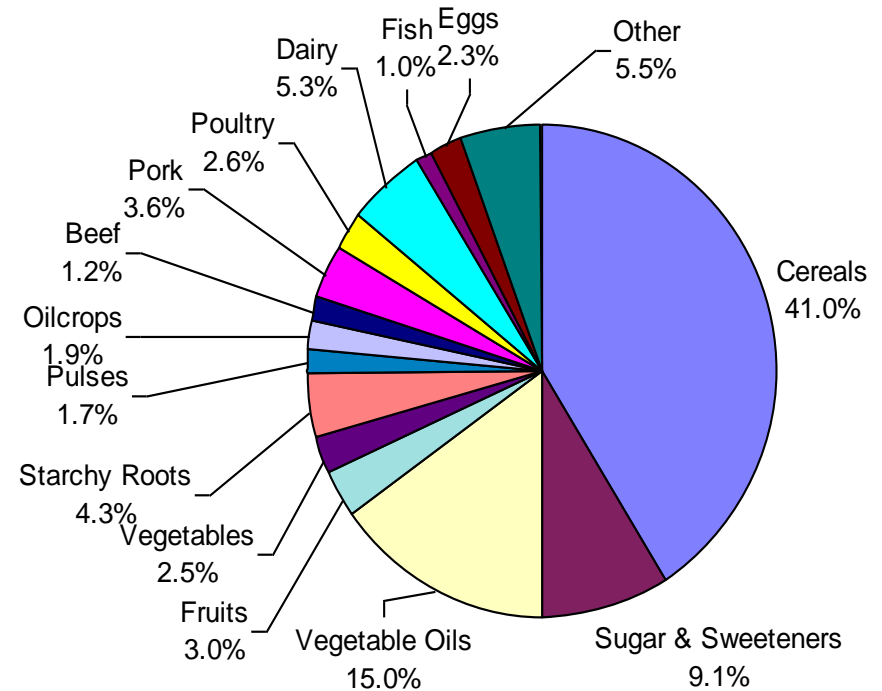
- Population—3 billion more
- 70% will live in cities—as many as are alive today
- Income will increase by 2.8 times
- Consumption will double
- Calories produced for food might need to triple



# World Projected Caloric Distribution Change



**Total Calories Delivered Per Capita Per Day in 2000**  
World Average 2,712



**Total Calories Delivered Per Capita Per Day in 2050**  
World Average 3,226

Source: Calories in 2000 as reported by the Food and Agricultural Organization of the United Nations



**it's how to think, not what to think**

# Threats to Significant Places



Amazon



Coral Triangle



Borneo



Coastal East Africa

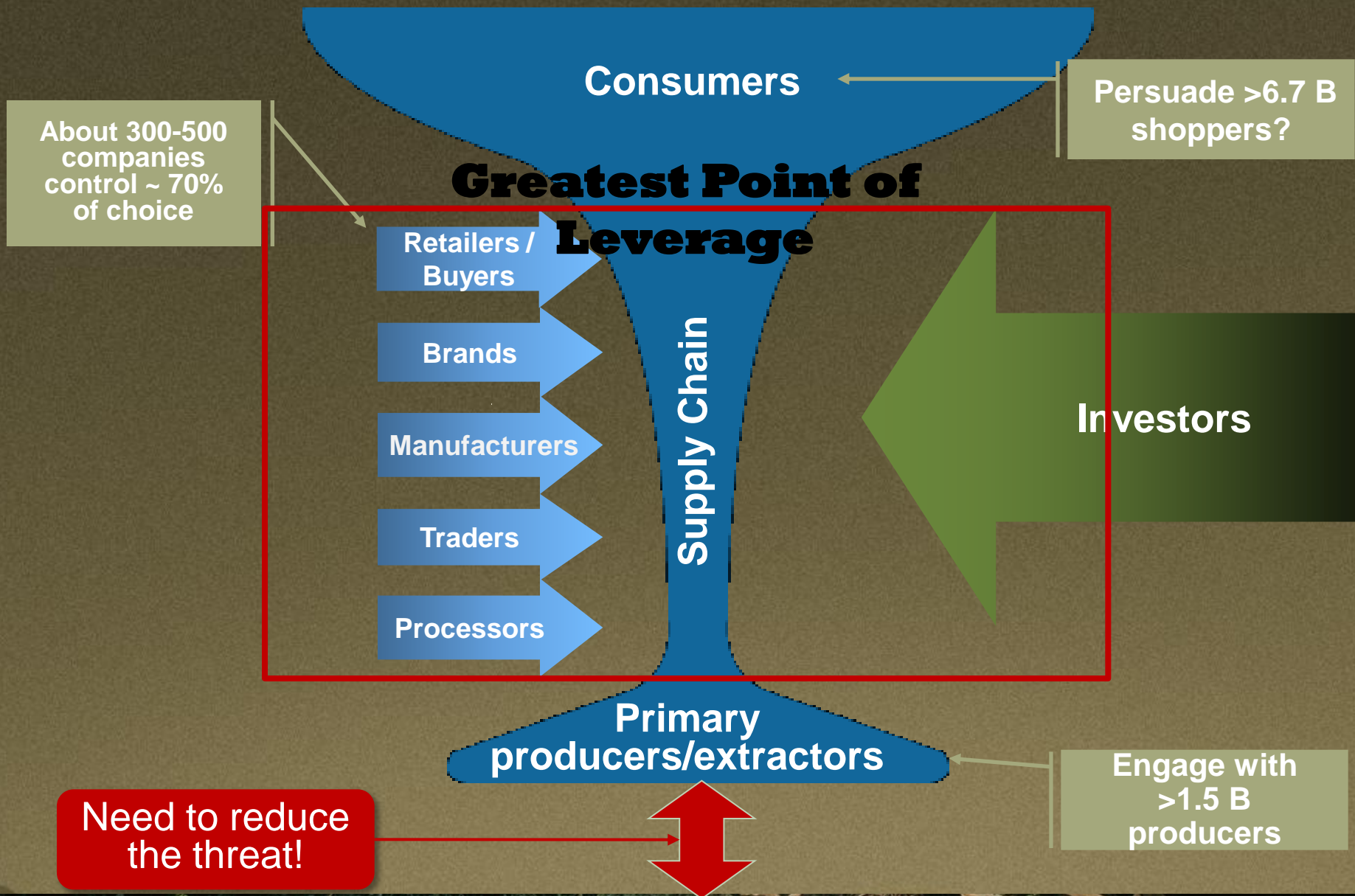


Congo Basin

	Biofuels	Cotton	Livestock	Palm Oil	Soy	Sugarcane	Cocoa	Timber
Amazon	✓	✓	✓	✓				✓
Coral Triangle	✓		✓		✓	✓		
Borneo	✓		✓			✓	✓	
Coastal East Africa	✓	✓			✓			✓
Congo Basin	✓		✓		✓			✓




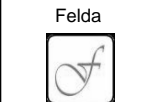




















































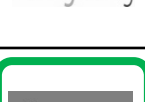

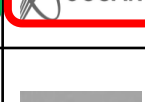












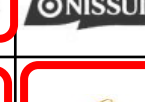








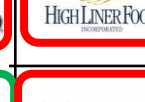


# Market Transformation Focus





# Engagement with Major Players (among top 20) in Key Commodities

Beef	Cocoa	Coffee	Palm Oil	Sugar	Soy	Cotton	Shrimp	White Fish
								
								
								
								
								
								
								
								
								

Strategy to Engage

In Discussions

Signed Agreement

# Retailer, Brand and Bank Assessments

Be strategic—you can't work on everything

What are you big to (Kraft)?

What is big to you (Starbucks)?

What is the biggest risk to you (Mars)?

What is the biggest risk to your industry (illegal product)?

What is it worth to fix these problems?

# Existing or Proposed Precompetitive Approaches

Soy and Beef Moratoria on Deforestation in Brazil

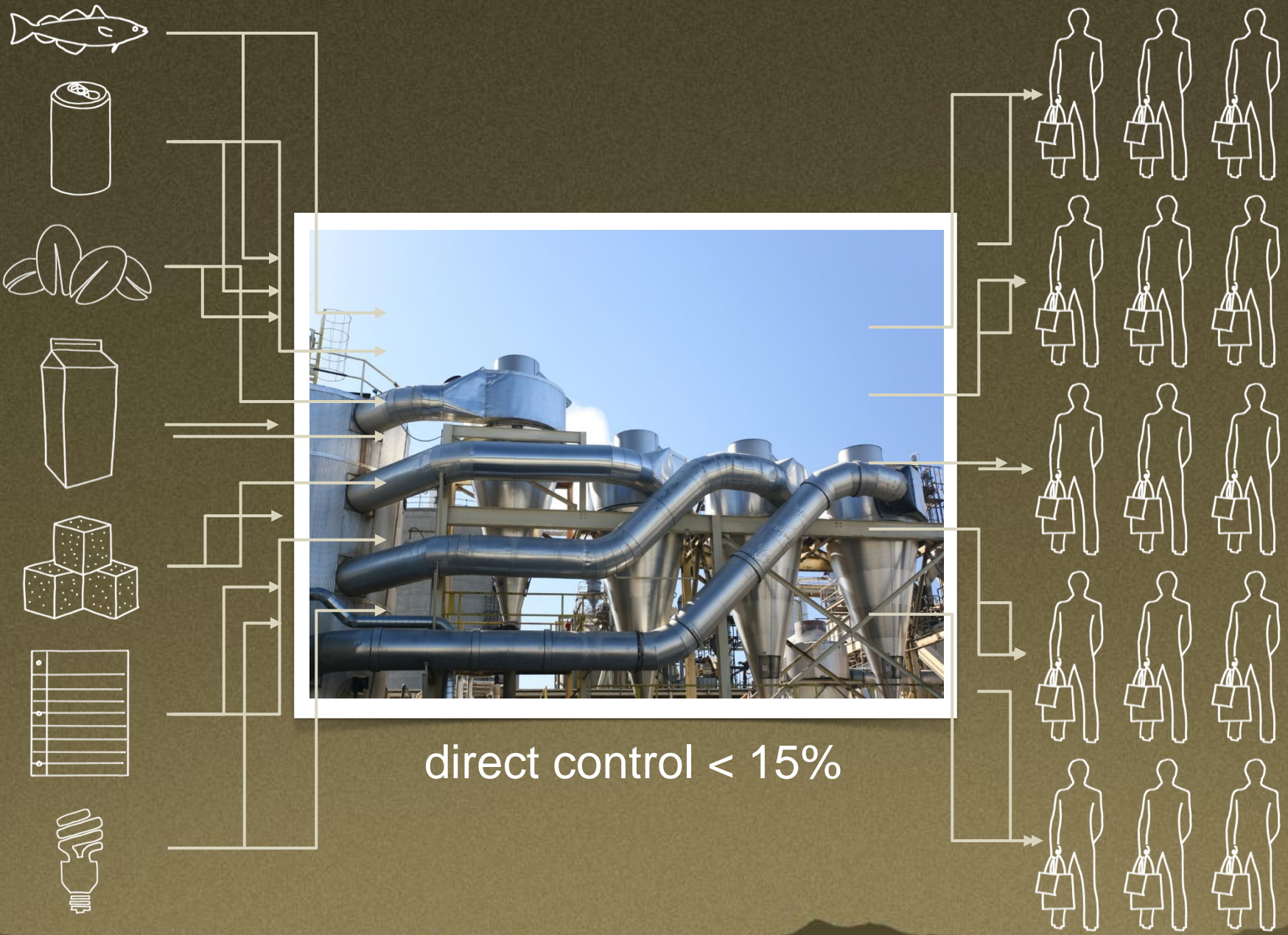
Sustainability Consortium/Index

Equator Principles

Palm Oil Purchase Strategies

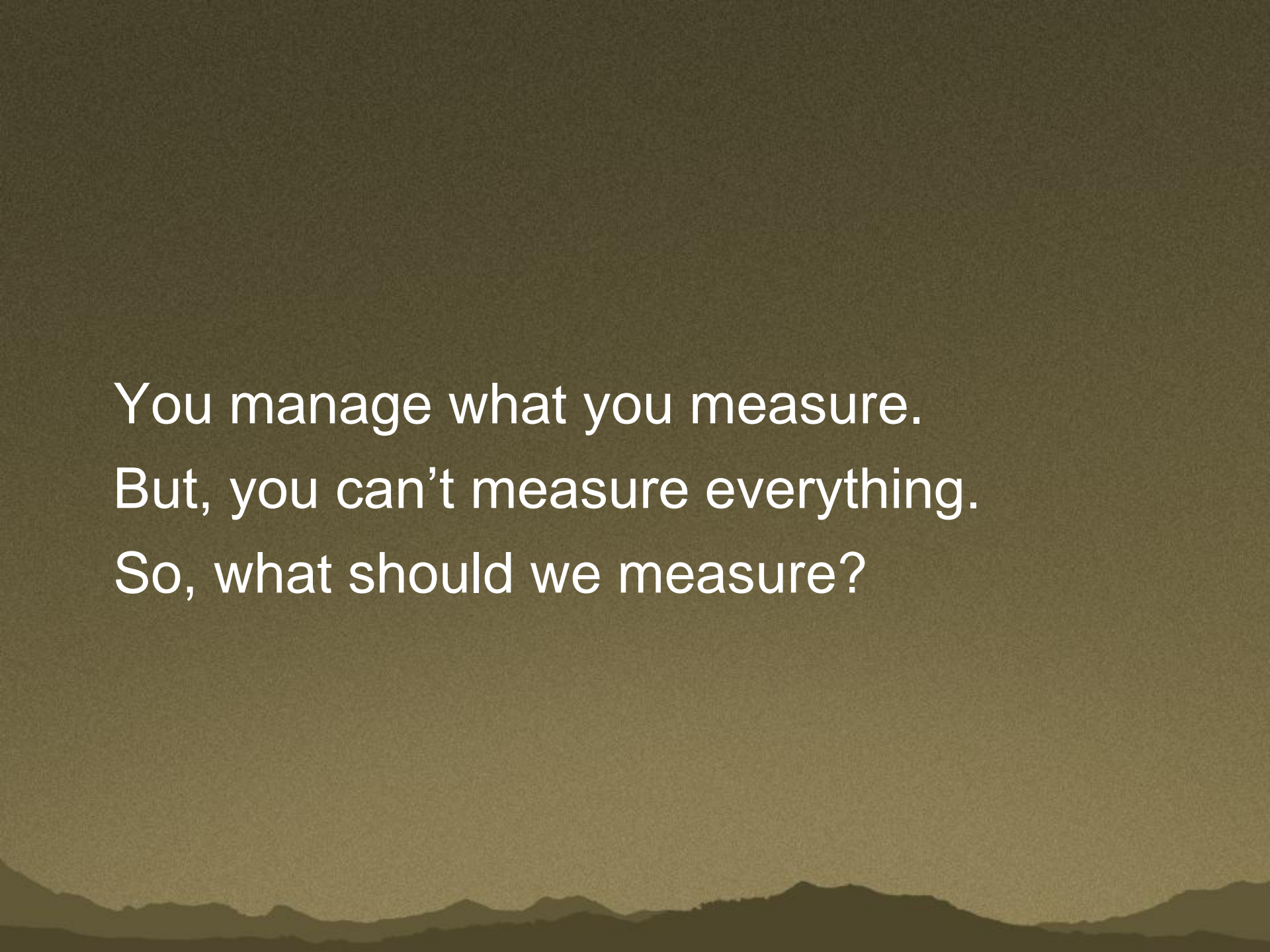
Orange Juice

Pooled Investments on Orphan Crops



direct control < 15%





You manage what you measure.  
But, you can't measure everything.  
So, what should we measure?

# On a finite planet what are the right metrics?

Tons of produce per hectare land?

Tons of produce per M<sup>3</sup> of water?

Tons of produce per unit of N?

Calories per hectare?

Energy per hectare?

Income per hectare or per hour?

Jobs per hectare?

Cost of production per calorie of production?

Tons of carbon avoided or sequestered per hectare?

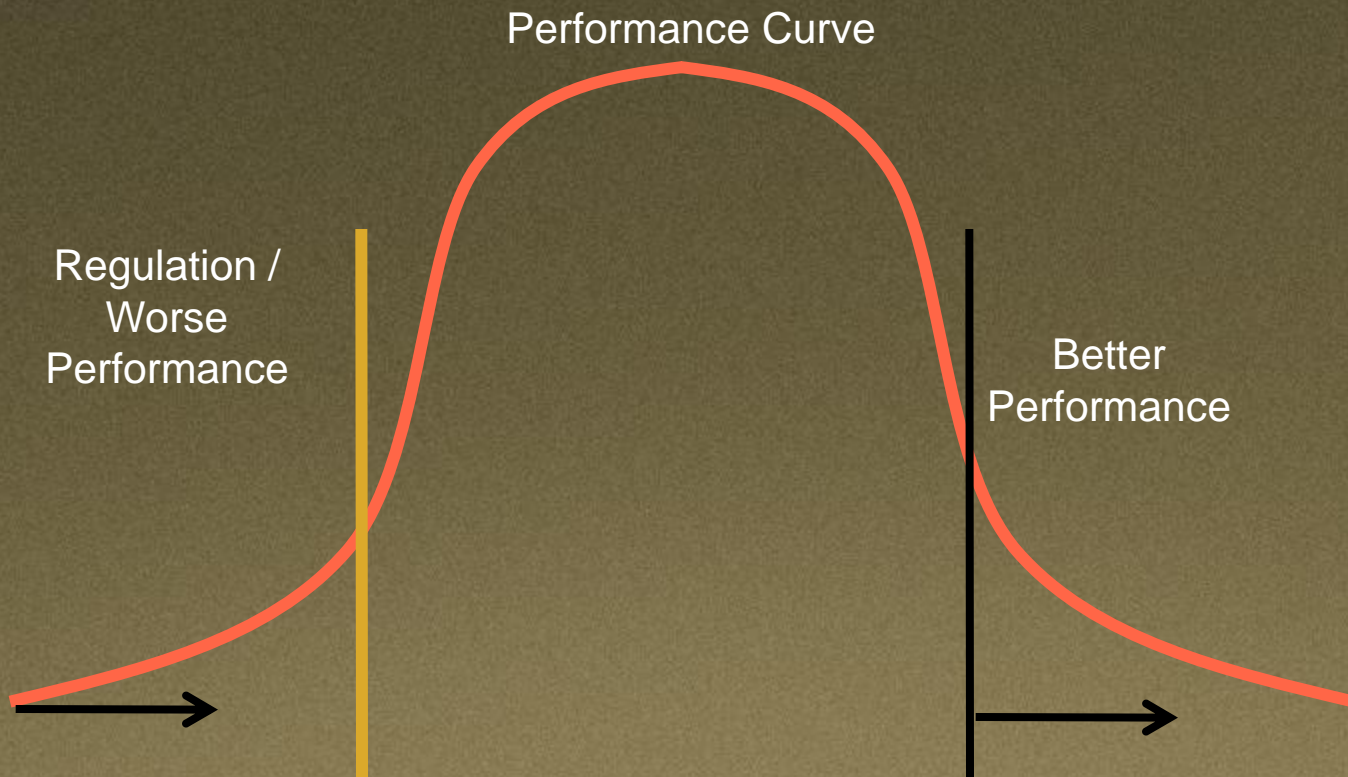
Impacts that are acceptable with 6.7 billion

will not be acceptable with 9 billion people.

We need to shift our thinking from maximizing any one variable

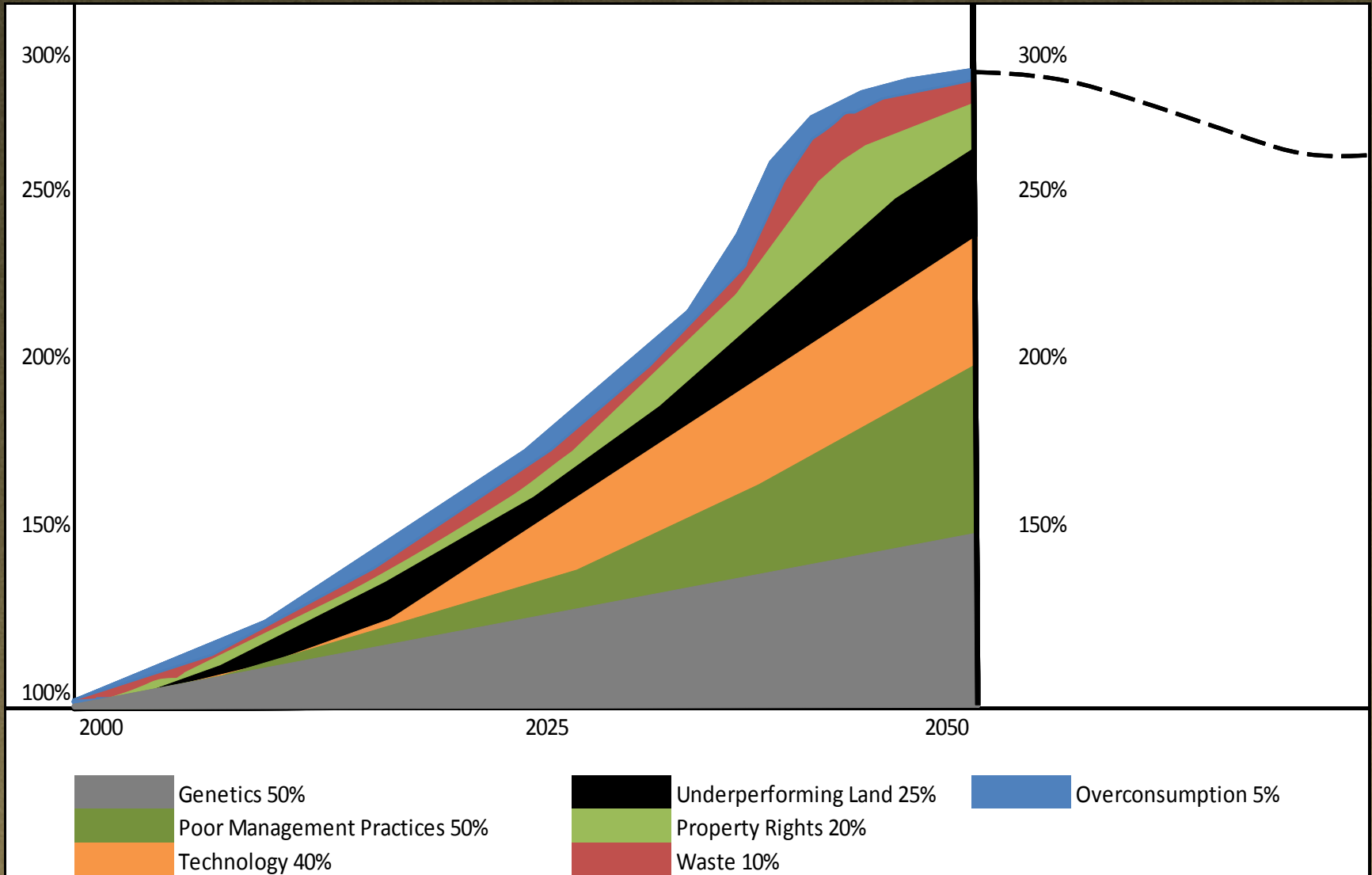
to optimizing several key ones

# Sustainability—Better Practices or Performance?



# Freezing the Footprint of Food

How to triple food production on the same amount of land by 2050





Is food produced with subsidies or protected by tariffs actually sustainable?

# **The Future of Supply Chains—2025 and Beyond**

Price is not the issue—availability is

Transformational and transparent, not transactional

Partners not adversaries

More forward contracting, fewer spot purchases

Longer-term contracts (1, 3, 5 years and beyond)

Access to longer-term, cheaper credit

Purchase of multiple values (carbon, water, etc.)

“If you don’t know where you’re going  
any road will get you there.”

# Key Issues Identified in the Breakout Groups

Prices will increase

Waste

Consensus on impacts to be reduced will be key

Need for new business *and* governance models

Collaboration along supply chain and with civil society

Transparency

Timing drives opportunities

Innovation will be essential

Consumer engagement will be essential

Need to anticipate trends



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