



# Insights from SCAR foresight exercise

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# SCAR foresights and global change

- 1° foresight: managing adaptation
- 2° foresight: uncertainty and knowledge
- 3° foresight: scarcity and behavioral change





**The geology of the planet**

# Welcome to the Anthropocene

**Humans have changed the way the world works. Now they have to change the way they think about it, too**

May 26th 2011 | from the print edition

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Jon Berkeley





# Two narratives

**Productivity**

**Sufficiency**



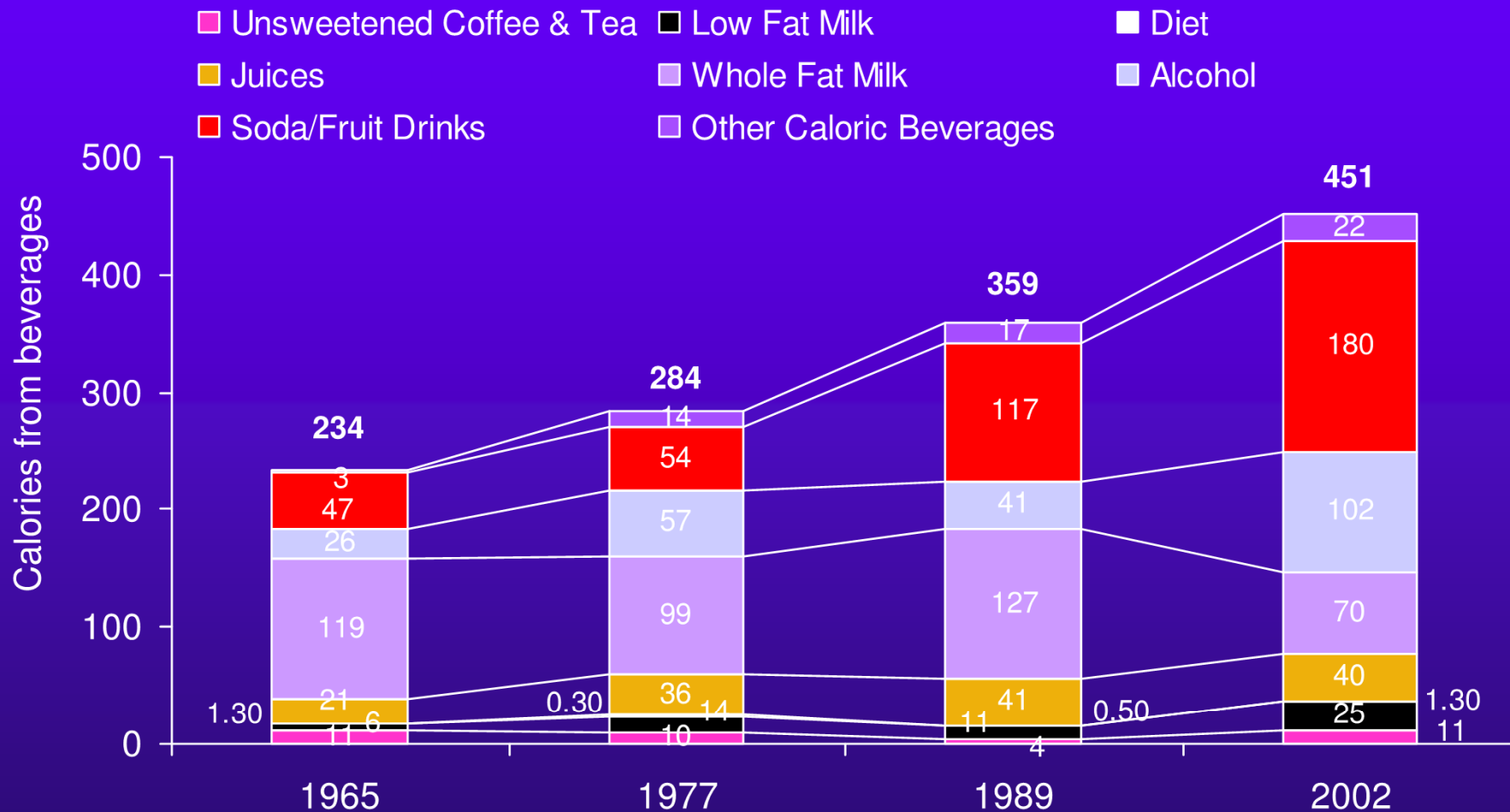


# Problem definitions

Productivity		Sufficiency
Expected production not sufficient		Overconsumption and waste
Productivity gap		Inappropriate technologies
Barriers to adoption		Inequality of access to resources



# Per Capita Change in Calories from Beverages Between 1965 and 2002





# Implications

## Productivity

- Doubling production
- High-tech innovation
- Locking-out technologies

## Sufficiency

- Reducing consumption and waste
- Socio-technical innovation
- Integrating technologies







## Together, we've reduced beverage calories in schools by 88%.

America's beverage companies have teamed up to remove full-calorie soft drinks from schools. And we've replaced them with lower-calorie and small portion-sized options like juices, teas and waters — reducing beverage calories by 88%.\* Together with schools, we're helping kids make more balanced choices every day. Learn more at [Ameribev.org](http://Ameribev.org)

\*Data compiled and analyzed by Foodwatch Research LLC.

*The Coca-Cola Company*

DR PEPPER  
SNAPPLE

PEPSICO

AMERICAN  
BEVERAGE  
ASSOCIATION







# A new nutritional transition?

- 10 g beef (100g)
- 10 g pork (79g)
- 47 chicken and eggs (115g)
- 23 g fish (46g)

Per day per person on average

=

Reduction of costs of mitigation 50% in 2050

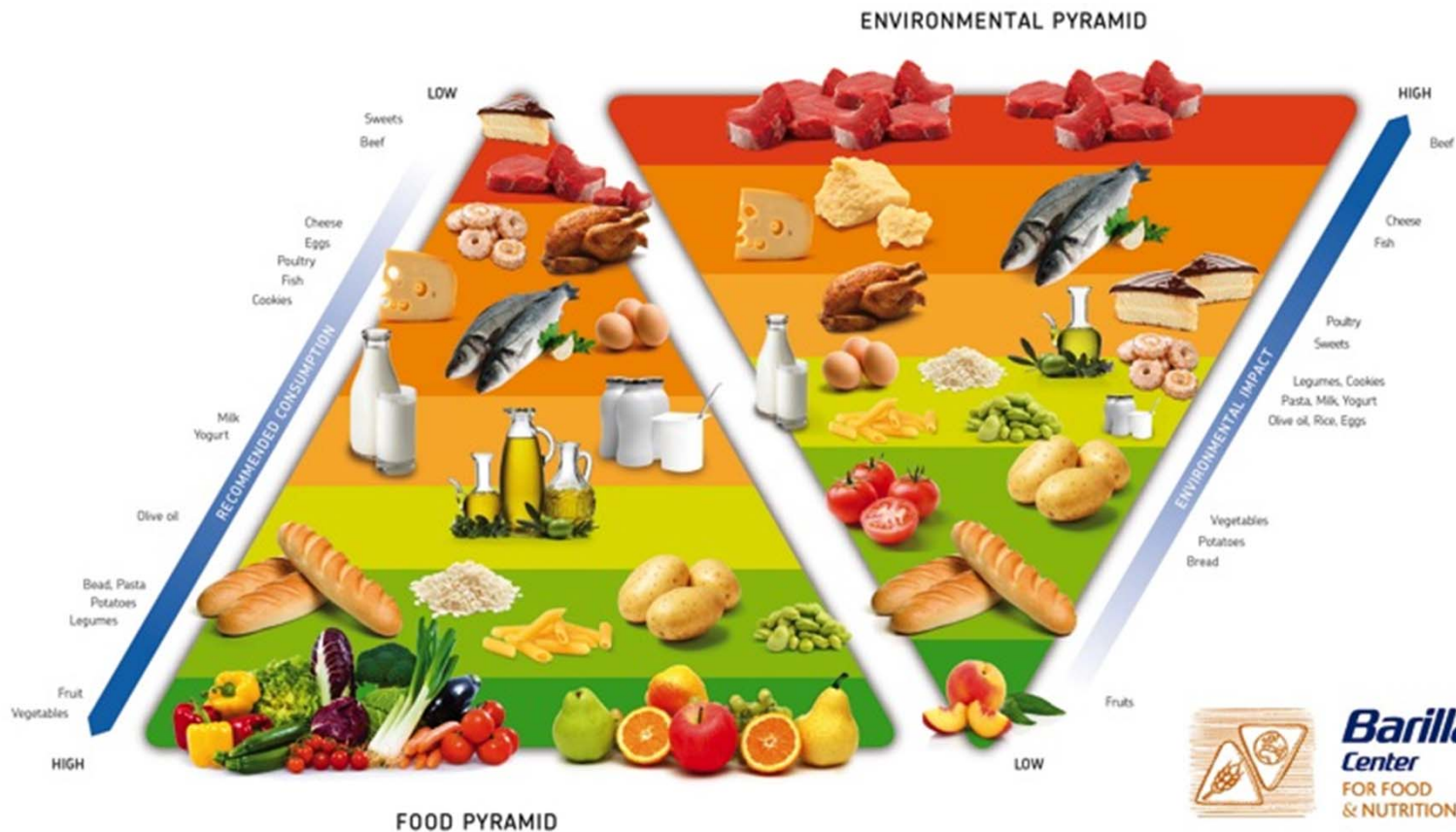
(source: Netherland Environmental Assessment Agency)





# Barilla's double pyramid

THE DOUBLE FOOD AND ENVIRONMENTAL PYRAMID MODEL, PROPOSED BY BCFN IN 2010



**Barilla**  
Center  
FOR FOOD  
& NUTRITION

© BCFN 2010





# Sustainable diets

- Reducing consumption
- More plant-based food
- Reducing waste
- Encouraging local biodiversity
- Reducing food miles
- Fresh and seasonal





# Appropriate technologies



# Reaping the benefits

Science and the sustainable intensification  
of global agriculture

October 2009

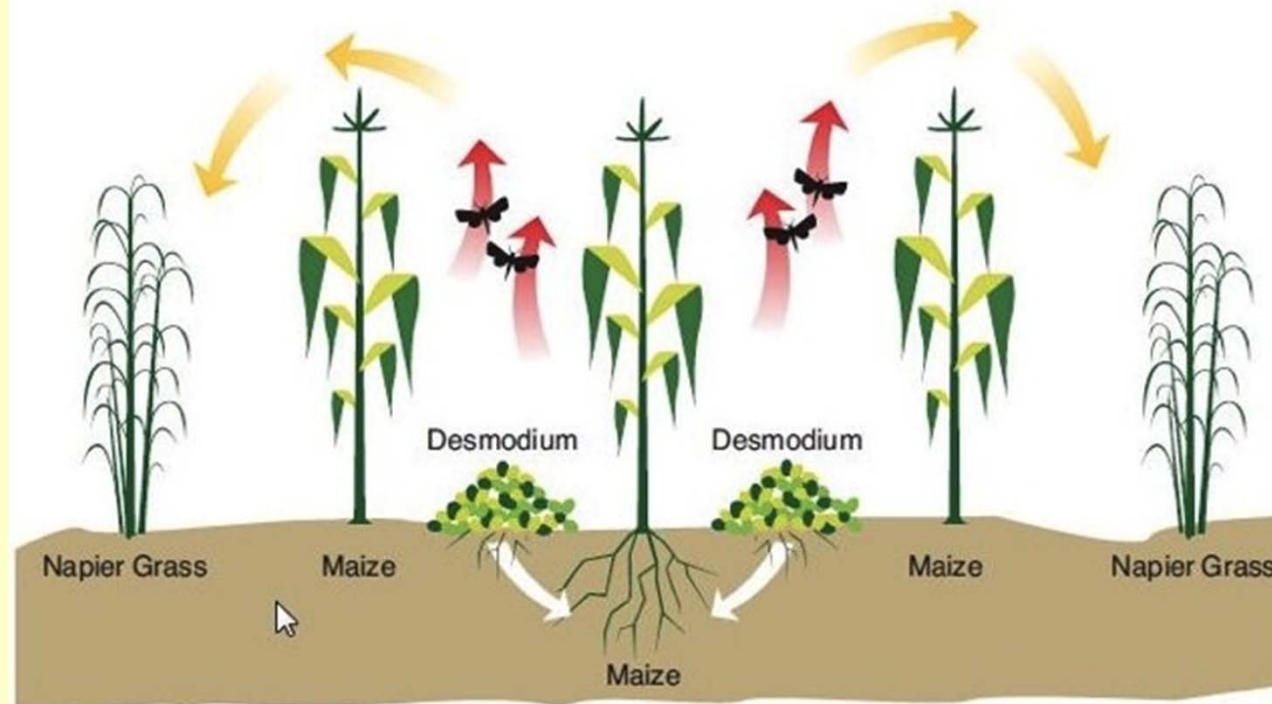





CELEBRATE  
350 YEARS  


THE ROYAL SOCIETY



## The push-pull system

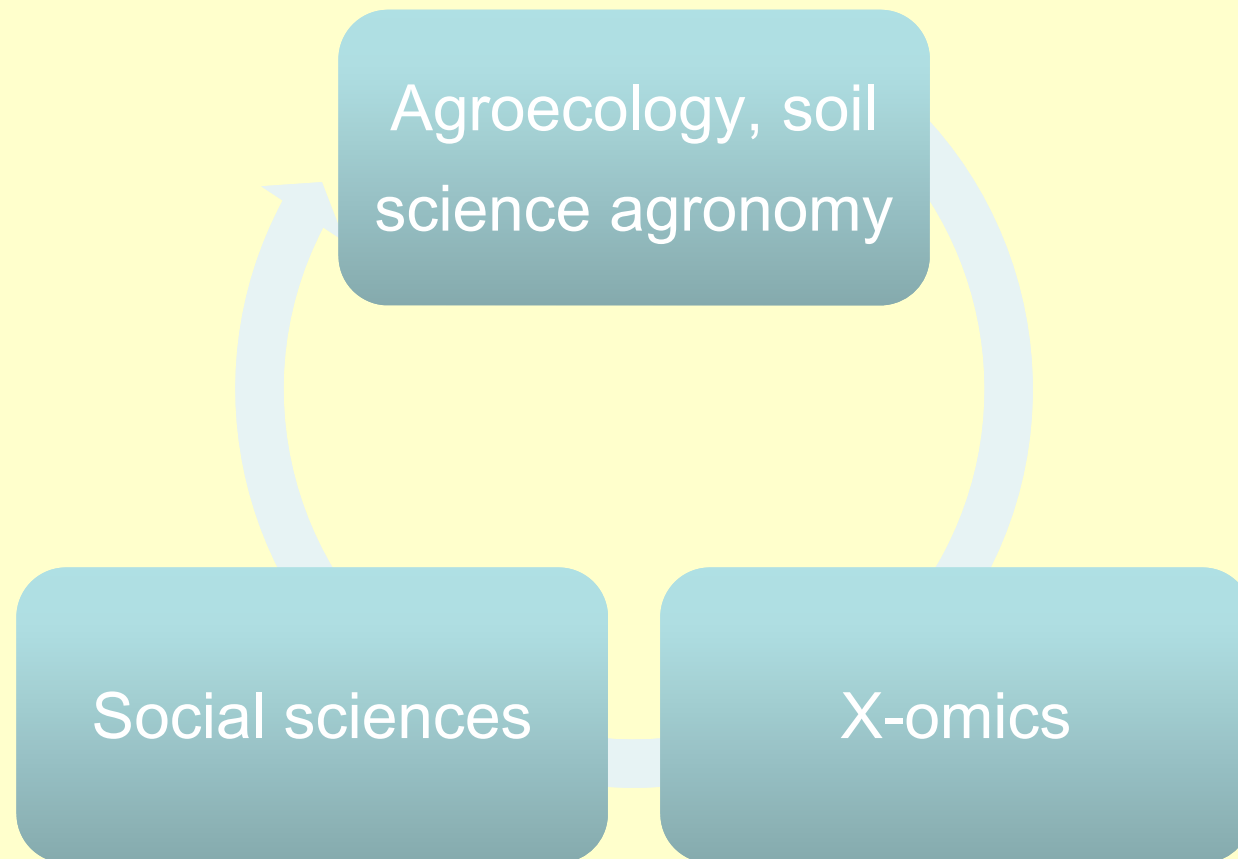


-  **Red arrow:** 'Push': Compounds released into the air by intercropped plants repel moths away from the maize.
-  **Orange arrow:** Compounds released into the air by border 'trap plants' attract moths to lay eggs, away from the maize.
-  **White arrow:** In addition, compounds secreted by desmodium roots inhibit the attachment of witchweed to maize roots and causes suicidal germination of witchweed seed in soil (see overleaf).





# The challenge of integration





Thank you!

