



INTERNATIONAL FOOD POLICY  
RESEARCH INSTITUTE  
*sustainable solutions for ending hunger and poverty*  
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# **Global Diet Change**

## **Implications for Agriculture and Nutrition**

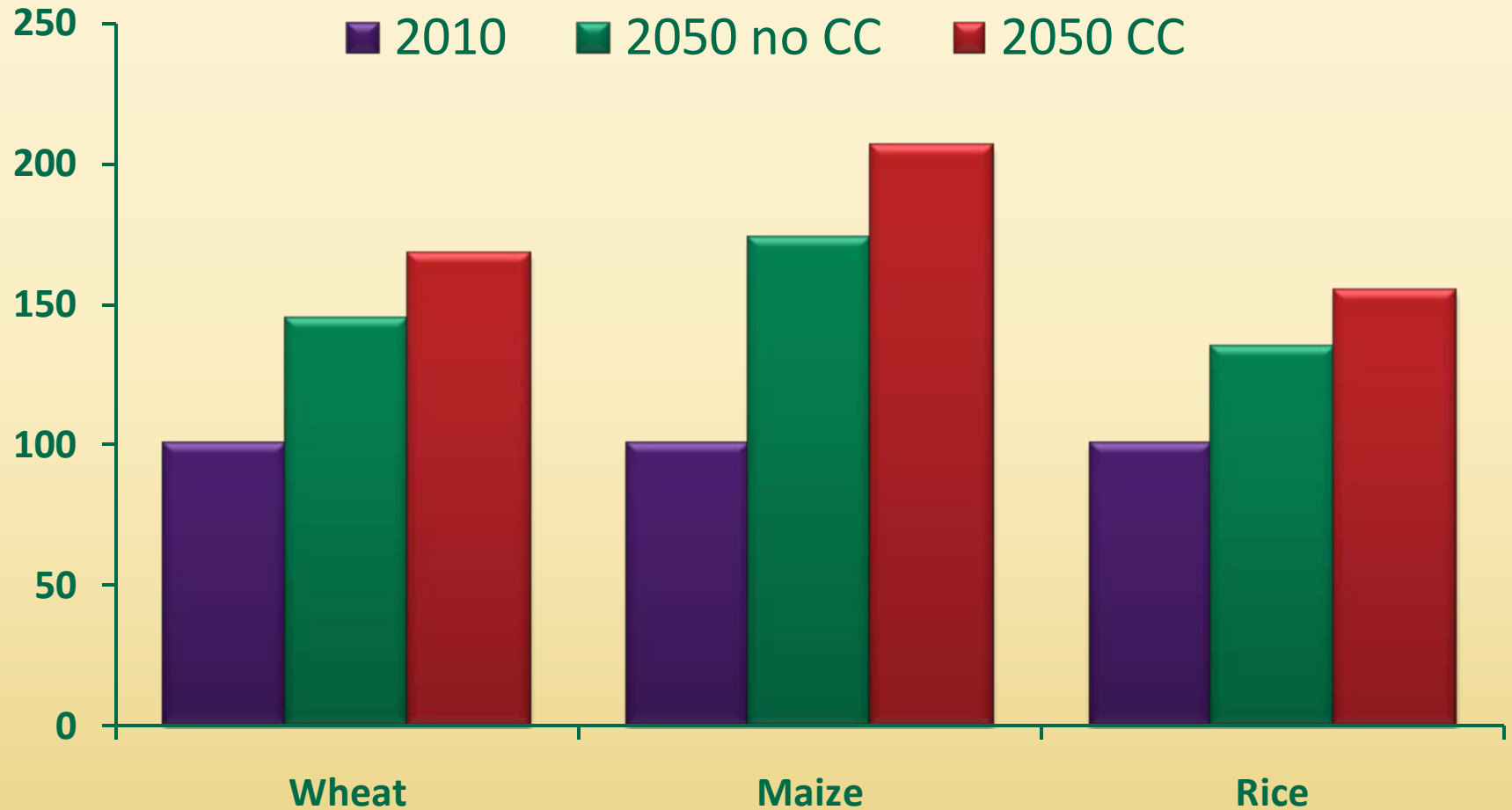
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**Senior Research Fellow**

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# Projected Food Prices: Increasing Scarcity

Based on IFPRI IMPACT Scenarios

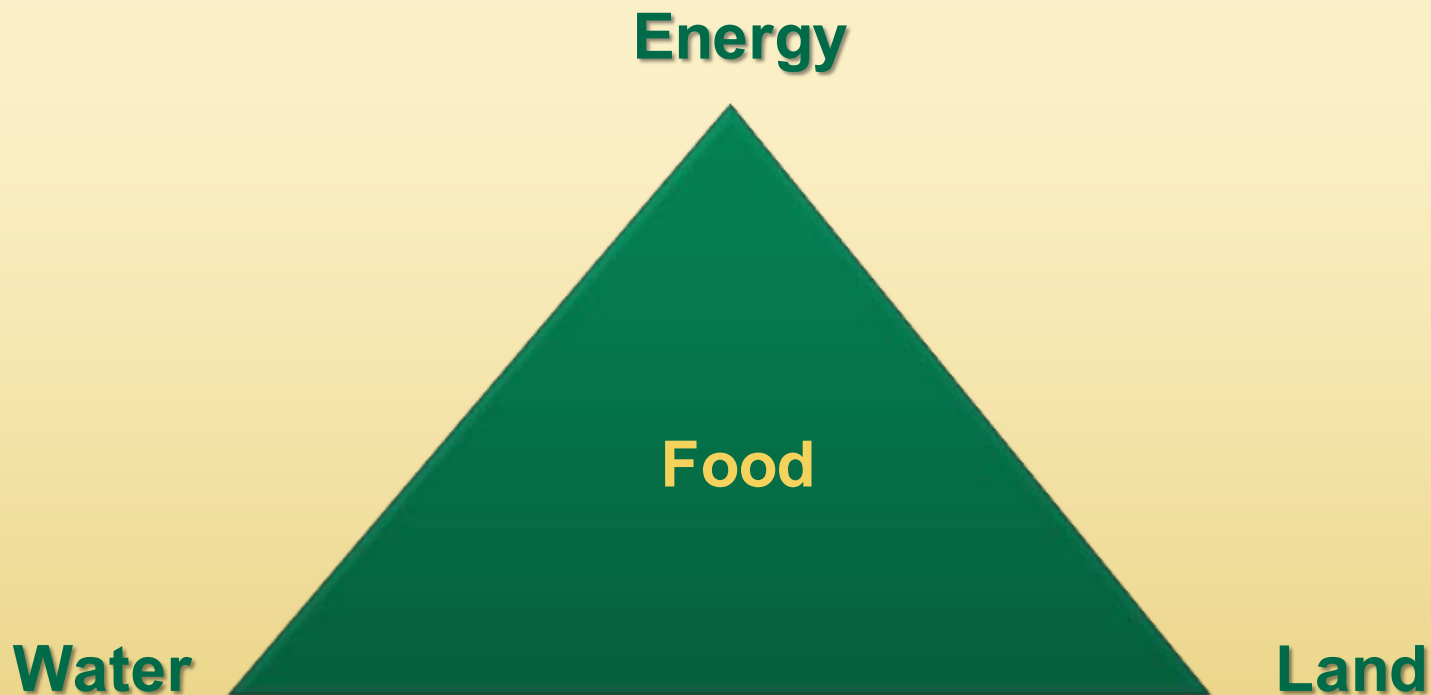


Notes: 2010 = 100; CC = climate change



# Non-food Competitors in Production

- Demand for biofuels and bioenergy
- Emissions mitigation and carbon sequestration
- Conservation and biodiversity



# Agricultural Growth and Food Security

## Supply drivers

Climate change

Water and land  
scarcity

Science and technology  
policy

Investment in  
agricultural research

Policy and governance  
reform

## Demand drivers

Population:  
9 billion people in 2050

Income growth:  
Africa, **not** just Asia and  
Latin America

Urbanization:  
in **2008** 50% urban  
in **2050** 78% urban



# Major Consequences

- Change in diets to convenience foods, fast foods
- Increased consumption of fruits and vegetables
- Higher food energy, more sugar, fats and oils
- Rapid growth in meat consumption and demand for grains for feed
- Half of growth in grain demand will be for livestock
- Intense pressure on land and water



# Dietary and Food System Approaches to Improving Nutrition

## Reducing post harvest losses

- 10% for grains; 25% for perishables
- Economic recoverability limited

## Wasting less food

- 20% wastage in households

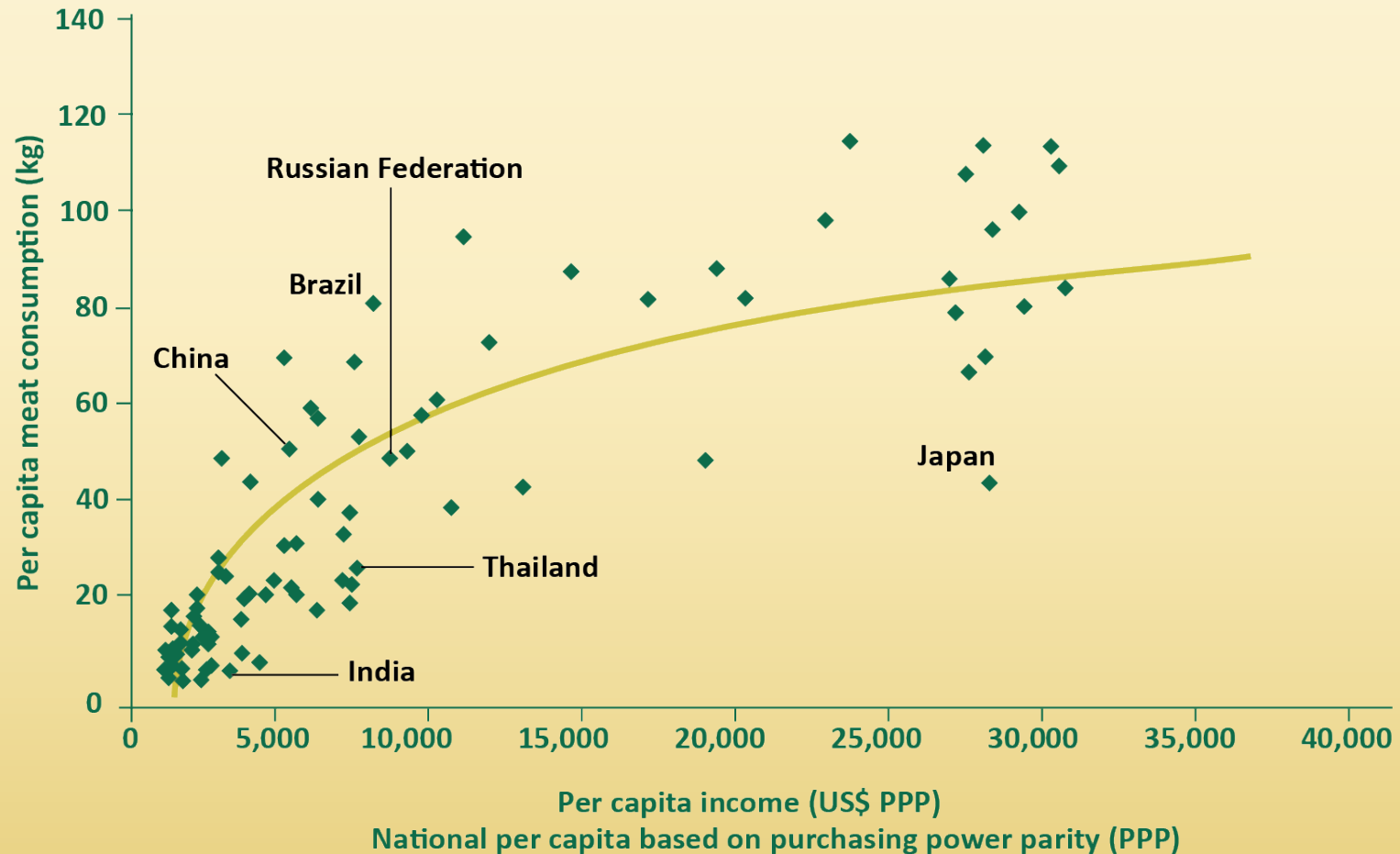
## Consuming fish from sustainable stocks

## Reducing consumption of meat and dairy products



# Key Question

Would reduction in meat consumption in richer countries improve food security in developing countries?



# Dietary Change Is Not Easy

## **CAMPAIGNS**

Advocacy, educational, and public relations campaigns

## **PROMOTE LOW-MEAT MENUS**

Cafeterias, schools, hospitals, and  
other public-sector institutions

## **POLICIES**

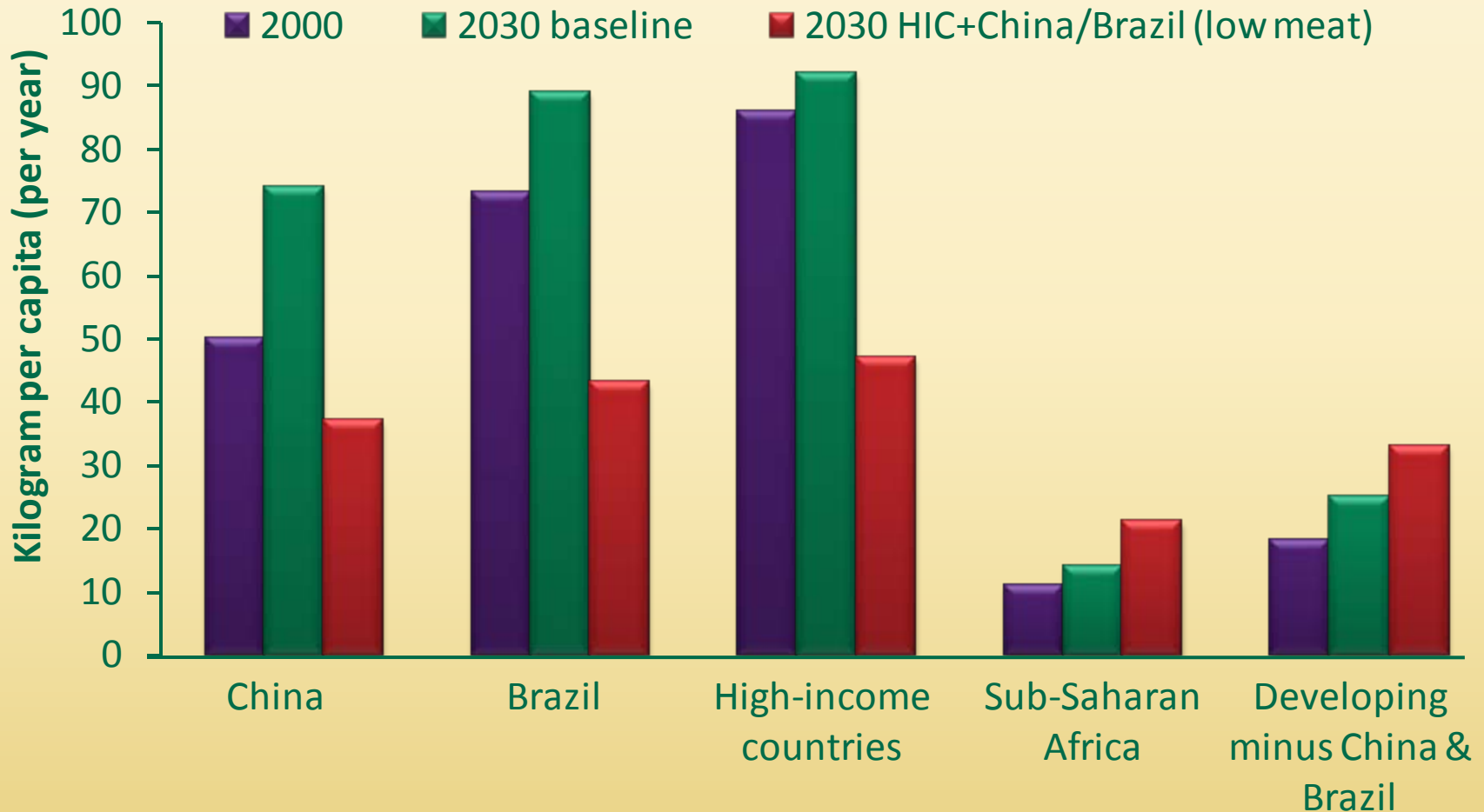
Taxation and subsidy policies to increase the cost of meat  
compared to other food products





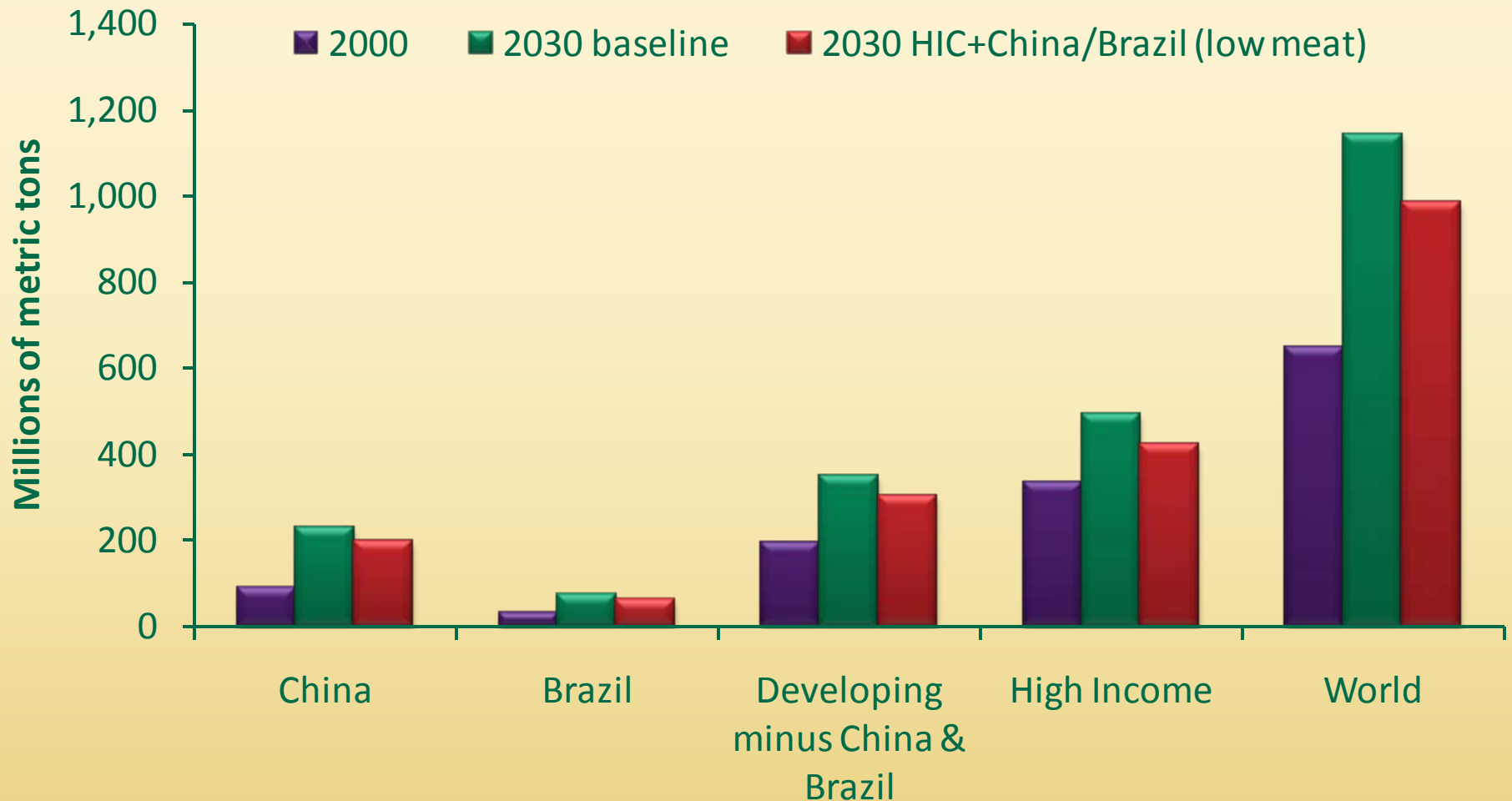
# Per Capita Meat Consumption

Less meat in rich countries = more in developing countries



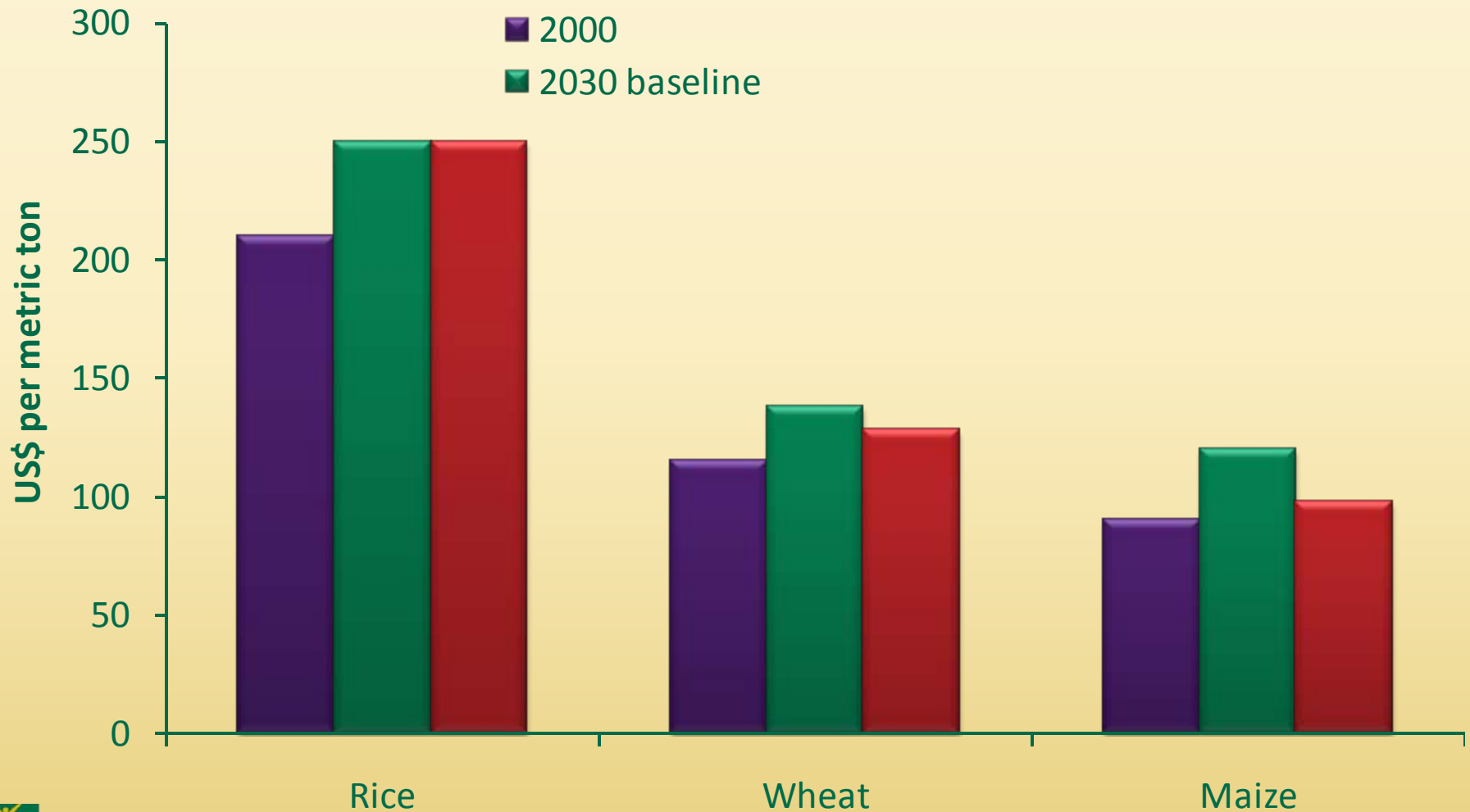
# Feed Demand for Coarse Grains

Less meat = Lower feed-grain demand



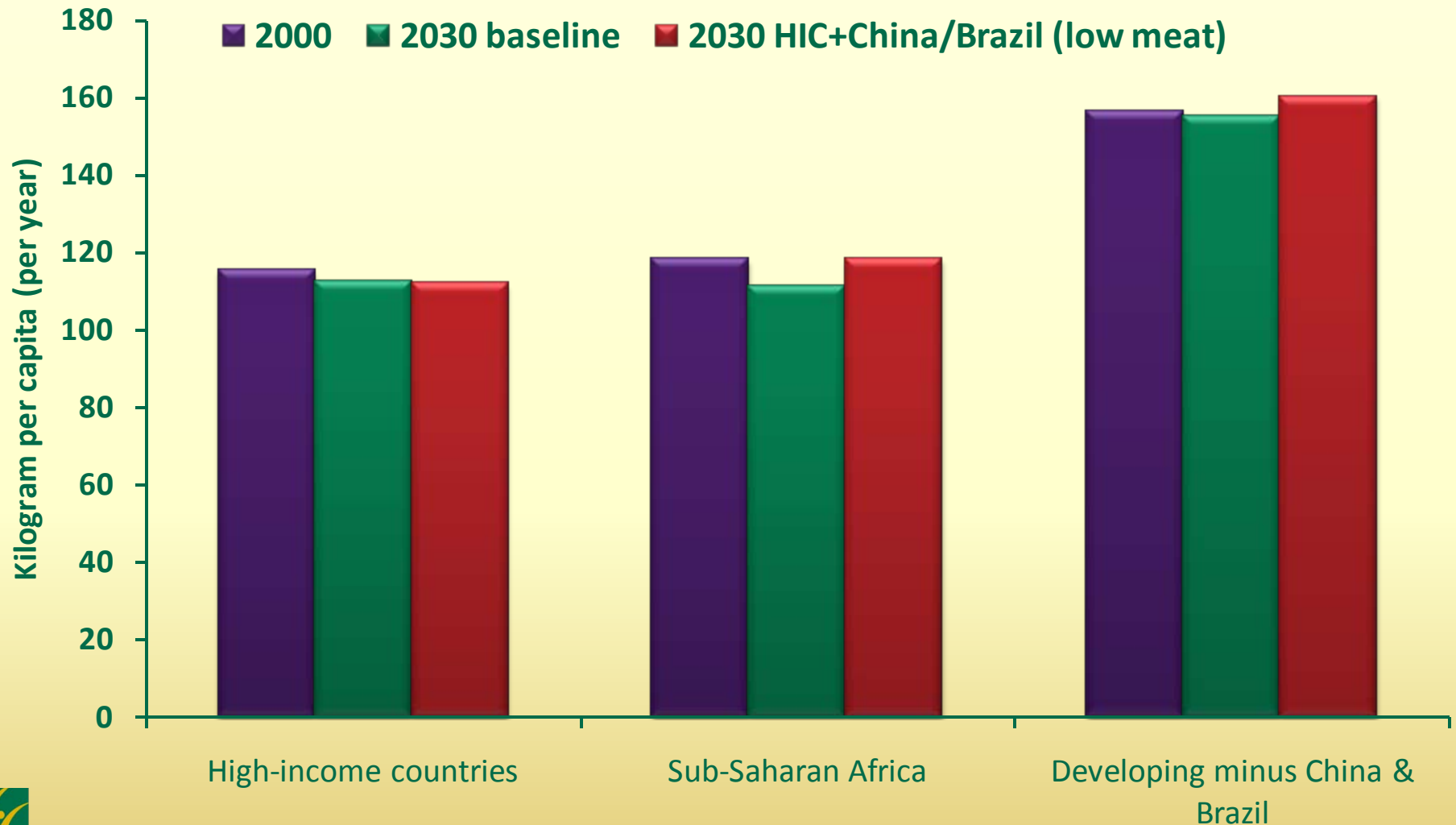
# World Prices of Grains

Reduced feed grain demand = Lower grain prices



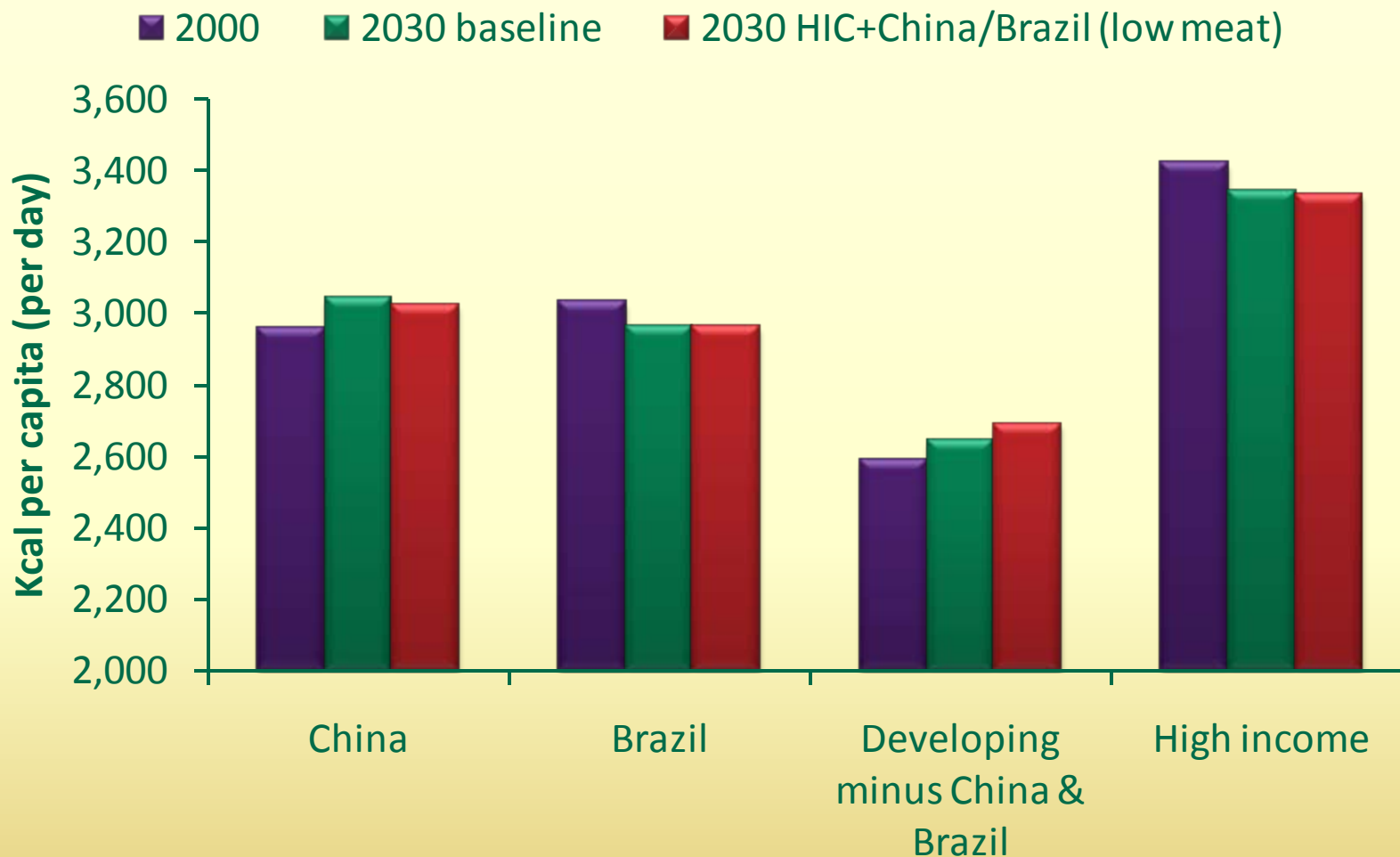
# Per Capita Food Grain Consumption

Lower grain prices increases demand



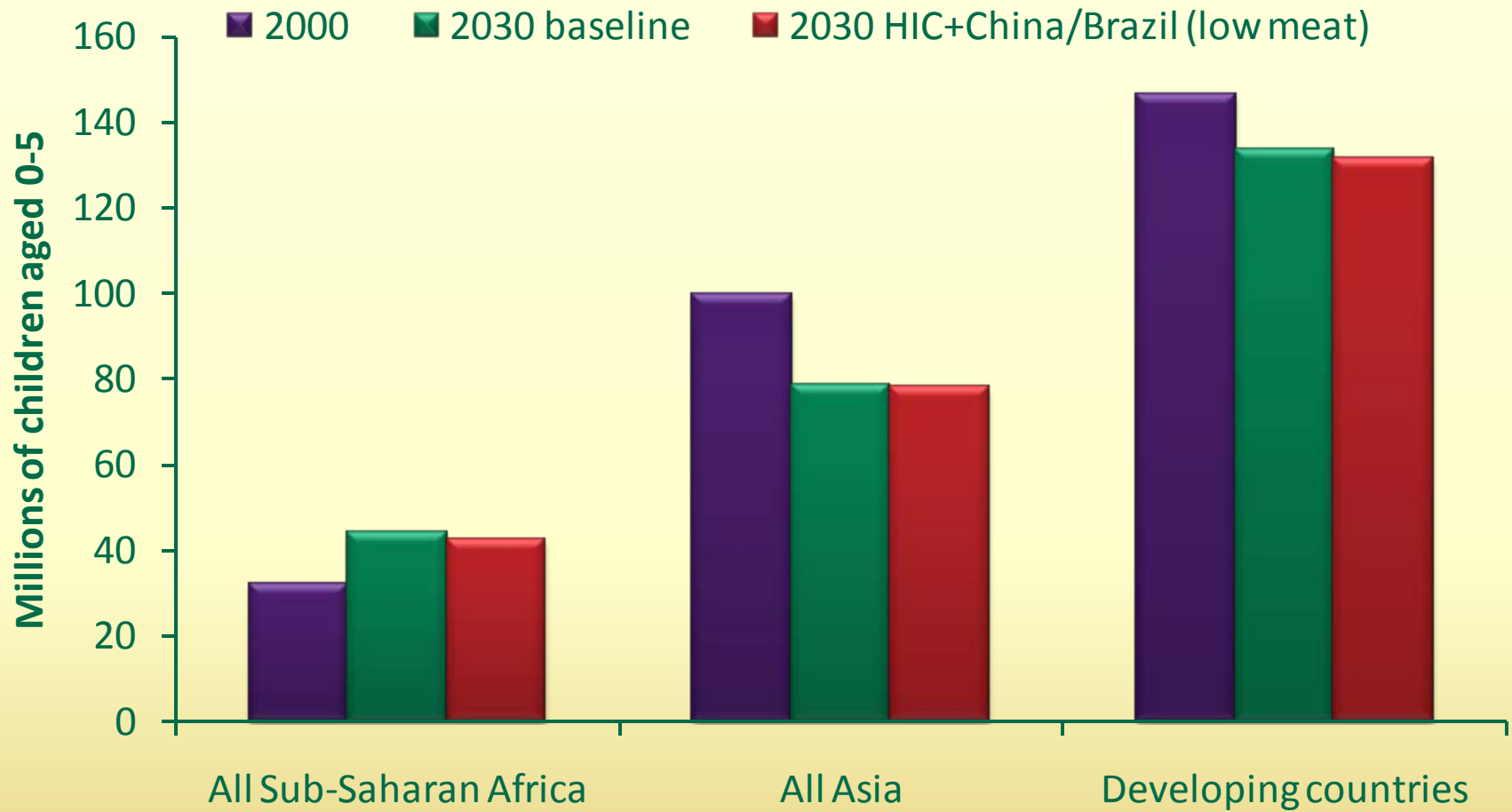
# Per Capita Calorie Availability

Lower prices increase calorie access

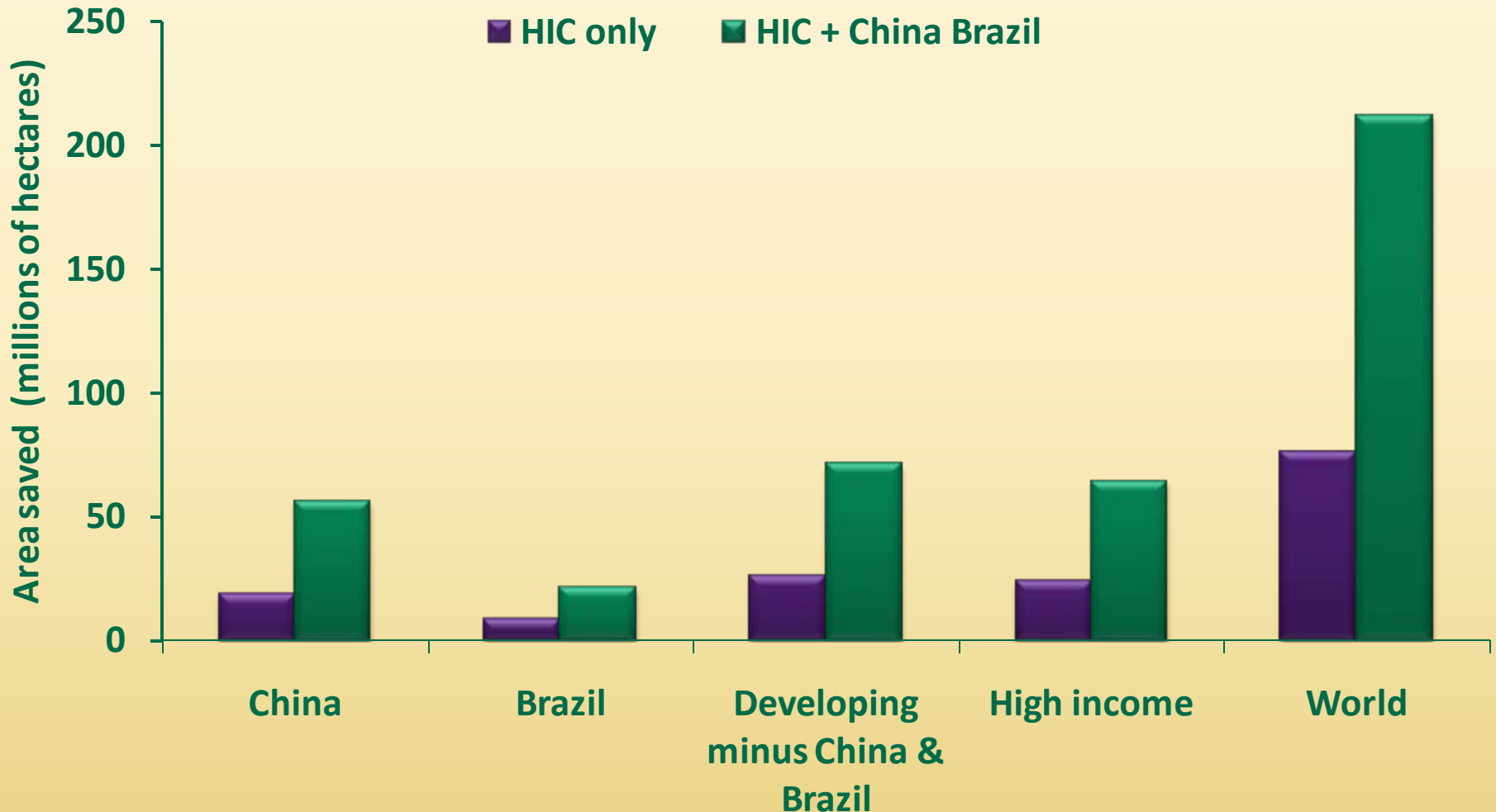


# Child Malnutrition

## Small improvement



# Lower Meat Production Saves Large Areas of Pasture and Cropland



# Conclusions

- **Halving of meat consumption in richer countries has**
  - small nutrition benefits in developing countries
  - big land saving impacts
- **Dietary change is a useful tool for improved food security and nutrition**
- **But transformative progress requires much broader investment in agricultural and rural development**

