



# Price Volatility and Food Security: What Can Be Done?

Florence Rolle  
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# Outline

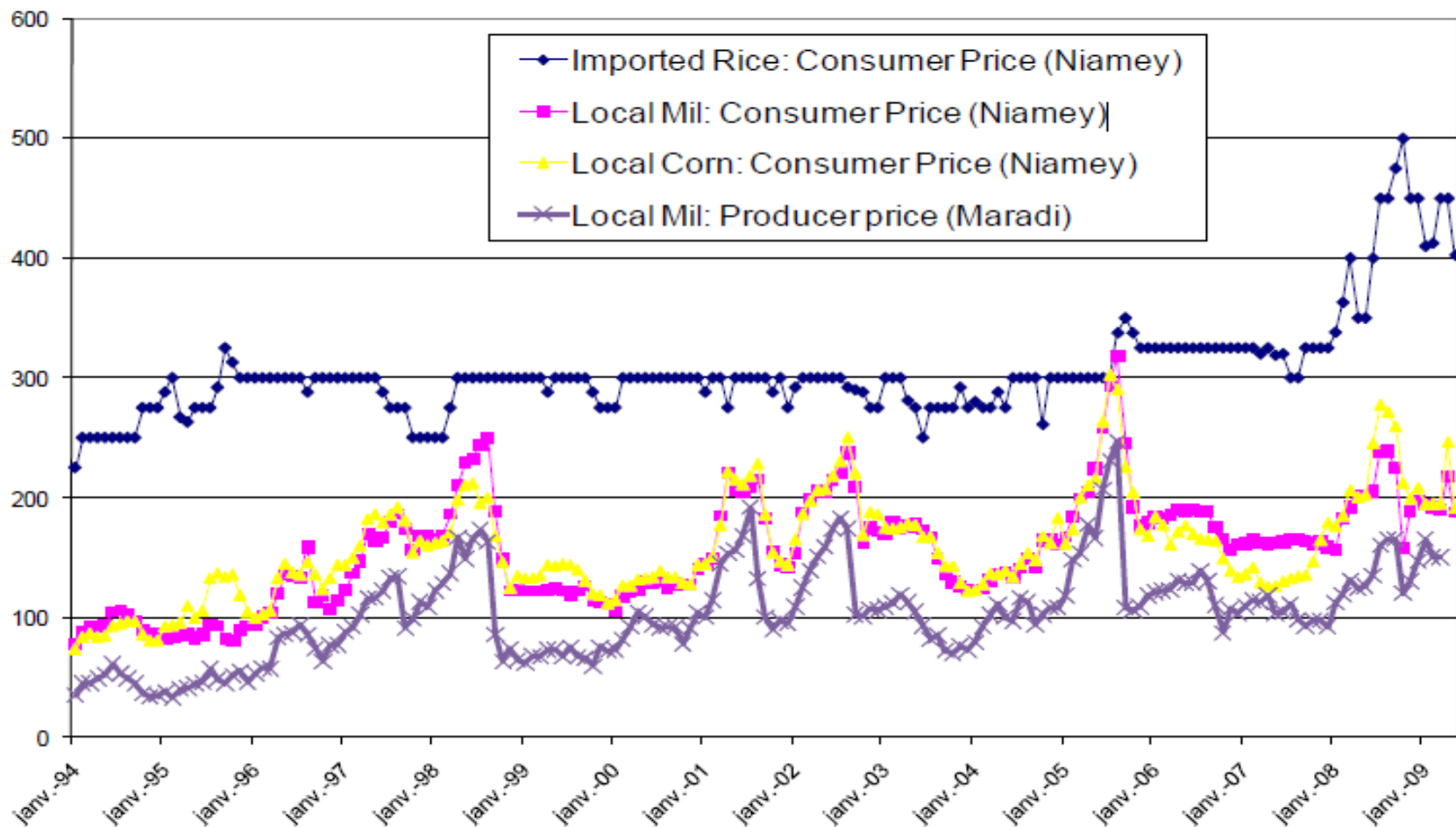
- Price Volatility: International / Domestic
- Price Volatility and Food Security
  - Global Level / Local Level
- Policy Responses
  - Global Level / National Level
- Conclusion



# Price Volatility: International / Domestic

- No tendency towards increased volatility of international prices over the past 50 years...but currently higher
- Domestic price volatility mainly of domestic origin....due to
  - Weather shocks, Poorly developed market infrastructure
  - Unpredictable changes in policies, Macro-economic instability
- Transmission incomplete and very variable

# NIGER: Consumer Prices for Imported Rice, Local Corn and Local Millet and Producer Prices for Local Millet





# Price Volatility and Food Insecurity

- Global level: a threat
  - Not well understood – SOFI 2012
  - Poverty traps
  - Reduced farm level investment
- Local level: a key factor
  - Much better understood
  - Food security analysis based on livelihood zones – the case of Ethiopia





# International Response ... AMIS

- Why AMIS?
  - To increase market information and transparency
  - To avoid panic-induced policy actions which exacerbate price surge
- AMIS objectives
  - More quality, reliable and up-to-date data on supply, demand, stocks, export availability
  - More coordinated policy response to market tensions



# International Response ... AMIS

- Achievements so far
  - Statistical database on wheat, rice, maize, soybeans
  - Capacity building of national statistical agencies and ministries of agriculture in collecting and analyzing agricultural data
  - Identification of indicators enabling AMIS to predict any sudden developments that could result in major market disturbances
  - Governance structure



# Domestic Response ... Indonesia

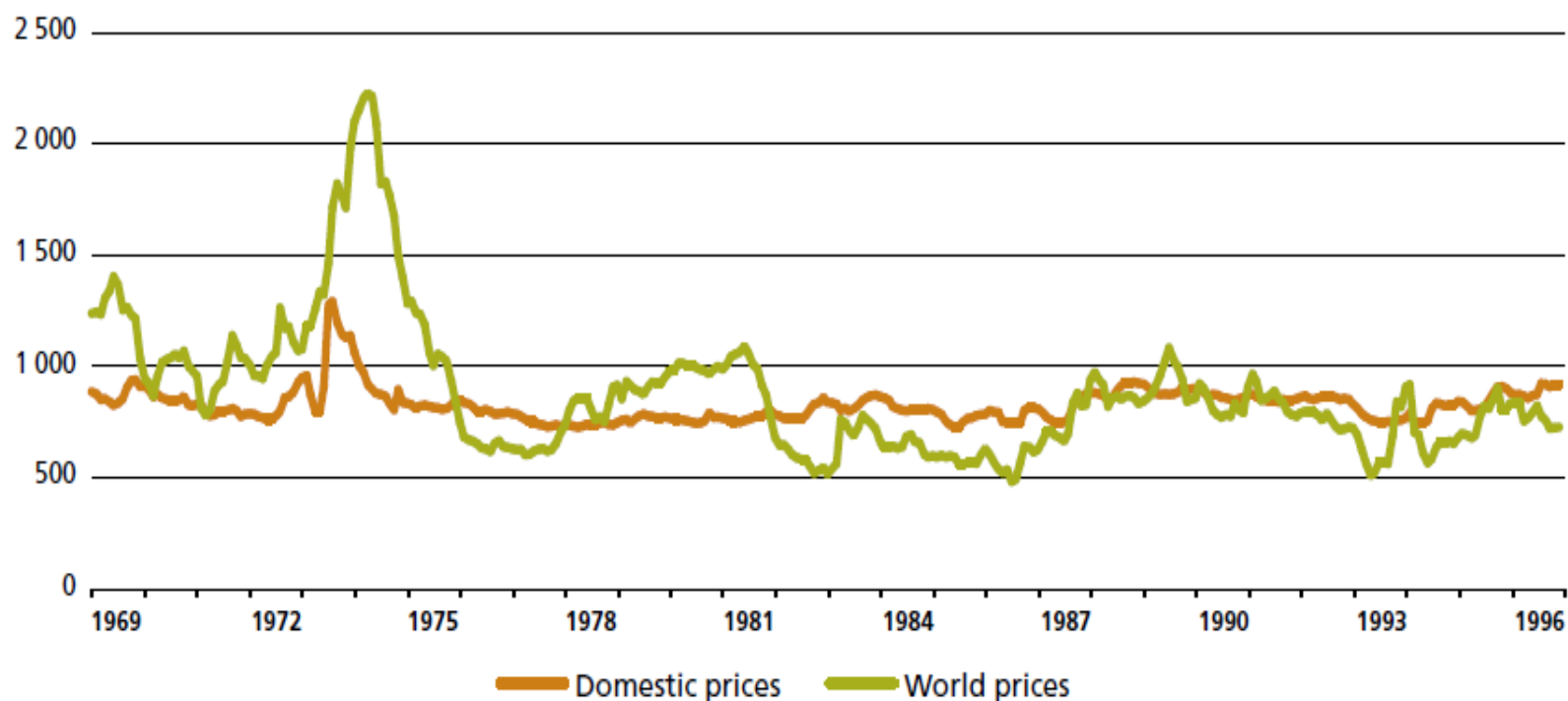
- Rice price stabilization over more than 25 years
  - Trade policies (usually imports, but occasionally exports)
  - Buffer stocks (government procurement less than 5% of domestic production and through traders)
  - Stable floor price provided long-term incentives to farmers for investment in rice production





Indonesia managed to stabilize its domestic price for rice from 1969 to 1996 through trade and buffer stocks

Inflation-adjusted price (1996 Indonesian rupiah/kg)



Sources of raw data: Indonesian Bureau of Logistics (BULOG); International Monetary Fund.

# Policy interventions adopted by countries to address 2007/2008 food crisis

	Africa	Asia	LAC	Overall
Countries surveyed	33	26	22	81
Interventions to prevent price increases				
Trade policies:				
Reduction of tariffs/custom fees On imports	18	13	12	43
Restricted or banned exports	8	13	4	25
Domestic market measures:				
Suspension/reduction of VAT/Taxes	14	5	4	23
Release public stocks at subsidized prices	13	15	7	35
Administered prices	10	6	5	21
Interventions to support the poor' access to food				
Safety net programmes				
Cash transfer	6	8	9	23
Food assistance	5	9	5	19
Increase disposable income	4	8	4	16
Interventions to boost domestic food supply in the short run				
Production support(input subsidies)	12	11	12	35
Production safety nets	6	4	5	15
Fertilizer/seed programmes	4	2	3	9
Market interventions	4	9	2	15

Source: Demeke *et al.* (2009)

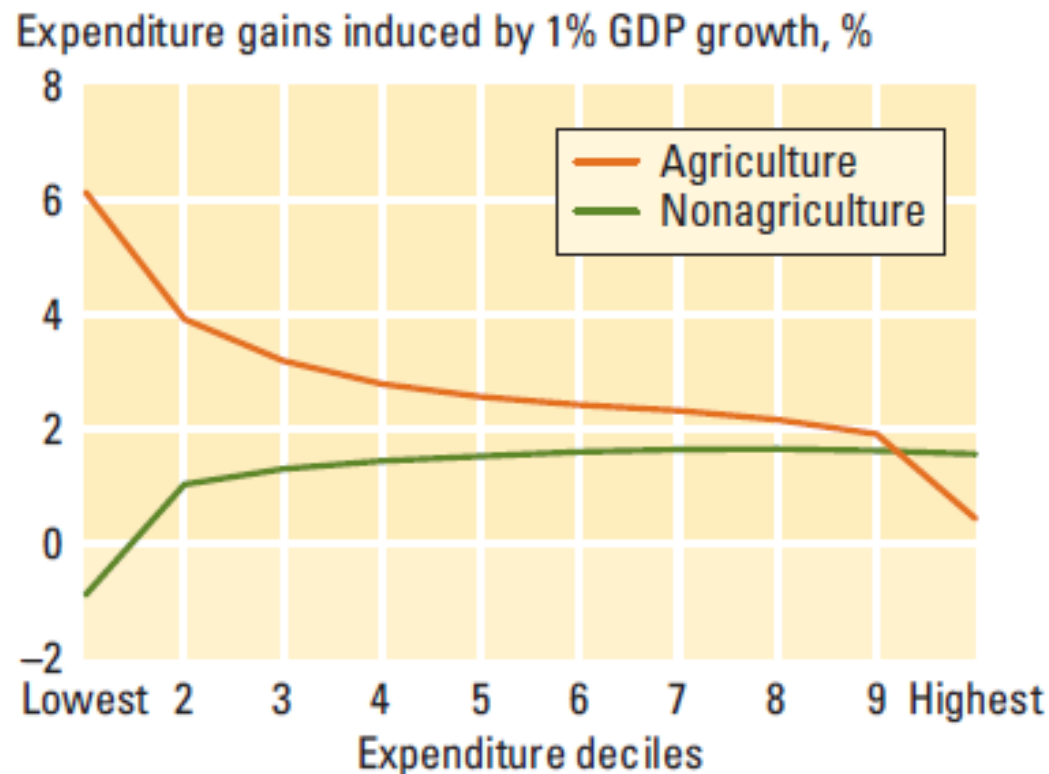


# Safety Nets: more social protection programs

- Malawi SCT
  - Mchinji pilot, 2007-2009
  - Expansion, 2011-2013
- Kenya CT-OVC
  - Pilot 2007-2011
  - Expansion, 2011-2013
- Mozambique PSA
  - Expansion, 2008-2009
- Zambia
  - Kalombo pilot, 2005
  - Monze pilot, 2007-2010
  - Expansion and child grant, 2010-2013
- South Africa CSG
  - Retrospective and expansion, 2010-2013
- Ethiopia
  - PNSP, 2006-2010
  - Regional minimum social protection package, 2011-2013
- Ghana LEAP
  - Pilot, 2010-2012
- Lesotho CGP
  - Pilot, 2011-2012
- Uganda, begins in 2011
- Zimbabwe, begins in 2011
- Tanzania, TASAF

# Investment in agriculture is clearly associated with hunger reduction

**GDP growth originating in agriculture benefits the poorest half of the population substantially more**



Source: Ligon and Sadoulet 2007. Estimating the effects of aggregate agricultural growth on the distribution of expenditures. The World Bank, 2007



# Conclusion: towards national effective food security policies and programmes

- Political commitment at the highest level translated into institutional arrangements
- Growth strategy for all
  - Social protection system for the poorest
  - Employment and income generation programs for the poor
- Large share of GDP resources





Thank you for your attention

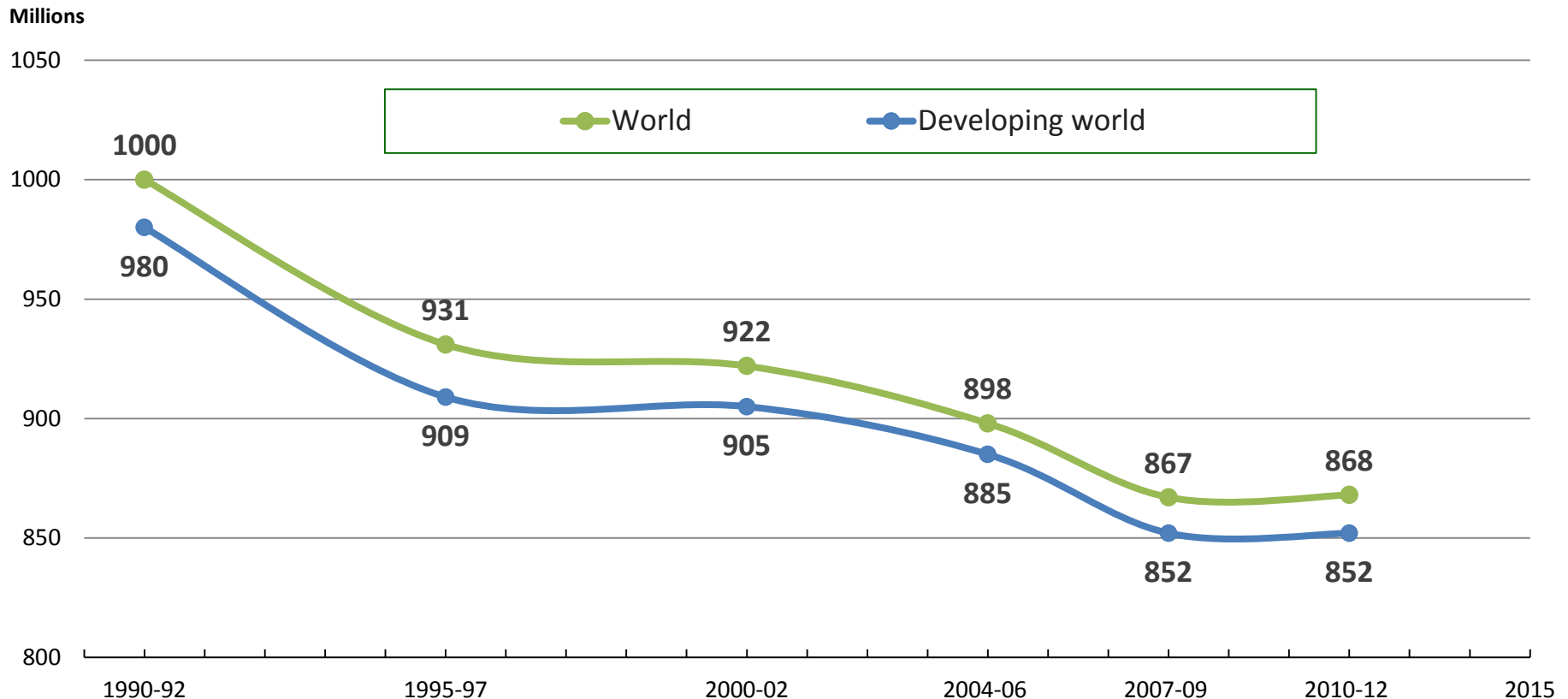
[www.amis-outlook.org](http://www.amis-outlook.org)

[www.fao.org](http://www.fao.org)



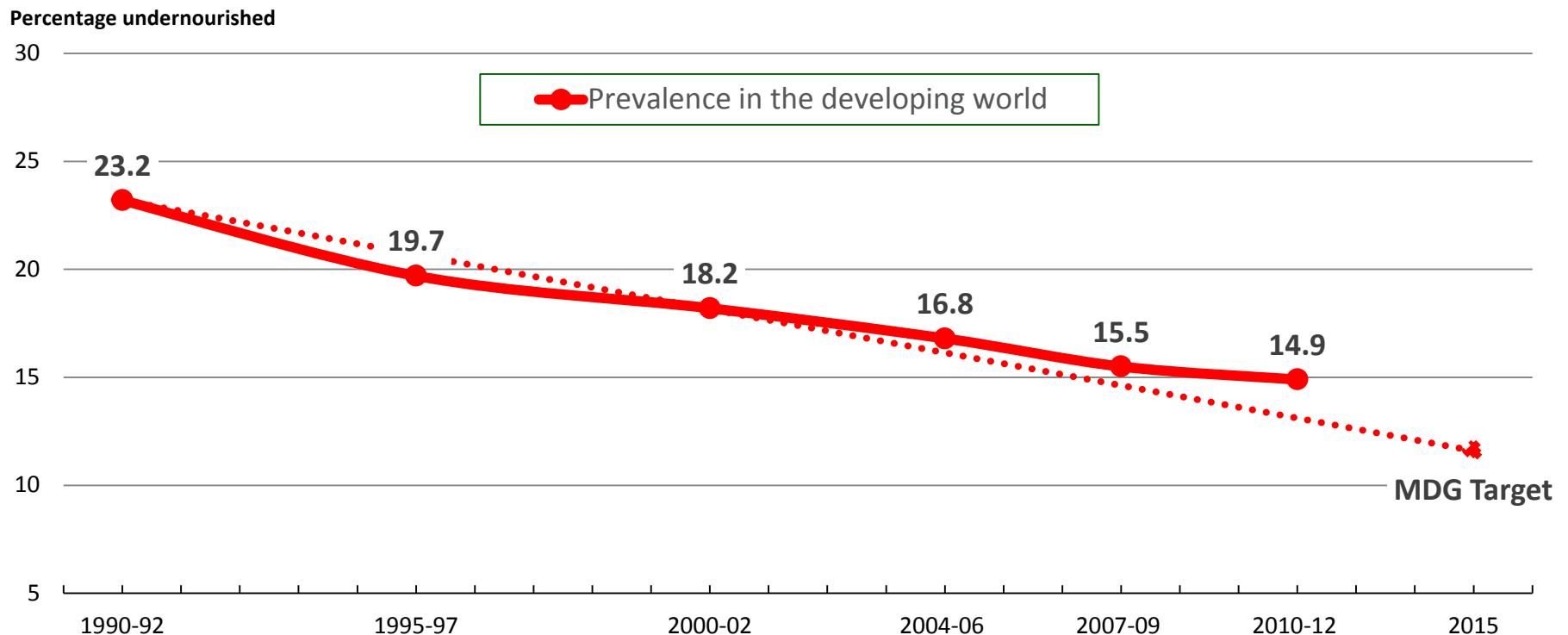
# Undernourishment in the world

- With almost **870 million** people chronically undernourished in 2010–12, the number of hungry people in the world is unacceptably high.
- The vast majority, more than **850 million**, live in **developing countries**.



# MDG1 hunger target achievable

- **More progress** in reducing hunger in the developing world than previously thought.
- MDG target within reach, only if adequate and appropriate actions taken to reverse **slowdown after 2006**.



# Uneven trends

## **Over time**

- Progress in 1990s with lower food prices
- Progress since due to economic growth

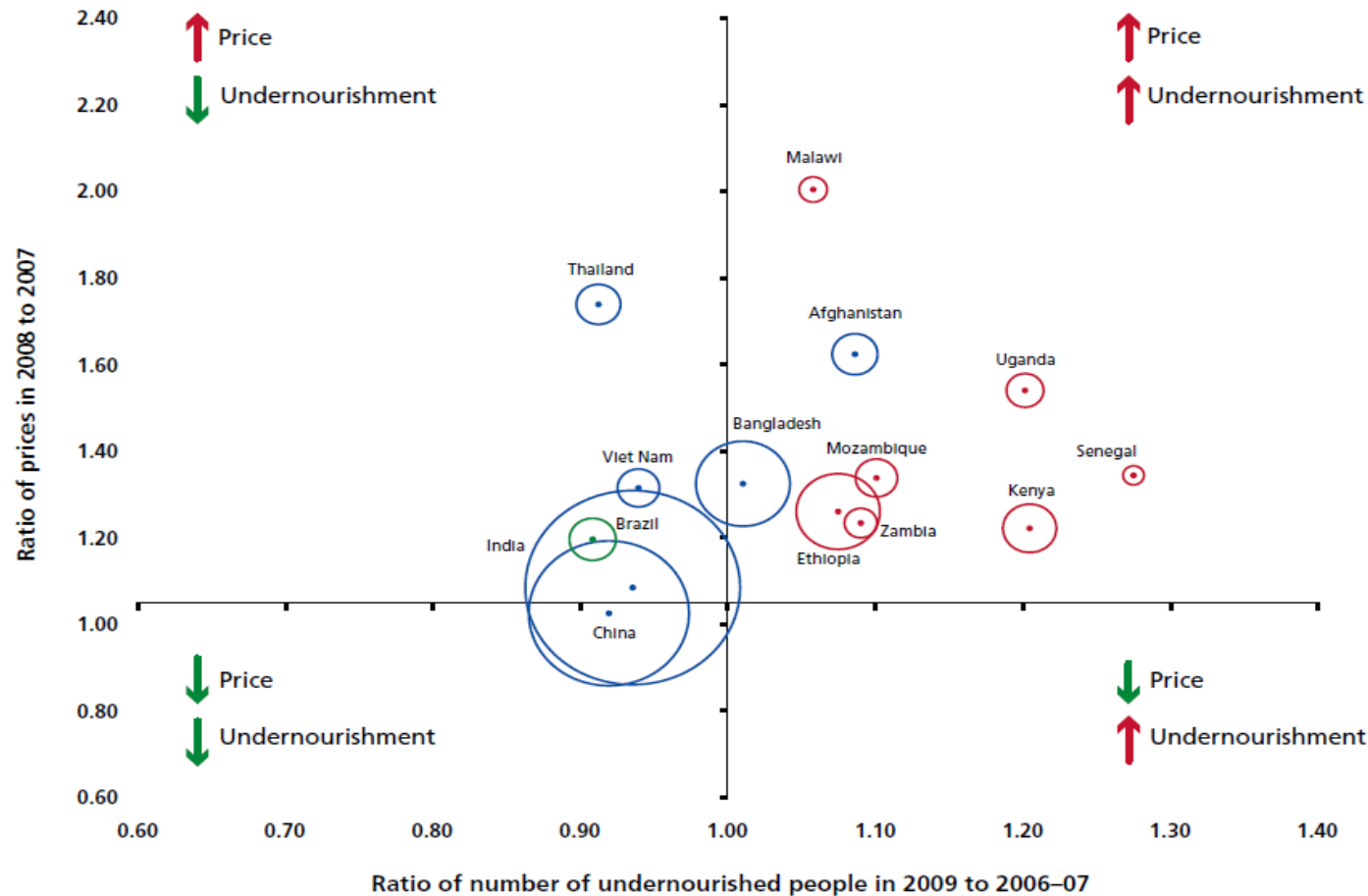
## **By region**

- South East Asia already reached the target
- East Asia almost on track
- South Asia lagging behind
- Latin America very likely to reach the target
- West Asia and North Africa off track
- Sub-Saharan Africa lagging behind



# Les famines: un problème global?

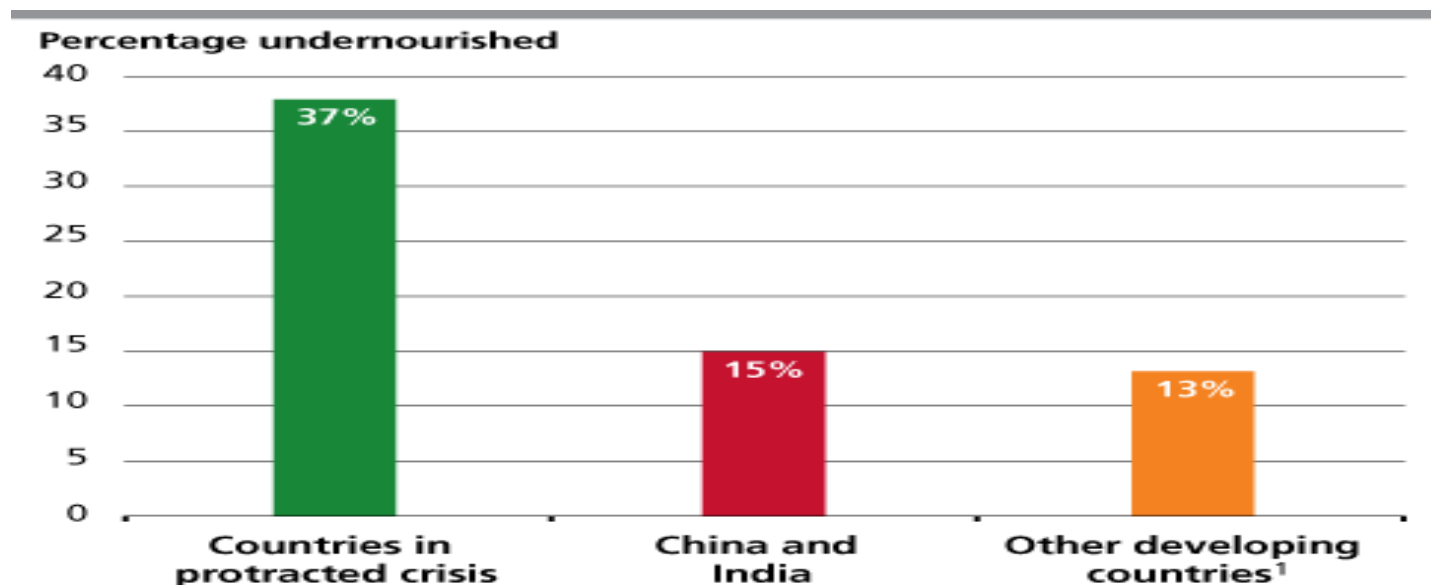
Differences in resilience to food price shocks across countries



Notes: The size of the bubbles is proportional to the number of undernourished in 2008. African countries are shown in red, Asian countries in blue and Latin American countries in green. Prices used are inflation-adjusted retail prices of major staple foods in main markets, weighted by the population of each market and the share in energy intake of each staple food.



## La sous-nutrition, trois fois plus élevée dans les pays en crise



Note: Data are for 2005–07.

<sup>1</sup> Excluding countries in protracted crisis, China and India.

Source: FAO.

# Why AMIS

## Food Price Crisis and Lack of Policy Coordination

- **2007-2008 Food Price Surge:** International prices peak in June 2008 - up 80 percent in two years!

## Problems to Solve

- Lack of reliable and up-to-date information on supply, demand, stocks and export availability
- Weaknesses at national level to produce consistent, accurate and timely agricultural market data and forecasts
- Inadequate information on stocks, domestic prices, and linkages between international and domestic markets
- Inappropriate and/or uncoordinated policy responses to market crisis

## Towards AMIS ...

- G20 Seoul Summit (November 2010) – Food security identified as one of the key pillars of the Multi-Year Action Plans for Development. A consortium of several international organizations prepares a report on **Price Volatility in Food and Agricultural Markets** and calls for the establishment of an **Agricultural Market Information System (AMIS)** to enhance the quality, timeliness and reliability of food market information.
- G20 Agriculture Ministers Meeting (June 2011) adopts the **Action Plan on Food Price Volatility and Agriculture**.
- Launch of **AMIS** and **Global Agricultural Geo-monitoring Initiative** to increase market information and transparency (September 2011).

## AMIS objectives

- Improve agricultural market information, analyses and forecasts at both national and international levels
- Report on *abnormal* international market conditions including structural weaknesses, as appropriate
- Strengthen global early warning capacity
- Collect and analyse policy information, promote dialogue and international policy coordination
- Build data collection capacity in participating countries

# AMIS Work Plan

## September 2011

Official launch of **AMIS** (Rome, 15-16 September 2011): Adoption of AMIS' Terms of Reference and Rules and Procedures, as well as a working document outlining Secretariat outputs.

## December 2011

Launch of the AMIS **Website** ([www.amis-outlook.org](http://www.amis-outlook.org)).

Expert Meeting on **Market Indicators**, AMIS outputs and Work Programme (Rome, 19-20 December 2011).

## February 2012

First meeting of the **AMIS Information Group** (Rome, 9-10 February 2011) to discuss informational channels, data requirements, methodology, and data input mechanisms with **AMIS Statistical Database**.

## April 2012

First meeting of the **Rapid Response Forum** (Mexico City, 11 April 2012) to review the progress made since the AMIS inception meeting in September 2011.

## October 2012

First meeting of the AMIS Secretariat Steering Committee (Rome, 1 Oct 2012)

Second meeting of the Global Food Market Information Group (Rome 2-3 Oct 2012)



# AMIS First Year Progress

## Statistics

- **AMIS statistical database** provides supply and demand statistics on AMIS-covered commodities (wheat, rice, maize, soybeans) for the participating countries and allows extraction/comparison of the latest data from different sources

## Capacity Development

- Establishment of an “**Umbrella project**” for all AMIS-related capacity building projects and preparation of two project documents (funded by the Japanese Government and the Bill and Melinda Gates Foundation)

## Governance

- Establishment of AMIS Steering Committee, a body which acts as a managing or governing body of the Secretariat, with a clear governance structure defining tasks and responsibilities of the Secretariat members

## Indicators

- Identification of priorities, assessment of needs and information to define a set of indicators enabling AMIS to predict any sudden, undesirable developments that could result in major market disturbances

## Market Monitor

- Release of regular reports on market conditions, that attempts not to duplicate any current information product already available and reflects the unique data and information collected by AMIS

# Capacity Development

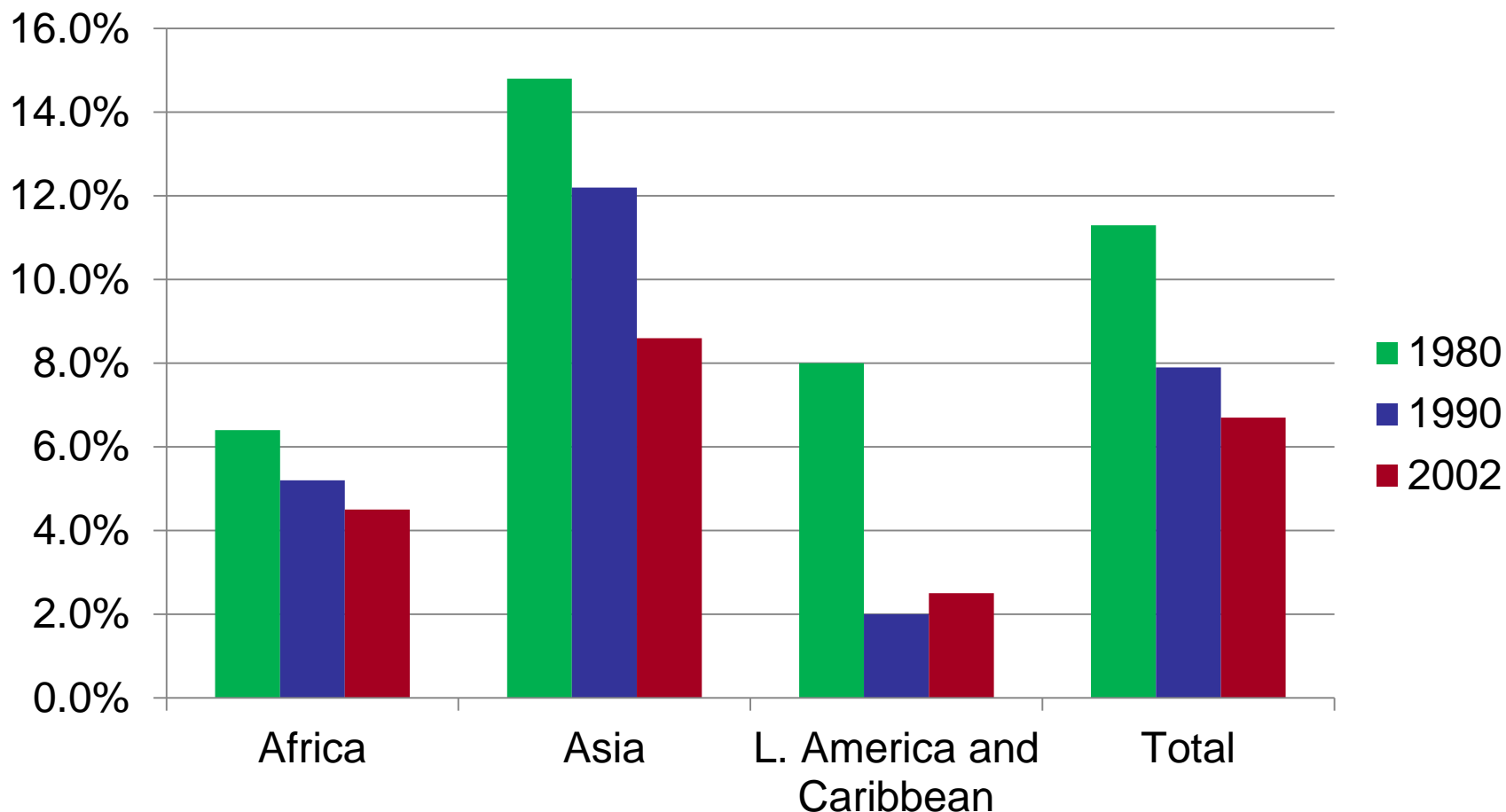
## Japan Funded Project

- **Title:** Strengthening agricultural market information in Thailand and the Philippines
- **Budget:** \$ 1,500,000
- **Duration:** 36 months
- **Components:**
  - Collection of best practices and improvement of relevant methodologies for the estimation of rice production, yields and stocks
  - Training and technical assistance to staff in NSOs and Ministries of Agriculture in accessing and applying improved methodologies
  - Dissemination of results of the Project within the broader ASEAN region



# Domestic public investment in agriculture has been neglected

Share of Total Government Spending in Agriculture 1980 - 2002

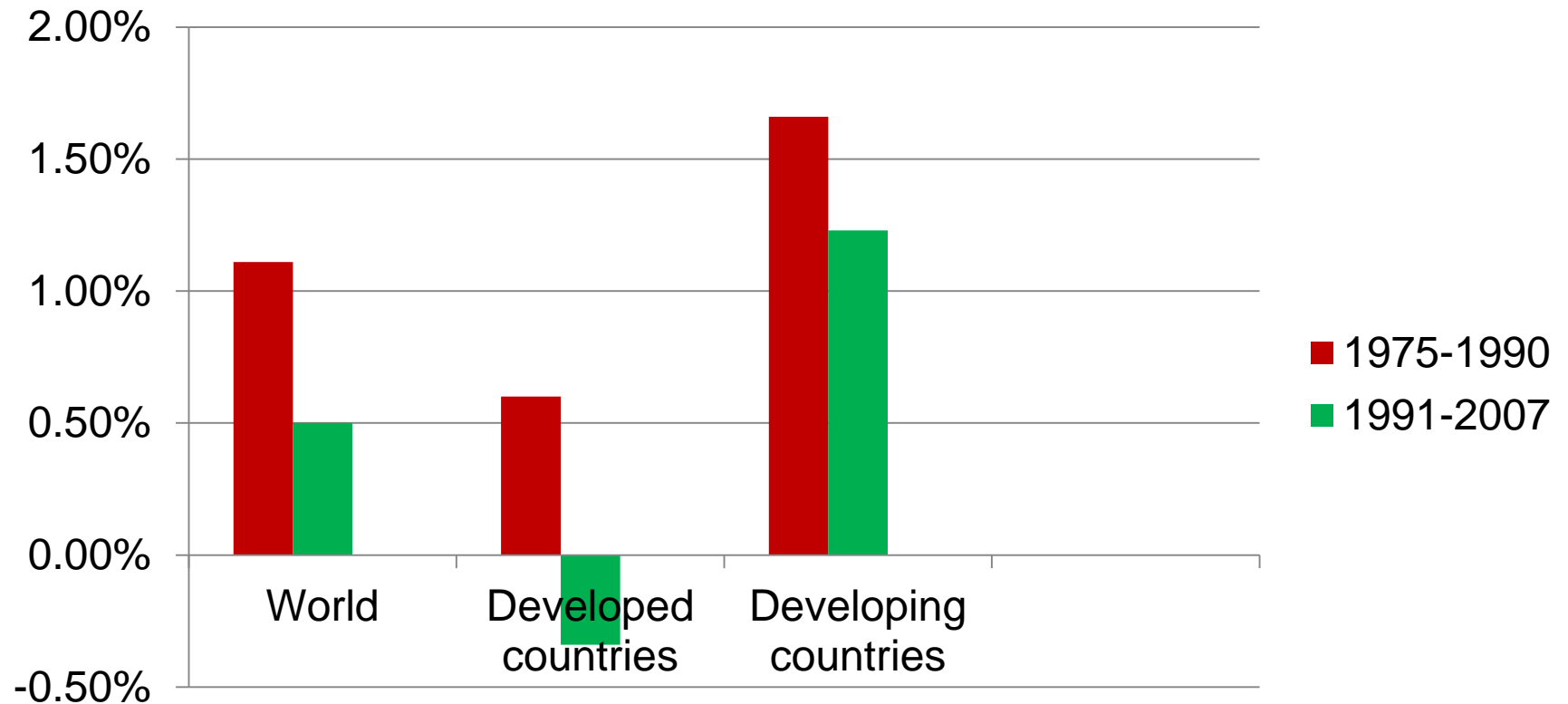


Source: Public Spending in Developing Countries: Trends, Determination, and Impact – Shenggen Fan and Anuja Saurkar



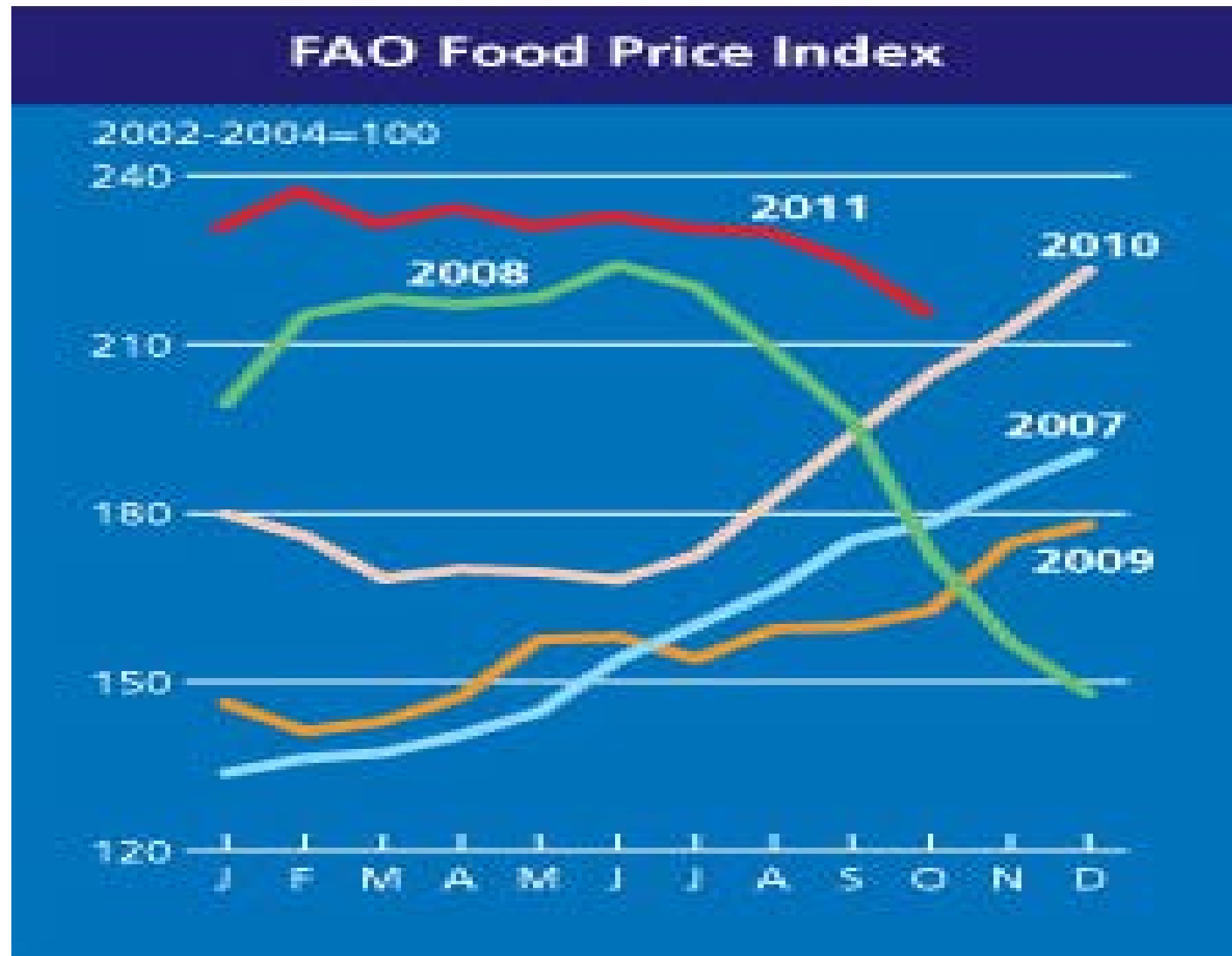
# Investment in agricultural capital, 1975-2007

Average annual rates of ACS growth before and after 1990



Source: von Cramon-Taubadel et al. 2009

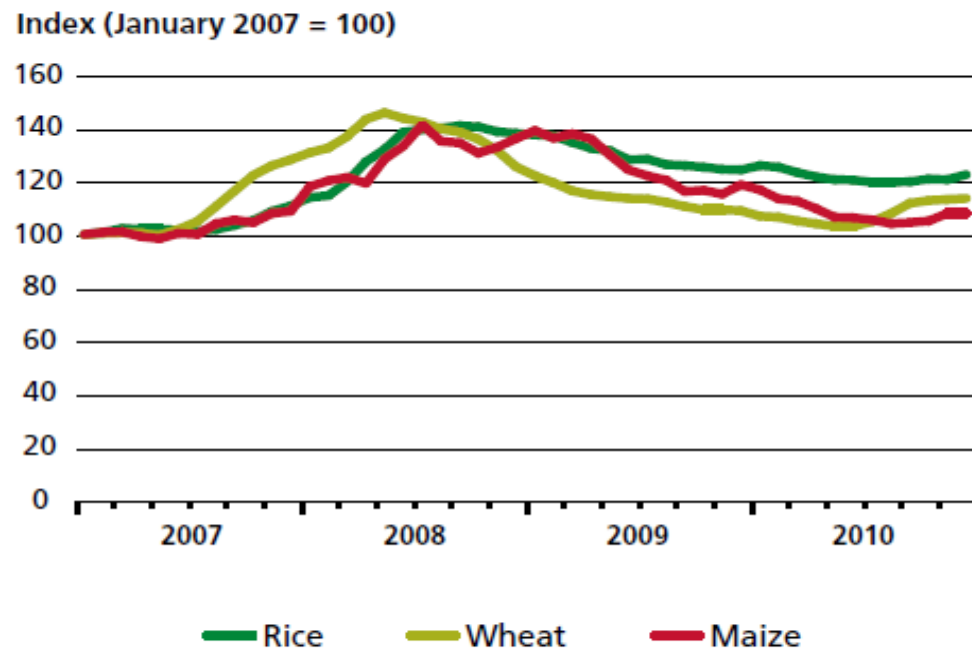
# Les famines: un problème global?





# Les famines: un problème global?

Domestic prices for rice, wheat and maize increased substantially during the crisis



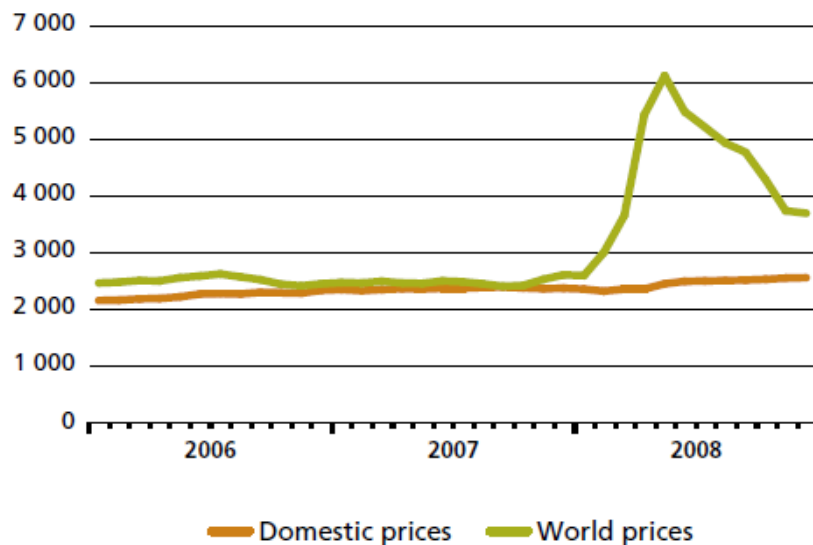
Note: The graph shows average inflation-adjusted trends in domestic prices for rice, wheat and maize across countries from January 2007 to December 2010. The domestic price is set equal to 100 in January 2007 for all countries, and the index value for subsequent months is equal to the average index value across all countries. The domestic price indices for rice, wheat and maize include 42, 27 and 34 countries, respectively, and include all countries for which data were available at the time of writing.

Source of raw data: FAO Global Information and Early Warning System.

# Les famines: un problème global?

Government control of trade in rice prevented high world market prices from affecting domestic prices in China during the 2006–08 food crisis

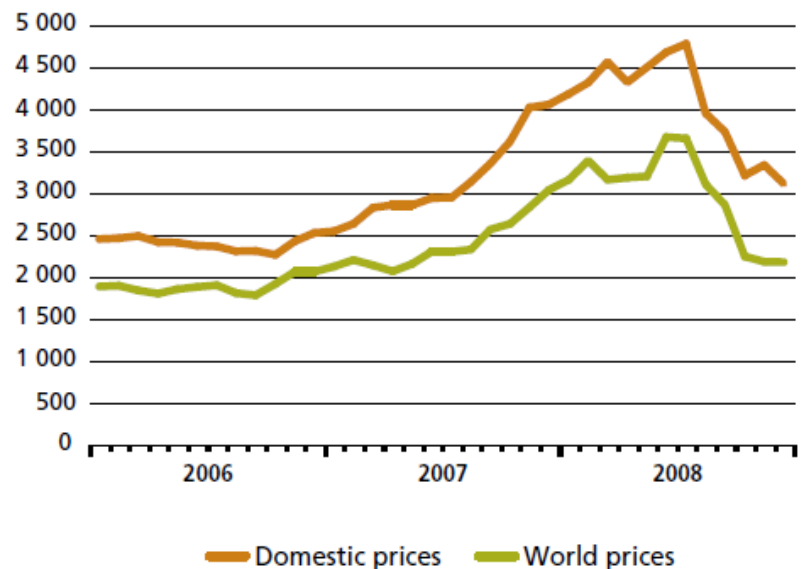
Inflation-adjusted price (2006 yuan/tonne)



Source: C. Fang. 2010. How China stabilized grain prices during the global price crisis. In D. Dawe, ed. *The rice crisis: markets, policies and food security*. London, Earthscan and Rome, FAO.

The Chinese government does not control trade in soybean, and domestic prices follow world market prices

Inflation-adjusted price (2006 yuan/tonne)



Source: C. Fang. 2010. How China stabilized grain prices during the global price crisis. In D. Dawe, ed. *The rice crisis: markets, policies and food security*. London, Earthscan and Rome, FAO.



# Vers une architecture globale plus forte?

- **1945:** Rapport général du travail de la FAO

“ Freedom from want means the conquest of hunger and the attainment of the ordinary needs of a decent, self-respecting life...If this can be done within and among nations by their separate and collective action, some of the world's worst economic ills, including hunger and extreme poverty, will be on the way to extinction”



# Vers une architecture globale plus forte?

- **1946**, proposition d'un bureau mondial de l'alimentation
  - Stabiliser les prix mondiaux des produits agricoles
  - Mettre en place des réserves alimentaires en cas d'urgence
  - Financer l'envoi de surplus alimentaires aux pays qui en ont le plus besoin
  - Coopérer en matière d'emprunts internationaux pour le développement agricole et le commerce



# Vers une architecture globale plus forte?

**1946**

- une FAO avec un mandat global pour l'agriculture et l'alimentation,
- une vision claire et partagée mais
- pas d'accord sur le comment
- peu de ressources



# Vers une architecture globale plus forte?

- Depuis 1962, découpage du mandat de la FAO en tronçons et établissement de nouvelles institutions (PAM, FIDA, WFC, WTO, CGIAR)





# Vers une architecture globale plus forte?

- 2005 – 2007 évaluation externe indépendante de la FAO...critique mais constructive
- 2008 – 2011 mise en place des recommandations de l' évaluation
- 2012 nouveau directeur général





# Conclusions

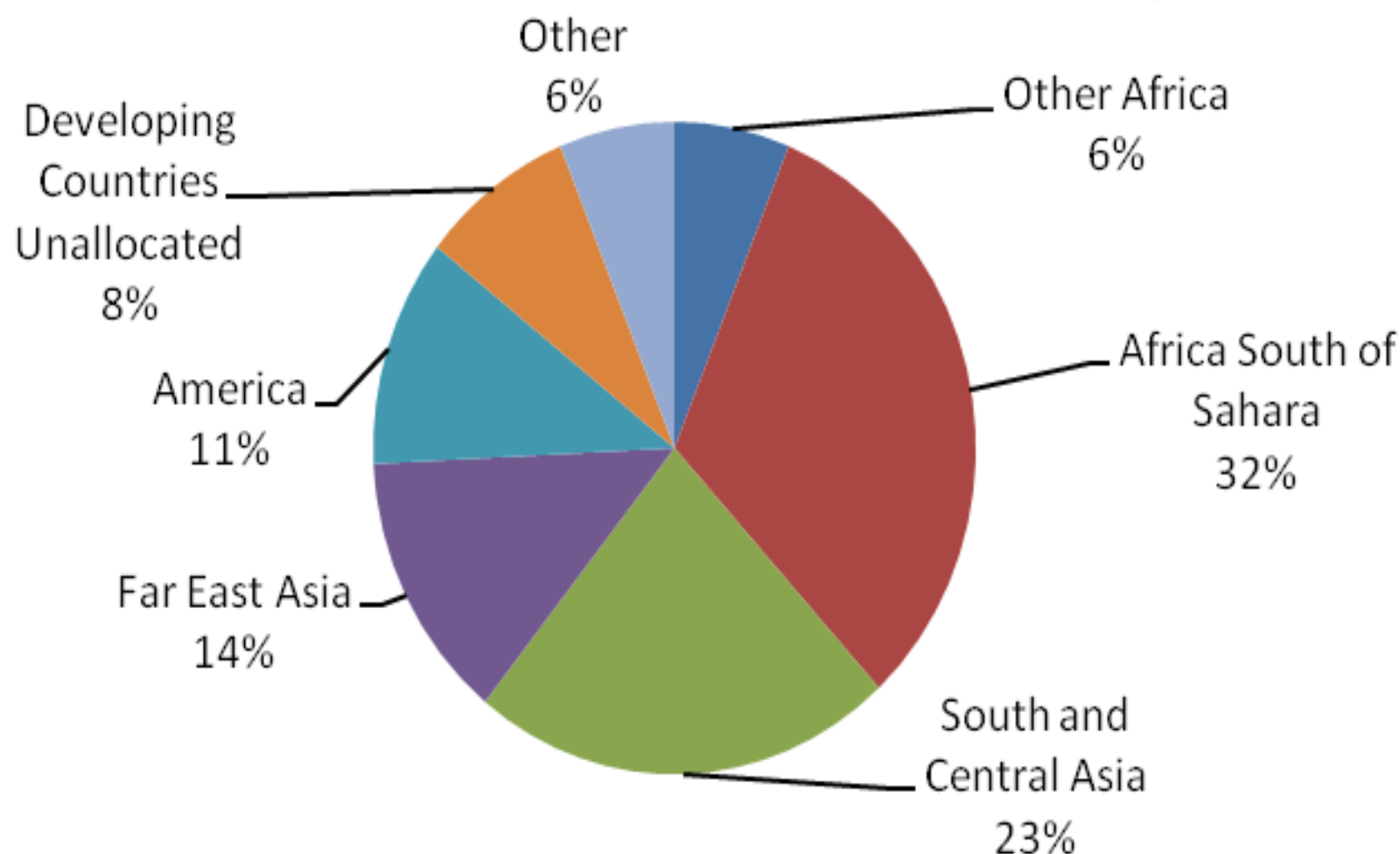
- Le système international pour l'agriculture et l'alimentation n'est pas égal à la somme de ses parties
- Il faut des politiques et programmes nationaux de combat de la faim et de la pauvreté efficaces
- Mais il faut aussi une volonté politique de se mettre d'accord sur les solutions. La société civile joue et jouera un rôle important à cet égard



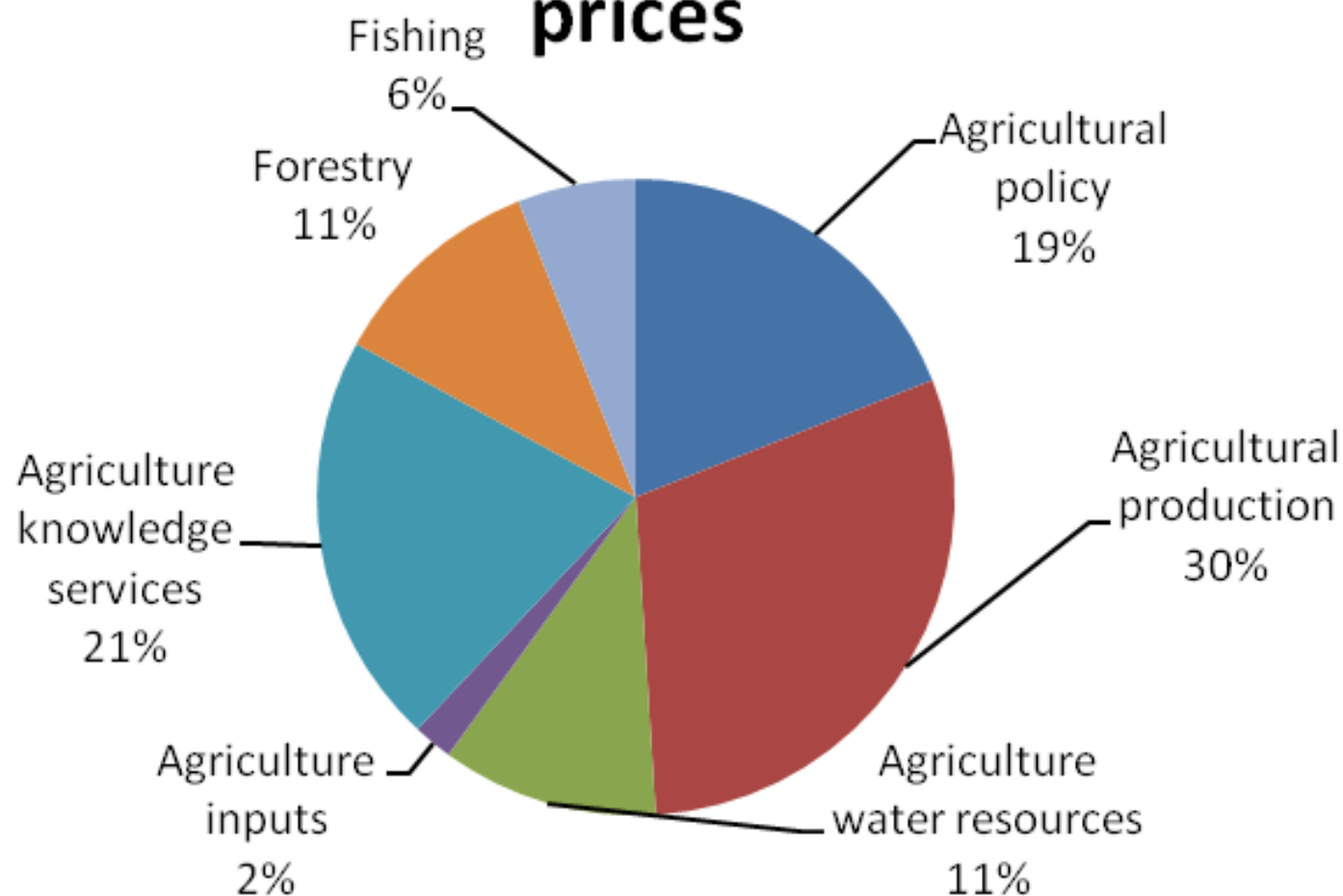
Thank you



## Regional breakdown of aid to agriculture - Commitments in 2003-08, constant 2007 prices



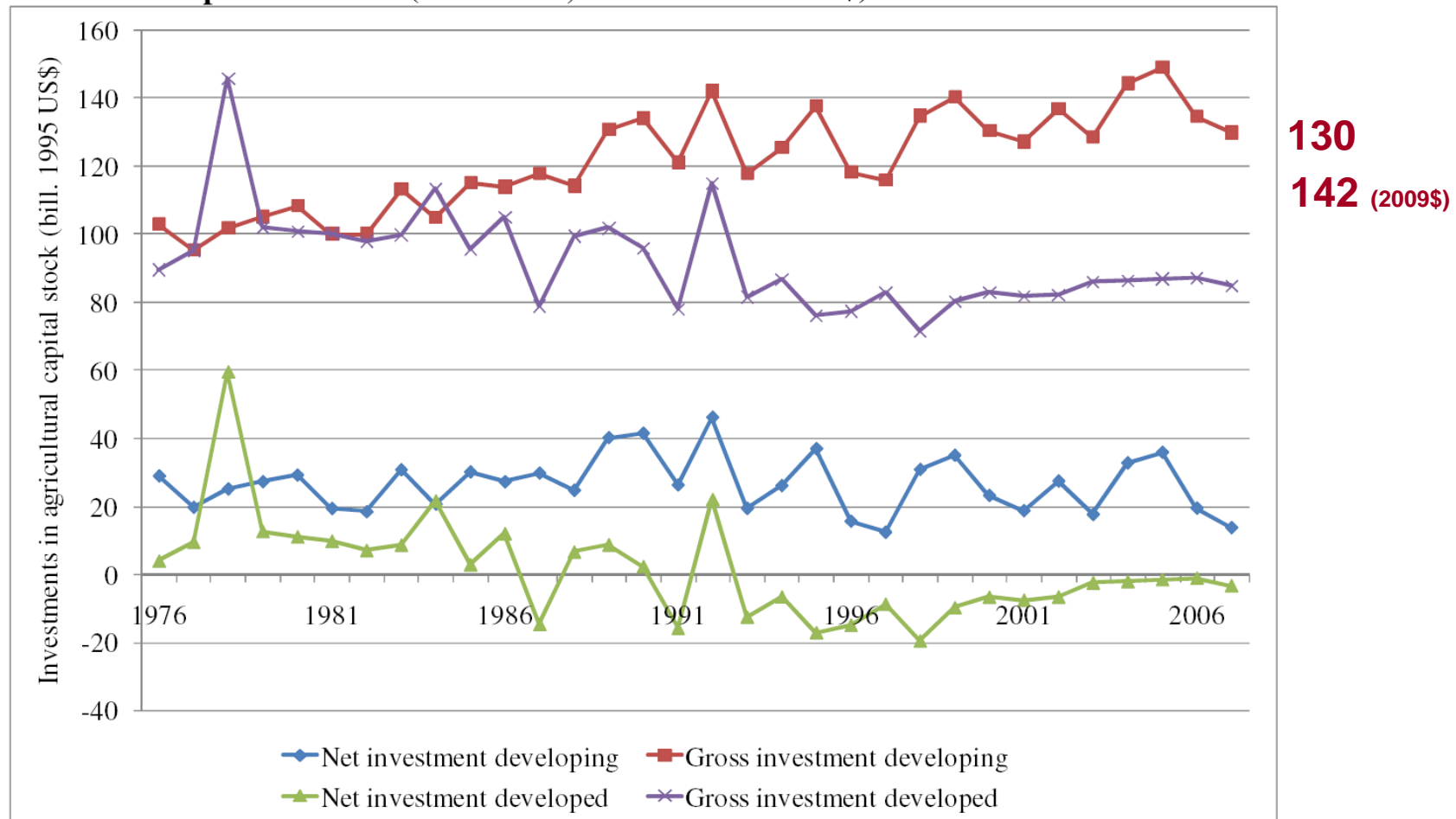
# Sub-sectoral breakdown of aid to agriculture -2007-08 - constant 2007 prices





# Investment in agricultural capital, 1976-2007

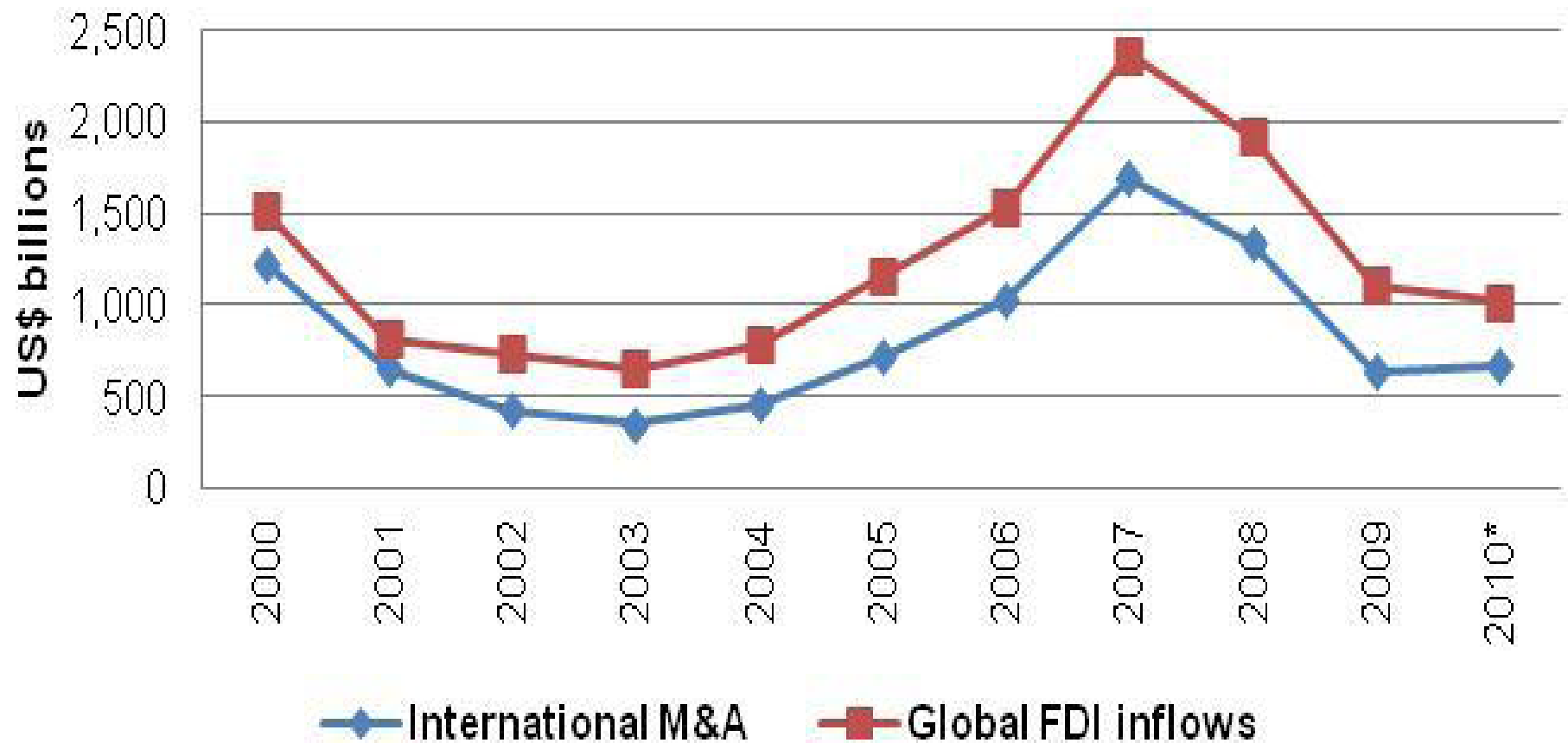
**Figure 3: Gross and net investments in the agricultural capital stock – developing and developed countries (1976-2007, in billion 1995 US\$)**



Source: von Cramon-Taubadel et al. 2009



# Figure 1. Global FDI inflows and international M&A, 2000-2010\*



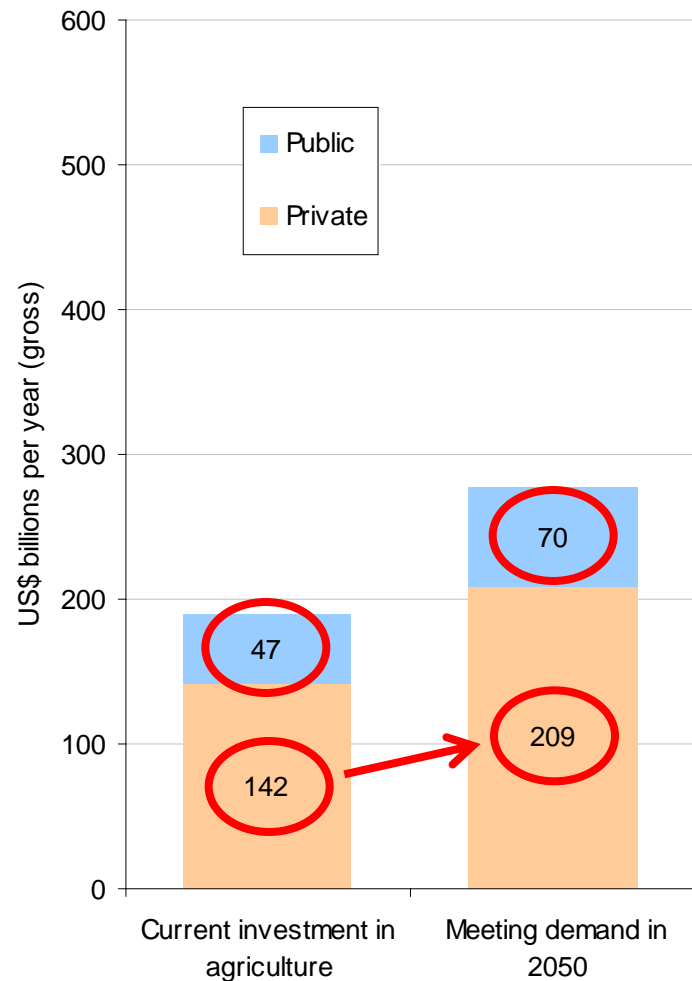
# Food demand to 2050

- Food demand to increase by 70 %
  - Population growth
  - Income growth
  - Dietary changes
- The natural resource base is adequate to meet the demand
  - Natural degradation stopped or significantly slowed
  - Climate change addressed
  - Small increase in cultivated area
  - 90 % from increased yields and cropping intensity





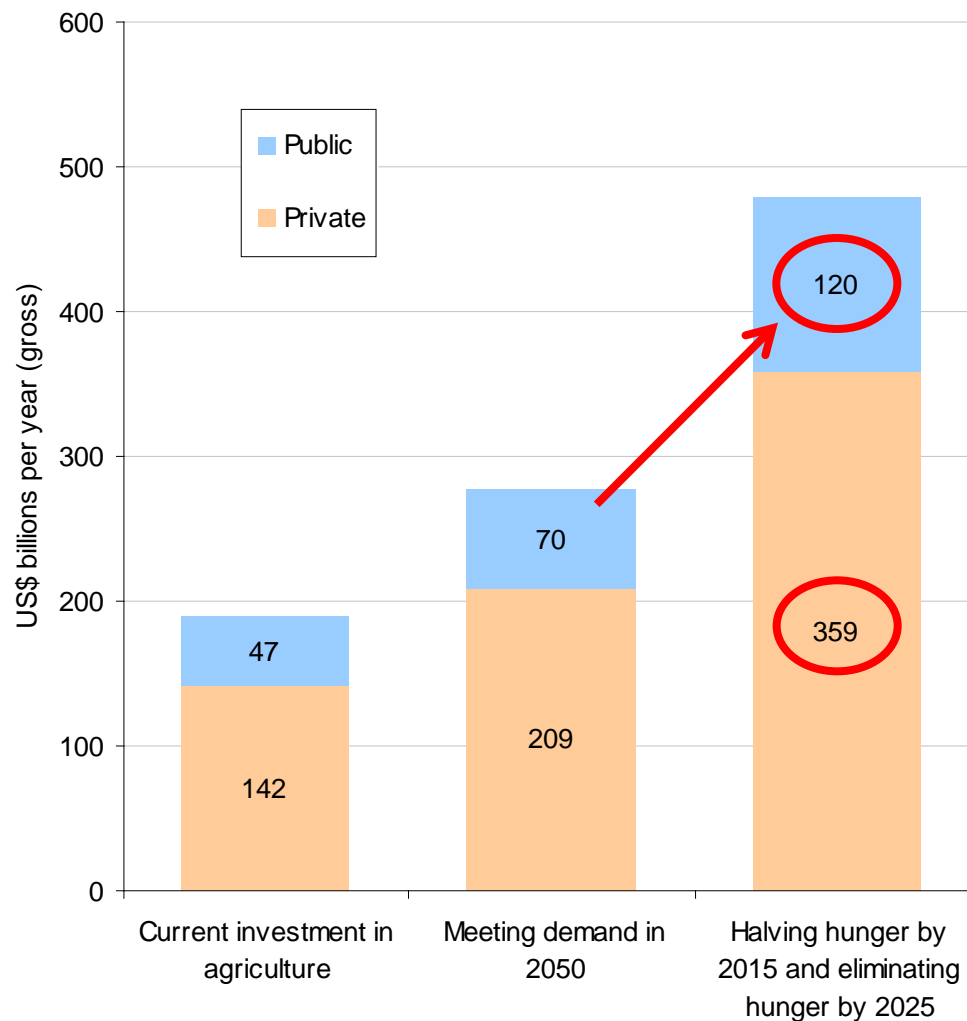
# Investing in agriculture to meet 2050 demand



- \$189 billion in 2007, \$278 billion for 2050
- assumed public = 1/3 private
- about 50% higher to meet demand in 2050
- \$142 billion private in 2007

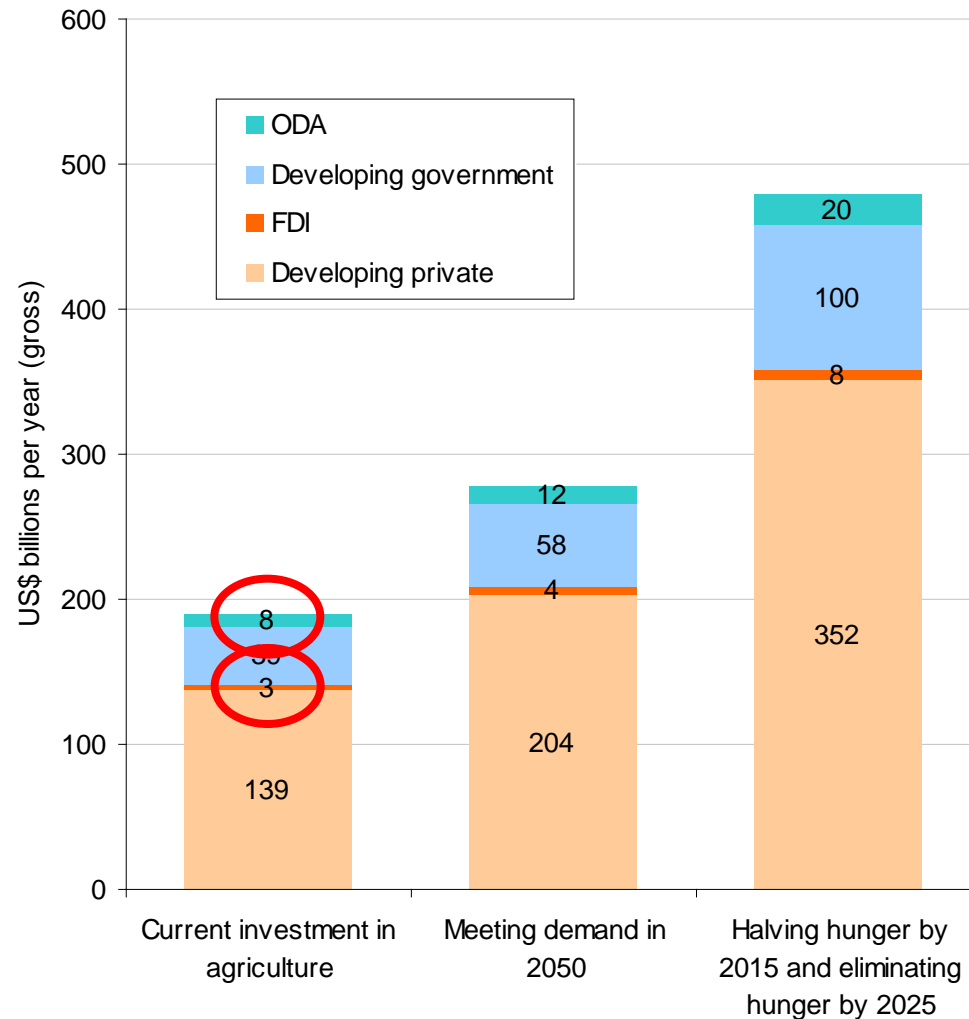


# Investing in agriculture to reduce hunger



- + \$50 billion public
- assumed that private investment would increase in proportion

# Most investment is funded by domestic private sources in developing countries



- \$8 billion ODA to agriculture in 2007
- \$3 billion FDI in developing country agriculture in 2007
- assumed to grow proportionately