Round Table

«Land Grabbing in Africa and Europe's Role in Global Food Security »

Presentation by

H.E. Mr Jean Feyder,

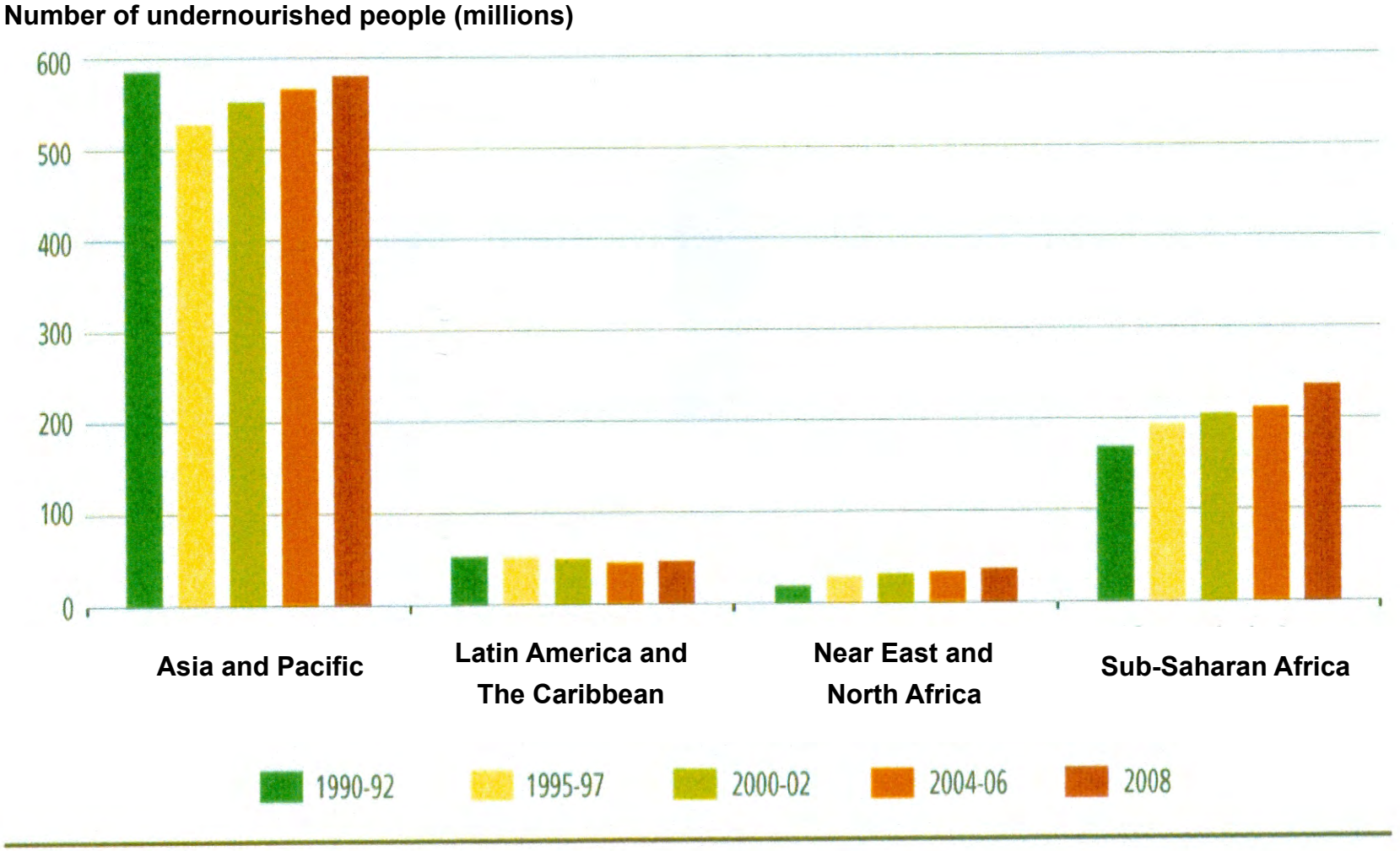
Ambassador, Permanent Representative of Luxembourg in Geneva

12 October 2011

European Parliament, Brussels

Learn from the past : number of people undernourished in the world : from 1969-71 to 2009

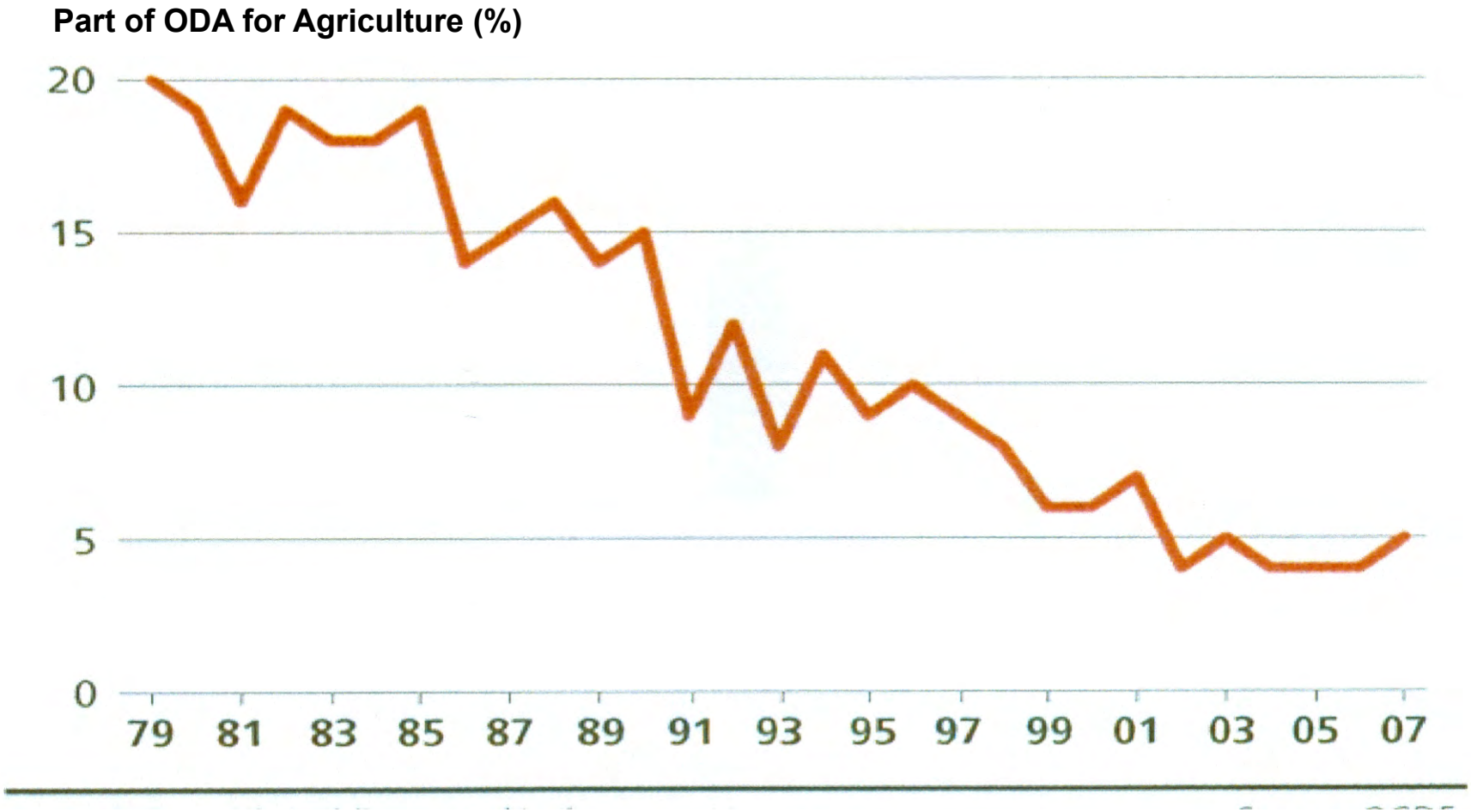
Increase in numbers of undernourished people round the world by region from 1990-92 to 2008



Who is suffering from Hunger and MaInutrition

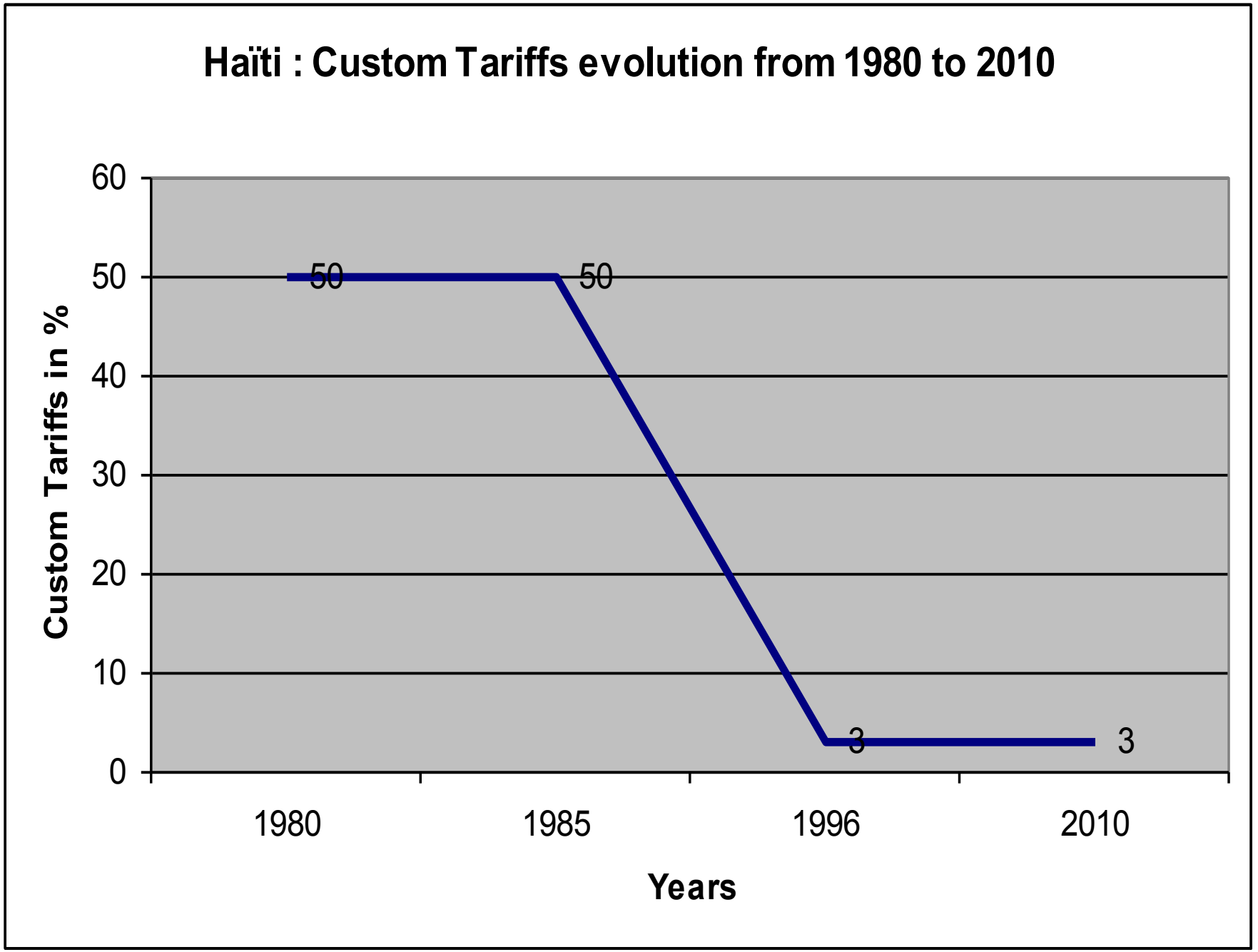
- 80% : Rural Population
  - 50% : Small Paysans
  - 20% : Landless
  - 10% : Herdsmen, Fischermen, Rural workers
- 20% : Shanty town habitants

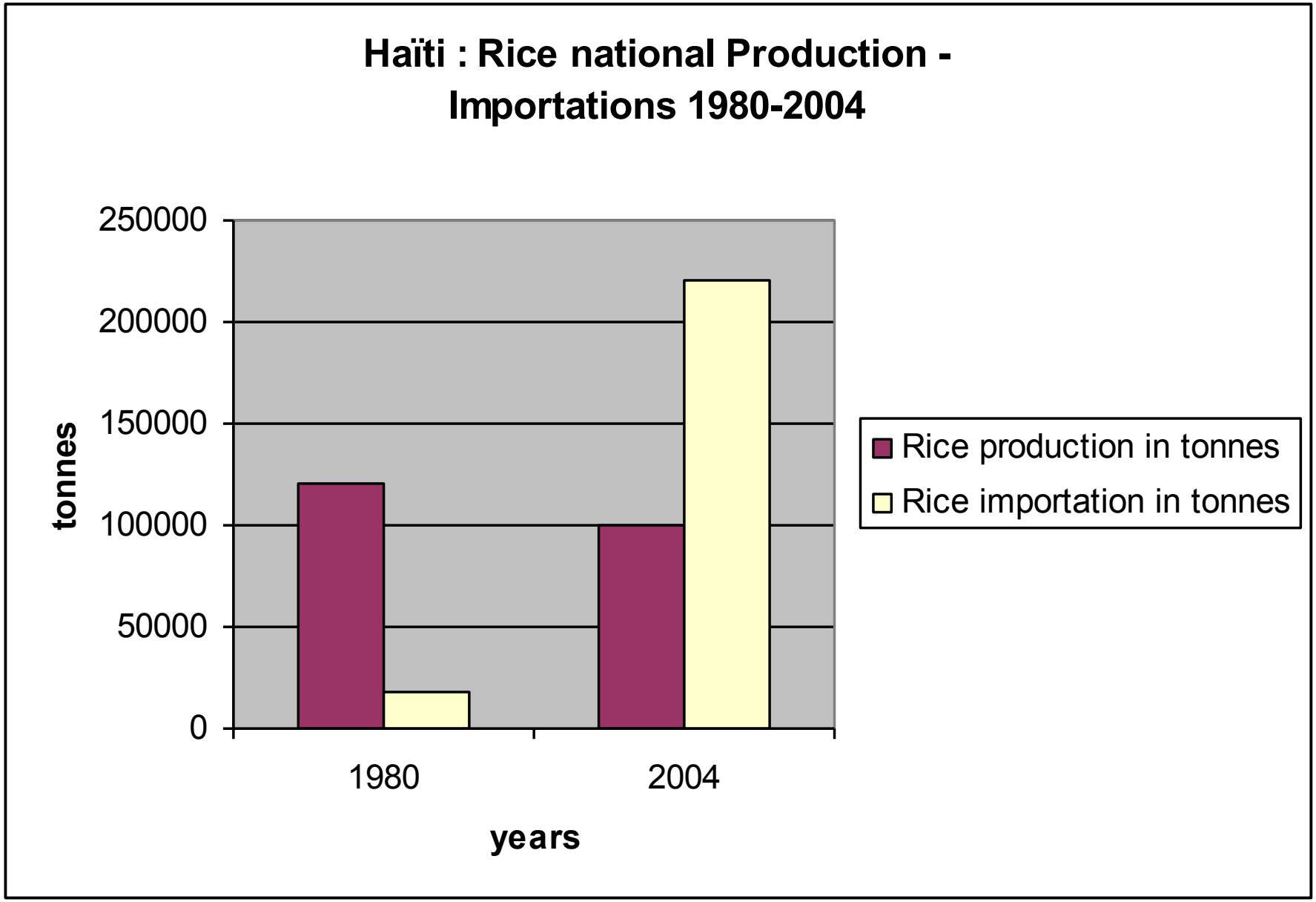
Dramatic fall of ODA for Agriculture

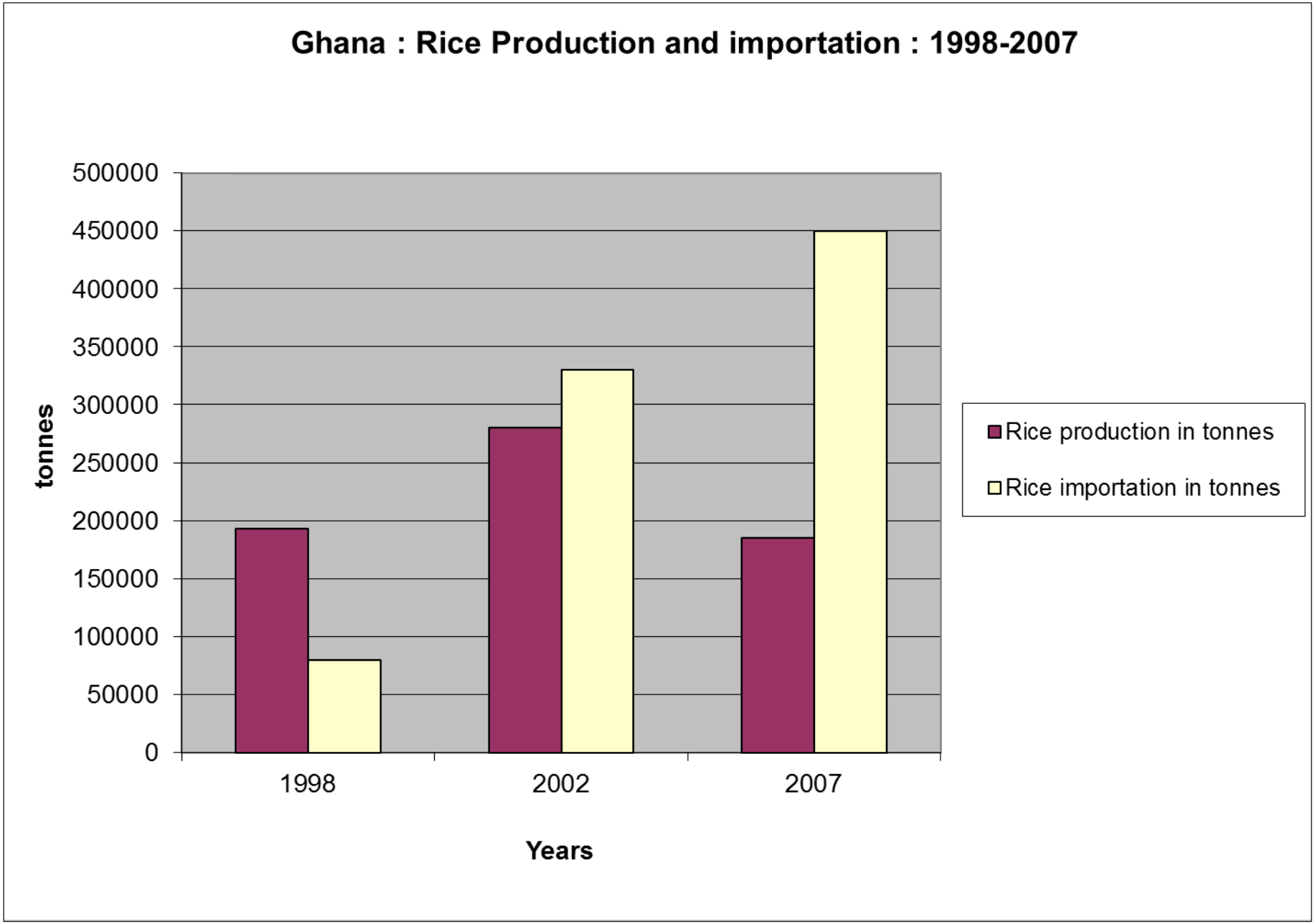


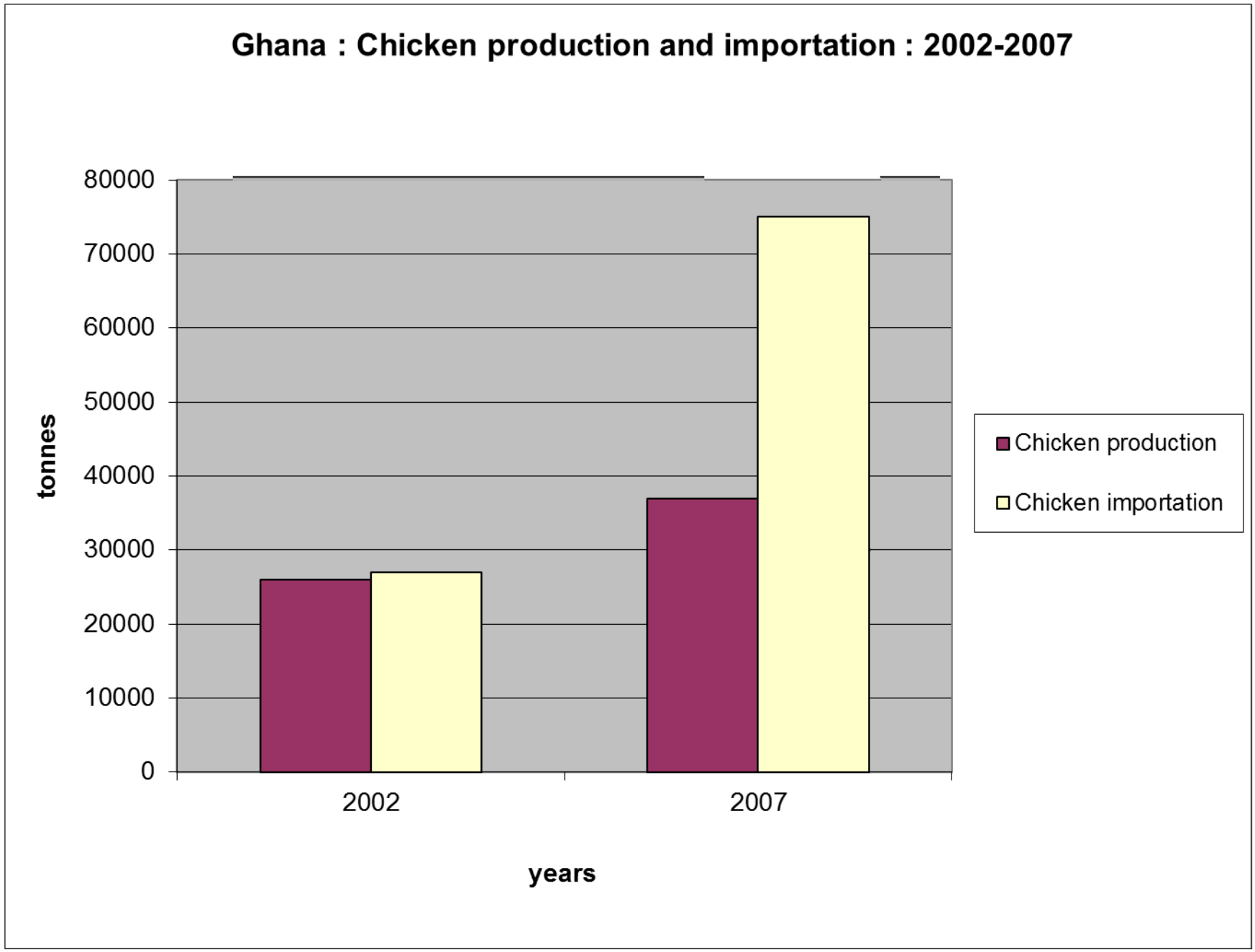
ODA : Official Developement Aid

Source : OCDE

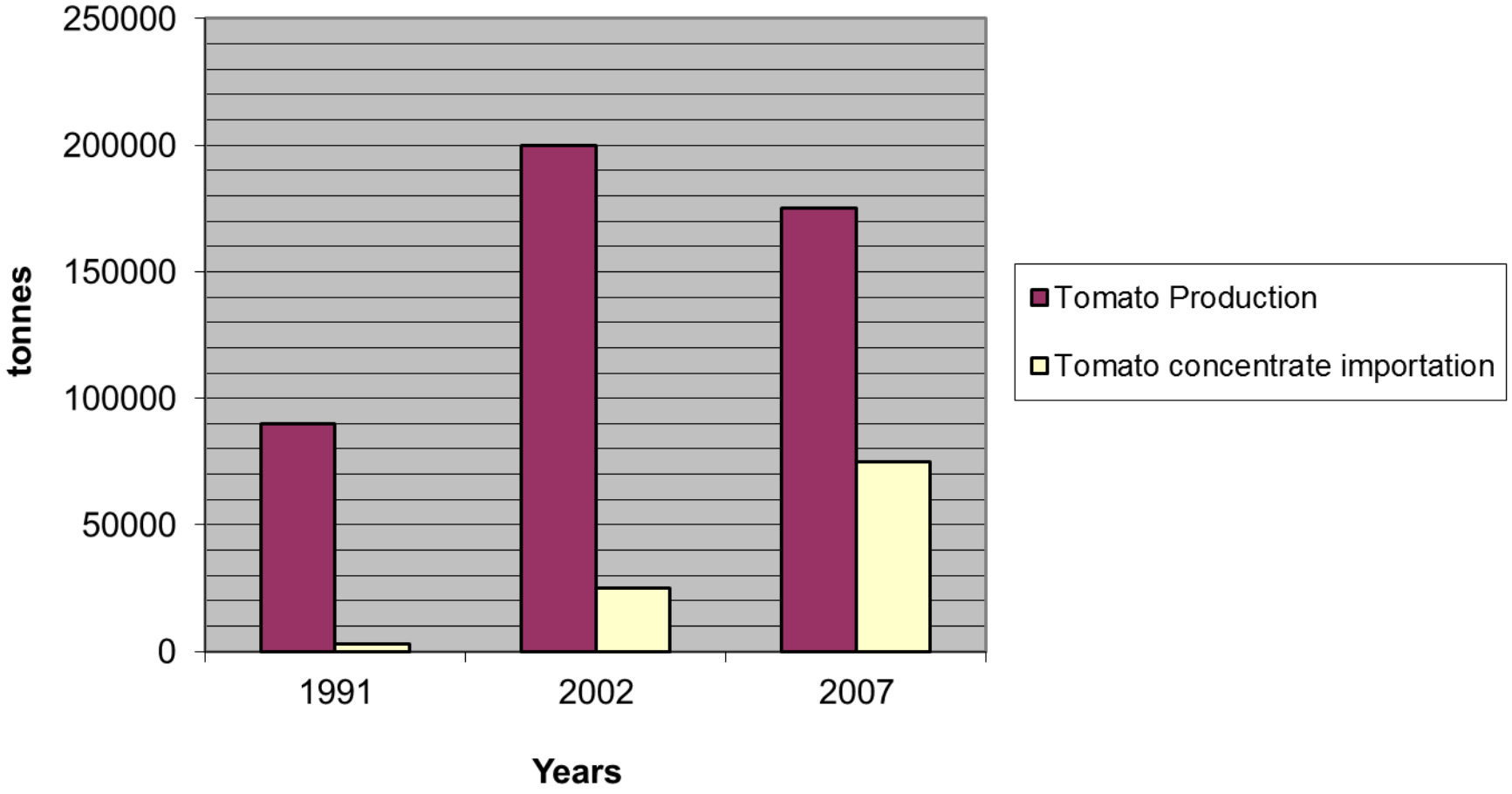

Haïti : Custom Tariffs evolution from 1980 to 2010
Custom Tariffs in %
60
50
40
30
20
10
0
50
50
3
3
1980
1985
1996
2010
Years

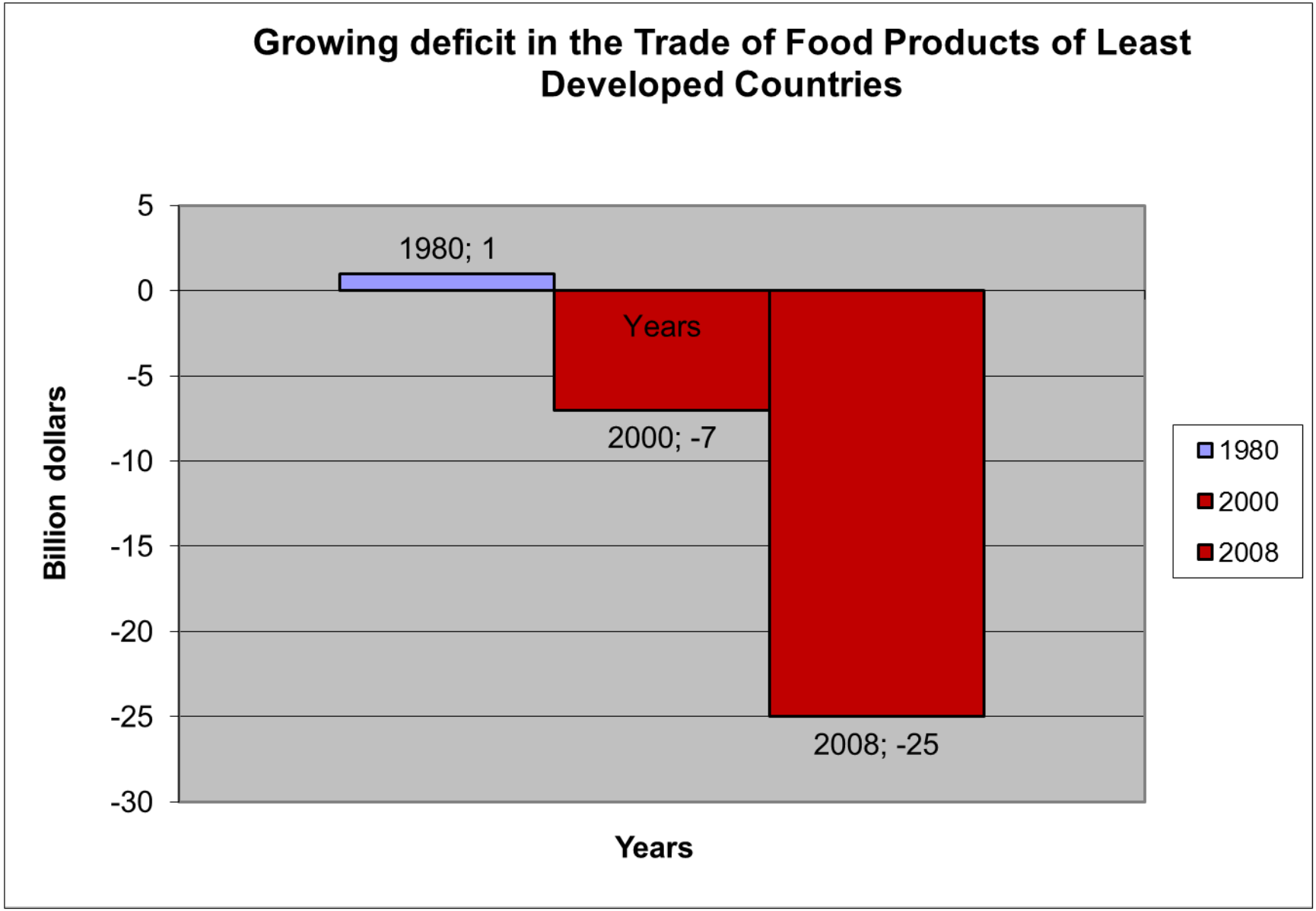

Haïti : Rice national Production - Importations 1980-2004
250000
200000
150000
100000
50000
0
tonnes
1980
2004
years
Rice production in tonnes
Rice importation in tonnes


Ghana : Rice Production and importation : 1998-2007
500000
450000
400000
350000
300000
250000
200000
150000
100000
50000
0
tonnes
1998
2002
2007
Years
Rice production in tonnes
Rice importation in tonnes


Ghana : Chicken production and importation : 2002-2007
80000
70000
60000
50000
40000
30000
20000
10000
0
tonnes
2002
2007
years
Chicken production
Chicken importation

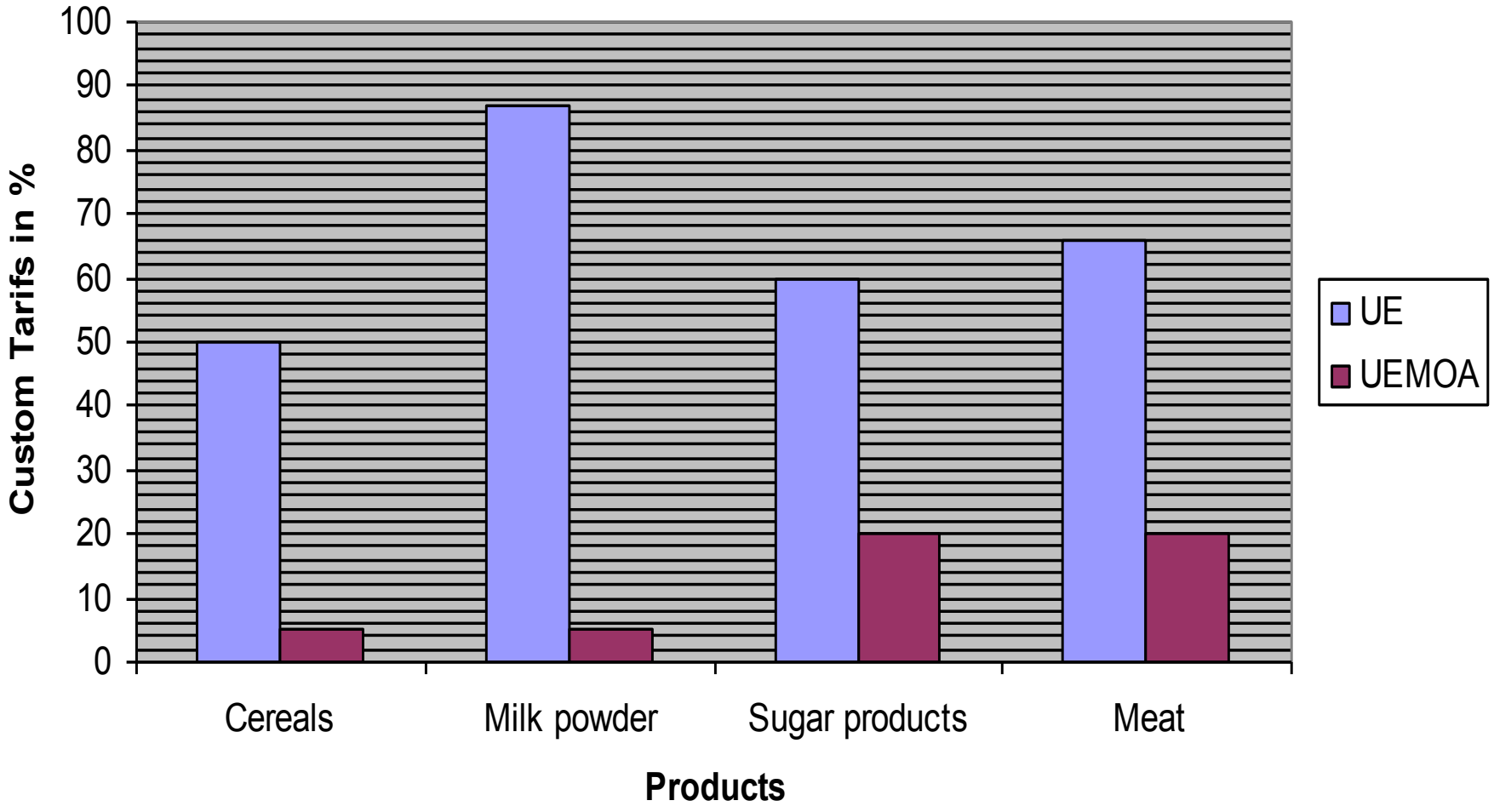
Ghana : Production and importation of tomatoes and tomato concentrate : 1991-2007




Growing deficit in the Trade of Food Products of Least Developed Countries
Billion dollars
5
0
-5
-10
-15
-20
-25
-30
1980; 1
Years
2000; -7
2008; -25
Years
1980
2000
2008

Custom tarifs in the EU and the UEMOA

(West African Economic and Monetary Union)



What to do ?

- Boost staple food agriculture
- Support small producers and in particular women
- Increase investment in agriculture
  - Respect official development assistance commitments
    - 0,7% of GNP by 2015
    - L'Aquila Summit 2009 : 20 billion dollars in 3 years
    - Reserve 10% of ODA for agriculture : example of Belgium
  - Develop human capacities
  - Facilitate access to inputs, infrastructures, and knowledge
- Participation of peasants associations

What to do ?

- Stable and fair prices
- Access to land
  - New challenges
    - Development of agro-fuels
    - Land-grabbing
- Develop a biological agriculture : agro-ecology
- Agricultural market regulations
  - Increase customs tariffs
  - (re)create trading offices
  - Develop food stocks
- EU : ensure policy coherence including through a re-assesment of its trade policy

Challenges to Productivity in African Agriculture

Philipp Aerni
University of Bern and
ETH Zurich
&
Africa Technology
Development Forum

European Parliament, Brussels, 12. Oktober, 2011

Overview

1. Facing reality in Africa
2. Lessons from China
3. Inclusive Agricultural Development in Africa
4. We need better theories for rural development
5. The Cassava Biotechnology Network (CBN)
6. Facing reality in Europe
7. Way forward

1. Facing Reality in Africa (Southgate 2010)

- Rapid Urbanization / Semi-subsistence agriculture
- Environmental soil degradation/deforestation/water scarcity
- Food insecurity in cities due to import-dependence
- Climate Change > additional biotic and abiotic stress factors

Why in Africa?

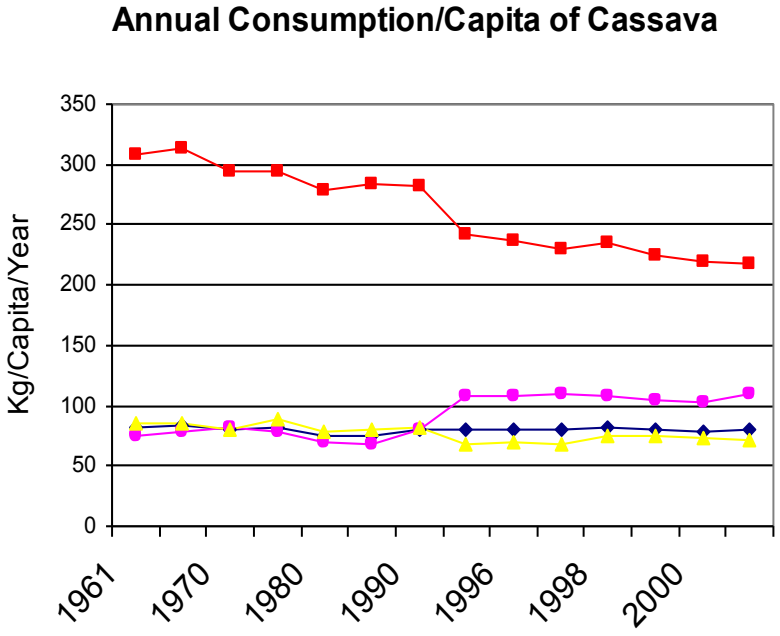
- Ruled by Socialism/Neoliberalism but not Pragmatism > too many foreign consultants/NGOs with theory but no practice
- No entrepreneurial middle class > no drive for change > no innovation in agriculture > low agricultural productivity

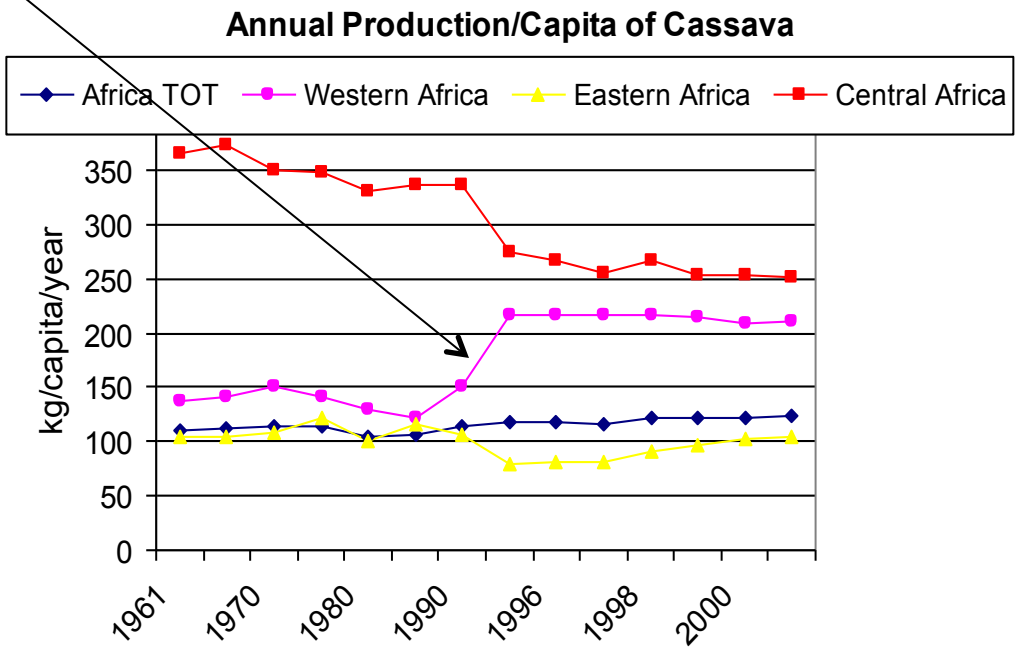
Total food production in SSA today 10% lower than in 1960

Decreasing consumption and production of food crops
E.g. Cassava, as an alarming indicator in Central Africa

Annual Consumption and Production of Cassava per Capita in Africa (Source: FAOSTAT)

Impact of IITA (International Institute of Tropical Agriculture)





- All the other major food crops such as maize, tuber&roots, millet, sweet potato, yam, sorghum declined too (except rice)

2. Lessons from China

The Success of Agricultural Development in China (1978-2008)

- Average annual agricultural GDP growth rate: 4%
- Average annual farm income growth rate: 7%
- China's poverty rate today 2.5% (compared to 31% in 1978)

How were they able to make small-scale farming more productive?

It was not Neoliberalism or Food Sovereignty but Pragmatism

Poverty reduction due to state push for technological change

- Investing in people, infrastructure, local companies and R&D
- Providing access to improved seeds, technical assistance, agricultural technologies, credit, off-farm employment

- **AU Summit 2007 > South-South Collaboration / Innovation**

3. Inclusive Agricultural Development in Africa

One Acre Fund (Kenya & Rwanda)

> From 40 farmers to 30'000 farmers in three years

> Each farm increased productivity 2-3 fold

How is this success possible?

By treating farmers as entrepreneurs rather than aid recipients

> Service model (field experts) connected to 'market points' (hub)

How to increase productivity and empower society in Africa?

> Hybrid model for rural business development (business/NGOetc)

> Tapping the many untapped resources > e.g. aquaculture

> Farm Field Schools > testing/adapting (IPM>striga, peanut seed)

- Combining the idea of land grant colleges with new technologies (E-mentoring) (http://match.atdforum.org)

4. Better theories for rural development

Common Agricultural Policy (CAP): A doubly problem

- Land Grabbing (**2007-10 expansion: 12.5%** /average: 3.5%)
- Exporting CAP to Africa (social instead of economic policy)

  - Transfer of regulation instead of transfer of technology
  - Humanitarian assistance instead of entrepreneur assistance

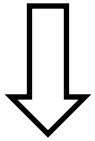
  > Makes innovation expensive, discriminates agents of change

Fatal Dualist Mindset: Community vs. Market

→ Lots of community projects> crowding out of private sector

→ productivity / employment / structural change

☹ Less Food Sovereignty/More land expansion



Welfare economics(social planning)

- *Relic of the 1970s mindset* > we live in a knowledge economy -New Growth Theory > knowledge, the only non-scarce resource

5. The cassava biotechnology network (CBN)

> Making use of the knowledge economy (Aerni 2006)

The Cassava Biotechnology Network (CBN): a multidisciplinary, bottom-up oriented public-private partnership, based at CIAT and dominated by stakeholders from the South > tri-annual meetings

- **Research focus on product innovation. E.g *Low-cost tissue* culture laboratories (cloning clean cassava planting material)**
  - > allowing women to use their skills and traditional knowledge and combine it with a new technique that generates business
  - > higher productivity of cassava, more revenues, more self-confidence, rural empowerment (especially of women)

EU and Swiss donors decided to stop financing CBN because of the term ‚biotechnology' (>5% GMO)

- B&M Gates Foundation jumped in but CBN meetings lost
- Network model has been replicated for many crop networks

6. Facing Reality in Europe

- Ideological and polarized Food Debate in Europe out of step with reality in Africa (*pragmatic South-South collaboration*)
  - > based on trial and error (experimentation) rather than social planning and patronizing 'participatory' projects

Wrong Baseline Assumptions in Europe:

- We are rich because they are poor, we have to protect them (entrepreneurship is a 'Western construction')
  - > *The rise of Asia contradicts this*
- European and African farmers sit in the same boat
  - > *they don't. Compliance systems are expensive , hostile to innovation and crowd out the private sector (Aerni 2009)*
- Farming is a life-style for those who like plants and animals
  - > *African farmers do not have the privilege to choose!*

7. Way forward

Sustainable intensification of African Agriculture (Rio 92)

- *introduce user-friendly new techniques that make it easier easier to produce more with less (e.g. Bt cotton, CBN, 1Acre)*
- *promote demand-driven innovation systems (Juma 2011, Aerni 2006)*
- *adjust development theories to knowledge economy reality*
- *move from confrontation to collaboration (based on pragmatism)*
- *introduce new knowledge in schools, de-link moral debate from fear about globalization (Aerni&Oser 2011, Aerni&Grün 2011)*
- *beware of the perspective of the privileged (why change?)*

References

- Juma, Calestous (2011) The New Harvest: Agricultural Innovation in Africa. Oxford University Press.
- Aerni, Philipp (2006) What is Sustainable Agriculture? Empirical Evidence of Diverging Views in Switzerland and New Zealand. Ecological Economics 68(6): 1872-1882
- Aerni, P. (2006) Mobilizing science and technology for development: The case of the Cassava Biotechnology Network (CBN). AgBioForum 9(1): 1-14.
- Aerni, P. und Oser, F. (2011) Forschung verändert Schule. Seismo Verlag, Zürich.
- Aerni, P. und Grün, K-J. (2011) Moral und Angst. Vandenhoeck und Ruprecht Verlag, Göttingen.

The European Union's virtual land grab:

Productivity growth, protein feed crops and social welfare effects

Harald von Witzke
Humboldt-Universität zu Berlin

Steffen Noleppa
agripol – network for policy advice GbR

Brussels, October 12, 2011

The changing economic environment of agriculture

- Agricultural Treadmill (1870-2000):
  Declining international agricultural commodity prices.
- Since 2000: Upward trend in world agricultural prices.
- Reason: Demand growth outpacing the growth in supply.

The changing economic environment of agriculture

- 2000-2050: Global demand will more than double:
  - continued rapid population growth:
    10 billion by 2050,
  - per capita food consumption growth.

The changing economic environment of agriculture

- Global demand growth can be met by
  - expanding the acreage or
  - productivity growth.
- Globally land is limited.
- Production growth:
  - predominantly through productivity growth.

The changing economic environment of agriculture

- Accelerating productivity growth:
  difficult to attain because of additional constraints:
  - water
  - energy price
  - resource competition with non-food crops
  - climate change
  - declining global agricultural productivity growth:
    1960-89: 4 %; presently: 1 % (EU: only 0.6%)

The changing economic environment of agriculture

Economic consequence (I):

- International agricultural commodity prices will be much higher in the future:
  + 50 - 100% (2004-2016).
- Significant increase in global hunger.

The changing economic environment of agriculture

Where are the problem Regions?

- Developing and newly industrializing countries.
- In particular Sub-Sahara Africa.
  Region with the highest incidence of undernutrition (35 percent).
- Sub-Sahara Africa lowest incidence of use of
  - modern seed varieties,
  - mineral fertilizer,
  - crop protection

The changing economic environment of agriculture

Modern Seed varieties by region, 2000

Region	Percent acreage
Sub-Sahara Africa	24
South Asia	77
East Asia; Pacific	85
Middle East; North Africa	48
Latin America; Caribbean	59

Source: World Bank, 2008

The changing economic environment of agriculture

Plant nutrients from mineral fertilizer, 2002 (kg/ha)

Region	Fertilizer use
Sub-Sahara Africa	13
South Asia	98
East Asia; Pacific	190
Middle East; North Africa	100
Latin America; Caribbean	81

Source: World Bank, 2008

The changing economic environment of agriculture

Economic consequence (II):

- Increasing agricultural prices:
  increasing incentives for expanding acreage.
- CO_2 emissions of agricultural land use change exceed global emissions from manufacturing and transportation.

The changing economic environment of agriculture

Economic consequence (III):

- Poor countries food import gap will widen significantly.
- Food import gap could be closed only if rich countries produce and export more.
- Problem:
  - EU has neglected productivity growth;
  - EU is now (one of) the world's largest agricultural net-importer.

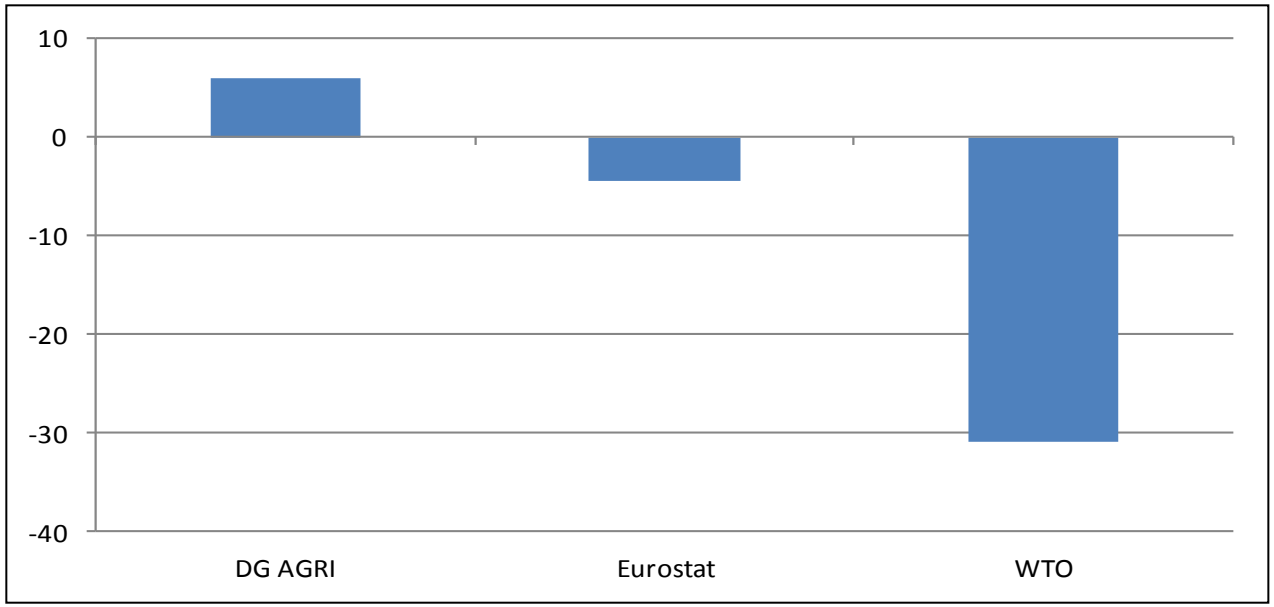
The European Union's virtual land grabbing

- FDI in agricultural land is frequently criticized: Land grabbing.
- EU is not engaging in land grabbing.
- Net imports constitute virtual land grabbing.

The European Union's virtual land grabbing

Data troubles: EU - net importer or exporter in 2010?

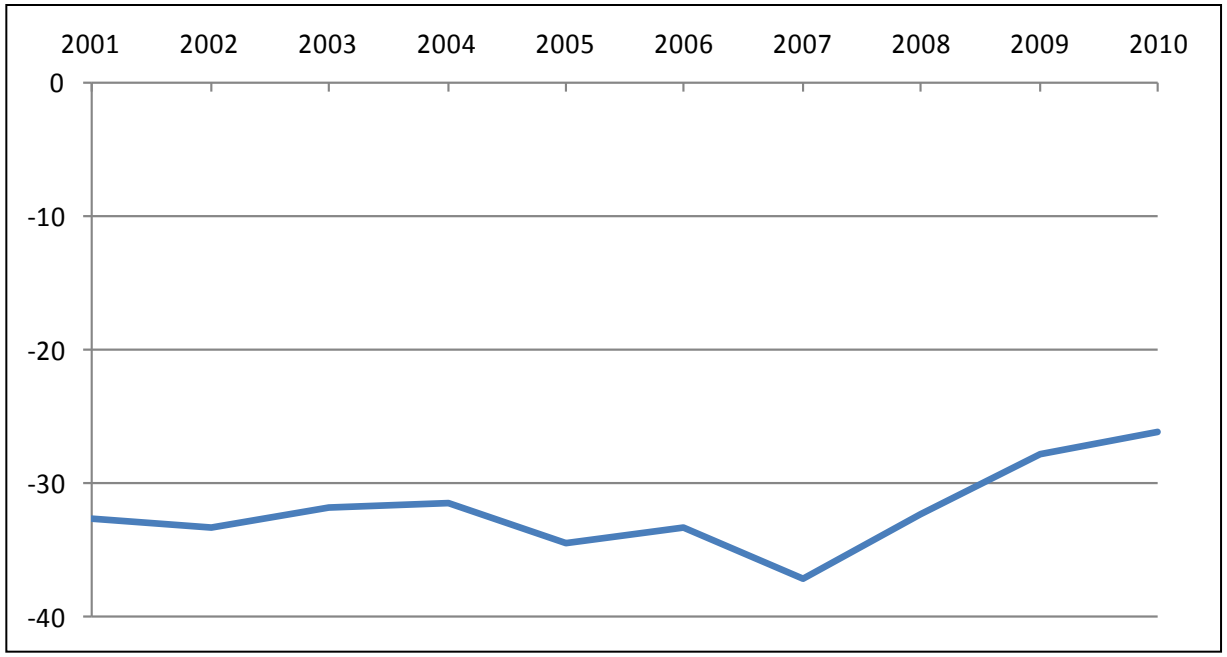
- EU agricultural trade balance (in billion EUR)



Source: Own figure based on DG AGRI (2011), Eurostat (2011) and WTO (2010).

The European Union's virtual land grabbing

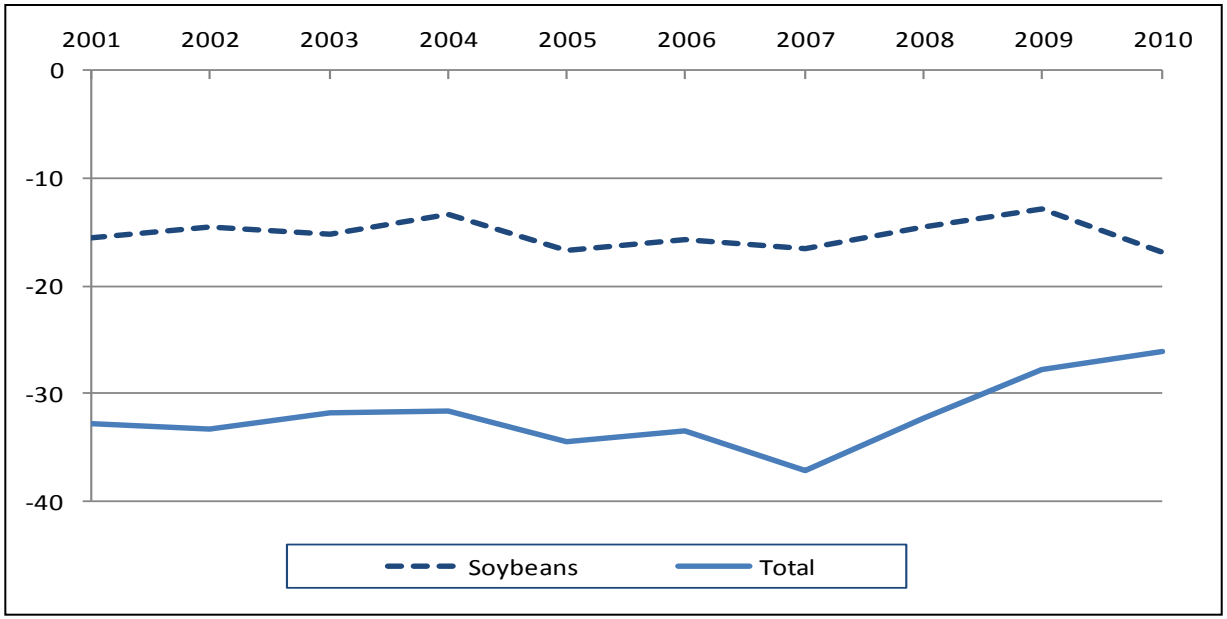
- EU net imports of virtual agricultural land, 2001-2010 (million ha)



Source: Own calculations based on Eurostat (2011) data.

The European Union's virtual land grabbing

- EU net imports of virtual agricultural land, in total and from soybeans, 2001-2010 (million ha)



Source: Own calculations based on Eurostat (2011) data.

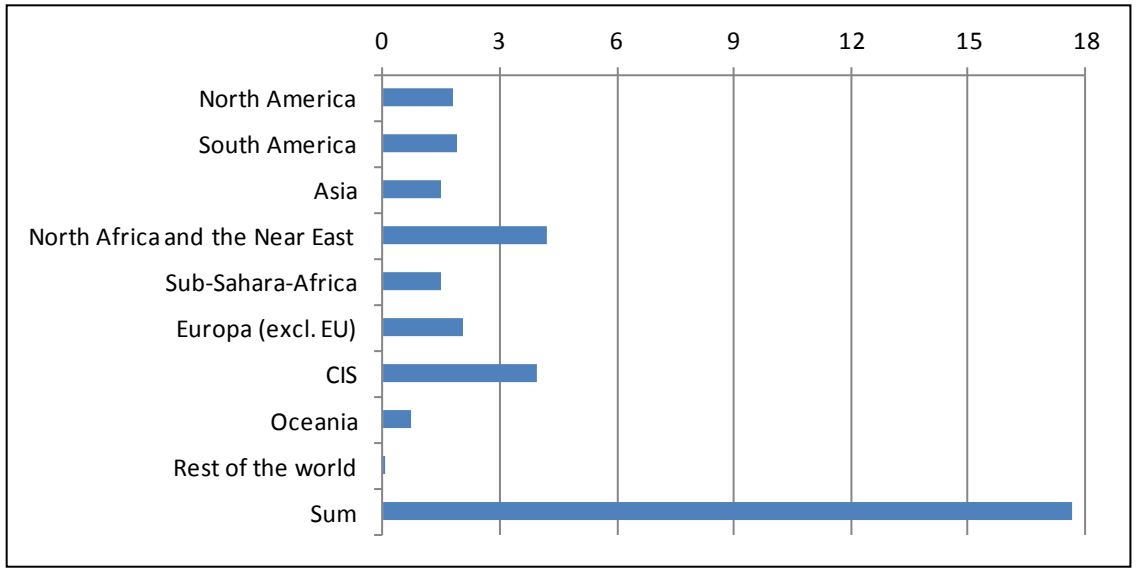
Potential changes in the EU's virtual land grabbing

Imports of virtual land when the attainable yield gap is closed by one third

- Decline by about 18 million ha (- 60 %).
- Decline from 29 mill. ha to about 11 million ha.

Potential changes in the EU's virtual land grabbing

Changes of EU virtual land trade by region, 'productivity growth' (million ha)



Source: Own calculations.

Potential changes in the EU's virtual land grabbing

Expanding protein feed crop production from 2 % to 10 % of the EU agricultural acreage

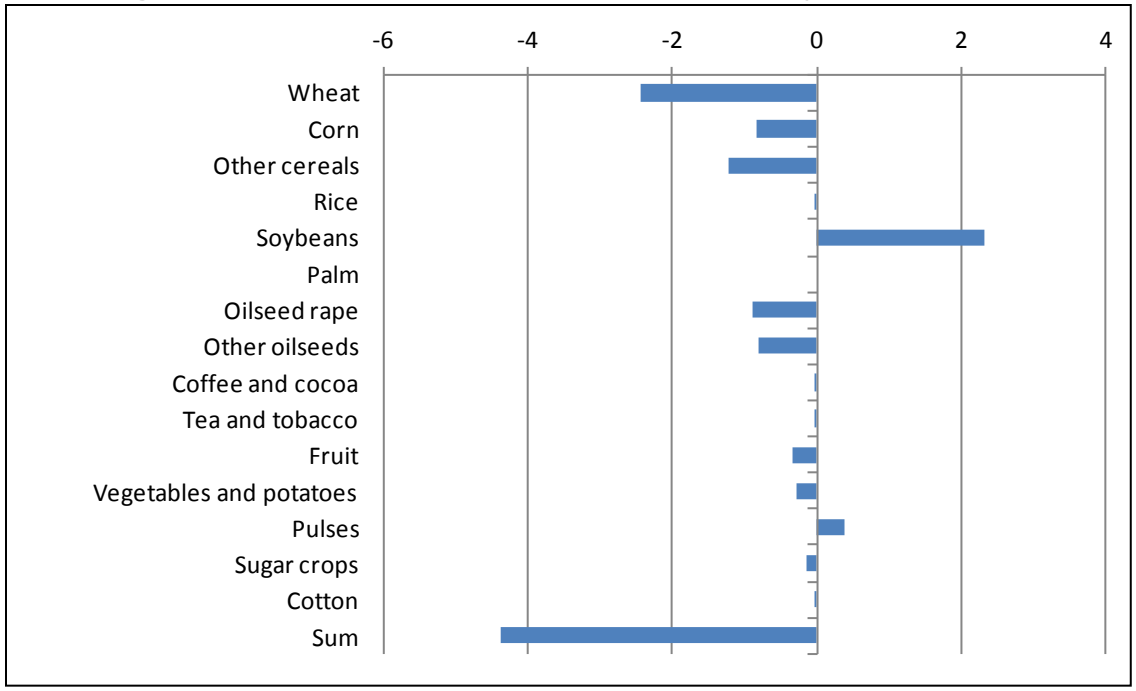
- Increase in virtual land imports from 29 to 33 million ha.
- Increase by about 12 %.

Reason:

- EU expands production of protein feed crops for which it is less productive than other countries.
- EU has comparative advantage in small grains (wheat) and pork.

Potential changes in the EU's virtual land grabbing

Changes of EU virtual land trade by crop, 'protein feed crops' (million ha)



Source: Own calculations.

Welfare effects of productivity growth and increasing protein feed crop production in the EU

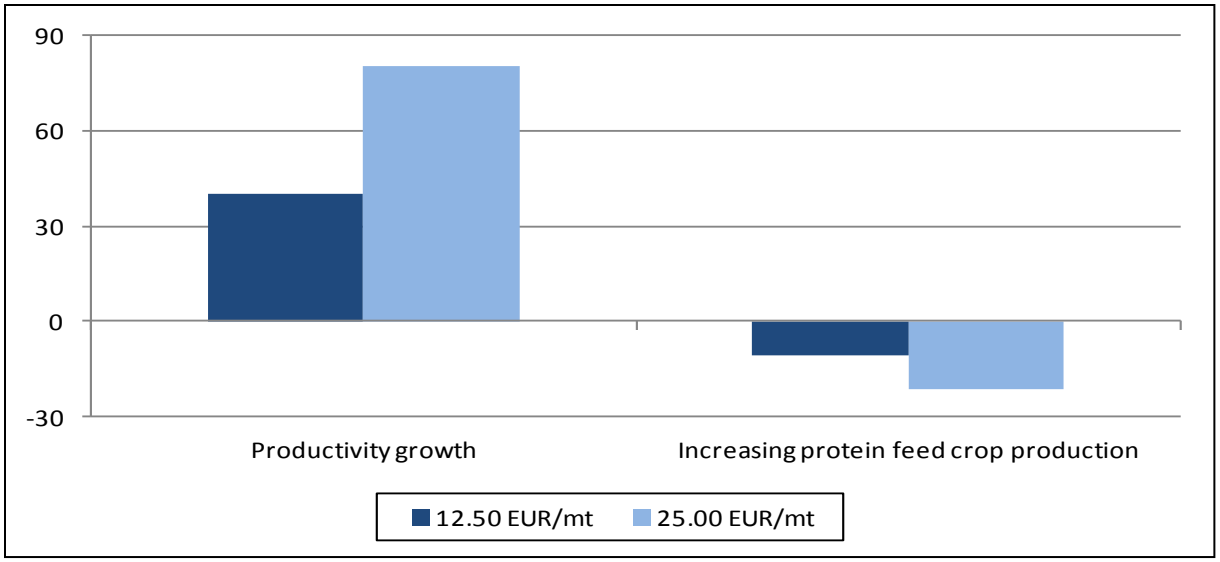
Social welfare effects (in million EUR)

Crop	Productivity growth	Increasing protein feed crop production
Wheat	2368	–1602
Corn	933	–366
Other cereals	194	–622
Sugar crops	512	–424
Oilseed rape	485	–191
Other oilseeds	760	–245
Pulses	149	2036
Other crops	456	–198
Total	**5857**	**–1612**

Source: Own calculations based on a model developed by von Witzke et al. (2011).

Welfare effects of productivity growth and increasing protein feed crop production in the EU

Social welfare effects of associated CO_2 emission changes (in million EUR)



Source: Own calculations based in CO_2 emission criteria set out by Tyner et al. (2010).

Welfare effects of productivity growth and increasing protein feed crop production in the EU

Total annual social welfare (in million EUR)

Social welfare indicator	Productivity growth	Increasing protein feed crop production
Social welfare from agricultural markets	5857	–1612
Social welfare from CO_2 markets (12.50 EUR/mt CO_2)	2004	–541
Social welfare from CO_2 markets (25.00 EUR/mt CO_2)	4007	–1082
Social welfare from agricultural and CO_2 markets (12.50 EUR/mt CO_2)	7861	–2153
Social welfare from agricultural and CO_2 markets (25.00 EUR/mt CO_2)	9864	–2694

Source: Own calculations.

Conclusions

- EU is one of the leading agricultural net importers in virtual agricultural land.
- Increasing EU production and productivity growth significantly reduces net imports.
- Expanding the production of crops for which the EU is relatively less productive than ROW acts to increase net imports virtual land.

Conclusions

- Increasing productivity leads to significant social welfare gains.
- Expanding protein feed crop production would have the opposite effect.
- The neglect of agricultural research and productivity growth has led to increasing net imports of both commodities and virtual agricultural land.

Thank you very much.

For additional information:

www.hu-berlin.de/wisola/fg/ihe

www.hffa.info

www.agripol.net