

Metropolitan Food Security

Twice as Much Food

Twice the Quality

Half the Resources

Ate Oostra, - Chairman MFS Foundation

Mumbai, India - 16 January, 2013



Outline

Global Food Security Challenges :

- Food Availability
- Population, Purchasing Power
- Reach the Consumer

India and The Netherlands

Metropolitan Food Security (MFS)



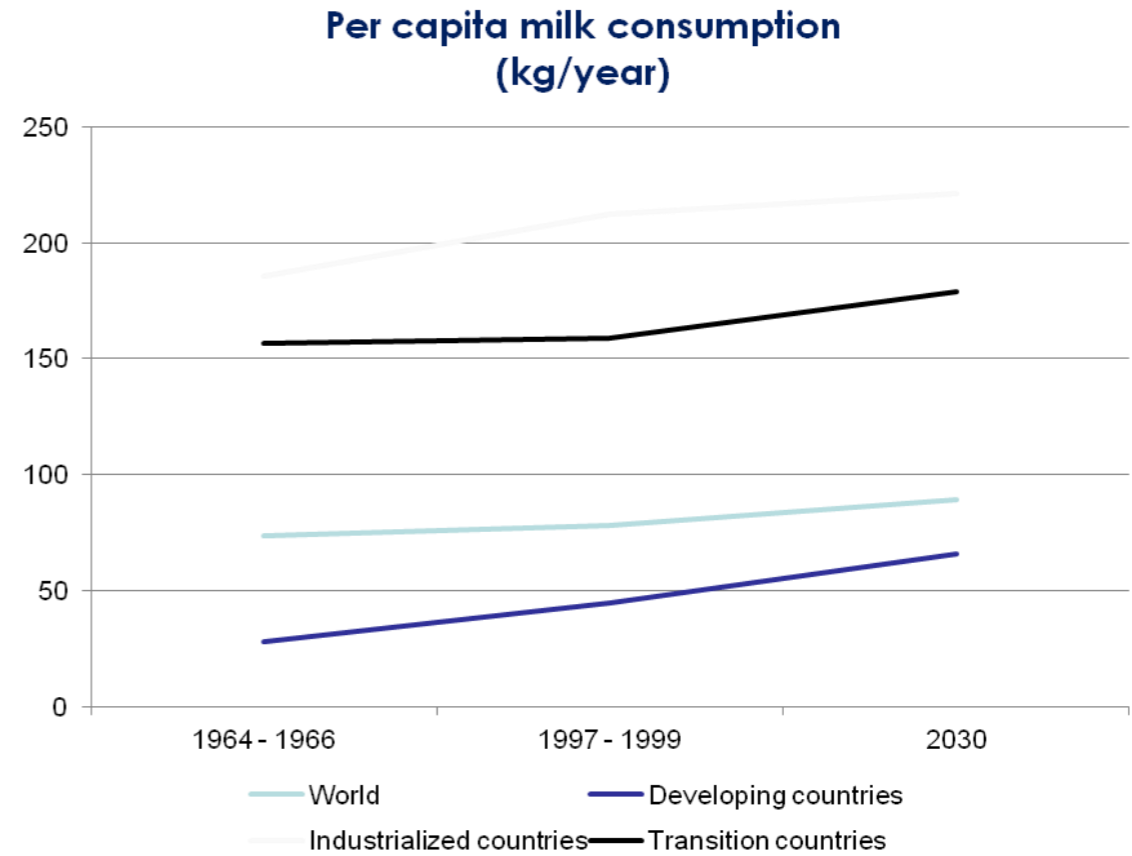
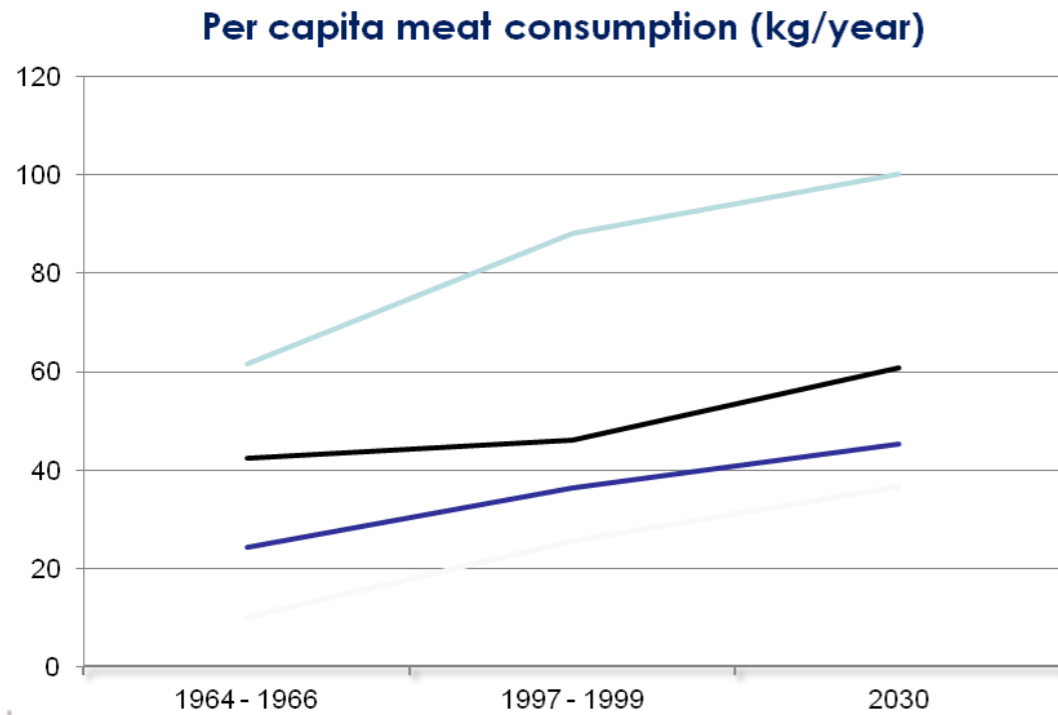
Food Availability

Globally, increasing demand puts higher pressure on local food systems

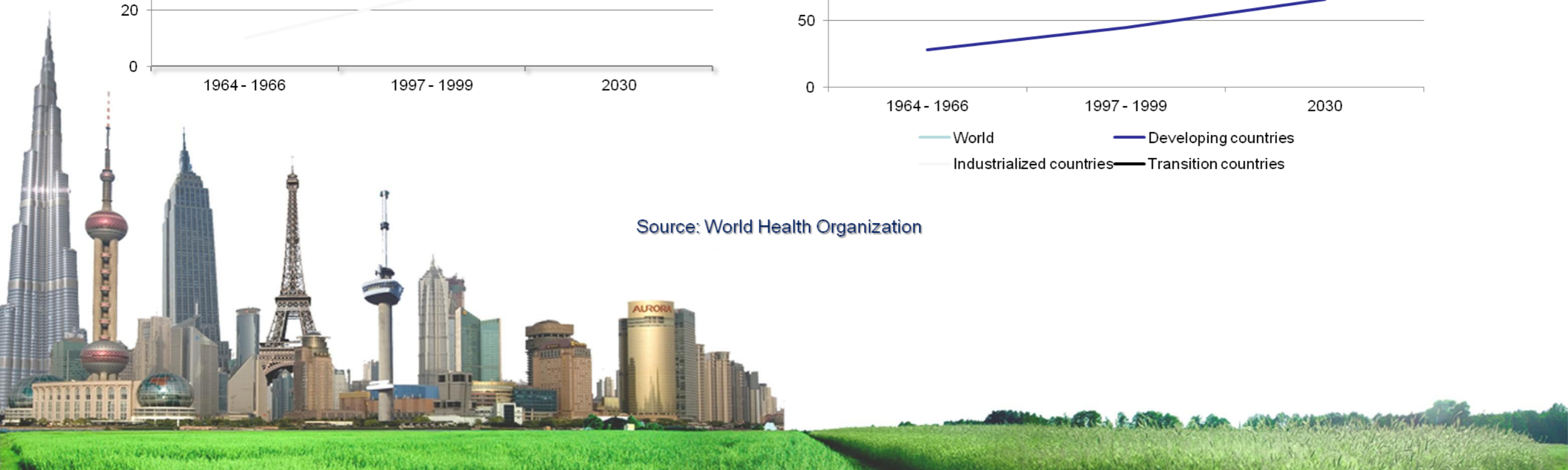
- Population Growth (9 billion inhabitants in 2050 ?)
- Growing purchasing power--> diet change in favor of (animal) proteins
- Climate Change (droughts, floods etc...) will enhance the need for sustainable food production practices.
- Cost and availability of raw materials, energy, water, and arable land will enhance the need for efficient food production practices



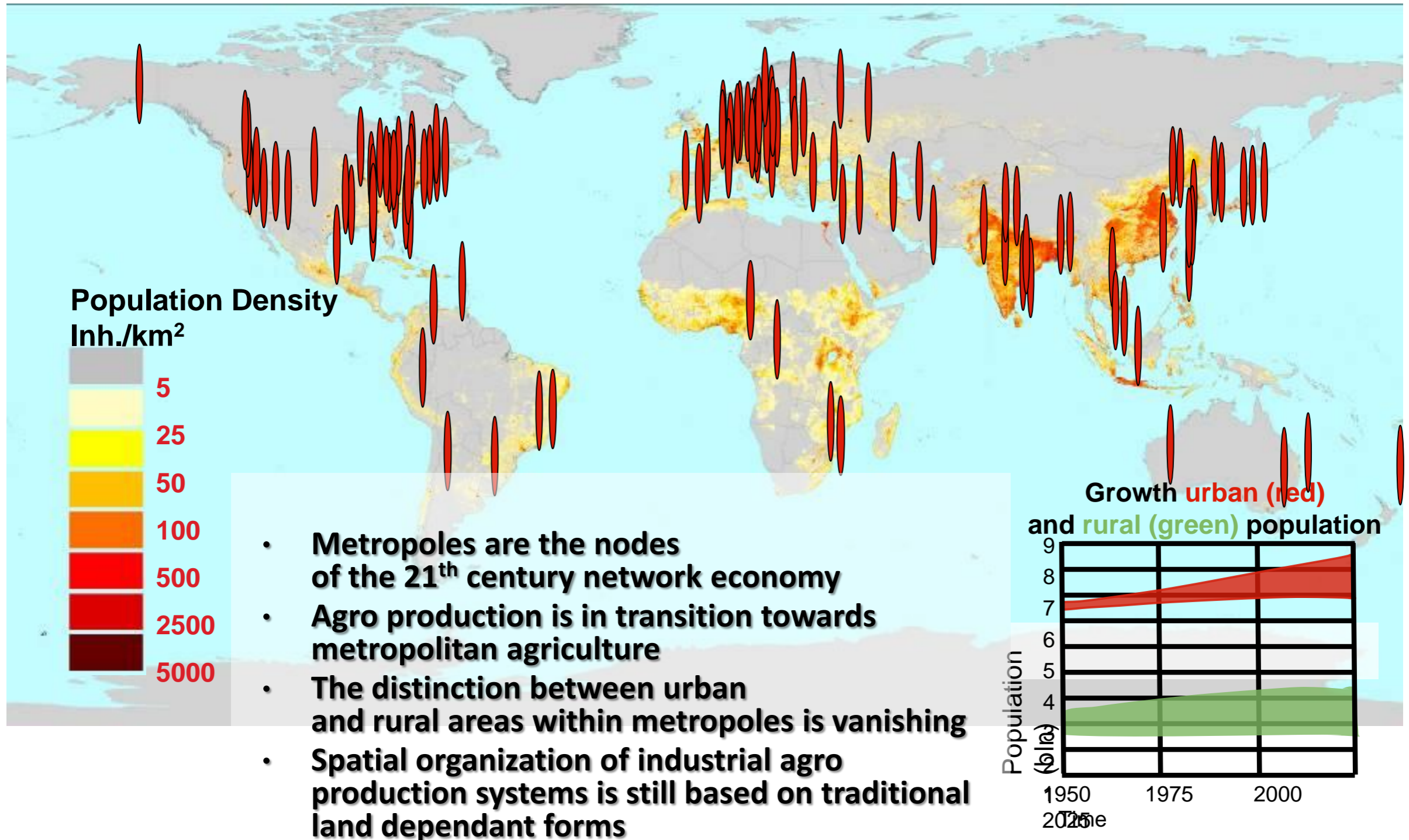
Changing Consumption Patterns



Source: World Health Organization



The World is Urbanizing

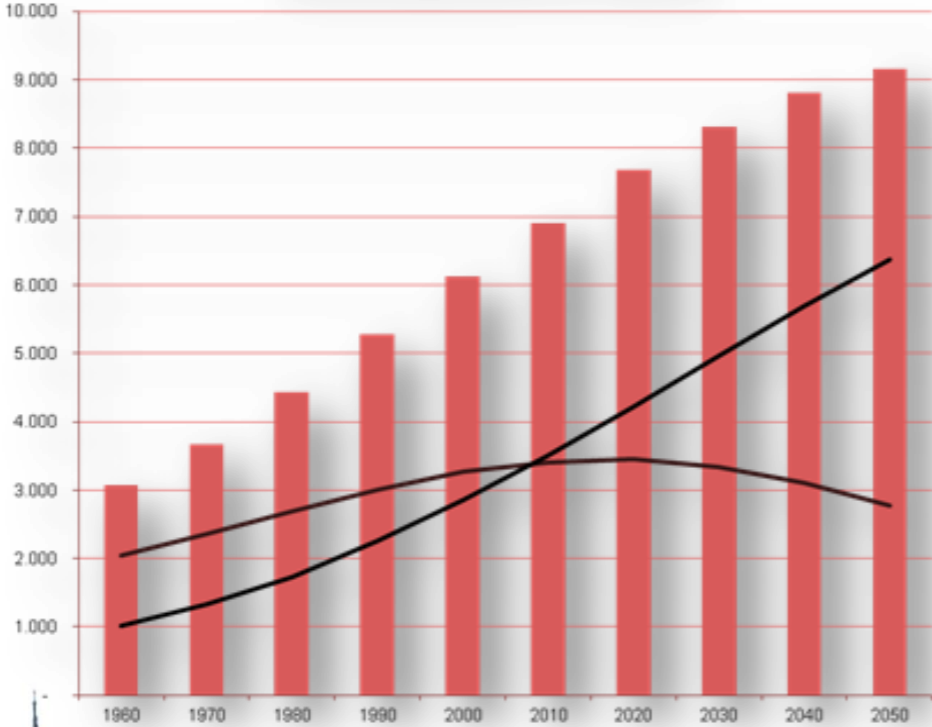


More people, Less land



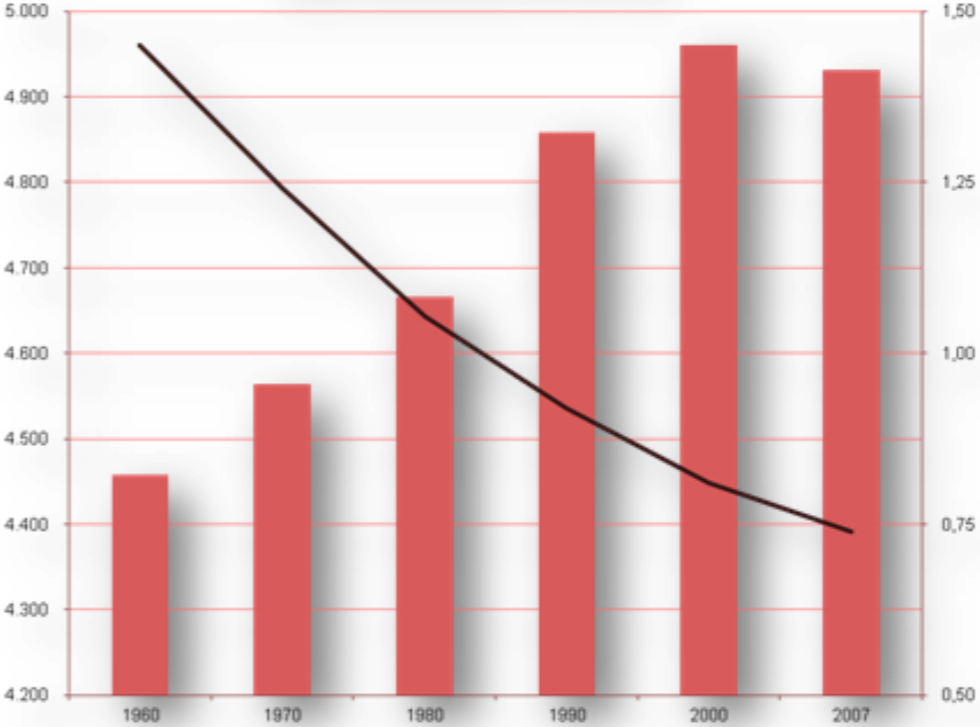
Rabobank

Global population (in millions)



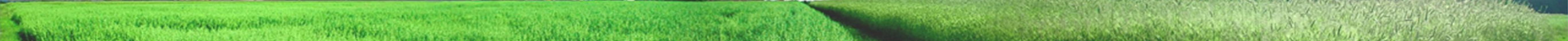
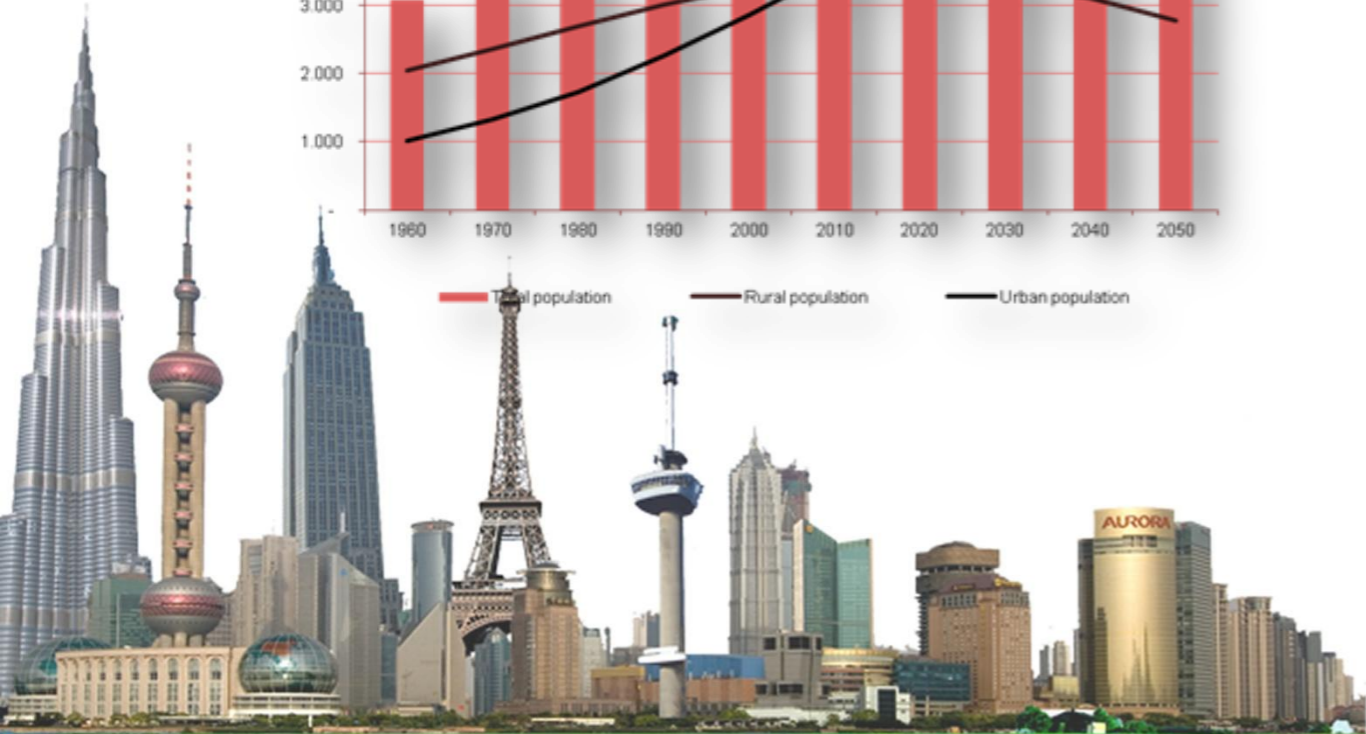
■ Total population — Rural population — Urban population

Agricultural land (1,000 ha)



■ Agricultural land area — Agricultural land area per capita

Source: FAO Stat, Rabobank



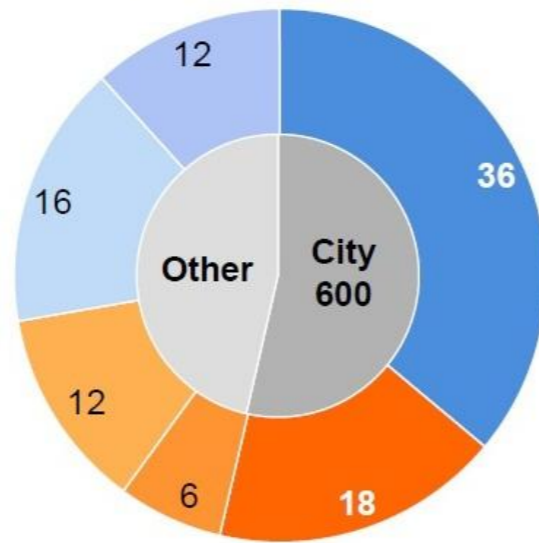
Economic growth for 75% result of performance emerging economies

Emerging 440 cities are poised to deliver close to half of global GDP growth

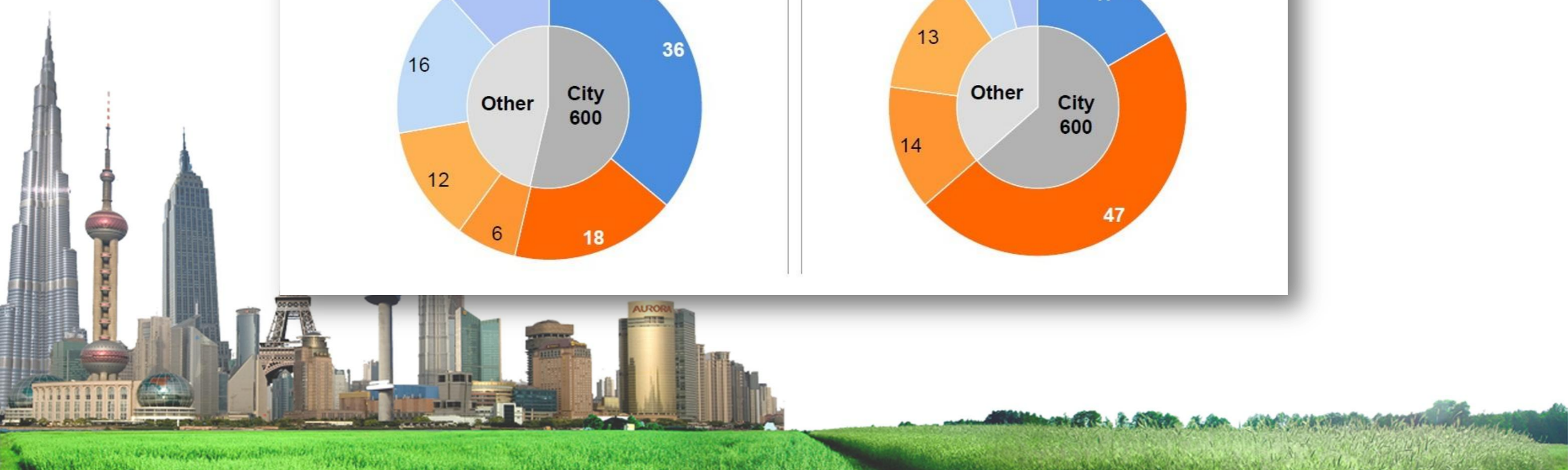
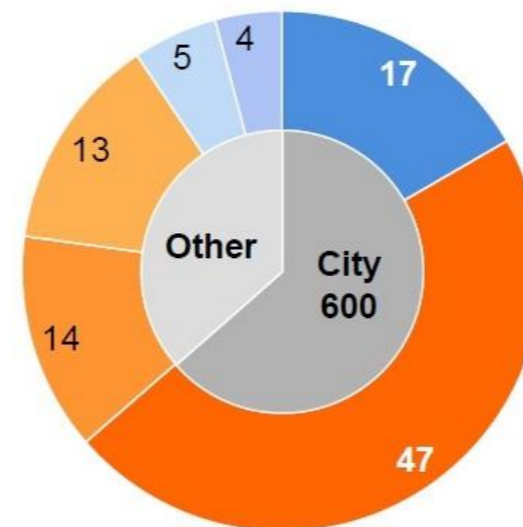
Contribution to global GDP and GDP growth %

- Emerging 440
- Other emerging large cities
- Emerging small cities and rural areas
- Developed 160
- Other developed large cities
- Developed small cities and rural areas

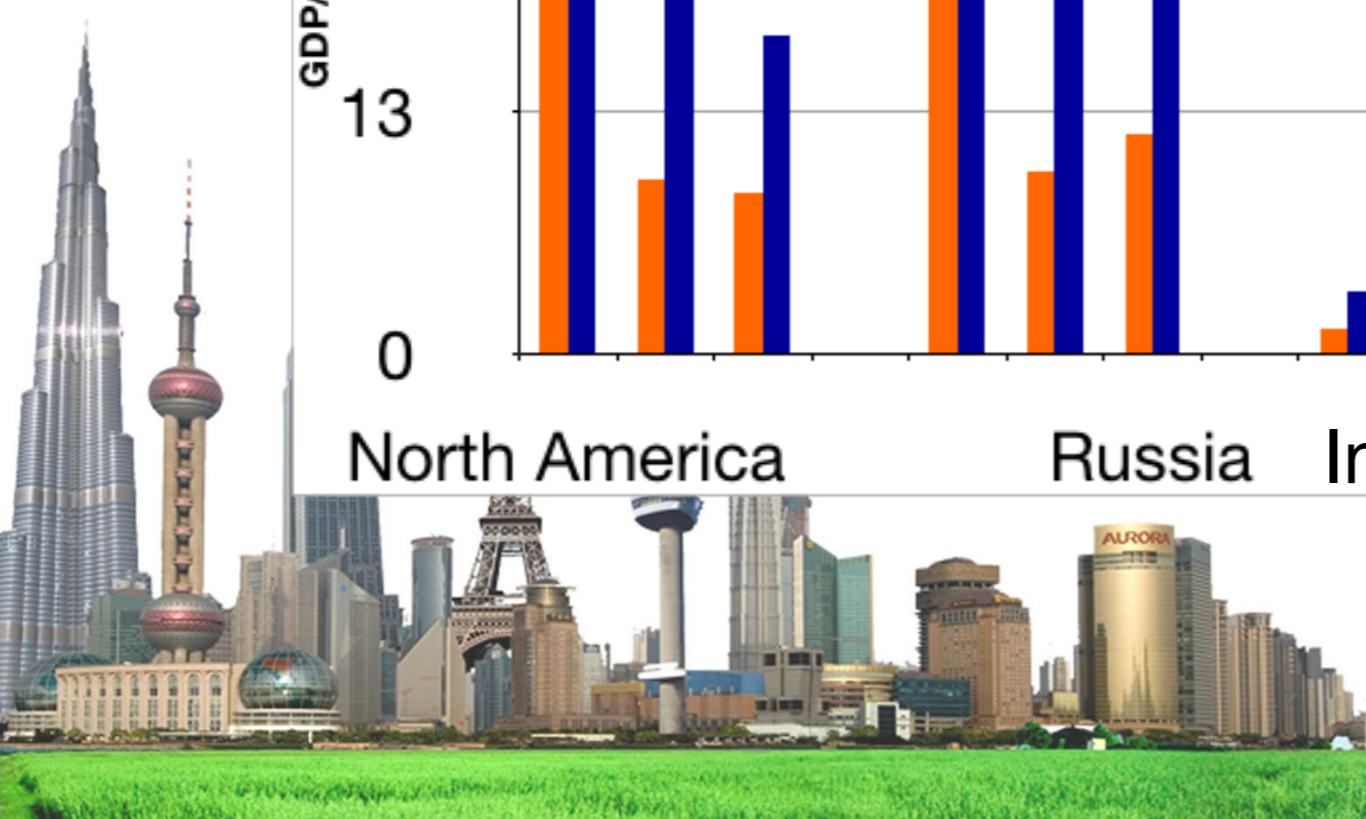
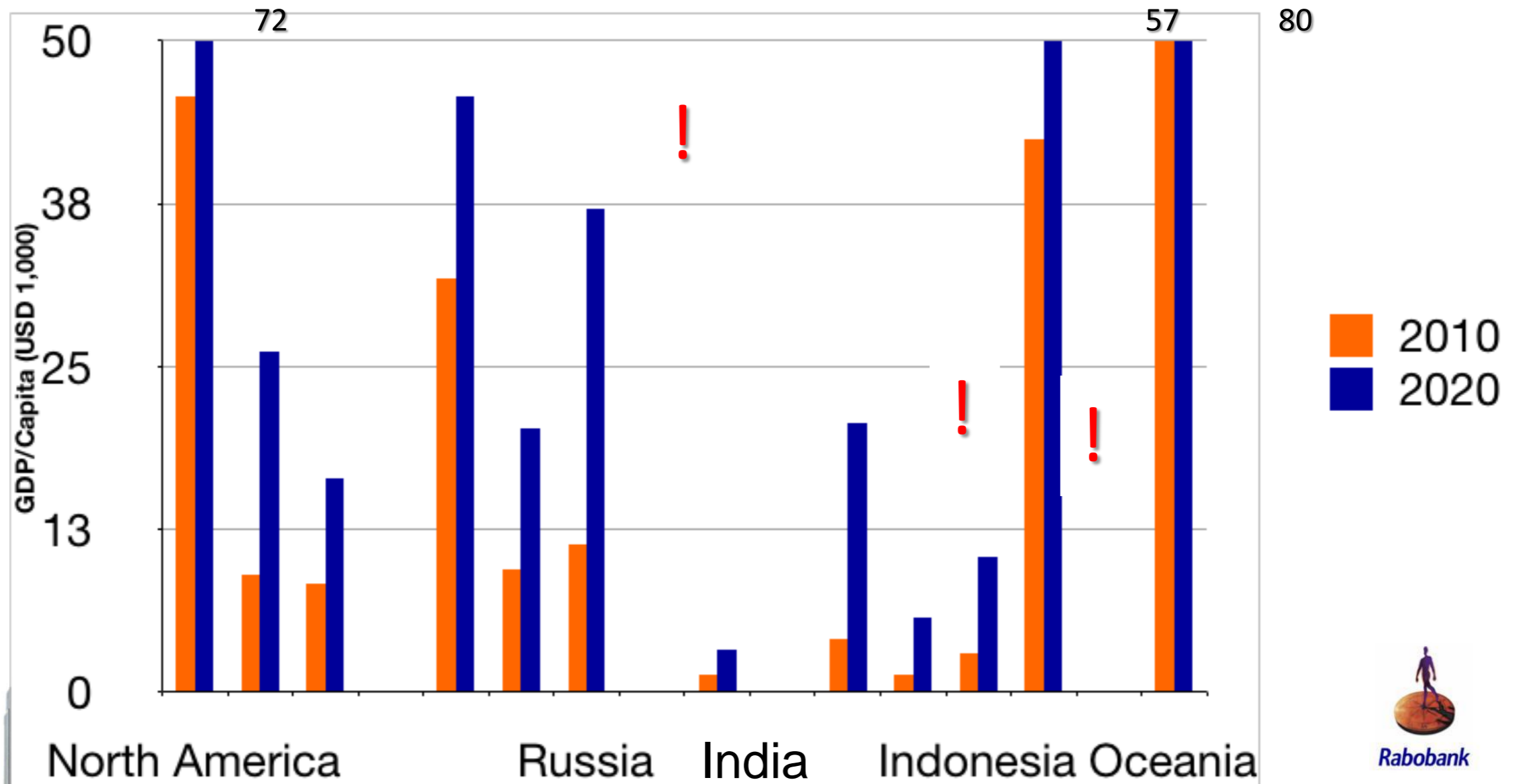
GDP, 2010
100% = \$63 trillion RER⁴



GDP growth, 2010–25
100% = \$50 trillion RER⁴



Purchasing power growing fastest in Russia, China and Indonesia



Deliver Quality Food to the Consumer

- **Economic and demographic trends drive up food demand:**

- Impact on water, land, natural resources
- Environment
- Social-political impact ('Arab spring')

- **Solutions:**

- Reduce inefficiencies and (post harvest) losses
- Put sustainable food production centrally
- Embrace technology to scale up production and enhance efficiency
- Help city economy and hinterland to interconnect



Food Imports, Rural or Urban Production?

Considerations:

■ Imports:

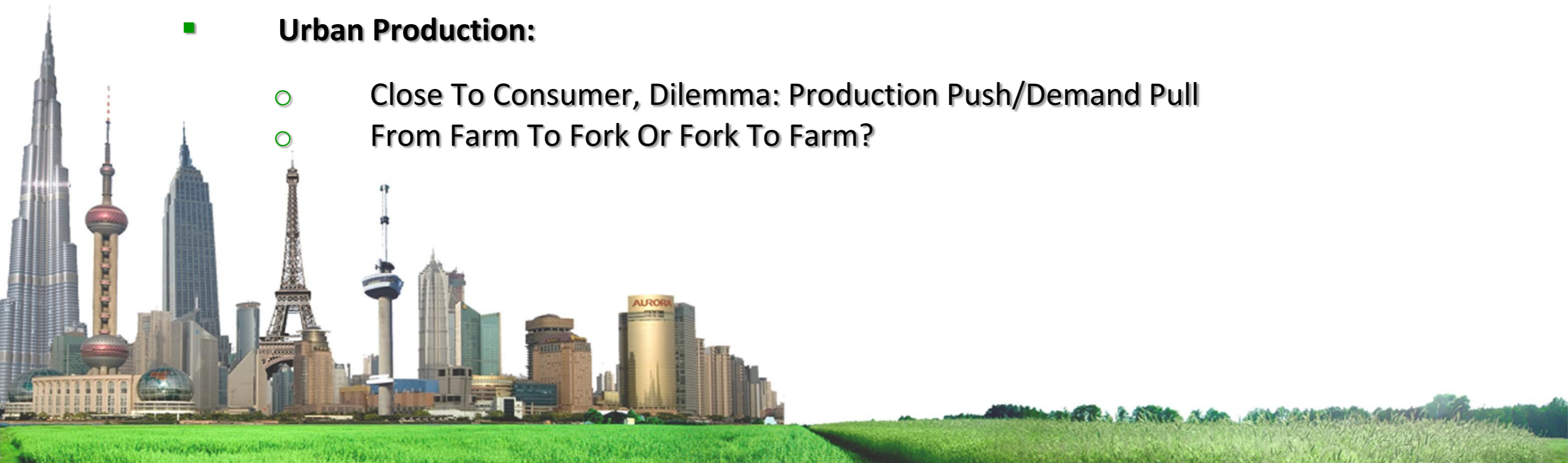
- Trade Barriers: Customs Duties – Phytosanitary Regulations – Deviating Standards – Non-tariff Barriers
- Lack Of Transparency In Regulations

■ Rural Production

- Depending on Land Size, Reliable Infrastructure, Respect for Quality Standards

■ Urban Production:

- Close To Consumer, Dilemma: Production Push/Demand Pull
- From Farm To Fork Or Fork To Farm?







Ministry of Economic Affairs

INDO – DUTCH ACTIONPLAN

GOVERNMENTAL PARTNERS

- **NETHERLANDS AGRO, FOOD & TECHNOLOGY CENTRE**

Public private partnership representing Dutch Agriculture, Food & Agro/Food technology enterprises in selected countries. It facilitates business development for its members & has established offices in India

- **GREENPORT HOLLAND INTERNATIONAL**

Independent organization, set up by the Dutch horticultural Industry. More than thirty of the leading businesses and organizations in the Dutch horticulture cluster work jointly on international development



Centers of Excellence

No	Sector	Project name	State	Effective
1	Horticulture	Center of Excellence	Karnataka	March 2013
2	Horticulture	Center of Excellence	Maharashtra	March 2013
3	Dairy	Center of Excellence Genetic and Animal Health	Punjab	March 2013
4	Dairy	Center of Excellence Genetic and Animal Health	Gujarat	March 2013
5	Education	Trainings and Research Center	Kerala	March 2013
6	Potato	Expertise Centers	Himachal Pradesh	March 2013
7 a / 7 b	Potato	Post-Harvest Knowledge Center	<i>Punjab & Gujarat respectively</i>	March 2013
8	Education	Educational Trainings Center in Meat and Meat processing / establishing slaughter houses	<i>Uttar Pradesh</i>	March 2013



Structure of Implementation

CENTRAL STEERING COMMITTEE

BOARD

Indian Government:	Central Government: Ministry of Agriculture (MOA)
Central Government:	Ministry of Food Processing Industries (MOFPI)
Dutch Government:	Embassy of The Netherlands: Agricultural Department

MEMBERS

Indian Government:	Federal States of India: Ministries of Agriculture, Principle Secretary
Dutch Government:	Netherlands Agricultural Food And Technology Center (NAFTC) Greenport Holland International (GHI)

INDO - DUTCH CENTERS OF EXCELLENCE IN STATES

BOARD

Indian Government:	Federal States of India: Ministries Of Agriculture, Director
Dutch Government:	Embassy of The Netherlands: Consulate-General, NAFTC, GHI & NBSO

Position of The Netherlands

- **Worlds second exporter of 'green' products (after US) in terms of added value**
- **Destination: 60 % within competitive EU market**
- **Result of interaction between hardware, orgware and software**
- **In breeding (input materials), production, logistics and coherent supply of technology**



Market Lead

- Knowledge (Wageningen UR, University Utrecht, Maastricht)
- Share in EU Framework Program
- Seed Production, Genetics
- Propagation Materials for Animals, Vegetables, Potatoes
- Processing: widely known multinationals (Unilever, Heineken)
- Machinery and Production Equipment:
 - Poultry Processing, Egg Handling, Potato Handling and Processing, Bakery, Cheese Processing



MFS Vision to Approach Food Security

Hardware + Orgware + Software

POTENTIAL YIELD

- Education
- Training
- Coaching

ATTAINABLE YIELD

- Metropole
- Biobased Economy

ACTUAL YIELD

- Pest and diseases
- Entrepreneurial spirit
- Horizontal & vertical chain integration

AVAILABLE FOOD

- Post harvest losses
- Technologies
- Management
- Logistics

**Innovating
Markets**

**Local Companies, Universities
and R&D Institutions,
Governments, EU, Worldbank**

**Emerging
Markets**

**(Local) Private Parties,
Governments, Embassies,
Educational & Knowledge, NAFTC**

**Developing
Markets**

**(Local) Private Parties,
Governments, Ngos, Knowledge
And Education Partners**

Metropolitan

Food Security

Business - Knowledge – Government - Education

Innovation seminar Netherlands - Israel

Vice Prime Minister, Mr. Maxime Verhagen, Seminar on Metropolitan Food Security, Israel, 6 June 2012

“Your Excellency, dear Ambassador, ladies and gentlemen, - - - -

We know the challenge ahead of us: **global population growth is outpacing our ability to grow food.** - - - -And while there is sufficient food to feed every person on the planet right now, this does not hold true for the future.

- - - - - I also believe that **food security allows us to achieve much needed economic growth.** It does so in two ways. First, **famine saps the strength** of the poorest of nations - - - -Second, **food itself is a growing industry** that provides jobs and stimulates fundamental research, innovation, exports and foreign investment.

-So food security is both a challenge and an opportunity.

To capitalise on these opportunities, we need two intimately connected things: **innovation and co-operation.** - - -
- innovation because increasing output by - - - - scaling up production - - - - won't be enough. There simply isn't enough land to feed the 10 billion people projected for 2100. - - - -

Co-operation implies another thing: a **multidisciplinary** approach. Because food security is not only about food. It is also about urban planning, water management, ICT, food processing, supply chain management, sustainable entrepreneurship and public opinion. Metropolitan Food Security is a good example of the new approach. - - - -

Your approach is radically different from the traditional approach to solving food-related problems. In the past, we would start at the source, for example by looking at ways to **increase food production.** Now, we are beginning with the **end result in mind.** - - - - I am enthusiastic about Metropolitan Food Security. It has great potential.

The pioneering spirit (of it) is fully present in today's

seminar. - - - -”



January 4, 2013

In the series: "My India", ambassador Stoelinga writes about 'his' India. This month he talks about dutch expertise in agriculture.

When I arrived in New Delhi four months ago, the Embassy driver saw my first name in my passport and said: "mr Ambassador, I have to inform you that your first name **Alphonsus is the name of a mango variety in India.** Luckily enough for you it's one of our best mangos."

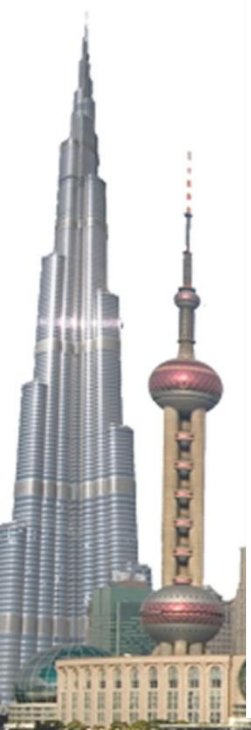
Actually, I came to use the mango as a symbol for an activity on which India and the Netherlands are working together to our mutual benefit. In the Netherlands no mangos are grown, but the Dutch consumer can find mangos in the supermarket all year long. Mangos are being imported from Brazil, Egypt, Mali, India and other countries. An effective and **efficient supply chain** with cold storage capacities **brings the mangos crispy** fresh over thousands of miles **onto the dish of Dutch families.**

As the economy of India is growing at a high pace, **consumer demand in the country is equally increasing** in quantity and quality. There is an enormous **need for supply chain infrastructure**, for cold storage capacity and supply chain management. At the moment a very high percentage (**up to 30%**) of fruits, vegetables, chicken, meat and eggs are **lost** at some point or at some moment **in the supply chain** in India.

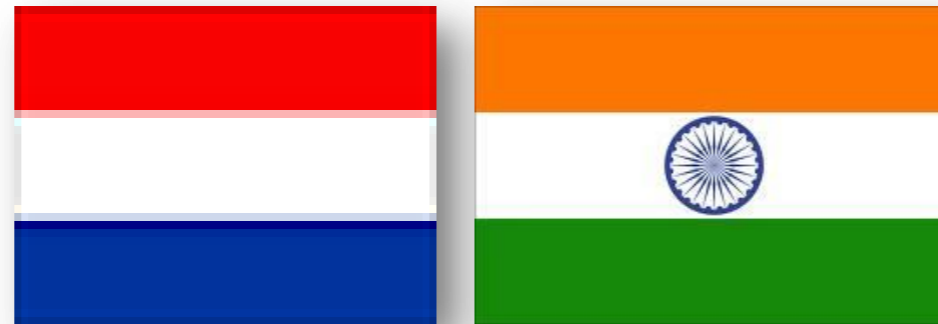
Recently parliament in New Delhi approved Foreign Direct Investment in multibrand retail and many huge supermarket chains are expected to invest heavily in India. It is clear that for those **supermarkets to function**, the supply **chain infrastructure will have to be boosted.**

Take meat: the government of India decided to bring the **daily intake of animal protein from 10 to 20 gramme** per capita per day. Consequently the average per capita meat consumption in the country will increase rapidly. The government also decided to modernise the abattoir capacity in the country in order to bring it into line with international hygiene standards. Together with the Indian authorities the Netherlands Embassy in New Delhi agreed to set up a train-the **trainers-course in meat processing** for participants from municipalities and universities. Also a modern abattoir will be built in Uttar Pradesh, serving as a centre of excellence inspiring and motivating other such investments around the country.

This reflects the way we engage with stakeholders in the agriculture sector and indeed in other sectors in India. The objective is to promote collaboration between the Dutch and Indian private sector, in close cooperation with the Indian and Dutch authorities.



INDO – DUTCH PARTNERSHIP IN AGRICULTURAL DEVELOPMENT



More information:
www.metropolitanfoodsecurity.nl

