



**Asia-Pacific
Economic Cooperation**

2013/SOM3/PPFS/017

Agenda Item: 8, 9

What is Food Security?

Purpose: Information

Submitted by: WG1 (Japan)



**Second Policy Partnership on Food
Security Meeting
Medan, Indonesia
22-25 June 2013**

What is Food Security?

MAFF Japan

Ministry of Agriculture, Forestry and Fisheries



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“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.”

- World Food Summit 1996
- Ministerial Meeting on Food Security NIIGATA, APEC JAPAN 2010



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What is Food Security?
Learn with me!



What is Food Security?



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Hum!
I want to know more about
Food Security!



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at all times, have physical and economic
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This widely accepted definition points to the following 4 dimensions of **food security**:

- **Food availability**: The availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports(including food aid).
- **Food access**: Access by individuals to adequate resources (entitlements) for acquiring appropriate foods for a nutritious diet. Entitlements are defined as the set of all commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which they live (including traditional rights such as access to common resources).
- **Utilization**: Utilization of food through adequate diet, clean water, sanitation and health care to reach a state of nutritional well-being where all physiological needs are met. This brings out the importance of non-food inputs in food security.
- **Stability**: To be food secure, a population, household or individual must have access to adequate food at all times. They should not risk losing access to food as a consequence of sudden shocks (e.g. an economic or climatic crisis) or cyclical events (e.g. seasonal food insecurity). The concept of stability can therefore refer to both the availability and access dimensions of food security.

Source: FAO [ftp://ftp.fao.org/es/ESA/policybriefs/pb_02.pdf](http://ftp.fao.org/es/ESA/policybriefs/pb_02.pdf)

What is Food Security?

I. Demand for Food

1. World's population growth forecast

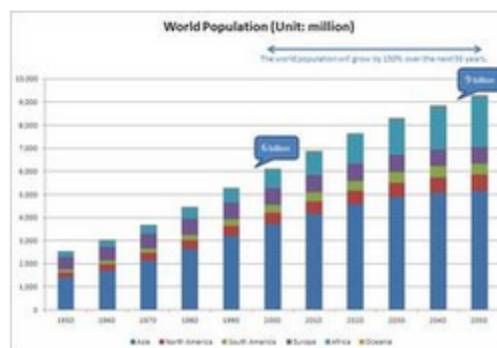
What will become of "food supply and demand" in the future?



Well, the world's population will continue to grow to well over 9.3 billion by 2050.



The world's population will continue to grow to well over 9.3 billion by 2050.



Source: UN (2011), World Population Prospects: The 2010 Revision <http://esa.un.org/unpd/wpp/index.htm>

What is Food Security?

I. Demand for Food



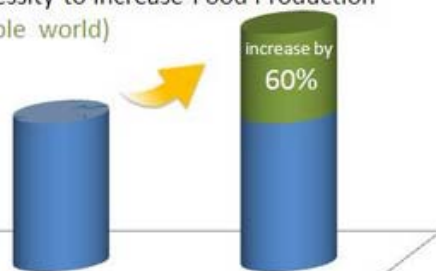
Naturally, as the population increases, the more food will be needed, right?



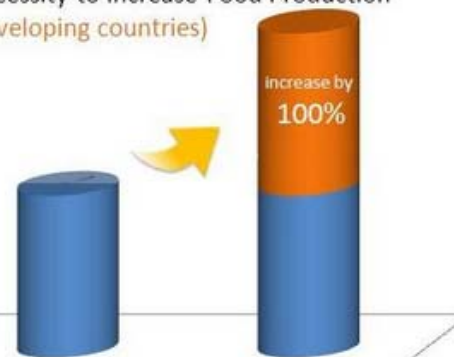
That's correct. According to the forecast by FAO, To feed the growing world population, a 60 Percent increase in food production will be required by 2050. Particularly in developing countries, 100% increase in food production will be required



Necessity to Increase Food Production
(Whole world)



Necessity to Increase Food Production
(Developing countries)



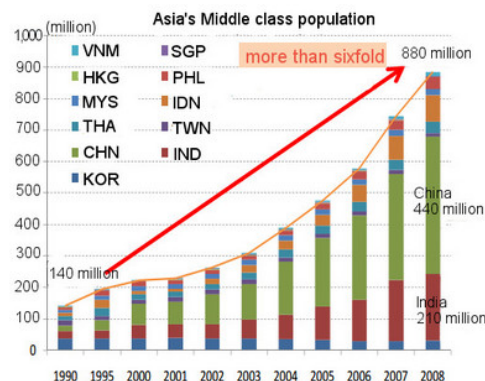
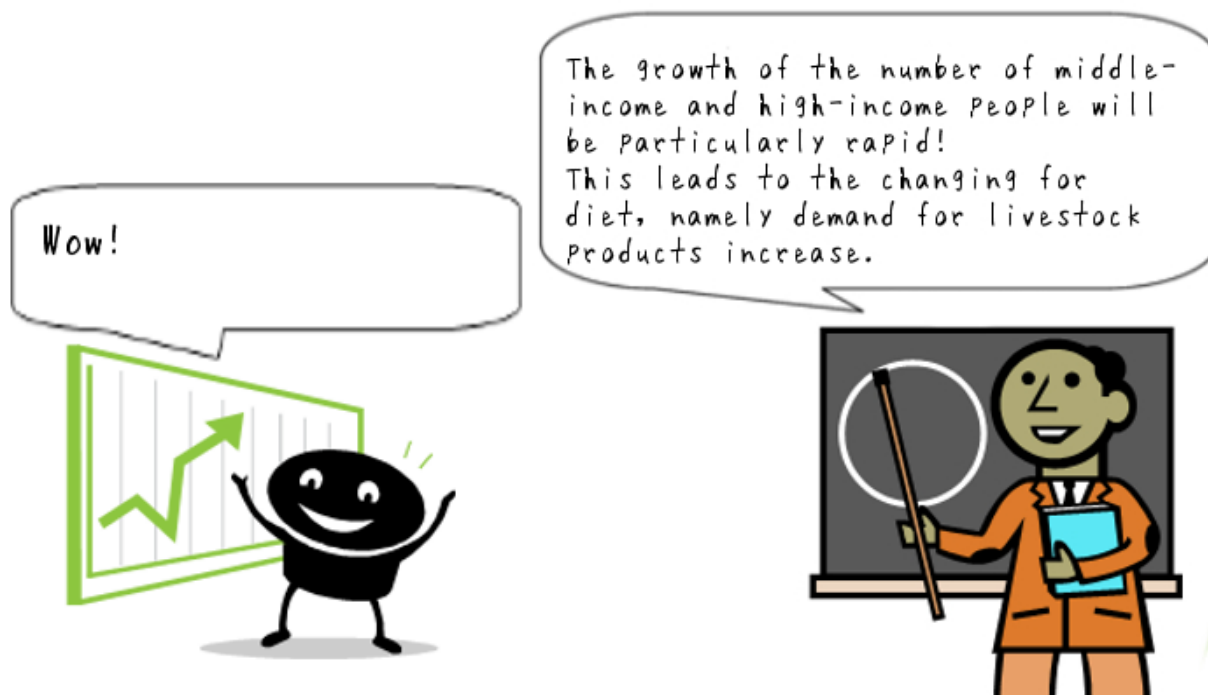
Source:

- FAO (2006), The State of Food Insecurity in the World 2006 <http://www.fao.org/docrep/009/a0750e/a0750e00.htm>
- FAO (2009), The State of Food Insecurity in the World 2009 <http://www.fao.org/docrep/012/i0876e/i0876e00.htm>
- FAO (2011), The State of Food Insecurity in the World 2011 <http://www.fao.org/docrep/014/i2330e/i2330e00.htm>
- FAO-OECD (2011), OECD-FAO Agricultural Outlook http://www.oecd-ilibrary.org/agriculture-and-food/oecd-fao-agricultural-outlook-2011_agr_outlook-2011-en
- USDA (2011), USDA Agricultural Projections to 2020 http://www.usda.gov/oce/commodity/archive_projections/USDAgriculturalProjections2020.pdf
- PRIMAFF (The Policy Research Institute, Ministry of Agriculture, Forestry and Fisheries)(2012), Agricultural Outlook Implications for Food Security http://www.maff.go.jp/primaff/meeting/kaisai/pdf/oecd_wayne_jones.pdf

What is Food Security?

I. Demand for Food

2. Growing middle-income class



1. Demand for Food

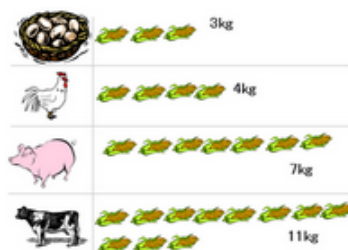
3. Growth in demand for livestock products

As a result of the growth in demand for animal products, it is estimated that the demand for grain will be continuing to rise.



The amount of grain (corn) required to produce 1kg livestock

Cows need 11kg of grain for every 1 kg of meat they produce, pigs about 7 kg. Chickens need about 4 kg to produce 1 kg of meat, and 3kg to produce 1 kg of eggs.



Source: <http://www.maff.go.jp/j/zyukyu/anpo/5-4.html> (Japanese)

What is Food Security?

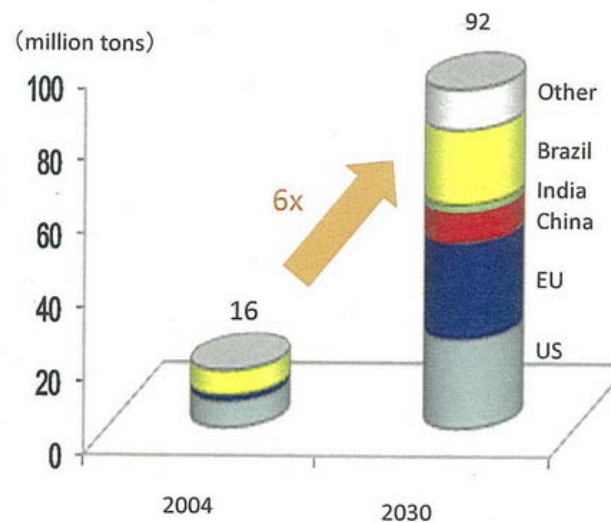
I. Demand for Food

4. Demand for biofuels increasing

In addition, world demand for bio fuel is growing significantly.
Increase in bio fuel competes with demand for food.



Projected demand for bio fuel



Source: PRIMAFF(2012) "World Food Supply & Demand Projection to 2021"

II. Supply of food

1. Expansion of agricultural land is limited

Can we expand agricultural land?

I have an idea! We should expand agricultural land. Then the harvest will increase.



Unfortunately, it is difficult to expand farmland. Because...



- Not be able to increase **crop yields** as well as it used to,
- Long-term decline of public **investment**,
- **Desertification**,
- Shortage of **fresh water**,
- Conversion of **agricultural land** to non-agricultural purposes,
- Increasing negative impact of **climate change**, etc.



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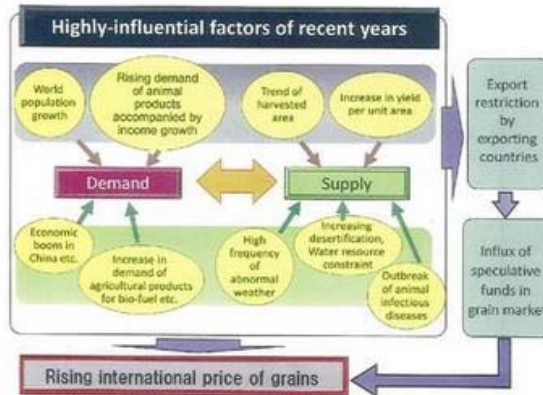
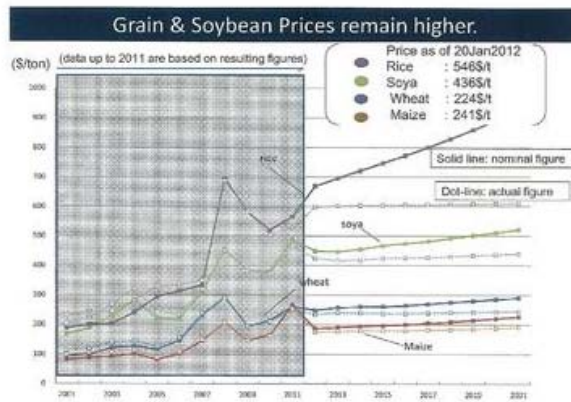
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What is Food Security?

III. Raising global grain prices

Then, if so many people want food, will the price go up?

Yes, and many analysts say that the dominant causes of recent food price increase were investor speculation and ethanol conversion.



IGC: World Supply & demand: total grains
<http://www.igc.int/en/grainsupdate/sd.aspx?crop=Totalg>

New England Complex Systems Institute:
"The Food Crises: Predictive validation of a quantitative model of food prices including speculators and ethanol conversion"

<http://necsi.edu/research/social/foodprices/update/>



Related Page on APIP: [Food Supply and Demand](#)

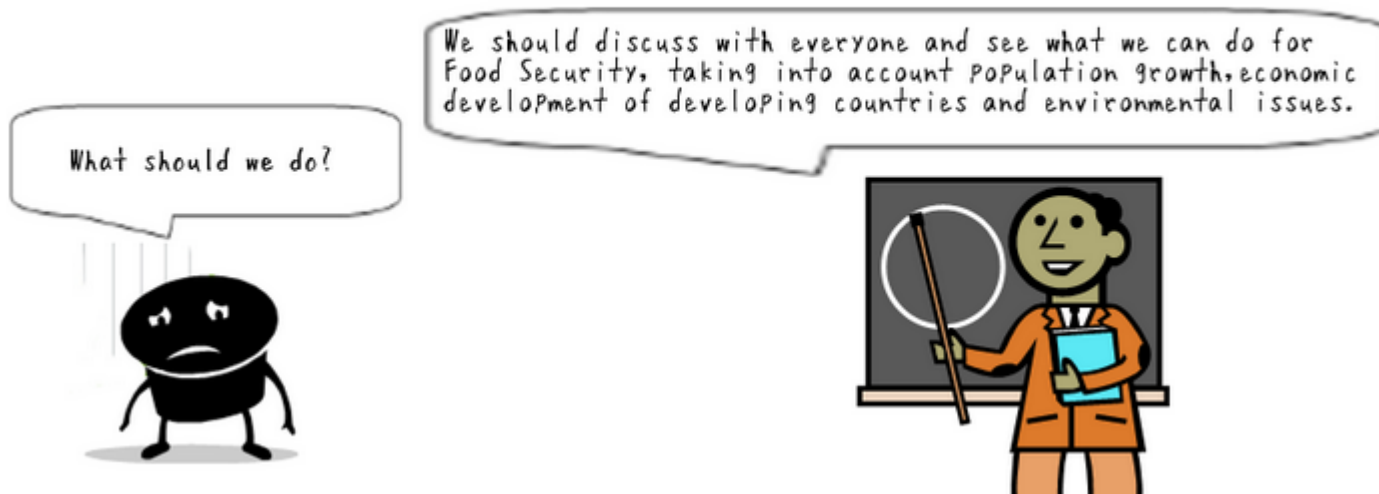
IV. We all have to think about food security



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The APEC Ministers responsible for food security met in Niigata, Japan in October 2010 and agreed to pursue the following two shared goals.

Shared Goal 1: Sustainable Development of the Agricultural Sector

Increasing the availability of sufficient, safe and nutritious food in the APEC region through expanded supply capacity, underpinned by viable rural communities, will be necessary to address a possible supply-demand imbalance for food that may result from future population and income growth.

Shared Goal 2: Facilitation of Investment, Trade and Markets

Food security cannot be achieved without stable efficient and equitable distribution systems that can deliver food to the whole population.

At the meeting in Niigata, they also endorsed an APEC Action Plan on Food Security, which identifies specific activities to be implemented by APEC economies to strengthen regional food security.

Source: First APEC Ministerial Meeting on Food Security NIIGATA DECLARATION ON APEC FOOD SECURITY (Japanse)
http://www.maff.go.jp/j/press/kokusai/kokusei/101017_1.html

V. Meetings

1. Majour leaders' meetings and declaration on Food Security up to 2011

Let's have a look at Majour leaders meetings and declaration on Food Security.

Ok!



2010

Oct. First APEC Ministerial Meeting on Food Security, Niigata, Japan

- Agreed to pursue the shared goals of sustainable development of the agricultural sector, and facilitation of investment, trade and markets.
- Endorsed an APEC Action Plan on Food Security, which identifies specific activities such as developing APIP.



2011

Jun. G20 Agriculture ministers meet, Paris, France

- Agreed on Action plan on Food Price Volatility and Agriculture. Recognize the importance of a significant increase in agricultural production and productivity, considering the diversity of conditions world-wide and the need for a sustainable use of natural resources, in order to respond to the challenge of a growing demand.
- Decided to launch an International Research Initiative for Wheat Improvement (IRIWI), the Agricultural Market Information System (AMIS), a "Rapid Response Forum", and consider supporting the development of a proposal for a targeted emergency humanitarian food reserves system, etc.



V. Meetings

2. Majour leaders' meetings and declaration on Food Security in 2012

2012

May G8 Camp David Summit, Camp David, US

- Committed to the New Alliance for Food Security and Nutrition, the next phase of shared commitment to achieving global food security
- Agreed to the 2012 G-8 Accountability Report



May Second APEC Ministerial Meeting on Food Security, Kazan, Russia

- Reaffirmed to collectively pursue the shared goals of sustainable development of the agricultural sector, etc. in the Niigata Declaration on Food Security
- For further Food Security, considering the diversity of environmental conditions world-wide and positive externalities of agriculture, agreed to focus on the following issues: increasing agricultural production and productivity and so on.
- Recognizing that bans and other restrictions on the export of food may cause price volatility, especially for economies that rely on imports of staple products, reconfirmed the commitments on protectionism made by APEC Leaders.



Jun. G20 Los Cabos Summit, Los Cabos, Mexico

- Recognize that increasing production and productivity on a sustainable basis while considering the diversity of agricultural conditions is one of the most important challenges
- Welcome the progress made in the implementation of the Agricultural Market Information System (AMIS)
- Reaffirm our commitment to remove export restrictions



Sep. APEC Leaders Vladivostok Declaration, Vladivostok, Russia

- Committed to increasing sustainable agricultural production and productivity, considering the diversity of environmental conditions world-wide and positive externalities of agriculture
- Welcome the progress made in implementing the Asia-Pacific Food Security Information Platform (APIP)
- Recognizing that bans and other restrictions on the export of food may cause price volatility, especially for economies that rely on imports of staple products, reiterate our pledge against protectionism.



Oct. The 39th Session on World Food Security - FAO, Rome, Italy

- Discussed the measures for recent food price volatility at a ministerial level
- recognizing the importance of the international cooperation for a increase agricultural production, improve productivity and improve market transparency



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V. Meetings

3. Majour leaders' meetings and declaration in 2013 APEC

2013 upcoming meetings

APEC 2013 in Indonesia



V. Meetings

4. 2013 Upcoming meetings other forum

2013 upcoming meetings (other forum)

Jun.G8 Leaders' Summit, 17th-18th.June.2013, Lough Erne in Con Fermanagh, England



Sep. G20 Leaders' Summit, 5th-6th.September.2013, St.Petersburg, Russia



Oct. The Committee on World Food Security, 7th-11th.October.2013, Rome,Italy



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