Asia-Pacific
Economic Cooperation

2013/SOM1/PPFS/009a
Agenda Item: 5

Challenges to Achieving Food Security in APEC - Presentation

Purpose: Information
Submitted by: Policy Support Unit, APEC Secretariat

APEC
INDONESIA 2013

Policy Partnership on Food Security Meeting
Jakarta, Indonesia
25-26 January 2013

Food Security Challenges in APEC

Asia-Pacific Economic Cooperation

25 January 2013
APEC PPFS Meeting, Jakarta

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Advancing Free Trade for Asia-Pacific **Prosperity**

Overview of presentation

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1. Recent trends in agricultural markets
2. Role of agricultural trade and trade barriers
3. Magnitude and causes of food losses
4. Challenges to increasing agricultural investments
5. Domestic policies to address food security in APEC
6. Role for APEC and the PPFS

Food Security Challenges in APEC

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1. Recent Trends in Agricultural Markets

Prices for agricultural products are higher and more volatile

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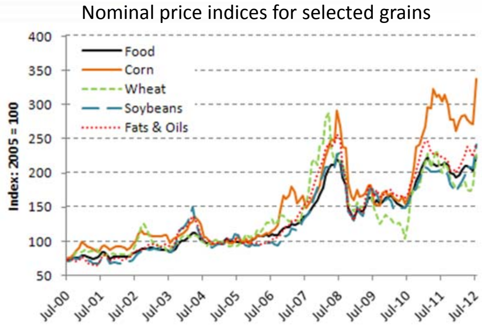
Nominal price indices for selected grains



Source: World Bank, Commodity Price Data and PSU calculations.

- Following price spikes in 2008 and 2011, prices for corn and wheat jumped by 25% in July 2012, while prices for soybeans rose by 17%.
- Although the latest price spike can be attributed to adverse weather conditions, the inherent price volatility in agricultural markets is a symptom of structural imbalance in global demand and supply.

Demand for agricultural goods growing faster than population

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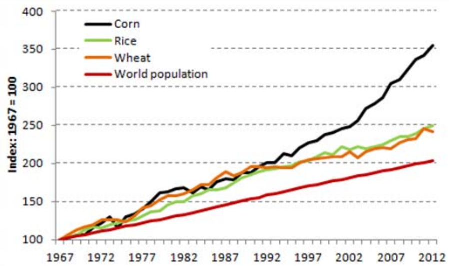
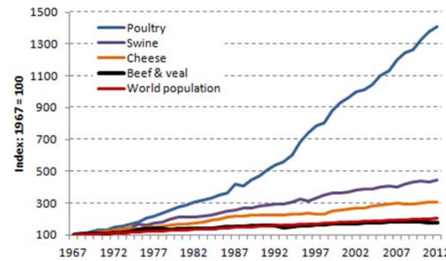
Global population growth vis-à-vis growth in global consumption of selected grains



Source: USDA, ERS and PSU calculations.

Global population growth vis-à-vis growth in global consumption of selected livestock



Source: USDA, ERS and PSU calculations.

Growth in the demand for agricultural products comes from many sources:

- population growth and rising incomes leading to diet diversification; and
- increased use of agricultural products in the feed and biofuel industries.

Agricultural production is being diverted to other non-food uses

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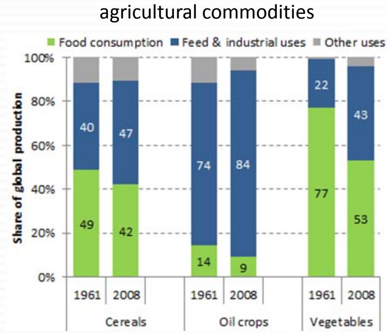
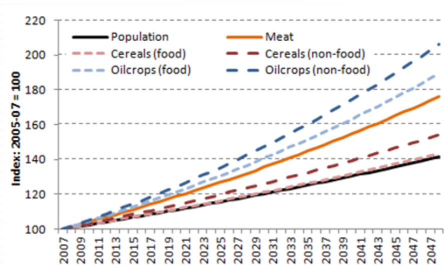
Demand allocation for selected agricultural commodities



Source: FAOSTAT and PSU calculations.

Projected population growth and demand growth for selected agricultural products



Source: Alexandratos and Bruinsma and PSU calculations.

- The share of global agricultural production going to food consumption has fallen as that going to feed and industrial uses has increased.
- This trend is expected to intensify in the coming decades as growth in the demand for oilcrops and meat is forecast to outstrip population growth.

Land expansion in the APEC region is restricted

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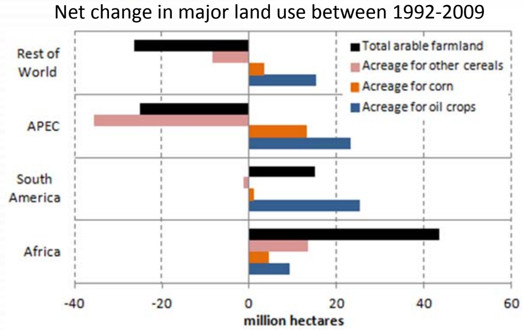
Net change in major land use between 1992-2009



Source: FAOSTAT and PSU calculations.

- Around 4% of the APEC region's arable farmland has been allocated to other uses since 1992, partly due to rapid urbanization.
- New sources of demand have led farmers to devote more resources to produce commodities with higher growth potential, such as energy crops, at the expense of traditional staple food crops, including rice and wheat.

Staple food crops are suffering from slower production growth

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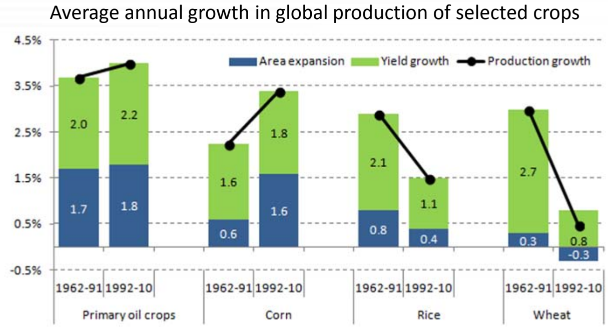
Average annual growth in global production of selected crops



Source: FAOSTAT and PSU calculations.

- While growth in the global production of energy crops has accelerated, that for staple grains has decelerated – the result of a contraction in harvested area and a slowdown in average yield growth.
- In the APEC region, wheat production has stagnated, with annual average production growth falling by 1% between 1992-2010.

Food inflation soared in many developing APEC economies

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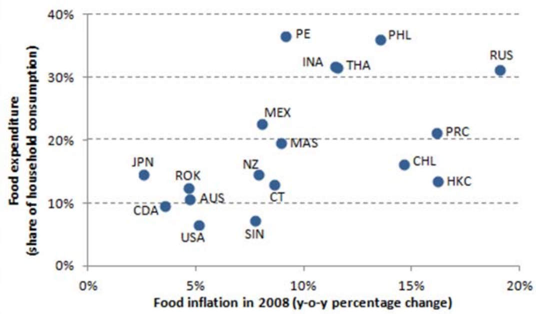
Food inflation and food expenditure in 2008



Source: Thomson Reuters; USDA, ERS.

- Food inflation tends to be higher in those economies where households spend a greater proportion of total expenditure on food.
- A 20% surge in food prices can increase the poverty rate in some APEC economies – INA, PNG, PHL, VN – by an estimated 3 percentage points.

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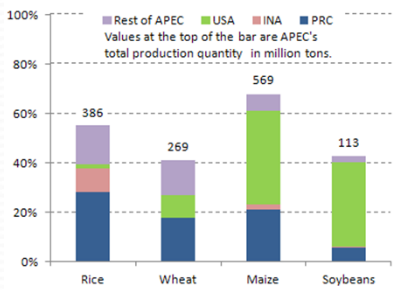
2. Role of Agricultural Trade and Trade Barriers

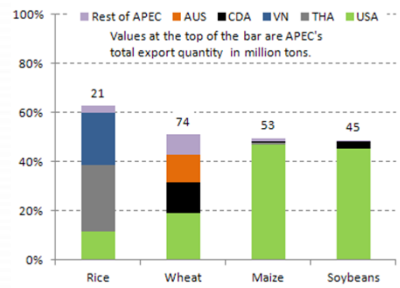
APEC economies include major food producers and exporters

Share of global production in 2010



Source: FAOSTAT and PSU calculations.

Share of global exports in 2010

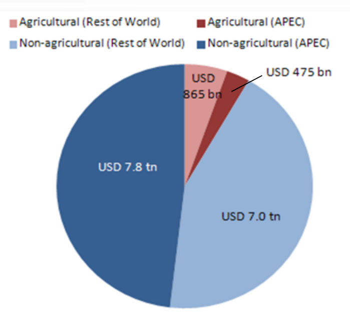


Source: FAOSTAT and PSU calculations.

- APEC economies produce over half of the global supply of cereals, fruits & vegetables, and meat; PRC and USA comprise over 70% of this production.
- The APEC region is also home to major exporters of many staple food products, supplying over half of global rice and wheat exports, while USA alone supplies nearly half of the world's maize and soybean exports.

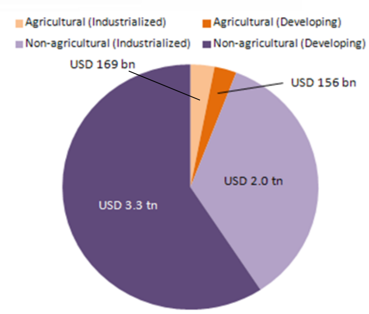
Agricultural trade accounts for a small portion of goods trade

Global goods trade value in 2011



Source: ITC, Trade Map and PSU calculations.

Intra-APEC goods trade value in 2011



Source: ITC, Trade Map and PSU calculations.

- Agricultural trade has been slow to liberalize: the average MFN applied tariff rate on agricultural products in APEC rose from 11.8% in 2010 to 12.3% in 2011; that for non-agricultural products fell from 4.9% to 4.7%.
- In 2011, the average MFN applied tariff rate on agricultural products was 9.8% in industrialized APEC and 13.0% in developing APEC.

Non-tariff barriers increasingly used on agricultural products

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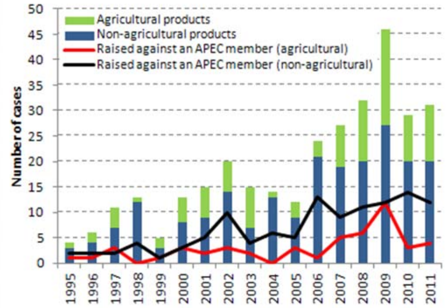
Specific trade concerns (STCs) raised against TBT measures



Source: WTO, TBT IMS and PSU calculations.

- Nearly half of the STCs raised during 1995-2011 against a TBT measure on an agricultural product named an APEC member as the maintaining economy; three-fourths of those were raised by another APEC member.
- TBT and SPS measures typically have a negative impact on food exports from developing economies where there is limited technical expertise.

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3. Magnitude and Causes of Food Losses

An estimated one-third of food is lost or wasted globally

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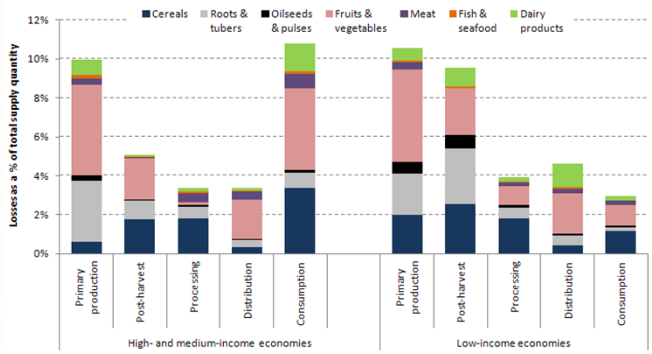
Global food losses, by supply chain segment and level of economic development



Source: Gustavsson et al. data provided by FAO and PSU calculations.

- Inadequate infrastructure and a lack of technical skills cause food losses in low-income economies to be higher at the beginning of the supply chain.
- Inventory management and wasteful consumer habits lead to large food losses in higher-income economies during marketing and consumption.

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4. Challenges to Increasing Agricultural Investments

Evidence of underinvestment in agricultural infrastructure

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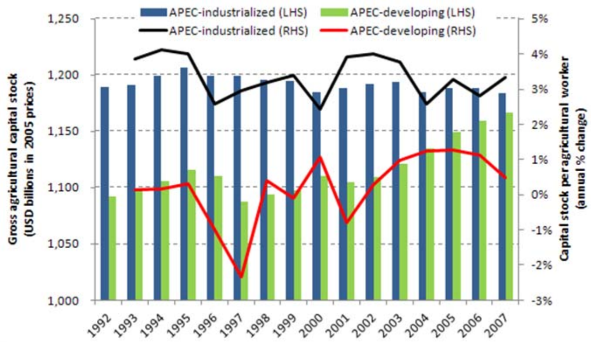
Agricultural capital stock in APEC



Source: FAOSTAT and PSU calculations.

- Total agricultural capital stock in the APEC region grew at an annual rate of just 0.2% in real terms between 1992 and 2007.
- Capital stock per agricultural worker was at USD 1,822 in developing APEC compared with USD 219,900 in industrialized APEC in 2007.

Agricultural sectors account for a low share of total FDI flows

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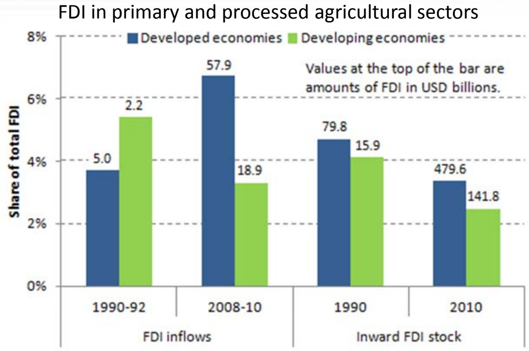
FDI in primary and processed agricultural sectors



Source: UNCTAD and PSU calculations.

- Primary and processed agriculture accounted for just 5.4% of global FDI flows during 2008-10, over 90% of which went to processed agriculture.
- An estimated USD 83 billion per year of additional investments in food, rural development, and agriculture is needed for food production to meet the expected growth in demand by 2050.

Regulatory barriers to FDI in agricultural sectors remain high

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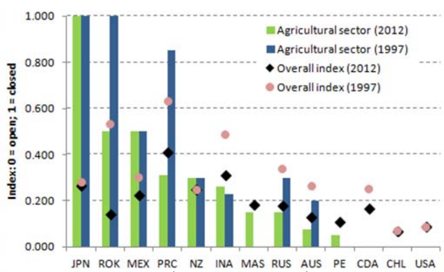
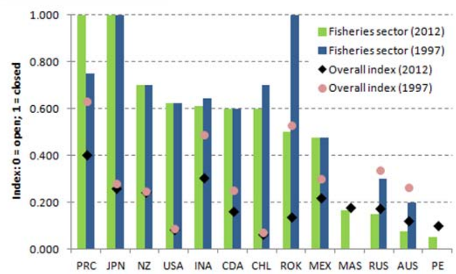
FDI Regulatory Restrictiveness Index, agricultural sector in selected APEC economies



Source: OECD, FDI Regulatory Restrictiveness Index.

FDI Regulatory Restrictiveness Index, fisheries sector in selected APEC economies



Source: OECD, FDI Regulatory Restrictiveness Index.

- Investment barriers are generally higher in the primary agricultural and fisheries sectors than in other sectors.
- Economies also need to create an attractive and viable investment climate with easier access to credit, a high level of investor protection, and strong intellectual property rights to reduce the risks to investors.

Global agricultural R&D spending has also slowed

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- Public agricultural R&D expenditure in industrialized APEC economies has been growing at a slower pace since the 1990s, resulting in fewer technological advances as well as declining productivity growth for several major food crops.
- Developing economies have built up their research capacity; however, their research intensity ratio – as measured by the ratio of R&D spending to total agricultural output – was 0.54 in 2008, compared with 3.07 in developed economies.
- While private R&D investment accounted for over half of total agricultural research spending in developed economies in 2000, it comprised less than 6% of total research funding in developing economies.

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5. Domestic Policies to Address Food Security

Policies to address food security vary across the region

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- Given the diversity among APEC economies, policy priorities to improve food security vary significantly between members, sometimes even resulting in a mix of policies that conflict with those of other economies (e.g., trade policies).
- The 2007-8 food price crisis renewed efforts by many net-importing APEC economies to increase self-sufficiency and food independence versus reliance on the international market for the availability of food in the domestic market.
- Most APEC economies have multiple agencies or departments involved in dealing with the diversity of issues related to food security, often resulting in disconnected policy making and miscommunication within an economy.

Some issues are of common concern across APEC

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- Common food security concerns in all APEC economies include:
  - climate change;
  - natural resource constraints;
  - declining agricultural investments;
  - natural disasters;
  - the rising cost of food; and
  - the lack of nutrition education.
- The contribution of the fisheries sector and the role of food losses are noticeably underestimated and overlooked in domestic food security policy discussions.

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6. Role for APEC and the PPFS

APEC PPFS can address these food security challenges

1. Governments and businesses should engage in large-scale agricultural infrastructure and R&D projects through public-private partnerships to ensure long-term food security.
2. Members must engage in capacity building in developing APEC economies to raise productivity, reduce food losses, enable more agricultural R&D, and potentially increase food exports.
3. PPFS should actively engage with other APEC groups in order to align priorities and initiatives, thereby consolidating APEC's food security agenda and helping to ensure success.
4. APEC should continue to build partnerships with other organizations working in the area of food security to effectively address the many challenges and to avoid duplication.

APEC Policy Support Unit

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http://www.apec.org/apec/about_apec/psu.html

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