



Rice Production and Market: Trends and Outlook

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2005 IFA Regional Conference for Asia and Pacific
December 6-8, Singapore

Rice economy

- A staple food for 2.6 billion people in Asia
- Contributes 30 to 70% to calorie intake
- A major source of employment and income for rural households
- A strategic commodity for economic growth, food security and political stability



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Long term trend in rice production, 1970-2004

	1970-72	1989-91	2002-04
Production (m.tons)	314	517	589
Area (m.has)	133	147	149
Yield (t/ha)	2.35	3.50	3.94

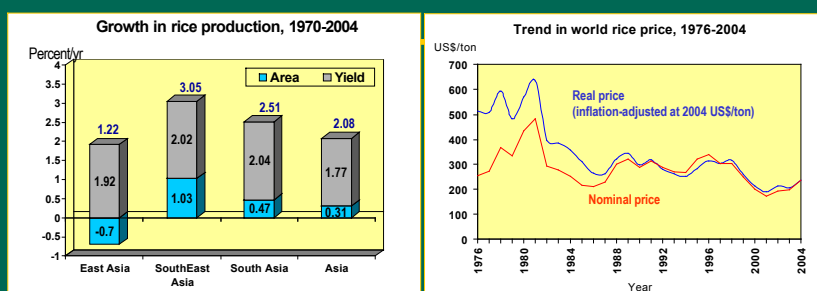
Source of raw data: FAO database online, FAO 2005.



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Achievements



- Rice production grew at pace with the growth of population
- 85% of the growth was contributed by increase in yield supported by technological progress
- Pressure of expansion of cultivation to marginal lands eased
- Downward trend in prices contributed to increase in food entitlement of low-income people, and thereby to reduction in poverty

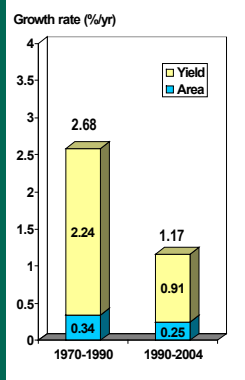


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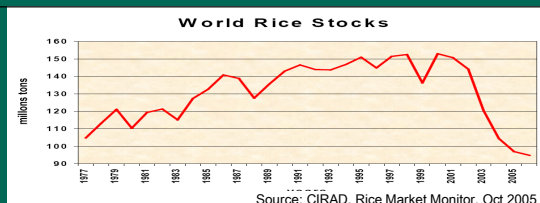
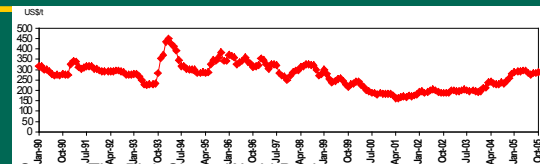
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Problems in the horizon?

Growth in rice production



Monthly export price (US\$/t free on board) of Thai rice 5% broken, 1990-2005 (January 1990 to Oct 2005)



- The growth in production has slackened from 2.7% per year during 1970-90 to 1.1% during 1990-2004
- Recent decline in growth was mainly due to substantial reduction in yield growth in the irrigated ecosystem
- The decline in global rice stocks has reached an alarming level
- A substantial upward pressure on rice prices in the world market in recent years

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Outline

- Characterization of the rice market
- Trends in consumption
- Trends in production
- Future outlook



Characterization of the rice market



Global rice market has expanded in the 1990s

Time period	Production of milled rice (Mn Ton)	Export of milled rice (Mn Ton)	Export share (%)
1970-72	209	8.55	4.1
1989-91	345	13.6	3.9
2001-03	393	27.3	6.9

FAO, 2005



Characteristics of trade

- Large number of small rice importers
- Africa and Middle East dominate the import market
- Africa accounts for one-third of the import market
- A few large rice exporting countries: Thailand, Vietnam, India, USA, Pakistan
- Market dictated by import demand
- Exports respond through stock adjustment



Growth in rice imports, 1988-2003

Country	Milled rice (million tons)		Rate of growth (%/yr)
	1988-90	2001-03	
Indonesia	0.12	1.36	20.5
Nigeria	0.24	1026	13.6
Philippines	0.30	0.95	9.3
Iran	0.57	0.86	3.2
Senegal	0.37	0.79	6.0
Bangladesh	0.37	0.78	5.9
Brazil	0.23	0.78	9.8
Korea, DPR	0.01	0.78	39.8
Saudi Arabia	0.30	0.76	7.4
South Africa	0.29	0.73	7.4
Cote d'Ivoire	0.31	0.70	6.5
UAE	0.29	0.57	5.3
Cuba	0.23	0.52	6.5
World	12.8	25.1	5.3

Note: Rate of growth was estimated using the end-year's method
Source of basic data: FAO, 2005. Last accessed Oct 2005.



Growth in rice exports, 1988-2003

Country	Milled rice (million tons)		Rate of growth (%/yr)
	1988-90	2001-03	
Thailand	5.20	7.81	3.2
Vietnam	1.05	3.59	9.9
India	0.43	3.56	17.7
USA	2.60	3.23	1.7
China	0.53	2.22	11.6
Pakistan	0.94	1.98	5.9
Uruguay	0.28	0.70	7.3
Myanmar	0.14	0.64	12.4
Italy	0.53	0.58	0.7
Egypt	0.06	0.57	18.9
World	13.31	27.33	5.7

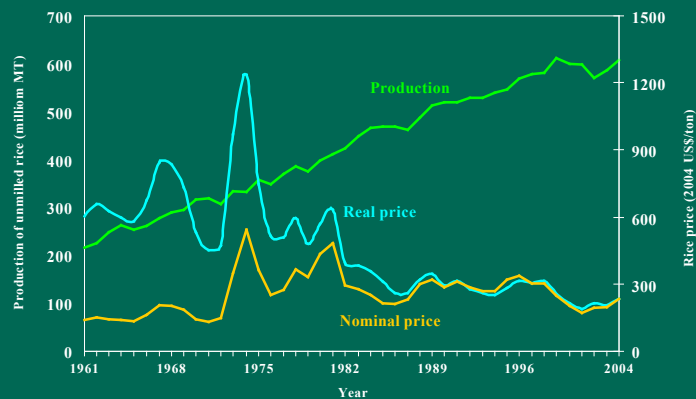
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Trends in world rice production and price 1961-2004



Source: Production: FAOSTAT Electronic Database, FAO, 20Dec2004 update.
Rice Price: Relate to Thai rice 5%-broken deflated by G-5 MUV Index deflator (adjusted based on 2004 data update)
Source: www.WorldBank.org

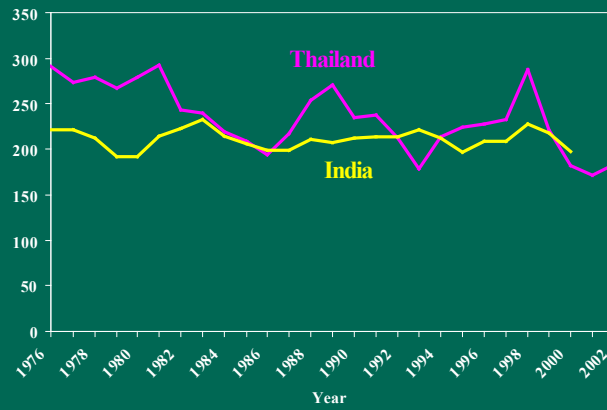


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Trend in real prices of rice (2000 US\$)

Price 2000 (US\$/ton)



Note: Wholesale price of rice deflated by general price index for individual countries.
Domestic currency values were converted into US\$ using 2000 nominal exchange rate.
Source: 1976-1998: World Rice Statistics database.
1998-2002: Websites of national statistical organizations

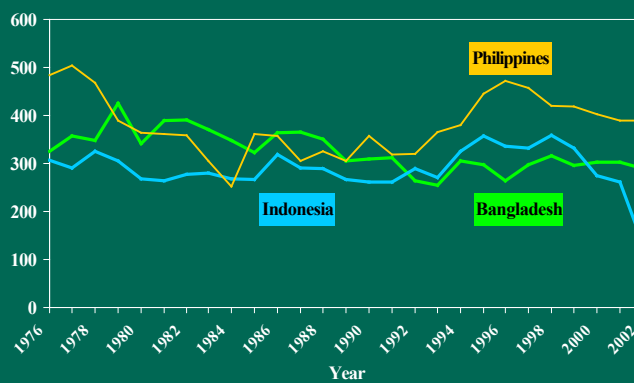


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TRENDS in CONSUMPTION



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Determinants of demand

- Level of income
- Urbanization
- Changes in food habits
- Relative prices
- Growth of population



Emerging trends in demand

- Declining per capita consumption in middle and high-income countries in Asia
- Stagnant per capita consumption in low-income countries in Asia
- Increasing per capita consumption in West Asia, Africa and Latin America
- Slow and declining growth of population in middle- and high- income countries, in Asia and Latin America
- High but declining population growth in low- income countries in Asia
- Continuing high population growth in West Asia and Africa

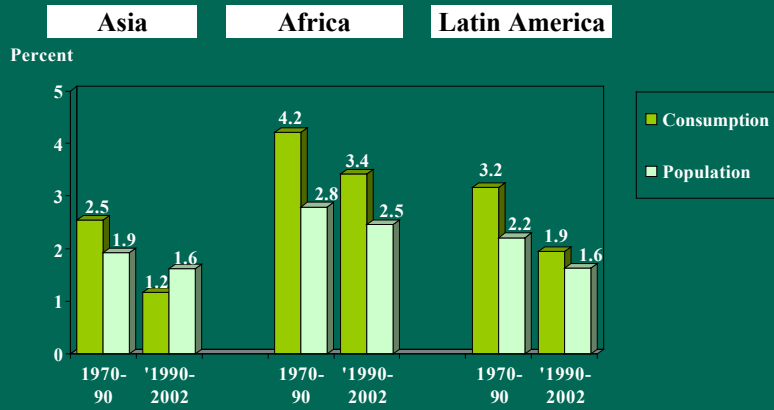


Changes in rice consumption and population, major rice consuming countries

Time period	Consumption (kg/capita)			Population (% increase)	
	1970-72	1989-91	2000-02	1970-2000	2000-2030
China	79	94	86	54	17
India	69	79	77	82	40
Indonesia	105	147	149	77	33
Bangladesh	150	153	158	94	43
Vietnam	157	154	169	82	41
Myanmar	160	209	206	78	31
Thailand	151	111	104	74	27
Philippines	86	96	103	107	49
Japan	89	65	59	22	-5
Korea, Rep	119	104	85	46	12
Brazil	38	41	37	78	33
Nigeria	5	24	25	139	80



Growth(%/yr) in rice consumption and population, 1970-90 and 1990-02

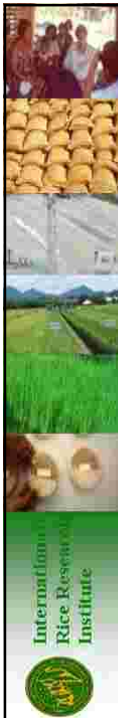


Source of raw data: FAO database online, FAO 2004.



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TRENDS in PRODUCTION

Factors affecting production

- Competing demand for land with urbanization and economic growth
- Looming water crisis
- Decline in soil fertility and overuse of harmful agro-chemicals
- Technological progress getting out of steam for irrigated ecosystem
- Increase in fuel and fertilizer prices would increase cultivation cost for irrigated rice
- Negative social perceptions for rice biotech
- Rapid economic growth and opportunities in non-farm sector dampen farmers' incentives



Factors influencing future growth

- Opening up of new land in Southeast Asia, South America and Africa
- Adoption of new plant type and hybrid rice for the tropics
- Consolidation of farms and adoption of precision farming in countries with surplus land
- Biotech products for drought- and submergence tolerance in rainfed systems
- Increase in production from rainfed ecosystem from NERICA, and shorter duration, drought and submergence tolerance rice varieties



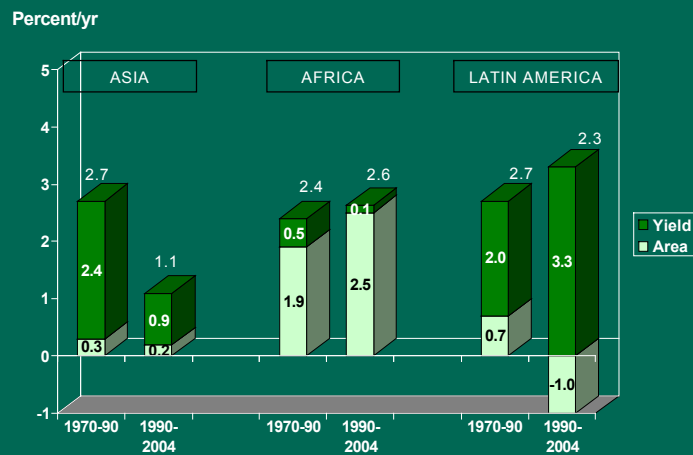
Recent trends in the growth of yield, selected Asian countries

Country	Yield increase (%/yr)	
	1970-90	1990-04
China	3.16	0.71
Korea, Rep	1.57	0.44
Indonesia	3.35	0.25
Philippines	3.49	1.54
Vietnam	2.13	1.18
India	2.36	0.76
Bangladesh	2.12	2.81
Thailand	0.57	1.49
Myanmar	3.76	2.04
Cambodia	0.24	3.77
Nepal	0.75	2.05
Laos	3.49	2.80

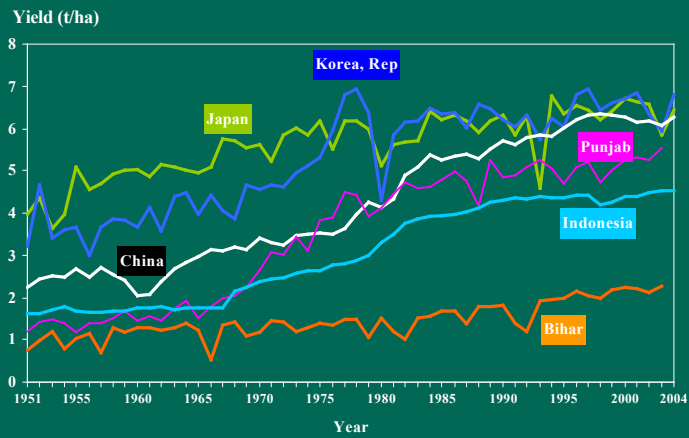
Source: Own estimates using data from FAO database, 2005



Changes in the source of growth in rice production, Developing countries, 1970-2004



Long term trend in yield, selected countries, 1951-2004



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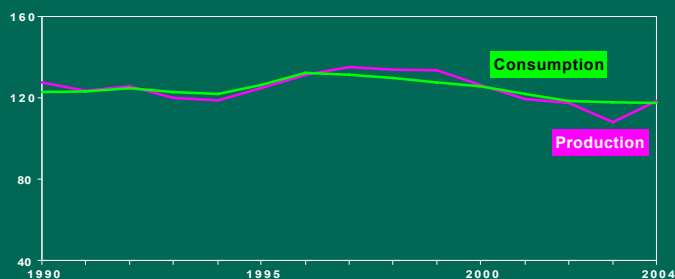
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FUTURE OUTLOOK

China

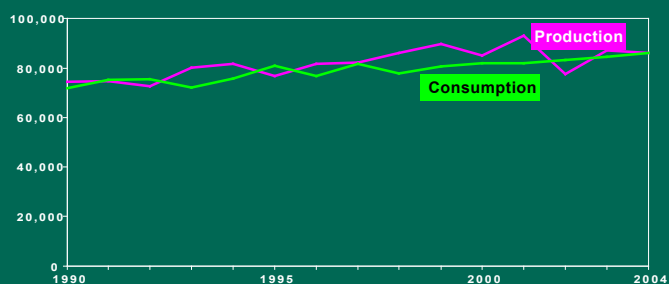
Rice, milled (Mn Tons)



- Consumption and production both have started declining, but production declining faster
- China will face rice shortage if it follows trade liberalization
- China's import of rice will put upward pressure on prices in the world market
- But China may decide to protect the domestic market in order to reduce the income disparity between rural and urban areas
- Increase in prices in the domestic market would maintain supply-demand balance

India

Rice, milled (Mn Tons)



- Production still affected by erratic monsoon
- Declining trend in production growth from irrigated systems
- Demand continues to increase from high population growth
- Maintain self-sufficiency in production with exports in years of favorable monsoon

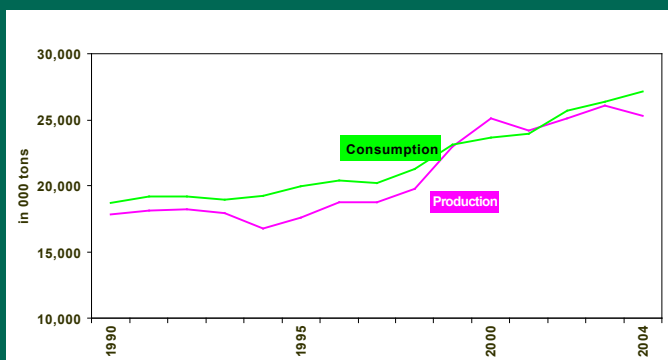


Indonesia



- Expansion of rice area in outer islands
- But diversion of rice land to other activities in Java
- Stagnation in growth of production will continue
- The growth in demand may slow down
- Will remain a major rice importer, unless protects domestic rice industry

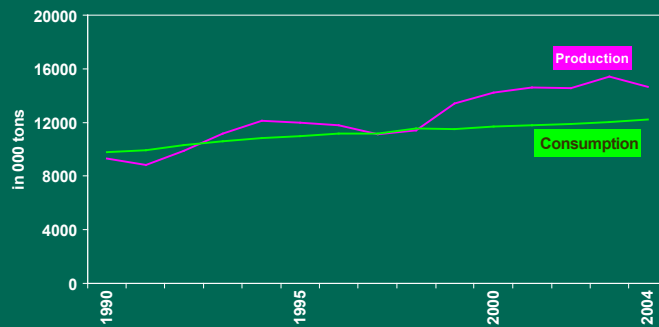
Bangladesh



- Potential for increase in production has been exploited
- Demand will continue to increase due to population growth
- Will remain a marginal rice importer



Myanmar



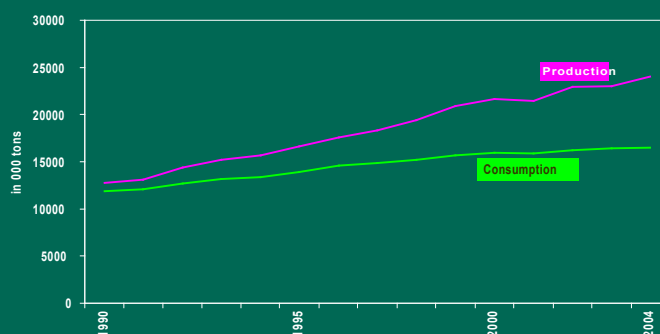
- Vast potential for increase in rice production
- Scarcity and high price of fertilizer is the major constraint
- Slow growth in demand as consumption has reached high levels
- Can generate substantial exportable surplus for the world market

Thailand



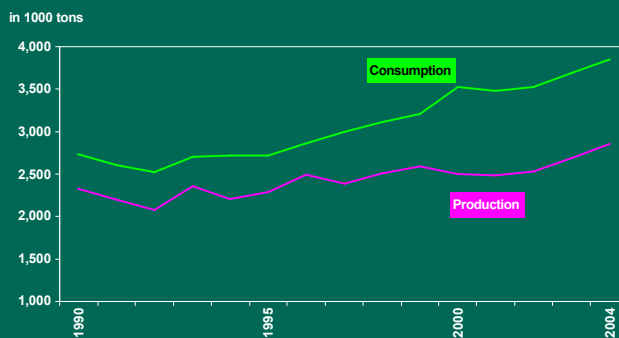
- Almost half of the production is currently exported
- Production growth will depend on prices in the world market
- Domestic demand will decline in absolute terms
- Will remain the major rice exporter in the world market

Vietnam



- Potential for production growth has almost been exploited
- Government policy favors diversification
- Production growth will slow down
- Demand will continue to increase moderately
- The surplus available for export will decline

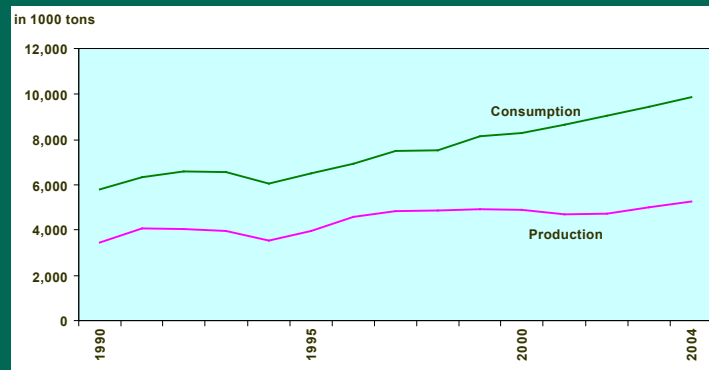
Eastern and Southern Africa



- Production will increase from area expansion
- Consumption will increase faster than production
- Will remain a major rice importing region

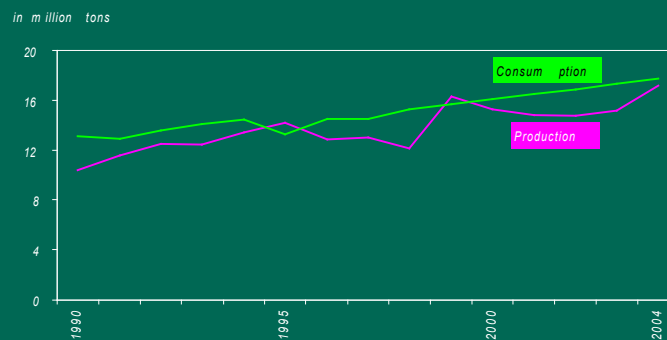


Western and Central Africa



- Increase in production from technological progress
- Continued high growth in consumption
- Increase in imports if rice prices continue to decline

Latin America



- Great potential for increase in rice area and yield
- Low rice prices and US farm bill may adversely affect the exploitation of the potential
- Increase in demand can be met by domestic production if rice industry is protected
- Trade may remain limited within the region



World market will be affected by Chinese Policy

- Trade liberalization may lead to decline in production faster than demand
 - Rice shortage in the domestic market may lead to an upward trend in rice imports
 - would lead to reversal of the downward trend in rice price in the world market
- But China may decide to protect the domestic market to:
 - Increase the profitability of rice farming
 - Help reduce rural-urban disparity in income
 - Maintain the rice supply and demand balance
- Such a policy would leave the world rice market unaffected



Conclusions

- World rice market may remain segmented and small
- Growth in demand for rice will slow down substantially with decline in per capita rice consumption and population growth in Asia
- Growth in production will also slow down due to scarcity of factors of production and economic opportunity in non-rice sectors
- Large Asian countries will maintain a policy of rice self-sufficiency
- Demand may expand substantially from West Asia and Sub-Saharan Africa
- Increase in import demand can be met by exploitation of excess capacity in Southeast Asia
- Protection of domestic market in China may lead to the continuation of the downward trend in rice prices in the world market

