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The rice crisis: Why did it happen and what can we do about it?

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McGill University
Conference on Global Food Supply
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The Green Revolution in Asia

1960s

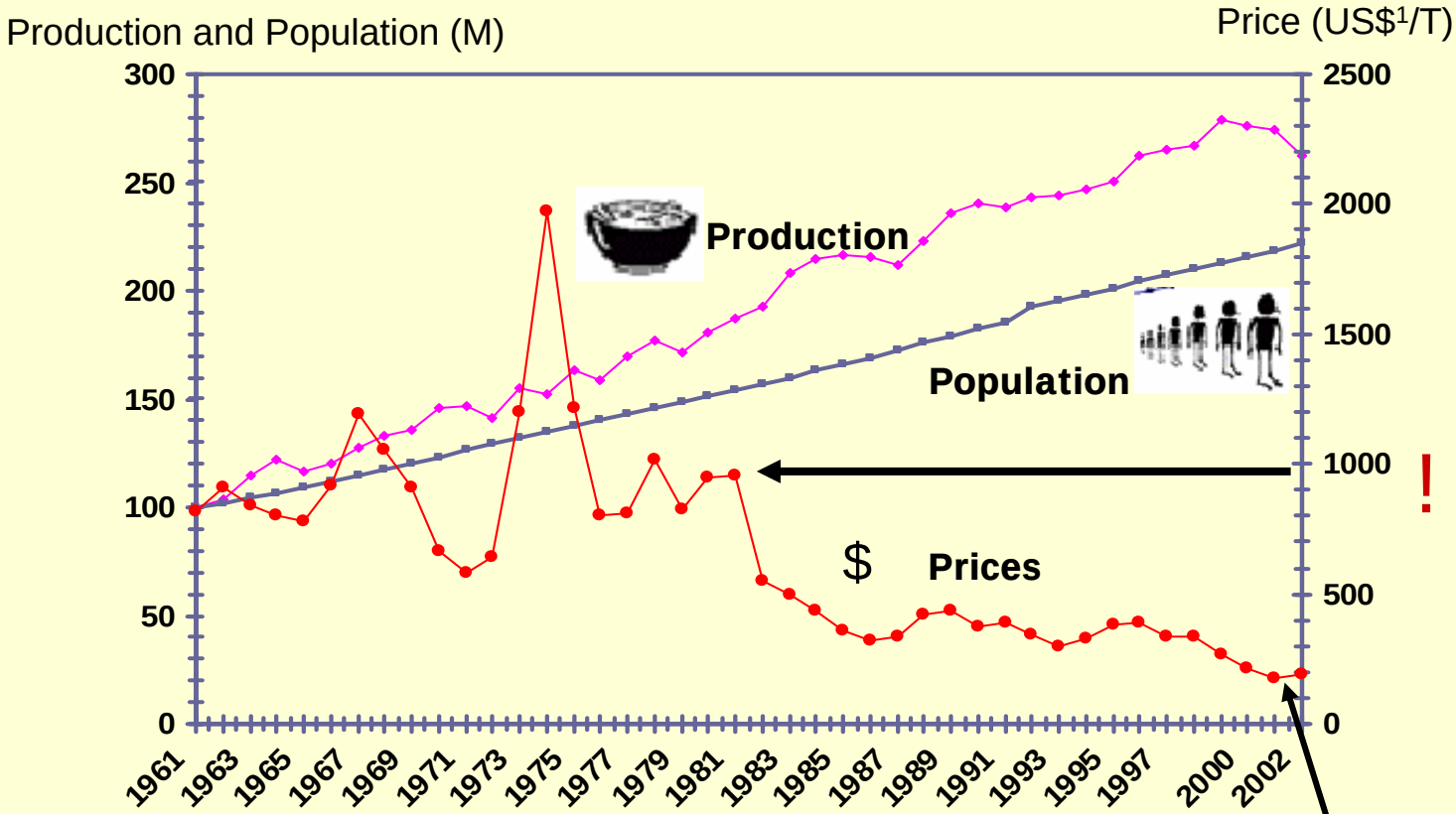
- yields ~1.5 t/ha
- widespread famines predicted

Today

- yields ~4 t/ha
- economic growth

An international undertaking initiated by philanthropy,
driven by great social need
and built by enduring partnerships

Population, rice production, and rice prices in Asia: 1961-2002…



[1]In US$ year 2000

Historical low

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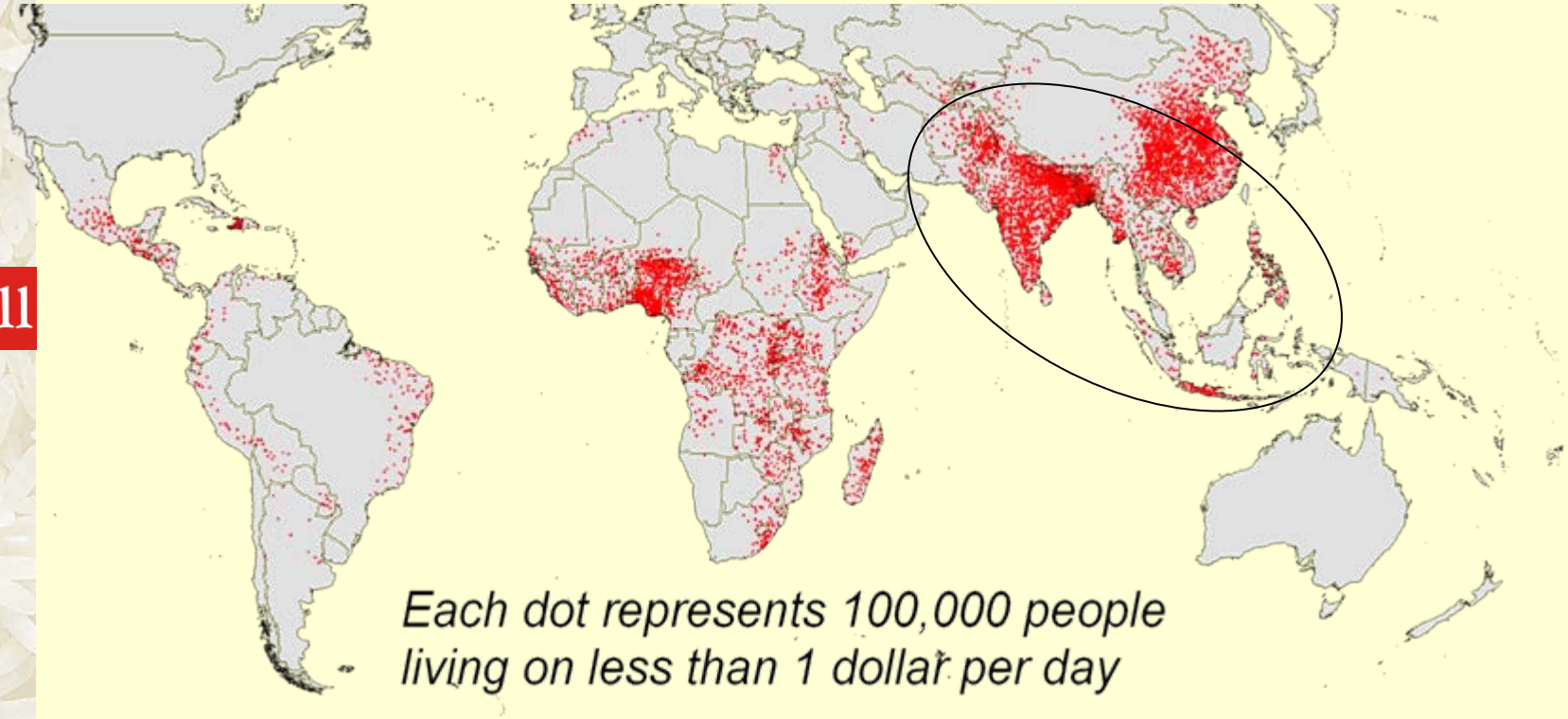
While much better off than 25 years ago, over one billion remain desperately poor



IN FACT: **Of the more than 1 billion poor in Asia and Africa, nearly 70% are in Asia … and more than ¾ of these people live in rural areas.**

Most of the world's poor are rice eaters!

R. Hijmans, IRRI

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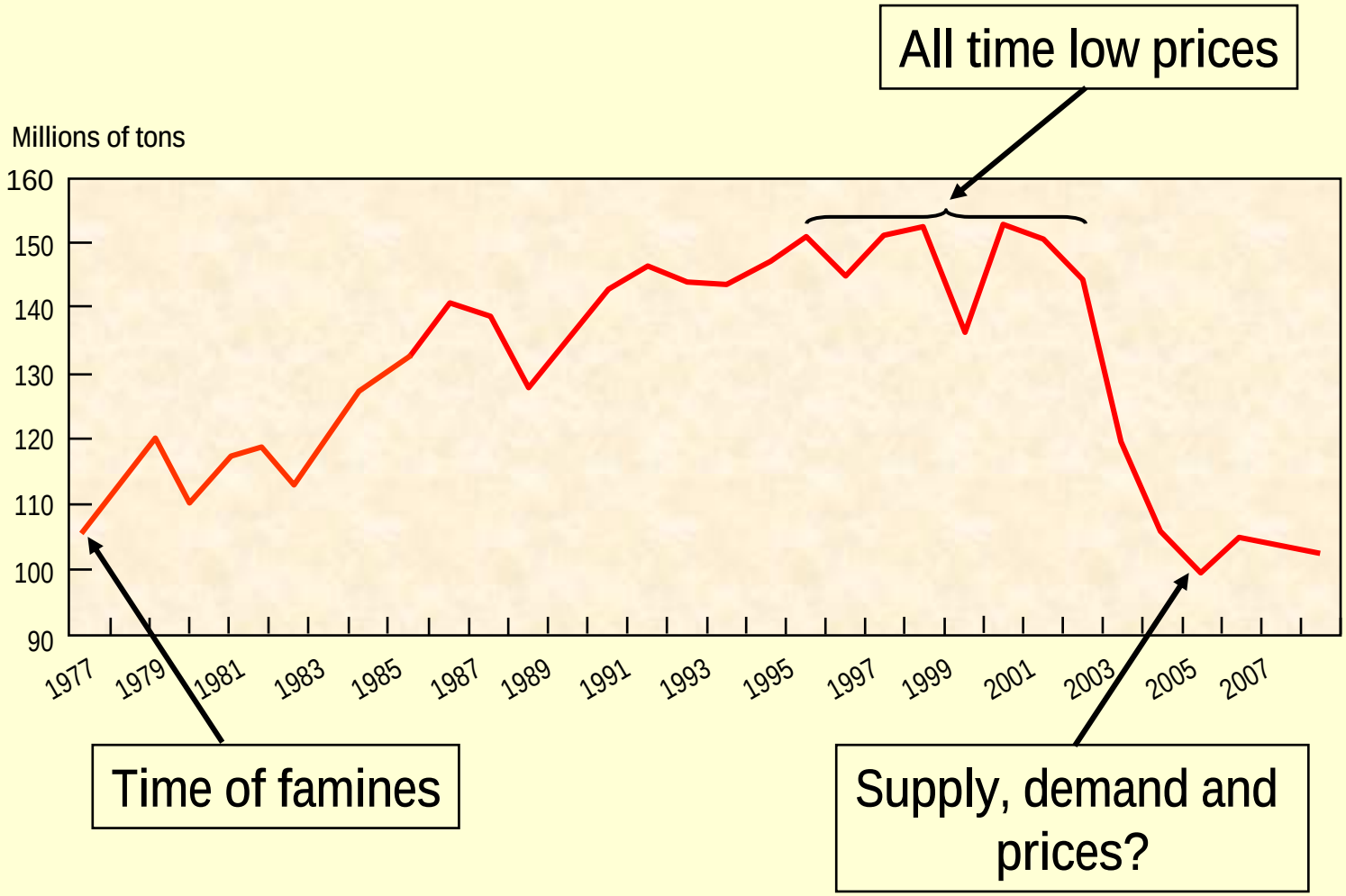
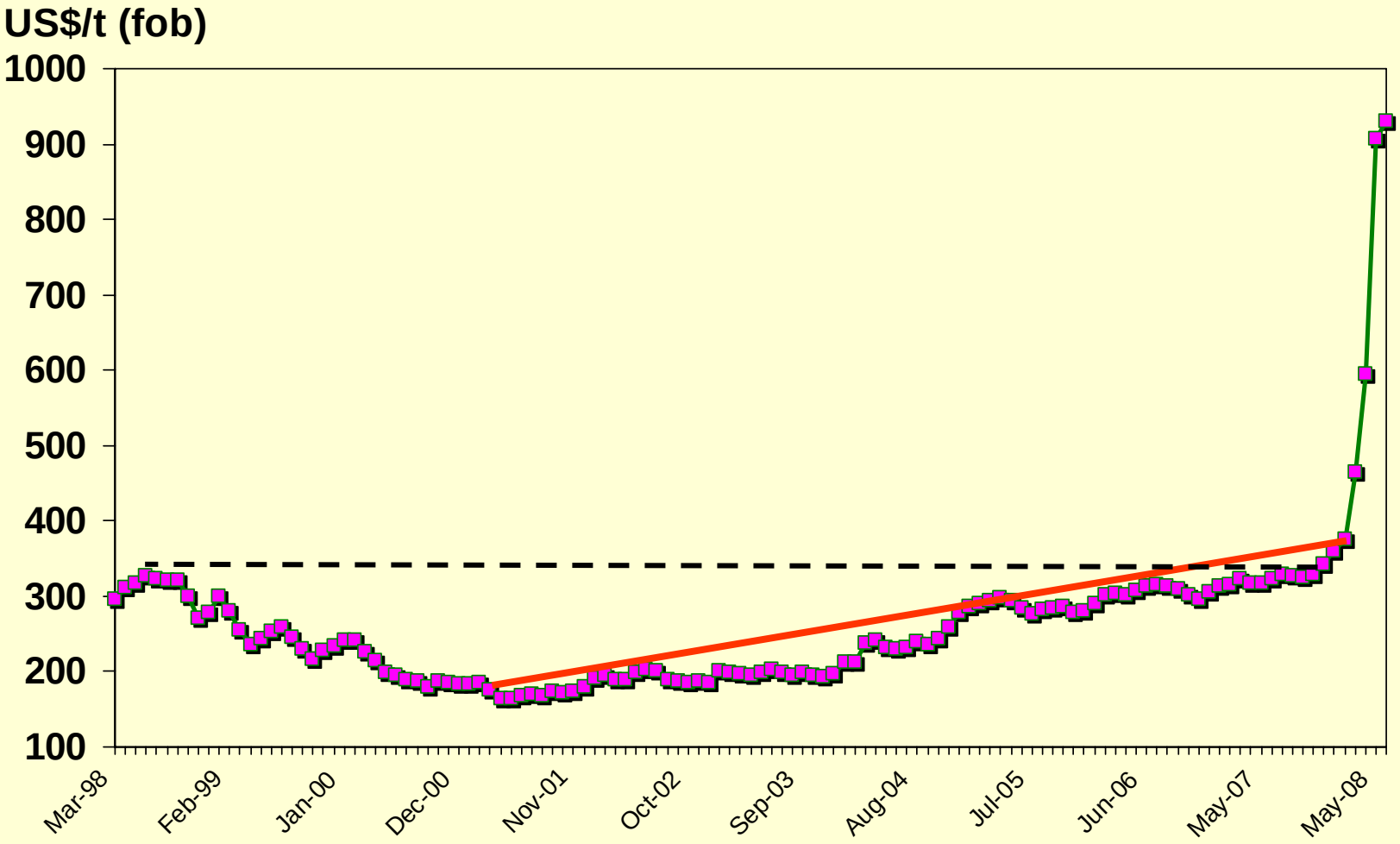
World Rice Stocks



Source: CIRAD, InfoArroz-February 2008

Monthly export price (US$/ton FOB) of Thai rice (5%-broken), 1998-2008 (March 1998 to May 2008)



Source of raw data: The Pinksheet, World Bank

Why did prices rise?

A convergence of causes and complacency

Longer term…

e.g., rising demand, economic development, reduced productivity gains,Africa, neglect in research and infrastructure

…Vs shorter term

e.g., export bans, rush to import, hoarding, RAPID oil + fertilizer price rise, weather + pest problems, biofuels

There is no endgame in agriculture

- Green Revolution
- Lower prices
- Complacency (cheap food is here to stay!)
- Disinvestment in ag research
- Slowing of productivity growth
- Higher prices

Continuous demand growth

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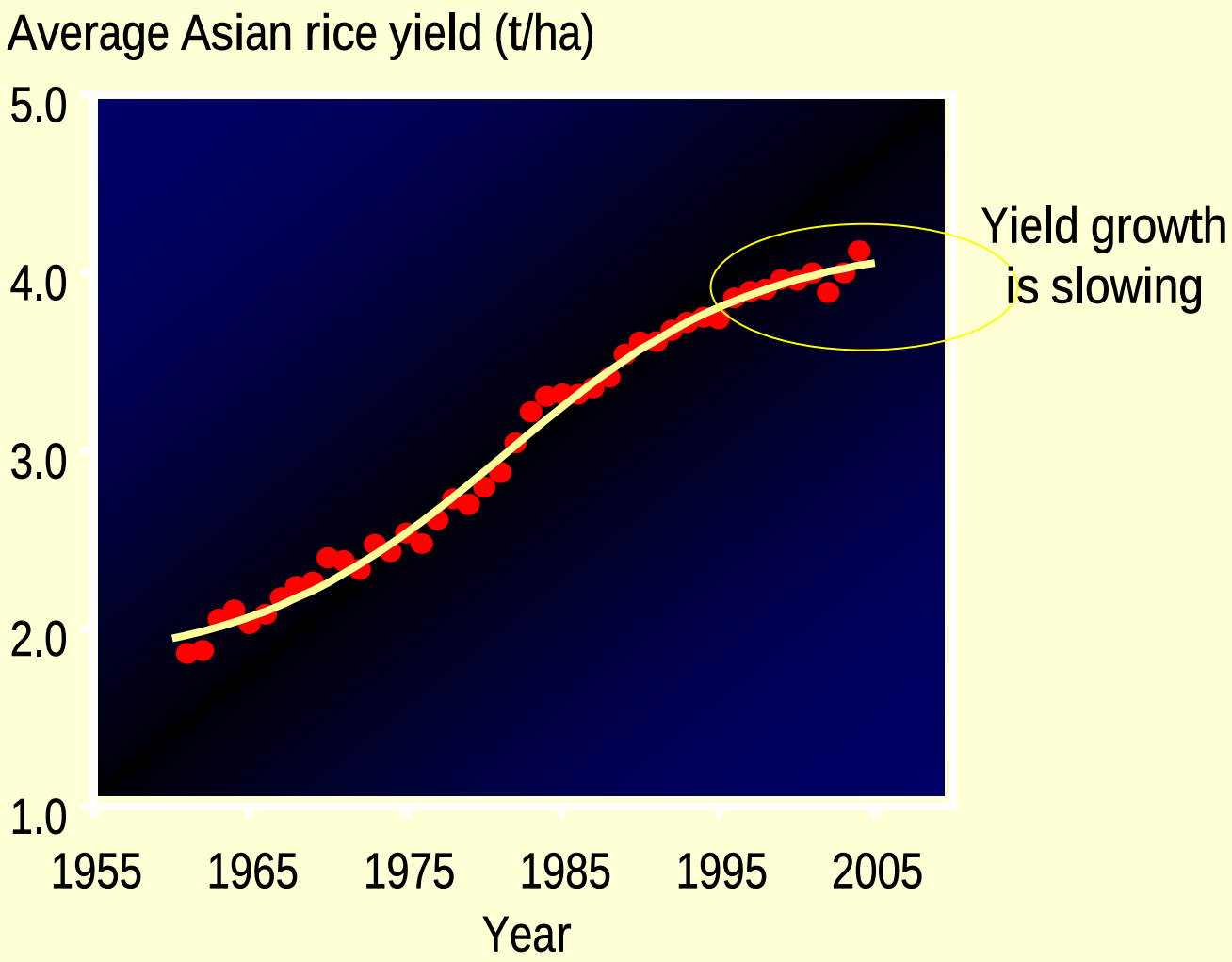
Even before the current crisis, it was predicted that in 2015 the world would need to produce at least an additional 50 M tons of paddy rice



Expensive rice = bad news...

Higher food prices could push 100 million extra people into poverty (World Bank)

Vicious cycle:
short-term malnutrition in young children can have life-long consequences

So, can the world feed itself?

Yes, but…

NOT with existing technologies

NOT without taking into account climate change

Asia MUST take full advantage of revolutions in biology, genetics and information technology

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Near-term steps:

We must:

1. Help farmers adopt and use existing technologies
2. Reinvest in deteriorating irrigation infrastructure

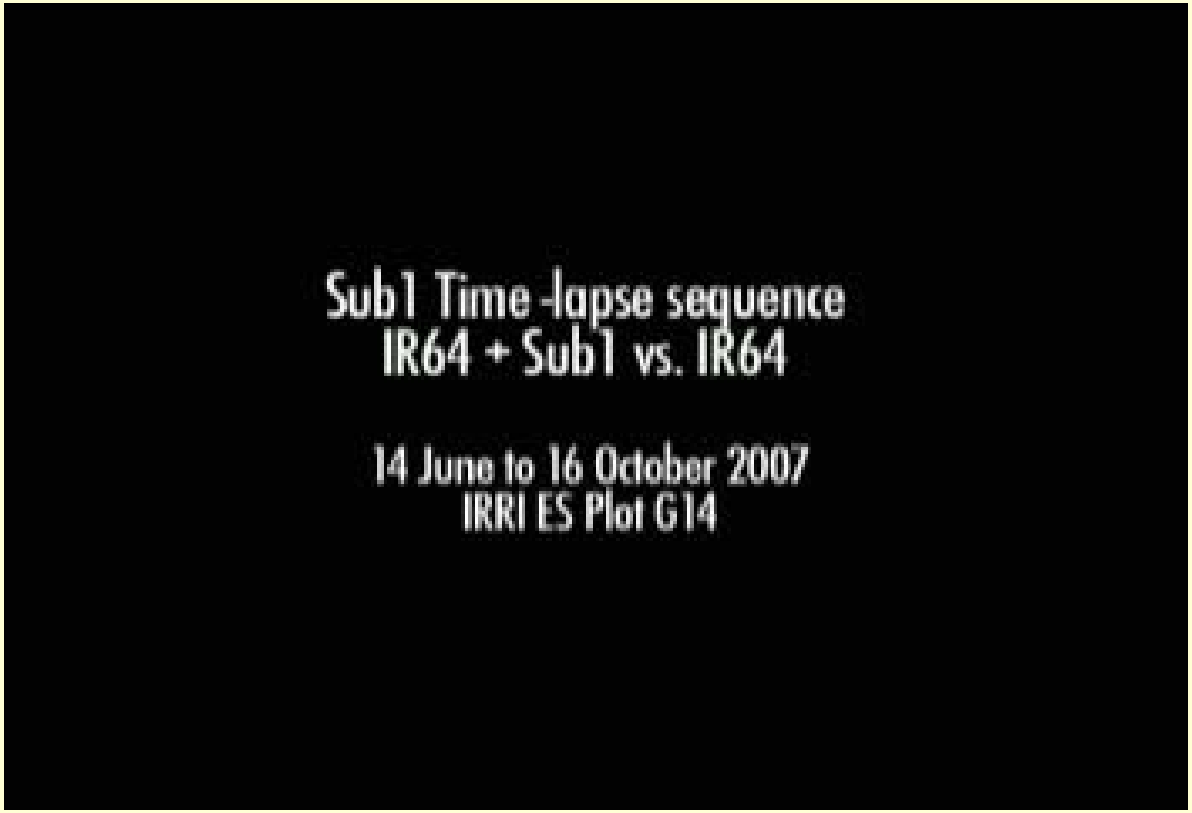
Long- and medium-term steps

Research and development of
new and improved technologies

The problem of too much water

- **20 million ha affected in South and Southeast Asia.**
- **Growing problem with climate change.**
- **Rice is only crop suitable, but ‘drowns’.**

Flood-tolerant rice



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Climate hazards

- At present, projections are prone to great uncertainty – but the risks are enormous.
- Rice production systems and varieties must be more resilient to climate extremes.
  - *Adaptation will be good for farmers and consumers under any future climate scenario*

Rice – based systems must be positive components of societal mitigation and adaptation strategies

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Human capacity will have to be rebuilt

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In Summary…

- We need productivity growth but that requires research, development, dissemination
- Lessons from the Green Revolution: it DOES work
- The requirements for success are in place
- Global food security depends on intensive rice systems
- Poverty reduction and global food supplies will also depend on cutting edge science to raise yield potential

More $ is needed…

We have heard a lot of talk:

- Time to "re-launch agriculture"

  FAO Director-General Jacques Diouf

- "We should double this investment [to the CGIAR] in research and development over the next 5 years."

  World Bank President Robert Zoellick

But we need more than talk…

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Monday, July 02, 1973

TIME

IN PARTNERSHIP WITH CNN

A Rice Crisis Is Boiling

Rice is life

itself in Southeast Asia, and this year, there is not enough to go around. Last year's bad weather has turned the region's usual bare sufficiency into severe shortage.

The result: smuggling, hoarding, soaring prices and hungry people.

Thank you

"Since the way to feed the world is not to bring more land under cultivation, but to increase yields, science is crucial."

The Economist

"The Silent Tsunami"

19 April 2008

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