

The hydraulic particulars of the Cumbum tank



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HYDRAULIC PARTICULARS OF PEDDA CUMBUM CHANNEL

| | |
|------------------------|--|
| HEAD SLUICE SILL LEVEL | HEIGHT : 634.89 FT. OR 193.72 M HEAD : 635.15 FT. OR 195.07 M |
| NO OF VENTS | 1 NO |
| SIZE OF VENT | 12.0 X 2.5 (0.60 X 0.75 M) |
| BED LEVEL | : 630.15 FT. OR 192.07 M |
| FULL SUPPLY LEVEL | : 633.65 FT. OR 193.14 M |
| F.S. DEPTH | : 3.50 FT. (1.05 M) |
| LENGTH OF THE CHANNEL | 1200 KM Upto 600 KM TO 6200 KM |
| CHANNEL SECTION | 150' X 350' |
| DISCHARGE | 10000 CFS |
| AYACUT | 20000 Acres |
| VILLAGE SERVED | 10000 Acres |

HYDRAULIC PARTICULARS OF CUMBUM TANK

TANK & SURPLUS DETAILS

| | |
|------------------------------|---------------------------------|
| CATCHMENT AREA | : 450 Sq. miles. or 1115 Sq. KM |
| ESTIMATE YIELD | : 2260 Mcft |
| WATER SPREAD AT FTL OF TANK | : 0.25 Sq. M. or 23.85 Sq. KM |
| (Excluding hills) | : 1400 Hrs. or 6000 Acres |
| TBL | : 683.66 FT. [208.37 M] |
| FTL | : 665.66 FT. [203.20 M] |
| MWL | : 660.66 FT. [201.40 M] |
| HIGHEST WATER LEVEL RECORDED | : 674.75 FT. [206.84 M] |
| (during 1940) | |

| | |
|------------------------|----------------------------|
| MAXIMUM DISCHARGE OVER | |
| SURPLUS WEIR AT MWL | : 15065 CFS OR 11.72 CUM/S |
| LENGTH OF SURPLUS WEIR | : 200 FT. OR 60.96 M |

BUND

| | |
|---|-----------------------|
| LENGTH OF BUND | : 1070 FT. (326.85 M) |
| TOP WIDTH | : 100 FT. (30.48 M) |
| HEIGHT OF BUND | : 60.00 FT. (18.27 M) |
| THE TANK SURPLUSSED DURING THE YEAR 1947, 1949, 1950, 1955, 1956, 1966, 1972, 1993, 1996 AND 2005 | |

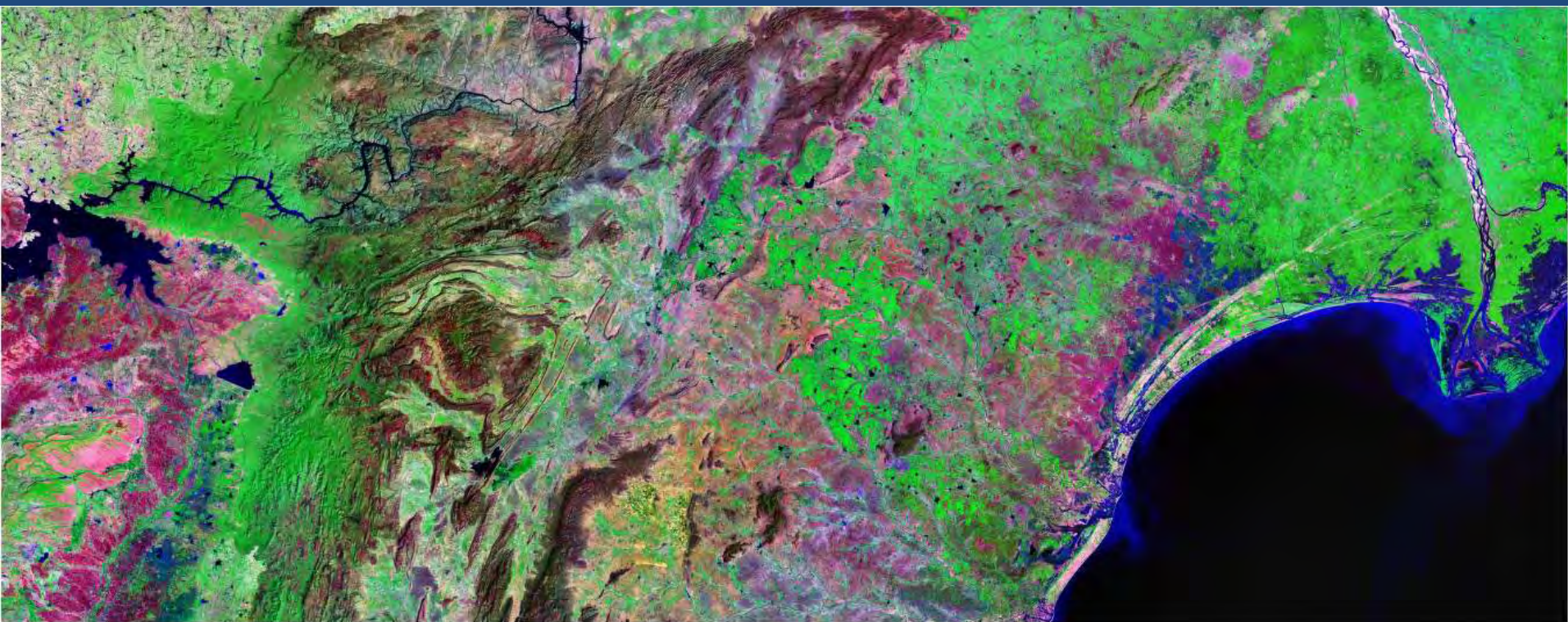
ABSTRACT OF AYACUT DETAILS

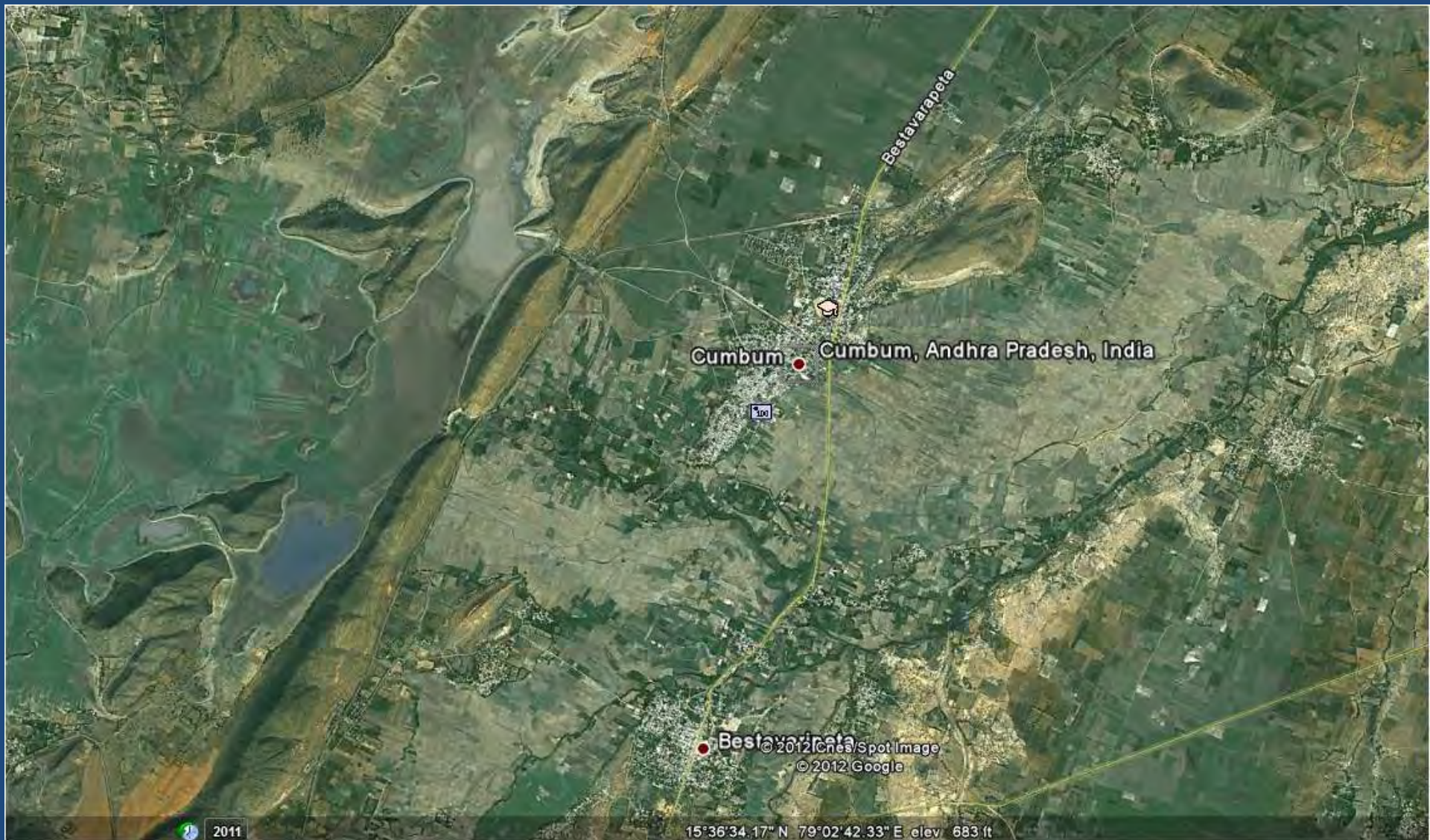
| | |
|--------------------------------------|-----------------|
| 1. CHINNA CUMBUM CHANNEL | : 1000.00 Acres |
| 2. PEDDA CUMBUM CHANNEL | : 1000.00 |
| 3. HIGH LEVEL CHANNEL (NAKKALAGANDI) | : 100.00 |
| 4. SERIAL KATRA CHANNEL | : 100.00 |
| 5. PAPAYAPALLI CHANNEL | : 100.00 |
| 6. TELLA VAGU RATWA | : 100.00 |

TOTAL TANK SERVED AYACUT: 6000.00

HYDRAULIC PARTICULARS OF CHINNA CUMBUM CHANNEL

| | |
|------------------------------|-----------------------------|
| HEAD SLUICE SILL LEVEL FRONT | : 633.15 FT. OR 193.07 M |
| NO OF VENTS | : 1 NO |
| SIZE OF VENTS | : 1.8 X 2.0 (0.45 X 0.60 M) |
| BED LEVEL | : 625.00 FT. OR 191.41 M |
| FULL SUPPLY LEVEL | : 628.40 FT. OR 191.41 M |
| F.S. DEPTH | : 3.50 FT. (1.05 M) |
| LENGTH OF THE CHANNEL | : 8.80 KM Upto 1000 KM |
| CHANNEL SECTION | : 150' X 350' |
| DISCHARGE | : 10000 CFS |
| AYACUT | : 20000 Acres |
| VILLAGE SERVED | : 10000 Acres |





Bestavarapeta

Cumbum Cumbum, Andhra Pradesh, India

100

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2011

15°36'34.17" N 79°02'42.33" E elev 683 ft











పైరు - నీరు ప్రణాళిక ఫలితాలు

జింపలేరువాగు భూగర్భజల యాజమాన్య కమిటీ
భూగర్భజలాల నిలువపరిస్థితి [జూన్ - 2006, మే 2007]



నీటి పరివాహక ప్రాంతం



జేమ:

3194324 ఘ.మీ.

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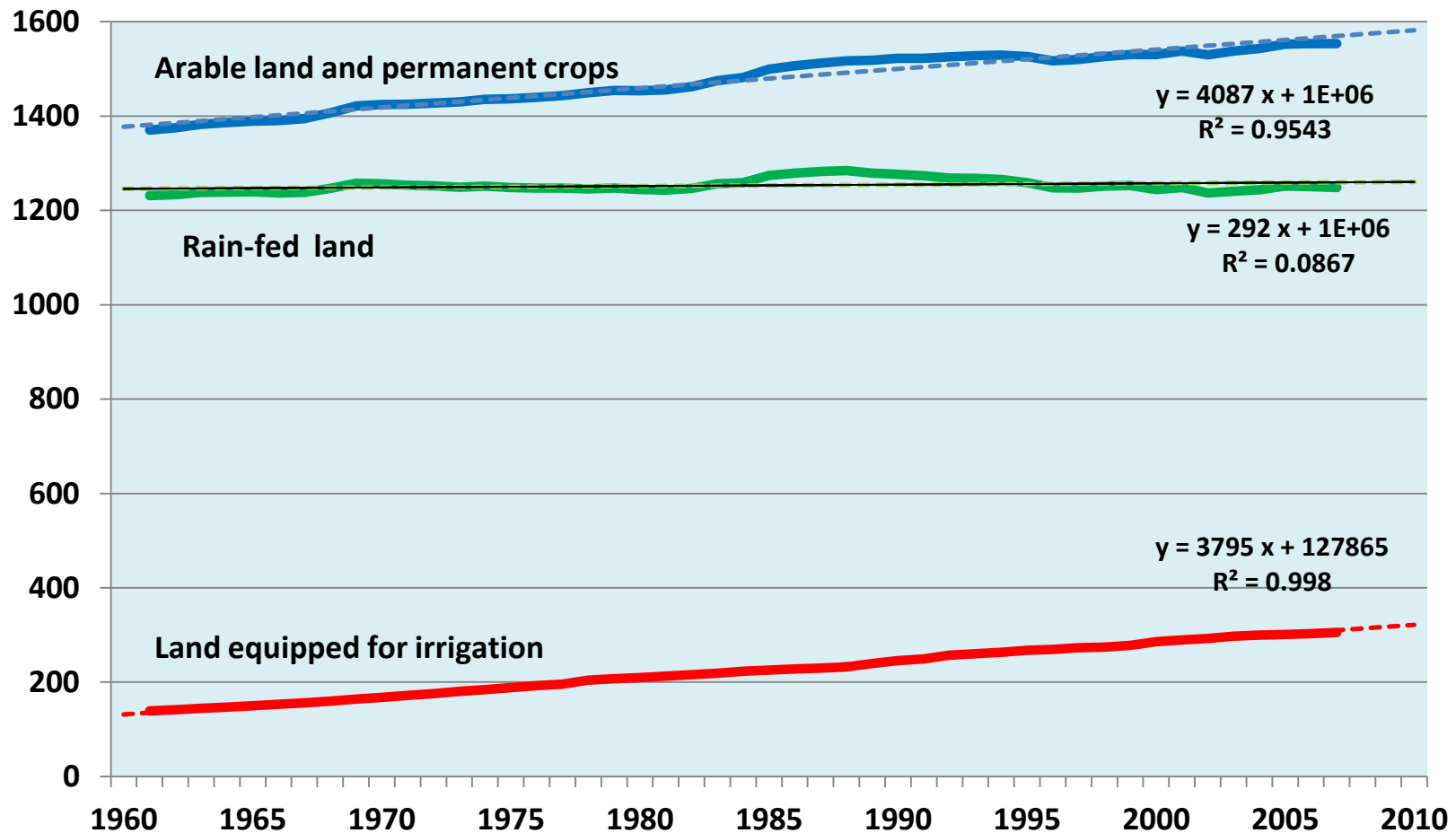
- 36839348 ఘ.మీ.

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"సర్వే" MRK..

World agricultural land 1961 – 2007 (million ha)



Feeding the 9 billion - toward 2050

sources of growth

Projected growth in agricultural output to meet demand

- 43% by 2030,
- 70% by 2050

Global cereal demand projected to rise from ~2 to ~3 billion t.

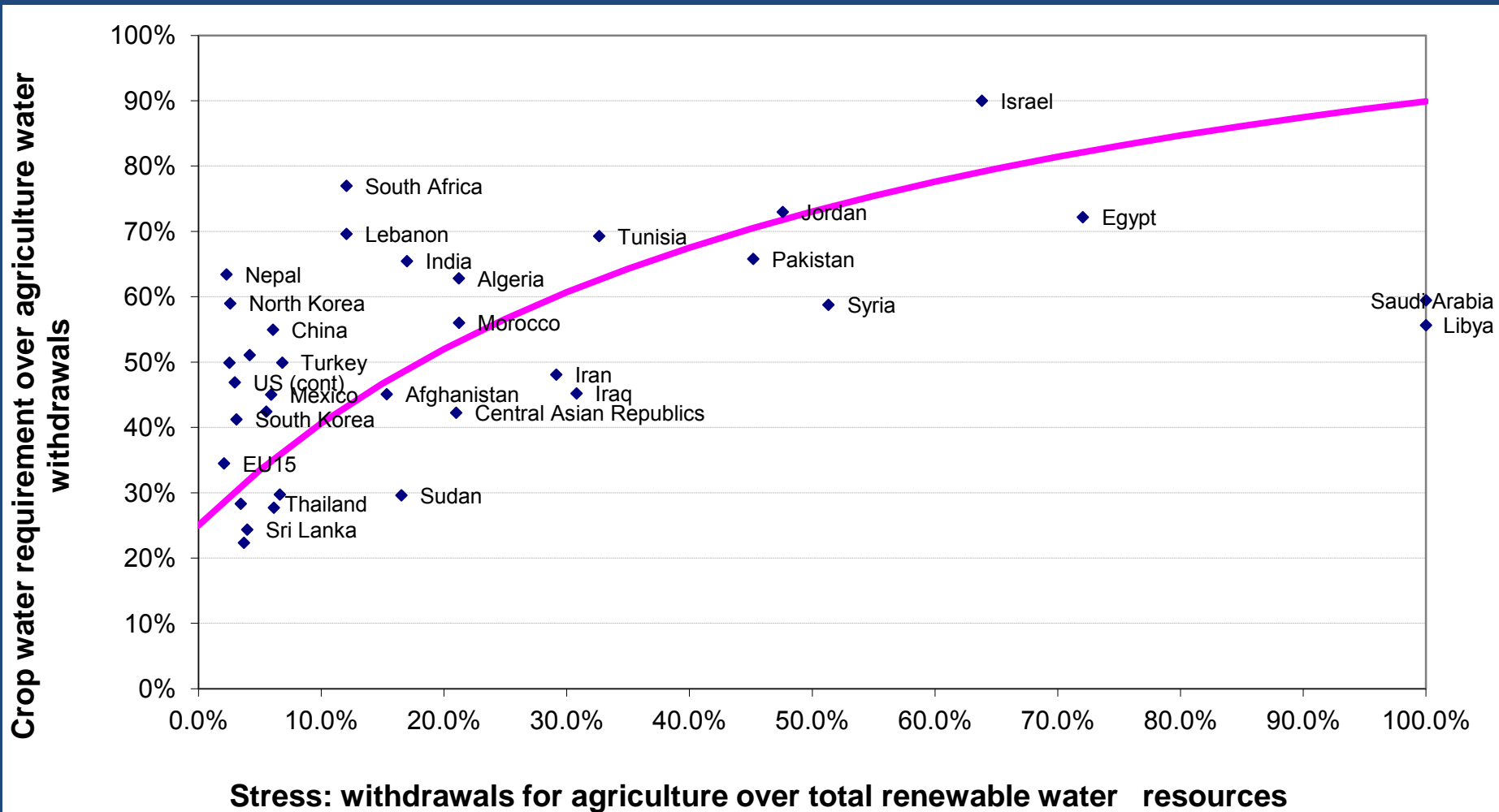
80% of the growth in developing countries from intensification

- yield increases (70%)
- higher cropping intensities (10%).

FAO Global Projections of Irrigated Areas (m ha)

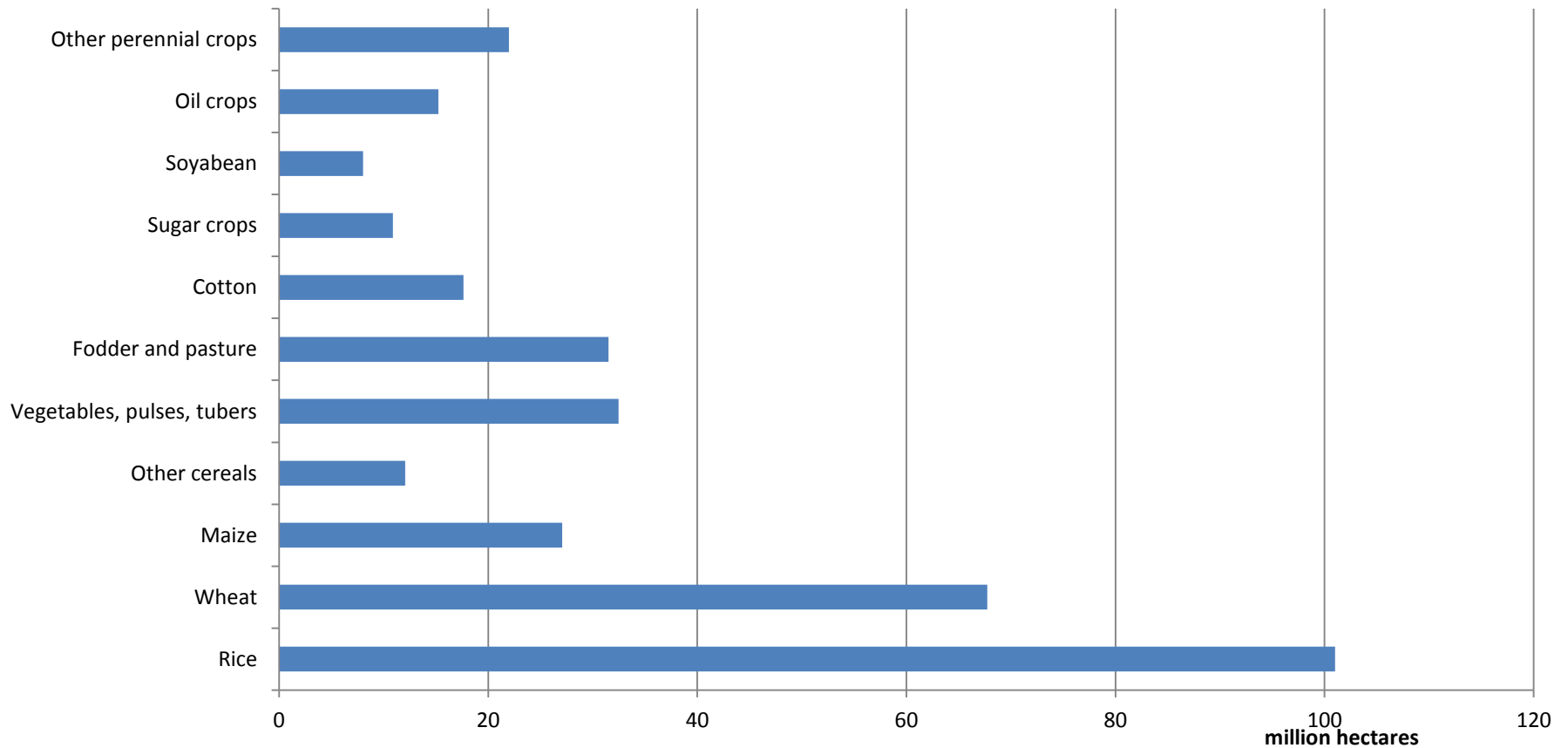
| | 2006 | 2050 |
|--|-------|-------|
| Area equipped: | 301 | 318 |
| Area Actually Irrigated: | 257 | 271 |
| Area harvested: | 327 | 350 |
| Irrigation water withdrawals km ³ | 2 711 | 2 988 |

Is water stress driving 'efficiency'?



Main irrigated crops

Global distribution of harvested areas for irrigated crops, 2009



Rice production, utilization and stocks

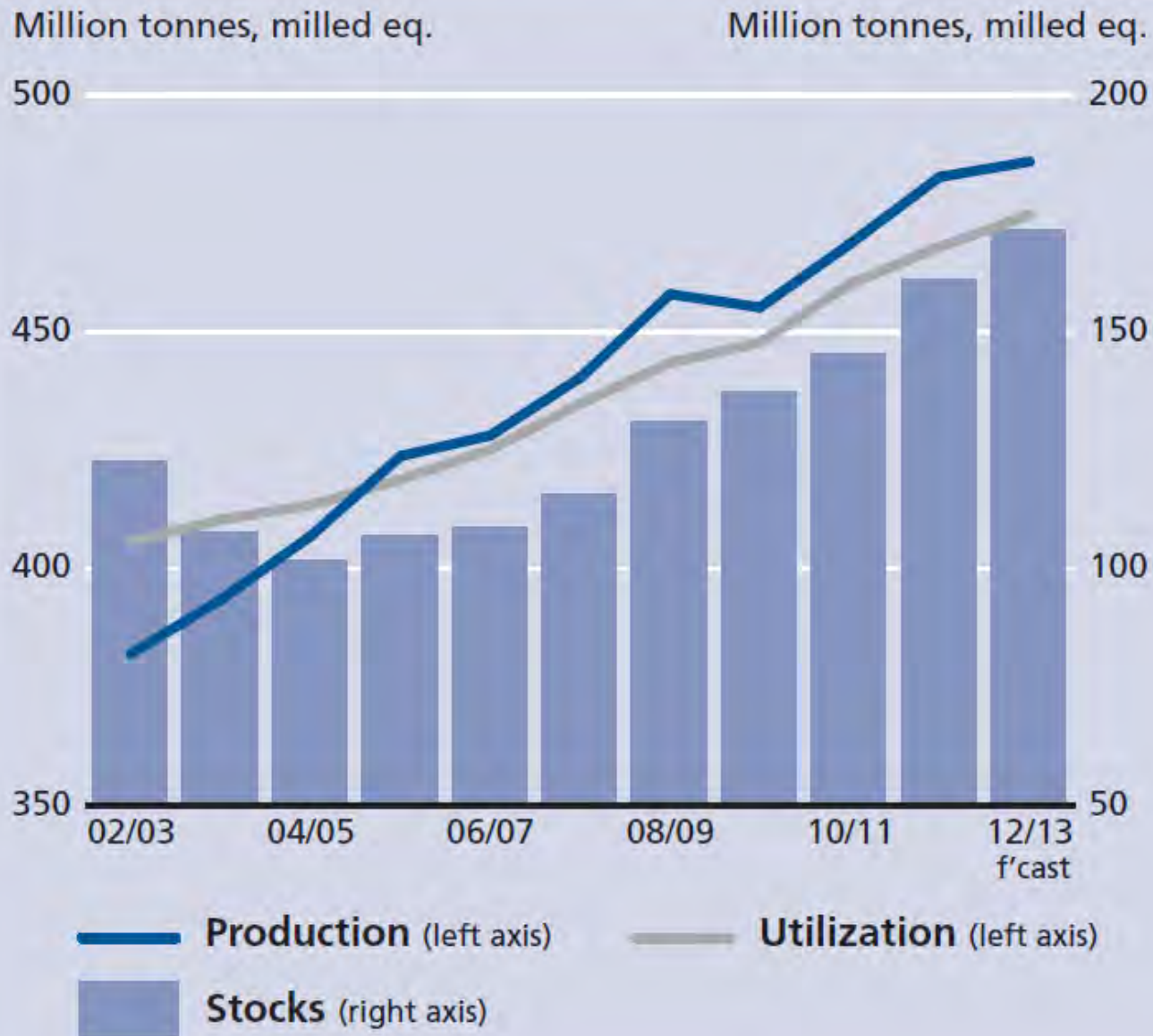


Figure 17. Global rice paddy production and area

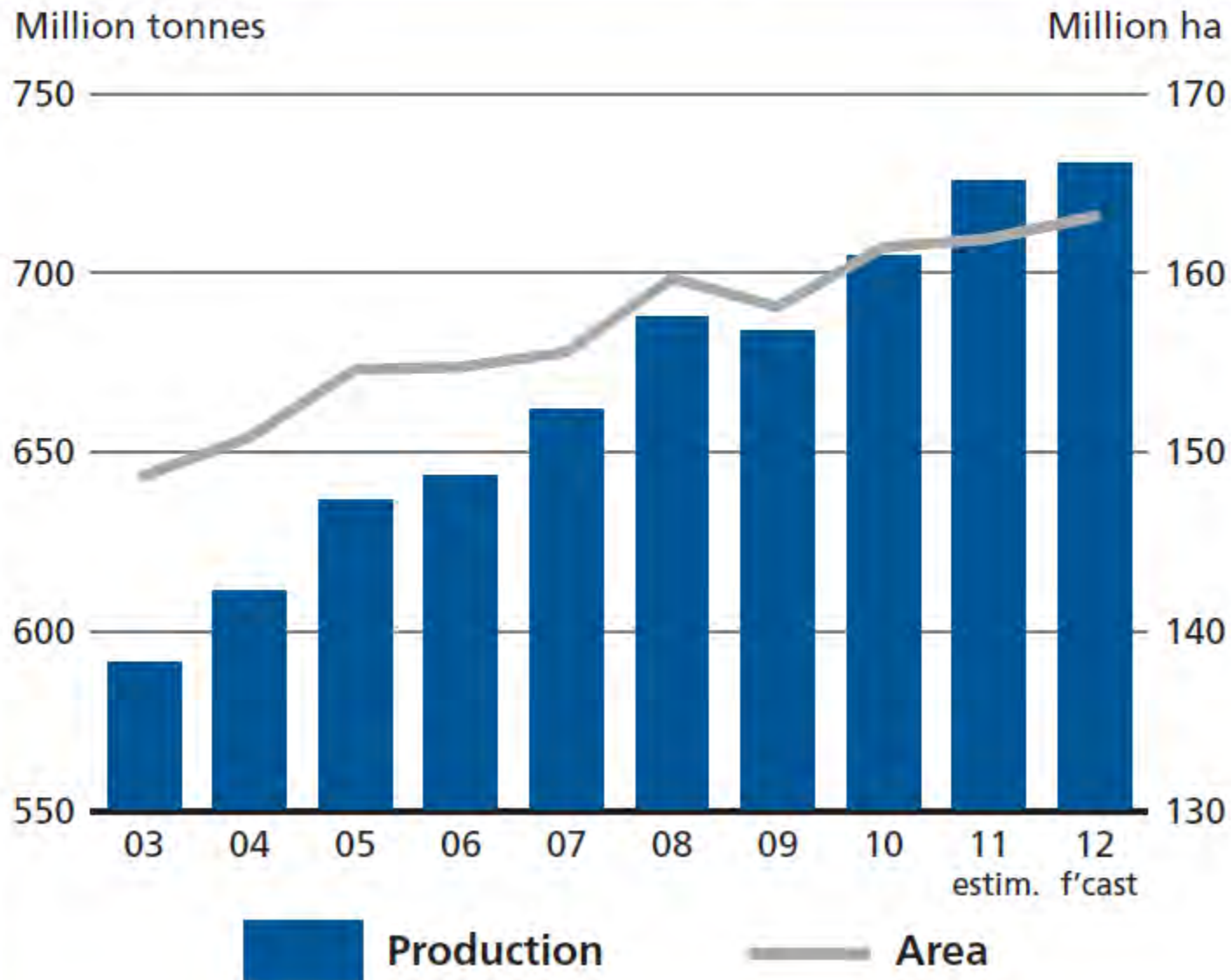


Figure 20. Rice imports by region

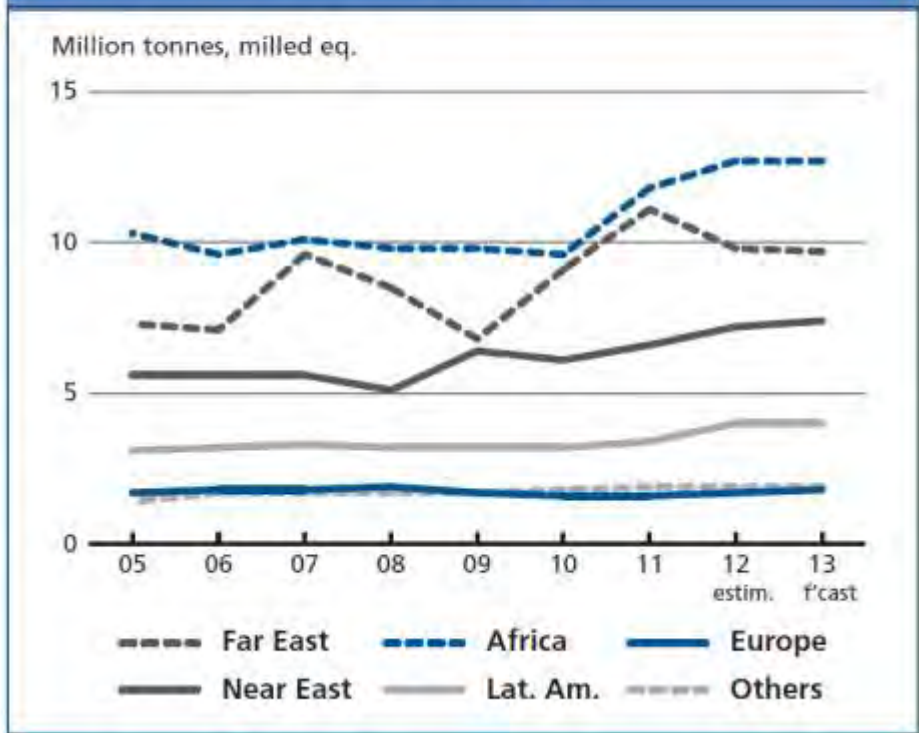


Figure 21. Rice exports by the major exporters

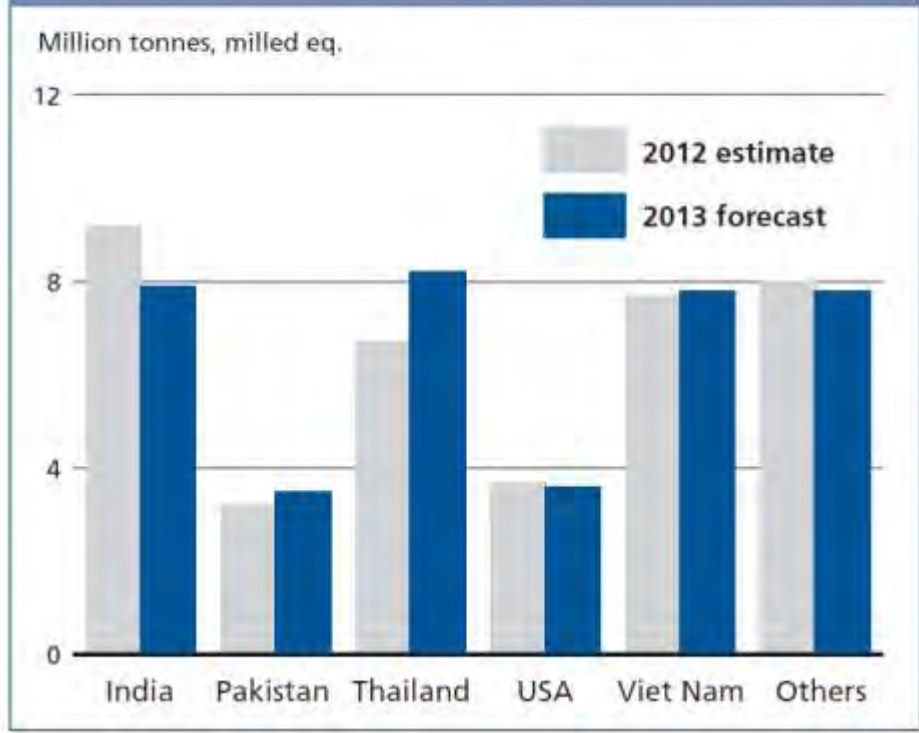
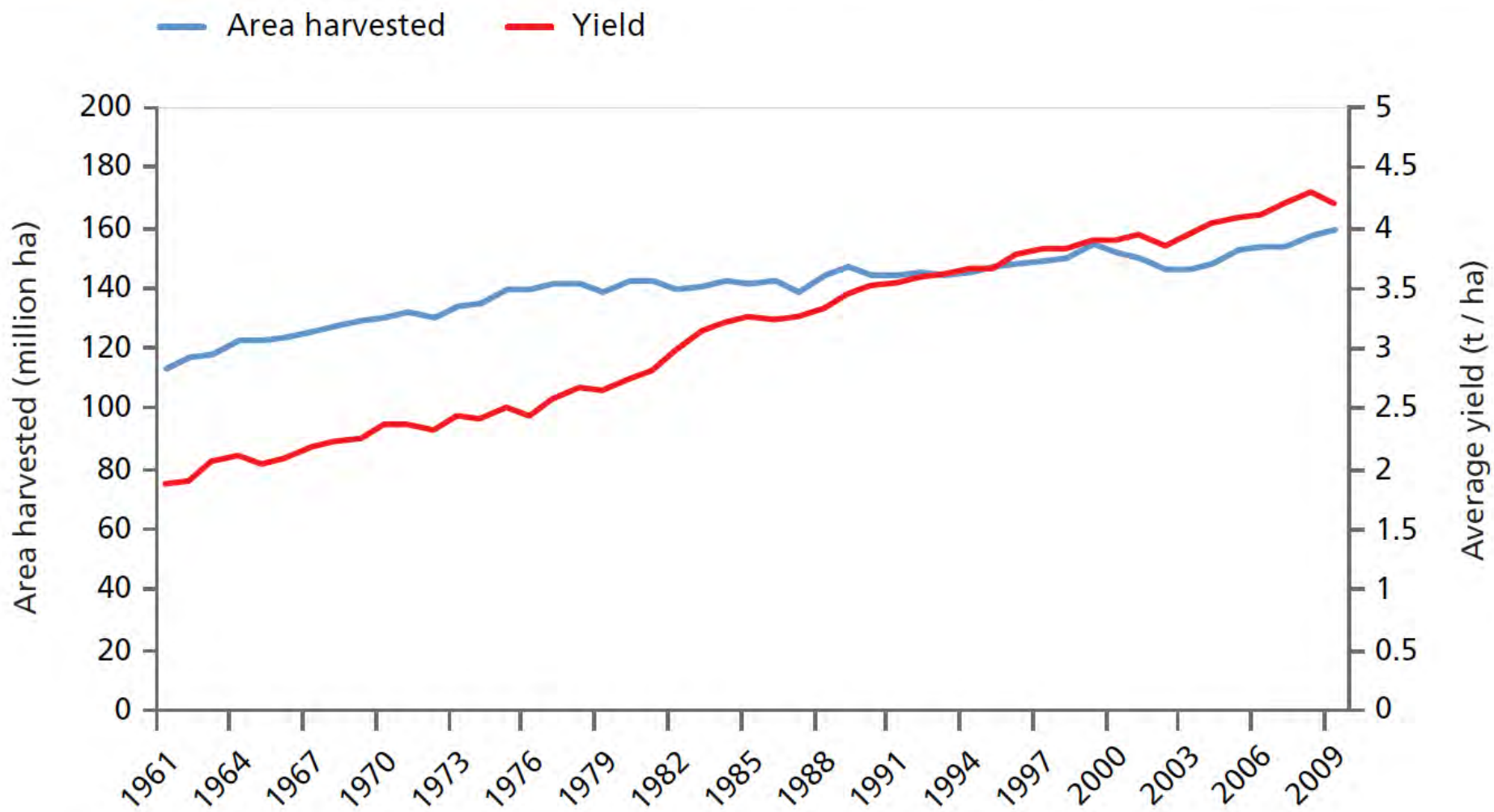


FIGURE 1 World rice harvested area and average yield over the period 1961-2009 (FAO, 2011).



SPECIAL ALERT

No. 330

COUNTRY: CHINA

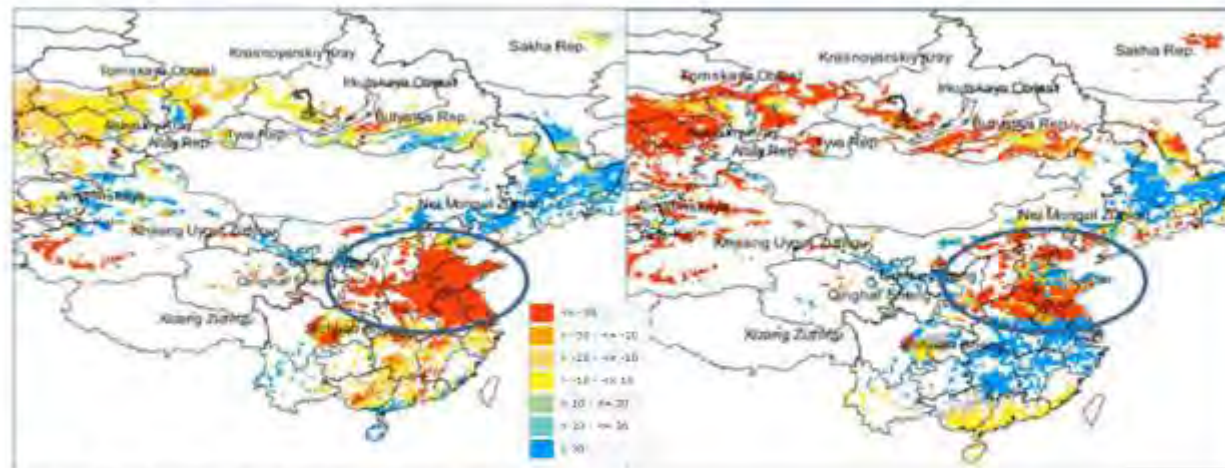
DATE: 8 February 2011

A severe winter drought in the North China Plain may put wheat production at risk

Substantially below-normal rainfall since October 2010 (see Figure 1a) in the North China Plain, the country's main winter wheat producing area, puts at risk the winter wheat crop to be harvested later in the month of June. Low precipitation resulting in diminished snow cover (see Figure 1b) has reduced the protection of dormant wheat plants against frost kill temperatures (usually below -18°C) during winter months from December to February. Low precipitation and thin snow cover have also jeopardized the soil moisture availability for the post-dormant growing period; see crop calendar shown in Figure 3. Thus, the ongoing drought is potentially a serious problem.

Figure 1a: Cumulative rainfall¹

Figure 1b: Average snow depth²



Source: GIEWS analysis based on the JRC/MARSOP web Tool.

¹ Cumulative rainfall (1st dekad of October 2010 to 2nd dekad of January 2011) as a percent deviation from the long term average (LTA).

² Average snow depth (1st dekad of October 2010 to 2nd dekad of January 2011) as a percent deviation from LTA.

Main agricultural area at risk circled.

Does the
groundwater
message get
through?

