Indian Rice Landscape: Trade, Production and Government Intervention in Marketing

インドのコメ輸出拡大政策

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This paper focuses essentially on three aspects of Indian rice landscape: First, it looks at the evolution of India's rice exports over two decades (1990-91 to 2010-11), and how its export policy has tried to balance the interests of domestic consumers and exporters/farmers; Second, it looks at the domestic production, and how it has gradually expanded, with occasional dips emanating from monsoon failures; and lastly, it looks at the government intervention in rice market to procure, stock, and distribute at a subsidized rate to poor consumers. All these three aspects are looked at keeping in mind India's need and priority to ensure food security to its own citizens, and how this objective may at times appear to be at variance with the need to provide global food security. It is against this backdrop that this paper also looks at the way forward, and how India is likely to balance its interests in the rice sector between exports and needs of its domestic constituency of consumers.

1.1 Backdrop: Rice in world trade

World rice trade in calendar year 2011 is projected at 34.3 million tonnes, about 8.7 percent more than 31.6 million tonnes in 2010. Rice is a very thinly traded commodity, with only about 7 per cent of world production being traded as against wheat or maize, where the world trade as a percentage of production was 20 per cent and 11 per cent respectively in 2010 (FAS/USDA, 2011). The concentration is particularly high on the export side, since five countries (Thailand, Viet Nam, United States, Pakistan and India) supply more than three-quarters of the trade (Fig 1). The major rice exporters for T.E. 2010 were Thailand (31%), Vietnam (19%), United States (11%), Pakistan (11%) and India (7%).

This situation is in contrast to the fragmentation of import markets and the wide year-to-year fluctuations in individual countries' purchases, resulting from the fact that importers do not rely consistently on the international market for rice supplies, but only as a last resort to fill the gap caused

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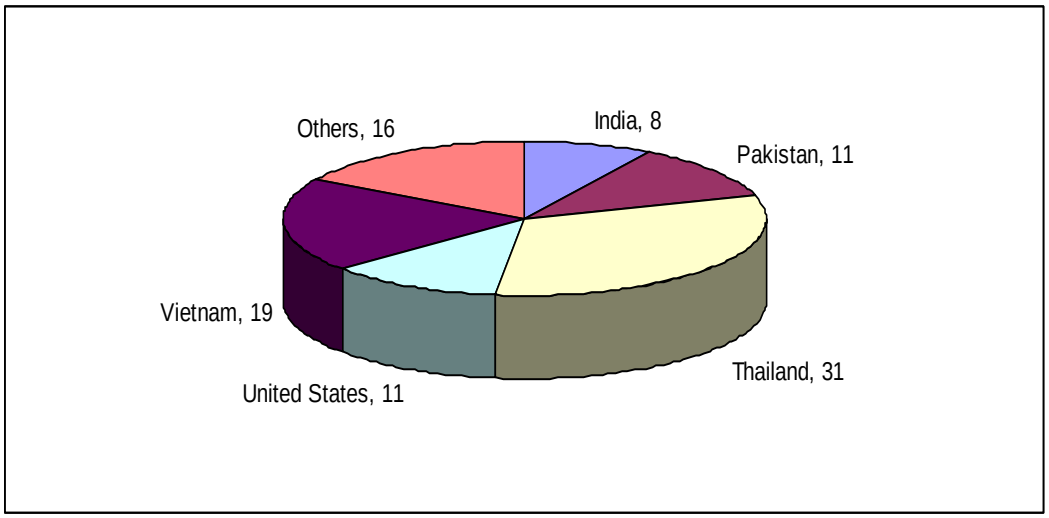
by a production shortfall. The major importers during T.E. 2010 were Philippines (8%), Nigeria (7%) and European Union (5%). The thinness and concentration of world rice markets imply that changes in production or consumption in major rice-trading countries have an amplified effect on world prices.

Fig 1: Share of Major Exporters of Rice, T.E. 2010



Source: Rice Yearbook 2011, USDA

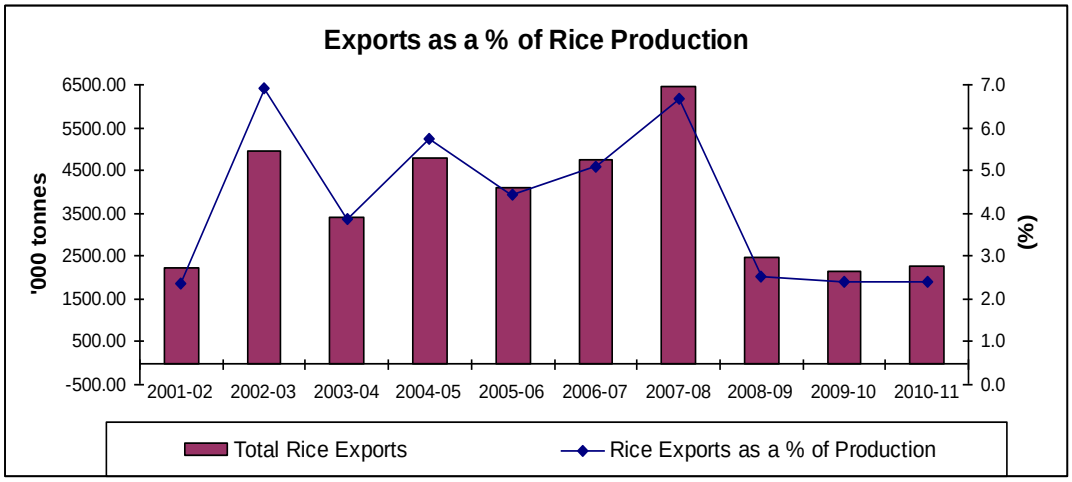
1.2 India's position in International Rice Trade

India accounts for 19.5% of global rice production, second after China which accounts for 28.7% of global rice output. Although it consumes, on average, 95% of what it produces, India is still the fifth largest exporter of rice, with approximately 8% of total riceexports in T.E 2011. India's exports as a share of total rice production rose to 7.0% in 2007-08, which was a bumper year for rice exports, and has been lingering between 2-3% since then. (Fig 2)

1.3 India's Rice Trade Policy

Until 1991, the export of common rice was subject to canalization, minimum export price (MEP) and export quotas. There were also restrictions on stocking rice beyond a limit unless an export order was in hand. Even imports of common rice were subject to quantitative restrictions occasionally when production dropped significantly. As a result of such restrictive export policy, India's trade in non-basmati rice was not significant, with India exporting a mere 25,000 to 30,000 tonnes between 1987 and 1990.

Fig 2: India's Exports as a % of Rice Production



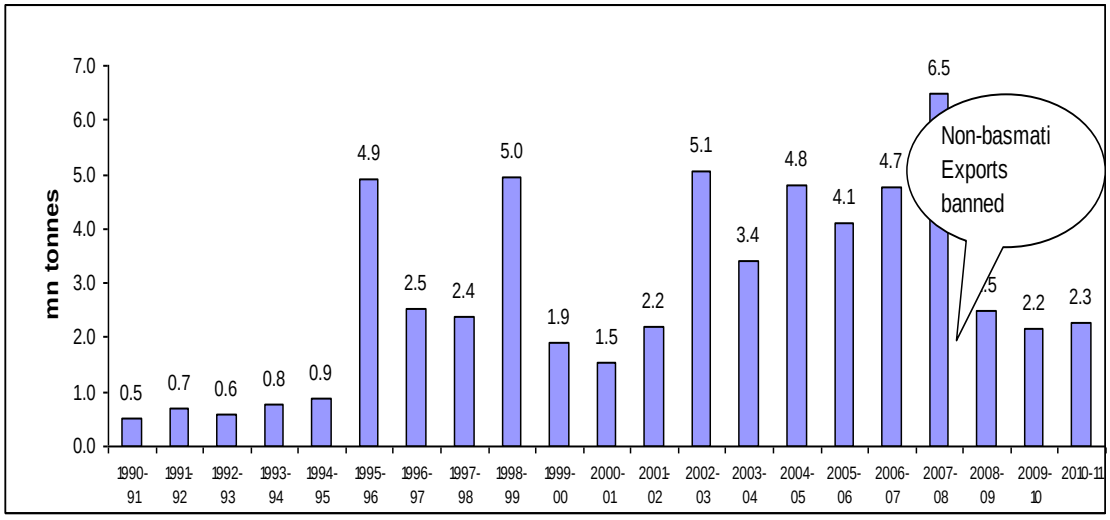
Source: Directorate of Economics & Statistics, Ministry of Agriculture

The situation changed dramatically with the devaluation of the Indian rupee in 1991 and India adopted an overall policy of economic liberalization. With the devaluation of rupee, the overvalued exchange rate was corrected, and as a result, the "implicit taxation" on exportable sectors, most notably agriculture, was reduced and finally eliminated. Agricultural exports during 1992-93 to 1996-97 increased significantly. In case of rice, first exports of basmati rice increased significantly. However, a major boost to rice exports occurred during 1995-96 when the export policy for common rice was liberalized. The removal of export bans on non-basmati rice and liberalizing the exports of basmati rice by eliminating the MEP in 1994 helped India to liberate rice exports from government controls and improve export volumes. Rice Exports jumped from 0.9 million tonnes in 1994-95 to 4.9 million tonnes in 1995-96, making India the second largest exporter of rice in 1995-96. However, it led to increase in domestic prices of rice and Government again retreated to a restrictive policy for rice exports.

The rice export policy generally follows a counter-cyclical position, i.e, when global prices are high and rising, India also filters its exports through high MEP or outright ban on common rice exports, and when global prices fall, India also opens the exports policy and reduces MEP. This is done primarily to give some stability to domestic rice prices. To an outsider, sometimes this "stop-go" nature of export policy is baffling, and is taken as against the global food security concerns, especially when exports are restricted in the wake of rising global prices. Even to rice exporters in India, this acts as an irritant as they do not get full potential price for their product in the international market as they are not counted as very reliable suppliers due to policy uncertainty. But to an insider, this is very

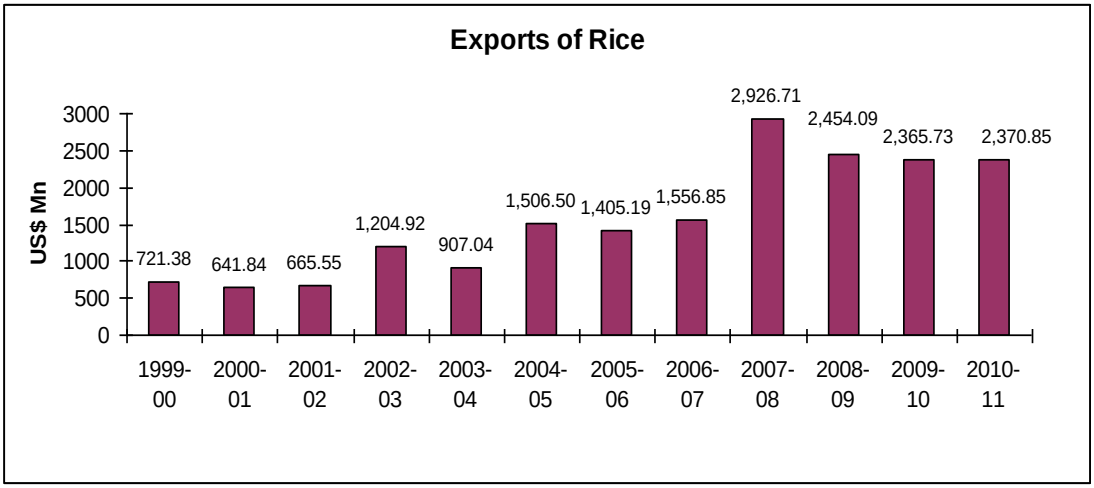
much understandable. Given that rice is the largest staple commodity in India (closely followed by wheat), and that India still has the largest number of poor in the world, this restrictive export policy is aimed at achieving food security for the large masses. If the large mass of poor Indians suffer due to abrupt spikes in rice prices, claims of global food security may remain hollow. Notwithstanding the "stop-go" nature of rice export policy, rice exports from India reached a peak of 6.5 million tonnes in 2007-08 (Fig 3), when again India banned exports of common rice. India's export of rice in value terms since 1999-00 is given in Fig 4.

Fig 3: Volume of Exports of Rice by India



Source: DGCIS

Fig 4: Value of Exports of Rice by India

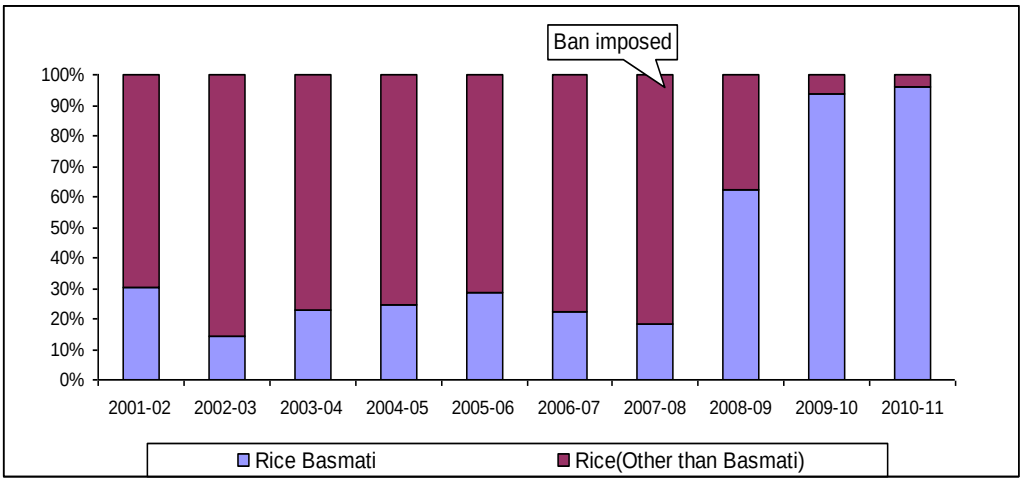


Source: Department of Commerce

The immediate reason for the ban on common rice in 2007/2008 was the accelerating global rice prices from 2007. The international price of standard Thai rice, 5 per cent broken increased from US$ 362/MT in December 2007 to US$ 1000/MT in April 2008. Though the prices showed some deceleration in May 2008, the August prices were still 128 per cent higher than the average 2006 price (World Bank). In India also the wholesale prices of rice increased with the average index showing an increase of 11.3 and 14.8 per cent in 2007-08 and 2008-09 respectively over the previous year. The ban on export of common rice was expected to increase the overall supply and contain the domestic price level of rice.

In 2008, when the ban was imposed, India was the third largest exporter of rice, after Thailand and Vietnam, constituting about 20 per cent of the total global rice export (2006-07). However, after 2008, India slipped to the fifth position in the global export market, lower than even Pakistan and USA. This was because of high MEP for basmati rice, which was fixed at US$ 900 per tonne in September, 2009, and non-basmati rice exports were practically banned since March 2008. The ban on non-basmati exports has led to the forcible rise in share of basmati exports as a ratio of total rice exports (Fig 5).

Fig 5: Share of Basmati & Non-Basmati Rice in Rice Exports



Source: Directorate of Economics & Statistics, Ministry of Agriculture

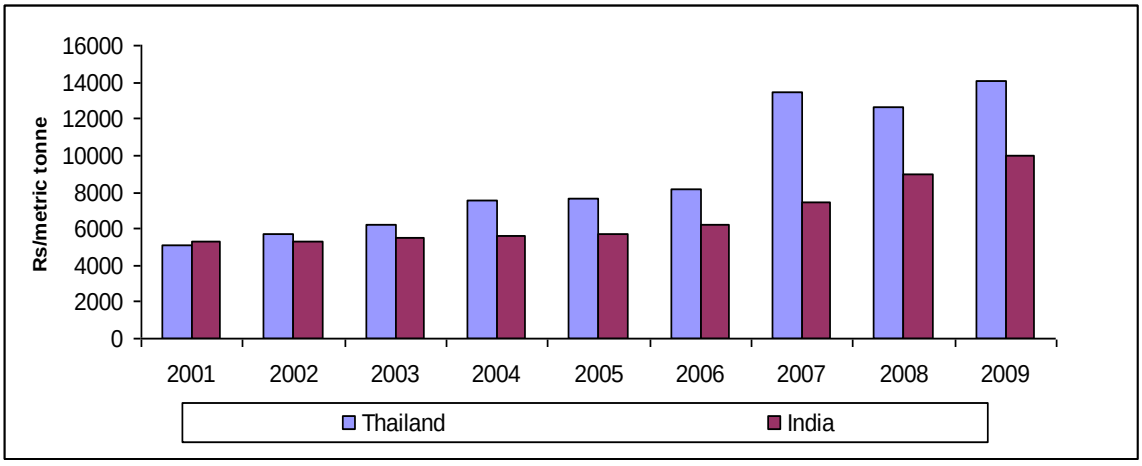
During 2010-11, India exported 2.28 million tonnes of rice valued at US$ 2370.85 million. With expectation of record rice production in 2011-12 and surplus stocks with Food Corporation of India (FCI), exports of three varieties of non-basmati rice have been allowed since February, 2010. However, exports up to 1.5 lakh tonnes of these rice varieties subjected to high MEP of $850 tonne

would be allowed. It has been estimated that rice exports in 2011-12 year are likely to be 3.0 MMT as compared to 2.2 MMT in 2010-11 (www.agriwatch.com). This "stop-go" policy on rice exports is not likely to see a major change in the near future, so long as Govt of India relies on "price policy" as a policy instrument to attain equity objectives. There is always a genuine political compulsion of holding the rice price line in the domestic market to safeguard the interests of poor, whose number could be anywhere between 300-400 million. If however, policy makers switch to using an "income policy" as a policy instrument to ensure food security to the poor, there is a possibility to keep exports of rice always open. But that seems to be still a long way in the Indian policy landscape.

1.4 India's Export Competitiveness

The domestic prices for rice in India have been lower than the international prices. The movement of international prices of rice (taking Thailand as a reference- as it is the largest exporter of rice) and MSP of comparative common variety of rice in India is given in Fig 6. The movement of the international price of rice has far outpaced that of the MSP, especially since 2008, when global prices witnessed unprecedented increase.

Fig 6: Movement of International Price and MSP of Paddy



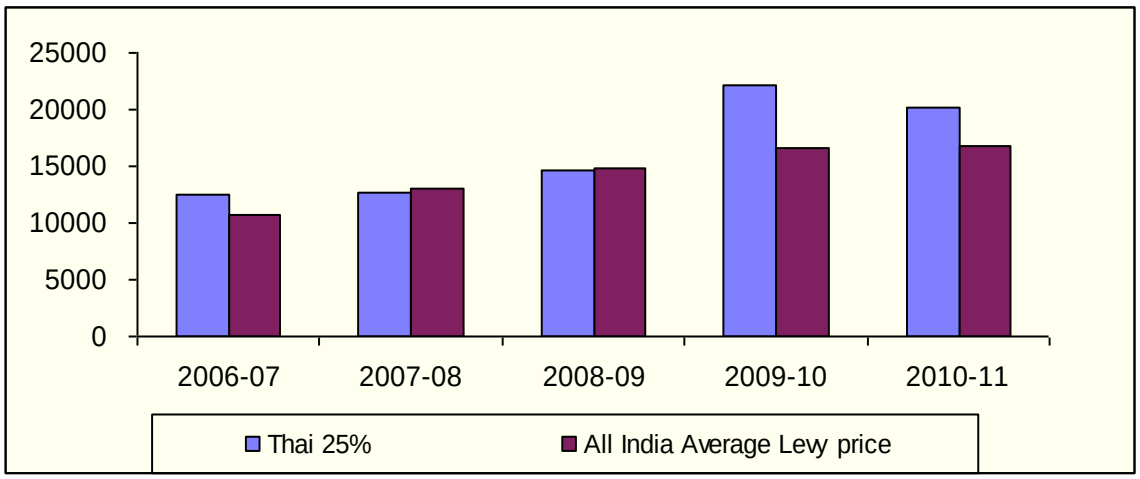
Source: FAOSTAT, DES, Ministry of Agriculture

* US$ Converted to Rupees as per the annual average exchange rate

India has had export competitiveness in rice during this period which can be seen from the Fig 7. The domestic price was ruling below the global reference price (Thai rice 25 per cent broken)

except for short periods, the difference was quite significant from 2008-09. The producers could not take advantage of the international price due to the export restrictions.

Fig 7: International and Levy Prices of Rice



Source: World Bank and Ministry of Consumer Affairs, Food & Public Distribution

Note: USD Converted to Rupees as per the annual average exchange rate

All India Average Levy Price has been calculated by weighing levy Prices in Top Five States with their shares in procurement of rice. Levy Price is imposed by FCI on FAQ (Fair Average Quality) Rice with 25% broken component.

2 India's Rice Production, Area & Yield

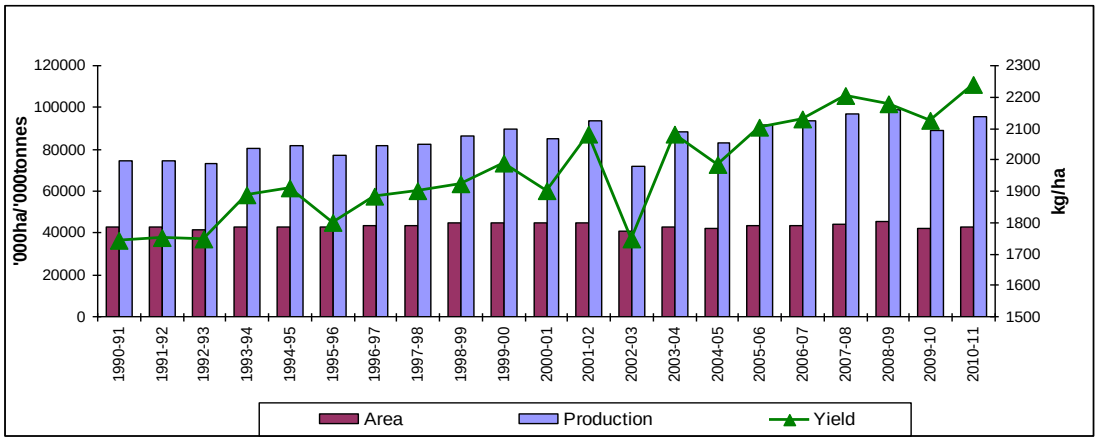
India produces about 96 million tonnes of rice in an area of 44.42 million hectaresaccounting for 23 per cent of Gross cropped area. It constitutes about 41 per cent of the total foodgrains production and 35 per cent of the foodgrains area in the country (Triennium Ending (T.E) 2010-11). It is also the staple food of about 65 per cent of the country's population. The above facts establish the importance of rice in the food security of India.

(a) Production

Production of rice during Xth Five Year Plan (2002-07) was 460 mn tonnes against a target of 428 mn tonnes over a five year period; while during the XI th Five Year Plan (2007-12), expected production is 467 mn tonnes against a target of 479.5 mn tonnes. Production increased at an average annual rate of 1.25% during 2000-01 to 2010-11 as compared to 2.09% during 1990-91 to 1999-00, indicating a significant slowdown over the two decades period. During 2000-01 to 2010-11, area

under rice reduced at 0.45% per annum (p.a) as compared to an increase of 0.7% during 1990-91 to 1999-00. However, the rice yield increased at a rate of 1.47% p.a. during 2000-01 to 2010-11 as compared to 1.36% p.a. during 1990-91 to 1999-00. Although the yield levels are still way below the global average, yet the increasing rate gives a sense of hope and potential to be exploited in the years to come. The performance in respect of all the three indicators, viz., growth in area, production and yield is shown in Fig 8.

Fig 8: Trends in Area, Production and Yield of Rice



Data Source: Directorate of Economics & Statistics, Ministry of Agriculture.

(b) Yield

Productivity enhancement is the one big challenge facing the crop, as is the case in other crops. The yield levels of paddy in India are still lower than the world average and that of major producing countries, as shown in the Table 1.

There is wide variation in the levels of rice productivity among the major producing states in the country. Punjab leads with a rice yield level of 3953 kg/ha (2010-11) followed by Andhra Pradesh (3112 kg/ha), Tamil Nadu (2943 kg/ha), and Haryana (2841 kg/ha). Uttar Pradesh, a leading state in rice production, has a yield level of only 2084 kg/ha, even lower than the national average of 2181 kg/ha. West Bengal, which has projected the highest production during 2009-10 has lower yield rate of 2532 kg/ha compared to states like Punjab, Haryana etc. The yield levels of states like Orissa (1572 kg/ha), Madhya Pradesh (725 kg/ha), Chhattisgarh (999 kg/ha), Bihar (1185 kg/ha) Assam (1458 kg/ha), Gujarat (1661 kg/ha) and Maharashtra (1448 kg/ha) are significantly below the national average, and indicate the vast potential to tap the yield gaps in the years to come.

Table 1: Country-wise Yield of Paddy in 2009

Country	Share in Area (%)	Share in Production (%)	Yield (kg/ha)
China	18.9	28.7	6582
India	26.4	19.5	3195
Indonesia	8.1	9.4	4998
Bangladesh	7.2	7.0	4203
Vietnam	4.7	5.7	5227
Thailand	6.9	4.6	2870
Philippines	2.9	2.4	3589
Brazil	1.8	1.9	4405
Japan	1.0	1.6	6522
Pakistan	1.8	1.5	3581
USA	0.8	1.5	7941
World			4329

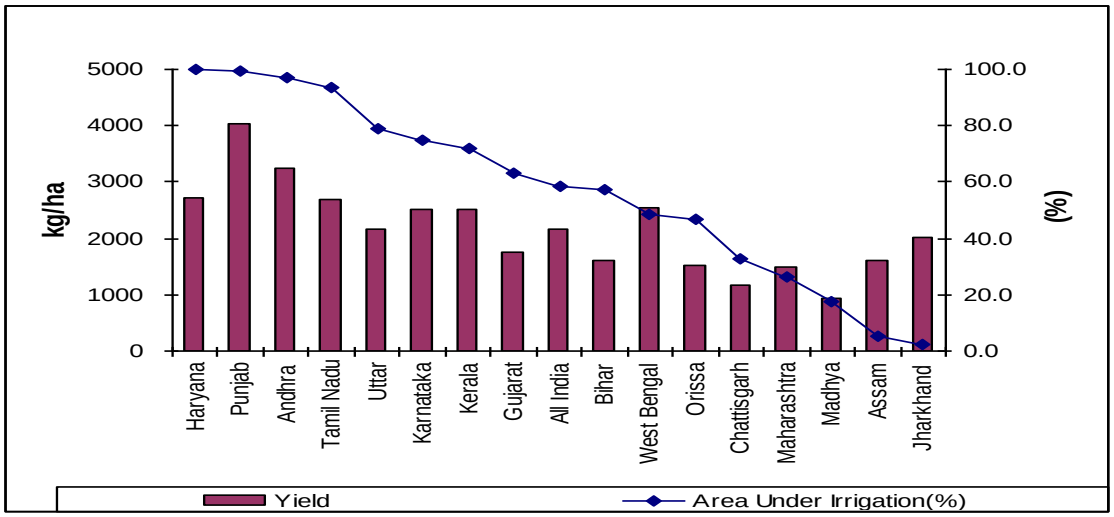
Source: Agricultural Statistics at a Glance, 2011

Inter-state variations in productivity, to a large extent, can be explained in terms of availability of assured water supply, rice being a highly water intensive crop. High productivity states like Punjab, Haryana, Andhra Pradesh and Tamil Nadu are highly irrigated with irrigation intensity in the range of 99.9 per cent (Haryana) to 93 per cent (Tamil Nadu). West Bengal and Orissa, though leading in terms of area and production have lower yield rates and also comparatively lower area under irrigation at 48.4 per cent and 46.8 per cent respectively. States with very low yield rates have low irrigation like Madhya Pradesh (17.8 per cent); Maharashtra (26.4 per cent); Assam (5.3 per cent); Chhattisgarh (32.7 per cent); Jharkhand (2.2 per cent) (Fig 9). Thus, there is immense scope for increasing the productivity by providing assured irrigation to the crop, which is presently only 56.7 per cent at all India level.

The yield advantage under hybrid varieties has been established, ranging from 10-45 per cent over corresponding high yielding inbred varieties. Despite this, only 3 per cent of the area under rice was covered under hybrid seeds in India in 2009 in contrast to China where it is about60 percent and the impact is evident by looking at the paddy yield level in China which are almost three times that of India.

The spread of the use of hybrid varieties among states has also not been even. About 80 per cent of the adoption has so far taken place in the eastern part of the country in the states of U.P (eastern), Bihar, Chhattisgarh and Jharkhand, while it has been only around 5 per cent in the southern states of Karnataka, Tamil Nadu and Andhra Pradesh and about 15 per cent in the North-West States

Fig 9: Yield & Irrigated Area (2008-09)



Data Source: Directorate of Economics & Statistics, Ministry of Agriculture

of Punjab, Haryana and Maharashtra. The popularity of hybrids in the eastern states could be attributed to the existing very low yield levels of local varieties and the significant yield increase which the hybrids provide. In West Bengal, which has the highest area under rice, the hybrids have yet to make a dent, reportedly because of the absence of the preferred variety hybrid seeds. In southern states also the area under hybrids is negligible since stickiness, which some of the varieties exhibit and the aroma of the hybrids is found to be unpopular with the food tastes of southern India. The existing deterrents in expansion of hybrids in various parts of the country need to be removed through research and commercialization of locally preferred hybrid varieties. ***Given the limited scope in expansion in area under cultivation, the focus on increasing yield levels for increase in rice production needs to be re-emphasized.***

(c) Second Green Revolution in Eastern India

Eastern India with 2-3 times more rainfall compared to the Northwest States, unexploited good quality ground water aquifers, and vast resources of social capital have relative advantage for sustainable production of rice. Eastern States account for 56% area under rice but produce only 48% of total rice production. The productivity levels in Eastern States except West Bengal are among the lowest in India, as was mentioned earlier. Out of 26.6 million ha rice area in eastern India (UP, Bihar, Jharkhand, West Bengal, Assam, Orissa and Chhattisgarh), approximately 14.3 million ha is rainfed and prone to different abiotic stresses like flooding, drought or soil salinity/sodicity. These abiotic

stresses are single most important yield limiting factor for eastern India. Rice productivity of eastern India is not only low (1.1 to 2.5 tons/ha) but also fragile.

The Central Government has been allocating money under *Rashtriya Krishi Vikas Yojana* from 2010-11 for extending green revolution to the Eastern Region of the country comprising of Bihar, Jharkhand, Eastern UP, Chhattisgarh, Orissa and West Bengal. The objective is to increase the productivity of crops, mainly rice, wheat, maize, pulses by intensive cultivation through promotion of recommended agriculture technologies, package of practices and promotion of high yielding stress tolerant hybrid rice varieties.

(d) National Food Security Mission (NFSM)

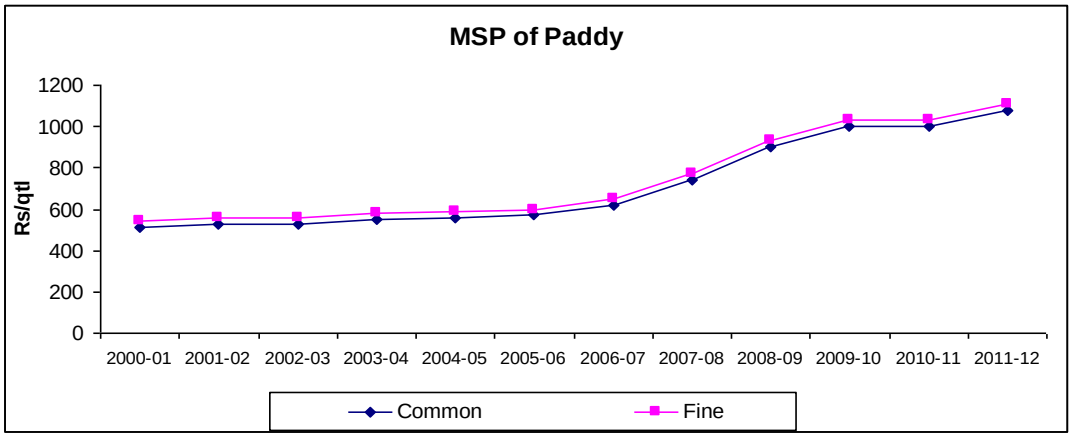
Government of India launched a Centrally Sponsored Scheme, 'National Food Security Mission' in August 2007. Its aim is to increase the production of rice by 10 million tonnes, wheat by 8 million tonnes and pulses by 2 million tonnes by the end of the Eleventh Plan (2011-12) over the base period of 2006-07. It covers 142 districts of 15 States (AP, Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Karnataka, Kerala, MP, Maharashtra, Orissa, Tamil Nadu, U.P. and West Bengal). The allocations for NFSM-Rice have been Rs 3862 million, Rs 4725 million and Rs 4065 million in 2008-09, 2009-10 and 2010-11 respectively.

3 Government Intervention in the Rice Market

Government intervenes in the foodgrain market through its price and procurement policies. At the farmer front, it sets the Minimum Support Price (MSP) to ensure remunerative returns to the farmers. This producer price policy plays a crucial role in supporting the growth in rice output by reducing the price uncertainty faced by the farmers and inducing them to adopt new technology in production. At the same time, it subsidizes the inputs to ensure the accessibility of these for the farmers in the production process. The government intervenes on the output front via its procurement, stocking and distribution policies.

MSP is viewed as a form of market intervention by the central government and as one of the supportive measures (safety nets) to the agricultural producers. Fig 10 displays the trend in MSP for common Paddy from 2000-1 to 2011-12. Government announced MSP of Rs.1080 and Rs. 1110 per quintal for common and Grade A varieties of paddy for the kharif marketing season 2011-12.

Fig 10: MSP of Paddy (Rs/qtl)

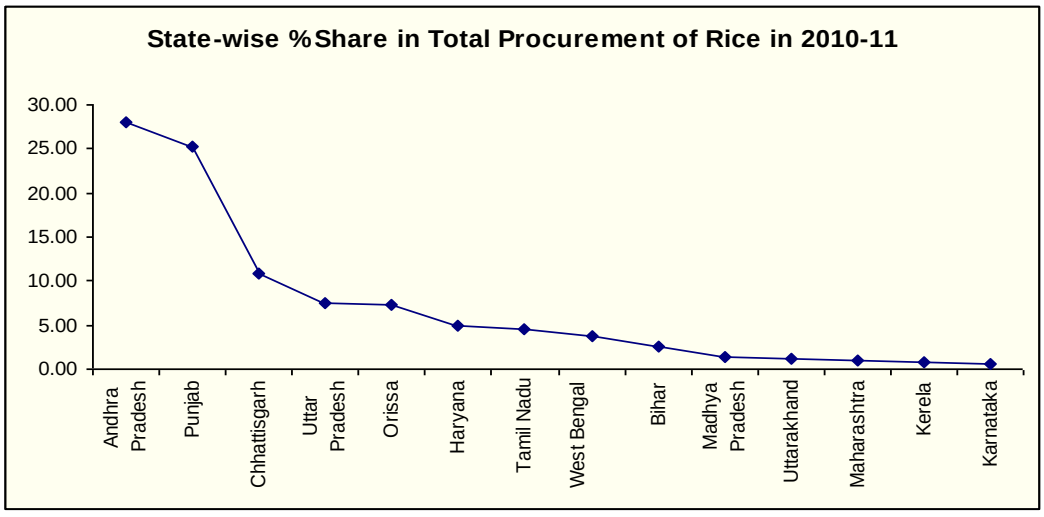


Source: Directorate of Economics & Statistics, Ministry of Agriculture

(a) Procurement

The Food Corporation of India (FCI), together with other agencies, has procured 34.18 million tonnes of rice in 2010-11 as against the procurement of 32.03 million tonnes procured during 2009-10, an increase of 6.69 per cent. Andhra Pradesh had the highest procurement of (9.61 million tonnes) which accounted for about 28.12 per cent of the total procurement. The state of Punjab had the second highest procurement (8.64 million tonnes), followed by Chhattisgarh (3.74 million tonnes), Uttar Pradesh (2.55 million tonnes), Orissa (2.46 million tonnes), Haryana (1.69 million tonnes), Tamil Nadu (1.54 million tonnes), and Bihar (0.88 million tonnes). States like Assam, West Bengal, and Jharkhand continue to have very low procurement. (Fig 11)

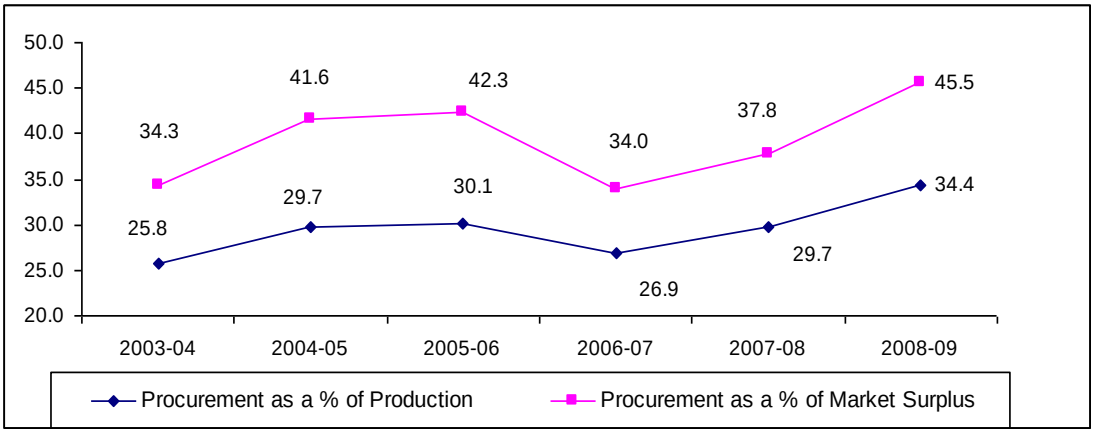
Fig 11: State-wise % share in Total Procurement of Rice (2010-11)



Source: Directorate of Economics & Statistics, Ministry of Agriculture

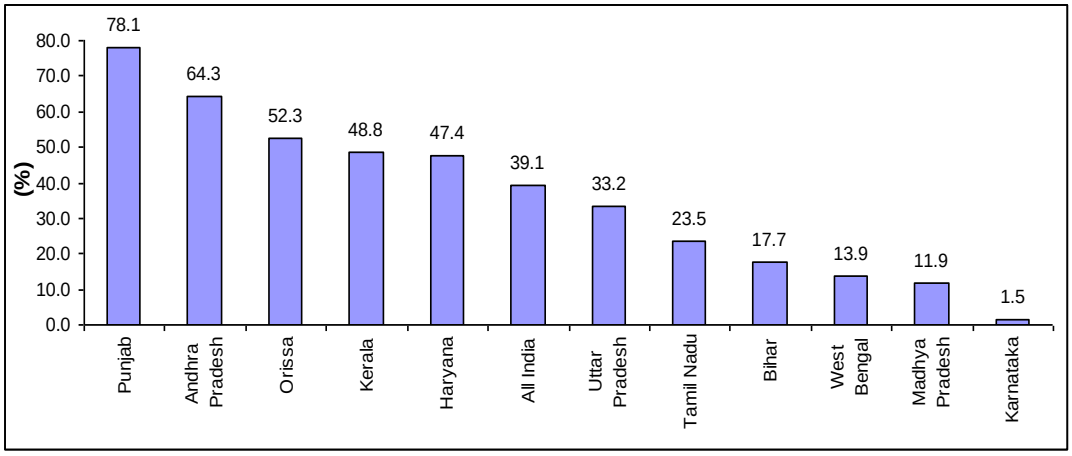
Procurement of rice by the Government captures about 30% of the total rice production and about 40% of the marketable surplus for rice. (Fig 12) This ratio varies across States. In Punjab and Andhra Pradesh, Government procures more than two thirds of the marketable surplus while it is quite low in UP (33.2%), Bihar (33.2%) and West Bengal (13.9%) (Fig 13). This is striking as West Bengal and UP are among the top producers of rice.

Fig 12: Procurement as a % of Rice Production & Market Surplus



Data Source: Directorate of Economics & Statistics, Ministry of Agriculture

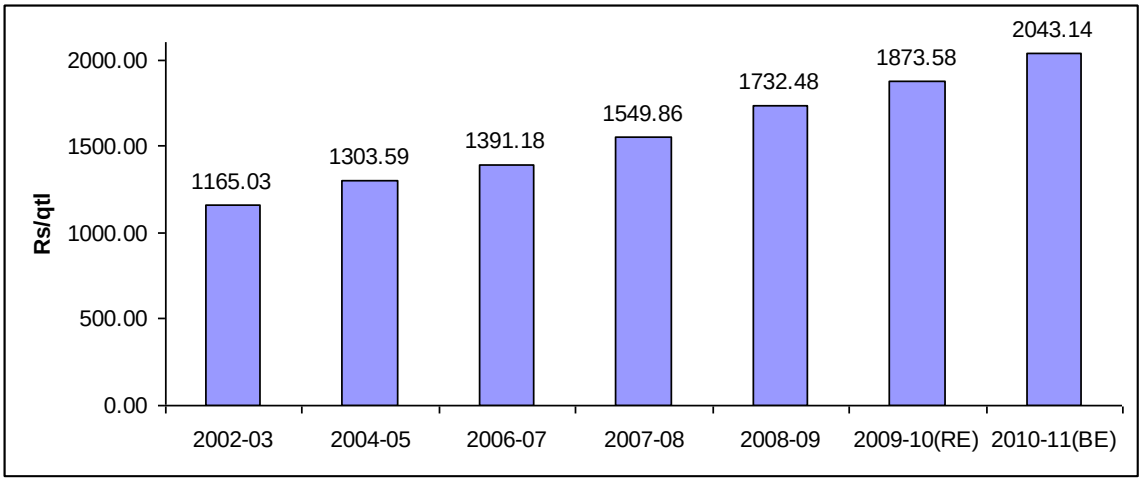
Fig 13: State- wise Procurement as a % of Market Surplus (T.E 2008-09)



Source: Agricultural Statistics at a Glance, 2010

The economic cost of procurement to FCI has been increasing over time as can be seen from Fig 14. This may be attributed to higher MSP of rice, higher procurement incidentals and increasing carrying costs of the buffer stock.

Fig 14: Economic Cost of Rice (Rs/qtl)

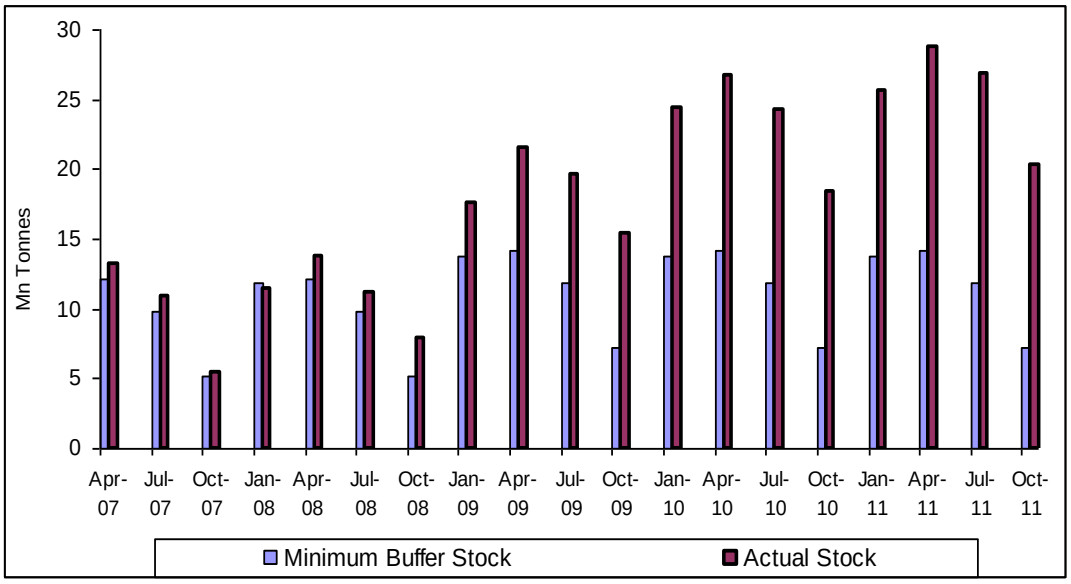


Source: Economic Survey, 2010-11

(b) Stock

Large scale procurements during the last three years, lack of adequate storage with the procurement agencies have brought to the front the issue of an optimum level of stock in the central pool. Rice stock held by the FCI and the state agencies as on 01.10.2011 was 20.36 million tonnes, while the minimum stock requirement was only 7.2 million tonnes. (Fig 15)

Fig 15: Minimum Buffer Stock Norms and Actual Stocks of Rice held by FCI and other State Agencies (Million tonnes)



Source: Foodgrains Bulletin; * Buffer stock from January 2009 includes food security reserve.

The total available storage capacity with the Government agencies to stock grains is much lower than the actual stocks. So a large proportion of stocks is kept under Cover and Plinth (CAP, with just a tarpaulin on it). Government has realized the need for more storage and about 15 million tonnes of more storage is being created under Public-Private Partnership model.

(c) Offtake for Public Distribution

Government runs a public distribution system for the poor. Offtake of foodgrains from the central pool during 2010-11 was 53 million tonnes, of which rice comprised of 29.93 million tonnes (against a procurement of 34.18 million tonnes of rice). Offtake of rice under Targeted Public Distribution System (TPDS) was 26.95 million tonnes and that under various welfare schemes of the government was 2.98 million tonnes. During 2011-12, (up to August, 2011), the offtake totaled 23.24 million tonnes.

(d) Market Levy on milled rice

Rice is also procured by the Government through compulsory levy quotas on rice millers and dealers under the Essential Commodity Act of 1955 (often at prices below market prices). This Act gives powers to control movement, stocking and distribution etc. of essential commodities on private account. The quantum of levy is determined by the state governments, according to the requirements under various welfare schemes and the price of the levy rice is fixed by the Government of India, at the beginning of the marketing season. Concerns with respect to levy are that the levy share stipulated for different states are quite high ranging between 10 per cent to 75 per cent and the generally depressed levy prices.

Considering that the quantity procured by the government through levies on milled rice, corners a majority of rice production/market surplus, the operation of market forces is severely handicapped in the rice sector.

(e) National Food Security Bill (NFSB), 2011

Under this Act, all priority households will be entitled to 7 kg of food grains (rice, wheat or nutria cereals) per person/month at a price not exceeding 3/2/1/ per Kg and General Households - 3 Kg. of food grain/ person/month at a price not exceeding 50 percent of MSP. The subsidized foodgrains are aimed to be extended in two phases to at least 75% of the country's population - 90% in rural areas and 50% in urban areas.

According to Economic Advisory Council, the foodgrain requirement for the two phases works out to 58.76 million tonnes and 63.98 million tonnes. According to the projections made by Department of Agriculture, the total projected production of wheat and rice is expected to be 187.82 million tonnes for 2011-12 and 192.02 million tonnes for 2013-14. Assuming that it will be possible to procure 30 per cent of the total production, it translates to 56.35 million tonnes in 2011-12 and 57.61 million tonnes in 2013-14. It has been estimated by the Department of Agriculture that the marketable surplus of wheat and rice in 2010-11 was about 106.5 million tonnes. The expected procurement of 53.22 million tonnes in 2010-11 works out to about 50 per cent of the marketable surplus. A larger procurement has the danger of distorting the food prices in the open markets.

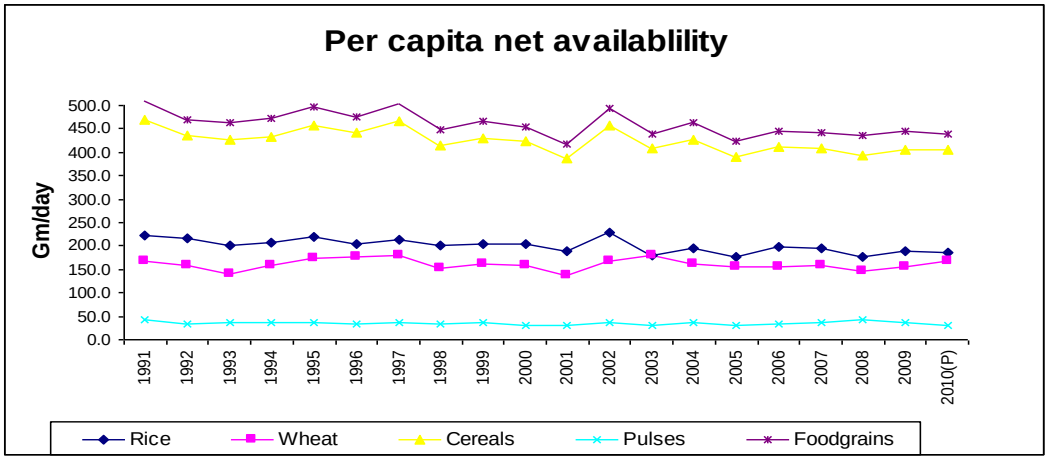
In addition to the physical foodgrain requirement, the proposed NFSB has large subsidy implications. According to the NAC projections the total subsidy will work out to Rs 71,837 crores in the first phase and Rs 79,931 crores in the final phase. With the latest increase in MSP of paddy, some experts estimate the subsidy bill to touch almost Rs 100, 000 crores (roughly US $ 20 billion). Secondly, with the current procurement and storage capacity of a little above 42.5 million tonnes, providing 68.76 million tonnes of foodgrain in the first phase and 73.98 million tonnes in the final phase implies significant scaling up of the procurement, warehousing and supply chain operations. This involves large financial outgo which has not been quantified as yet. Thirdly, since the promised entitlements are legally enforceable, procurement would need to be scaled up by large increases in the MSP or imports. Both these options imply a large fiscal burden which is difficult to quantify. Fourthly, this does not include the subsidy on supplying grain to the non entitled households at MSP based prices which are lower than the economic cost of procurement, storage and carrying this grain. Moreover there are other components like the cost of carrying the buffer stock and the increase in the economic cost over time, all of which will inflate the subsidy outgo to more than Rs 100,000 crore (US $ 20 billion).

(http://eac.gov.in/reports/rep_NFSB.pdf)

4 Demand and Supply

Since 1990, India's per capita net food grain availability has fallen by almost 8% from 472.6 gm per day to around 438.6 gram per day in 2010, while foodgrains production has risen by around 36%. (Fig 16)

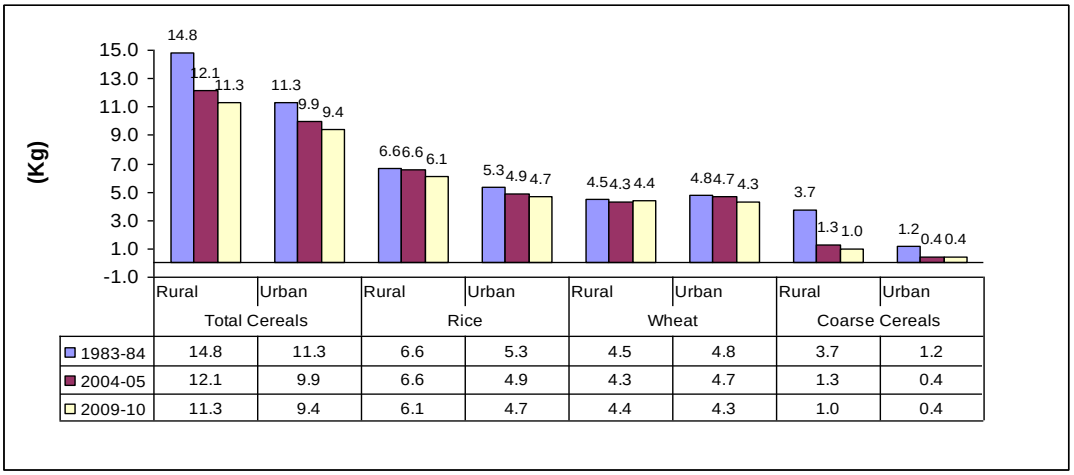
Fig 16: Per capita net availability of food grains



Data Source: Directorate of Economics & Statistics, Ministry of Agriculture

Per capita demand for cereals for direct human consumption has declined over time. Per capita monthly consumption of cereals has declined from 14.80 kg in 1983-84 to 12.11 kg in 2004-05 and further to 11.35 kg in 2009-10 in the rural areas. In the urban areas, it has declined from 11.30 kg in 1983-84 to 9.94 kg in 2004-05 and to 9.37kg. in 2009-10. The above demand trend could be attributed to shift in consumption pattern of the individuals from basic cereals to high value products as income rises. The decline in the per capita direct consumption of cereals was brought about mainly by coarse cereals, to a lesser extent by rice and marginally by wheat (in rural areas only). (Fig 17)

Fig 17: Per capita consumption of Cereals, Rice, Wheat & Coarse cereals



	Total Cereals		Rice		Wheat		Coarse Cereals	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1983-84	14.8	11.3	6.6	5.3	4.5	4.8	3.7	1.2
2004-05	12.1	9.9	6.6	4.9	4.3	4.7	1.3	0.4
2009-10	11.3	9.4	6.1	4.7	4.4	4.3	1.0	0.4

Source: NSSO

5 Way Forward

As India's food grain economy is one of the world's largest, the path India eventually takes on food grain policy is likely to have important implications for global markets for wheat and rice. Promoting competition, devoid of policy-induced distortions, will help improve resource allocation by farmers, as well as allow consumers to benefit from competitive prices of food.

Significant contribution of food-grains to the central pool is at the cost of annual negative balance in the ground water reserves for these states. According to the latest assessment of ground water situation in India (CGWB 2009-10), 75% of blocks in Punjab are overexploited, only 18% are considered safe. There is, therefore, need for water conservation and management measures in this region focusing on water saving and productivity enhancement technologies to ensure that it does not adversely affect the overall farm economies and more importantly, its contribution to the food buffer stock. As a step towards demand management of water, a gradual shift of rice, sugarcane, aquaculture and other water guzzling crops from North-Western India to Eastern States is required.

India competes with countries like Thailand, Vietnam, USA and Pakistan in the export of rice. It is evident that India's "stop-go" nature of its rice export policy has led to uncertainty in the international market regarding rice supplies from India, despite India having a comparative advantage in rice exports. While short term measures to ban/restrict export of rice is inevitable at times, keeping in mind the interests of consumers, the long term goal should be to switch to income policy to help the poor and liberating the rice exports to incentivize the farmers to expand rice production by increasing its productivity and conserving water through better water management. Only then India can emerge as a reliable supplier of rice in global markets and contribute to global food security as well as take care of its own poor people. The perceived conflict in domestic and global food security inherent in "stop-go" nature of India's rice export policy can be reduced/eliminated by gradual shift to using income policy to protect the poor at home and liberating the rice exports fully. This would expand the size of global market and reduce amplitudes and spikes in global prices, whenever there are some external shocks emanating from supply side.