

Budget TRACK

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Foreword

In addition to highlighting key issues in budget and policy tracking, this issue of Budget Track tries to draw your attention to two very important issues that are staring us in our face today—the global economic and food crisis. We also discuss how changing patterns in agricultural production due to varying climatic conditions will further impact on food security. The article from Dr. Prabhat Patnaik in the Guest Column argues that the global economic crisis would further aggravate the food crisis. It also does the important task of laying out the inadequacies in our current responses to the global economic crisis and suggests that a more “foodgrain led growth strategy” is the need of the hour than stimulus packages focused on a mere injection of liquidity that seems to be the predominant approach.

In presenting these important issues before you, we hope we will gradually build a larger consensus around the need for adequate state effort to address these critical issues.

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THE hangover of the last budget of the present UPA government is now over. Thanks to the political turmoil, that witnessed yet another spotted episode of the so called 'win' of the UPA in the 'no-confidence' motion called by the opposition, it has now given the government an opportunity to carry forward the dictates of its fiscal masters more aggressively. The promises made in the NCMP and for that matter in the budgets, no matter how scant they were in comparison to the real needs of the common people, are now pushed back in cold storage. Since the presentation of Budget on 29th February 2008, we have not heard much about budgets and budgetary provisions in the policy circles. The most prominent activities in the post budget phase have been on two fronts. At one end, there

A. BUDGET SESSION IN THE PARLIAMENT:

During the Budget session, the Parliament functioned in a very erratic manner. Out of a total 35 scheduled sittings, the Parliament could sit for just 28 times. Other than the Finance and Appropriation Bills, out of a total 29 Bills planned to be passed during the session, only 9 could be passed. In all, the Lok Sabha could work for only 77% of the total planned time. The most significant Bills passed in Lok Sabha during the session include; the Maternity Benefit (Amendment) Bill-2007, the Jawaharlal Institute of Post-Graduate Medical Education and Research, Puducherry Bill-2007, the Sugar Development Fund (Amendment) Bill-2008, the Food Safety and

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-Siba Sankar Mohanty

has been much anguish of the common people over the issue of galloping inflation in necessary commodities. In many parts of the country, common public, housewives, farmers, academicians and many progressive formations have come to protest against artificial unavailability and price rise of edible oils, cooking gas, pulses, flour, sugar, vegetables and so on. At the same time, the arrival of monsoon floods in many parts of Eastern and Central India has made thousands of farmers, and poor people struggle for survival. At the other end, the newfound emphasis of the policy makers on the issue of energy security and the debates around the controversial Indo-US nuclear deal has certainly succeeded in diverting the attention of our vocal middleclass from genuine real life issues to the peripheral ones. In this issue of budget track we shall try to analyze some such developments that encompassed the Indian economy in post Budget 2008-09.

Standards (Amendment) Bill-2008, the Prasar Bharati (Broadcasting Corporation of India) Amendment Bill-2008, the Delimitation (Amendment) Bill-2008, the Railways (Amendment) Bill-2008, the Finance Bill-2008 and the Constitution (Scheduled Tribes) Order (Amendment) Bill-2008. Another Bill containing regulation provisions in the forward contract issue was withdrawn. Unfortunately, the Right to Education Bill-2008 which was listed for introduction in Lok Sabha during the Budget Session could not be introduced. The table below presents a list of significant Bills that were scheduled for the budget session but could not be introduced or discussed.

One of the long time pending bills, the "Women's Reservation Bill", which was first introduced in Lok Sabha in 1996, aimed at providing one third

reservations for women in parliament and state legislative assemblies. The UPA government presented this Bill (108th Amendment Bill) in Rajya Sabha in May 2008 amidst strong

sections among elected women is even higher. So, in India, the discrimination is not between different groups of women but between men and women since very few women are given party

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Bills Scheduled for Passing, but Could not be Considered

- The National Jute Board Bill, 2006
- The Seeds Bill, 2004
- The Constitution (One Hundred and Sixth (Amendment) Bill, 2005
- The Drugs and Cosmetics (Amendment) Bill, 2006
- The Information Technology (Amendment) Bill, 2006
- The Sixth Schedule to the Constitution (Amendment) Bill, 2007
- The Constitution (One Hundred and Seventh Amendment) Bill, 2007 (Amendment of Articles 244 and 332)
- The Unorganised Sector Workers' Social Security Bill, 2007
- The Factories (Amendment) Bill, 2005
- The Gram Nyayalayas Bill, 2007
- The National Waterway (Kakinada-Pondicherry Stretch of Canals and the Kaluvelly Tank, Bhadrachalam-Rajahmundry Stretch of River Godavari and Wazirabad-Vijaywada Stretch of River Krishna) Bill, 2006
- The Constitution (Scheduled Tribes) (Union Territories) Order Bill

Source: www.parliamentofindia.nic.in

Bills Scheduled for Discussion, but Could not be Introduced

- The Forward Contracts (Regulation) Amendment Bill, 2008
- The Food Safety and Standards (Amendment) Bill, 2008
- The Delimitation (Amendment) Bill, 2008
- The Central Universities Laws (Amendment) Bill, 2008
- The Companies Bill, 2008
- The National Commission for Heritage Sites Bill, 2008
- The Indian Trusts (Amendment) Bill, 2008
- The Prevention of Money Laundering (Amendment) Bill, 2008
- The Compulsory Registration of Marriages Bill, 2008
- The Mines and Minerals (Development and Regulation) Amendment Bill, 2008
- The Science and Engineering Research Board (SERB) Bill, 2008
- The Right to Education Bill, 2008

opposition from the Samajwadi Party and Rastriya Janata Dal. However, it would be worthwhile to mention here that enactment of this bill could play a very important role in empowering the women and it is evident through cross country experiences. All over the world, statutory provisions enacted to ensure a certain percentage of women legislators, women belonging to all communities and social strata in poor countries like Nepal, Afghanistan, Rwanda and in developing countries like South Africa, Latin American countries etc., are now able to play a tremendous role as public representatives.

From the data presented above, it is clear that India is among the worst performers in terms of women representation. In our own country, out of total number of women MPs, 60% belong to the SC, ST, OBC and minority communities. In the state assemblies, representation of these

tickets to contest elections. Given this situation, longer number of women representatives in the Panchayati Raj Institutions and local bodies (they now occupy more than 40% of the total seats in many states) through reservation and also

Table No. 1 Women Representation in some Countries
Women Representation

	No. of Women Members out of Total	Percentage
Rwanda	39/80	48.8
Sweden	164/349	47.0
Afghanistan	67/242	27.7
Pakistan	76/338	22.5
UK	126/646	19.5
France	105/577	18.2
Nepal	57/329	17.3
USA	73/435	16.8
India	49/541	9.1

Source: Websites of respective countries

considering their positive roles, the bill should be enacted as soon possible.

B. A SNAP SHOT OF MAJOR ANNOUNCEMENTS IN POST BUDGET 2008-09 PERIOD

Of a number of announcements made by the government, we have presented below an overview of a few such developments that deserve special attention of budget and policy analysis groups working from the perspective of the common masses.

APPROVAL OF DEBT WAIVER FOR FARMERS

On 23 May 2008, the government of India got (cabinet approval of the guidelines for the implementation of the Farmers' Debt Waiver and Debt Relief Scheme, 2008. As per the guidelines, the Scheme will cover direct agricultural loans extended to 'marginal and small farmers' and 'other farmers' by Scheduled Commercial Banks, Regional Rural Banks, Cooperative Credit Institutions (including Urban Cooperative Banks) and Local Area Banks. With this approval, the Scheme shall come into force with immediate effect.

As per the norms, a farmer cultivating (as owner or tenant or share cropper) agricultural land upto 1 hectare (2.5 acres), between 1 hectare and up to 2 hectares (5 acres) and more than 2 hectares (more than 5 acres) are considered as marginal, small and other farmers respectively.

The Scheme shall not apply to any loan disbursed by a lending institution prior to March 31, 1997.

In the case of a small or marginal farmer, the entire 'eligible amount' shall be waived. In the case of 'other farmers', there will be a one time settlement (OTS) Scheme under which the farmer will be given a rebate of 25% of the 'eligible amount' subject to the condition that the farmer pays the balance of 75% of the 'eligible amount'.

As per the information by RBI/NABARD, about 3,69,00,000 small/marginal farmer accounts and about 59,75,000 'other farmer' accounts with an overdue amount of about Rs.60,416 crore and about Rs.31,839 crore respectively are to be covered under the Scheme. The Central Government outlay towards the scheme has been estimated at around Rs.60, 416 crore for small and marginal farmers and about Rs.7,960 crore for 'other farmers'.

In addition to the above, with regard to the 237 districts falling under DPAP or DDP or PM's Special Relief Package, OTS relief will be 25% of the overdue amount or Rs.20,000, whichever is higher.

This will enable graded relief to 'other farmers' as shown below:

Amount Overdue of overdue Up to	Relief (Rs.) Up to	Relief as (Rs.) %
20,000	20,000	100.00
30,000	20,000	66.66
40,000	20,000	50.00
60,000	20,000	33.00
70,000	20,000	28.60
80,000	20,000	25.00
1,00,000	25,000	25.00

Source: Press Information Bureau

The estimate of the additional cost of the more liberal package to 'other farmers' in the 237 districts will be of the order of Rs. 3,304 crore.

ARWSP MODIFIED

On 31st July 2008, the Union Cabinet approved the proposals for modification of Accelerated Rural Water Supply Programme (ARWSP), requiring rural drinking water supply projects to be implemented with emphasis on sustainability of the projects, both in terms of quality and quantity. Government of India will support all sustainability components with full assistance (100% assistance) to the States. The principles of Swajaldhara programme will also be encouraged with greater flexibility for the State Governments and communities participating in the community-led water supply programmes.

The Cabinet also approved the proposal for entering into MoUs with the State Governments to ensure sustainability as well as full participation of the Panchayati Raj Institutions in the operation and maintenance of water supply projects.

AAM ADMI BIMA YOJANA

The 'Aam Admi Bima Yojana' (AABY) was launched on 2 October, 2007 to provide death and disability cover for rural landless households in the country. The said scheme is being implemented through the Life Insurance Corporation of India (LIC).

On 31 July 2008, the Union Cabinet gave its approval to release an additional amount of Rs. 1000/- crore to augment the 'Aam Admi Bima Yojana' Premium Fund maintained with LIC. This was to meet the liability of the Central Government towards its share of premium payment for an additional one crore rural landless households under AABY by September 30, 2009.

However, the scheme is only for those states and UTs that agree to participate in the scheme.

WORKMEN'S COMPENSATION ACT, 1923 AMENDED

On 8 August 2008, an attempt was made towards gender sensitization of the erstwhile Workmen's Compensation Act 1923. The Workmen's Compensation (Amendment) Bill, 2008 was approved by the Cabinet for introduction in the parliament. The Bill will make a change in the earlier 1923 Act by substituting the term 'employee' for the term 'workmen'. The title of the new Act (if passed) will be Employees Compensation Act. In addition to the symbolic changes for making it gender neutral, there are proposals for removing several restrictive clauses in order to include all classes of workers and for enabling the Central Government to suitably change the wage ceiling and other provisions.

SIXTH PAY COMMISSION RECOMMENDATIONS TO BE IMPLEMENTED

On 14 August 2008, the recommendations of the Sixth Pay Commission got approval for implementation. The financial implications of the implementation of the recommendations of the Sixth Central Pay Commission during 2008-09 as modified by the Cabinet will be around Rs. 15,700 crore on the Central Budget and Rs. 6,400 crore on the Railway Budget.

C. INFLATION AND PRICE RISE

The present rise in prices of basic commodities is unprecedented. In India, inflation based on the wholesale price index (WPI) increased from 7.7% at end-March 2008 to 11.9% by 12 July 2008. It is recognized in the official circles that such a rise has been largely led by a global rise in oil and food prices accompanied by a strong domestic demand situation. The table below provides a brief comparison of the situation across different countries of the world.

In India, the rural population has been worst affected by inflation. In case of agricultural workers and rural labourers, the rate of growth in general consumer price index has been around 9% during May and June 2008. It needs to be noted here that price inflation in all the four indices of consumer price has been led by the rise in the prices of food group commodities. In case of agricultural labourers, it has increased from a modest 1.6% per annum in March 2004 to 10% in May 2008. For rural labourers, it has increased from around 1.9% to 10% during the same period.

Unfortunately, the Indian policymakers have till now not been able to understand the character of inflation in India. Instead of viewing the issue from a clear governance angle, the government is considering the present price rise as a monetary

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"price inflation in all the four indices of consumer price has been led by the rise in the prices of food group commodities. "

Table No. 3 Global Price Rise during 2007 and 2008

(Per cent)

Country/ Region	CPI Inflation(y-o-y) June 2007	WPI Inflation(y-o-y) June 2008	June 2007	June 2008
Developed Economies				
Australia	2.4	4.2	2.3	4.7
Canada	2.2	3.1	2.2	2.4
Euro area	1.9	4	2.3	7.1
Japan	0.0	1.3	1.8	4.7
UK	2.4	3.8	2.5	10
US	2.7	5	3.3	9.2
Developing Economies				
Brazil	3.7	6.1	3.7	15.4
India	6.6	7.8	4.4	11.9
China	4.4	7.1	2.5	8.8
Indonesia	5.8	11	13.4	25.5
Israel	-0.7	4.8	1.4	13.2
Korea	2.5	5.5	2.7	11.6
Philippines	2.3	11.4	1.5	3.7
Russia	7.8	15.1	2.5	4.5
South Africa	6.9	11.7	13.2	16.4
Thailand	1.9	8.9	1.8	18.6

Note: For India, data on CPI inflation pertain to CPI for Industrial Workers

Source: International Monetary Fund, websites of respective central banks and The Economist as Cited by RBI

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“Instead of viewing the issue from a clear governance angle, the government is considering the present price rise as a monetary phenomena resulting from the availability of money in circulation in the economy.”

“However, at the current juncture, the most disabling factor in this front is the existing Fiscal Responsibility and Budget Management Act (FRBMA) that needs to be abolished at the earliest in the interests of the common masses”

phenomena resulting from the availability of money in circulation in the economy. Over the last four years of UPA rule the most favoured instrument for trying to control inflation was monetary intervention. However, in India, monetary interventions through RBI have proved

future trading market, a curb on hoarders, special crisis mitigation efforts like import of foodgrains and a restriction on exports, all have contributed in controlling it in the short run. Still, the Finance Minister has not yet realized the magnitude of the problem. His orthodox attitude

Table No. 4: Consumer Price Indices in India during the UPA Rule

CPI Measure	Weight	March2004	March2005	March2006	March2007	March2008	May2008	June2008
CPI-IW (Base: 2001=100)#								
General	100	3.5	4.2	4.9	6.7	7.9	7.8	-
Food Group	46.2	3.1	1.6	4.9	12.2	9.3	10.7	-
CPI-UNME (Base: 1984-85=100)								
General	100	3.4	4	5	7.6	6	6.8	-
Food Group	47.1	3	2.2	5.3	10.9	7.8	9.5	-
CPI-AL (Base: 1986-87=100)								
General	100	2.5	2.4	5.3	9.5	7.9	9.1	8.8
Food Group	69.2	1.6	2.2	5.5	11.8	8.5	10	9.6
CPI-RL (Base: 1986-87=100)								
General	100	2.5	2.4	5.3	9.2	7.6	8.8	8.7
Food Group	66.8	1.9	1.9	5.8	11.5	8.2	10	9.6
WPI Inflation (End of period)		4.6	5.1	4.1	5.9	7.7	8.8	11.9
GDP Deflator based Inflation @		3.7	4.2	4.9	5.5	4.2	—	—

Source: RBI

to be ineffective, given the bad fiscal governance witnessed in recent years. Table No. 5 makes the issue more clear. Commonsensical logic suggests that the capacity of an agency to control economic fluctuations is largely determined by the size of that agency in the overall economy. Owing to self-imposed restrictions like FRBM, the size of the government sector (centre and the states) in the economy has been on a decline from around 28% to less than 27% between 2003-04 and 2005-06 (this is the latest information available for actual expenditure). Instead of relying too much on monetary interventions, the government should have gone for certain fiscal tools like tax and public expenditure on subsidies that could have been more effective at this juncture. The trend of certain indicators of monetary intervention and inflation in India suggests that there is hardly any link between the two in our country. Over the last four years, the Finance Minister has made monetary interventions upto 30 times (six times by increasing the Reserve Repo Rate during 2004-05-06, nine times by increasing the Repo Rate during 2005-06-07-08 and fifteen times by increasing the Cash Reserve Ratio during 2004-06-07-08). However, except for a few occasions in all cases, government intervention on monetary front failed. Even in those few occasions when inflation rate declined from the previous reference periods, it was because of multiple factors such as tax interventions, dictating the upper ceiling price for Cement and steel in 2004, a few regulations in the speculation activities in the

towards the crisis prevented him from going beyond the RBI as a solution, more so in a country like India. As a result, common people who spend major part of their income on food and other essential commodities are forced to consume less in order to face this turbulent time of galloping inflation at a level more than 10%. To our understanding, the only way the government can fight inflation effectively is to increase its stake in the economy in the short run and to make substantial efforts to reduce economic inequality in the economy in the long run. All these can be a part of a 'Progressive Price Stabilisation Policy' which is currently not there in India. The government can effectively do so through suitable fiscal mechanisms like progressive taxation policy and public expenditure policy as part of a broader 'price policy'. However, at the current juncture, the most disabling factor in this front is the existing Fiscal Responsibility and Budget Management Act (FRBMA) that needs to be abolished at the earliest in the interests of the common masses.

(D) INTENSIFICATION OF AGRARIAN CRISIS

The Economic Advisory Council (EAC) to the Prime Minister recently released a report titled 'Economic Outlook 2008-09' highlighting major projections on macroeconomic indicators. In contrast to the tall claims made about the economic situation in the country as projected by the government on several occasions, this

Table No. 5 : Effectiveness of Key Inflation Control tools adopted in Recent Years

Date of Reference	Reverse Repo Rate	Repo Rate	Cash Reserve Ratio	WPI Inflation
31-Mar-04	4.5	6	4.5	4.6
18-Sep-04	4.5	6	4.75(+0.25)	7.9
2-Oct-04	4.5	6	5(+0.25)	7.1
27-Oct-04	4.75 (+0.25)	6	5	7.4
29-Apr-05	5.00 (+0.25)	6	5	6
26-Oct-05	5.25 (+0.25)	6.25(+0.25)	5	4.5
24-Jan-06	5.50 (+0.25)	6.5(+0.25)	5	4.2
9-Jun-06	5.75 (+0.25)	6.75(+0.25)	5	4.9
25-Jul-06	6.00 (+0.25)	7(+0.25)	5	4.7
31-Oct-06	6	7.25(+0.25)	5	5.4
23-Dec-06	6	7.25	5.25(+0.25)	5.8
6-Jan-07	6	7.25	5.5(+0.25)	6.4
31-Jan-07	6	7.5(+0.25)	5.5	6.7
17-Feb-07	6	7.5	5.75(+0.25)	6
3-Mar-07	6	7.5	6(+0.25)	6.5
31-Mar-07	6	7.75(+0.25)	6	5.9
14-Apr-07	6	7.75	6.25(+0.25)	6.3
28-Apr-07	6	7.75	6.5(+0.25)	6
4-Aug-07	6	7.75	7(+0.50)	4.4
10-Nov-07	6	7.75	7.5(+0.50)	3.2
26-Apr-08	6	7.75	7.75(+0.25)	8.3
May 10,2008	6	7.75	8(+0.25)	8.6
May 24,2008	6	7.75	8.25(+0.25)	8.2
12-Jun-08	6	8(+0.25)	8.25	11.1
25-Jun-08	6	8.5(+0.50)	8.25	11.6
5-Jul-08	6	8.5	8.5(+0.25)	11.9
19-Jul-08	6	8.5	8.75(+0.25)	—

Source: Reserve Bank of India

report expects a slowdown in almost all sectors in 2008-09. The Indian economy that grew by around 8.8% per annum during 2003-2007 is expected to grow by 7.7% in 2008-09. Although, EAC asserts such a slowdown to be modest, there are certain factors, especially the projections related to the agricultural sector, which cause severe concern.

The agricultural sector is expected to grow by only 2% in 2008-09 compared to 4.5% in 2007-08. It should be remembered here that the Eleventh Five Year Plan has targeted for 4% annual growth (during 2007-2012) of the farm sector as essential to meet the socio-economic objectives of reducing poverty and creating adequate income incentives for sustainable agriculture in India. Unfortunately, in the second year itself, the expected growth rate has halved from the targeted one.

The major challenges confronting the agriculture sector, as cited by the EAC are slowdown in

fertilizer consumption, irrigation, and energy use at the farm level and technological stagnation, deterioration of terms of trade for agriculture, shift from high value crops to low value, less risky and less input demanding crops and a decline in both public and private investment.

The farm sector that provides direct employment to half of the country's workforce has been the most neglected sector as far as investment and capacity creation is concerned. Although the latest Economic Survey shows an increase in the overall investment in the sector as a proportion of agricultural GDP in recent years, the sector has been continuously neglected by the government for the last two decades. Again, on methodological grounds, it will erroneous to have a say on investment in a sector as a proportion of its exclusive contribution to GDP. As per the nine sector classification of the economic activities, agriculture still contributes the largest proportion of GDP (18.8%) followed by trade,

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“The condition of the farmers has deteriorated to such a level that, as per the National Crime Records Bureau, in the past eleven years (1995-2006), 190753 farmers in different parts of the country have committed suicide”

hotel and restaurants (16.4%) and manufacturing (15.9%). Unfortunately, the public investment in agriculture is abysmally low compared to the contribution of the sector to the overall GDP and its contribution in providing gainful employment in the economy. In the year 2006, less than 8% of the total public investment was on agriculture and allied activities. On a different note, a significant proportion of total public investment is currently concentrated in electricity gas and water supply, which is the most privatized sector and contributes the least (only around 2%) to the overall GDP.

the farmers has deteriorated to such a level that, as per the National Crime Records Bureau, in the past eleven years (1995-2006), 190753 farmers in different parts of the country have committed suicide. Unfortunately, instead of coming forward to support the farmers with increased expenditure and more capacity creation in the sector, the government is waiting for the private sector to invest in agricultural infrastructure. Such apathy towards agriculture has resulted in increased landlessness among the masses and accumulation of land in a few hands. The projections of EAC, in the present context, are nothing but the

Table No. 6 : Contribution of Different Sectors in GDP and Composition of Public Investment in these sectors

Economic Sectors	Share of the specific sector in GDP	Composition of Public Investment in Specific Sectors
Agriculture, Forestry & Fishing	18.8	7.9
Mining & Quarrying	2.9	7.7
Manufacturing	15.9	9.8
Elect. Gas & Water Supply	2	22.1
Construction	8.1	2.7
Trade, Hotels & Restaurants	16.4	-0.6
Transport, Storage & Communication	8.5	10.3
Financing Insurance	13.8	2.6
Community, Social & Personal Services	13.7	37.7
Total	100	100

Note: Information pertains to year 2005-06

Source: Calculated by the author from National Accounts Statistics 2008

The recent years have seen an intensification of crisis in the countryside. As mentioned in the recent report on Indian Economic Outlook-2008-09 by EAC, there has been a shift in the cropping pattern from high value crops to low risk crops in recent times. While this may be considered as a positive development as far as food security in the country is concerned, one should understand the genesis of such a shift in the cropping pattern. Initially with the advent of economic reforms and neoliberal policies, a shift in the cropping pattern was noticed from essential food grain crops to marketable commercial crops. Such a shift has not only led to an increased inequality in the rural asset-holding pattern, it has also led to an increased indebtedness among the farmers. Over time such a shift has reversed again; not because of people rejecting ideas in the neoliberal paradigm, but because of increased distress in the rural economy. The increasing government apathy to the sector, vulnerability of the farmers to market fluctuations and increasing indebtedness must have resulted in such a shift. The condition of

projections of an outcome of continuous government apathy towards the agricultural sector over the last two decades.

(E) A REVIEW ON THE REAL ECONOMY IN POST BUDGET 2008-09 PERIOD

A review of the real economy during the post Budget 2008-09 period shows the symptoms of a retarding economy. Probably shining India is poised for a break now. In the following table, we have presented a brief analysis of selected indicators of the three major classifications of the Indian economy, namely, agriculture, industry and services.

In agriculture, although, there is a marginal improvement in the area under kharif crops, it is still way behind the normal area available for cultivation of such crops. As far as management of food stocks is concerned, although the recent procurement shows significant improvement over the corresponding period last year, one needs to

study the issue of off-take in different programmes. Over the entire UPA regime, the off-take of food grains has shown a declining trend.

As far as industry is concerned, except for consumer durables, in all other sectors, there is a retarding trend in the post budget 2008-09 period. In services sector also, except for railways,

tourism and export cargo through civil aviation in all other subsectors there is a declining trend.

In all, the economy is in an impending mood, contrary to the claims made by the Prime Minister and the Finance Minister about the robust economic performance.

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Table No. 7 : Progress of Area under Kharif Crops 2008-09 (in million Ha)

Crop	Normal Area	Area Coverage		Variation
		2007	2008	
		(As on July 18, 2008)		Variation
Rice	39.1	12.1	14.9	2.8
Coarse Cereals	22.7	9.6	9.9	0.3
Total Pulses	10.9	4.2	4.2	0.0
Total Oilseeds	15.9	9.9	10.1	0.2
of which:				
Groundnut	5.4	3.0	2.7	-0.3
Soyabean	7.3	5.5	6.5	1.0
Sugarcane	4.1	5.3	4.3	-1.0
Cotton	8.4	7.0	5.8	-1.2
All Crops	101.9	48.8	50.1	1.3

Source: Ministry of Agriculture, Government of India.

Table No. 8 Management of Food Stocks (in million tones)

Financial Year	Opening Stock of Foodgrains			Procurement of Foodgrains					Foodgrains Offtake			Closing Stock
	Rice	Wheat	Total	Rice	Wheat	Total	PDS	OWS	OMS Domestic	Exports	Total	
2004-05	13.1	6.9	20.7	24.0	16.8	40.8	29.7	10.6	0.2	1.0	41.5	18.0
2005-06	13.3	4.1	18.0	26.7	14.8	41.5	31.4	9.8	1.1	0.0	42.3	16.6
2006-07	13.7	2.0	16.6	26.3	9.2	35.5	31.6	5.1	0.0	0.0	36.8	17.9
2007-08	13.2	4.7	17.9	26.4	11.1	37.5	33.5	3.9	0.0	0.0	37.4	19.8
2008-09 (up to July 18, 2008)	13.8	5.8 (4.2)	19.8 (11.1)	4.7 (15.3)	22.5	27.3

PDS: Public Distribution System. OWS: Other Welfare Schemes. OMS: Open Market Sales. .. : Not Available.

Note: 1. Closing stock figures may differ from those arrived at by adding the opening stocks and procurement and deducting off-take, as stocks include coarse grains also.

2. Figures in parentheses indicate procurement of foodgrains during the corresponding period of 2007-08.

3. Total minimum stocks are to be maintained, as on April 1, July 1, October 1, and January 1, by public agencies under the 'new buffer stocking policy' with effect from March 29, 2005.

Source: Ministry of Consumer Affairs, Food and Public Distribution, Government of India.

Table No. 9 Growth in Industrial Production

Sectoral	Weight in the Index of Industrial Production	Growth Rate (April-May)		
		2007-08	2008-09	Trend
Mining	10.5	3.2	5.6	Prospering
Manufacturing	79.4	11.8	5.3	Retarding
Electricity	10.2	9.0	1.7	Retarding
Use-Based				
Basic Goods	35.6	9.5	3.5	Retarding
Capital Goods	9.3	16.9	6.5	Retarding
Intermediate Goods	26.5	9.7	2.3	Retarding
Consumer Goods (a+b)	28.7	11.6	7.9	Retarding
a) Consumer Durables	5.4	0.8	4.8	Prospering
b) Consumer Non-durables	23.3	15.4	8.8	Retarding
General	100.0	10.9	5.0	Retarding

Source: CSO

Table No. 10 Growth in Service Sector Activities

Sub-sector	Growth in Selected Service Sector Activities during April-May		
	2007-08	2008-09	Trend
1. Tourist arrivals	8.2 *	10.2 *	Prosperous
2. Commercial vehicles production #	10.6	4.6	Retarding
3. Railway revenue earning freight traffic	6.2	10.2	Prosperous
4. New cell phone connections	50.4	42.9	Retarding
5. Cargo handled at major ports	17.7	10.3	Retarding
6. Civil aviation			
a) Export cargo handled	1.6	7.6	Prosperous
b) Import cargo handled	21.7	9.3	Retarding
c) Passengers handled at international terminals	13.1	9.0	Retarding
d) Passengers handled at domestic terminals	24.4	5.9	Retarding
7. Cement **	7.8	5.4	Retarding
8. Steel **	5.5	4.5	Retarding
9. Aggregate deposits of SCBs	4.1 @	3.5 @	Retarding
10. Non-food credit of SCBs	-0.7 @	1.7 @	Retarding

* : April-June #: Leading Indicator for transportation. **: Leading indicators for construction.

@ : Up to July 4. SCBs: Scheduled Commercial Banks.

Source: Reserve Bank of India

INTRODUCTION:

Since the early 1990 the claim from various nation states across the globe has been that of steady economic development. Without getting into an examination of this claim here, it is quite obvious that a significant proportion of the world's population continues to suffer from hunger and malnutrition. The Food and Agriculture Organization (FAO) of the United Nations, 2006 figure estimates that 823 million people in developing countries are undernourished, i.e. an increment of over 23 million from 1996. The declaration of the Millennium Development Goals (MDGs) in 2000, recognized hunger and food insecurity as the primary reason for misery of the poor and set out to halve the proportion of extremely poor and hungry people in the world by 2015. Even

There is every possibility that the number of people under the net of food insecurity will increase. In India, since the poorest quartile of consumer spends about three-fourths of their income on food, increased prices of foodgrains will lead to serious food insecurity problems. Hence, food security continues to be a major challenge for India particularly for more than 80% of its population who are economically underprivileged and living on an income of less than \$ 2 a day.

MEANING OF FOOD SECURITY:

Basically, food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food. This helps them in meeting their dietary needs and food preferences for an active and healthy life. In a

Food Security in India- A Critical Issue

-Nilachala Acharya

though there is a decline in the proportion of undernourished people to the extent of 17% in the developing countries during 1996-06, (as total population grew faster than the undernourished population) there are evidences that still majority of population is undernourished and vulnerable to food insecurity. Even in the case of India, despite sustained economic growth and centrally targeted policy efforts since mid-nineties, the country has made comparatively little progress in reducing malnutrition over the last decade as against its other counterparts with comparable socio-economic indicators. The United Nations International Children's Emergency Fund (UNICEF) attributes 50% of all childhood deaths in India to malnutrition. Hunger tends to be chronic rather than acute, affecting women, adolescent girls, children under five, Scheduled Tribe and Scheduled Caste communities and people living in remote rural areas in particular.

In such a given scenario, recent global and national rise in food prices have a severe impact on the poor and the marginalized communities in terms of accessing foodgrains. The likely impact on India's poor due to the recent rise in food prices make it unlikely that India will reach the first MDG even using the official poverty line.

wider sense it means adequate availability, affordability and accessibility of food grains. Food security thus means; a) adequate availability of food in the country to meet the domestic needs; b) efficient means of foodgrain distribution; and c) adequate purchasing power of the people to access foodgrains.

All the above three essential features of food security with a perfect competitive market mechanism, underlie the whole process of food security in India. Food security does not mean godowns overflowing with foodgrains procured by the government and a large quantities rotting inside the godowns. It actually means access to foodgrains by all sections of the society having sufficient purchasing power.

On the other hand, food insecurity arises, if there is a decline in productivity and production of foodgrains; growth of population more than the growth of foodgrain production; decline in the crop land under foodgrain cultivation and inadequate income of the people to access foodgrains. Before analyzing the reasons for food insecurity, it is imperative to have a quick glance over the severity of the issue of food insecurity in India.

Food Security in India-A Critical Issue

“For every service there exists class gradients, but gradients get steeper as the tests get more complicated”

“One in every three institutional deliveries for the poorest wealth quintile takes place in private facilities”

EXTENT OF FOOD INSECURITY IN INDIA:

The present situation of food insecurity in India is acute, as is reflected by most of its socio-economic indicators. Data given in Table-1 below shows the severity of food insecurity in India.

Table-1: Extent and Magnitude of Food Insecurity in India

Indicators	Sources and reference years	Figure
Estimated Population	In Millions 2004-5, NSS, 61 st Round, 2004-5	1092
Annual Growth rate of Population	In Percentage-As per Census-2001	1.8
Annual Growth rate of Foodgrain Production	In percentage-1989-0 to 2006-7, Economic Survey, 2007-8, GoI (Government of India).	1.18
Rural House Hold reported food inadequacy	In Percentage -as per 2004-5, NSS	2.4
Person Below Poverty line in rural areas (Rs. 12 per person per day)	In Percentage-2004-5 based on URP consumption data, NSSO, 61 st Round, 2004-5	28.3
Population below \$ 1 a day	In percentage, India Development Report, 2008, Oxford, IGIDR, Mumbai	35.3
Population below \$ 2 a day	In percentage, India Development Report, 2008, Oxford, IGIDR, Mumbai	80.6
Life Expectancy at Birth	2001-6, Economic Survey, 2007-8, GoI	63.2
Infant Mortality Rate -Urban	NFHS-III, 2005-6, GoI	41.5
Infant Mortality Rate -Rural	NFHS-III, 2005-6, GoI	62.2
Infant Mortality Rate-Total	NFHS-III, 2005-6, GoI	57.0
Infant Mortality Rate -STs	NFHS-III, 2005-6, GoI	62.1
Infant Mortality Rate -SCs	NFHS-III, 2005-6, GoI	66.4
Maternal Mortality Rate	Per one lakh live births, 2005- UNDP, HDR, 2007-8	450
Mortality Rate (Under Five Years)	In percentage- NFHS-III, 2005-6, GoI	74.3
Proportion of children less than five years of age classified as Undernourished	In percentage- NFHS-III, 2005-6, GoI	48.0
Proportion of children less than five years of age classified as Underweight	In percentage- NFHS-III, 2005-6, GoI	42.5
Proportion of children less than five years of age severely undernourished	In percentage- NFHS-III, 2005-6, GoI (according to height-for-age)	23.7
Proportion of children less than five years of age severely undernourished	In percentage- NFHS-III, 2005-6, GoI (according to weight-for-age)	15.8
Proportion of children less than five years of age in any degree of Anaemia	In percentage- NFHS-III, 2005-6, GoI	69.5
Proportion of population do not have access to safe drinking water-Rural	In percent; 2001, Economic Survey, 2007-8, GoI	26.8
Rural population belong to household having Monthly Per capita Consumption Expenditure below Rs. 365, i.e. Rs. 12 per person per day -All Category	In percentage- in 2005-6 prices, NSS, 62 nd Round, 2004-5	19
Proportion of rural Population in India having MPCE below the average level of Rs. 558.8	In Percentage, NSS, 61 st Round, 2004-5	65.7
Proportion of Population located in SC HHS having MPCE below average level of Rs. 588.8	In Percentage, NSS, 61 st Round, 2004-5	77.4
Proportion of Population located in ST HHS having MPCE below average level of Rs. 588.8	In Percentage, NSS, 61 st Round, 2004-5	79.6

It is estimated that 35.3% of rural population in India falls below the internationally recognized dollar a day standard and as per the World Bank estimates, during 2005 around 42% of population was under the poverty line based on \$ 1.25, and about 81% of people earn less than \$ 2 a day. As per officially declared poverty line (based on 2004-05 NSS data), 28% of the total population in rural India live below the poverty line (BPL).

Again a closer look into the extent of poverty amongst the specified sub-group of populations like Scheduled Tribes and Scheduled Castes, it is found to be more acute. These communities are more prone to food insecurity when there is an increase in foodgrain prices.

Among other vulnerable communities, 48% of children less than five years of age are undernourished and about 42.5% of children are underweight. The proportion of children who are severely undernourished is also notable and the figure stands for 23.7% in India. Proportion of children less than five years of age who are in any degree of anaemia is counted to the extent of 69.5%. Proportion of rural population who do

not have access to safe drinking water facilities is accounted for 26.8%. An estimated 7,00,000 children die annually and the infant mortality rate (IMR) in rural India still stands at as high as 62 per 1000 live births in general and for SCs it is more than 66. As much as 450 women die out of hundred thousand women at the time of delivery. The case of malnutrition and undernourishment is also prevalent. Half of the underweight children of India live in only six states (Maharashtra, Orissa, Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan) where child malnutrition levels exceed those of countries in Sub Saharan Africa. It is estimated that nearly 19% population in rural India spends less than Rs.12 per person a day and the proportion of rural population having MPCE (Monthly Per capita Consumption Expenditure) below the average level of Rs. 558.8 accounts for 65.7%. In case of STs it is 79.6% and for SCs it is 65.7%. The information above clearly shows that food security of the most marginalized communities in India is at stake and there is a need for urgent government intervention to bring the derailed system into track failing which, impoverishment will continue further.

UNDERLYING REASONS FOR FOOD INSECURITY IN INDIA:

There are many reasons contributing towards food insecurity in India. Among others, continual distress of farmers with lopsided and inadequate availability of agricultural credit and crop insurance coined with transport bottlenecks, inadequate storage capacities and uneven distribution of food corporation of India, lack of credible regulatory mechanisms for foodgrain distribution, failure of transparency and accountability in the functioning of the PDS (Public Distribution System), abject rural poverty, lack of purchasing power among the rural mass, diversion of foodgrains for bio-fuel production,

increasing trend of crop diversification (basically from foodgrain crops to cash crops) and finally diversion of agricultural land for non-agriculture purposes to meet the growing need for industrialization are important factors responsible for food insecurity in India.

In a country like India, farmers, who constitute a large chunk of the rural population, are producers of foodgrains, and usually suffer because of not getting remunerative prices for their produce. Given a choice, farming communities are willing to move beyond agricultural activities as agriculture is not a viable, profitable and a sustainable means of livelihood. Apart from this, the declining index of gross areas under foodgrain crops leads to decline in the per capita availability of foodgrains. The area under production of foodgrains over a 16 year period witnessed an average annual decline of 0.26% during 1989-90 to 2005-06. This decline in the areas under foodgrain production since 1980s put forward a serious threat to food security in India in terms of declining net availability of foodgrains.

It is also evident that, looking at the trend of foodgrain production in India since 1980, there is no such encouraging fact which reflects food availability and security in India. Data in Table-2 shows that the index number of production of foodgrain crops since 1970-71 remains below the index number of the production of all commodities. In other words, the growth of production of non-foodgrain crops always remains higher than the growth of foodgrain crops. It is also found that there is a continuous decline in area under foodgrain crops and increase in the area under non-foodgrain crops. The index number of area under foodgrain crops during 1990-91 which was 100.7 has declined to 96.1 in 2005-06 vis-à-vis increase in the areas under non-foodgrain crops by around 50% during 1970-71 to 2005-06.

Table-2: Index Number of Agricultural Production and Area (Base: Triennium ending 1981-2=100)

Items/Year	1970-71	1980-81	1990-91	2000-01	2002-3	2003-4	2004-5	2005-6
Agricultural Production								
Foodgrains	87.9	104.9	143.7	158.4	140.4	172.0	159.9	168.6
Non-Foodgrains	82.6	97.1	156.3	178.2	167.2	201.0	205.7	224.4
Area Under Principal Crops								
Foodgrains	97.9	99.8	100.7	95.4	89.7	97.3	94.6	96.1
Non-Foodgrains	91.1	99.4	120.0	127.0	115.6	125.4	137.5	139.9

Source: Economic Survey, 2007-08, Government of India

Food Security in India-A Critical Issue

“Half of the underweight children of India live in only six states (Maharashtra, Orissa, Bihar, Madhya Pradesh, Uttar Pradesh and Rajasthan) where child malnutrition levels exceed those of countries in Sub Saharan Africa.”

“The area under production of foodgrains over a 16 year period witnessed an average annual decline of 0.26% during 1989-90 to 2005-6. This decline in the areas under foodgrain production since 1980s put forward a serious threat to food security in India in terms of declining net availability of foodgrains”

Food Security in India-A Critical Issue

“the crux of the problem of food insecurity in India revolves around inadequate access to foodgrains by the vulnerable community due to lack of purchasing power”

“The government has proposed to formulate a policy targeting to produce 10 per cent of transport fuel from bio products by 2017”

It is crucial to specifically mention the desired level of productivity and production of foodgrains in India since early 1990s. This is basically due to low level of public investment in agriculture and allied sectors. Although, the country has witnessed completion of 57 years of economic planning; agriculture and allied sector has never been given due priority in terms of overall public investment in general and plan investment in particular. Hence, there is a serious mismatch between demand and supply of foodgrains which is evident from the declining trend of the per

capita per day net availability of foodgrains. No doubt, since 1990s the per capita per day net availability of foodgrains has declined as the growth of population out run the growth of foodgrain production. This is mainly because of shrinking area under foodgrain production and diversion of crop land towards other uses. Data in Table-3 shows that during 1991, per capita per day availability of foodgrains was 510 grams which got reduced to 445 grams in 2006. Even the per capita per day availability of foodgrains during 2005-06 is less than the availability during 1971.

Table-3: Net Production and Net Availability of Food grains (FG) since 1951 (in Million tones)

Year	Net Production of FG	Net availability of FG	Per capita per day net availability of FG (in grams)
1951	48.1	52.4	394.9
1961	72.0	75.7	468.7
1971	94.9	94.3	468.8
1981	113.4	114.3	454.8
1991	154.3	158.6	510.1
2001	172.2	157.0	416.2
2002	186.2	189.5	494.1
2003	152.9	170.6	437.6
2004	186.5	183.3	462.7
2005	173.6	170.0	422.4
2006 (P)	182.5	181.7	444.6

Source: Economic Survey, 2007-08, GoI, P= provisional; Net availability= Net production + net imports- changes in government stocks

In India, cultivation of staple food is being replaced by cash crops. In most parts of the country, vast tracts of forests and paddy fields have been converted into cash crop plantations. Every year thousands and thousands of hectares of good paddy land are being diverted for non-paddy purposes. Diversion of good/fertile agricultural land, which in any case is inelastic in nature, to commercial farming and even industries further restricts the ability to grow sufficient foodgrains. Commercial crops are eating

into the fertile land tracts meant for growing essential foodgrains, thereby pulling the self reliant Indian economy into the trap of shortage of foodgrains and ultimately food insecurity.

However, the crux of the problem of food insecurity in India revolves around inadequate access to foodgrains by the vulnerable community due to lack of purchasing power. It is often said that the off take of the foodgrains from the national pool of foodgrain stock is lower than the allocation because the beneficiaries may not take the delivery of foodgrains as per their entitlement. There are several reasons one could think why beneficiaries have not been taking the advantages of foodgrain distribution under public distribution system at a subsidized rate. The most important reasons are low level of income of the poor households and rampant corruption in the public distribution system as well as failure of the food based plan programmes.

Although, NREGS (National Rural Employment Guarantee Scheme) has indirectly facilitated in raising wages as well as employment opportunities in rural areas, there is a long way to go for the direct employment effect to be evident as it is estimated that 42% of Indians fall below the internationally recognized \$ 1.25 standard. The so called food related schemes like Food for Work Programme and the recent National Employment Guarantee Scheme, Mid-Day Meal Scheme and ICDS (Integrated Child Development Scheme) have not reaped the desired results because of the presence of administrative loopholes and widespread corruption.

Another reason which is propelling food insecurity in India is the growing fuel crisis and the need for production of bio-fuels (both diversion of foodgrains and arable land). The possible implications of increased reliance on the use of bio-fuel and diversion of arable land from foodgrain production as well as food crops towards the production of bio-fuel certainly raises questions towards food security of the country. The government has proposed to formulate a policy targeting to produce 10 per cent of transport fuel from bio products by 2017. According to the proposed policy, 12 million hectares of revenue and forest waste land would be brought under bio-fuel plantation by 2017. It is important to note here that already, the country has about 60,000 hectares of land under jatropa plantation in states like Andhra Pradesh, Chhattisgarh, Madhya Pradesh and Rajasthan which could produce 0.3-0.5 billion litre of bio diesel. If this happens there is every possibility of further diverting arable land towards production of bio-fuels.

Cultivable land is being acquired either for Special Economic Zones (SEZs) or for infrastructure development and fertile land is being diverted to meet the demands of the industry and housing sectors. The result is therefore a decline in cultivable land. A policy like SEZ will seriously impact on the shortage of foodgrains, subsequently leading to food insecurity in India.

CONCLUSION

The philosophy of an altered agricultural planning in the changed macroeconomic policy regime poses a serious threat to food security in India. In present times, when foodgrain production is struggling to keep pace with the burgeoning population growth, farmers are being asked for crop diversification and produce crops that are suitable for international markets. The task of feeding millions of hungry people have somehow been left to market forces thereby aggravating the crisis of ever rising deprivation and starvation deaths. Mainstream economists have argued for a shift in focus from agriculture to industry, hoping to meet our food security needs by importing cheap food. It is neither feasible nor does it make any economic sense to buy food at exorbitant prices and offer countryside farmers a

low price for their produce. For instance, the case of wheat portrays a disturbing trend. How can a country justify importing wheat at Rs. 16,000 per tonne at a time when domestic procurement prices do not exceed Rs. 8,500 a tonne?

Hence, the first and foremost attempt of the government should focus on growing sufficient food to feed the ever-growing population, particularly when the land available to grow more food is limited and does not increase to cope with the progressive increase in the country's population. Though supply of land is inelastic in nature, extended acreage along with higher productivity may ensure hike in food crop production. There is a need to protect the farmers and the consumers against the vagaries of production process and the market forces in order to enhance agricultural productivity and ensure fair prices; bring efficiency in reducing the cost of procurement, storage, transportation and distribution of foodgrains; efficient delivery system and sufficient access to foodgrains by raising farm income as well as other direct income generating schemes.

If all these above mentioned measures are undertaken, there is a hope that we can ensure food security for the millions of poor Indians.

Food Security in India-A Critical Issue

"The task of feeding millions of hungry people have somehow been left to market forces thereby aggravating the crisis of ever rising deprivation and starvation deaths"

“Little upon his little earth, man contemplates the universe of which he is both judge and victim”
-W.H. Auden)

Generally, food security is directly or indirectly linked to agriculture and forest ecosystem services, soil and water conservation, watershed management, combating land degradation, protection of coastal areas and mangroves, and biodiversity conservation. The High-level Conference on World Food Security (Rome; 2008) has also outlined agriculture, rural livelihoods, sustainable management of natural resources and food security as inextricably connected within the changing developmental pattern and climate change challenges of the twenty-first century.

therefore affects food security. The decline in foodgrain productivity disproportionate with rising population challenges the resilience of local food grain supply; it therefore consequently increases country's dependence on imports of food and foreign aid. It may cause the possibility of losing economic independence in the long run.

Second, the rising rate of natural disasters—heavy rains, floods, tropical cyclone, and drought—affect all forms of agricultural production. The livelihood and ability of poor, marginalized and vulnerable groups get compromised particularly in accessing food and coping with unsustainable food system such as processing, distribution, acquisition, preparation and consumption. As a matter of fact, the producer groups such as poor

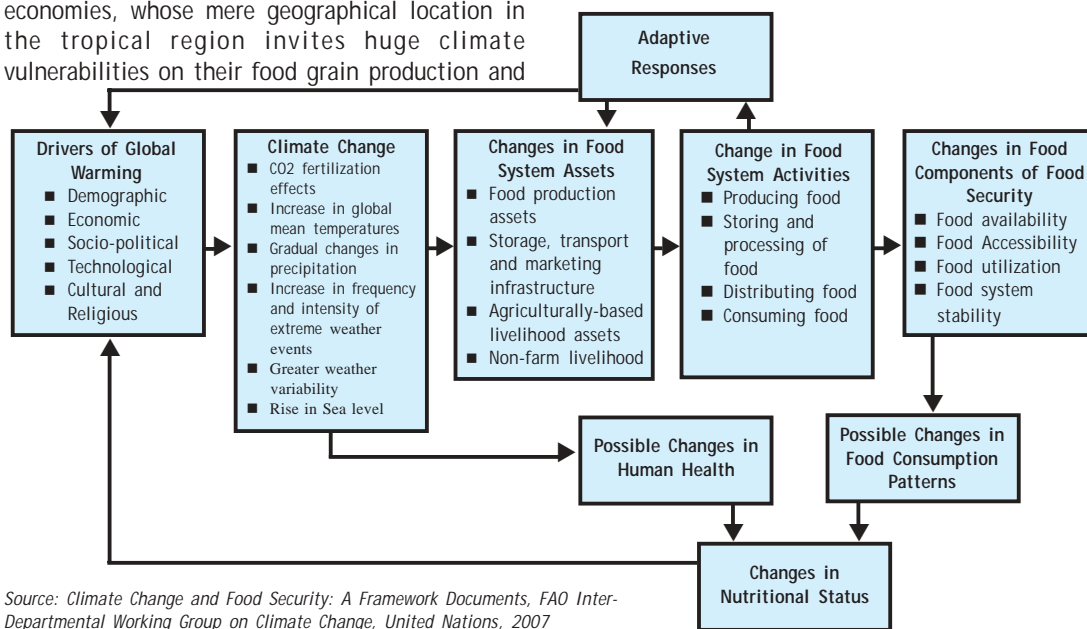
Climate Change and Food Security in India

- Gyana Ranjan Panda

The changing patterns in agricultural production due to varying climatic conditions affect food security broadly in two ways.

First, due to changes in global climatic conditions, there will be asymmetric production of food grains and hence unequal food supply at both global and local levels. Globally, the higher yields in temperate regions could offset lower yields in tropical regions. This will affect many underdeveloped and developing agriculture driven economies, whose mere geographical location in the tropical region invites huge climate vulnerabilities on their food grain production and

and marginal farmers are less able to deal with such unprecedented global climatic change because of greater exposure to the risks of unsustainable food grain productivity. Above and beyond, the impact of food insecurity causes nutritional deterioration resulting in massive malnourishment among pregnant women, young children, and elderly, ill and disabled people. The following chart shows the inextricable link between climate change and food security.



Source: *Climate Change and Food Security: A Framework Documents*, FAO Inter-Departmental Working Group on Climate Change, United Nations, 2007

THE INDIAN EXPERIENCE

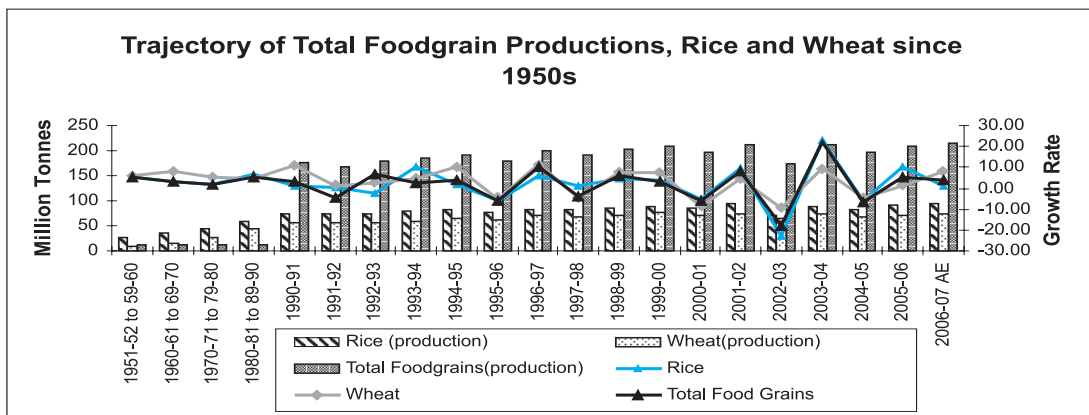
Agriculture is considered as the mainstay of India's economy and its share in generating mainly rural employment (comprising 52% of workforce) and livelihood sustainability, and contribution to country's GDP growth (at present 18.5% of GDP) has been significantly acknowledged. It is the core to sustained food security irrespective of incremental population growth and rising poverty (in absolute number) across states. However, this sector is under performing due to less critical inputs—low level of public and private investment, lack of irrigation and mechanization, heavy reliance on chemical instead of organic fertilizers; and over dependence on erratic monsoon and other climatic factors.

Sixty five percent of Indian agriculture is heavily dependent on monsoon. Conditioned by its geographical location in tropical region, its food grain production, in particular wheat and rice

crops, are sensitive to an increase in maximum as well as minimum temperature. The rising temperature or thermal stress causes water stress, frequent drought and extreme weather therefore rooting negative influence on the food grain productivity particularly wheat and, more severely, rice productivity.

Due to first Green Revolution, as the following graph shows, the productivity of total food grains, both staple and non-staple items, have increased manifold compared to pre-green revolution phase. However, its impact both in terms of rice as well as wheat productivity since 1990s have been subject to some external factors like changing pattern of south west monsoon, rainfall, drought and other natural calamities, irrespective of comparatively high percentage of critical inputs such as consumption of NPK fertilizers and pesticides, increase of gross irrigated areas, increase in gross shown areas, and the use of High Yield Verities (HYV).

Climate Change and Food Security in India



Source: Handbook of Statistics on Indian Economy (2008), Reserve Bank of India

Natural disasters particularly caused by the South-West (SW) Monsoon in India are not new and their inconceivable impacts have always been a major concern for the policy makers. It's implication on public exchequer is unimaginably high in all the financial years. For instance, while

the hectares of crop area affected particularly in 2007 due to South West Monsoon remained 64 lakh hectares, it was 24 lakh hectares in 2008. As a result of which it cost the economy approximately 3600 crore (FY 2007), followed by approximately 750 crore in 2008.

Table 1: State wise extent of Damage (Cumulative) due to Heavy Rains, Flood, Cyclone During South-West Monsoon

Items	2007	2008 (Information Reported till 13th October)
Population Affected (In Lakh)	592.651	280.8
No. of Human Lives Lost	3339	2744
No of District Affected	241	149
No of Villages Affected	52494	19839
Crop Area Affected (In Hectare)	6415288.49	2416669
Crop Damaged (In Lakh)	357857.5	74876.52

Source: Compendium of Environmental Statistics, 2007 and Data collected from the website of National Institute of Disaster Management

Climate Change and Food Security in India

According to an advanced estimation of United Nation Framework Convention on Climate Change (UNFCCC: 2005), the economic impact of climate change on India in 2100, with a 2.5°C warming and no changes in precipitation, is expected to be 53.2 billion (\$) on the damages of the agriculture sector, followed by 21.9 billion (\$) damages in the energy sector and 1.2 billion \$ damages in water resources.

TECHNICAL ASSESSMENT OF THE SITUATION

Various independent research studies that include the World Bank technical paper titled *“Climate Change Impacts on Indian Agriculture: The Ricardian Approach”* examine the impact of climate change on agricultural crop yields, GDP and welfare in India. The study estimates that a temperature rise of 2.5°C to 4.9°C for India, without considering the carbon dioxide fertilization effects, would lead to losses in rice and wheat production vary between 32-40%, and 41-52%, respectively; and a decline in GDP by 1.8 - 3.4%. Likewise, another study *“Deforestation, Climate Change and Sustainable Nutrition Security: A case study of India”* estimated that a 2°C increase in mean air temperature could decrease rice yield by about 0.75 ton/hectare in the high yield areas and by about 0.06 ton/hectare in the low yield coastal regions. Further, “a 0.5°C increase in winter temperature would reduce wheat crop duration by seven days and reduce yield by 0.45 ton/hectare. An increase in winter temperature of 0.5 °C would thereby translate into a 10% reduction in wheat production in the high yield states of Punjab, Haryana and Uttar Pradesh.” Furthermore, a new estimation suggests that a rise in mean

temperature of 2°C and a 7% increase in mean precipitation will reduce net revenues by 12.3% for the country as a whole. Agriculture in the coastal regions of Gujarat, Maharashtra and Karnataka is likely to be negatively affected. Small losses are also likely to occur in the major food grain producing regions of Punjab, Haryana, and Western Uttar Pradesh.

Likewise, the Government sponsored Indian Council of Agricultural Research (ICAR) study has also indicated that a negative departure of annual rainfall (over the period of 1990-2004) has been noticed in most part of the country that include Western Uttar Pradesh, West Madhya Pradesh, Haryana, Uttaranchal, Himachal Pradesh, entire North Eastern States, and some parts of the Southern Peninsula-South Telengana, parts of Rayalseema, Vidarbha and Tamil Nadu. In addition, a significant 73% of the rainfall measuring stations have shown short term fluctuations in annual rainfall (*Rajya Sabha Starred Question No 58, 2006*).

POLICY MEASURES AND RESPONSES

Article 4.1 (f) of the United Framework Convention on Climate Change (UNFCCC) calls upon all parties (Both Annex I and Non-Annex I) to “take climate change considerations into account to the extent feasible in their relevant social, economic and environment policies and actions, and employ appropriate methods... with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.”

Vulnerability of Food Production: Some Compelling Facts

- There is an increasing trend of 0.5°C during the last century. Recent data indicates a substantial acceleration of this warming after the 1990's which is comparable to the global warming trend.
- Analysis of past tide gauge records for the Indian coastline regions gives an estimate of sea level rise of 1.30 mm/year.
- Areas of increasing trends in Monsoon rainfall are found along the West Coast, North Andhra Pradesh and North-West India, and those of decreasing trend over East Madhya Pradesh and adjoining areas, North Eastern India and parts of Gujarat and Kerala (-6 to -8% of normal over 100 years).
- The year 2006 was the warmest year on record since 1901. The ten warmest years on record are 2006(0.595), 2005(0.40), 2002(0.59), 2004 & 2001(0.47), 2003(0.45), 1999(0.39), 1998(0.50), 1987 & 1941(0.41), 1980(0.34), 1953 & 2000(0.36) and 1958(0.43). Spatial pattern of trends of mean annual temperature anomalies suggests significant positive (increasing) trend over most parts of the country except over some parts of Rajasthan, Gujarat and Bihar, where significant negative (decreasing) trends were observed.
- There is decrease in rice yields in recent past in Indo-Gangetic plains due to slight rise in minimum temperatures.
- The wheat yields and hence, and production decreases by about 4-6 million tons in recent years due to increase heat in February-March.
- Increasing temperatures in Himachal Pradesh has resulted in a decrease in apple productivity and the apple belt is gradually shifting upwards (higher elevation).
- There is some preliminary data to indicate that marine fish are migrating due to increase in sea temperatures.

India being Non-Annex Parties in the Kyoto Protocol has committed to undertake various adaptation measures for agriculture and land use change and forestry to combat climate change. While for agriculture, the Government of India in its first National Communication to UNFCCC (2004) has reported to have taken up following measures such as:- reducing methane emissions in rice cultivation through improved farm management practices; shifting from long duration to short duration rice varieties; providing training and dissemination of information on mitigating methane emissions from rice paddies; improving water management through soil aeration and periodic drainage of paddy fields; optimizing livestock population and using nutrient supplement urea-molasses mineral blocks, etc. And for the Land-Use Change and Forestry (LUCF), the Government intends to conserve existing forest cover; developing commercial plantation such as agro-forestry; converting low productivity lands into grasslands and rangelands, etc.

Government claimed that different ministries such as Ministry of Agriculture (MoA), Ministry of Rural Development (MoRD), Ministry of Water Resources, etc. have been adapting various resources conservation programmes and schemes to promote efficient utilization of water, land, nutrient and pesticides, etc. for sustainable farm development in the country. These are the National Watershed Development Project for Rainfed Areas (NWDPA), Soil Conservation for Enhancing Productivity of Degraded Lands in the Catchments of River Valley Project and Flood Prone River (RPV&FPR), Reclamation of Alkali Soil (RAS), Watershed Development Project in Shifting Cultivation Areas (WDPSCA), Desert Development Programme (DDP),

Vikas Yojana (RKVY), and many more. These specific measures are basically adaptation measure whose specific areas of concern being agriculture, water resources, health and sanitation, forests, coastal-zone infrastructure and extreme weather events. Unfortunately such adaptation measures' effective adjustment time may take years (more than 10-15 years) to make any credible impacts on the food grains productivity.

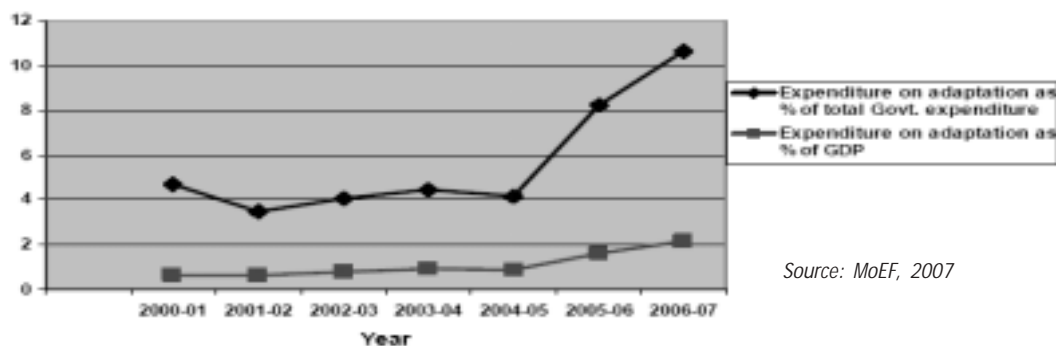
Furthermore, such schemes look ineffective due to some existing policy imbalances such as high subsidies for the promotion of indigenous as well as imported chemical fertilizers and pesticides. While in FY 1999-2000 (AE) the non-plan expenditure on subsidies on indigenous urea fertilizers were 8000 crores, in 2008-09 (BE), it constitute 12900 crores. The subsidies on imported urea fertilizers in the same fiscal durations, it has been increased to manifold from 750 crores (AE) to 11400 crores (BE). Such subsidies on chemical fertilizers have eroded the soil fertility and thereby deficient in micro-nutrients, critical for yield sustainability.

With regard to adaptation expenditure to total fiscal expenditure, according to Government sources, it exceeds 10% (FY 2006-07); its share in GDP in the same financial year constitutes approximately 2%. However, tracking public expenditure on adaptation measures remains quite complex and eludes public scrutiny as different measures crop-up under different ministerial mandate. It hardly gets presented in the Annual Union Budget under a specific policy statement alike to Gender Budget Statement.

Furthermore, the government policy measures and responses are not only inadequate but also lack

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Chart: Percentage of Adaptation Expenditure to Total Expenditure and GDP



Integrated Waste-Land Development Programme (IWDP), National Afforestation & Eco-Development Project (NAEP), National Project on Development & Use of Bio-fertilizers (NPD&UB), National Project on Organic Farming (NPOF), the National Employment Guarantee Scheme (NREGS), National Food Security Mission (NFSM), Rastriya Krishi

integration and networking, and synergizing. Climate Change being a complex problem needs proper scientific assessment and comprehensive government responses and its impacts both in terms of adaptation as well as mitigation involving all the core ministries as well as governance functionaries.

Discussions of the current world economic crisis tend to focus exclusively on the bursting of the housing bubble in the United States. This no doubt is the immediate cause of the crisis, but underlying its operation is the fact that the stimulus for booms in contemporary capitalism has increasingly come from such bubbles. The U.S. whose size and strength make it, in the current regime of trade liberalisation, the main determinant of the pace of expansion of the world economy as a whole, has increasingly come to rely on such bubbles to initiate and sustain booms. The dot-com bubble whose bursting had caused the previous crisis was followed by the housing bubble which started a new boom. This has now come to an end, precipitating a major financial crisis and initiating what looks like a major depression reminiscent of the 1930s.

John Maynard Keynes, writing in the midst of that Depression, had located the fundamental defect of the free market system in its incapacity to distinguish between “enterprise” and

the State had to have the autonomy to intervene meaningfully in the economy.

The process of globalisation, involving above all the globalisation of finance, which began during the period of Keynesian demand management in the capitalist countries, and removed a whole host of regulatory measures that characterised the Keynesian regime. Boosts to aggregate demand have of late come increasingly from the stimulation of private expenditure, associated with the creation of bubbles in asset prices, rather than from an adjustment of public expenditure within the context of reasonably stable asset prices. The reliance on bubbles in short has acted as a substitute for the earlier regime of Keynesian demand management; it is management through the creation and sustenance of bubbles rather than through the pace of public spending. Not surprisingly, the frequency of financial crises, associated with the bursting of these bubbles, has increased greatly after 1973, and the capitalist world is even now headed for a major crash.

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“speculation” and hence in its tendency to get dominated by speculators, interested not in the long-term yield on assets but only in the short term appreciation in asset values. Their whims and caprices, causing sharp swings in asset prices, determined the magnitude of productive investment and hence the level of aggregate demand, employment and output in the economy. The real lives of million of people were determined by the whims of a bunch of speculators under the free market system.

Keynes wanted this link to be severed through what he called a comprehensive “socialisation” of investment, whereby the State acting on behalf of society always ensured a level of investment in the economy, and hence a level of aggregate demand, that was adequate for full employment. This prescription entailed not only a jettisoning of the free market system in favour of State intervention, but also restrains on the free global mobility of finance, since meaningful State intervention could not be possible if the nation-State faced *internationally-mobile capital*. “Let finance be primarily national”, he had said, if

Governments in advanced countries have still not recognised this onset of a crash. They have proceeded on the assumption that the injection of liquidity into the system is all that is needed. It was thought initially that this injection could be achieved through the government purchase of “toxic” securities, but widespread opposition to that scheme has now made most governments accept the idea of injection of liquidity in lieu of equity, i.e. through the part-nationalisation of financial institutions.

But injection of liquidity, even in this manner, is not enough. Credit will not start flowing simply because banks can access more liquidity. There has to be adequate demand for credit for viable projects by solvent and worthwhile borrowers. And this is not happening. First, the injection of liquidity does not improve the solvency of firms saddled with “toxic” securities, so that the risk associated with lending to them remains prohibitively high. And secondly, quite apart from this, the anticipation of the depression makes borrowers chary of borrowing and lenders chary of lending.

This anticipation in turn derives from several factors: first, the bursting of one bubble is not necessarily succeeded by the immediate formation of another, so that some recession of a more or less prolonged duration is in any case inevitable. Secondly, the very scale of the current financial crisis is such as to entail an anticipation of a prolonged recession. And thirdly, since the recession has already started, the prospects of crisis prevention now through the usual monetary instruments (including liquidity injection) appear distinctly dim. The scenario, in which tendencies towards increased liquidity preference on the part of private individuals and institutions and a downward slide in the real economy mutually reinforce one another, has already started unfolding itself and will continue for a prolonged period, *unless governments now act to inject demand into the economy directly*, apart from injecting liquidity. Until this happens on a large enough scale the Depression will persist.

The third world countries will not escape the effects of this depression. True, many of them whose financial systems are still not sufficiently "opened up" and hence have not been "contaminated" by any links to "toxic" securities, will escape the *direct* impact of the world financial crisis (though even they cannot escape some "sympathetic" movements in their financial markets as well). But they certainly will have to face the impact of the Depression of the real economy. Their export earnings, both merchandise and invisibles, will be hit, causing unemployment and output contraction on the one hand, and foreign exchange crisis, exchange rate depreciation and accentuated inflation on the other. (The latter will be aggravated by the outflow of speculative capital that had come in earlier to the 'newly emerging markets' under the auspices of Foreign Institutional Investors).

Two areas are of special concern here. One is the inevitable decline in the terms of trade for primary commodities that will occur in a Depression, which will push cash-crop growing peasants into even greater distress and destitution and into even larger mass suicides. (These have been already occurring for some time on a disturbing scale in countries like India). The second is the loss of food security over much of the third world that will inevitably occur. Food security in the third world of course has been getting undermined for some time now, but matters will become even worse with the onset of Depression. There are at least three mutually reinforcing reasons for this: first, the loss of foreign exchange earnings owing to the decline in exports and in the terms of trade will cause a decline in foodgrain availability in food-importing countries owing to a decline in their import capacity. Secondly, even if food availability is

somehow maintained, the decline in the incomes of exporting peasants and small producers and of those affected by the rise in unemployment will mean that large masses of people will simply lack the purchasing power to buy necessary food. And thirdly, if the terms of trade of non-food primary commodities decline relative to food, as has been happening for sometime now, then both the above problems will be greatly aggravated.

There is a tragic irony here, the booms fed by asset price bubbles not only did not benefit the large mass of peasants, petty producers, agricultural labourers, craftsmen, and industrial workers in the third world, but were actually accompanied by an absolute deterioration in their living standards. This happens not despite the boom but because of it, in a number of ways. First, with the interlinking of global financial markets, asset price booms in the US tended to produce stock market booms, and more generally financial sector booms, even in third world countries, where banks and other financial institutions withdrew from productive sector lending to speculative spending, from rural lending to urban lending and from agriculture and small scale sector lending to consumer credit to the affluent, and loans against securities. This damaged the productive base of the peasant and the small-sector. Secondly, the changed role of the State in the new dispensation where it was more concerned with supporting the financial sector boom and in maintaining the "confidence of the investors" than with sustaining peasants and petty production, entailed a withdrawal of State support from the latter sector: inputs subsidies, the price support system, essential public investment and State spending on rural infrastructure and on social sectors, were all drastically curtailed; and without them the entire small producer economy became submerged in crisis.

A simple statistic illustrates the point. During the quinquennium 1980-85, the per capita cereal output in the world was 335 kilograms. By 2000-05, it had fallen to 310 kilograms. This absolute decline in per capita cereal output meant also an absolute decline in per capita cereal consumption for the world as a whole. But since per capita cereal consumption, taking both direct and indirect consumption into account, increased for the advanced countries, the overall decline for the world as a whole was caused by a massive decline in the third world countries, where even countries like China and India which experienced remarkably high GDP growth rates, did not escape this trend.

The fact that this decline in per capita cereal output in the world economy was not accompanied by any rise in relative cereal prices

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(infact between these two years, the terms of trade of cereals vis-à-vis manufacturing in the world economy declined by nearly 40%), even when the per capita income in the world economy was increasing quite noticeably, suggests that the squeeze on the purchasing power of the masses in the third world was even greater. The other side of the speculative boom occurring in the deregulated and financially-interlinked capitalist world therefore was a drastic squeeze on the living standards of the masses, especially in the third world (which incidentally is one reason why the 'locomotive' analogy often given for the US economy's role in the world economy is so inapposite: this locomotive while pulling some coaches, pushes back some others).

But even though the masses suffered from the effects of the speculative boom, they would also suffer additionally from the effects of its collapse. We do not have symmetry here between the effects of booms and of depressions, and herein lies the tragic irony of the situation.

It is clear from the above that the need of the hour is not just the injection of liquidity into the world economy but also in addition the injection of demand. This can occur only through direct fiscal action by governments across the world. For activating governments for this, two conditions have to be satisfied. The first is control over cross-border financial flows, for otherwise governments will continue to remain prisoners to the caprices of globally-mobile speculative financial capital. And the second is the setting up of an international financial facility, operated on principles different from the existing multilateral institutions, which not only makes concessional finance available to them, but also enables them to substitute long-term loans for their short-term borrowing, so that they are not caught "borrowing short to invest long".

The sectors where government spending will go up will of course vary from country to country, but the general objective of such spending must be the reversal of the squeeze on the living standards of the ordinary people everywhere in the world that has been a feature of the world economy in the last several years. In the United States government spending may have to take the form of increasing the social wage and enlarging welfare state activities generally, increasing infrastructure expenditure and making more funds available to states through federal transfers. But in India, China and other third world countries in addition to welfare state measures, larger government expenditure has to be oriented towards a substantial increase in agricultural, specially foodgrains output.

Taking the world economy as a whole, the new growth stimulus will have to come not from some new speculative bubble but from enlarged government expenditure that directly improves the livelihoods of the people, both in the advanced and in the developing economies, and that is geared towards improving the foodgrain output of the world through a revamping of peasant agriculture (and not through corporate farming, since that would reduce purchasing power in the hands of the peasantry and perpetuate its distress). In short, the new paradigm must entail a foodgrain-led growth strategy (on the basis of peasant agriculture), sustained through larger government spending towards this end, which simultaneously rids the world of both depression and financial and food crisis. The trade and financial arrangements of the world economy have to be oriented towards achieving this rather than being made to conform to some *a priori* free market principles that have the effect of pushing the world economy into the financial crises and slumps, and the peasantry and small producers of the world into destitution both during the booms and also, additionally, during the slumps.

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