1. Basic Concepts in Economy

The applied science of economics can be broken down into A) Macro Economics which includes macro economic variables like GDP, employment, poverty investment and savings rate, Balance of Payments forex reserves etc. B") Micro Economics which studies the output trends of individual industries, consumer behavior, labour wage etc. C) Meso economics which studies intermediate level of organization of economic activity like institutions, regulatory framework etc. In welfare economics, the focus is on the study of man and human welfare i.e., not just generations of wealth but also its distribution. Keynesian economics of John Maynard Keynes (famous for his work - General Theory of Employment, Interest and Money.of 1936) declares that state should intervene in the economic system when growth slows down. The state should then increase money supply in the economy (an expansionary policy) to stimulate revival of growth. Neoliberal economics is part of Laissez Faire economics and advocates free markets and declares that human well being can be advanced by creating an environment which liberates individual entrepreneurial freedoms and skills within an institutional framework supported by strong private property rights, free markets and free trade. Socialist economics calls for state ownership of means of production to'achieve equality between individuals and groups. This can be done via a centrally planned economy where private ownership is not allowed and economic activity is at the command of the state.

The economy of any country/region is its capacity to produce goods/services. The purpose of economic development and growth is the well being of Mar),.' The production of goods/services and their consumption are basic economic activities. The factors of production are land, labour (including the entrepreneur) and capital. Factor incomes refer to rent of land, wages of labour (including profits of the entrepreneur) and interest paid on capital. The cost of production is the sum of the factor incomes. The activity of economic production, leads to output of goods/ services whose value in monetary terms is income.

Some basic variables of an economic system are :

- **Gross Domestic Product :** The measure of the total flow of goods and services produced in a country or region within the domestic territory, both by residents and non-citizens in a year. It is obtained by valuing outputs of'goods and services, at market prices and then aggregating them. InG.D.P., all intermediate products are excluded and only goods used for final consumption or capital goods are included.
- **Gross National Product:** The Gross Domestic Product plus income to domestic residents from investment abroad minus income earned by foreign investors in domestic market and sent out. That is, it is the production of goods by nationals of a given country both resident as well as non-resident. (Like money earned abroad by Indian investors). G.N.P. is a measure of the national income of a country. It may be noted that the value of output of all units of production is not equal to national income because the output also includes intermediate goods which are used to produce goods for final consumption. While GDP focuses on location of production, GNP focuses on who produces it. In an open economy where more number of its citizens carry out economic activity abroad compared to non-citizens working within that country, the GNP is larger than GDP.
  - **(a) GNP by Income Method :** It takes into account all incomes (including wages, rents, profits etc.) which result from the production of goods and services and hence excludes incomes like pensions.
  - **(b) GNP by Output Method :** It adds the value of all outputs from mining, manufacturing, construction, transport and also output of services like public administration and banking. It only takes into account the net value of output i.e., excludes the value of raw materials. It also excludes the income earned from Indian investments abroad.

(c) **GMP by Expenditure Method :** It adds up all expenditure on goods and services in a year by its people. It takes into account only final expenditure i.e., excludes expenditure on intermediate goods. It excludes investment income from abroad.

Note : GNP by Income Method and GNP by Output Method give GNP at Factor Cost while GNP by Expenditure method gives GNP at market prices. GDP at factor cost includes subsides but excludes the value of indirect taxes). While GDP at market price includes indirect taxes but excludes government subsides.

- **Gross National Product at Factor Cost :** gnp at market prices minus all indirect taxes.
- **Net National Product :** This is Gross National Product minus Depreciation. Depreciation is the amount of output (usually denoted in monetary terms i.e., amount' of capital generated from the output) that is kept aside as investment to maintain the productive capacity of the plant and machinery so that the productive capacity remains the same. Hence depreciation is not part of disposable income. Depreciation :is also called .Capital Consumption Allowance. Note : Net National Product at factor cost is equal to Net National Product at market prices minus net indirect taxes (Net indirect taxes is equal to total indirect taxes minus the value of subsidies)
- **Per Capital Income :** Net National Product divided by total population of a country.
- **National Income :** Net National Product minus indirect taxes.
- **Nominal National Income :** This is national income at prevailing market prices but not at prices of the base year. Base year is any year with normal trends of production i.e., an year with neither overproduction nor underproduction.
- **Total Factor Productivity :** This is.the output of an economy from each unit of labour used. It is an index of productivity of all factors of production.
- **Economies of Scale :** This is reduction in the average cost per unit of output as the size of production goes up.
- **Capital Output Ratio:** This shows the relationship between the value of capital (including the value, of the factors of production) versus the value of output. It is a measure of the productivity of the economy.
- **Incremental Capital Output Ratio (ICOR) :** This is a ratio of additional units of capital required to raise the production by one unit. It measures the efficiency of the production process.

Green GDP: This is. estimate of GDP after considering the value of loss of ecosystem resources like forests, soil, water and also taking into account the value of loss of ecosystem services in the course of producing goods/services.

Real Vs Nominal GDP - Real GDP measures change in output with respect to a reference .period. Nominal GDP measures change in output as well as change in prices of goods/services compared to a reference year.

Net Factor Income from Abroad (NFIA) : The difference between income from Indian citizens abroad and income of foreign citizens working in India.

Genuine Progress Indicator (GPI) : It is based on concepts of green economics and welfare economics and has been suggested as an alternative to GDP to measure economic growth.

GPT seeks to measure whether a country's economic growth has actually improved the well being .e. welfare of its people.

Gross National Happiness (GNH): A concept advocated by the former king of Bhutan Jigme Singye Wangchuk in 1972. The GNH is based on the argument that true development is one where material and spiritual development proceed simultaneously. GNH seeks to capture this development by measuring

- Equitable and sustainable socio-economic development
- Preservation and promotion of cultural values
- preservation of natural ecosystems and
- establishment of good governance.

The PQLI (Physical Quality of Life Index): This was developed by Morris in the 1980 s. The indicators used are life expectancy at age one, infant mortality and literacy. For each indicator, the performance of individual countries is rated on a scale of 1 to 100 where lower scores indicate a poor performance and higher scores a good performance. For life expectancy, a value of 77 gets a score of 100 and a value of 28 gets a score of one, for infant mortality the value of 9/1000 gets a score of 100 and a value of 229 gets a score of one and for literacy rates, they are measured in percentages from 1 to 100 and these percentages are directly included in. the scale of literacy. Though a correlation between GDP/GNP and PQLI is not very close, yet countries with low GDP tend to have low PQLI scores.

Recession and Depression: According to economic theory, recession is a condition of contraction of GDP i.e. negative GDP growth for two successive quarters. Depression is a prolonged depression where the GDP contracts by at least 10%. According to Keynesian economics, a recession is due to aggregate fall in demand and hence Keynesian economics calls for state spending on a v large scale to provide stimulus to revive the growth.

Classification of Economies

Economies in Transition : These are emerging economics Iifaj&India, which are characterized by rapid economic growth, transformation from agricultural economies to industrial economies, increasing open market economy characterized by liberal two way movement of FDI, and increasing globalization of their industries.

Least Developed Countries: The UN developed criteria to define LDC's in 1971 and there were 25 LDC's in 1971 rising to 48'now. As per the UN criteria, an LDC a) Is a low income country whose 3-year average per capita Gross National Income is less than 905 US dollars 2) is economically vulnerable and 3) has weak human development based on indicators of nutrition, health, education and adult literacy. Only 3 countries could lift themselves out of the LDC status - Botswana, Cape Verde and Maldives.

G.D.P. and Purchasing Power Parity (PPP): An economy can be measured on the basis of GDP or Purchasing Power Parity (PPP). In the GDP measure, the domestic GDP is converted into GDP in US dollars. Purchasing Power Parity uses inter-country differences in prices. It compares the ability of a local currency to buy a fixed unit of goods in the domestic economy with the ability of the US dollar to buy the same unit of goods in the U.S. economy. India ranks higher on the basis of PPP rather than GDP.

Problems in G.D.P. : Only items entering into the exchange economy are part of G.D.P. ^ Hence : 1) It does not include goods and services that are of a subsistence' nature which do not enter the exchange economy (for e.g., a farmer's output for personal consumption). Hence G.D.P. understates economic position of a Developing Country. 2) Does not include non-monetary satisfactions. 3) G.D.P. makes no distinction between socially productive / useful growth and undesirable growth. 4) G.D.P. growth may sometimes create a false sense of growth.

Human Development : A concept that assesses the impact of economic growth and JJI development not only in terms of the improvement in the material well being of the society but also in terms of improvement in human capabilities (like literacy, health and longevity) and also in terms of the qualitative impact of economic growth (like the equity or lack of it in the distribution of benefits of economic development, and the impact of economic development on creating human capabilities in terms of knowledge, capacity to be healthy and the capacity to be productive).

Human Development Index : A qualitative and a quantitative measure of economic development. Developed by UNDP in 1990, its three components are: Life Expectancy; GNP in US dollars (or per capita GNP in US dollars) and Literacy. India ranks as medium in human development.

Gender Development Index (GDI) : it seeks to assess the opportunities available to women. It measures the same three components oftheHDIbut after adjusting for the inequalities between men and women.

The GDI was included in the Human Development Report of 1995.

Capability Poverty Measure : It assesses the lack of capabilities in a society. It's components are:

- Percent of children under 5 years of age who are underweight.
- Number of births unattended by.trained persons.
- Percent of women above 15 years of age who are illiterate.

Human Poverty Index : It was dveloped by the UNDP in 1997. It's 3 indicators are longevity, decent standard of living and knowledge. It assesses these indicators by measuring :

- Percent of children under 5 years of age who are underweight.
- Percent of population without access to safe drinking water and health services.
- Percent of adults who are illiterate.
- Percent of population dying before the age of 40 years.

Indian economy is the 10th largest in terms of nominal GDP and 4th largest by PPP. But on per capita income basis, India economy ranks 140th based on nominal GDP per capita. India is the 19th largest exporter and the 10th largest importer in the world in 2011-12.

COMPOSITION OF GDP/ SECTORS OF INDIAN ECONOMY

The sectoral composition of any GDP is in terms of 1) The primary sector which includes agricultural proper, forestry and fishery and, mining / quarrying. 2) The secondary sector which includes manufacturing, construction and, electricity, gas and water supply 3) Tertiary sector which includes services, trade/hotels/ restaurants, finance, real estate and insurance, transport, storage and communication.

Sectoral Changes in the Indian Economy: As a result of planned economic development, the sectoral composition of India's GDP has undergone fundamental changes. Before India started economic planning, the primary sector contributed the greatest to India's GDP followed by the secondary sector and the tertiary sector. India today mimics a developed economy in terms of the sectoral composition of the GDP. This transformation is brought out in the following table

	Year	Agriculture	Industry	Tertiary Sector
1.	1950-51	53.1	16.6	30.3
2	1960-61	48.7	20.5	30.8
3	1970-71	42.3	24.0	33.8
4	1980-81	36.1	25.9	38
5	1990-91	29.6	27.7	42.7
6	2000-01	22.3	27.3	50.4
7	2010-11	14.5	27.8	57.7

These trends displayed bv India's economy are a result of the following factors: Planned economic development focused investment on manufacturing and certain crucial areas of the tertiary sector like transport and communications, banking and insurance and also India's foreign trade. In addition, the massive expansion of public administration and the defence sector also contributed to the growth of the tertiary sector. However, manufacturing could not become dominant in terms of its share in India's GDP because of the trend of Indian industry to become capital intensive. Increase in public investment, particularly in infrastructure, increase in the investment rate in the Indian economy due to high level of gross domestic savings. The liberal policies that were started in the sixth five year plan (1980-85) which' involved policies on industry and trade. The economic reforms that were initiated in 1991-92 wjiich deeply liberalised policies on trade, industry and the services sector also are important .factors.

Major Trends in Structural Transformation:

1. The growth rate of the Indian Economy decisively broke out of the Hindu Growth Rate era beginning in_the 6th.5 year plan. As the following table shows, the GDP growth rate till the sixth 5-year plan (1980-85 was the period of the 6th 5 year plan) was well below 5% but decisively crossed above 5% growth in the 6th 5 year plan. The factors for this are
   (i) The capital stock added to the Indian economy, particularly in the industrial economy, due to sustained and focused plan investment in the earlier plans began -to yield returns.
   (ii) The expansion of industrial'arid infrastructural activity accelerated the growth of the tertiary i.e. the services sector of the economy.
   (iii) The plans also focused on development of physical and social infrastructure much more beginning in the 6th 5-year plan leading to faster industrial and services sector growth.
   (iv) The growth of public administration and trade, transport and communications increased the overall pace of economic growth.
2. Faster growth of the economy and per capita income in the period of economic reforms is an importantjeature in the structural transformation of the economy. The GDP growth averaged^576% per anum (pTaTJln the period 1991-2001 and between 2001-2011 it recorded a compound average growth rate of 7.5% p.a. Within this period of 2001-11, the fastest growth period was 2003-04 to 2010-11 when the GDP grew by 8.5% p.a. on an average. In this period the per capita income increased by nearly two-third. In fact, the per capita income recorded a 3-fold increase in the 10 year period 2000 to 2010. This per capita income doubled between 1950-51 to 1991-92 i.e. almost took 40 years to double but it tripled over just 10 years in the period of economic reform. The per capita income of India in 2011 was 1Q75 dollars. The rapid growth of the Indian economy in the period after economic reforms were initiated in 1991-92 is possibly due to
   (i) dynamism of the private sector in economic activity.
   (ii) increasing integration of the Indian economy into the global economy due to increased role of India's foreign trade and liberal receipt of FDI by India.
   (iii) The rapid growth of the tertiary sector particularly due to rapid growth of communications, transport and financial services.
   (iv) Development of infrastructural sectors.
3. Increasing importance of foreign trade in the Indian economy. The period after economic reforms has improved the share of foreign trade in India's GDP. For e.g., exports accounted for 6.3% of India's GDP in 1990-91 rising to 16% in 2010-11. Similarly imports accounted for 8.5% of GDP in 1990-91 rising to 23.5% in 2010-11. This clearly demonstrates the growing importance of the external economy of India.
4. Increasing share of direct tax revenues of the state is also a significant feature of Indian economy's structural transformation. For e.g., direct tax revenues of the state have increased by 15 times in thel5 years before 2012.

Trends in GDP Growth Rate :

Years	1951-61	1961-71	1971-81	1981-91	1991-01	2001-11
GDP Growth Rate	3.9%	3.7%	3.2%	5.4%	5.6%	7.5%
Years	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13
GDP Growth	6.7%	8.4%	8.4%	6.9	6.2%	5.0%

(in percent, at 2004-05 prices)

Implications Of These Structural Changes : Though the share of agriculture has come down very sharply in India's GDP, its share in the employment of labour force has not come down proportionately. The occupational structure in Indian economy has therefore not shown any significant change. This implies that number of people in the agricultural sector are increasingly sharing lesser and lesser national income. Manufacturing accounts for only one-tenth of all labour force. Hence benefits of industrial development are accruing to smaller number of people directly, though it has been contributing to the growth of the services sector. The fastest growing areas among the services sector are community / personal and social services followed by financial services. These do not contribute much to the economy as capital creation. In addition, the services sector also does not account for much of the labour force. Hence less number of people have begun to share more and more of the national income.

Negative Features in the Structural Transformation: Though Indian economy has decisively moved into the high growth orbit, there are some concerns in this transformation. These are briefly 1. Increasing income inequality in India. According to some estimates, income inequality doubled in the 20 years between 1990-2010. This is possibly due to lesser and lesser share of a larger workforce employed in agricultural sector whose relative share in India's GDP has sharply come down in the recent decades. In addition, the share of the tertiary sector has increased very sharply in the recent decades but the workforce employed in the services sector is not as large as in the agricultural sector. 2) There has not been a significant shift in the occupational structure of India's workforce as the agriculture sector still accounts for around 52% of the workforce. Hence industrial sector has not been able to create large employment opportunities though the sector has registered an impressive growth in the period of economic reforms. 3) Though the overall value addition in the Indian economy has increased significantly, there is inadequate value addition in many industrial sectors, in exports of India and also in agriculture.

SERVICES SECTOR

This constitutes the tertiary sector of the Indian.economy. The growing importance of services sector is reflected in a series of facts. For e.g., services exports have been growing at 30% per anum (p.a.) while goods exports have been growing at around 20% to 25% p.a. The services sector has been helping in the growth of infrastructure as construction and real estate have been growing at around 10% p.a. It is the rapid growth rate of the services sector which has been responsible for the high growth rate of the, Indian economy in the 10th and 11th 5-year plans. It has also been contributing to growth of employment. For e.g., according to the 61st National Sample Survey, for every 10% increase in the value added in manufacturing, employment increases by 3.8%, while in the sub-sector of trade, hotels and restaurants, of the services sector, the employment grows by 6%, and by 9.4% in the sub-sector of real estate, insurance and finance. It may be noted that the increasing importance of the'services sector increases the resilience of the Indian economy because of increasing diversification. Today the services sector accounts for roughly 25% of the workforce within which the biggest employer is transport, storage and communication followed by hotels and restaurants and community', social and personal services.

The share of services in India's foreign trade increased from 3.3% of GDP in 1990 to 9% of the GDP in 2011. In fact, IT and ITES exports account for one third of India's exports today. Within services, construction, housing, real estate have been growing at a faster pace. The growing importance of the services sector in 'the Indian economy has mixed implications. For e.g., it has been accelerating the growth rate including increasing contribution to exports. It also reflects diversification of the economy. It has also made an impact on poverty and unemployment. However, it has worsened inegualities in distribution of wealth because it accounts for 25% of workforce but makes up 59%pf the GDP. The rapid growth of the sector also leads to misallocation of investible resources. In addition, some sectors of the services economy have a high COR compared to industry and hence investment is going into capital intensive sectors. In addition, a few sub-sectors in the services sector do not add much to the capital stock of the economy.

Reasons for Growth of Service Sector: 11 rapid growth of India's foreign trade 2) significant receipts of FDI 3) high growth rate of manufacturing 4) rapid growth of the services sector. The lower contribution of industry was due to its lower share in the GDP. Services exports have been growing at the rate of 30% per annum against goods exports which have been growing at 25% per annum. The rapid growth of the services sector is because of factors such as 1) rise in wages 2) rapid growth of sectors like IT/ITES and telecom 3) large receipts of FDI 4) significant growth of India's foreign trade 5) rapid growth of manufacturing has created demand for a large number of services.

The Negative Implications of the Growing Importance of the Service Sector: It is worsening income inequalities as the sector accounts for around 59% of the GDP but only 25% of the workforce. It also leads to faulty pattern of investment as more investment flows into the services sector because of its rapid growth. Some sectors of the services sector like non-financial services have a high COR compared to manufacturing hence leading to investment in capital intensive sectors. In addition, unlike agriculture and manufacturing, the service sector also does not add so much to the capital stock of the economy

GDP AND OCCUPATIONAL STRUCTURE OF WORKFORCE : Though the share of agriculture in India's GDP has come down very sharply from around 50% of India's GDP in 1950-51 to around 14% today, there has not been any significant change in the occupational structure of the workforce. Agriculture still accounts for around 52% of India's occupational workforce. Hence the occupational structure of the labour force did not undergo a major shift along with a shift in the sectoral contributions to the GDP because : a) Inadequate "increase in agricultural productivity which could have created entrepreneurs from a prosperous agriculture, b) Development of capital intensive industry, c) Inadequate rural industrialisation which could have absorbed workforce from the farm sector, d) High rate of growth of labour force due.to high rate of growth of population. Note : The only change in the occupational structure within the agricultural sector was a decline in the proportion of cultivators and a consequent increase in the proportion of agricultural labour.

CHARACTERISTICS OF THE INDIAN ECONOMY

The following are the characteristics of the Indian economy as a developing economy:

1. Low per capita income.
2. The occupational pattern is dominated by the agricultural sector. Agriculture accounts for around 14% of GDP and 52% of the workforce.
3. High growth rate of population. Growth rate of population as per 2011 census is 1.64% p.a.
4. High incidence of unemployment and underemployment. This is due to rapid growth of population, and hence the more rapid growth of labour force than the growth rate of the economy.
5. Low rate of capital formation. Capital formation is indicated by the level of investment.
6. Inequality in the distribution of assets.
7. Poor quality of human capital. This is reflected in
   (i) the high levels of illiteracy. Low levels of literacy are due to poverty and inadequate expenditure of the state on education.
   (ii) High levels of undernourishment and malnourishment.

The demographic characteristics of under-development in India are :

(i) High infant mortality rates.
(ii) High growth rate of population.
(iii) Large percent of population in the age group of 0-15.
(iv) Adverse sex ratio.

PRIMARY SECTOR-AGRICULTURE

Importance in the Indian Economy : The following bring out the importance of agriculture in the Indian economy.

1. Contributes around 14% to the GDP.
2. Accounts for 52% of the labour force.

3. Supplies bulk of the wage goods to the non-farm sector.
4. Meets requirement of industrial raw material.
5. Generates demand for industrial goods and helps in industrial growth.
6. Has a low ICOR compared to other sectors. Agriculture in India witnessed rapid growth due to the Green Revolution. The Green Revolution was introduced under an experimental project in 1961 as Intensive Agriculture Development Programme (IADP).

Benefits Of Green Revolution : It led to expansion of area under High Yielding Varieties (HYV) of seeds, expansion of irrigation, growth of fertiliser, agri-chemical industry and seed industry, growth of banking sector in rural areas to extend credit to the farm sector and expansion of rural electrification.

Impact of Green Revolution: It led to self-reliance in India's foodgrain output, increased the value of agricultural sector, led to a sharp rise in the productivity of the farm sector, helped the growth of a rural entrepreneurial class who became industrialists, increased employment in agriculture and helped in the decrease of seasonal unemployment in Green Revolution regions. The crops which benefited due to the Green Revolution are rice, wheat, bajra, maize, sugarcane and potato.

Trends and Crisis in Indian Agriculture :

The following table shows the trends in agricultural growth rate.

Year	Growth Rate of Agriculture
1999- 2000	2.67%
2000- 2001	0.25%
2001-2002	6.25%
2002- 2003	7.24%
2003- 2004	9.66%
2004- 2005	0.05%
2005- 2006	5.14%
2006- 2007	4.16%
2007- 2008	5.8%
2008- 2009	(-) 0.15%
2009- 2010	0.44%
2010-2011	5.41%
2011-2012	6.2%
2012-2013	1.8%

Factors for Crisis in Agriculture :

1. Development of capacity and capital in India's agriculture has been slow and has been adversely affected by a sharp fall in investment in the sector. Total investment in the sector has fallen from 7.07% of the agro GDP in 1976-1980 to around 6.69%' of agro GDP today. Declining investment has slowed down addition of capital stock to agriculture arid hence slowing down agriculture growth rate.
2. Inadequate development of livestock sector as it accounts for only 32% of agro GDP.
3. Inadequate modernization which is reflected in low chemical use like pesticide / fertilizer (for e.g., in India pesticide use is 0.33% kg per hectare while it is 15 Kg/ha in USA, UK and Canada) and also in the fact that only 49% of cultivated land is irrigated. Around 350 million hectare meters of rainwater flows wastefully into oceans from India's landmass.
4. Inadequate availability of credit to agricultural households.
5. There is grossly inadequate development of the backward linkages like storage / warehousing, grading facilities, extension services.
6. Inadequate development of food processing industry. This is reflected in the fact that only 11% of agro produce is processed (as of 2009).
7. The problem soils in agriculture have been increasing. This has sharply cut into the yields.
8. Area under food crops has bee- coming down sharply.
9. Average growth rate of GDP in agriculture and allied sectors hascoe down from 3,6% p.a. in 81-91 to 2.7% in 91-2001 and further declined to around 2% per annum in the last decade.
10. The growth of agro output in the 8th Plan was 4.7%. In the 9th plan, the growth of agricultural output fell to 1.2% i.e., fell below the population growth rate.

The sharp fall is due to the sharp fall in the yield growth rate (from 2.6% p.a. in the 80's to l·t p.a. in the 90's). Low productivity is due to the small size of holdings. The small size of holdings impedes application of modern inputs and also adoption of scientific land, soil and water management practices.

11. Land reforms, particularly consolidation of holdings and distribution x of land to the landless, have failed. This is clearly seen in facts like
    (i) Only 4.9 million acres were distributed in 60 years of independence
    (ii) Small size of holdings (holdings below 2 ha) make up 63% of all holdings. Failure of land reforms have impacted on security of agricultural households and modernisation of the farm sector.
12. The share of agriculture in India's GDP has come down to around 14% in 2011-12 but it still accounts for nearly 52% of the occupational workforce. Hence poverty in agricultural households has intensified.

Year	Population Growth Rate (%)	Food grain Growth Rate (%)
1961-71	2.24	2.83
1971-81	2.33	1.8
1981-91	2.16	3.13
1991-2001	1.95	1.1
2001-2011	1.65	.1.03

Trends in Foodgrain Output

Year	2005-06	2006-07	2007-08
2008-09	2009-2010	2010-2011	2011-2012
Output	208.6 m.t.	217. 28 m.t.	230.78 m.t.
234.47 m.t.	218.11 m.t.	244.78 m.t.	257.44 m.t.

(in million tonnes)

(Advance estimates)

Pricing Policy : The Commission on Agriculture Costs and Prices (CA.CP) determines the support price and procurement price for 25 crops. Minimum Support Price (MSP) - is the price at which the government of India buys grain from the farmers if. the market price of the grain drops below the MSP. Procurement Price - is the price at which the government of India buys grain from the farmers voluntarily to meet the requirement of buffer stocks and the public distribution system.

Employment Structure in Agriculture : Full employment in agriculture is 270 days (at the rate 8 hours a day). Punjab and Haryana provide full employment in farm sector. Unemployment and under-employment in agricultural sector is highest in U.P. followed by Bihar, A.P., and Tamil Nadu.

Size of Agricultural Holdings :

- **Marginal Holding :** This includes holdings below 1 3 hectare. This group covers 15% of all agricultural land.
- **Small Holding :** This includes holdings which are between 1-4 hectares. This group covers 41% of the total agricultural land.
- **Medium Holdings :** This group includes holding between 4-10 hectares. It accounts for 27% of the total agricultural area.
- **Large Holdings :** This group includes holdings which are 10 3 hectares and above. It accounts for 17% of the total agricultural areci. Studies have shown that the number of small and medium holdings had increased and account for a major percentage of all holdings. The states with the largest average size of holdings in the descending order are:
  (i) Rajasthan
  (ii) Maharashtra
  (iii) Gujarat
  (iv) M.P.

NAFED : This stands for National Agricultural Cooperative Marketing Federation of India Ltd. It 5 the apex cooperative organisation at the national level. It deals in procurement, distribution and export / import of select agricultural commodities. It also promotes inter-state trade and export trade in farm produce. NAFED is the central nodal agency to undertake price support operations for pulses and oilseeds.

Credit for Agriculture : The Primary Agricultural Credit Societies (PACs) provide short term and medium term loans to farmers. The average membership of a village level PAC is around 14000. The Land Development Banks. These provide long tem credit.

The structure of LDB's is, at the state level are the State Cooperative Agricultural Rural Development Banks (SCARDBs) and at the lower level, the Primary Cooperative Agricultural Rural Development Banks. The main function of the LDB's is to grant loans on the security of agricultural properties. The rural branches of commercial banks and the Regional Rural Banks provide both short term and long term loans to the agricultural sector.. The National Bank for Agriculture and Rural Development (NABARD) is the apex institution at the national level for agricultural credit and provides refinance to all the agencies mentioned above. In rural areas the cooperative credit structure is as follows: 1. At the lowest level are the Primary Agricultural Credit Societies (PAC's). These give loans for short periods of time on soft terms. Since 1970, the commercial banks are making funds available to the PAC's. 2. At the next level are the District Central Cooperative Banks. These are federations of PACs. Their main task is to fund PAC's. .3. At the highest level are the State Cooperative Banks. They control the working of District Central Cooperative Banks and finance them and also provide funds to PAC's.

National Agriculture Insurance Scheme (The New Crop Insurance Scheme) : A new agriculture insurance scheme was launched in 1999. This replaced the Comprehensive Crop Insurance Scheme launched in 1985. The chief points about the new crop insurance scheme are :

1. It will provide insurance cover" to all crops - both food and cash crops.
2. Insurance cover is available to loanee as well as non-loanee farmers. However, the insurance scheme is optional for non-loanee farmers but compulsory for loanee farmers (i.e., those who have availed credit from banks).
3. No ceiling on insurance cover.
4. Insurance claims and financial liability on account of premium subsidy to be shared equally between the centre and the states.
5. The funds under the scheme to be equally contributed by the centre and the states.
6. An Indian Agriculture Insurance Corporation has been set up to manage the scheme.
7. It will be based on the area approach. That is, all the farmers in an area affected by a calamity will be entitled to insurance claims.

Weather Based Crop Insurance Scheme (WBCIS) : This was introduced in 2003 Kharif on'a pilot basis in some states. The weather Based Crop Insurance Scheme (WBCIS) aims to reduce the hardship of the insured farmers against the likelihood of financial loss on account of anticipated crop loss due to adverse weather conditions like drop in temperature, abnormally high temperature or humidity, high wind speeds etc. Weather based crop insurance is built on the fact that adverse weather.conditions affect crop production even when a cultivator has taken all the care to ensure a good harvest. Payout structures are developed to compensate cultivators to the extent of losses deemed to have been suffered by them (based on correlation of crop yields and weather parameters). In India, WBCIS operates on the basis of the area approach, (i.e., for the purpose of compensation, a reference unit area is deemed to be a homogenous unit of insurance). The reference unit area is notified by the state government before the commencement of the seasonTThe sum insured is pre declared per unit hectare by the AIC at the beginning of the crop season (and could be different for differentorops). Premium rates depend"on the expected loss which in turn depends on patterns of weather parameters for a historical period of 25-100 years in the context of ideal weather requirements of a crop. However, the premium rates are limited for the cultivator, and the premium rates beyond the cap are shared by the centre and states on a 50:50 basis. The scheme is open to loanee and non-loanee framers, tenant farmers and also share croppers It is implemented by Agriculture Insurance Company of India Limited (AIC).

The New Agricultural Policy : The New Agricultural Policy announced in 2000 aims at a growth rate of 4% per annum,for the agricultural sector. Its major objectives are:

1. A growth rate of 4% per annum for the agricultural sector.
2. Efficient use of resources and conservat of of soil, water and biodiversity.

3. Growth with equity i.e., growth which is widespread across 'eg c-s and farmers.
4. Agricultural exports to be promoted.
5. Agricultural growth to be sustainable technologically, environmentally and economically.

Objectives:

1. An agricultural grov.th case; an efficient use of resources and widespread growth across regions and farmers.
2. A demand driven growth.
3. A growth that is technologically, environmentally and economically sustainable
4. Agricultural growth to.be 4% per anum.

Features:

1. Conjunctive use of surface and subsurface water.
2. Measures to be taken to reduce biotic pressure an land.
3. To control indiscriminate conversion of agricultural land to non-agricultural use.
4. Unutilised wastelands to be put to agricultural use and afforestation.
5. Shift of government policy from support measures to agriculture to a policy of asset formation in agriculture.
6. To restructure National Seeds Corporation and State Farms Corporation of India for efficient utilisation of investment and manpower.
7. Liberalisation of domestic agricultural market and all controls/regulations, to increase income of farmers. Restriction on movement of agricultural products to be gradually removed.
8. Private sector participation in agriculture to be encouraged (like contract farming/land leasing arrangements) for technology transfer and developing markets for crops.
9. Promote private sector investment in agriculture like agricultural R&D, marketing and post-harvest management.

Criticisms:

1. Too many priorities simultaneously
2. Does not spell out strategies to reach the goals like for e.g., the contribution of various inputs like seeds, fertiliser, irrigation for attainment of the growth rate of 4% for the agriculture sector from the present 2% p.a., has'not been worked out.
3. The policy does not address the disturbing trends that have emerged in Indian agriculture (like decrease in size of holdings, fluctuation in price of products, inadequacies in the extension system, inadequate credit and the fact that share of public investment in agriculture has been coming down).
4. The risk factor in Indian agriculture (the monsoon factor for example) has not been taken into account while setting the high growth rate.

National Policy on Farmers - 2007 : The National Commission on Farmers was set up under th chairmanship of M.S. Swaminathan in 2004. It submitted its final report in 2006. The National Policy on Farmers was framed based on its recommendation in 2007. The main points are

1. Focus on human dimension i.e. the economic well being Of farmers rather than just on production and productivity. This will be the principal determinant of the policy on farmers
2. To promote asset reforms among farmers to ensure that every man and woman in villages, particularly the poor, either posses or have access to a productive asset
3. To promote awareness and efficiency of water use by maximizing yield and income per unit of water in all crop production programmes
4. To implement a drought code, a flood code and a good weather code in drought prone and flood prone areas and arid areas respectively to maximize benefit from monsoon arid also be prepared for likely contingencies
5. use of modern technologies to enhance productivity per unit of land, water, particularly bio-tech, ICT and renewable energy technology to launch an evergreen revolution.
6. A national agricultural bio-security system to be set up to organise a coordinated agricultural bio-security programme

7. To promote use of good quality seeds including disease free planting material particularly to raise small farm productivity
8. To develop support services for women in farms like creches, child care centers and provision of nutrition
9. Credit counseling centers to be established in areas with severe farmer indebtedness to enable them to come out of the debt trap
10. A comprehensive national social security scheme for farmers to be implemented to ensure livelihood security, to provide for insurance cover on account of old age, illness etc
11. The minimum support price to be implemented effectively to ensure remunerative prices for agro produce
12. The market intervention scheme (a scheme of Department of Agriculture and Cooperation where on request by state governments, there is procurement of horticultural and agriculture commodities of a perishable nature which are riot covered by the minimum support price mechanisnn) to be. strengthened
13. Setting up farm schools to promote farmer learning and strengthening farmer learning and strengthening extension services, setting up of Gvan Choupals in villages, to use ICT for farmer services and setting up community foodgrain banks
13. To promote the establishment of a single national market by relaxing controls on inter-state and intra-state movement of agro-produce
14. expanding the grain basked of the PDS to include nutritious crops like bajra, jowar, ragi etc. and
15. setting up.a cabinet committee on food security. The policy to be implemented by the National Commission on Farmers set up in 2004.

The National Food Security Mission : This was launched by the Department of Agriculture and Cooperation, Ministry of Agriculture. It will be a centrally sponsored programme to increase the production of rice, wheat and pulses by 10, 8 and 2 million tonnes respectively over the existing levels by the end of the 11th 5-year plan. This will be achieved through area expansion, increase in productivity, restoring soil fertility, creating employment opportunities and enhancing farm level economy. The mission seeks to distribute quality seeds of HYV and hybrids, popularizing newly developed varieties, increase support for micronutrients and farmer training. The identified districts will enjoy flexibility to adopt any local area specific intervention as part of the strategic Research and Extension Plan prepared for t|ne identified districts. Each district will get 2 crore in the 11th plan for two or more crops identified in the mission i.e., from rice, wheat and pulses and 1 crore for any one of the two crops. The total outlay in the 11th plan is 4882 crore and it is being implemented in 312 districts of 17 states.

HORTICULTURE : Horticulture covers a group of crops such as vegetables / fruits, plantation crops, aromatic and medicinal plants. The horticulture sector contributes roughly 25% of agro- GDP from around only 8% of the cultivated area. It provides nutritional and livelihood security, helps in poverty alleviation 'and employment generation. India is 2nd in the world output of fruits and vegetables. India is blessed with both tropical and temperate climates which are well suited for horticulture and plantation crops. In addition, these crops,can be raised on marginal and degraded lands which are unsuitable for other crops. The thrust in horticulture development is expanding area, improving productivity, reducing cost of production, extending marketing support, developing cold chains and strengthening credit and organizational support.

Importance :

1. Increases supply of nutritive foods like fruits / vegetables.
2. Improves rural economy by generating employment / income, particularly for the small and marginal farmers.
3. Contributes to foreign exchange without much liability on the import front.

Measures Taken : Horticultural Board set up in Gurgoan in 1984 to promote the integrated development of horticulture industry. The National Horticulture Mission seeks to facilitate the holistic development of horticulture by promoting latest technologies including providing good quality planting material , promoting organic farming including development of post-harvest technology and management, marketing support and developing processing facilities. The cluster approach under the mission is to help in the establishment of food processing units for fruits and vegetables. The government has launched two centrally sponsored programmes:

1. The Technology Mission for Integrated Development of Horticulture in Northeastern states and Sikkim in 2001-02. This has been extended to the Himalayan states of J & K, Himachal Pradesh and Uttarakhand in 2003-04.
2. The National Horticulture Mission was launched in 2005-06 in the remaining states. In 2006-07, development of modern terminal markets has been introduced as a new component in the National Horticulture Mission.

The National Horticulture Board is implementing many programmes to reduce post harvest losses. A capital investment scheme called Gramin Bhandaran Yojana for construction and renovation of rural godowns is being implemented. The Vishesh Krishi Upaj Yojana has been launched to promote export of fruits / vegetables and flowers besides minor forest produce, and their value added products. This providesifor duty rebates. The 11th plan proposed to set up 30 mega food parks which will have state of art technology and supply chain for food processing units linked to them. These will be state owned.

National Horticultural Mission (NHM) : This aims at holistic development of horticulture by using latest technologies (including production / supply of good quality planting material through tissue culture, expansion of area with improved plants, rejuvenation of senile orchards, organic farming, integrated nutrient management and development of post - harvest management and marketing).

Vision 2015 for Food Processing Industry : This was launched at 2005 to increase the level of food processing of perishables from 6% to 20% and to increase value addition of perishables from 20% to 35% by 2015. The vision also seeks to improve share of India in global food trade from 1.6% to 3% and to increase processing of fruits and vegetables to 15%. The 11th plan programmes for giving a thrust to food processing industry include.

1. Mega Food Park Scheme with an outlay of 1575 crore.
2. Modernization of Abattoirs with an outlay of 825 crore.
3. Development of Integrated Cold Chain Facilties with an outlay of 210 crore.

Loan Waiver Scheme : This was a major initiative to reduce the distress of indebted farmers, particularly the small and marginal farmers. This was announced in 2007. Under the scheme, all loans owed by small and marginal farmers to Regional Rural Banks, scheduled commercial banks and agriculture cooperative credit societies upto 31-3-2007 and overdue on 31-12-2007 were waived. The interest not paid on investment loans and due on 31-12-2007. Were also waived. For large farmers, a one time settlement for loans overdue on 31-12-07 was offered if they paid 75% of the overdue loan. For small farmers, the waiver was for those holding upto 2 hectares, and where the crop loan was not more than 1 lakh rupees as an investment loan. This benefitted 3.69 crore small and marginal farmers and 1 crore other farmers.

Kisan Credit Card Scheme: This was introduced in 1998 1999 to provide timely and flexible availability of production credit to farmers. All categories of farmers including tenant farmers, share croppers and oral tenants are eligible for the card. Commercial banks, Regional Rural Banks (RRB) and cooperative banks implement the scheme. The credit is repayable within one year. The card includes a micro - insurance policy of 50,000 rupees providing for insurance Coverage upon death and disability upon payment of a premium of Rs. 5 per year. The interest rate is 7% per anum.

Rashtriva Krishi Vikas Yoiana: This was launched in 2007 to provide incentives to the states which'increase investment in agriculture. The 11th 5 year plan allocated 25,000 crore to the scheme. It will be a state plan scheme and the eligibility of a state under the scheme would depend upon the additional amount allocated by the state over and above the base line percentage expenditure incurred on agriculture and allied sectors. The funds under the scheme are provided to the state as 100% grant by the centre. The RKVY aims at achieving 4% average annual growth in agricultural sector during the 11th 5-vear plan. The objectives of the scheme are

1. To provide incentives to states so that they increase public investment in agriculture and allied sectors.
2. To provide autonomy and flexibility to states in planning / executing schemes, in agricultuVe / allied sectors.
3. To help states develop agricultural plans for districts and states based on agro-climatic conditions, availability of technology and natural resources.
4. To ensure that local .needs and local crops along with local priorities are reflected in their plains.
5. To achieve the goal of reducing the yield gap in important crops.
6. To maximize returns to farmers.

RIDF : Rural Infrastructure Development Fund (RIDF) was set up in 1995-96 to provide loans to state governments and state owned corporations for projects in minor / medium irrigation, soil conservation, watershed management and for projects in rural physical infrastructure (like roads, market yard,s). 'Investment projects in social infrastructure such as construction 6f health care centres, schools, drinking water projects are also.supported by RIDF. The RIDF is managed by NABARD. The RIDF is financed from monies from banks to the extent of their shortfalls in priority sector lending targets.

Trends in Farm Wages: During 2001-01 to 2006-07, real farm wages varied between 117 rupees per day in 2001-02 to 111 rupees per day in 2006-07. But since 2007- 08, real farm wage has been rising from a.low of 111 rupees in 2006-07 to 154 rupees a day in 2011-12 with an average annual growth rate of 6.8% per anum. This is because of high growth of agro GDP in the 11th plan (Where the growth rate was 3.4% p.a. compared to 2.4% per anum in the 10th plan), rising prices of agro products, increase in minimum support price of major crops and the impact of Mahatma Gandhi National Rural Employment Guarantee Programme.

Agriculture Produce and Marketing Committee Act : The apmc Act in each state requires all agricultural products to be sold only in government regulated markets like mandis. These markets impose substantial taxes on buyers in addition to commission and fee taken by middlemen. The Act also makes contract farming illegal and companies cannot directly buy from the farmers as they have to buy from government.regulated market. Though the main aim of the Act was to prevent exploitation of farmers by intermediaries, the controls under the Act have acted as disincentives to farmers, traders and industries. Hence the central government enacted a model Agriculture Produce Marketing (Development and Regulation) Act-2003 which provides for direct marketing by farmers, contract farming and setting up of agricultural markets both in private and cooperative sectors. Many states have repealed their APMC Acts and are in the process of framing aws in accordance with the model Act of the centre, as agriculture is a state list subject.

Mega Food Parks : These are to be set up under Infrastructure Development Scheme. Each park must benefit 6,000 farm products and at least 25,000 to 30,000 farmers indirectly. These should generate 40,000 jobs directly or indirectly. Each will be set up with an investment .of 100 crore to leverage an additional investment of 250 crores. Annual turnover of each project should be 500 crore. Each park should have 30-40 food processing industries. 15 such parks are already being set up and 15 more are to be set up.

Mahila Kisan Sashaktikaran Pariyojana (MKSP): it is a sub-component of the National Rural Livelihood Mission. The primary objective is to empower women in agriculture by making systematic investments to enhance their participation and productivity and, create/sustain agriculture based livelihoods for rural women. The specific objectives are

1. Enhance productive participation of women in agriculture.

2. To create sustainable agricultural livelihood opportunities for women in agriculture.
3. To improve skills/capabilities of women in agriculture to support farm and non-farm activities.
4. To ensure food and nutrition security at the household and the community level.
5. To enable women to have better access to inputs and services of government and other agencies.
6. To enhance managerial capacities of women in agriculture for better management of bio-diversity.

Strategy: The project implementing agency under MKSP is expected to follow the following strategy

1. Use of locally adopted, resource conserving knowledge-centric, farmer-led and environment friendly technologies.
2. Coprdinated action by communities and community based institutions such as SHG, NGO's, farmer groups
3. Inculcating community mobilization skills among women in agriculture
4. To enhance skill base of women in agriculture to help them pursue their livelihoods on a sustainable basis. The capacity building and skill upgradation to be through formal and vocational courses.
5. To strategise MKSP to target the poorest of the poor women and most vulnerable women such as SC/ST women, landless women and women of primitive tribal groups
6. Priority to be given to single woman headed households and women groups engaged in agriculture.
7. Participatory approach and bottom up planning will constitute core values of the scheme.

Recent Budgets and Initiatives for Agriculture : In budget 2011-12, 400 crore was given to improve rice agriculture in eastern states (Assam, West Bengal, Odisha, Bihar, Jharkhand, Chhattisgarh and Eastern U.P.) under the Rashtriya Knshi Vikas Yojana. Around 1200 crore was allocated for increasing production of pulses, oil palm, vegetal the Tusters and millets. A national programme to increase protein production with an outlay of 300 crore was also announced, The credit to agriculture was raised from 3.75 lakh crore in 2010-11 to 4.75 lakh crore. The outlay for RIDF was raised from 16000 crore in 2010-11 to 18000 crore in 2011-12. In the budget 2012-13, the credit for agriculture has been raised to 5.75 Takh core. It also introduced a programme of improved delivery of subsidy in 50 districts on a pilot basis in which subsidy will be paid to farmer accounts. The outlay to support rice agriculture in the east was raised to 1000 crore. A National Mission on Food Processing to,be launched. An Irrigation and a Water Finance Company to be started. The outlay for Mahila Kisan Sashaktikaran Pariyojana was raised to 3918 crore. Around 200 crore has been set aside for agricultural research.