



सत्यमेव जयते

# ECONOMIC SURVEY, ASSAM

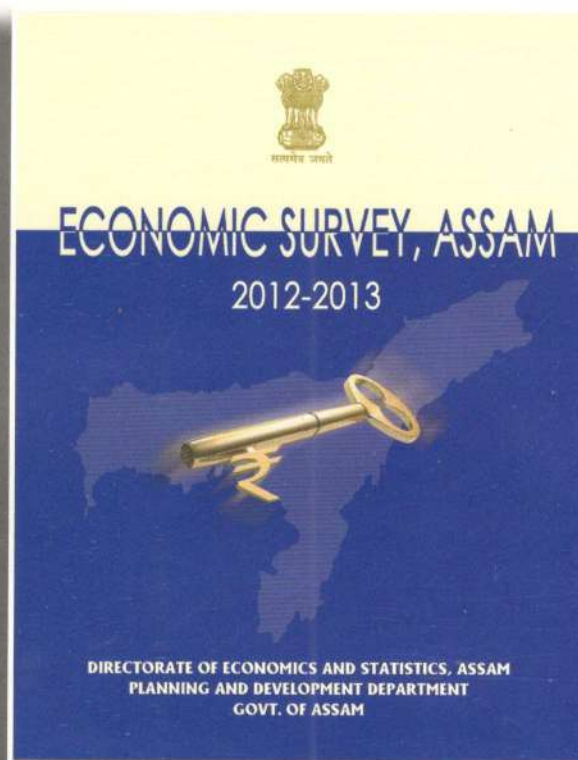
2012-2013



**DIRECTORATE OF ECONOMICS AND STATISTICS, ASSAM  
PLANNING AND DEVELOPMENT DEPARTMENT  
GOVT. OF ASSAM**

# ECONOMIC SURVEY, ASSAM

## 2012-13



**DIRECTORATE OF ECONOMICS AND STATISTICS, ASSAM**  
**PLANNING AND DEVELOPMENT DEPARTMENT**  
**GOVT. OF ASSAM**

## Foreword

The Directorate of Economics and Statistics, Assam has been regularly publishing its annual prestigious report "Economic Survey, Assam" with a view to focus the performance of the State Economy.

The present issue of Economic Survey, 2012-13 pertaining to the State attempted to have an analytical view of the State economy and the achievements made in different sectors of the economy through various plans and programmes initiated by the Govt. during the period. The report also provides the latest statistical updates along with a short overview of the State.

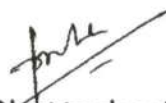
I acknowledge with gratitude the co-operation extended by different Govt. departments and organizations by making available relevant information required for analysis of the State economy for presentation in this important document. I look forward for such type of assistance in near future.

The Economic Survey, Assam, 2012-13 is the outcome of the sincere and dedicated efforts of all officers and staff of the Directorate of Economics and Statistics associated in compilation of this report. I wish to place on record my sincere appreciation for these officers and staff for valuable contribution in bringing out this report.

I hope that this edition of Economic Survey would be of immense help to the planners, administrators, academicians, researchers, students etc in carrying out their respective activities.

Comments, suggestions for improvement of future issues of this publication are most welcome.

Date: February, 2013

  
P. K. Bhattacharjya  
Director of Economics and Statistics, Assam.

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**ASSAM AT A GLANCE**  
**1. AREA, ADMINISTRATIVE UNIT AND POPULATION**

Sl. No.	ITEM	Particulars
<b>A.</b>	<b>AREA</b>	
(a)	Geographical area (in sq. Km.) as per 2011 Census	78438
<b>B.</b>	<b>ADMINISTRATIVE UNITS</b>	
(a)	District (as on 31 <sup>st</sup> March, 2012)	27
(b)	Sub-Division (as per 2011 Census)	56
(c)	Revenue Circle (as per 2011 Census)	184
(d)	C.D. Blocks (as on March 2012)	219
(e)	Gaon Panchayats (as on March 2012)	2202
(f)	Villages (Census, 2011)	26395
(g)	Total Towns (2011 Census)	214
	(i) Statutory Towns	88
	(ii) Census Towns	126
(h)	Police Station (2011)	301
(i)	Police Out Post (2011)	193
<b>C.</b>	<b>POPULATION as per 2011 Census</b>	
(a)	(i) Total Population (Provisional)	31169272
	(ii) Male	15954927
	(iii) Female	15214345
	(iv) Percentage of Rural Population	86
	(v) Percentage of Urban Population	14
	(vi) Sex-Ratio (Female per thousand male)	954
	(vii) Density of Population (per Sq. Km.)	397
	(viii) Decadal percentage variation (2001-2011)	16.93
(b)	Population of age group (0-6 years) (Provisional)	
	(i) Male	2305088
	(ii) Female	2206219
	(iii) Total	4511307
	(iv) Sex-Ratio	957
(c)	Literacy Rate (Provisional)	
	(i) Male	78.81
	(ii) Female	67.27
	(iii) Total	73.18

Sl. No.	ITEM	Particulars
(d)	Vital Statistics: (2011)	
	(i) Birth rate (per thousand)	22.8
	(ii) Death rate (per thousand)	8.0
	(iii) Infant mortality rate (per thousand)	55
	(iv) M.M.R. (2007-2009) (death per lakh live birth)	390
(e)	BPL Population (2009-10) using Tendulkar methodology (in percentage)	
	(i) Rural	39.9
	(ii) Urban	26.1
	(iii) Total	37.9

## 2. SECTORAL STATISTICS

Sl. No.	ITEM	Ref. Year	Unit	Particulars
I	<b>AGRICULTURE</b>			
A.	<b>Land Utilisation</b>			
(a)	Net area sown	2010-11	000 Hectare	2811
(b)	Area sown more than once	"	"	1349
(c)	Total cropped area	"	"	4160
(d)	Percentage of Net Area sown to total Geographical Area	"	Percent	35.83
(e)	Percentage of Area Sown more than once to Net Area sown	"	"	48.01
B.	<b>Area under important crops</b>			
(a)	Autumn Rice	2011-12	000 Hectare	276
(b)	Winter Rice	"	"	1876
(c)	Summer Rice	"	"	394
(d)	Total Rice	"	"	2546
(e)	Wheat	"	"	40
(f)	Total Pulses	"	"	132
(g)	Other cereals & small millets	"	"	4
(h)	Maize	"	"	21
(i)	Total food grains	"	"	2743
(j)	Sugarcane	"	"	28
(k)	Jute	"	"	66
(l)	Total oil Seeds	"	"	287

Sl. No.	ITEM	Ref. Year	Unit	Particulars
C.	<b>Production of important crops</b>			
	(a) Autumn Rice	2011-12	000 tonnes	338
	(b) Winter Rice	"	"	3298
	(c) Summer Rice	"	"	1080
	(d) Total Rice	"	"	4716
	(e) Wheat	"	"	49
	(f) Total Pulses	"	"	73
	(g) Maize	"	"	17
	(h) Other cereals & small millets	"	"	2
	(i) Total food grains	"	"	4857
	(j) Total Oil seeds (excluding Coconut)	"	"	152
	(k) Sugarcane (in cane)	"	"	1053
	(l) Jute (000 bales of each 180 kgs)	"	"	608
D.	<b>Yield rate</b>			
	(a) Autumn Rice	2011-12	Kg/Hectare	1242
	(b) Winter Rice	"	"	1785
	(c) Summer Rice	"	"	2744
	(d) Total Rice	"	"	1876
	(e) Wheat	"	"	1209
	(f) Maize	"	"	802
	(g) Total Pulses	"	"	560
	(h) Total Food grains	"	"	1792
	(i) Total Oilseed	"	"	564
	(j) Sugarcane (cane)	"	"	37055
	(k) Jute (Dry fibres)	"	"	1669
E.	<b>Index of Agricultural Production (All commodities)</b> (Base Triennium ending 2007-08=100)	2011-12	-	126.44
F.	<b>Per capita Food Grain Production</b>	2011-12	Kg.	156
	<b>AGRICULTURE CENSUS</b>			
G.	<b>Number of operational holdings</b>			
	(a) Size Marginal (below 1 hectare)	2010-11(P)	000 Nos.	1831
	(b) Size Small (1.0 to 2.0 hectare)	"	"	497
	(c) Size Semi Medium (2.0 to 4.0 hectare)	"	"	303
	(d) Size Medium (4.0 to 10.0 hectare)	"	"	85
	(e) Size Large (above 10 hectare)	"	"	4
	(f) All size	"	"	2720

Sl. No.	ITEM	Ref. Year	Unit	Particulars
H.	<b>Area under operational holdings</b>			
	(a) Size Marginal (below 1 hectare)	2010-11(p)	000 Hectare	775
	(b) Size Small (1.0 to 2.0 hectare)	"	"	687
	(c) Size Semi Medium (2.0 to 4.0 hectare)	"	"	818
	(d) Size Medium (4.0 to 10.0 hectare)	"	"	437
	(e) Size Large (above 10 hectare)	"	"	282
	(f) All size	"	"	2999
I.	<b>Average size of operational holdings</b>	"	Hectare	1.10
II.	<b>LIVESTOCK AND VETERINARY</b>			
	<b>Livestock and Poultry Population (Sample Survey)</b>			
A.	Livestock:			
	(i) Crossed Breed Cattle	2011-12	000 Nos.	470
	(ii) Indigenous Cattle	"	"	8469
	(iii) Buffaloes	"	"	544
	(iv) Goat	"	"	2796
B.	Poultry:			
	(i) Fowls	"	"	8579
	(ii) Ducks	"	"	3228
C.	Hospitals, Dispensaries & Block Dispensaris	"	"	499
D.	(a) Production of Milk	"	Million Ltrs.	838
	(b) Production of Egg	"	Million Nos.	471
	(c) Production of Meat	"	000 Tonnes	34
III.	<b>FOREST</b>			
	(a) Area under Reserved Forest	2011-12	000 Hectare	1419
	(b) Area under proposed Reserved Forest	"	"	154
	(c) Total Forest excluding unclassified State Forest	"	"	1932
	(d) Number of National Parks	"	Nos.	5
	(e) Number of Wildlife Sanctuaries	"	"	18
	(f) Total Forest revenue	"	₹ in lakh	7006.80
IV.	<b>FISHERY</b>			
	(a) Beel Fisheries (Registered and Unregistered)	2011-12(P)	Number	1197
	(b) Area under Beel Fisheries	"	Hectare	100815
	(c) Ponds and Tanks	"	Number	294381
	(d) Area under Ponds and Tanks	"	Hectare	41949
	(e) Total Area under Fisheries	"	"	393734
	(f) Production of Fish Seed	"	Million Nos.	4490
	(g) Production of Fish	"	000 Tonnes	244



Sl. No.	ITEM	Ref. Year	Unit	Particulars
V.	<b>SERICULTURE</b>			
A.	<b>Sericulture Villages</b>	2011-12	Nos.	10740
B.	<b>Families engaged in Sericulture</b>			
	(a) Eri	"	"	183000
	(b) Muga	"	"	39750
	(c) Mulberry	"	"	31766
C.	<b>Total area under Silk worm's food plants</b>			
	(a) Eri	"	Hectare	8044
	(b) Muga	"	"	9400
	(c) Mulberry	"	"	6824
D.	<b>Yield of Cocoons</b>			
	(a) Eri Cut Cocoon	2011-12	M.T	1622.51
	(b) Muga Cocoon	"	Lakh Nos.	5812.40
	(c) Mulberry reeling Cocoon	"	M.T	129.28
E.	<b>Production of Silk Yarn</b>			
	(a) Eri Raw Silk	2011-12	M.T	1061.61
	(b) Muga Raw Silk	"	"	114.56
	(c) Mulberry Raw Silk	"	"	11.25
F.	<b>Number of Spinning Charkhas</b>	"	Nos.	4570
VI.	<b>POWER</b>			
	(a) Total Installed Capacity	2011-12	M.W	376.7
	(b) Total Unit Generation	"	MU	1773
	(c) Availability	"	"	5670
	(d) Total unit Billed to ultimate consumers	"	"	3969.89
	(e) Energy Requirement	"	"	6081
	(f) Total villages electrified	"	Nos.	22294
VII.	<b>INDUSTRY AND MINERALS</b>			
A.	<b>Production of some Selected Industries</b>			
	(a) Petroleum (Crude)	2011-12	000 M. T	5023
	(b) Coal	"	"	590
	(c) Jute	"	"	20
	(d) Fertilizer	"	"	394
	(e) Cement	"	"	863
	(f) Wheat Flour	"	"	1166
	(g) Lime Stone	"	"	242
	(h) Natural Gas (Utilized)	"	MCM	2726

Sl. No.		ITEM	Ref. Year	Unit	Particulars
	B.	Registered Factories	2011	Nos.	11717
	C.	Workers in Registered Factories	"	000' Nos.	160551
	D.	(i) Index of Industrial Production (Base 2004-2005=100)	2011-12(P)	-	147.75
		(ii) Index of Mineral Production (Base 2004-2005=100)	2011-12	-	108.35
VIII.		<b>TEA , COFFEE &amp; RUBBER INDUSTRY</b>			
	(i)	Tea Gardens	2007	Nos.	64597
	(ii)	Area under Tea Cultivation	2011	Hectare	317814
	(iii)	Production of Tea	"	tonnes	508741
	(iv)	Area under coffee cultivation	2011-12	Hectare	909.49
	(v)	Production of coffee	"	M.T	57.00
	(vii)	Area under Rubber Cultivation	"	Hectare	32117.43
	(viii)	Production of Rubber	"	M. T	10950
IX.		<b>TRANSPORT &amp; COMMUNICATION</b>			
	A.	<b>Vehicle</b>			
	(i)	Total Vehicles Registered	2011-12	Nos.	226010
	(ii)	Total Vehicles on Road	"	Nos.	1528269
	(iii)	Total Revenue earned during the year	2011-12(P)	₹ in Crore	307.24
	B.	<b>ROAD</b>			
		<b>Total P.W.D. Road Length (including N.H.)</b>	2011-12	Km.	47448
	(a)	Surfaced (Black topped)	"	"	21200
	(b)	Un-Surfaced	"	"	24300
	(c)	National Highway	"	"	1948
	(d)	State Highway	"	"	3134
		<b>Railway route Length (Total)</b>	2011-12	Km.	2458.93
	(a)	Broad Gauge	"	"	1470.06
	(b)	Meter Gauge	"	"	988.87
	C.	<b>Air Transport</b>			
	(a)	Air Traffic Movement	2009-10	Nos.	35270
	(b)	Passenger Handled	"	"	1997506
	(c)	Freight(Loaded + Unloaded)	"	Tonne	5829
	(d)	Average flight per day	"	Nos.	97
	(e)	Average Passenger Handled per day	"	Nos.	15513
	(f)	Average Cargo Handled per day	"	Tonne	17

Sl. No.	ITEM	Ref. Year	Unit	Particulars
D.	<b>Inland Water Transport</b>			
(i)	Total No. of Ferry Services	2010-11	Nos.	81
(ii)	Passengers Transported	"	('000 Nos.)	11345
(iii)	Goods Transported	"	M.T.	378164
E.	<b>POSTAL</b>			
(a)	Post Office	2011-12	Nos.	4007
(b)	Letter Boxes	"	"	16386
F.	<b>TELEPHONE</b>			
(a)	No. of Telephone Exchanges	Dec'2011	Nos.	597
(b)	Direct Exchange lines (Fixed+WLL+MTS)	"	"	1827575
(c)	Villages covered by Public Telephones (VPTs)	"	"	24326
(d)	Wire line phones (Fixed DELs)	"	"	231683
(e)	Wireless Phones (GSM+CDMA)	"	"	13926481
(f)	Public call offices	"	"	23271
X.	<b>TOURISM</b>			
(a)	Number of Tourists using Tourist lodges			
(i)	Indian Tourist	2011-12	Nos.	26439
(ii)	Foreign Tourist	"	"	696
(b)	Number of Tourist using other accommodation like Hotel etc.			
(i)	Indian Tourist	2011-12	"	4381897
(ii)	Foreign Tourist	"	"	15964
(c)	Revenue earned from Tourist lodges	"	₹in Lakh	184.49
XI.	<b>EMPLOYMENT</b>			
(a)	Total No. of Employment Exchanges	2011	Nos.	82
(b)	Employment in Organised Sector	"	"	1120553
(i)	Employment in Public Sector	"	"	537044
(ii)	Employment in Private Sector	"	"	583509
(c)	Educated Applicants in Live Register	"	"	1312987
(d)	Total Applicants in Live Register	"	"	1729029
XII.	<b>HEALTH</b>			
(a)	Government Hospitals	2011	Nos.	22
(b)	Primary Health Centres	"	"	844
(c)	Sub-divisional Civil Hospitals	"	"	13
(d)	Sub Centres	"	"	4592

Sl. No.	ITEM	Ref. Year	Unit	Particulars
XIII.	<b>EDUCATION</b>			
A.	<b>Institution</b>			
(a)	No. of Primary School	2011-12	Nos.	35541
(b)	No. of Middle School	"	"	11423
(c)	No. of High School	"	"	5460
B.	<b>Enrolment</b>			
(a)	Primary School	2011-12	000 Nos.	3928
(b)	Middle School	"	"	1833
(c)	High School	2011-12	"	761
XIV.	<b>BANKING</b>			
(i)	Scheduled Commercial Banks (Reporting offices)	March/2012	Nos.	1574
(ii)	Total deposit	"	₹ in crore	67455
(iii)	Total credit	"	"	25171
(iv)	Credit-Deposit Ratio	"	Percent	37.32
(v)	Population served per Bank	"	000 Nos.	20
(vi)	Regional Rural Bank	"	Nos.	407
(vii)	Deposit of Regional Rural Banks	"	₹ in crore	5168
(viii)	Credit of Regional Rural Banks	"	"	2777
XV.	<b>RURAL DEVELOPMENT PROGRAMME</b>			
A.	<b>SGSY</b>			
(a)	Physical Achievement			
(i)	Total Self-Help Groups formed	2011-12	Nos.	24218
(ii)	Women SHGs formed	"	"	15394
(b)	Financial Performance			
(i)	Total fund available	2011-12	₹ in lakh	24363.95
(ii)	Total expenditure	"	"	21627.37
(iii)	Percentage of expenditure	"	Percent	88.77
B.	<b>IAY</b>			
(a)	Annual Target	2011-12	Nos.	166913
(b)	Physical Achievements	"	"	143770
(c)	Percentage of Achievements	"	Percent	86.13
C.	<b>MGNREGA</b>			
(i)	Total Fund Available	2011-12	₹ in lakh	83061.96
(ii)	Total Expenditure	"	"	68661.11
(iii)	Person days generated	"	Lakh Mandays	353.52

Sl. No.	ITEM	Ref. Year	Unit	Particulars
XVI.	<b>STATE INCOME</b>			
A.	<b>Net State Domestic Product</b>			
(i)	At Current Prices	2011-12(Q)	₹ in crore	114695
(ii)	At Constant (2004-05) Prices	"	"	70544
B.	<b>Per Capita Net State Domestic Product</b>			
(i)	At Current Prices	2011-12(Q)	In Rupees	37250
(ii)	At Constant (2004-2005) Prices	"	"	22910
XVII.	<b>STATE GOVT. RECEIPTS AND EXPENDITURE</b>			
A.	<b>Total Revenue Receipts</b>	2012-13 (BE)	₹ in lakh	3766284
(i)	Central Taxes	"	"	1100870
(ii)	State Taxes	"	"	800923
(iii)	Non-Tax Revenue (Collection by the State)	"	"	348746
(iv)	Non-Tax Revenue (Contribution from Centre)	"	"	1515745
B.	<b>Total Revenue Expenditure</b>	2012-13(BE)	₹ in lakh	3629886
(i)	General Services	"	"	1033007
(ii)	Social and Community Services	"	"	1500018
(iii)	Economic Services	"	"	703667
(iv)	Grants-in-aid & Contribution	"	"	393194
XVIII.	<b>STATE PLAN</b>			
(i)	Eleventh Plan Expenditure (anticipated)	2007-12	"	2996400
(ii)	Twelfth Plan projected outlay (at 2011-12 prices)	2012-17	"	9867188
(iii)	Annual Plan Outlay (proposed)	2012-13	"	1453733

P : Provisional  
E : Estimated  
Q : Quick  
BE : Budget Estimate



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## CHAPTER – I

### AN OVERVIEW OF THE STATE

Assam is situated in the North-East region of India – bordering seven States viz. Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries viz. Bangladesh and Bhutan. With a geographical area of 78,438 sq. km i.e, about 2.4 percent of the country's total geographical area Assam provides shelter to 2.58 percent population of the Country. Most of the State's population lives in the lush and verdant valleys of its two major river systems in the twenty four districts of the Brahmaputra valley and the three districts of the Barak valley. The less densely populated two hill districts - Karbi-Anglong and Dima Hasao, separated the two valleys. For administrative and revenue purposes, the State has 27 districts including Kamrup (Metro) district and four districts under the Bodoland Territorial Council (BTC) areas viz. Kokrajhar, Baska, Chirang and Udalguri.

#### Population

According to the Census of India, 2011 the population of Assam stands at 3,11,69,272 of which 1,59,54,927 are males and 1,52,14,345 females. The decadal growth of the State's population works out at 16.93 percent during the decade 2001-2011 as against 17.64 percent for the country as a whole.

The density of population of the State has gone up to 397 as against India's density 382 as per 2011 Census. The corresponding State's figure as per 2001 Census was 340.

#### State Domestic Product

The state of economy in terms of Gross State Domestic Product (GSDP) at factor cost is expected to grow at the rate of 6.88 percent in real terms (at 2004-05 prices) as per Advance Estimates for 2012-13 as against the growth rate of 6.47 percent estimated in the previous year. In terms of Rupee value of the Gross State Domestic Product (GSDP) at constant (2004-05) prices for the year 2012-13 (Advance Estimates), it is estimated at ₹85690.32 crore as against ₹.80171.91 crore for 2011-12 (Quick Estimates) and reflecting the growth of 6.88 percent. The estimated growth of 6.88 percent in GSDP of the State for 2012-13 comprises of 3.80 percent growth in respect of Agriculture and Allied sector, 3.66 percent in Industry sector and 9.30 percent in Services sector.

As per Advance Estimates for 2012-13, the growth of the 'Industry' sector, comprising of 'Mining & Quarrying', 'Manufacturing' (Registered and Unregistered), 'Electricity, Gas & Water Supply' and 'Construction', is expected to be moderately increased to 3.66 percent as compared to 2.95 percent in the previous year 2011-12. This marginal increase of growth is due to the contribution made by the sub sectors 'Construction (6.15 percent)', 'Mining & Quarrying' (1.67 percent) and 'Manufacturing' (3.29 percent).

The Services sector comprising of Trade, Hotels & Restaurants, Transport by other means & Storage, Real Estate & Business Services and Communications, Banking & Insurance, Social & Personal services is likely to grow by 9.30 per cent during 2012-13 as compared to 9.34 per cent growth achieved in 2011-12 due to comparatively lower performance to be shown by the key sub sectors of the services sector like 'Communication', 'Storage', 'Banking & Insurance' and 'Public Administration'.

In respect of the 'Agriculture and Allied' sector, 'Forestry' sector is likely to experience moderately low growth of 4.73 percent as compared to the previous year's growth of 5.61 percent. However, the 'Agriculture' alone and 'Fishing' sector is expected to attain a higher growth rate of 3.45 percent and 7.14 percent respectively as compared to the previous year and therefore, all together Agriculture and Allied sector is expected to grow in a higher rate of 3.80 percent in 2012-13 as compared to 2.95 percent estimated in 2011-12.

The Net State Domestic Product (NSDP), also known as State Income, at 2004-05 prices is also expected to grow by 6.91 percent as per Advance Estimates for the year 2012-13 compared to 6.43 percent during 2011-12.

It is expected that as per Advance Estimates for 2012-13, the per capita income will attain the level of ₹24198.00 at constant prices (2004-05) and ₹42036.00 at current prices as against ₹22910.00 and ₹37250.00 at constant (2004-05) prices and current prices respectively in the previous year 2011-12. In terms of growth rate, per capita income is increased by 5.62 percent at constant (2004-05) prices and 12.85 percent at current prices in 2012-13 over the previous year.

## State Finance

The analysis of the Assam Government Budget 2012-13 reveals that the receipt under the consolidated fund is expected to be ₹42380.68 crore. Out of this, ₹37662.84 crore is on Revenue Account and the remaining ₹4717.84 crore is under Capital Account. After taking into account of the receipt of ₹243916.06 crore under Public Accounts and ₹50.00 crore under Contingency Fund, the aggregate receipts amount is estimated at ₹286346.74 crore. The total expenditure from the consolidated fund of the State in 2012-13 is estimated at ₹43151.79 crore, of which ₹36298.86 crore is on Revenue Account and ₹6852.93 crore is on Capital Account. Taking into account of the expenditure of ₹242359.28 crore under Public Account and ₹50.00 crore under Contingency Fund, the aggregate expenditure for the year is estimated at ₹285561.07 crore. Thus, it is expected to have a surplus of ₹785.67 crore during the year 2012-13 which together with the opening deficit of ₹1079.11 crore for the year 2012-13 will lead finally to an estimated closing deficit of ₹293.44 crore.

In the Budget 2012-13 the State expects ₹8009.22 crore as Tax Revenues and ₹3487.47 crore as Non-Tax revenue amounting to ₹11498.69 crore under State's Own Resources. The expected transfers from the Centre is ₹37664.84 crore which include ₹11008.70 as Share in Central Taxes and ₹15157.45 crore as Grants from the Centre. In respect of Revenue Expenditure, the expected Plan expenditure in the Budget 2012-13 is ₹11519.68 crore and the estimated Non-Plan expenditure is ₹24779.18 crore of which expected interest payment component is ₹2119.95 crore and under Pension the expenditure is expected to be ₹2588.87 crore. Budget estimates of 2012-13 show revenue surplus of ₹1363.98 crore and fiscal deficit is pegged at 2.99 percent of GSDP.

## Banking

As per the Reserve Bank of India's publication "Quarterly Statistics of Deposits and Credit of Scheduled Commercial Banks" for the Quarter ending of March, 2012, the number of reporting Bank Offices of all Scheduled Commercial Banks in Assam stood at 1574 against 1504 Bank Offices as reported in March 2011. The average population covered per Bank branch office (based on the Provisional population Census, 2011) in the State was around 19.8 thousand compared to all India average of 12.8 thousand as on March, 2012. The aggregate bank deposit and gross credit was ₹67455.00 crore and ₹25171.00 crore respectively as on March 2012. The credit deposit ratio was 37.3 percent during the year against 35.6 percent in 2010-11. Out of the total 1574 reporting offices as on March 2012, 810 bank offices (52 percent of the total reporting offices) located in the rural areas of Assam and share more than 18 percent of the total bank deposits of the State.

## Agriculture

The economy of Assam continues to be predominantly agrarian. Agriculture sector continues to support more than 75 percent population of the State directly or indirectly providing employment of more than 53 percent of the total workforce.

The net cultivated area of the State is 28.11 lakh hectare(2010-11) or about 88 percent of the total land available for agricultural cultivation in the State. The contribution of Agriculture sector to the State Domestic Product [at constant(2004-05) Prices] was more than 18.0 percent during 2011-12(Quick estimates) but recorded gradual fall since 2005-06. The area covered under Paddy cultivation was 25.46 lakh hectares which was more than 92 percent of the total area under foodgrains in the State during the year 2011-12. During the year 2011-12, the productivity of Winter Rice decreased to 1785 kg per hectare from 1993 Kg. per hectare[ i.e.more than 10.0 percent] in the previous year. The productivity of winter paddy was affected by overall "Deficient" rainfall experienced in the State both in terms of total rainfall and its spread [except in the month of July, 2011] during the kharif season. The yield rate of Autumn Rice, on the other hand, has been expected to reach all time high with 1242 kg/hectare which is 7.5 percent above the yield rate of 1155 kg/hectare in 2010-11. The productivity of Summer Rice has also continued to maintain its increasing trend and recorded 6.5 percent increase in 2011-12 over the previous year. The reduction of yield rate of winter rice thus effected to total Rice production in the State. The production of Rice in the State has gone down to 47.16 lakh tonnes or 6.3 percent in 2011-12 from 50.33 lakh tonnes in 2010-11. In view of growing demand and to attain self sufficiency in food production, the State Agriculture Department has set the target to cover 30.00 lakh hectare of area under Rice so as to increase the production of Rice to 75 lakh MT at the end of the Twelfth Five Year Plan.



As per final estimates, total food grains production in the State was 48.57 lakh MT in 2011-12 as against 51.78 lakh MT produced in the State during the year 2010-11. Total food production in the State was 6.20 percent less during the year 2011-12 compared to the previous year's production. However, the production of total Pulses reported 1.39 percent increase with 0.73 lakh MT in 2011-12 over the previous year's production of 0.72 lakh MT.

The production of total Oilseeds, on the other hand, was badly affected by the "Scanty" rainfall [**deviation of overall rainfall in the State was (-) 72.0 percent from normal**] experienced in the State during the Rabi season. As a result the production of oilseeds was reportedly decrease by 1.94 percent during the year 2011-12 with 1.52 lakh MT compared to 1.55 lakh MT in 2010-11.

Horticultural crops occupy about 15 percent of the gross cultivated area of Assam and annually produce more than 67 lakh MT of various horticultural produces besides nut crops, flowers and medicinal & aromatic plants thus contributing significantly towards food and nutritional security of the State. The Horticulture Department estimated that 17.14 lakh MT fruits, 2.48 lakh MT spices and 46.2 lakh MT vegetables were produced in the State during the year 2011-12. According to the Horticulture and Food Processing Directorate, the impact of implementation of the Technology Mission for Integrated Development of Horticulture (now named as "**Horticulture Mission for North East and Himalayan States**") helped in production of fruits, spices and vegetables to increase 19.18 percent, 6.40 percent and 72.20 percent respectively during last ten years.

The Index of Agricultural Production for all crops (Base triennium ending 2007-08=100) for the State stands at 126.44 in 2011-12 compared to 130.25 in 2010-11. In respect of food crops, the Index of Agricultural Production for the State was 140.08 in 2011-12.

### Irrigation

The achievement made by Irrigation Department in creation of additional irrigation potential has not been much encouraging as per available report. Out of the Gross Cropped Area of 41.60 lakh hectares of the State, the State Irrigation Department created potential of 8.23 (approx) lakh hectares up to March, 2012 of which 2.54 lakh hectares through Major & Medium Irrigation Projects and the rest 5.68 lakh hectares through Minor Irrigation Schemes out of which 1.58 lakh irrigation potential was utilized during the year. In addition, the State Agriculture Department has also created irrigation facility of 5.91 lakh hectares till the end of 2011-12 through the Shallow Tube wells and Low Lift Points etc., under utilizable/assured irrigation.

### Flood and Flood Control

The geographical area of Assam is 78,438 Sq. Km and the total land and water mass comprise of the Brahmaputra valley with an area of 56,194 Sq. Km. and Barak valley with an area of 22,244 Sq. Km. including the two hill districts viz. Karbi-Anglong and Dima Hasao. The vast network of 48 major and 128 small rivers originating from the hills and mountains surrounding the State is largely responsible for the recurrent floods and erosion of river banks which are the two major natural disasters being faced by the State.

The flood prone area of the state is 31,500.00 Sq Km as assessed by the **Rastriya Barh Ayog** which is about 40.16 percent of the total land area of Assam and about 9.40 percent of total flood prone area of the whole country (**The flood prone area of the country as a whole stands at about 10.2 percent of the total area of the country**). It signifies that the flood prone area of Assam is four times of the national mark of the flood prone area of the country. Records also show that average annual area affected by flood is 9.31 Lakh Hectares. The flood protected area of the state is 16,500.00 Sq. Km till date.

### Fishery

There are about 3.91 lakh hectare of water area in the State in the form of rivers, beel, derelict water bodies and ponds and tanks. The Assam Fishery sector contributes more than 2 percent to GSDP. During 2012-13, Fishery sector is expected to achieve a growth rate of 7.14 percent as compared to previous year. Scientific fish farming in natural water bodies has been mostly traditional capture fishery only. The scientific fish farming is practiced generally in individual and community tanks. The State Fishery Department has given special emphasis for scientific fish farming in beels and community tanks through awareness, training, government support and subsequent bank linkage. There is a positive trend in fish productivity during recent past. During the year 2011-12, the fish production has reached the tune of 2.43 lakh MT against 2.32 lakh MT fish produced in 2010-11. State is yet to reach self-sufficiency in productivity with regards to economic as well as minimum nutritional requirement.

## Forest

As per Forest profile of the State, the Reserved Forest area has decreased by 705 sq km in 2011-12 as compared to existing Reserved Forest area in 2010-11. In 2011-12 Reserved Forest area is 13507 sq km as compared to 14212 sq km in 2010-11. The Reserved Forest area is 67 percent of the total forest area. The protected area is 4198 sq km area which comprising of 5 National Park and 18 Wildlife sanctuary. The total Forest area excluding un-classed State Forest is 20031 sq km as reported by the State Forest Department. Thus, the reserved forest area constitutes around 17 percent and the total forest area excluding un-classed forest constitutes about 26 percent of the total geographical area of the State. The amount of revenue earned from the forest products during the year 2011-12 was ₹7006.80 lakh against ₹5868.52 lakh earned in the previous year.

## Livestock and Veterinary

The State Animal Husbandry and Veterinary (AH&V) Department's estimation (Sample Survey, 2011-12) shows that there are 8469106 Indegeneous and 469654 Crossbreed Cattle population in the State during 2011-12. The estimate also shows that the population of Buffalo and Goat is 543575 and 2796448 respectively.

The volume of milk production of the State was estimated at 838 million litres for the year 2011-12 against 832 million litres produced in 2010-11 showing marginal increase of milk production over the previous year. During the year 2010-11, the per capita/per day milk availability in the State was estimated at 74 ml as against per capita national availability of 281 grams.

Meat and egg production of the State was also showing moderate growth in 2011-12 over 2010-11.

## Industry

The Industrial scenario of the State is mainly confined within the growth of employment oriented Small Scale Sector which comprises of manufacturing and processing industries. Despite various constraints impeding the growth of industries in the State, the Industries and Commerce Department of the State as well as some other agencies like Assam Industrial Development Corporation (AIDC) are closely associated with implementation of various promotional schemes meant for sustainable industrial development of the State. The declaration of the North East Industrial Investment Promotion Policy has been another important feature for industrialization of the State. However, the Manufacturing Sector's contribution to the State economy maintain its downward trend in 2011-12 (Quick Estimates) and pegged at 4.05 percent at constant (2004-05) prices. The Index of Industrial Production for the Manufacturing Sector, on the other hand, recorded positive trend during 2011-12 [194.17] compared to 184.32 in 2010-11 [Base 2004-2005=100].

At present, there are 16 Industrial Estates, 17 Industrial Areas, 11 Growth Centers under the Industries and Commerce Department of Assam spread over an area of 2155 thousand Sq.M land in different locations of the State. Apart from the aforesaid infrastructures, there are 11 Integrated Infrastructure Development (IID) Projects, 4 Industrial Growth Centers, 6 Mini Industrial Estates, One Export Promotion Industrial Park, two Food Processing Industrial Park spread over an area of 7343 thousand Sq.M land also provided additional infrastructure facilities to the entrepreneurs of the State. As many as 695 functioning Industrial units utilized the infrastructure provided by the Industry and Commerce Department.

There are 35717 SSI/MSME units in Assam and provided employment to 1.91 lakh persons till the end of March 2012.

The Annual Survey of Industries results show that Assam has 2795 number of functioning Registered Factories with 166670 employees in 2010-11. The results also show that the value of output increased by more than 15.0 percent during the year 2010-11 over the 2009-10. The net income has recorded a considerable increase with 31.6 percent during the same period.

The Tea Industry of Assam plays a vital role in the State as well as in the national economy. The Assam's Tea industry also possesses a significant reputation in the global economy. Assam alone produces more than half of India's tea production. The total area under Tea Gardens in the State is 318 thousand Hectares. The estimated production of tea in Assam was 508.7 thousand tonne in 2011, which was about 5.94 percent more compared to the estimated production of tea in 2010.

The small Tea growers played an important role in tea production in the State. There are about 70000 small tea holdings covering 117,000 (approx) acres of land in 14 out of 27 districts in Assam. About 87 percent of the cultivation is done in land area measuring less than three acres. It is praiseworthy that the small tea growers accounted for 30 percent of the total tea produced in the State, which is 14 percent of the total tea production of India.

Among the Plantation crops, Rubber cultivation is also gaining its popularity in the State due to congenial agro climate as well as its eco-friendly activity. The Rubber Board has identified Assam as a "Potential State". From the "productivity" point of view, Assam too has huge scope of rubber plantation. Considering the growing national demand, the Rubber Board has planned to enhance rubber plantation area in the State to 2 lakh hectares at the end of Twelfth Five Year Plan. The area under rubber cultivation in Assam has grown from 16.5 thousand hectares in 2006-07 to 32.1 thousand hectares in 2011-12. The production of rubber has also been increased considerably [more than 250 percent during 2011-12 over 2006-07]. Moreover rubber cultivation generated more than 30 lakh mandays employment during the year 2011-12. Considering the growth of plantation areas and rubber production trends, there is vast potential for setting up of rubber industries in the State.

Assam has the highest concentration of bamboo having high potential for commercialization. The region has approximately 60 percent of the total bamboo of the country. The Ministry of Agriculture, Govt of India, has launched the National Bamboo Mission with focus in the North Eastern Region and proposed for plantation of selected species of Bamboo in the State, in an area of 176000 Hectare, as a raw material for Bamboo based industry. Bamboo Development Agency of Assam is the coordinating and executing agency of National Bamboo Mission. The Agency has so far cultivated 9751 hectare of bamboo plantation and improvement of degraded bamboo stock of 7351 hectare in various districts of Assam.

Traditionally, Sericulture, a major cottage industry of the State, is practiced in more than 10700 villages at present and provides employment to more than 2.5 lakh family of the State. Assam has the monopoly in production of Muga, the Golden Silk in the world and 99 percent of Muga Silk produced in Assam. Assam has also achieved the right of "Geographical Indication" in Muga Silk. According to the State Sericulture Department, the State has produced 114.56 MT Muga Raw silk, 1061.61 MT Eri Raw Silk and 11.25 MT Mulberry Raw Silk during the year 2011-12.

## Minerals

Assam is richly endowed with mineral resources. The performance of Mining Sector during the year 2011-12 was observed as not satisfactory as compared to previous year. The Indian Bureau of Mines, Government of India reported that among the major minerals while the production of Crude Oil and Natural Gas (utilized) in the State recorded 6.6 percent and 9.0 percent increase respectively in 2011-12 against 2010-11, the production of Coal and Lime Stone recorded 46.8 percent and 27.5 percent decrease respectively during the same period. The Index of Mineral Production is worked out at 108.35 (Base: 2004-2005) in 2011-12.

## Transport

The rapid increase of the number of motor vehicles on road in Assam has been observed over the past few years. The on road vehicle population in the State has reached 1528269 as on March 2012 as against 1363625 as on March 2011. An additional of 226010 vehicles was added during the year 2011-12 as against 199076 vehicles added during the year 2010-11. The density of motor vehicles in Assam was slightly above 19.0 per sq. km. during 2011-12.

## Telecommunication

The overall tele-density (Telephone per 100 of population) of Assam State as on December 2011 was 45.85 percent as against the national average of 76.86 percent. Disaggregated figures show that the telecom penetration has been uneven across the urban and rural segments. While the urban tele-density of Assam stood at 144.72 percent, the rural tele-density was only 28.21 percent. However, the tele-density of urban and rural segments of Assam was marginally below the national average.

## Roads

The Assam PWD (Roads wing) is primarily responsible for maintaining uninterrupted road communication through construction, improvement and maintenance of roads, bridges and culverts for speedy development of the State. The road network in Assam comprises of total 51878 Km of roads consisting of National Highways, State Highways, Major district roads, Urban roads, rural Roads and Project & Other Non PWD Roads. At present 47449.81 km road network including 1949.81 km National Highways [out of total 2848.32 km NH Way length] is maintained by the State PWD. Excluding the National Highways, 21200 Km out of the total 45500 Km road length maintained by the PWD is blacktopped.

## Power

The power supply position in the State was not much encouraging. There have been always a shortage of power due to less generation of power in comparison to demand in the State. The total available installed capacity of generating plants in the State remained unchanged during 2011-12 as it was in the previous year [401.5 MU].

As a result of functioning of Hydel Power Projects, the power generation scenario has slightly been improving in the State since 2006-07. During 2011-12 the generation of electricity in the State was 1773.00 MU as against 1707.76 MU, a nominal 3.82 percent increase in generation compared to the previous year 2010-11. Assam is a power deficit State because of existence of gap between power availability and power requirement. The energy availability during 2011-12 was 5670 Million Units as against total requirements of 6081 Million Units [i.e., power deficit of 411 Million Units or about 14 percent]. However, the ASEB Ltd fulfills the demand shortfall of power requirement by purchasing power from other public and private sources. The per capita availability of power in the State was 182 Kwh in 2011-12. The total transmission and commercial losses was calculated at 29 percent during the year 2011-12. Like most of the states of the country, Assam is also lagging behind in respect of rural households electrification. Till the end of the 2011-12 electrification of 84 percent villages of the State could be completed. However, for better improvement of the power supply position in the State, various projects have been undertaken and are in progress.

## Price situation

The State in particular and the Country as a whole is experiencing price rise in varying degree during the last few years. The WPI of agricultural commodities (Base 1993-94=100) during 2011-12 was 287 as compared to 272 in 2010-11 showing an increase of 5.51 percent against an increase of 9.24 percent in 2010-11 over the previous year. The WPI during the financial year up to the month of July, 2012 shows no change over the corresponding period of the previous year. The annual average Index for Rural, Urban and Combined (Base 2010=100) in 2011 in the State was 112,108 and 111 respectively as against the National average of 110.95, 107.96 and 109.65 respectively. The average CPI (General) for Rural, Urban and Combined of the first eight months of 2012 increased by 9.2 percent, 9.3 percent and 9.4 percent respectively over the corresponding period of 2011. During the first eight months of 2012, the average CPI for working Class Population (Base: 2010=100) in Assam was 184 against the average 174 of the corresponding period of 2011 thereby showing an increase of 6.98 percent in 2012. During the same period Guwahati had a high average index of 181 in 2012 compared to 168 of the previous year. During 2011, the CPI for Industrial Workers (Base 2001=100) in Assam increased by 8.07 percent as against 9.09 percent at all India level over 2010. The rate of increase of the Index in different centres in 2011 was recorded higher by 8.23 percent in Morioni, followed by 7.69 percent in Guwahati, 6.25 percent in Doomdooma, 5.84 percent in Rangapara and 4.49 percent in Labac over the previous year.

## Public Distribution System

There are 37,126 Fair Price Shops operating in the State as on 31<sup>st</sup> March 2012. During the year 2010-11 the scheme with the brand name and logo "Amar Dukan" and "Jagok Grahok Jagok" was introduced through selected Fair Price Shops. The scheme has facilitated distribution of 21 essential non PDS [MRP based] food items at subsidized rates through selected Fair Price Shops, throughout the State. The State has achieved target of selecting 19.06 lakh beneficiaries from BPL families by providing BPL PDS items at subsidized rate.

## Employment Situation

The Report of the Second Employment – Unemployment Survey, 2011-12 conducted by Labour Bureau, GOI reveals that in rural areas 44.8 percent households are self employed in agriculture, 17.9 percent are self employed in non-agriculture, 15.5 percent are regular wage or salary earners, 8.9 percent are agricultural labour and 9.0 households are other labour in Assam compared to 39.6 self employed in agriculture, 11.3 self-employed in non-agriculture, 11.1 regular wage or salary earners, 20.7 agricultural labour and 12.5 households are other labour at all India level. The Unemployment Rate (per 1000) for persons of age 15 years and above according to usual status approach for both principal status and subsidiary status in Assam is 42 persons in Rural areas, 58 persons in Urban areas and 44 persons in Rural and Urban combined areas as against 29, 47 and 33 at all India level respectively. The size of the educated job seekers is considerably high, which is a challenge to the growing economy of the State. From the records of the live register of Employment Exchanges, the registered educated job seekers stood at 1312987 during 2011 and recorded decrease by 8.39 percent over 2010. The percentage of educated job seekers constitutes about 76 percent of the total job-seekers.

## Panchayat and Rural Development

The Commissionerate of Panchayat and Rural Development of Assam has been implementing various schemes for poverty alleviation and upliftment of rural poor. For eradication of poverty the Panchayat wing has been implementing various schemes viz. Indira Gandhi National Old Age Pension Scheme, National Family Benefit Scheme, Annapurna, Chief Minister's Assam Bikash Yojana, Backward Region Grant Fund, etc. The Rural Development, on the other hand, implementing programmes like SGSY which provides help to form Self Help Group for taken up economic activity. In 2011-12 total SHGs formed is 24218 out of which 15747 has taken economic activity. IAY provides dwelling to the BPL families and under this scheme total beneficiaries are 143770 during 2011-12. MGNREGA provides employment to the job card holder. Under MGNREGA household provided employment is 13.47 lakh and average mandays created is 26.21 days during 2011-12.

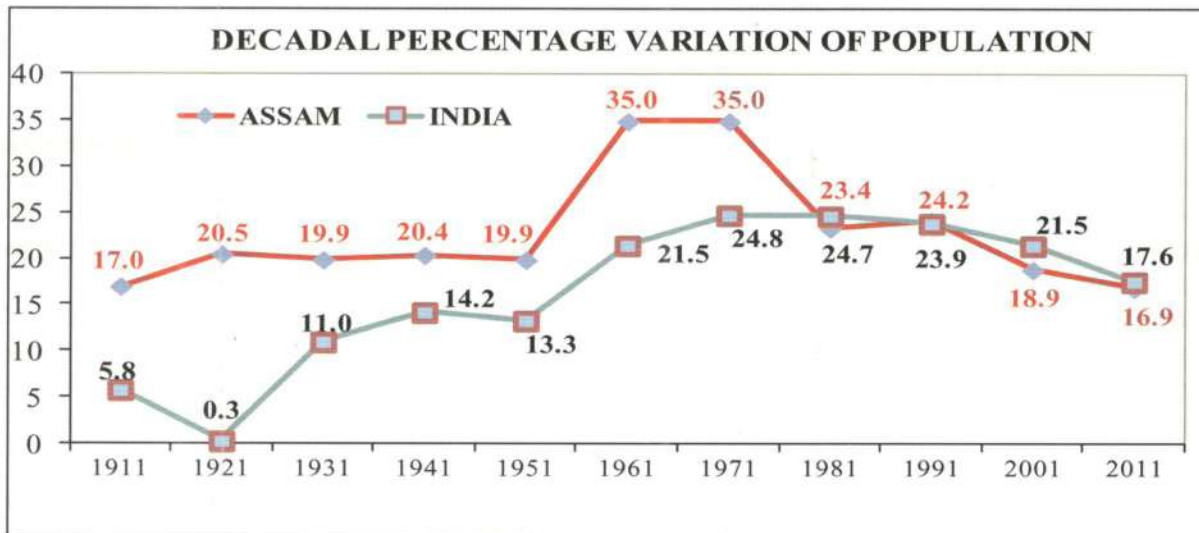
Against the backdrop of constraints like continued insurgency problem, debt burden, unemployment problems, recurrence of natural calamities in the shape of flood, drought etc. the State is expected to achieve 6.88 percent growth of the State's economy in terms of GSDP in real terms during the year 2012-13, a positive development is already under way.



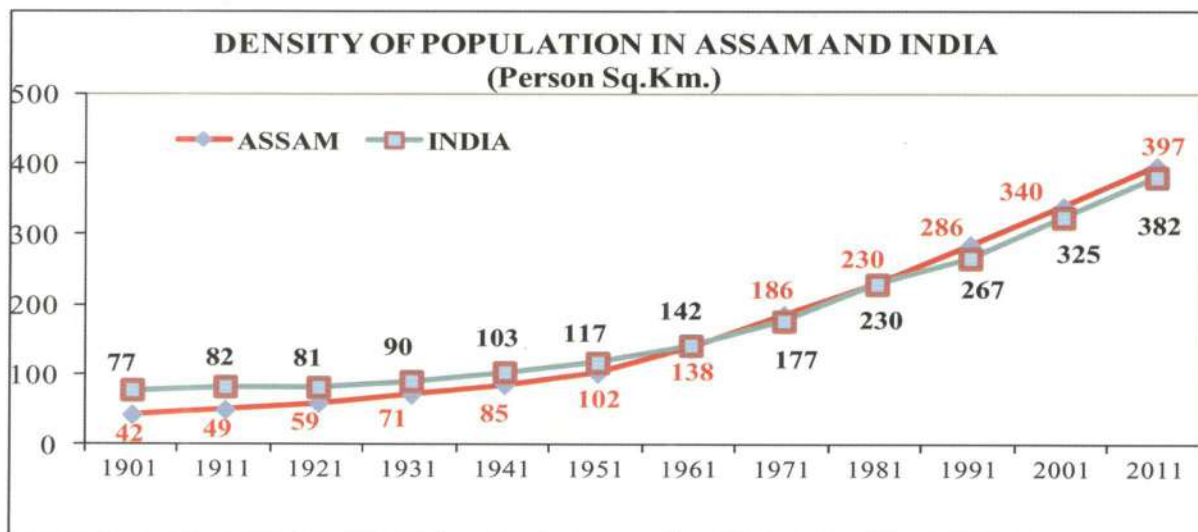
## CHAPTER – II

### POPULATION

Assam is situated in the North-East region of India – bordering seven States viz. Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura and West Bengal and two countries viz. Bangladesh and Bhutan. With a geographical area of 78,438 sq. kms. i.e, about 2.4 percent of the country's total geographical area, Assam provides shelter to 2.6 percent population of the Country. Most of the State's population lives in the lush and verdant valleys of its two major river systems in the twenty four districts of the Brahmaputra valley and the three districts of the Barak valley. Less densely populated are the two hill districts of Karbi-Anglong and the Dima Hasao, set in the low-lying hills that separate the two valleys. For administrative and revenue purposes, the State has 27 districts including Kamrup (Metro) district and four districts under the Bodoland Territorial Council (BTC) areas viz. Kokrajhar, Baska, Chirang and Udalguri.



According to the Census of India, 2011 the population of Assam stands at 3,11,69,272, of which 1,59,54,927 are males and 1,52,14,345 are females. The decadal growth of the State's population works out to 16.93 percent during the decade 2001-2011 as against 17.64 percent for the country as a whole. The density of the population of Assam has gone upto 397 in 2011 which was 340 in 2001 Census. The corresponding all India figure was 382 as per Census, 2011.



**TABLE – 2.1**  
**POPULATION TREND IN ASSAM AND INDIA**

Year	Population (in lakh)		Percentage Decadal Variation		Density (Person per Sq.Km.)	
	ASSAM	INDIA	ASSAM	INDIA	ASSAM	INDIA
1901	33	2384	-	-	42	77
1911	38	2521	17.0	5.8	49	82
1921	46	2513	20.5	0.3	59	81
1931	56	2789	19.9	11.0	71	90
1941	67	3186	20.4	14.2	85	103
1951	80	3611	19.9	13.3	102	117
1961	108	4392	35.0	21.5	138	142
1971	146	5481	35.0	24.8	186	177
1981	*180	6833	*23.4	24.7	*230	230
1991	224	8463	24.2	23.9	286	267
2001	266	10270	18.9	21.5	340	325
2011	311	12102	16.9	17.6	397	382

\*Interpolated.

Source: Census of India 2011, Provisional Population Totals.

Some important features of population of Assam are shown in the following Table.

**TABLE-2.2**  
**POPULATION FEATURES AT A GLANCE ASSAM**

Particulars	Unit	2001 Census	2011 Census
		Assam	Assam
Population	Lakh	267	311
Decadal Growth	Percent	18.92	16.93
Change in percentage of decadal growth	Percent	(-) 5.32	
Density	Per Sq. Km.	340	397
Sex-Ratio	Females per 1000 males	935	954
Literacy	Percent	63.25	73.18
(a) Male	Percent	71.28	78.81
(b) Female	Percent	54.61	67.27
Urban Population	Percent	12.90	14.08
(a) Male	Percent	53.41	51.61
(b) Female	Percent	46.58	48.39
Rural Population	Percent	87.10	85.92
(a) Male	Percent	51.43	51.12
(b) Female	Percent	48.57	48.88
S.C. Population	Percent	7.40	NA
S.T. Population	Percent	12.83	NA

## POPULATION

### Rural and Urban

As per Population Census, 2011, the rural population of the State was 86 percent of the total population. This percentage was much higher than that for All-India (69 percent). The proportion of rural population in the State decreased from 87 percent in 2001 to 86 percent in 2011. As per the Population Census, 2011, around 14 percent of the State population was living in urban areas. The proportion of urban population in the State increased from 12.9 percent in 2001 to 14 percent in 2011.

### Sex Ratio

The sex-ratio in the State shows an improvement from 935 in 2001 to 954 in 2011. The sex ratio in the age-group 0-6 years is the vital indicator of the future trends of the sex composition in the population in the State. Child sex ratio in the State was 957 female per 1000 male child as per Census, 2011. The corresponding sex ratio in the State for the age-group 0-6 years declined to 967 in 2001 from 975 in 1991.

### Literacy

The growth of literacy in Assam has shown an encouraging sign. The literacy rate for Assam as per Census 2011 increased to 73 percent with 79 percent for males and 67 percent for females. The literacy rates for rural and urban areas found at 70.44 percent and 88.88 percent respectively. The literacy rate for country as a whole increased to 74 percent from 65 percent with male and female literate 79 percent and 67 percent respectively.

Some State highlights in 2011 census, such as highest and lowest population, percentage of growth, literacy rate, sex ratio and density among the districts of Assam may be seen in the following.

### STATE HIGH LIGHTS – 2011 CENSUS

The Census Directorate of Assam highlighted the following observation after completion of the Population Census, 2011.

- Growth of population in the state during 1971-2011 is 113.12 percent against the national growth rate of 120.77% during this period.
- Assam ranks 14<sup>th</sup> in size of population among the states of India.
- Assam ranks 15<sup>th</sup> in density among the states of India.
- Assam ranks 15<sup>th</sup> in sex-ratio among the states of India.
- Assam ranks 26<sup>th</sup> in literacy among the states of India.
- Highest and lowest population, percentage of growth, literacy rate, sex-ratio and density among the districts of the state.

Information on		Highest	Lowest
Total Population		Nagaon (826,006)	Dima Hasao (213,529)
Total Rural Population		Nagaon (2,457,906)	Dima Hasao (152,302)
Total Urban Population		Kamrup Metro (1,044,832)	Baksa (12,173)
Percentage of Population Growth	Total	Dhubri (24.40)	Kokrajhar (5.19)
	Rural	Dhubri (27.13)	Kamrup Metro (2.93)
	Urban	Nalbari (200.34)	Sonitpur (-2.65)
Literacy Rate	Total	Kamrup Metro (88.66)	Dhubri (59.36)
	Rural	Jorhat (81.36)	Dhubri (56.49)
	Urban	Hailakandi (94.67)	Darrang (66.86)
Sex-ratio	Total	Marigaon (974)	Kamrup Metro (922)
	Rural	Marigaon (975)	Darrang (923)
	Urban	Hailakandi (992)	Dima Hasao (880)
Density		Kamrup Metro (2,010)	Dima Hasao (44)



## Population – Religion-wise

Religion-wise percentage distribution of population, according to Population Census 2001, reveals that out of total population in the State 64.89 percent were Hindus, 30.92 percent were Muslims, 3.70 percent were Christians, 0.08 percent were Sikhs, 0.19 percent were Buddhists, 0.09 percent were Jains, 0.09 percent were from other religions and persuasions and 0.04 percent were, religion not stated.

Following table shows the distribution of population in Assam by major scheduled languages:

**TABLE – 2.4**  
**DISTRIBUTION OF POPULATION BY SCHEDULED LANGUAGES IN ASSAM**  
**(CENSUS, 2001)**

Mother Languages	Total Population	Percentage of Population
Assamese	13010478	53.08
Bengali	7343338	29.96
Hindi	1569662	6.40
Bodo	1296162	5.29
Nepali	564790	2.30
Santali	242886	0.99
Oriya	231474	0.94
Manipuri	154059	0.63
Others	100082	0.41
All Total (ASSAM)	24512931	100.00

## Population by Economic Activity

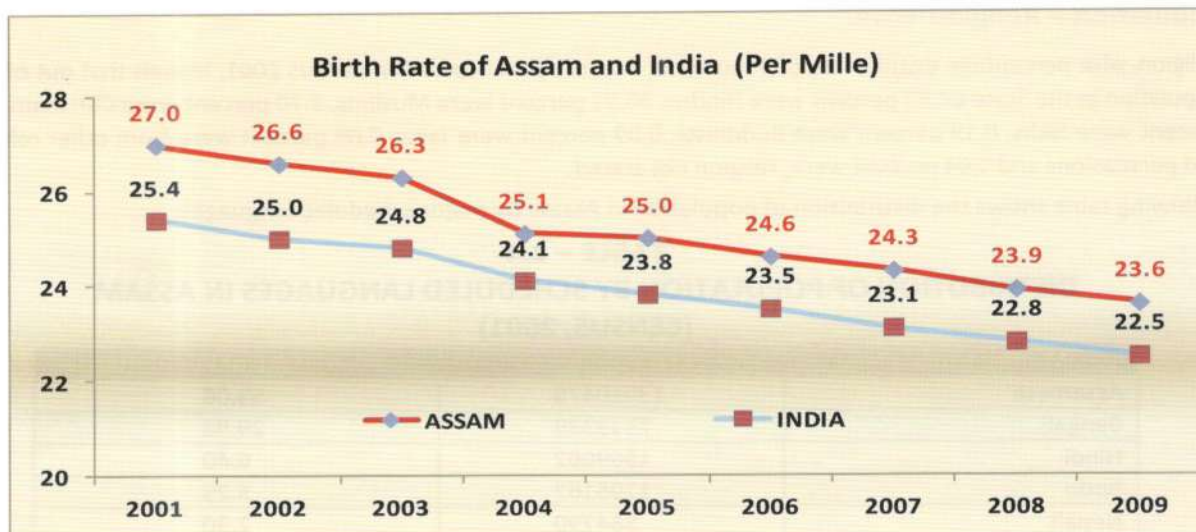
Classification of population by economic activity according to the result of Population Census, 2001 reveals that out of total population of 26655528 in the State, 9538591 were total workers of which 7114097 were main workers and 2424494 were marginal workers. Among male workers 85 percent were main workers, 15 percent were marginal workers, while among females 47 percent were main workers and 53 percent were marginal workers. Out of the total 9538591 workers in Assam, 3730773 were Cultivators (39 percent), 1263532 were Agricultural labourers (13 percent), 344912 were engaged in Household Industries (4 percent) and 4199374 were Other Workers (44 percent). Thus, about 52 percent working population was engaged in Agriculture (i.e. cultivators and agricultural labourers) in the State.

**TABLE-2.5**  
**DISTRIBUTION OF WORKERS AND NON WORKERS IN ASSAM, 2001 CENSUS**

Workers	Person	Male	Female
Total workers	9538591	6870960	2667631
Main workers	7114097	5849032	1265065
Marginal workers	2424494	1021928	1402566
Cultivators	3730773	2634068	1096705
Agricultural labourers	1263532	832508	431024
Household Industries workers	344912	133902	211010
Other workers	4199374	3270482	928892
Non workers	17116937	6906077	10210860

## Birth and Death Rates

The data obtained from the Sample Registration Bulletin published by the Registrar General of India depicts some idea about the trend in the birth and death rates, natural growth rate and infant mortality rate in the State. It is evident from the information that birth rates, death rates and infant mortality rates in the State were found to be higher than that of the country as a whole, although there has been a trend of gradual declination. As per available information received from the Registrar General of India, during the year 2009, the birth rates, death rates and infant mortality rates of Assam have been 23.6, 8.4 and 61 per mille as against 22.5, 7.3 and 50 per mille respectively at all-India level. The Table - 2.6 shows the birth, death, natural growth and infant mortality rates of Assam and India from 2001 to 2009.



**TABLE - 2.6**  
**BIRTH RATE, DEATH RATE, NATURAL GROWTH RATE AND INFANT MORTALITY RATE OF ASSAM AND INDIA (PER MILLE)**

YEAR	Birth Rate		Death Rate		Natural Growth Rate		Infant Mortality Rate	
	ASSAM	INDIA	ASSAM	INDIA	ASSAM	INDIA	ASSAM	INDIA
2001	27.0	25.4	9.6	8.4	17.4	17.0	74	66
2002	26.6	25.0	9.2	8.1	17.4	16.9	70	63
2003	26.3	24.8	9.1	8.0	17.2	16.8	67	60
2004	25.1	24.1	8.8	7.5	16.3	16.6	66	58
2005	25.0	23.8	8.7	7.6	16.3	16.3	68	58
2006	24.6	23.5	8.7	7.5	15.9	16.0	67	57
2007	24.3	23.1	8.6	7.4	15.7	15.7	66	55
2008	23.9	22.8	8.6	7.4	15.4	15.4	64	53
2009	23.6	22.5	8.4	7.3	15.2	15.2	61	50

Source : Sample Registration Bulletin, R.G.I., New Delhi.

### Availability of Household Facility

As per Population Census Report, 2011, data on availability of some household facilities was collected. The comparative figures (in percentage) of available facilities as per Census, 2001 and Census, 2011 are shown below:

**TABLE - 2.7**  
**HOUSEHOLD AVAILING FACILITY IN ASSAM**

Item	Total		Rural		Urban	
	2011	2001	2011	2001	2011	2001
No. of Household	6367295	4935358	5374553	4220173	992742	715185
Availability fo Drinking Water within premises (% of HH)	54.8	37.9	50.4	33.6	78.8	63.2
Main sources of Drinking Tap Water (% of HH)	10.5	9.2	6.8	5.4	30.2	31.4
Source of Lighting Electricity (% of HH)	37.0	24.9	28.4	16.5	84.1	74.3
Mode of Communication-Computer/Laptop*	9.3		7.2		21.	

\*New additiion in 2011

Source: Census, 2011

**APPENDIX – 2.1**

**DISTRICTWISE DEMOGRAPHIC PROFILE OF ASSAM, 2011 CENSUS**

Sl. No.	District	Area in Sq. Km.	Population	Rural Population	Urban Population	Population Density per Sq. Km.
1	Dhubri	1664	1948632	1746715	201917	1171
2	Bongaigaon	1725	732639	631813	100826	425
3	Kokrajhar	3165	886999	832249	54750	280
4	Chirang	1975	481818	446290	35528	244
5	Baksa	2007	953773	941600	12173	475
6	Goalpara	1824	1008959	871132	137827	553
7	Barpeta	2677	1693190	1545901	147289	632
8	Nalbari	1010	769919	687368	82551	763
9	Kamrup (M)	627	1260419	215587	1044832	2010
10	Kamrup (R)	3484	1517202	1375188	142014	436
11	Darrang	1851	908090	852692	55398	491
12	Udalguri	1674	832769	795191	37578	497
13	Sonitpur	5281	1625975	1754835	171140	365
14	Lakhimpur	2277	1040644	949348	91296	457
15	Dhemaji	3237	688077	639605	48472	213
16	Morigaon	1551	957853	884557	73296	618
17	Nagaon	3973	2826006	2457906	368100	711
18	Golaghat	3502	1058674	960892	97782	302
19	Jorhat	2851	1091295	871730	219565	383
20	Sivasagar	2668	1150253	1040376	109877	431
21	Dibrugarh	3381	1327748	1083984	243764	393
22	Tinsukia	3790	1316948	1053956	262992	347
23	Karbi-Anglong	10434	965280	851158	114122	93
24	Dima Hasao	4888	213529	152302	61227	44
25	Karimganj	1809	1217002	1106745	110257	673
26	Hailakandi	1327	659260	611087	48173	497
27	Cachar	3786	1736319	1420309	316010	459
<b>ASSAM</b>		<b>78438</b>	<b>31169272</b>	<b>26780516</b>	<b>4388756</b>	<b>397</b>

Source : Census of India, 2011.

## APPENDIX – 2.2

### DECADAL PERCENTAGE VARIATION IN POPULATION OF ASSAM

District	1901-1911	1941-1951	1951-1961	1961-1971	1971-1991	1991-2001	2001-2011
Dhubri*	28.73	12.74	43.74	43.26	45.65	22.97	24.40
Bongaigaon*	28.69	12.88	36.27	35.81	38.77	22.09	19.58
Kokrajhar*	28.73	17.11	55.41	54.89	61.96	14.49	5.19
Chirang*	5.02	18.18	40.32	57.37	103.33	(-) 0.08	11.26
Baksa*	18.36	33.68	60.52	66.67	73.65	12.51	11.17
Goalpara	29.97	9.25	37.10	45.88	54.12	23.03	22.74
Barpeta*	18.65	16.62	34.39	33.91	40.97	19.62	21.40
Nalbari*	15.24	35.15	33.56	31.79	75.78	14.21	11.74
Kamrup(M)*	6.59	2.39	13.30	19.99	20.77	45.91	18.95
Kamrup *	10.01	17.01	45.12	44.48	81.53	14.97	15.67
Darrang*	22.72	18.58	40.94	36.05	89.77	22.18	19.51
Udalguri *	45.60	29.13	54.04	37.85	43.03	10.02	9.76
Sonitpur*	23.67	22.02	41.99	33.17	68.08	18.11	15.67
Lakhimpur	26.29	17.94	50.46	43.39	56.29	18.30	17.06
Dhemaji	26.29	17.94	75.21	103.42	107.50	19.45	20.30
Morigaon	15.84	36.63	37.89	37.51	50.90	21.35	23.39
Nagaon	15.84	36.65	35.91	38.99	51.26	22.26	22.09
Golaghat	16.55	19.76	26.04	30.85	58.12	14.27	11.88
Jorhat	16.90	14.87	24.17	17.47	33.10	14.69	9.21
Sivasagar	13.41	15.98	23.36	19.47	38.76	15.83	9.37
Dibrugarh	26.29	17.94	30.64	22.93	37.78	13.68	12.04
Tinsukia	26.29	17.94	35.92	31.02	47.03	19.51	14.51
Karbi Anglong	-	30.96	79.21	68.28	74.72	22.72	18.69
Dima Hasao	(-) 33.12	6.16	36.95	40.00	98.30	24.72	13.53
Karimganj	12.94	29.87	22.96	25.13	42.08	21.87	20.74
Hailakandi	16.09	17.48	27.23	23.61	45.94	20.89	21.44
Cachar	12.33	23.92	22.60	23.96	47.59	18.89	20.17
<b>ASSAM</b>	<b>16.99</b>	<b>19.93</b>	<b>34.98</b>	<b>34.95</b>	<b>53.26</b>	<b>18.92</b>	<b>16.93</b>

\*Due to creation of 4 new Districts the rates for 2001 have been affected in 12 Districts.

### APPENDIX – 2.3

#### STATEWISE POPULATION, SEX RATIO, POPULATION DENSITY, LITERACY RATE AND PERCENTAGE DECADAL GROWTH IN INDIA

Sl. No.	India, States, Union Territories	Population 2011	Sex Ratio 2011	Population Density per sq. km. 2011	Literacy rate 2011	Percentage decadal growth	
						1991-2001	2001-2011
	<b>India</b>	<b>1210193422</b>	<b>940</b>	<b>382</b>	<b>74.04</b>	<b>21.54</b>	<b>17.64</b>
1.	Jammu & Kashmir	12548926	883	124	68.74	29.43	23.71
2.	Himachal Pradesh	6856509	974	123	83.78	17.54	12.50
3.	Punjab	27704236	893	550	76.68	20.10	7.58
4.	Chandigarh	1054686	818	9252	86.43	40.28	-68.51
5.	Uttarakhand	10116752	963	189	79.63	20.41	11.34
6.	Haryana	25353081	877	573	76.64	28.43	10.00
7.	Delhi	16753235	866	11297	86.34	47.02	-55.61
8.	Rajasthan	68621012	926	201	67.06	28.41	19.05
9.	Uttar Pradesh	199581477	908	828	69.72	25.85	17.81
10.	Bihar	103804637	916	1102	63.82	28.62	23.90
11.	Sikkim	607688	889	86	82.20	33.06	-5.20
12.	Arunachal Pradesh	1382611	920	17	66.95	27.00	22.88
13.	Nagaland	1980602	931	119	80.11	64.53	-14.59
14.	Manipur	2721756	987	122	79.85	24.86	10.58
15.	Mizoram	1091014	975	52	91.58	28.82	18.20
16.	Tripura	3671032	961	350	87.75	16.03	2.13
17.	Meghalaya	2964007	986	132	75.48	30.65	27.04
<b>18.</b>	<b>Assam</b>	<b>31169272</b>	<b>954</b>	<b>397</b>	<b>73.18</b>	<b>18.92</b>	<b>15.35</b>
19.	West Bengal	91347736	947	1029	77.08	17.77	13.93
20.	Jharkhand	32966238	947	414	67.63	23.36	22.34
21.	Orissa	41947358	978	269	73.45	16.25	13.97
22.	Chhatisgarh	25540196	991	189	71.04	18.27	22.59
23.	Madhya Pradesh	72597565	930	236	70.63	24.25	20.30
24.	Gujarat	60383628	918	308	79.31	22.66	19.17
25.	Daman & Diu	242911	618	2169	87.07	55.73	53.54
26.	Dadra & Nagar Haveli	342853	775	698	77.65	59.22	55.50
27.	Maharastra	112372972	925	365	82.91	22.73	15.90
28.	Andhra Pradesh	84665533	992	308	67.66	14.59	11.10
29.	Karnataka	61130704	968	319	75.60	17.51	15.67
30.	Goa	1457723	968	394	87.40	15.21	8.17
31.	Lakshadweep	64429	946	2013	92.28	17.30	6.23
32.	Kerela	33387677	1084	859	93.91	9.43	4.86
33.	Tamil Nadu	72138958	995	555	80.33	11.72	15.60
34.	Puducherry	1244464	1038	2598	86.55	20.62	27.72
<b>35.</b>	<b>Andaman &amp; Nicobar Islands</b>	<b>379944</b>	<b>878</b>	<b>46</b>	<b>86.27</b>	<b>26.90</b>	<b>6.68</b>

Source : Census of India, 2011.

**APPENDIX – 2.4**  
**BIRTH AND DEATH RATES IN ASSAM**

YEAR	BIRTH RATE			DEATH RATE		
	Combined	Rural	Urban	Combined	Rural	Urban
1991	30.9	31.7	21.3	11.5	11.8	6.9
1995	29.3	30.2	21.8	9.6	10.0	6.7
1996	27.6	28.9	20.7	9.6	10.2	5.8
1997	28.2	29.0	20.7	9.9	10.3	5.9
1998	27.9	28.7	20.2	10.0	10.5	6.0
1999	27.0	28.0	18.9	9.7	10.1	6.2
2000	26.9	27.9	18.6	9.6	10.0	6.1
2001	26.8	27.8	15.5	9.5	9.8	6.6
2002	26.6	27.5	18.3	9.2	9.6	6.0
2003	26.3	27.2	18.0	9.1	9.5	5.9
2004	25.1	27.0	14.3	8.8	9.3	5.5
2005	25.0	26.6	15.3	8.7	9.2	5.6
2006	24.6	26.1	15.4	8.7	9.2	5.8
2007	24.3	25.7	15.5	8.6	9.1	5.7
2008	23.9	25.3	15.7	8.6	9.0	5.6
2009	23.6	24.9	15.9	8.4	8.8	5.9
2010	23.2	24.4	15.8	8.2	8.6	5.8
2011	22.8	24.0	15.5	8.0	8.4	5.6

Source : Registrar General of India.

**APPENDIX – 2.5**  
**INFANT MORTALITY RATE IN ASSAM AND INDIA**

SECTOR	ASSAM/ INDIA	YEARS										
		2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Rural	Assam	77	73	70	69	71	70	68	66	64	60	58
	India	72	69	66	64	64	62	61	58	55	51	48
Urban	Assam	34	38	35	38	39	42	41	39	37	36	34
	India	42	40	38	40	40	39	37	36	34	31	29
Total	Assam	74	70	67	66	68	67	66	64	61	58	55
	India	66	64	60	58	58	57	55	53	50	47	44

Source : Registrar General of India.

**APPENDIX – 2.6**

**DISTRICT-WISE NUMBER OF VILLAGES, GAON PANCHAYAT, COMMUNITY DEVELOPMENT BLOCK, ANCHALIK PANCHAYAT AND ZILA PARISHADS IN ASSAM**

Sl No.	District	Number of Villages (As per 2011 Census)	Number of Gaon Panchayat as on 2011	Number of Community Development Block as on 2011	Number of Anchalik Panchayat as on 2011	Number of Zila Parishad as on 2011
1.	Dhubri	1091	168	15	15	1
2.	Kokrajhar	1068	-	4	-	-
3.	Bongaigaon	563	65	5	5	1
4.	Goalpara	829	81	8	8	1
5.	Barpeta	835	129	11	11	1
6.	Nalbari	456	65	7	7	1
7.	Kamrup	1068	146	16	16	1
8.	Darrang	561	76	6	6	1
9.	Sonitpur	1876	158	14	14	1
10.	Lakhimpur	1184	81	9	9	1
11.	Dhemaji	1319	65	5	5	1
12.	Morigaon	632	85	5	7	1
13.	Nagaon	1412	239	18	20	1
14.	Golaghat	1125	102	8	8	1
15.	Jorhat	848	110	8	8	1
16.	Sivasagar	875	118	9	9	1
17.	Dibrugarh	1348	93	7	7	1
18.	Tinsukia	1168	86	7	7	1
19.	Karbi Anglong	2921	-	11	-	-
20.	Dima Hasao	695	-	5	-	-
21.	Karimganj	936	96	7	7	1
22.	Hailakandi	331	62	5	5	1
23.	Cachar	1040	163	15	15	1
24.	Chirang *	508	-	2	-	-
25.	Baksa *	690	-	7	-	-
26.	Kamrup (M)*	216	14	-	-	-
27.	Udalguri *	800	-	5	-	-
	<b>Assam</b>	<b>26395</b>	<b>2202</b>	<b>219</b>	<b>189</b>	<b>20</b>

N. B \* Indicates newly created Districts.

## APPENDIX – 2.7

### COMPARATIVE STATEMENT ON PERCENTAGE OF POPULATION BELOW POVERTY LINE

Sl. No.	State	Using TENDULKAR Methodology (Poverty Headcount Ratio)			Using TENDULKAR Methodology (Poverty Headcount Ratio)		
		2004-05			2009-10		
		Rural	Urban	Combined	Rural	Urban	Combined
1	Andhra Pradesh	32.30	23.40	29.90	22.8	17.7	21.1
2	Arunachal Pradesh	33.60	23.50	31.10	26.2	24.9	25.9
3	<b>Assam</b>	<b>36.40</b>	<b>21.80</b>	<b>34.40</b>	<b>39.9</b>	<b>26.1</b>	<b>37.9</b>
4	Bihar	55.70	43.70	54.40	55.3	39.4	53.5
5	Chhatisgarh	55.10	28.40	49.40	56.1	23.8	48.7
6	Delhi	15.60	12.90	13.10	7.7	14.4	14.2
7	Goa	28.10	22.20	25.00	11.5	6.9	8.7
8	Gujrat	39.10	20.10	31.80	26.7	17.9	23.0
9	Haryana	24.80	22.40	24.10	18.6	23.0	20.1
10	Himachal Pradesh	25.00	4.60	22.90	9.01	12.6	9.5
11	Jammu & Kashmir	14.10	10.40	13.20	8.1	12.8	9.4
12	Jharkhand	51.60	23.80	45.30	41.6	31.1	39.1
13	Karnataka	37.50	25.90	33.40	26.1	19.6	23.6
14	Kerala	20.70	18.40	19.70	12.0	12.1	12.0
15	Madhya Pradesh	53.60	35.10	48.60	42.0	22.9	36.7
16	Maharashtra	47.90	25.60	38.10	29.5	18.3	24.5
17	Manipur	39.30	34.50	38.00	47.4	46.4	47.1
18	Meghalaya	14.00	24.70	16.10	15.3	24.1	17.1
19	Mizoram	23.00	7.90	15.30	31.1	11.5	21.1
20	Nagaland	10.00	4.30	9.00	19.3	25.0	20.9
21	Odisha	60.80	37.60	57.20	39.2	25.9	37.0
22	Puducherry	22.90	9.90	14.10	0.2	1.6	1.2
23	Punjab	22.10	18.70	20.90	14.6	18.1	15.9
24	Rajasthan	35.80	29.70	34.40	26.4	19.9	24.8
25	Sikkim	31.80	2.90	31.10	15.5	5.0	13.1
26	Tamil Nadu	37.50	19.70	28.90	21.2	12.8	17.1
27	Tripura	44.50	22.50	40.60	19.8	10.0	17.4
28	Uttar Pradesh	42.70	34.10	40.90	39.4	31.7	37.7
29	Uttarakhand	35.10	26.20	32.70	14.9	25.2	18.0
30	West Bengal	38.20	24.40	34.30	28.8	22.0	26.7
	<b>All India</b>	<b>42</b>	<b>25.5</b>	<b>37.2</b>	<b>33.8</b>	<b>20.9</b>	<b>29.8</b>

Source: Planning Commission, Govt. of India.





## CHAPTER III

### STATE INCOME

Economic growth has been recognized to be a key factor for attaining sustainable Human Development and a higher economic growth eventually lead to improvement to the well being of people. The State Domestic Product and its related aggregates are main components of Planning and Policy making as well as represent as important indicators of development process of the State. The estimates of State Domestic Product reveal the extent and direction of changes in the levels of economic development of the State over a period of time.

The annual average growth rate of Eleventh Five Year Plan Period (2007-12) of the State of Assam is estimated at 6.78 percent by the Directorate of Economics and Statistics, Assam which indicates a favourable status of the State economy when compared with the growth rate of 5.33 percent accredited during Tenth Five Year Plan Period(2002-07). Updating of data base and shifting the Base year to a more recent year has constantly been undertaken so that the structural and sectoral shifts that are likely to take place in a developing economy could be properly measured and captured. The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation (MOSPI) introduced the new series of National Accounts Statistics with Base year 2004-05, replacing of previous series with Base year 1999-2000, to incorporate the availability of latest data from various surveys and censuses conducted by State/Central Government as per latest international standards to capture the structural changes that have taken place in the economy. Accordingly, the Directorate of Economics and Statistics, Assam, has revised its earlier base from 1999-2000 to 2004-05 and worked out the estimates of State Domestic Product taking the new series of Base year 2004-05.

#### Advance Estimates of Gross State Domestic Product (GSDP) and Net State Domestic Product (NSDP) for the year 2012-13

The GSDP at constant(2004-05) prices for the year 2012-13 (Advance Estimates) is estimated at ₹85690.32 crores as against ₹80171.91 crores for 2011-12 (Quick Estimates) reflecting a growth of 6.88 per cent which is nominally higher than the growth of 6.47 per cent estimated in 2011-12(Quick Estimates) . The expectation of growth of 6.88 per cent in GSDP of the State for 2012-13 comprises of the estimated growth of 3.80 per cent in Agriculture and Allied sector, 3.66 per cent in Industry sector and 9.30 per cent in Services sector.

**TABLE – 3.1**  
**ADVANCE ESTIMATES OF STATE DOMESTIC PRODUCT FOR ASSAM AND INDIA**  
**2012-13 (Rs.in crore)**

Year 2012-13	GDP		NDP		Per Capita NDP(Rs)	
	Assam	India	Assam	India	Assam	India
At Constant (2004-05) Prices	85690 (6.88)	5503476 (4.96)	754167 (6.91)	4821126 (4.38)	24198 (5.62)	39143 (2.91)
At Current Prices	143567 (13.45)	9461979 (13.27)	131014 (14.23)	8468471 (13.26)	42036 (12.85)	68747 (11.67)

Figures in brackets are growth in percentage.

Source: Directorate of Economics and Statistics, Assam.

The 'Industry' sector comprising of Mining & quarrying, Manufacturing (Registered and Unregistered), Electricity, Gas & Water Supply and Construction is expecting a growth to be achieved at 3.66 per cent in 2012-13 against a growth of 2.95 per cent estimated in the previous year 2011-12. Amongst the sub-sectors of Industry sectors a favourable growth rate is expected in the "Construction" and "Manufacturing" sectors.

The Services sector comprising of Trade, Hotels & Restaurants, Transport by other means & Storage, Real Estate & Business Services and Communications, Banking & Insurance, Social & Personal services is likely to grow by 9.30 per cent during 2012-13 as compared to 9.34 per cent growth achieved in 2011-12 due to comparatively lower performance to be shown by the key sub sectors of the services sector like 'Communication', 'Storage', 'Banking & Insurance' and 'Public Administration'.

In respect of Agriculture and Allied sector the growth of 'Forestry' sector is likely to achieve moderately low growth of 4.73 percent in 2012-13 against the growth of 5.61 per cent experienced in 2011-12. However, the 'Agriculture' and 'Fishing' sector are expected to grow positively by 3.45 and 7.14 per cent respectively and therefore, all together Agriculture and Allied sector is expected to attain a positive growth rate of 3.80 per cent in 2012-13 against 2.95 per cent of the previous year.

The Net State Domestic Product (NSDP), also known as State Income, at 2004-05 prices is expected to grow by 6.9 per cent as per Advance Estimates for the year 2012-13 compared to 6.4 per cent achieved during 2011-12. The expected estimated sectoral growth of State Domestic Product for 2012-13 is presented in the following table:

**TABLE – 3.2**  
**SECTORAL GROWTH OF STATE DOMESTIC PRODUCT FOR**  
**ASSAM, 2012-13(ADVANCE ESTIMATES)**

Sector	Growth of GSDP at 2004-05 prices (in %)
Agriculture and Allied Services	3.80
Industry	3.66
Services	9.30

Source: Directorate of Economics and Statistics

### Advance Estimates of Per capita Income for the year 2012-13

It is expected that the per capita income will attain the level of ₹24198.00 at constant prices (2004-05) and ₹42036.00 at current prices as per advance estimates for 2012-13 as against ₹22910.00 and ₹37250.00 at constant (2004-05) prices and current prices in the previous year 2011-12 respectively. In terms of growth rate per capita income at constant (2004-05) prices is likely to be increased by 5.62 per cent in 2012-13 over the previous year.

### Gross State Domestic Product (GSDP) for 2011-12(Quick Estimates)

The Gross State Domestic Product (GSDP) of the State of Assam, during 2011-12(Quick Estimates) at current prices was ₹126543.65crore which is 12.52 percent higher than that of ₹112466.26 crore in 2010-11 which comprising the high growth of 5.01 per cent in Agriculture Sector, 13.87 per cent in Industry Sector and 15.82 per cent in Service Sector. In recent years, the gap in the growth between Agriculture and Non-agriculture Sector has been widening depicting remarkable transition of the State economy from Agriculture sector to Non-agriculture Sector. The Gross State Domestic Product of the State during 2011-12 (Quick Estimates) at constant (2004-05) prices was ₹80171.91 crore against ₹75297.77 crore in 2010-11 showing an increase of 6.47 per cent growth over the previous year. As per Quick Estimates the Agriculture and Allied Activities showed a moderate growth of 2.95 percent compared to the growth of 5.87 per cent in previous year 2010-11. The growth of Service Sector has also slided down to 9.34 percent in 2011-12 from 11.57 percent in 2010-11. The Industry Sector, on the other hand, has experienced marginally higher growth of 2.95 per cent against 1.58 per cent achieved during 2010-11.

TABLE – 3.3

## SECTORAL GROWTH RATES OF GSDP AT CONSTANT (2004-05) PRICES

Sector	Percentage change over previous year		
	2009-10	2010-11(P)	2011-12(Q)
Agriculture & Allied Activities	6.89	5.87	2.95
Mining & Quarrying	2.79	-2.00	1.7
Manufacturing	22.10	5.74	4.05
Construction	8.39	1.80	3.07
Electricity, Gas & Water Supply	-20.08	(-)8.23	(-)1.85
Trade, Hotels & Restaurant, Transport, Storage & Communication	8.60	8.65	7.22
Banking & Insurance Real Estates and Business Services	10.41	15.16	13.49
Public Administration & Other Services	11.45	13.57	10.17
<b>Gross State Domestic Product (GSDP)</b>	<b>9.00</b>	<b>7.89</b>	<b>6.47</b>
<b>Agriculture &amp; Allied Services</b>	<b>6.89</b>	<b>5.87</b>	<b>2.95</b>
<b>Industry (2+3+4+5)</b>	<b>8.82</b>	<b>1.58</b>	<b>2.95</b>
<b>Services (6+7+8)</b>	<b>10.01</b>	<b>11.57</b>	<b>9.34</b>
Source : Directorate of Economics & Statistics, Assam.			

**State Income for 2011-12(Quick Estimates)**

The State Income i.e, Net State Domestic Product (NSDP) at current prices is estimated at ₹114695.09 crore in 2011-12 (quick estimates) which is higher by 13.09 per cent than that of ₹101421.16 crore in 2010-11. At current prices 'Agriculture & Allied activities' registered an increase of 5.04 per cent while 'Industry' and 'Service' sector registered a growth of 15.44 per cent and 16.48 per cent respectively. The quick estimates of State Income at constant (2004-05) prices is estimated at ₹70543.66 crore in 2011-12 showing an increase of 6.43 per cent than that of ₹66279.74 crore in 2010-11. This increase is the net effect of increase of 2.60 per cent in agriculture & allied activities, 2.21 per cent in industry sector and 9.56 per cent in service sector.

**Per capita State Income**

As per Quick Estimates for 2011-12 the per capita income at constant (2004-05) prices is ₹22910.00 as against ₹21793.00 in 2010-11 and ₹20406.00 in 2009-10 showing a growth rate of 5.13 per cent, 6.80 per cent and 7.84 percent respectively.

At current prices per capita State Income is worked out at ₹37250.00 during 2011-12 as against ₹33348.00 in 2010-11 and ₹28383.00 in 2009-10 registering a growth of 11.70 per cent, 17.49 and 17.78 percent respectively.

A comparative table in respect of Per capita Income of the State and the country is given at Table-3.4.

**TABLE – 3.4**  
**PER CAPITA INCOME OF ASSAM AND INDIA**

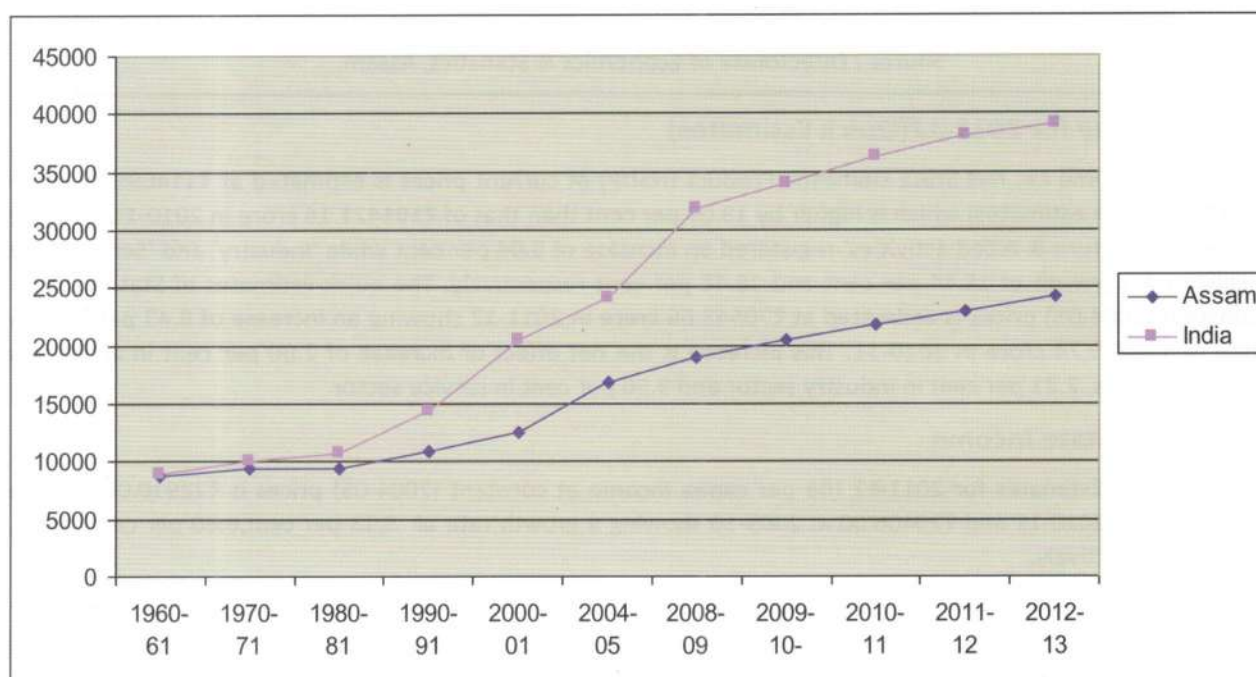
(in Rupees)

Year	Per capita Income			
	Assam		India	
	At Current Prices	*At Constant (2004-05) Prices	At Current Prices	At Constant (2004-05) Prices
1960-61	433	8769	373	8889
1970-71	743	9351	763	10016
1980-81	1673	9334	1852	10712
1990-91	5315	10915	5621	14330
2000-01	12803	12447	17295	20362
2004-05	16782	16782	24143	24143
2008-09	24099	18922	40775	31754
2009-10	28383	20406	46249	33901
2010-11	33348	21793	54151	36342
2011-12	37250(Q)	22910(Q)	61564(Q)	38037(Q)
2012-13	42036(A)	24198(A)	68747(A)	39143(A)

Source : \*For 1960-61 to 2000-01 the base-1999-2000  
Directorate of Economics & Statistics, Assam and  
Central Statistical Office (MOSPI), Govt. of India.

It has been observed that till 1980-81, the difference of per capita income between the State and country was not significant. But from 1990-91 onwards, the gap widened considerably.

**Per capita Income Assam and India**



## Sectoral Composition of Gross State Domestic Product (GSDP)

Sectoral composition of SDP gives an idea of the relative comparable position of different sectors in the economy over a period of time which not only indicates the real structural changes taking place in the economy but also facilitates formulation of plans & various programme for overall economic development of the State.

The sectoral composition of GSDP of Assam, both at current and constant (2004-05) prices has undergone considerable change during the past few years. In 2004-05 at constant (2004-05) prices the share of Agriculture and Allied sector was 26%, Industry 27% and Services sector was 47%.

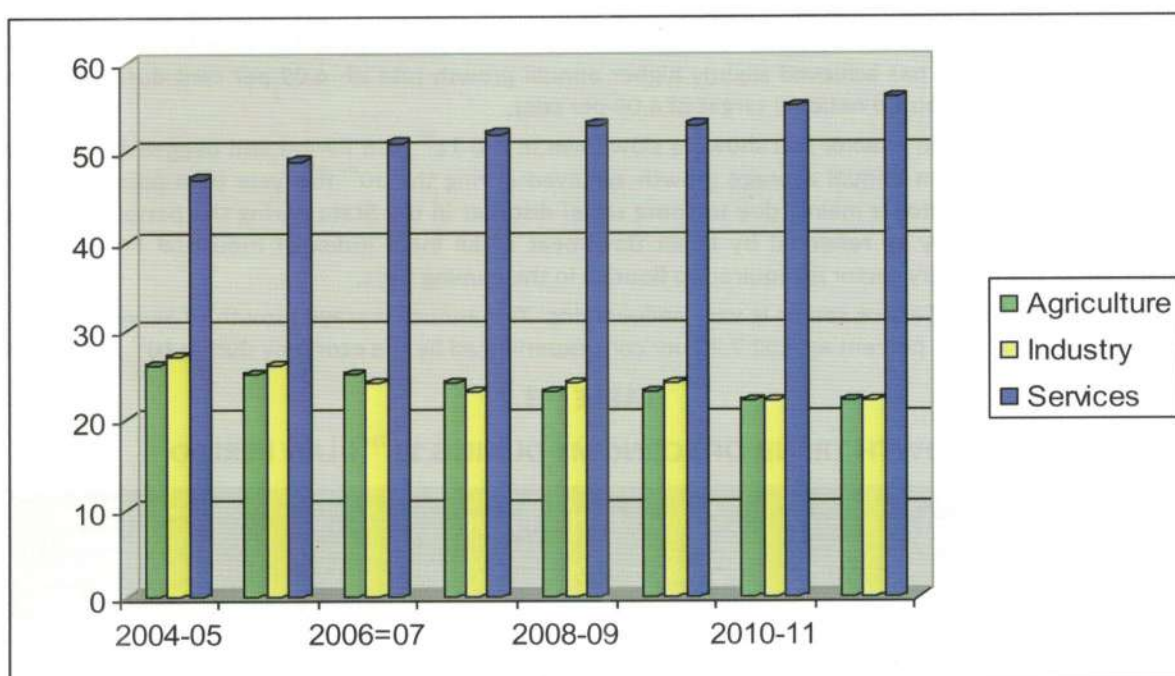
**TABLE – 3.5**

Sector/ Year	Agriculture and Allied	Industry	Services	Total GSDP
2004-05	1365566(26)	1470509(27)	2503697(47)	5339772(100)
2005-06	1400591(25)	1418571(26)	2702195(49)	5521356(100)
2006-07	1427368(25)	1417783(24)	2933101(51)	5778253(100)
2007-08	1467602(24)	1427423(23)	3161725(52)	6056750(100)
2008-09	1496102(23)	1526227(24)	3380925(53)	6403254(100)
2009-10	1599220(23)	1660887(24)	3719282(53)	6979389(100)
2010-11	1693080(22)	1687210(22)	4149487(55)	7529777(100)
2011-12(Q)	1743001(22)	1737043(22)	4537147(56)	8017191(100)

Source: Directorate of Economics and Statistics, Assam.

Figures in brackets indicates percentage contribution to total

## Sectoral Contribution to the Gross State Domestic Product



It has been observed from above, that the share of 'Agriculture and Allied' sector in the GSDP has declined from 26% in 2004-05 to 22% in 2011-12. Similar trend has been noticed in case of the share of Industry sector also since it has come down from 27 percent in 2004-05 to 22 percent in 2011-12 depicting a gloomy industrial scenario in the State. On the other hand, the Services Sector has shown an encouraging trend in the State economy which has increased from 47 per cent in 2004-05 to 56 percent in 2011-12. Moreover, it has also been revealed that the share contribution of Agriculture & Allied sector and Industry sector to GSDP has been remained more or less equal since last few years. The State Economy however experienced a picturesque change over the periods as the primary sector witnessed a shift to service sector and the service sector has flourished very rapidly in the State's economy.

The growth of GDP of Assam and India during Tenth Five Year Plan Period and Eleventh Five Year Plan Period are shown in the table 3.6.

**TABLE – 3.6**

Item	10 <sup>th</sup> Plan Period (Year: 2002-07)		**11 <sup>th</sup> Plan Period (Year:2007-12)	
	Assam*	**India	Assam	India
Average Annual Growth Rate of GDP	5.33	8.74	6.78	7.80
Agriculture	0.63	4.50	4.09	3.50
Industry	7.90	9.82	4.19	7.16
Services	7.20	9.86	9.13	9.74

Source: Directorate of Economics and Statistics, Govt of Assam.

Central Statistical Office(MOSPI), Govt. of India.

\*Base year 1999-2000/\*\* Base year 2004-05

### Growth of Economy during Eleventh Plan Period (2007-2012)

The State has achieved an annual average growth rate of GSDP at 6.78 per cent during 11<sup>th</sup> plan period against 5.33 percent annual average growth achieved during 10<sup>th</sup> plan period (2002-2007). The growth trend of Agriculture sector during 11<sup>th</sup> plan period has been steadily increasing as compared to the 10<sup>th</sup> plan period. The Agriculture and Allied sector of the State has improved considerably during the 11<sup>th</sup> Plan Period as compared to the 10<sup>th</sup> Plan Period and has achieved slightly higher annual growth rate of 4.09 per cent during the eleventh plan period than the proposed national target of 4.00 per cent.

The growth rate of Industry sector has shown a slowdown in the 11<sup>th</sup> plan period and pegged at 4.19 per cent, compared to 7.90 percent annual average growth achieved during the 10<sup>th</sup> five year plan period. The slowing down of the Industry sector is mainly due to some social disorder in the State during the period and economic meltdown in the country as reflected by latest downbeat of all India Index of Industrial Production. More acceleration in the Industry sector is required to flourish in the coming days.

The present scenario of Service sector is very encouraging. The annual average growth of Service sector in the 11<sup>th</sup> plan period was 9.13 percent against 7.20 per cent experienced by the economy during 10<sup>th</sup> plan period.

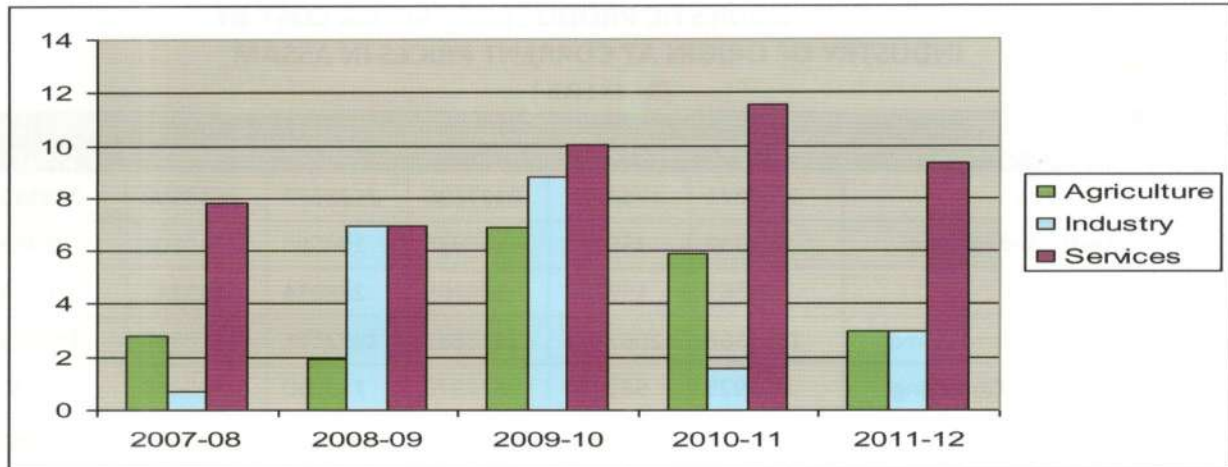
**TABLE – 3.7**

### GROWTH TREND OF ECONOMY DURING 11<sup>TH</sup> PLAN PERIOD

Sector	Eleventh Plan Period					Annual Average Growth Rate During 11 <sup>th</sup> Plan Period (2007-12)
	2007-08	2008-09	2009-10	2010-11(P)	2011-12(Q)	
Average Annual Growth Rate of GSDP	4.82	5.72	9.00	7.89	6.47	6.78

Source: Directorate of Economics and Statistics, Assam

### Average Annual Growth Trend of Economy during 11<sup>th</sup> Plan Period



#### Sector wise Performance of the Economy during Eleventh Plan Period:

##### Agriculture and Allied Sector

The growth of Agricultural sector plays a pivotal role in the performance of the State economy as a whole. During 10<sup>th</sup> plan period Agriculture and Allied Sector had increased to 0.63 per cent over 9<sup>th</sup> plan period's negative growth of 1.7 percent. But during 11<sup>th</sup> plan period Agriculture and Allied Sector has griped a good improvement by achieving a growth of 4.09 percent due to greater emphasis given by the Government in this primary sector of the economy by injecting more investment and introduction of region specific schemes. During this plan a substantial growth of 6.48 percent and 7.01 percent were achieved in the years 2009-10 and 2010-11 respectively in respect of the sector 'Agriculture' proper. However, it is observed that growth rate of Agriculture sector has been declining in the year 2011-12(Quick Estimates) and 2012-13(Adv Estimates) due to crop damaged by flood in some areas of the State, unfavourable weather condition for some crops etc and which has caused a noticeable slashed down in production of some major crops like Winter Paddy by 10.66percent, Autumn Paddy by 2.07 percent, Rape and Mustard by 2.8percent, Wheat by 13.55 percent, Sugarcane by 2.21percent and Jute by 2.71 percent in 2011-12 over the previous year. A good productivity is also observed in Fishery sector at the end of 11<sup>th</sup> plan. On the other hand, the sector like Animal Husbandry and Veterinary needs more nursing to cope up with the demand of the people of the State.

##### Industry Sector

During the 10<sup>th</sup> Five Year Plan period, the Industry sector exhibited the growth of 7.90 percent over 9<sup>th</sup> Plan Period's growth 4.02 percent. The better growth achieved during 10<sup>th</sup> Five Year Plan Period as compared to 9<sup>th</sup> Plan Period was mainly attributed to the better performance of some sector like-Oil and Refinery, Manufacturing (Chemical & Chemical production, Electrical Machinery & Apparatus, Motor Vehicle parts), Processing and Presentation of Food items, etc. But comparatively, the Industry sector has slowed down its pace during 11<sup>th</sup> Plan Period and pegged at 4.19 percent in the wake of some social disorders in the State and economic meltdown in the country reflected by latest downbeat of Index of Industrial Production (IIP) at all India level. The Industry sector of the State requires more attention and emphasis to grow to reach a substantial position in coming days.

##### Services Sector

Presently, the services sector holds a place of prominence in the share of SDP estimates in the economy. The share of Service sector to SDP during the 10<sup>th</sup> Plan Period was 50.76 percent and the annual average growth was 7.20 percent during 10<sup>th</sup> Plan Period over 9<sup>th</sup> Plan Period. This was mainly due to the rapid diversification in the Communication Sector, Transport Sector, Trade & Business Services, Banking Services, Hotel and Catering Services and introduction of various Ancillary services. Infact, the Services sector has radically changed the structure of the State economy and generated significant level of employment particularly in the private sector of the economy. It is hoped that this sector would be able to provide larger employment opportunity for the young generation of the State in near future.

**APPENDIX – 3.1**  
**GROSS STATE DOMESTIC PRODUCT AT FACTOR COST BY**  
**INDUSTRY OF ORIGIN AT CURRENT PRICES IN ASSAM**

(Rs. in lakh )

Sl. No	Sector	2004-05	2008-09	2009-10	2010-11 (P)	2011-12 (Q)	2012-13 (Adv)
1.	Agriculture	1158871	1752517	2127696	2538973	2646908	2883323
2.	Forestry and logging	127332	156160	166935	184586	210807	224784
3	Fishing	79363	159180	184205	238814	253142	302261
	<b>Agriculture and Allied</b>	<b>1365566</b>	<b>2067857</b>	<b>2478836</b>	<b>2962373</b>	<b>3110857</b>	<b>3410368</b>
4	Mining and Quarrying	467925	580974	677976	733090	809645	927425
	<b>a) Primary Sector (Sub-Total)</b>	<b>1833491</b>	<b>2648832</b>	<b>3156812</b>	<b>3695463</b>	<b>3920502</b>	<b>4337793</b>
5.	Manufacturing (Total)	562146	608147	772464	905889	1023186	1170324
	5.1 Registered	434687	391864	552955	642730	729086	827558
	5.2 Unregistered	127459	216284	219509	263158	294100	342766
6.	Construction	342026	681504	751883	849904	1011812	1138737
7.	Electricity, Gas and Water supply	98412	142028	128998	129150	136501	143883
	<b>b) Secondary Sector (Sub-Total)</b>	<b>1002584</b>	<b>1431680</b>	<b>1653345</b>	<b>1884943</b>	<b>2171498</b>	<b>2452943</b>
	<b>c) Industry [4+(b)]</b>	<b>1470509</b>	<b>2012654</b>	<b>2331321</b>	<b>2618033</b>	<b>2981144</b>	<b>3380368</b>
8.	Transport, Storage and Communication(Total)	329700	566604	671704	774154	892436	1072429
	8.1 Railways	89783	155787	160486	175189	176030	212002
	8.2 Transport by other means	157887	263950	327903	373967	435253	499248
	8.3 Storage	2509	4057	5096	5526	6534	7942
	8.4 Communication	79521	142810	178219	219473	274618	353237
9.	Trade, Hotel and Restaurant	752981	1274253	1409263	155605	1719930	1935794
10.	Banking and Insurance	162017	243984	296680	383776	464795	565393
11.	Real Estate, Ownership of Real Estate, Dwelling and Business services	146463	219899	245164	279357	310380	337679
12.	Public administration	342066	528644	700902	747404	939076	1118993
13.	Other services	770469	1193472	1463587	1925923	2235748	2535658
	<b>d) Tertiary Sector (Sub –Total)</b>	<b>2503697</b>	<b>4026855</b>	<b>4787300</b>	<b>5666219</b>	<b>6562365</b>	<b>7565946</b>
14.	State Domestic Product (Rupees In lakh)	5339772	8107367	9597457	11246626	12654365	14356682
15.	State Per Capita Income in Rupees	<b>18993</b>	<b>27334</b>	<b>31952</b>	<b>36980</b>	<b>41098</b>	<b>46064</b>

Source: Directorate of Economics and Statistics, Assam.



**APPENDIX – 3.2**  
**GROSS STATE DOMESTIC PRODUCT AT FACTOR COST BY**  
**INDUSTRY OF ORIGIN AT CONSTANT (2004-05) PRICES IN ASSAM**  
**(Rs.in lakh)**

Sl. No	Sector	2004-05	2008-09	2009-10	2010-11 (P)	2011-12 (Q)	2012-13 (Adv)
1.	Agriculture	1158871	1252426	1333637	1427188	1461053	1511510
2.	Forestry and logging	127332	155758	163520	168421	177871	186292
3	Fishing	79363	87918	102063	97471	104077	111508
	<b>Agriculture and Allied</b>	<b>1365566</b>	<b>1496102</b>	<b>1599220</b>	<b>1693080</b>	<b>1743001</b>	<b>1809310</b>
4	Mining and Quarrying	467925	422277	434048	425383	434777	442044
	<b>a) Primary Sector (Sub-Total)</b>	<b>1833491</b>	<b>1918379</b>	<b>2033268</b>	<b>2118463</b>	<b>2177778</b>	<b>2251354</b>
5.	Manufacturing (Total)	562146	460277	561978	594261	618350	638668
	5.1 Registered	434687	282765	373008	396572	408983	424306
	5.2 Unregistered	127459	177512	188970	197689	209367	214362
6.	Construction	342026	528345	572695	582981	600899	637825
7.	Electricity, Gas and Water supply	98412	115329	92166	84585	83018	82031
	<b>b) Secondary Sector (Sub-Total)</b>	<b>1002584</b>	<b>1103950</b>	<b>1226839</b>	<b>1261827</b>	<b>1302266</b>	<b>1358525</b>
	<b>c) Industry [4+(b)]</b>	<b>1470509</b>	<b>1526227</b>	<b>1660887</b>	<b>1687210</b>	<b>1737043</b>	<b>1800569</b>
8.	Transport, Storage and Communication(Total)	329700	541826	612471	752916	837267	939856
	8.1 Railways	89783	159456	124152	146012	145263	163287
	8.2 Transport by other means	157887	196935	217120	234688	248167	264959
	8.3 Storage	2509	2771	2892	3349	3951	4587
	8.4 Communication	79521	182664	268307	368868	439885	507024
9.	Trade, Hotel and Restaurant	752981	1005185	1067608	1072558	1120152	1184005
10.	Banking and Insurance	162017	281457	316556	380224	445841	511629
11.	Real Estate, Ownership of Real Estate, Dwelling and Business services	146463	175240	187699	200485	213214	227192
12.	Public administration	342066	432499	509041	513892	620017	700308
13.	Other services	770469	944719	1025908	1229412	1300656	1396162
	<b>d) Tertiary Sector (Sub –Total)</b>	<b>2503697</b>	<b>3380925</b>	<b>2719282</b>	<b>4149487</b>	<b>4537147</b>	<b>4959153</b>
14.	State Domestic Product (Rupees In lakh)	5339772	6403254	6979389	7529777	8017191	8569032
15.	State Per Capita Income in Rupees	<b>18993</b>	<b>21589</b>	<b>23236</b>	<b>24758</b>	<b>26037</b>	<b>27494</b>

Source: Directorate of Economics and Statistics, Assam.

**APPENDIX – 3.3**  
**NET STATE DOMESTIC PRODUCT AT FACTOR COST BY**  
**INDUSTRY OF ORIGIN AT CURRENT PRICES IN ASSAM**  
(Rs.in lakh)

Sl. No	Sector	2004-05	2008-09	2009-10	2010-11 (P)	2011-12 (Q)	2012-13 (Adv)
1.	Agriculture	1068008	1648458	2002319	2415373	2519345	2746481
2.	Forestry and logging	125651	154220	164761	182515	208669	222491
3.	Fishing	69139	136827	156525	210994	222532	269424
	<b>Agriculture and Allied</b>	<b>1262798</b>	<b>1939505</b>	<b>2323605</b>	<b>2808882</b>	<b>2950546</b>	<b>3238396</b>
4.	Mining and Quarrying	390230	460857	520609	601450	668751	776282
	<b>a) Primary Sector (Sub-Total)</b>	<b>1653028</b>	<b>2400363</b>	<b>2844214</b>	<b>3410332</b>	<b>3619298</b>	<b>4014677</b>
5.	Manufacturing (Total)	132430	435353	602884	712573	818836	951109
	5.1 Registered	321900	245563	413577	480510	558189	644229
	5.2 Unregistered	110530	189791	189307	232063	260647	306880
6.	Construction	328743	645532	712545	810597	967493	1091193
7.	Electricity, Gas and Water supply	44408	76393	70978	63710	71061	73682
	<b>b) Secondary Sector (Sub-Total)</b>	<b>805581</b>	<b>1157279</b>	<b>1386407</b>	<b>1586880</b>	<b>1857389</b>	<b>2115984</b>
	<b>c) Industry [4+(b)]</b>	<b>1195811</b>	<b>1618136</b>	<b>1907016</b>	<b>2188330</b>	<b>2526141</b>	<b>2892266</b>
8.	Transport, Storage and Communication(Total)	264518	451961	549430	641225	747647	932678
	8.1 Railways	54980	100273	112535	110433	106042	152492
	8.2 Transport by other means	140400	231874	287885	337094	394925	455985
	8.3 Storage	2371	3692	4651	5030	5977	7344
	8.4 Communication	66767	116122	144359	188668	240704	316856
9.	Trade, Hotel and Restaurant	730861	1223220	1351115	1493909	1651441	1862323
10.	Banking and Insurance	158850	240116	292822	379370	460187	560605
11.	Real Estate, Ownership of Real Estate, Dwelling and Business services	103593	138530	150295	181959	203528	223054
12.	Public administration	275000	437967	593635	639368	823860	995396
13.	Other services	726643	1098376	1357392	1809073	2106158	2396641
	<b>d) Tertiary Sector (Sub -Total)</b>	<b>2259466</b>	<b>3590169</b>	<b>4294688</b>	<b>5144904</b>	<b>5992822</b>	<b>6970696</b>
14.	State Domestic Product (Rupees in lakh)	4718075	7147811	8525310	10142116	11469509	13101358
15.	State Per Capita Income in Rupees	<b>16782</b>	<b>24099</b>	<b>28383</b>	<b>33348</b>	<b>37250</b>	<b>42036</b>

Source: Directorate of Economics and Statistics, Assam.

**APPENDIX – 3.4**  
**NET STATE DOMESTIC PRODUCT AT FACTOR COST BY**  
**INDUSTRY OF ORIGIN AT CONSTANT (2004-05) PRICES IN ASSAM**  
**(Rs.in lakh)**

Sl. No	Sector	2004-05	2008-09	2009-10	2010-11 (P)	2011-12 (Q)	2012-13 (Adv)
1.	Agriculture	1068008	1170680	1244862	1331786	1358530	1401335
2.	Forestry and logging	125651	154252	162014	166803	176132	184423
3	Fishing	69139	69321	79891	73644	78471	83991
	<b>Agriculture and Allied</b>	<b>1262798</b>	<b>1394253</b>	<b>1486767</b>	<b>1572233</b>	<b>1613133</b>	<b>1669749</b>
4	Mining and Quarrying	390230	322186	309232	302894	309438	314696
	<b>a) Primary Sector (Sub-Total)</b>	<b>1653028</b>	<b>1716439</b>	<b>1795999</b>	<b>1875127</b>	<b>1922571</b>	<b>1984445</b>
5.	Manufacturing (Total)	432430	311303	420459	442179	454915	463035
	5.1 Registered	321900	156228	256257	271106	274152	279411
	5.2 Unregistered	110530	155075	164202	171073	180763	183624
6.	Construction	328743	497228	540030	547878	563175	597286
7.	Electricity, Gas and Water supply	44408	60452	46682	35706	30491	25583
	<b>b) Secondary Sector (Sub-Total)</b>	<b>805581</b>	<b>868982</b>	<b>1007171</b>	<b>1025762</b>	<b>1048581</b>	<b>1085903</b>
	<b>c) Industry [4+(b)]</b>	<b>1195811</b>	<b>1191168</b>	<b>1316403</b>	<b>1328656</b>	<b>1358019</b>	<b>1400599</b>
8.	Transport, Storage and Communication(Total)	264518	447026	503940	636284	711928	805163
	8.1 Railways	54980	115411	76201	94482	89886	103776
	8.2 Transport by other means	140400	168976	183744	198820	209623	223537
	8.3 Storage	2371	2486	2569	3001	3578	4186
	8.4 Communication	66767	160153	241426	339981	408841	473663
9.	Trade, Hotel and Restaurant	730861	964412	1023057	1024682	1068702	1128715
10.	Banking and Insurance	158850	278135	312698	376078	441386	506841
11.	Real Estate, Ownership of Real Estate, Dwelling and Business services	103593	113444	118686	126321	133514	141542
12.	Public administration	275000	358359	427999	426801	526425	599730
13.	Other services	726643	865498	939840	1136920	1201260	1289347
	<b>d) Tertiary Sector (Sub -Total)</b>	<b>2259466</b>	<b>3026873</b>	<b>3326219</b>	<b>3727085</b>	<b>4083214</b>	<b>4471337</b>
14.	State Domestic Product (Rupees In lakh)	4718075	5612294	6129389	6627974	7054366	7541686
15.	State Per Capita Income in Rupees	<b>16782</b>	<b>18922</b>	<b>20406</b>	<b>21793</b>	<b>22910</b>	<b>24198</b>

Source: Directorate of Economics and Statistics, Assam.

### APPENDIX – 3.5

#### MOVEMENT OF GROSS STATE DOMESTIC PRODUCT (GSDP) OF ASSAM AT CURRENT AND CONSTANT (2004-2005) PRICES

(New Series)

Year	Gross State Domestic Product (Rs.in Lakh)		Per capita Gross State Domestic Product ( in Rupees)	
	At current Prices	At constant (2004-05) Prices	At current Prices	At constant (2004-05) Prices
2004-05	5339772	5339772	18993	18993
2008-09	8107367	6403254	27334	21589
2009-10	9597457	6979389	31952	23236
2010-11(P)	11246626	7529777	36980	24758
2011-12(Q)	12654365	8017191	41098	26037
2012-13(Ad)	14356682	8569032	46064	27494

Source: Directorate of Economics and Statistics, Assam.

### APPENDIX – 3.6

#### MOVEMENT OF NET STATE DOMESTIC PRODUCT (NSDP) OF ASSAM AT CURRENT AND CONSTANT (2004-2005) PRICES

(New Series)

Year	Gross State Domestic Product (Rs.in Lakh)		Per capita Gross State Domestic Product ( in Rupees)	
	At current Prices	At constant (2004-05) Prices	At current Prices	At constant (2004-05) Prices
2004-05	4718075	4718075	16782	16782
2008-09	7147811	5612294	24099	18922
2009-10	8525310	6129389	28383	20406
2010-11(P)	10142116	6627974	33348	21793
2011-12(Q)	11469509	7054366	37250	22910
2012-13(Ad)	13101358	7541686	42036	24198

Source: Directorate of Economics and Statistics, Assam.



## CHAPTER – IV

### STATE FINANCE

The State Government has experienced transition from severe financial crisis prior to 2005-06 to a recovery path. The fiscal deficit turned to surplus during 2005-06 and continued up to 2008-09. Thereafter it started declining once again and in 2009-10 the fiscal deficit escalated to `4043 crore and stood at 4.37 percent of Gross State Domestic Product (GSDP). Thus the fiscal deficit remained above the 3.5 percent of GSDP limit of State's FRBM Act as well as 4.0 percent of GSDP limit raised by Government of India for 2009-10 as a part of stimulus packages to facilitate more borrowings for increasing capital expenditure for recovery from economic recession. On the other hand, the debt-GSDP ratio of the State for 2011-12 was 22.47 and the rate of interest payment to total revenue receipts was 7.56 percent which are well below the acceptance level of 28 percent and 15 percent recommended by the Twelfth Finance Commission. The total tax revenues of the State during 2011-12 have shown a growth of 28.81 percent over the previous year. The gross VAT collection increased by 31 percent in 2011-12 over previous year leading to an overall comfortable financial position.

#### Budget 2012-13

The analysis of the Assam Government Budget 2012-13 reveals that the receipt under the consolidated fund of the State is expected to be ₹42380.68 crore. Out of this, ₹37662.84 crore is on Revenue Account and the remaining ₹4717.84 crore is under Capital Account. After taking into account the estimated receipt of ₹243916.06 crore under Public Accounts and ₹50.00 crore under Contingency Fund, the aggregate receipts amount to ₹286346.74 crore. The total expenditure from the consolidated fund of the State in 2012-13 is estimated at ₹43151.79 crore, of which ₹36298.86 crore is on Revenue Account and ₹6852.93 crore is on Capital Account. Taking into account of the expenditure of ₹242359.28 crore under Public Account and ₹50.00 crore under Contingency Fund, the aggregate expenditure for the year is estimated at ₹285561.07 crore. Thus, during the year 2012-13, it is expected to have a surplus of ₹785.67 crore which together with the opening deficit of `1079.11 crore for the year 2012-13 will lead to an estimated closing deficit of ₹293.44 crore.

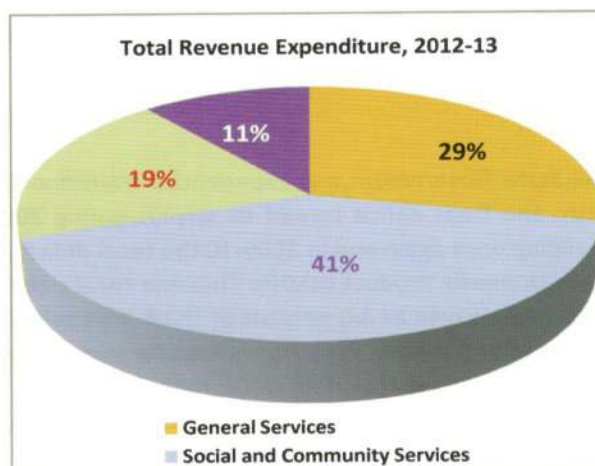
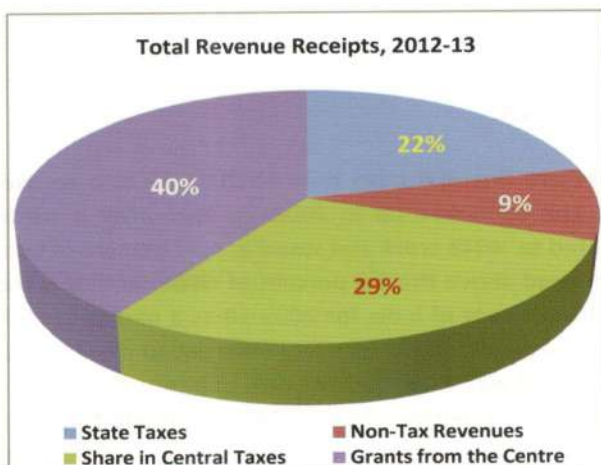
#### The Revenue Budget 2012-13

During the financial year 2012-13, the Government of Assam expects to receive ₹37664.84 crore under Revenue account against the total outlay amounting to ₹36298.86 crore. The major components of the Revenue account and Revenue expenditure in the Budget 2012-13 may be evident from the pie chart on next page.

**TABLE – 4.1**  
**BUDGET AT A GLANCE**

(Rupees in crore)		
Item	2011-12(R.E.)	2012-13(B.E.)
<b>A. Receipts</b>	269312.64	286346.74
<b>I. Consolidated Fund</b>	37005.57	42380.68
Revenue Account	32850.11	37662.84
Capital Account	4155.46	4717.84
II. Contingency Fund Accounts	50.00	50.00
III. Public Accounts	232257.07	243916.06
<b>B. Expenditure</b>	269418.50	285561.07
<b>I. Consolidated Fund</b>	38562.89	43151.79
Revenue Account	32554.62	36298.86
Capital Account	6008.27	6852.93
II. Contingency Fund Accounts	50.00	50.00
III. Public Accounts	230805.61	242359.28
<b>C. Transactions during the year (A-B)</b>		
Surplus (+)		785.67
Deficit (-)	(-)105.86	
<b>D. Opening balance</b>		
Surplus (+)		
Deficit (-)	(-)973.25	(-)1079.11
<b>E. Closing balance (C+D)</b>		
Surplus (+)		
Deficit (-)	(-)1079.11	(-)293.44

R.E. = Revised Estimate, B.E. = Budget Estimate.  
Source: Assam Budget in Brief, 2012-13, Assam.



In the Budget 2012-13 the State expects ₹8009.22 crore as Tax Revenues and ₹3487.47 crore as Non-Tax revenue amounting to ₹11498.69 crore under State's Own Resources. The expected transfer from the Centre is ₹37664.84 crore which include ₹11008.70 as Share in Central Taxes and ₹15157.45 crore as Grants from the Centre. The Revenue Expenditure is segregated into plan and non-plan expenditure. The expected Plan expenditure in the Budget 2012-13 is ₹11519.68 crore and the estimated Non-Plan expenditure is ₹24779.18 crore of which expected interest payment component is ₹2119.95 crore and under Pension the expenditure is expected to be ₹2588.87 crore. Budget estimate of 2012-13 shows revenue surplus of ₹1363.98 crore and fiscal deficit is pegged at 2.99 percent of GSDP.

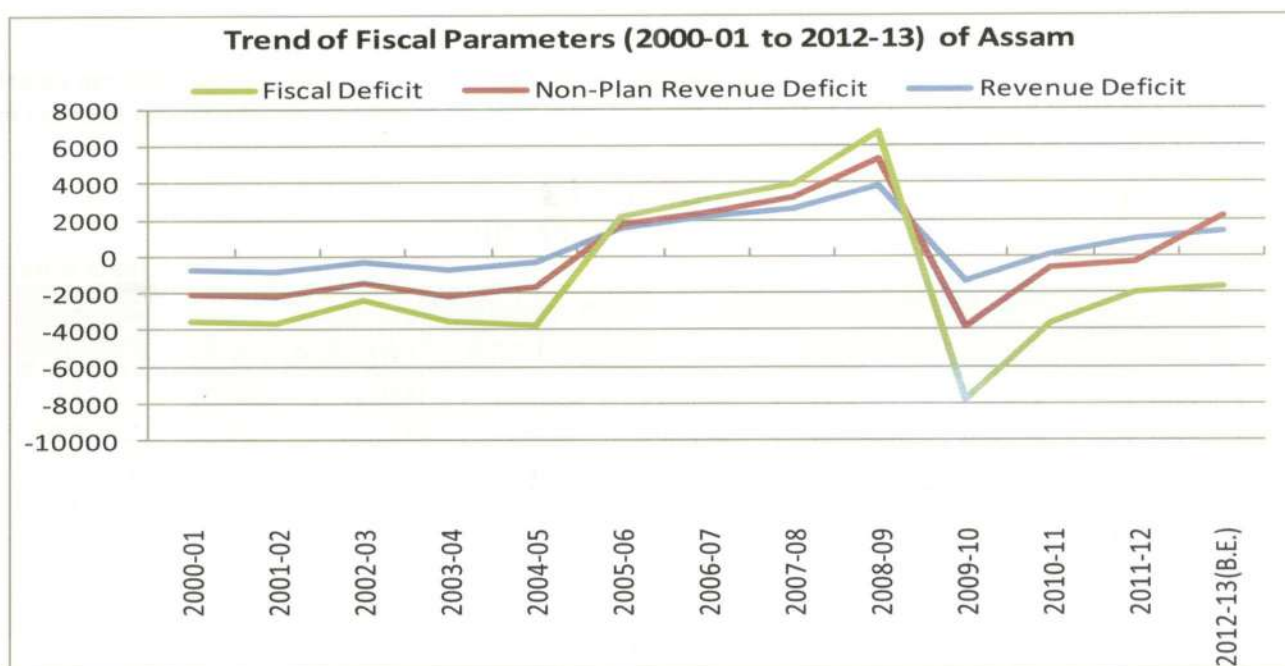
### The Capital Budget 2012-13

The Budget estimates anticipate receipt of ₹4686.48 crore from Public Debt and ₹31.37 crore from recovery of loans and Advances by the State Government. As regards to the allocation of funds under the three important components of Capital expenditure, the Budget 2012-13 provides ₹4710.00 crore for Capital Outlay, ₹1571.48 crore for Repayment of Public Debt and ₹571.12 crore for Loans and Advances. The expected deficit in Capital budget is estimated at ₹2135.08 crore for 2012-13.

### Analysis of the Fiscal Scenario of the State

A review of the State's fiscal position from 2000-01 to 2004-05 shows a dismal picture. During the period the revenue expenditure outstripped revenue receipts leading to unbridled increase of revenue deficit, fiscal deficit and non-plan deficit. During 2000-01, the overall revenue deficit was ₹779 crore and it ended up with ₹292 crore in 2004-05. The non-plan revenue deficit which was ₹1269 crore in 2000-01 steadily increased to ₹1386 crore in 2004-05. During the same period fiscal deficit escalated from ₹1540 crore to ₹2057 crore and primary deficit overshoot from ₹2405 crore to ₹3461 crore. The high proportion of revenue deficit as percentage of fiscal deficit indicates a declining trend in capital expenditure and borrowings were largely used to finance revenue expenditure rather than creation of capital assets.

A remarkable feature is that these crippling deficits have occurred despite a significant improvement in State's own tax and non-tax revenue collection. During the period 2000-01 to 2004-05 the collection of State taxes increased by 92 percent and non-tax revenue recorded an increase of more than hundred percent. The fiscal position of the State improved after 2004-05 due to the fiscal measures adopted by the State. The first fiscal reform programme was implemented in January 2000 in consultation with the Government of India. This was followed by implementation of the Medium Term Fiscal Reform Programmes (MTFRP) as recommended by the Eleventh Finance Commission to contain fiscal imbalance. The major agenda of this programme was the cumulative reduction of revenue deficit as a percentage of revenue receipt by 16 percent in a period of five years i.e., 2000 to 2005 for special category States and 12 percent for General Category States. Another important milestone in fiscal reform is the enactment of the Assam Fiscal Responsibility and Budget Management Act (AFRBM) in 2005. This was followed by a programme of Medium Term Fiscal Plan (MTFP) under Assam Governance and Public Resource Management Programme (AGPRMP). The objectives of the said programmes were to eliminate revenue deficit and to contain fiscal deficit to 3 percent of GSDP by 2008-09.



The fiscal reforms yielded a positive turn in 2005-06. During the year the overall revenue and non-plan revenue account showed a surplus of ₹1509 crore and ₹281 crore respectively from a huge deficit of ₹292 crore and ₹1386 crore respectively in the previous year, 2004-05. Likewise, the fiscal deficit of ₹2057 crore in 2004-05 turned into a positive figure of ₹356 crore in 2005-06. This favourable trend continued upto 2008-09. Thereafter it started declining once again. In 2009-10 revenue deficit rose to ₹1348 crore, Non-Plan revenue deficit and fiscal deficit escalated to ₹2457 crore and ₹4043 crore respectively. Fiscal deficit stood at 4.37 percent of GSDP in 2009-10. This crossed the 3.5 percent of GSDP limit of State's FRBM Act and also 4.0 per cent of GSDP limit raised by the Government of India (GOI) for 2009-10 as a part of stimulus packages to facilitate more borrowings for increasing capital expenditure for recovery from economic recession. This heavy downside is largely accountable to the revision of pay and pension as per Revision of Pay Rules, 2010. As per actual available for 2010-11 and 2011-12, the revenue deficit turned into surplus of ₹53.12 crore and ₹926.85 crore, non-plan revenue deficit declined to ₹657.26 crore and rose to ₹1290.16 crore and fiscal deficit came down to ₹2984.82 crore being 1.91percent of GSDP in 2010-11 and further declined to ₹1646.05 crore with 1.43 percent of GSDP in 2011-12. Budget estimate of 2012-13 shows revenue surplus of ₹1363.98 crore and fiscal deficit is pegged at 2.99% of GSDP. The Table-4.2 below summarises the position.

**TABLE – 4.2  
FISCAL PARAMETERS**

Year	(Rs.in crore)				
	Revenue Deficit (-) / Surplus (+)	Fiscal Deficit (-) / Surplus (+)	Primary Deficit (-) / Surplus (+)	Non-Plan Deficit (-) / Surplus (+)	Fiscal Deficit (-) / Surplus (+) as percentage of GSDP
2005-06	1509.08	355.71	1865.83	281.17	0.60
2006-07	2210.42	711.39	2227.06	156.25	1.10
2007-08	2580.76	790.39	2302.33	613.18	1.11
2008-09	3833.71	1406.79	3000.12	1492.26	1.73
2009-10	(-)1347.71	(-)4043.42	(-)2210.84	(-)2457.05	(-)4.37
2010-11	53.12	(-)2984.82	(-)78.44	(-)657.26	(-)1.91
2011-12	926.85	(-)1646.05	(-)3270.55	(-)1290.16	(-)1.43
2012-13(B.E)	1363.98	(-)3886.11	(-)6006.06	821.62	(-)2.99

Source: Department of Finance (Economic Affairs), Government of Assam.

## Total Revenue Receipts:

Revenue Receipts comprises of two major components - State's Own Resources and Transfer from the Centre. The trend of actual Revenue receipts for the last six years from 2006-07 to 2011-12 and the Budget Estimate for 2012-13 is placed in the table-4.3 below.

**TABLE – 4.3**  
**TOTAL REVENUE RECEIPTS**

(Rs.in crore)

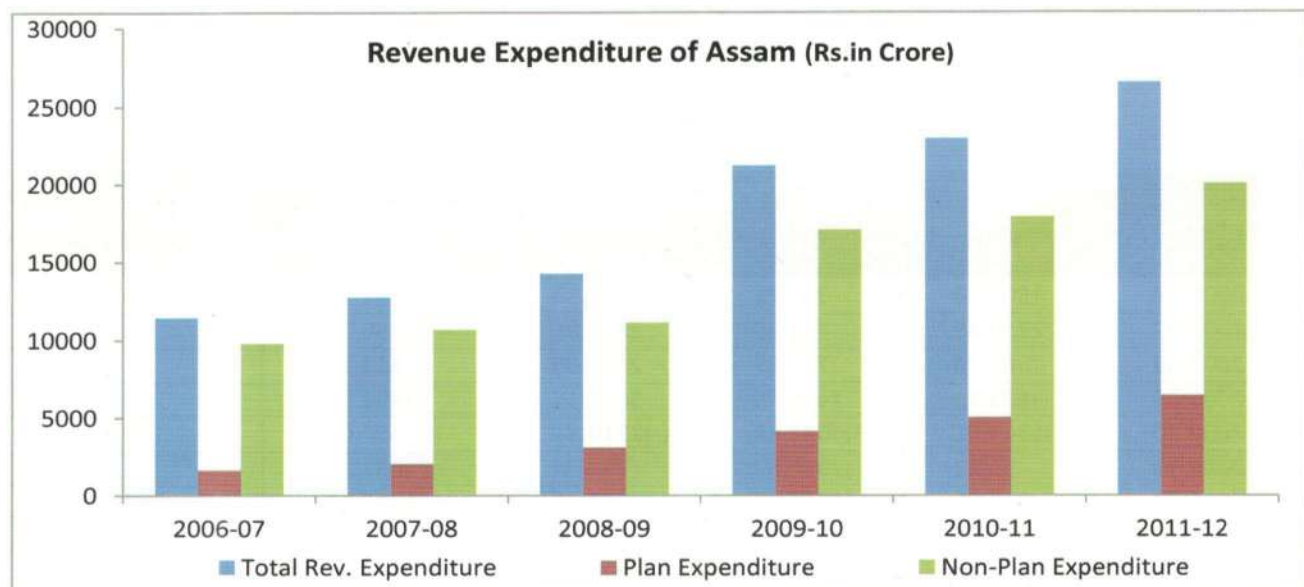
Year	Tax Revenues	Non-Tax Revenues	State's Own Resources	Share in Central Taxes	Grants from the Centre	Transfer from the Centre	Total Revenue Receipts
2006-07	3483.32	1859.27	5342.59	3898.99	4425.37	8324.36	13666.95
2007-08	3359.50	2134.59	5494.09	4918.21	4912.63	9830.84	15324.93
2008-09	4150.21	2271.90	6422.11	5189.90	6465.03	11654.93	18077.04
2009-10	4986.71	2752.94	7739.65	5339.53	6805.31	12144.84	19884.49
2010-11	5929.84	2373.32	8303.16	7968.61	6733.16	14701.77	23004.93
2011-12	7638.24	2866.76	10505.00	9283.53	7666.87	16950.40	27455.40
2012-13(B.E.)	8009.22	3487.47	11498.69	11008.70	15157.45	26166.15	37664.84

Source: Department of Finance (Economic Affairs), Government of Assam.

The growth of total revenue receipts during the last six years (2006-2012) was more than hundred percent. During the same period transfer from the Centre grew by 103 percent and the State's Own revenue resources had a growth of 96 percent. Revenue from State's Own taxes showed a growth of 119 percent in 2011-12 over 2006-07. The percentage increase of State taxes in 2011-12 over 2010-11 was 28 percent than that of 19 percent in 2010-11 over the previous year. The growth of share in Central taxes during the period 2006-2012 is 138 percent. The increase of share in Central taxes in 2011-12 was 17 percent than that of 49 percent increase in 2010-11 over the previous years. During 2011-12 of the total Revenue receipts of ₹27455.40 crores the share of State Taxes was 28 percent, non-tax revenue was 10 percent, the share of Central Taxes was 34 percent and Grants from the Centre was 28 percent.

## Revenue Expenditure

Revenue expenditure is segregated into plan and non-plan expenditure. The volume of Total Revenue Expenditure, Plan Expenditure and Non-plan Expenditure from 2006-07 to 2011-12 is presented through the graph given below.





The steady increase in Plan expenditure shows inclination of the Government to stimulate developmental activities. During 2006-07, the volume of Plan expenditure to total expenditure was 15 percent and after gradual increase over the years it reached 24 percent during 2011-12. It is expected to spend around 32 percent of the total expenditure during 2012-13 on the Plan head.

Out of the total Expenditure amounting to ₹11456.53 crores during 2006-07, the proportion of expenditure on salary and wages was as high as 51 percent and remained more or less same up to 2008-09. It declined to 46 percent during 2009-10 and again soared to 56 percent during 2010-11 and remained more or less at the same level during 2011-12. This increase may be attributed to the implementation of the Sixth Pay Commission and the arrear thereon payable since October 2008. Another component of revenue expenditure is interest payment. The trend since 2006-07 shows that the proportion of expenditure on interest payment to the total expenditure is decreasing. The table below shows the trend of actual expenditure of Government of Assam from 2006-07 to 2011-12 and the Budget Estimate for 2012-13.

**TABLE – 4.4**  
**REVENUE EXPENDITURE**

(Rs. in crore)

Year	Plan Expenditure		Non-Plan Expenditure			Total Revenue Expenditure	
	Total	Salary	Total	Interest Payment	Salary		Pension
2006-07	1662.50	200.21	9794.03	1515.67	4484.19	1177.86	11456.53
2007-08	2067.38	172.62	10676.78	1512.24	5068.58	1340.68	12744.16
2008-09	3110.65	256.68	11132.68	1593.33	5583.70	1437.37	14243.33
2009-10	4168.91	297.59	17063.29	1832.58	7804.80	1769.28	21232.20
2010-11	5055.96	413.18	17895.86	1912.12	10030.59	2384.53	22951.82
2011-12	6487.76	668.89	20040.79	2074.40	10978.54	3136.07	26528.55
2012-13(B.E.)	11519.68		24779.18	2119.95		2588.87	36298.86

Source: Department of Finance (Economic Affairs), Government of Assam.

#### Non-Debt Capital Expenditure

Non-debt capital Expenditure consists of capital outlay and lending. This excludes loan payment. The trend of actual capital expenditure during the period from 2006-07 to 2011-12 and the Budget Estimate (BE) for 2012-12 is indicated in the 4.5 given below.

**TABLE – 4.5**  
**NON-DEBT CAPITAL EXPENDITURE**

(Rs. in crore)

Year	Capital Outlay			Lending			Total Capital Expenditure	Total Revenue Expenditure	Total Expenditure
	Plan	Non-Plan	Total	Plan	Non-Plan	Total	(Col 4+ Col 7)		(Col 8+ Col 9)
2006-07	1403.11	49.86	1452.97	76.85	3.78	80.63	1533.60	11456.53	12990.13
2007-08	1470.83	217.28	1688.11	139.80	3.09	142.89	1831.00	12744.16	14575.16
2008-09	2286.15	86.86	2373.01	75.09	13.65	88.74	2461.75	14243.33	16705.08
2009-10	2548.98	80.37	2629.35	96.99	2.24	99.23	2728.58	21232.20	23960.78
2010-11	1929.97	70.92	2000.89	70.78	0.10	70.88	2071.77	22951.82	25023.59
2011-12	2431.34	74.67	2506.01	81.81	6.47	88.28	2594.29	26528.55	29122.84
2012-13(B.E.)	4602.79	107.54	4710.33	526.77	44.35	571.12	5281.45	36298.86	41580.31

Source: Department of Finance (Economic Affairs), Government of Assam.

The break-up of total expenditure excluding Public Debt into Plan expenditure, General services, Social services and Economic services alongwith Development expenditure (Social services and Economic services) is given in the table-4.6 below.

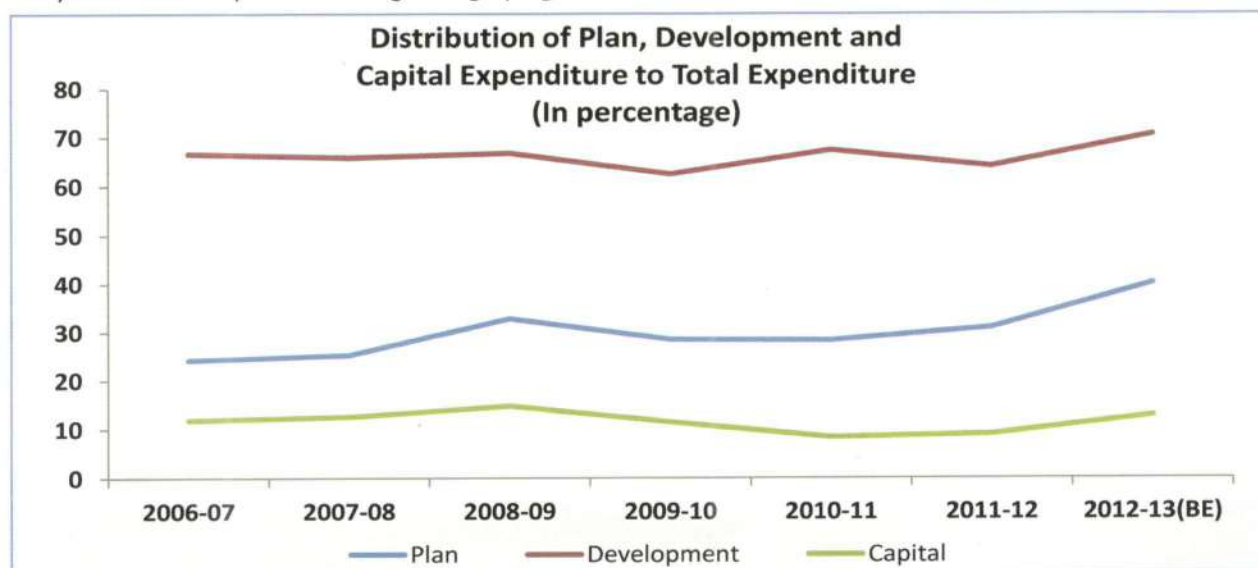
**TABLE – 4.6**  
**TOTAL EXPENDITURE OF THE STATE**

(Rs. in crore)

Year	Plan Expenditure	General Services (GS)	Social Services (SS)	Economic Services (ES)	Total Development (SS+ES)	Total Expenditure (Col.3+4+5)
2006-07	3142.46	4333.32	4634.36	4022.45	8656.81	12990.13
2007-08	3678.01	4976.64	5247.81	4350.71	9598.52	14575.16
2008-09	5471.89	5549.80	6350.80	4804.48	11155.28	16705.08
2009-10	6814.88	9004.29	9018.40	5938.09	14956.49	23960.78
2010-11	7056.71	8177.57	10337.26	6508.76	16846.02	25023.59
2011-12	9000.91	10468.00	11639.15	7015.69	18654.84	29122.84
2012-13(BE)	16649.24	12239.32	17500.90	11840.09	29340.99	41580.31

Source: Department of Finance (Economic Affairs), Government of Assam.

The percentage Share of Capital Expenditure to Total Expenditure from 2006-07 to 2011-12 and the expected for the year 2012-13 is present through the graph given below.



From the analysis of the trend of public expenditure made in above Table 4.4, 4.5 and 4.6 it may be seen that capital expenditure of the State Government, which was 11.8 percent of total expenditure in 2006-07 rose to 14.7 percent in 2008-09 and came down to 8.9 percent in 2011-12. This sliding trend of capital expenditure during 2009-10 and 2011-12 may be attributable to abrupt rise of salary and pension expenditure on the revenue account owing to implementation of revised pay scale and pension of the employees of the State Government. Similarly, expenditure on social and economic services which constitute development expenditure has remained more or less stable during the period from 2006-07 to 2011-12. Plan expenditure as a percentage of total expenditure has increased from 24.19 percent in 2006-07 to 30.91 percent in 2011-12. However, revenue expenditure still continues to remain above 80 percent of total expenditure during the period from 2006-07 to 2011-12 and capital expenditure is less than 3 percent of GSDP. Capital expenditure, which was 2.38 percent of GSDP in 2006-07, has come down to 2.25 percent of GSDP in 2011-12. In order to accelerate economic growth there is a need to substantially increase capital expenditure.

## Borrowings and Repayment

Sources of borrowings of the State Government are loans from the market, loans from financial institutions/banks, NSSF loans, loans from the Centre against EAPs and State Provident Fund & GIS. State Government usually resorts to borrowings to meet the fiscal deficit. The prudent level of borrowings is the 3 percent fiscal deficit of GSDP. The Table below shows the position of actual borrowings and repayment of loans of the State Government for the last six years from 2006-07 to 2011-12 and Budget Estimate for 2012-13.

**TABLE – 4.7**  
**BORROWINGS AND REPAYMENT**

(Rs. in crore)

Year	Borrowings	Repayment of loans	Net loans
2006-07	1115.75	494.72	621.03
2007-08	1138.30	575.14	563.16
2008-09	2877.51	780.80	2096.71
2009-10	2190.28	1007.56	1182.72
2010-11	2045.32	923.38	1121.94
2011-12	2114.47	1673.26	441.21
2012-13 (B.E.)	4686.48	1571.48	3115.00

Source: Department of Finance (Economic Affairs), Government of Assam.

## Debt Position

The standard criteria for determining the debt sustainability of the States are- acceptable level of the debt-GSDP ratio and the ratio of interest payment to total revenue receipts. Twelfth Finance Commission recommended 28 percent and 15 percent as the acceptable levels of debt-GSDP ratio and the ratio of interest payment to total revenue receipts respectively. The Table below summarises the debt position of the State from 2006-07 to 2011-12.

**TABLE – 4.8**  
**DEBT POSITION OF ASSAM**

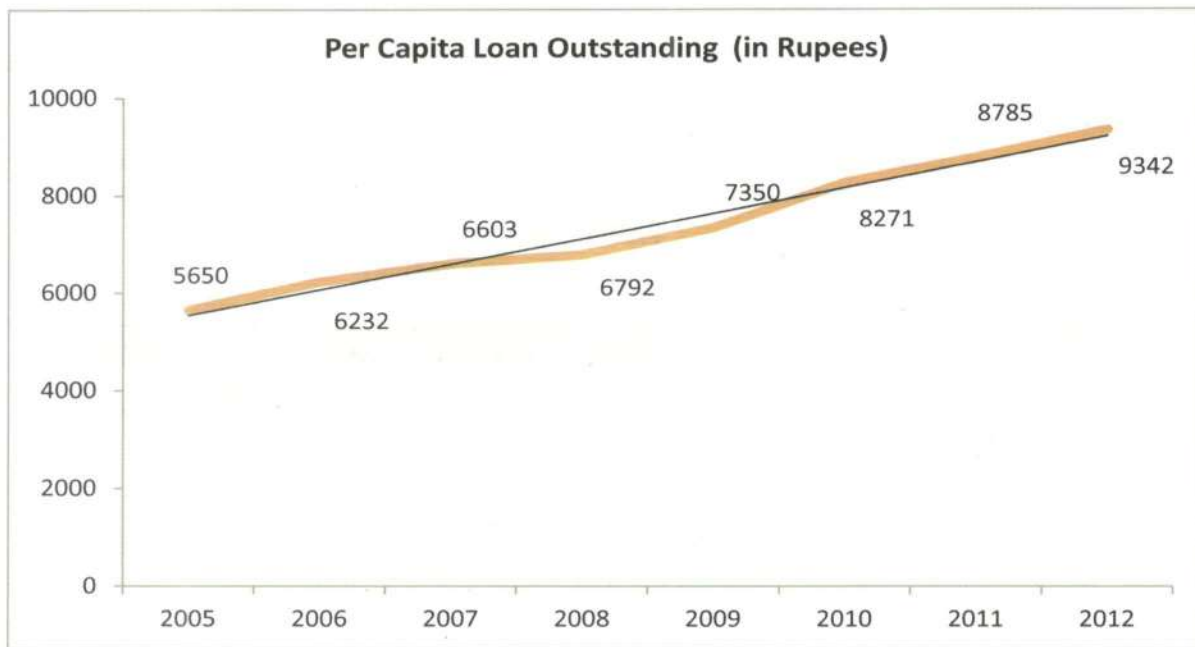
(Rs. in crore)

Year	Market Loan	Institution al Loan	NSSF Loan	Central Loan	State Provident Fund	Year end total outstanding debt	Debt-GSDP Ratio (%)
2006.07	7296.53	417.74	4688.26	2775.31	3614.78	18792.62	29.17
2007-08	7841.09	511.80	4679.66	2708.44	3932.74	19673.73	27.47
2008-09	9855.85	645.26	4697.03	2639.56	4322.97	22160.67	27.95
2009-10	11261.30	690.92	4721.82	2346.38	4812.52	23832.94	25.77
2010-11	11561.34	760.05	5582.28	2238.69	5352.93	25495.28	24.46
2011-12	10906.58	841.39	6057.14	2143.48	5987.91	25936.50	22.47

Source: Department of Finance (Economic Affairs), Government of Assam.

It appears from the above Table that outstanding debt position of the State has come down within the manageable level of 28 percent of GSDP, as prescribed by the Twelfth Finance Commission. In 2011-12 debt stock has far declined to 22.47 percent of GSDP, as against the 28.3 percent of GSDP prescribed by the Assam FRBM (Amendment) Act, 2011 as per award of the Thirteenth Finance Commission.

The per capita loan outstanding of the State from 2005 to 2012 calculated taking mid-financial year population published by the RGI is reflected in the graph given below. (Source: Budget in Brief, 2012-13 published by the Directorate of Economics and statistics, Assam).



### Interest Payment to Revenue Receipts

The position of interest payment to total revenue receipts in terms of percentage is indicated below:

**TABLE – 4.9**  
**INTEREST PAYMENT TO REVENUE RECEIPTS**

(Rs. in crore)

Year	Total Revenue Receipts	Interest Payment	Ratio of Interest Payment to Revenue Receipts (in percent)
2006-07	13666.95	1515.67	11.09
2007-08	15324.93	1512.24	9.87
2008-09	18077.04	1593.33	8.80
2009-10	19884.49	1832.58	9.22
2010-11	23004.94	1912.12	8.31
2011-12	27455.40	2074.40	7.56

Source: Department of Finance (Economic Affairs), Government of Assam.

It appears from above Table that the ratio of interest payment to revenue receipts has been falling persistently and has come down to 7.56 percent in 2011-12 from 11.09% in 2006-07. The ratio of interest payment to revenue receipts remains well below the benchmark prescribed by the Twelfth Finance Commission i.e. 15 percent.

### Government Guarantees

State Government has long since been providing Government guarantees to various State PSUs and Cooperative Institutions for investment in different sectors of the economy against loans given by Banks and Financial Institutions. Since most of the borrowing PSUs failed to discharge guarantee liabilities in time due to their weak financial conditions and became defaulters, Banks and Financial Institutions started invoking the Government guarantees. To honour the Government guarantees invoked by the Banks and Financial Institutions, State Government had initiated a process of one time settlement with the Banks and the Financial Institutions and liquidated major amount of Government guaranteed debt on behalf of the defaulted PSUs and misguided youths. In this way, State Government was able to reduce the outstanding contingent liability arising out of Government guarantees. The Table 4.10 shows the position.

**TABLE – 4.10**  
**OUTSTANDING GOVERNMENT GUARANTEES AS ON 31<sup>ST</sup> MARCH**

Year->	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Principal	1220.56	863.49	897.63	735.42	246.53	186.26	161.50
Interest	52.37	40.92	53.68	60.45	61.22	60.79	97.53

(Rs. in crore)

Source: Department of Finance (Economic Affairs), Government of Assam.

### Consolidated Sinking Fund and Guarantee Redemption Fund

Government of Assam joined the Consolidated Sinking Fund (CSF), a scheme set up by the Reserve Bank of India to facilitate redemption of matured State Development Bonds, by constituting a CSF in 1999-2000. Government of Assam revised the scheme of CSF for redemption of all outstanding loans of the State Government commencing from 2007-08. Under the revised scheme, State Government is to contribute to the CSF on a modest scale of at least 0.5 percent of the outstanding liabilities as at the end of the previous year beginning with the financial year 2007-08. The Corpus comprising the periodic contributions as well as the interest accruing to the Fund has been kept outside the General Revenues of the Government. The Fund is administered by the Reserve Bank of India subject to such directions / instructions as the Government may issue from time to time. The year-wise contribution of the Government towards CSF is indicated below: -



Source: Department of Finance (Economic Affairs), Government of Assam.

The total contribution of the Government towards CSF as on 31<sup>st</sup> March 2012 is ₹1300.32 crore. State Government has not yet utilized the interest amount of CSF towards redemption of loans of the State Government.

To liquidate future contingent liabilities arising out of Government guarantees, State Government has constituted Guarantee Redemption Fund.

### Achievement of Taxation Department during 2011-12

The Finance (Taxation) Department is responsible for collection of major share of tax revenue of the State. It contributes more than 80 percent of the State's Own Tax Revenue. During the year 2011-12 the Department collected ₹6604.31 crore as against the target of ₹5684.62 crore and the percentage of collection against the target was 116 percent and the growth of collection was 27 percent against the corresponding collection of ₹5185.59 crore during 2010-11.

The Department administered nine different Taxation acts during 2011-12 and collection under different Taxation Acts during the years from 2005-06 to 2011-12 presented in Table-4.11 below.

**TABLE – 4.11**  
**COLLECTION OF TAXES UNDER DIFFERENT TAXATION ACTS IN ASSAM**

(Rs. in crore)

TAXATION ACT	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
The Assam Value Added Tax, 2003	1781.38	2015.36	2238.56	2694.77	3229.44	3952.20	5181.44
The Central Sales Tax Act, 1956	490.34	550.49	443.15	415.81	305.82	366.41	512.51
The Assam Entry Tax Act, 2008	296.69	216.43	9.13	268.84	526.64	461.67	518.75
The Assam Professions, Trades Calling & Employment Tax Act, 1947	99.62	108.80	124.54	137.61	150.06	160.58	164..27
The Assam Electricity Duty Act, 1964	13.29	15.89	4.62	22.36	27.07	41.58	36.67
The Assam Amusement and Betting Tax Act, 1939	2.31	2.70	2.93	2.41	3.50	4.51	5.87
The Assam Taxation on Luxuries (Hotels & Lodging Houses) Act, 1989	2.49	2.70	3.11	5.75	5.17	5.42	5.89
The Assam Taxation (on Specified Land) Act, 1990	61.46	63.92	68.55	80.00	78.87	92.02	95.64
The Assam Agricultural Income Tax Act, 1939	7.02	2.52	3.14	18.18	78.34	101.20	83.27
<b>Total</b>	<b>2754.66</b>	<b>2978.84</b>	<b>2897.73</b>	<b>3645.73</b>	<b>4404.91</b>	<b>5185.59</b>	<b>6604.31</b>
Growth Rate (in percent)	18.09	8.14	(- )2.72	25.81	21.00	17.7	27.4

N.B.: Total of 2005-06 & 2006-07 includes arrear collection under the Assam Taxation (on Luxuries) act, 1997.

Source: Commissionerate of Taxes, Assam

Collection under the Assam Electricity Duty Act during 2011-12 was ₹36.67 crore against ₹41.58 crore in 2010-11 showing a fall of 12 percent mainly due to less grant-in-aid to Assam State Electricity Board in 2011-12. Excluding the grant-in-aid, collection during 2011-12 was ₹12.67 crore compared to ₹9.79 crore in 2010-11 registering a growth of 29 percent.

The growth of collection under Assam Agricultural Income Tax Act in 2011-12 has shown a fall of 18 percent over the collection during 2010-11. The fall was due to realization of arrear demand tax of ₹13.35 crore for the assessment year 1988-89, 1990-91 to 1994-95 from Messrs Mlcod Ressel (India) Ltd., Kolkata. Another reason for the fall is increase in cost of manufacture and decrease in average auction price per Kg. during 2011-12.

During 2011-12, the Department under the Assam Value added Tax, collected ₹5181.44 crore as against ₹3952.20 crore in 2010-11 registering a growth of 31 percent. The collection up to July 2012 during the current financial year (2012-13) is ₹2680.18 crore with a growth of 18 percent over the corresponding period of the previous year.

For the current financial year 2012-13, the Government has fixed a target of ₹7270.61 crore for the Taxation Department. The provisional collection of taxes by the department up to July 2012 is ₹2063.29 crore as against ₹1800.40 crore of the corresponding period of the previous year.



## CHAPTER – V

### AGRICULTURE

Agriculture and its allied activities played an important role in the socio- economic development of the State of Assam as this sector is the major contributor to the State economy as well as providing livelihood to a significant proportion of the population of the State. About 99 percent area of total land mass of the State is rural. The net cultivated area of the State is 28.11 lakh hectares (2010-11) which is about 88 percent of the total land available for agricultural cultivation in the State. The average operational holding is 1.10 hectare only and more than 85 percent of the farmer family is small and marginal farmers [Provisional figure of 2010-11, Agricultural Census]. It has been observed that the contribution of Agriculture Sector to the State economy [GSDP at constant (2004-05) prices] has been recording gradual fall during the period 2005-06 to 2011-12. The year on year (YOY) analysis also shows that the trend of growth of the Agriculture Sector [GSDP (at constant 2004-05 prices)] was erratic during the same period and finally pegged at 2.4 percent 2011-12 (Quick estimate). However, Agriculture sector continues to support more than 75 percent population of the State directly or indirectly providing employment of more than 53 percent of the total workforce.

**TABLE– 5.1**

**TREND OF GROWTH AGRICULTURAL SECTOR [GSDP at Constant (2004-05) Prices]**

(Figure in percentage)

Year →	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11 (P)	2011-12(Q)
Contribution to GSDP	21.39	20.78	20.43	19.56	19.10	18.95	18.22
Annual Growth over the previous year	1.9	1.7	3.0	1.2	6.5	7.0	2.4

Source: Directorate of Economics and Statistics, Assam.

Assam has been experiencing erratic rainfall due to unpredictable monsoon since a few years back. Insufficient irrigation support, damage caused by natural calamities coupled with inconsistent weather like flood also stands as impediment in attaining self sufficiency in food production by the State. In this context, it may be stated that the major portion of Brahmaputra Valley is incidentally prone to chronic flood and bank erosion. Despite such situation, the State Agriculture Department has given more focus of attention to increase production of food grains for farm income to provide food security and nutrition to the growing population by increasing productivity of crops and cropping intensity. Accordingly, the State Agriculture Department has prioritized optimum and efficient use of available resources to enhance the production and productivity of the crops including the horticultural crops by harnessing the best technologies. The Department has formulated District / State specific plans depending on Agro-Climatic condition, growth potential and specific requirement of Districts through improved farm mechanization and assured irrigation, use of quality/certified HYV seeds, popularizing the integrated Nutrient and Pest Management with the special use of bio-fertilizer and bio-pesticides and organic farming, development of Marketing infrastructure etc with a view to encourage the farming community and to create maximum potential for employment generation.

Regarding the two hill districts of the State viz. Karbi Anglong and Dima Hasao, the development in the Agriculture Sector are suffering from various weaknesses viz. low infrastructural facilities, low productivity due to extensive jhum cultivation, non-availability of market etc. Changing the pattern of cultivation in these two hilly terrains is a great challenge before the State Government. Introduction of new schemes for production of cash crops, horticultural crops and settled agriculture in terrace lands will remain a priority in the coming periods. Infrastructural development and access to markets are special areas of concern in development of agriculture in the two hill districts. Exploitation of horticultural potentialities through introduction of suitable fruits and spices and their value addition will substantially contribute towards the economy of these two districts.

The Table below shows the trend of food production in Assam during the period 2001-02 to 2011-12.

**TABLE– 5.2**  
**TREND OF PRODUCTION OF FOODGRAINS IN ASSAM**

(Figure in 000 tonnes)

Item	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Total Rice	3854	3738	3880	3470	3552	2916	3319	4009	4409	5033	4716
Wheat	85	78	73	68	54	67	71	55	65	56	49
Total Pulses	66	60	63	61	56	59	61	62	66	72	73
Total Food grains	4023	3894	4034	3617	3680	3060	3468	4142	4557	5178	4857
Total oilseeds [excl.Coconut]	151	144	152	142	110	129	135	137	143	155	152

Source: Directorate of Economics and Statistics, Assam.

### Agriculture Policy

The Government of Assam is committed to the development of agriculture and its allied activities with special emphasis on diversified agriculture cropping system by making use of improved seeds, adoption of modern farm mechanization practices, improved technology of paddy, wheat, maize, pulses & oilseeds with a view to achieve self sufficiency in food production in the State. It is proposed to fully utilize the Govt. seed farms, if necessary through PPP mode. Necessary schemes will be implemented for enhancing soil nutrition. Distribution of tractors, power tillers and installation of small scale agro-industries will be taken up for welfare of women, landless and marginal farmers.

The State Government proposes to increase fertilizer consumption, improve farm mechanization, soil nutrient status, agriculture credit, extent of assured irrigation and availability of quality planting material. In order to improve the availability of quality seed, Assam Seed Certification Agency is being strengthened. Emphasis is being laid on the expansion of extension services and capacity building in agriculture and allied sectors.

Externally Aided “Assam Agriculture Competitiveness Project (AACP)” has performed well in the State for which the World Bank has complimented the State. The State Government has submitted proposal seeking additional fund from the World Bank under the said Project.

Central Sector Programme “Bring Green Revolution to Eastern India” to improve production and productivity of rice based cropping system is operational in the State since 2010-11. “Mission Double Cropping” programme has been launched in the State to bring 5 lakh hectares cultivable land under the coverage of the programme.

In addition, the State Agriculture Department is going to launch five new schemes namely –Mukhya Mantrir Gramin Bharal Yojana, Mukhya Mantrir Bisesh Bojar Asoni, Mukhya Mantrir Suoni Gaon Achoni, Mukhya Mantrir Nagarmukhi Utpadan Prosar Asoni and Mukhya Mantrir Udayan Prosar Asoni through which marketing and storage infrastructure will be improved for providing better facilities to the farmers of the State.

In order to increase production of vegetables a special scheme named “Vegetable Initiative for Urban Clusters” has been launched. A society called SAMEETI is being constituted to disseminate modern technology at the grass root level. The State Government has also proposed to establish a Horticulture College in Nalbari District.

### Agriculture Scenario – 2011-12

#### Weather and Rainfall

Assam is situated in the high rainfall zone with annual average rainfall of 2297.4 mm. The State normally receives 2 percent rainfall in Winter Season (January – February), 25 percent in Summer Season (March – May), 65 percent in Monsoon Season (June – September) and 7 percent in Post-monsoon Season (October – December). Moreover, Assam is prone to flood and also occasional drought. Having all potentialities for growing food grains, the State has lost the opportunity to contribute its share to the national granary due to erratic and



unpredictable weather condition experienced during the last few years. It is observed that impact of climate change has also effected to erratic rainfall and unpredictable monsoon behaviour in the State which further badly affected the agricultural production. The pattern of crop season wise rainfall may be evident from the Table below:

**TABLE– 5.3**  
**CROP SEASON WISE AVERAGE RAINFALL IN ASSAM**

(Figure in mm)

Year	Kharif season				Rabi season				All Season			
	Actual	Normal	Deviation from normal (%)	Pattern	Actual	Normal	Deviation from normal (%)	Pattern	Actual	Normal	Deviation from normal (%)	Pattern
2007	1816.6	2118.2	(-)14.2	Normal	259.7	313.6	(-)1.7	Normal	2076.3	2431.9	(-)14.6	Normal
2008	1773.0	2038.1	(-)13.0	Normal	275.1	314.8	(-)12.6	Normal	2048.1	2352.9	(-)13.5	Normal
2009	1512.4	1953.6	(-)22.6	Deficient	187.8	302.2	(-)37.9	Deficient	1700.2	2255.8	(-)25.0	Deficient
2010	2066.3	1976.0	(+)4.6	Normal	189.0	306.2	(-)38.3	Deficient	2255.3	2282.2	(-)1.2	Normal
2011	1411.1	2001.0	(-)29.5	Deficient	155.5	295.3	(-)47.3	Deficient	1566.6	2296.3	(-)29.5	Deficient

Source: Directorate of Agriculture, Assam.

#### Rainfall during 2011-12

It is evident from the Table 5.4 that the State had experienced 1492.9 mm rainfall during 2011-12 against normal rainfall of 2295.8 mm. During the kharif crop season only 1411.1 mm [against the normal rainfall of 2001.0 mm] was occurred in the State. Thus, according to the State Agriculture Department, the pattern of overall rainfall in the State was deficient both in terms of total rainfall [(-) 35.0 percent deviation from normal] and it's spread except in the month of July, 2011 with (-) 16.0 percent deficit. During the Rabi season overall rainfall in the State was “Scanty” with deviation of (-) 72.0 percent from normal.

**TABLE– 5.4**  
**Rainfall in Assam during Kharif and Rabi Season, 2011-12.**

Month	Actual (mm)	Normal (mm)	Departure from normal	Pattern
<b>Kharif Season</b>				
April, 2011	74.7	172.9	-57%	Deficient
May, 2011	226.4	304.2	-26%	Deficient
June, 2011	267.6	427.3	-37%	Deficient
July, 2011	382.0	454.2	-16%	Normal
August, 2011	268.8	356.7	-25%	Deficient
September, 2011	191.6	285.7	-33%	Deficient
<b>Total (Kharif, 2011) :</b>	<b>1411.1</b>	<b>2001.0</b>	<b>-29%</b>	<b>Deficient</b>
<b>Rabi Season</b>				
October, 2011	31.4	131.8	-76%	Scanty
November, 2011	11.4	24.9	-54%	Deficient
December, 2011	2.3	11.8	-81%	Scanty
January, 2012	8.3	16.2	-49%	Deficient
February, 2012	6.2	32.0	-81%	Scanty
March, 2012	22.2	78.1	-72%	Scanty
<b>Total (Rabi, 2011-12) :</b>	<b>81.8</b>	<b>294.8</b>	<b>-72%</b>	<b>Scanty</b>

Source: Directorate of Agriculture, Assam.

## Rainfall during Kharif Season of 2012

The State has experienced "Excessive" rainfall during the months of April and June of the Kharif Season, 2012 after experiencing deficient rainfall continuously during the whole Rabi season of 2011-12. However, overall rainfall pattern was "normal" during the kharif season of 2012.

The excessive rainfall, especially in the month of June, caused flood in all the districts of the State except the district of Dima Hasao. The second wave of flood occurred in the month of September also affected several districts. These two waves of flood caused serious damage to standing Kharif crops, mainly Sali paddy and Jute. Crop area of 9814 villages [about 5.30 lakh hectares] belonging to 12.38 lakh farmer families were affected due to flood. The immediate compensatory measures taken by the State Government has given relief not only to the affected farmers but also helped farmers to re-transplant the Sali Paddy seedlings in the affected fields resulting to good Kharif Rice production in the State during 2012-13.

**TABLE- 5.5**  
**Rainfall during Kharif Season of 2012**

Month	Actual (mm)	Normal (mm)	Departure from normal	Pattern
April, 2012	234.1	172.9	35%	Excessive
May, 2012	164.1	304.2	-46%	Deficient
June, 2012	528.8	427.3	24%	Excessive
July, 2012	471.6	454.2	4%	Normal
August, 2012	248.9	356.7	-30%	Deficient
September, 2012	305.7	285.7	7%	Normal
<b>Total (Kharif, 2012)</b>	<b>1953.2</b>	<b>2001.0</b>	<b>-2%</b>	<b>Normal</b>

Source: Directorate of Agriculture, Assam.

## Area under Crops

In Assam, the soil, topography, rainfall and climate in general are conducive for agricultural activities mainly for paddy cultivation. The Paddy cultivation occupies 90.6 percent of the net cropped area and 61.2 percent of the Gross Cropped area in the State during the year 2011-12. As per final estimates, the average area covered for normal paddy cultivation during the year was 25.46 lakh hectares or about 92.8 percent of the total area under food grains in the State leaving 7.2 percent area for cultivation of other food grains.

However, there has been a gradual decline in respect of area covered for cultivation of Autumn Rice, which has switched over to the Summer Rice due to its higher productivity and hazard risk. During period 2004-05 to 2011-12, the area under Autumn Rice cultivation recorded 36.7 percent decline over the period of eight years. During the year 2004-05, the area under Autumn Rice was 4.36 lakh hectares and declined to 3.13 lakh hectares during 2010-11. Final forecast estimates show that the area under Autumn Rice has declined further to 2.76 lakh hectares during 2011-12.

The area covered under Winter Rice, the principal Kharif Crop of the State, which was declined due to serious drought like situation experienced by the State during the year 2006-07 [14.98 lakh hectares] from 17.07 lakh hectares in 2005-06 had increased to 16.47 lakh hectares during 2007-08 due to improvement of normal seasonal rainfall, weather condition and irrigation support. The area coverage under the crop has further increased to 18.76 lakh hectares during 2011-12. The area coverage under the crop recorded 25.2 percent [or 3.78 lakh hectares] increase during 2011-12 compared to the area under the crop during 2006-07.

According to the final estimates, the area covered for cultivation of Summer Rice during 2011-12 was 3.94 lakh hectares which was 1.30 percent less than that of the previous year. Compared to the area covered during 2006-07 [3.12 lakh hectares], the area under Summer Rice during 2010-11 was about 26.3 percent more.

The area coverage under Pulses and Oilseeds in 2011-12, as per final estimates, has been expected to reach the level of 1.32 lakh hectares and 2.68 lakh hectares respectively against 1.26 lakh hectares and 2.64 lakh hectares in 2010-11. It is evident from the Table 5.6 that while the area under Pulses has been gradually increasing from 1.00 lakh hectare in 2005-06 to 1.32 lakh hectares in 2011-12, the area coverage under Oilseeds recorded moderate increase from 2.46 lakh hectares in 2008-09 to 2.68 lakh hectares in 2011-12 despite overall deficient rainfall experienced during the rabi season of 2011-12.

The trend of crop-wise land utilization in Assam during the last eight years may be evident from the Table 5.6.

**TABLE- 5.6**  
**AREA UNDER CROPS IN ASSAM DURING THE PERIOD 2004-05 to 2011-12**  
(In lakh hectares)

Crop	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Autumn Rice	4.36	3.98	3.79	3.54	3.51	3.46	3.13	2.76
Winter Rice	16.36	17.07	14.98	16.47	17.73	17.89	18.59	18.76
Summer Rice	3.11	3.15	3.12	3.23	3.60	3.94	3.99	3.94
Total Rice*	23.83	24.20	21.89	23.24	24.84	25.30	25.71	25.46
Wheat	0.64	0.50	0.60	0.56	0.50	0.60	0.45	0.40
Total Pulses	1.08	1.00	1.07	1.13	1.14	1.19	1.26	1.32
Total Food grains	25.82	25.97	23.82	25.18	26.71	27.35	27.67	27.43
Total Oilseeds (excl. Coconut)	2.68	2.35	2.60	2.57	2.46	2.65	2.64	2.68

\*Total may not be equal due to rounding off to nearest zero.

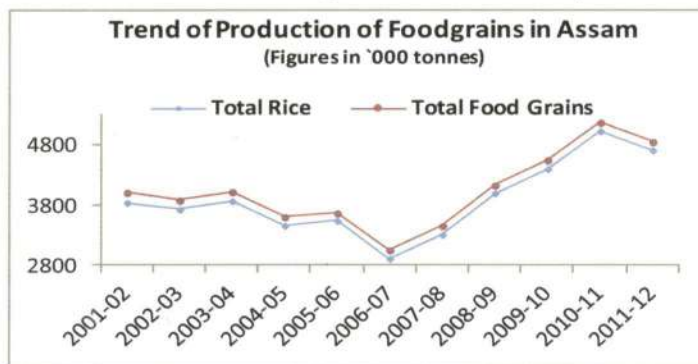
Source: Directorate of Economics and Statistics, Assam.

### Production

As per final estimates, [reference Table-5.2] total food grains production in the State was 48.57 lakh MT in 2011-12 as against 51.78 lakh MT produced in the State during the year 2010-11. Total food production in the State was 6.20 percent less during the year 2011-12 compared to the previous production.

It is worth mentioning that during the year 2010-11 the State could produce all time record production both in respect of rice [ 50.33 lakh MT] and total food grains [51.78 lakh MT ]. **It is a matter of record during the 11<sup>TH</sup> Five Year Plan performance that Assam retained first position in rice production and productivity under 13 NFSM-Rice districts amongst the seven States of eastern India in the National Conference of Agriculture for Rabi-2010 held in New Delhi and also the State occupies 1<sup>ST</sup> position for award of Best Performance State in production and productivity of food grains under 2<sup>ND</sup> categories of State organised by Ministry of Agriculture in New Delhi with an award of ₹2.00 crore.....[Source-Draft 12<sup>TH</sup> Five Year Plan and Annual Plan 2012-13, Planning and Development Department, Govt. of Assam].**

The total production of Rice in the State was 47.16 lakh MT in 2011-12 as against 50.33 lakh MT produced in 2010-11. Total production of rice in the State, thus, 6.30 percent less during 2011-12 compared to previous year's production. During the year 2009-10, the total production of rice was 44.09 lakh MT. The weather condition and the pattern of overall rainfall in the State was deficient both in terms of total rainfall [(-) 35.0 percent deviation from normal]] and it's spread except in the month of July, 2011 with (-) 16.0 percent deficit effected to less production Kharif crops, more particularly the Winter Paddy. During the kharif crop season, according to the State Agriculture Department, the State had experienced only 1411.1 mm rainfall against the normal rainfall of 2001.0 mm.



The production of total Pulses, on the other hand, reported 1.39 percent increase with 0.73 lakh MT in 2011-12 over the previous production of 0.72 lakh MT. However, increasing trend of production of total Pulses continued since 2005-06. The total Oilseeds production, on the other hand, reported 1.94 percent decrease during the year 2011-12 with 1.52 lakh MT compared to 1.55 lakh MT in 2010-11. The production oil seeds was affected by the rainfall as **the pattern of overall rainfall in the State was "Scanty" with deviation of (-) 72.0 percent from normal** during the Rabi season.

## Yield Rate

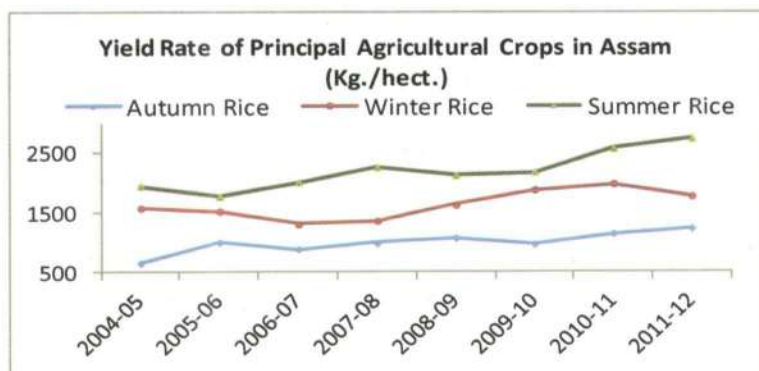
It is evident from the Table 5.7 that the trend of yield rate of autumn rice was erratic during the period 2004-05 to 2011-12. The yield rate of autumn rice increased to 1016 Kg/ hectare during 2005-06 from 667 Kg. / hectare in 2004-05. It again decreased to 899 Kg/hectare during 2006-07. The yield rate of the autumn rice increased to 1084 kg/hectare during 2008-09. From 2009-10, the increasing trend of yield rate of autumn rice [982 Kg/hectare] has been continuing. During the year 2011-12, the yield rate of autumn rice has been expected to reach all time high level with 1242 kg/hectare which is 26.5 percent above the yield rate of 982 kg/hectare in 2009-10. The yield rate of autumn rice was 1155 kg/hectare in 2010-11.

**TABLE- 5.7**  
**YIELD RATE OF PRINCIPAL AGRICULTURAL CROPS IN ASSAM**

Name of Crop	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Autumn Rice	667	1016	899	999	1084	982	1155	1242
Winter Rice	1598	1543	1321	1380	1641	1894	1993	1785
Summer Rice	1959	1780	2017	2267	2133	2185	2577	2744
Total Pulses	569	550	564	555	545	558	572	560(P)
Total Oilseeds	535	464	506	493	550	530	546	564(P)

P: Provisional. Source: Directorate of Economics and Statistics, Assam.

The yield rate of winter rice (kg/ hectare) was 10.44 percent less during the year 2011-12 compared to 2010-11. It is evident from the Table above that the yield rate of winter rice remained high with 1894 kg/hectare and 1993 kg/hectare in 2009-10 and 2010-11 respectively after maintaining low productivity during the years from 2004-05 to 2007-08. The yield rate of winter rice was low during the years 2006-07 and 2007-08 over the previous two years mainly due to drought like situation and severe floods that the State had experienced during the peak Sali Paddy season of the aforesaid years respectively.



However, the yield rate (kg/hectare) of winter rice recorded 21.45 percent increase during the year 2010-11 over 2008-09 due to good seasonal rainfall. The productivity of winter rice was low during the year 2011-12 over the previous year due to "deficient rainfall" experienced by the State during the kharif season.

The productivity of Summer Rice also continued to maintain its increasing trend during the period 2004-05 to 2011-12 except in the year 2005-06. The yield rate of summer paddy although remained marginally low during 2009-10 [3.8 percent] compared to the yield rate of 2007-08, it recorded 6.5 percent more in 2011-12 compared to the yield rate calculated in the previous year.

The trend of productivity of Pulses and Oil Seeds was erratic during the period 2004-05 to 2009-10. However, productivity of Pulses is expected to fall by 2.1 percent and the productivity of oilseeds is expected to be increased by 3.3 percent during 2011-12 over 2010-11.

## Area under High Yielding Variety (HYV)

Total area under HYV of Autumn Rice, Winter Rice and Summer Rice was 16.98 lakh hectare during 2011-12. The area coverage under HYV Rice was 66.7 percent out of the total area under rice during the said year. It is evident that area under HYV Rice coverage remained 60 percent or more during the period 2006-07 to 2011-12. However, the area coverage under HYV Rice was more than 66 percent for last two consecutive years i.e.,

2010-11 and 2011-12. According to the Agriculture Department, increasing concentration of area under HYV Rice assisted to bumper production of rice in the State vis-à-vis put additional impetus for enhancing productivity and farm income. Moreover, the productivity of HYV summer Rice is more than winter rice & autumn rice due to of package of practices during summer season as free from any risk. Considering the productivity, cultivators preferred the seed of HYV rice viz., Mala, IR-36., Lachit, Masuri, Joya, Ranjit, Ratna, China Boro, Biplov, Bahadur, Kaveri, Krishna etc.

The area covered under HYV rice may be evident from the Table below.

**TABLE- 5.8**  
**AREA UNDER HIGH YIELDING VARIETY RICE**

(Area in lakh hectares)

Crop	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Autumn Rice	2.35	2.15	2.23	2.24	2.29	2.13	1.86
Winter Rice	9.50	8.63	8.94	9.75	10.2	11.34	11.61
Summer Rice	2.65	2.67	2.78	3.14	3.41	3.54	3.51
Total HYV Rice area	14.5 (59.9)	13.45 (61.44)	13.95 (60.0)	15.13 (60.9)	15.9 (62.8)	17.01 (66.2)	16.98 (66.7)

Total figure may not be equal due to rounding off to nearest zero;

Figure in bracket shows the percentage to Total Rice Area.

Source: Directorate of Agriculture. Assam.

### Hybrid Rice

In addition to the HYV rice, the State Agriculture Department has started cultivation of hybrid variety of rice on experiment basis in the State considering the productivity of hybrid rice is more than double of HYV rice. The area under such variety of rice covers 2.4 percent of the total area under rice in the State during the year 2010-11. Area coverage under hybrid rice, however, was 61.4 percent less in 2011-12 compared to the previous year.

Table 5.9 shows the area under hybrid rice in Assam.

**TABLE- 5.9**  
**AREA UNDER HYBRID RICE IN ASSAM**

(Area in '000 hectare)

Crop	2009-10	2010-11	2011-12
Kharif Rice (Autumn+Winter)	32.9	37.7	2.5
Rabi Rice (Summer Rice)	14.1	25.0	21.7
Total	47.0 (1.9)	62.7 (2.4)	24.2(1.0)

\*Total figure may not be equal due to rounding off to nearest zero.  
Figure in bracket shows the percentage to Total Rice Area.  
Source: Directorate of Agriculture. Assam.

### TARGET OF AREA, PRODUCTION & PRODUCTIVITY

#### Target of Area, Production & Productivity of Crops in Assam during 12<sup>th</sup> Five Year Plan Period

In view of growing food demand and attainment of food & nutrition security, sustainable agricultural development and transform present agriculture scenario through commercialization, technology transfer and crop diversification is the need of the hour. To increase production and productivity of food grains by area expansion, crop intensity and schematic support vis-à-vis increase farm income are the major objectives of the Twelfth Five Year Plan. To achieve the objective and to attain self-sufficiency in food production, the Agriculture Department has set the target to increase the area under total food grains in the State to 34.9 lakh hectares at the end of the 12<sup>th</sup> Five Year Plan so as to increase total food grains production in the State to 80.25 lakh MT by the end of 2016-17. Rice being the staple food of the State, the State Agriculture Department has planned to increase production of rice through systematic and schematic planning so that the area under rice can be increased to 30.00 lakh hectare so as to attain self sufficiency in rice production with target of 75.00 lakh MT at the end of 2016-17.

Details of target set for production of various food crops during the 12<sup>th</sup> Five Year Plan period i.e., 2012-13 to 2016-17 is presented in the table below.

**TABLE- 5.10**  
**TARGET OF AREA, PRODUCTION & PRODUCTIVITY OF CROPS IN ASSAM**  
**DURING 12<sup>TH</sup> FIVE YEAR PLAN PERIOD**

(Area in lakh hectares, Production in lakh MT & Productivity in Kg. per hectare)

Crop	Item	2012-13	2013-14	2014-15	2015-16	2016-17
Rice	Area	27.25	27.90	28.40	29.60	30.00
	Production	57.20	62.00	66.00	71.00	75.00
	Productivity	2100	2225	2325	2400	2500
Wheat	Area	0.90	1.05	1.20	1.35	1.50
	Production	1.30	1.50	1.80	2.05	2.35
	Productivity	1425	1450	1480	1525	1550
Maize	Area	0.70	0.75	0.85	0.90	1.00
	Production	0.70	0.79	0.94	1.04	1.20
	Productivity	1000	1050	1100	1150	1200
Pulses	Area	1.60	1.75	1.90	2.00	2.25
	Production	1.05	1.20	1.30	1.45	1.60
	Productivity	660	675	690	705	725
Other Cereals & Small Millets	Area	0.06	0.08	0.10	0.12	0.15
	Production	0.03	0.04	0.06	0.07	0.10
	Productivity	540	550	560	570	580
Total Food grains	Area	30.50	31.55	32.45	34.00	34.90
	Production	60.30	65.55	70.10	75.60	80.25
	Productivity	1975	2075	2160	2225	2300
Oilseeds	Area	3.80	4.00	4.20	4.40	4.50
	Production	2.45	2.70	3.00	3.30	3.60
	Productivity	640	680	720	760	800
Jute & Mesta	Area	0.86	0.98	1.10	1.22	1.35
	Production	10.55	12.40	14.20	16.20	18.20
	Productivity	2210	2280	2325	2390	2430
Sugarcane	Area	0.30	0.35	0.40	0.45	0.50
	Production	13.75	17.30	21.15	25.40	30.00
	Productivity	45810	49360	52910	56460	60000
<b>Cropping Intensity :</b>		<b>152%</b>	<b>156%</b>	<b>162%</b>	<b>168%</b>	<b>175%</b>

Source: Directorate of Agriculture, Assam.

### Index of Agricultural Production

The Index of Agricultural Production for all crops (Base triennium ending 2007-08=100) for the State stands at 126.44 in 2011-12 compared to 130.25 in 2010-11. In respect of food crops, the Index of Agricultural Production for the State was 140.08 in 2011-12. The All India Agricultural Production Index for all major crops, on the other hand, stands at 192.0 (Base Triennium ending 1993-94=100) in 2011-12. The table 5.11 shows the trend of Index of Agricultural Production in the State as well as in the country as a whole, for the last ten years.

**TABLE- 5.11**  
**INDEX OF AGRICULTURAL PRODUCTION IN ASSAM AND INDIA**

(Base : Triennium ending 1981-82=100)

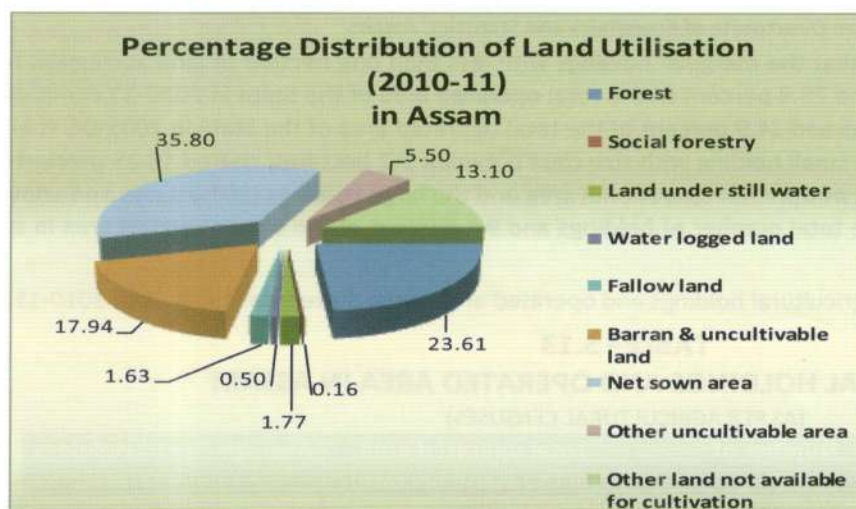
Year	Assam			India		
	Food	Non-Food	All Commodities	Food	Non-Food	All Commodities
2002-03	164	166	165	140	166	150
2003-04	170	162	166	172	201	183
2004-05	152	154	153	160	206	177
2005-06	155	148	153	169	230	192
2006-07	128	156	142	176	241	200
2007-08	145	161	153	187	247	207
2008-09	174	167	170	190	221	193
2009-10	131.43	107.00	120.57	159.4	144.3	159.6
2010-11	149.34	106.43	130.25	178.9	170.1	185.3
2011-12	140.08	109.42	126.44	188.1	175.1	192.0

- N. B.: 1. The Agricultural indices for Assam are constructed only on the basis of crops covered by the Crop Forecast. The Base year of Agricultural Indices for Assam for the years 2009-10, 2010-11 and 2011-12 is Triennium ending 2007-08.
2. The Base year of Agricultural indices for All India for the years 2009-10, 2010-11 and 2011-12 is Triennium ending 1993-94=100.
3. Figure rounded to nearest zero.

Source: (1) Directorate of Economics and Statistics, Assam.

(2) Department of Agriculture and Cooperation, Ministry of Agriculture, Govt. of India/Reserve Bank of India.

### Land Utilization Statistics



As per the Land Utilization Statistics for the year 2010-11(Provisional), the total reporting area (Village paper) of the State was 78.50 lakh hectares. Out of the total reporting area, net sown area constitute 35.80 percent [28.11 lakh hectares], 23.61 percent was under forest, 26.26 lakh hectares or 33.45 percent of the total reporting area was 'land not available for cultivation' and other uncultivable area was 4.32 lakh hectares or 5.5 percent. While Fallow land constitutes 1.63 percent of the total reporting area with around 1.28 lakh hectares,

land under still water and water logged area jointly constitutes 1.78 lakh hectares or 2.27 percent. The area under Social forestry was only 0.13 lakh hectare or 0.16 percent of the total reporting area.

The Gross Cropped Area in the State increased to 41.6 lakh hectares in 2010-11 from 39.99 lakh hectares in 2008-09. In 2007-08 the Gross Cropped Area in the State was 38.39 lakh hectares. The Gross Cropped Area in the State, thus, increased by 8.36 percent during the year 2010-11 over 2007-08.

The area sown more than once while recorded 4.25 percent increase with 13.49 lakh hectares in 2010-11 over 2009-10[12.94 lakh hectare], the net cropped area remained at the same level with 28.11 lakh hectares during 2010-11 as it was in 2009-10. Thus, it reveals from the above that the ratio of area sown more than once to the net area sown was 48.0 percent during the year 2010-11 compared to 46 percent in 2009-10. The ratio of area more than once to the net sown area in the State was 42.28 percent during 2008-09.

The ratio of net sown area to gross cropped area, on the other hand, was calculated at 67.57 percent during the year 2010-11 compared to 68.48 percent during the year 2009-10. During the year 2008-09 the ratio of net sown area to gross cropped area was 70.28 percent.

### Agricultural Holding

From the available **provisional data** of the Agricultural Census, 2010-11 it reveals that, there were 27.2 lakh operational holdings in Assam covering an operated area of 29.99 lakh hectares as against 27.5 lakh operational holdings covering an operated area of 30.49 lakh hectares in 2005-06 and 27.1 lakh operational holdings covering an operated area of 31.1 lakh hectares in 2000-01. The decreasing of operated area was caused due to soil erosion of ever widening Brahmaputra River, increasing urbanization, industrialization, expansion of roadways and other infrastructural development activities, conversion of agricultural land to homestead land to accommodate ever increasing population etc. The Table 5.12 depicts the trend of number of holding and area between the Agricultural censuses, 2000-01, 2005-06 and 2010-11.

**TABLE- 5.12**  
**AGRICULTURAL CENSUSES 2000-01,2005-06 AND 2010-11**

Size class (In hectare)	Number of holding			Area operated (in hectare)		
	2000-01	2005-06	2010-11(P)	2000-01	2005-06	2010-11(P)
Marginal (Below 1.0)	1699107	1752989	1831115	662780	760145	774796
Small (1.0-2.0)	561039	591431	496574	730513	718383	687156
Semi-medium (2.0-4.0)	351521	317859	303528	957959	846006	817982
Medium (4.0-10.0)	95500	82933	84869	498797	425403	437372
Large (10.0 & above)	4970	4902	4137	263529	298606	271763
<b>Total</b>	<b>2712137</b>	<b>2750114</b>	<b>2720223</b>	<b>3113578</b>	<b>3048543</b>	<b>2999069</b>

P: Provisional. Total figure may not be equal due to rounding off to nearest zero

Source: Directorate of Economics and Statistics, Assam.

The disaggregated data also shows that the marginal holdings with less than one hectare of land accounted for 67.3 percent of the total holdings and 25.8 percent of the total operated area of the State in 2010-11 compared to 63.7 percent of the total holdings and 24.9 percent of the total operated area of the State in 2005-06. It also reveals from the Table 5.12 that the small holding with size class between 1-2 hectares, shared 18.25 percent of the total holdings and 22.91 percent of the total operational area and the large holdings (10 hectares and above) constituted only 0.15 percent of the total number of holdings and 9.1 percent of the total operated area in the State in 2010-11.

The Table 5.13 shows the trend of agricultural holdings and operated area in the State from 1970-71 to 2010-11.

**TABLE- 5.13**  
**AGRICULTURAL HOLDINGS AND OPERATED AREA IN ASSAM**  
(AS PER AGRICULTURAL CENSUSES)

Agricultural Census Year	Number of Holdings	Total operated area (in thousand hectare)	Average size of Holdings (in hectare)
1970-71	1964376	2882	1.47
1976-77	2253654	3079	1.37
1980-81	2297588	3121	1.36
1985-86	2419156	3161	1.31
1990-91	2523379	3205	1.27
1995-96	2682997	3138	1.17
2000-01	2712137	3114	1.15
2005-06	2750114	3049	1.11
2010-11(P)	2720223	2999	1.10

P: Provisional. Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Economics and Statistics, Assam.



## Horticulture

Assam is traditionally rich in horticultural production due to its diverse and unique agro-climatic condition which is conducive for growing wide range of horticultural crops like various fruits, vegetables, flowers, spices, nuts, tuber crops and medicinal and aromatic plants. The World citrus belt encompasses Assam within it.

Horticultural crops occupy about 15 percent of the gross cultivated area of Assam and annually produce more than 67 lakh MT of various horticultural produces besides nut crops, flowers and medicinal & aromatic plants thus contributing significantly towards food and nutritional security of the State. Statistically, according to the Directorate of Horticulture and Food Processing, Assam, the growth rate of production of fruits, spices and vegetables was 19.18 percent, 6.40 percent and 72.20 percent respectively in last ten years. Having enormous inherent potentiality for employment and income generation as well as to sustain this growth, the Directorate targeted to strengthen production of various horticultural crops through area expansion and raising their productivity with the primary objective to transform the horticulture sector in Assam commercially viable. Of let, the efforts of the Directorate of Horticulture and FP helping the horticulture sector of the State limping towards commercialization.

During the 11<sup>th</sup> Five Year Plan period maximum focus on raising productivity of various commercially potential crops through use of better technology, management and planting materials is being given. Similarly due importance has been given on various aspects of post harvest aspects like pre-harvest treatment, proper harvest, setting up of collection centers with grading facilities and transport facilities. Marketing and processing, involvement of private sectors more particularly for contractual farming and buy back arrangement are also being considered as prime area of intervention.

Details of area, production and productivity of horticulture crop in Assam during the period 2005-06 to 2010-12 are presented in the Table 5.14.

**TABLE- 5.14**  
**AREA, PRODUCTION & PRODUCTIVITY OF HORTICULTURAL CROPS**

Crop		2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Fruits	Area (lakh hectares)	1.13	1.14	1.16	1.34	1.27	1.37	1.36
	Production (lakh MT)	13.52	13.72	14.08	16.61	15.65	16.56	17.14
	Productivity (Kg./ hectare)	12005	12139	12142	12425	12370	12485	12600
Spices	Area(lakh hectares)	0.86	0.86	0.88	0.93	0.94	1.01	0.98
	Production (lakh MT)	2.12	2.14	2.18	2.80	2.35	2.30	2.48
	Productivity (Kg./ hectare)	2475	2476	2478	3023	2505	2277	2535
Vegetables	Area (lakh hectares)	2.32	2.36	2.38	2.46	2.51	2.57	2.66
	Production (lakh MT)	38.18	38.87	39.18	44.20	42.55	44.33	46.20
	Productivity (Kg./ hectare)	16485	16469	16462	17923	16952	17231	17368

Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Agriculture, Assam and Directorate of Horticulture &FP, Assam

### Technology Mission for Integrated Development of Horticulture (TMIDH) in Assam

In spite of diverse and varied soil types and climatic situations ideally suited for growing vast numbers of Horticulture crops, this sector remained unexploited commercially. Keeping this point in view, a centrally sponsored scheme on Technology Mission for Integrated Development of Horticulture now named as "**Horticulture Mission for North East and Himalayan States (HMNEH)**" was sponsored by Govt. of India for the N. E. States including Sikkim in 2001-02 considering the potential of Horticulture for socio economic development of the N. E. States including Assam. Later scheme was extended to J & K, Himachal Pradesh and Uttaranchal in 2003-04.

The objective of the Scheme is to augment the productivity of horticulture crops through bringing new area under cultivation to have the way for rapid commercialization of this vital sector with precise strategies in the form of Mini Missions. The specialty of the scheme is comprehensive which encompasses all the issues associated with development of horticulture right from generation of technologies (Mini Mission-I), increasing production and productivity (MM-II), storage and marketing (MM-III) and processing (MM-IV). The impact of implementation of this scheme in the State is gradually emerging in various fronts including products, productivity, infrastructure development, per capita income, commercialization etc.

Assam Small Farmers Agri-Business Consortium (ASFAC) receives fund from the Government of India who in turn releases fund to the State Horticulture Directorate for MM-II and also MM-III. The Assam State Agriculture Marketing Board (ASAMB) received fund to perform the activities under MM-III.

Following major achievements were made by the Directorate of Horticulture, Assam under the Mission:

- During the year 2011-12, the Directorate of Horticulture and FP could cover an additional area of 5825 hectare under various crops viz: Banana, Orange, Pineapple, Assam lemon, Cashew nut, Black pepper, Ginger, Turmeric, Potato, Aromatic plants, Bhut Jalakiya etc. under 'Horticulture Mission'.
- The Directorate could train 1800 nos. of farmers on improved practices of horticultural crops.
- Similarly the medicinal and Aromatic plants sector was a neglected area and no systematic cultivation was taken up. Now Govt. of India has introduced a new scheme on this vital and comparatively new sector. Under this scheme cultivation of medicinal plants has been extended to 234 ha area.
- Successfully introduced cultivation of Bhot Jalakiya the hottest chili in the world and area expansion programme is going on at Golaghat, Baska, Karbi Anglong, Nagaon and Jorhat district.

### Impact of Implementation of TMIDH on Production and Productivity of Horticultural Crops in Assam:

Implementation of the TMIDH Scheme has brought some major changes in production of horticultural crops. Achievements attained in production and average yield due to implementation of TMIDH presented in the Table 5.15

**TABLE- 5.15**  
**PRODUCTION AND PRODUCTIVITY OF HORTICULTURE**  
**CROPS DUE TO IMPLEMENTATION OF TMIDH**  
(Production in lakh MT/Average yield in Kg/hectare)

Crop	Production			Average Yield		
	2000-01	2010-11	2011-12	2000-01	2010-11	2011-12
Fruit Crops	12.94	16.56 (+28.0)	17.14 (+32.45)	11870	12085 (+1.8)	12600 (+6.14)
Spice Crops	1.87	2.30 (+23.0)	2.48 (+32.6)	2309	2277 (-1.4)	2535 (+9.78)
Vegetable Crops	24.71	44.33 (+79.4)	46.20 (+86.96)	12660	17231 (+36.1)	17368 (+37.2)

Note: Figure in bracket shows % increase/decrease over 2000-01.

Source: Directorate of Agriculture, Assam and  
Directorate of Horticulture &FP, Assam

### Vegetable Initiative for Urban Clusters (VIUC)

Govt. of India has allotted one new scheme namely 'Vegetable Initiative for Urban Clusters (VIUC) under RKVY and has allocated an amount of ₹12.00 crores for the year 2011-12. The objectives of the Scheme are:

- To address all concerns related to both demand and supply side of the vegetable sector in selected cities. (Guwahati);
- To enhance vegetable production and productivity, improve nutritional security and income support to vegetable growers;

- To encourage establishment of efficient supply chain thereby leading to employment and income opportunities for intermediate service providers and safe, good quality, fresh as well as processed agricultural produces at competitive price for urban consumers;
- To promote, develop and disseminate technologies with a view to enhance production and productivity of vegetables in semi-urban areas of major cities;
- To assist in addressing the entire value chain right from the stage of pre-production to the consumers table through appropriate interventions.

### Action Plan under HMNEH for the year 2012-13

The Directorate of Horticulture, Assam has planned to boost up Horticulture Sector of Assam and proposed to cover an area of 4300 ha under thrust crops along with other supporting components like creation of irrigation potential, water sources, mechanization, plasticulture, IPM, training etc. The total financial outlay under the scheme for the year 2012-13 is ₹30.00 crore.

Scheme Components	Proposed Physical and Financial Target	
	Physical target (ha)	Financial target (Rs. In Lakh)
Large Nursery under Public sector	4 nos.	100.00
Large Nursery under Pvt. sector	2 nos.	25.00
Pvt. sector Small Nursery	20 nos.	62.50
Setting up of New Tissue culture Lab. in Pvt. sector	1 no.	50.00
Area expansion of Banana, Straw berry, Passion fruit, Pineapple, Cashew nut, Ginger, Turmeric, vegetables etc.	4300 ha	1379.38
Flowers	400 units	215.25
Rejuvenation of Citrus	1000 ha	150.00
Canopy Management, meadow of other perennial fruits	200 ha	30.00
Creation of Water Sources		
Water Harvesting system for storage of water in 20 m x 20 m x3 m pond	60 nos.	61.80
Promotion of IPM/ INM	1000 ha	10.00
HDPE vermibed of 96 cft (12'x4'x2') (HQ)	1473 nos.	73.65
Centre of Excellence for Horticulture (HQ)	1 no.	500.00
Training of Farmers including women within the district	1000 Nos.	4.00
Training of Farmers including women within the state	2000 nos.	15.00
Exposure visit of Farmer including women outside the state	200 nos.	1.23
Information dissemination through publicity printed literature & Local Advertisement	40 nos.	16.00
III. 2 <sup>nd</sup> year Installment of 2011-12	2525 ha	284.72
IV. 3 <sup>rd</sup> year Installment of 2010-11	2480 ha	154.80
V. Mission Management		
State/ District Mission Office Adm. Expenses etc. Hiring vehicle/ purchase of Hardware/ Soft ware / Audio visual Aids etc	-	50.21
Seminar, conference, workshop at State level	2 nos.	6.00
District level	24 nos.	48.00
<b>Grand Total</b>	<b>-</b>	<b>3000.00</b>

Source: Directorate of Horticulture and FP, Assam

## National Mission on Medicinal Plants

The Medicinal and Aromatic plants sector was a neglected area and no systematic cultivation was taken up. With more than 95 percent of the AYUSH products being plant based, the raw material base needs to be shifted from forests to the cultivated source for its long term sustainability. Increasing concerns of unsustainable collection from the wild, disappearance of certain species on the one hand and concerns of quality and standardization on the other make it imperative to promote cultivation of species critical to AYUSH systems of medicine through appropriate financial incentives, policy, infrastructural and marketing support in a synergic manner. Keeping the matter on view, the Government of India has initiated a centrally sponsored scheme 'National Mission on Medicinal Plants' from the year-2009-10.

Under this scheme a comprehensive approach will be made during the year 2012-13 for integrated development of the sector in Assam with a total outlay of ₹334.12 lakh.

Components	Proposed physical Target	Proposed amount (Rs. in lakh)
Cultivation	1335 ha	261.155
Nursery	7 nos.	28.00
Management support	-	14.46
Capacity building	-	30.50
<b>Total-</b>	-	<b>334.12</b>

## Floriculture

Floriculture is an integral part of Horticulture. It is a part of local tradition as it could fulfill aesthetic and ritual requirements. Floriculture is a significant commercial activity as it has become a most promising area not only for income and employment generation but also has high growth potential to contribute to the agriculture sector in the State. At present, floriculture in the State is on the part of expansion with market oriented approach due to outcome of the scheme Technology Mission for Integrated Development of Horticulture (now named as "Horticulture Mission for North East and Himalayan States") which was initiated in the year 2001-02 and still continuing. There are at least 40 varieties of traditional flowers in the State which are either seasonal or perennial besides valuable orchids with a projected number of 600 species totally indigenous and it is a part of local flora. A rough estimate says that the area under floriculture in Assam is around 700 ha which includes avenue plantation, ferns, greens besides various floral crops. The latest flower varieties being targeted for commercial exploration are orchids, anthurium, gerbera, marigold, lilies, tube-rose, rose, coronation, gladioli and other seasonal. There is serious attempt to grow orchids, anthuriums, greens, foliage either under rain shelter or protected cultivation. It is worth mentioning that due to agro-climatic condition the flowers produced in the State is superior in quality. This indicates the potentiality of this sector for commercial exploitation which can be attained through bio-technological intervention and commercial exploration of flowers and their value addition. At present, thrust has been given for improvement of this fastest growing sector in the State. Presently Kamrup and Kokrajhar Districts of Assam are emerging as major commercial growers of Anthurium, Orchid and Tuberoses under protected condition. These crops are being grown commercially by Self Help Groups under buy back arrangement with flower exporters. Flowers are now started reaching markets of Kolkata, Delhi and even Bangalore. The Government of Assam has given special emphasis to cultivate flowers in a mission mode approach supported by the Govt. of India and also under State Plan involving new generation farmers through various incentives

## INTEGRATED NUTRIENT MANAGEMENT (INM)

### Fertilizer and Manure

Fertilizer is an important input, which plays a dominant role in augmenting the productivity of crops. Therefore thrust has been given on "Integrated Nutrient Management" (INM) to make a major breakthrough in this direction with the following objectives:

- i) Less dependence on inputs from outside source and encourage farmers to utilize on farm resources.  
 ii) Economize the production cost by using optimum dose of fertilizer.

The trend in use of bio-fertilizer, compost and green manures and organic farming have been increasing gradually as the application of chemical fertilizer is posing a major threat in depletion soil nutrients.

Much stress has been given by the State Government on timely availability of fertilizers at the door step of farmers during peak period of cultivation. AAIDC, NAFED, GPSS, and organization like IFFCO, BVFCL, Green Chemicals Ltd, Teesta Agro Industries Ltd. have been plying a pivotal role in distribution of fertilizer through their respective branches located at various corners of the State. At present there are 6855 fertilizer sale point and 416 whole sale point in Assam.

<b>Sale Point</b>	
Co-operatives	: 360 nos.
Individual Agencies/ASC Ltd	: 120 nos.
Private	: 6475 nos.
<b>Total</b>	<b>: 6855 nos.</b>
<b>Wholesale Point</b>	
IPL	: 9 nos.
IFFCO	: 172 nos.
BVFCL	: 150 nos.
TCL	: 10 nos.
TAI	: 41 nos.
KOROMONDEL	: 34 nos.
PROG. FERTILISER	: Tie-up with BVFCL
<b>Total</b>	<b>: 416 nos.</b>

Source: Directorate of Agriculture, Assam.

### Consumption of Fertiliser

The trend of fertiliser consumption in the state in terms of nutrient (NPK) per hectare is much lower than the National average consumption. According to the State Agriculture Department consumption of fertiliser in the State was 74.58 kg per hectare during the year 2011-12 compared to 67.09 kg per hectare during the year 2010-11. It reveals from the Table 5.17 that the consumption of chemical fertilizer is low during the Kharif season than that of Rabi season. The reason behind the lesser consumption is that the farmers are reluctant to use fertilizers during Kharif season fearing monetary loss due to heavy rainfall and flood. Moreover, disruption of transport movement fertilizers cannot reach destination in time for delivery to farmers. However, the level of consumption of fertilizer can be increased substantially by making timely availability of fertilizer in this season of the State.

The details of consumption of fertilizers in Assam during the last six years is presented in the Table 5.17.

**TABLE— 5.17  
SEASON WISE CONSUMPTION OF FERTILISERS**

(Fig in '000 MT)

Year	Season	Consumption in terms of Materials					Consumption in terms of Nutrient			
		Urea	SSP	MOP	DAP	Total	N	P	K	Total
2005-06	Kharif	77.19	51.09	35.42	37.61	201.31	42.28	25.48	21.25	89.01
	Rabi	94.43	66.92	45.53	41.37	248.23	51.34	29.74	27.32	108.40
2006-07	Kharif	95.53	40.95	32.24	29.08	197.80	49.08	20.19	19.44	88.71
	Rabi	93.47	65.06	50.63	38.92	248.08	53.44	30.89	30.55	114.88
2007-08	Kharif	92.88	62.55	44.14	37.34	236.91	49.44	28.52	26.49	104.45
	Rabi	195.41	113.23	92.43	74.83	475.91	103.36	54.61	55.97	213.94
2008-09	Kharif	103.67	49.36	46.66	31.16	229.85	53.30	22.69	28.00	103.99
	Rabi	119.81	37.77	46.39	48.60	252.57	61.70	29.85	31.15	122.69
2009-10	Kharif	111.73	51.07	44.53	26.26	233.59	56.12	20.78	26.72	103.62
	Rabi	139.58	59.38	65.91	38.47	303.34	68.75	28.58	39.54	136.87
2010-11	Kharif	116.24	52.54	45.67	18.35	232.81	NA	NA	NA	6.45
	Rabi	136.84	52.48	62.90	41.50	293.71	NA	NA	NA	5.62
2011-12	Rabi	168.41	63.55	73.22	44.50	351.60	85.9	31.0	41.2	158.0
	Kharif	136.20	57.31	63.14	15.35	273.64	65.2	18.1	34.4	117.7

Total may not be equal due to rounding off to nearest zero.

Source: Directorate of Agriculture, Assam.

The trend of per hectare consumption of fertilizer, according to the Agriculture Department, also increased more than 50 percent during the period 2003-04[49.5 kg] to 2011-12[74.58 kg]. Table 5.18 shows the trend of per hectare fertilizer consumption in the State.

**TABLE– 5.18**  
**CONSUMPTION OF FERTILIZER PER HECTARE**

(Fig. in Kg.)

Item	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Fertilizer Consumption	49.5	42.65	50.66	52.27	56.20	57.80	63.16	67.09	74.58

Source: Directorate of Agriculture, Assam.

### Application of Bio-fertilisers

Depletion of soil nutrient poses a major threat to sustainable crop production, which needs tapping of other plant nutrient sources. Bio-fertiliser has given tremendous result in crop production, increase in productivity and maintenance of soil health by narrowing the gap between nutrient removal and supply. Of late, the trend in use of Bio-fertiliser has increased significantly due to its motivation through extension machinery and initiation of demonstration programmes by the Department of Agriculture. Special thrust has been given in use of Bio-fertiliser by initiating Programme 'Input support to the agriculturist having KCC' under State Priority Scheme which has been implemented from 2006-07 with an aim to attract the farming communities to go for credit support in cultivating crops. Under the Programme bio-fertiliser kits have been distributed to farmers.

**TABLE – 5.19**  
**CONSUMPTION OF BIO-FERTILISER**

ITEM	YEAR		
	2008-09	2009-10	2010-11
Bio-Fertilizer (MT)	178	227	175
Organic Manure (including FYM) (Lakh MT)	NA	1.92	2.80

Source: Directorate of Agriculture, Assam.

### Organic Farming

The objective in organic farming is to achieve a sustainable farming system that preserves the environment and soil fertility without disturbing the rules of nature. It is being proved that the indigenous practices in the traditional farming system were good in respect of maintenance of ecological balance through nutrient management and plant protection measures. Therefore, emphases have been given on promotion of organic farming by using green manure, adopting crop rotation management and ecologically sound plant protection measures. In organic farming system, priority in use of bio-fertilizer is also given.

At present, due to globalization, market preference for organic food is tremendously increased. Therefore, the State Agriculture Department has given emphasis on organically produced crops with the following objectives:

- Popularization of organic cultivation of crops, which have market potential and thereby taking emerging market opportunities in the areas where the state has an competitive advantage.
- Dissemination of refined technical knowledge to the farmers.
- Motivating farmers to use their own resources.

**TABLE– 5.20**  
**AREA UNDER ORGANIC FARMING**

(Figure in Hectare)

Crop	Year					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Joha Rice	91.00	91.00	267.00	71.00	71.00	-
Pineapple	-	-	157.00	157.00	157.00	157.00
Ginger	-	-	957.00	550.00	750.00	750.00
Turmeric	-	-	236.00	236.00	642.00	642.00
Orange	2483.00	2483.00	2483.00	109.00	109.00	109.00
Total	2574.00	2574.00	4100.00	1123.00	1729.00	1658.00

Source: Directorate of Agriculture, Assam.

## Integrated Pest Management (IPM)

Integrated Pest Management (IPM) is the key component of sustainable agricultural production. Assam having a diverse eco-system with sub-tropical climate, the crop production is associated with loss of biotic stress problem which share 20-30 percent of the yield loss. Excessive and injudicious use of chemical pesticides in the field as well as horticultural crops result into development of pest resistance, pest resurgence, pest replacement and pesticides residue problem.

Intensification of agriculture with the introduction of HYV, Hybrid, STW, Mechanization and other advance inputs also enhance the pest population dynamics and pest status.

In order to facilitate the availability of the Bio-Control Agent (BCA) in the Biological pest management intensive IPM (BIPM), the thrust has been given to increase production of the already established BCA and the newly introduced BCA in the State Bio-Control Laboratory (SBCL).

However, consumption of pesticides in Assam is very low compared to national average.

**TABLE– 5.21**

### CONSUMPTION OF PESTICIDES

Pesticide Consumption	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Chemical Pesticide	165 MT	158 MT	150 MT	143 MT	150MT	160MT
Consum per hectare	41.25gm ai	39.50gm ai	37.50 gm ai	38.75gm ai	37.50gm ai	39.80gm ai
Bio-pesticide	-	6.7MT	-	19.00MT	24.00MT	90.00(Estimated)

Source: Directorate of Agriculture, Assam.

## Seed: Development of Seed Sector

Quality seed is the primary and pivotal input for crop production. Certified Seed production is a process through which seeds are produced in conformity with the standard variety, characters by taking specific measure as required for seed production. In Assam, production of certified seed has been taken up in the Field Trial Stations (FTSS) and in some State Govt. Seed Farms & Assam Seed Corporation's seed farms. But there is dearth of quality seeds in the State and so the Seed Replacement Rate (SRR) in the State stands at a very low level. Moreover, the State has to depend on outside sources for quality seeds of some crops every year to meet the demand immediately after every unwarranted natural calamity. To meet the growing demand and increase quality seed production, the Agricultural Department has taken the following steps:

- Expansion of Seed Village Programme;
- Production of certified seeds of Paddy, Pulse & Oilseeds in Seed Village in large scale;
- To focus on capacity building of Registered Seed Growers;
- Strengthen Seed Farms to facilitate production, processing & storage of seeds.

**TABLE– 5.22**

### CROP SEASON WISE AVAILABILITY OF QUALITY SEEDS IN THE STATE

(in thousand quintal)

Crop	Kharif season				Rabi season			
	2008-09	2009-10	2010-11	2011-12	2008-09	2009-10	2010-11	2011-12
Paddy	148.69	833.77	417.8	680.94	8.456	76.240	165.00	200.00
Wheat	-	-	-	-	11.462	49.087	50.70	-
Maize	-	-	2.20	-	0.590	4.733	4.73	-
Pea	-	-	-	-	6.597	14.362	15.00	15.00
Lentil	-	-	-	-	0.472	4.394	7.50	8.00
Rape- Mustard	-	-	-	-	19.25	19.703	24.48	25.00
Arahar	-	0.250	0.310	1.50	-	-	-	-
Sesamum	0.280	0.230	1.05	0.72	-	-	-	-
Black gram	0.150	8.560	10.35	-	-	-	-	11.00
Green ram	0.500	1.000	3.00	-	-	-	-	3.00
Jute	1.000	1.015	3.10	5.25	-	-	-	-

Source: Directorate of Agriculture, Assam.

## Seed Village Programme

To meet the demand of seeds so as to raise the SRR to the desired level, the facilities like seed production, seed distribution, seed storage and other related facilities need to be augmented.

The State Agriculture Department has been taking initiative to mobilize the farmers through different seed production programmes and Seed Village is one of such concepts with the following objectives:

- To increase Seed Replacement Rate.
- To make quality seeds available at farmers' doorsteps to achieve targeted SRR.
- To provide necessary assistance to farmers in terms of quality Foundation Seeds, Seed Processing Units and Storage Facilities for farmers saved seeds.

Apart from the above, the Department is taking initiatives to increase the quantity of certified seed production and to make availability to the farmers through departmental seed farms & FTS, Seed Farms of Assam Seed Corporation Ltd. and through other private Registered Growers in collaboration with Assam State Seed Certification Agency (ASSCA).

**TABLE – 5.23**  
**PRODUCTION OF CERTIFIED SEEDS UNDER**  
**SEED VILLAGE PROGRAMME**  
(in '000 Qtl.)

Crop	Year	
	2010-11	2011-12
Paddy	777.92	296.30
Rape & Mustard	27.0	7.5
Black gram	8.56	9.0
Green gram	-	2.50
Sesamum	-	0.80

Source: Directorate of Agriculture, Assam.

## Seed Replacement Rate (SRR)

Seed replacement improves the productivity of crops to a large extent. The actual seed replacement rate of Paddy, Blackgram, Pea and Oilseeds (Rape & mustard) during 2011-12 was 47 percent, 80 percent, 41 percent and 26 percent respectively compared to seed replacement rate of Paddy 47 percent, Blackgram 53 percent, Pea 37 percent and Oilseed 16 percent respectively during the year 2010-11. During the year 2009-10, the seed replacement rate of paddy was 33 percent, wheat 51 percent, Blackgram 53 percent, Pea 51 percent and Rape & Mustard 60 percent.

Table 5.24 shows the Seed Replacement Rate during the period 2004-05 to 2011-12.

**TABLE– 5.24**  
**SEED REPLACEMENT RATE (SRR)**

(Figure in percentage)

Crop	Year							
	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Paddy	3.01	3.41	10.7	17	23	33	47	47
Wheat	37.25	7.80	34.8	28	42	51	2	-
Black gram	-	-	17.8	20.5	7	64	53	80
Lentil	-	-	9.0	21	7	51	34	26
Pea	-	-	12.4	20.2	37	88	37	41
Oilseed (Rape & Mustard)	4.17	12.60	15.3	16	24	60	16	26

Source: Directorate of Agriculture, Assam.

## Seed Certification

Assam State Seed Certification Agency (ASSCA) is the Nodal Agency for seed testing & seed certification in the State. ASSCA is entrusted for Seeds Certification of Paddy, Mustard and Pulses as per feasibility in the State. The planting crops like Coconuts, Litchi, and Guava etc are under consideration for certification. There are 3 nos. of notified Seed Testing Laboratories under ASSCA located at Guwahati, Jorhat and Silchar. Total annual testing capacity of these three notified laboratories is 20,000 seed samples. Seed testing & certification guidelines are strictly followed for proper quality control and certification. At present the agency is having shortage of technical manpower. To strengthen the manpower position the process of filling up of the vacant post is under process.



Table 5.25 below shows the status of seed certification in Assam.

**TABLE- 5.25**  
**STATUS OF SEED CERTIFICATION**

(Area in Hectare/Quantity in Quintal)

Crop	Year	Area Registered	Quantity Certified
Paddy	2008-09	10098	20500
Rape and Mustard		925	8180
Black gram		90	290
Paddy	2009-10	6026	19750
Rape and Mustard		3970	9780
Black gram		370	2010
Paddy	2010-11	6768	18960
Rape and Mustard		1720	7520
Black gram		540	1591
Sesamum		-	85
Green gram		-	324
Paddy	2011-12 (Targeted)	-	40000
Rape and Mustard		-	15000
Black gram		-	7000
Green gram		-	3000
Sesamum		-	200

Source: Directorate of Agriculture, Assam.

### Farm mechanization and Irrigation

Farm mechanization is a critical input as it facilitates timely agricultural operation. But in Assam the growth of mechanization is slow. The low availability of Farm Power has become constraints for double or multiple cropping in the State. In order to boost up farm mechanization, special thrust has been given by the State Agriculture Department in a systematic/ schematic manner.

At present the availability of farm power in the State is only 1.02 HP per hectare compared to 2.05 HP per hectare at national level. The low availability of farm power has become the constraints to double or multiple cropping in the State. Moreover, fragmented and small land holding is a constraint in bringing the entire farming community under high volume mechanization. However, to facilitate timely agricultural operations as well as to encourage for multiple cropping, the State Agriculture Department has taken initiative to procure Tractors, Power Tillers and other farm equipments under various Externally Aided, Centrally Sponsored and State Plan Schemes for the benefit of farmers mainly for Small and Marginal farmers. Total number of such machineries and equipments procured and distributed to farmers till 2011-12 was as follows:

Tractor	:	6142 nos.
Power Tiller	:	23627 nos.
Power Paddy Thresher	:	43 nos.
Rotavator	:	446 nos.
Self Propelled Reaper	:	20 nos.
Small Implements	:	99884 nos.

During the year 2012-13, the State Government proposed to distribute 1056 nos. Tractors, 6504 nos Power Tillers, 5504 nos Rotavators, 100 nos. Self- Propelled Reapers, 50 nos. Thresher Machines under various schemes of the Department which will benefit more than 1.40 lakh farmer families of the State.

Various farm machineries and equipments procured and distributed by the State agriculture department during the period 2006-07 to 2011-12 may be evident from the Table 5.26.

**TABLE– 5.26**  
**STATUS OF FARM MECHANISATION**

(Figure in Nos.)

Item	Year					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Tractor	338	855	1718	506	962	824
Power Tiller	2484	4805	1318	3962	3135	2925
Small Implement	958	850	1527	92492	0	-
Rotovator	-	-	20	26	65	335
Farm power available [HP per hectare]	0.54	0.60	0.60	0.69	0.90	1.02

Source: Directorate of Agriculture, Assam.

### Irrigation

There is considerable potential for agricultural growth in the State by increasing cropping intensity, raising crop yield and diversifying into pulses and oilseeds through irrigation. Considering the uncertainties in the production of Kharif crop due to flood and high rainfall, the State Agriculture Department has given more emphasis on Rabi crops by assigning top priority to develop assured irrigation facilities through installation of Pump Sets (Shallow Tube Well & Low Lift Pump). Irrigation by way of Shallow Tube Well and Low Lift Pumps is considered to be the efficient method of water utilization for crop growth. It has high water use efficiency because water can be applied to the crop at regular intervals i.e. as and when plant needs.

The Central Ground Water Board (CGWB) report indicates that the state has the ground water potential for installation of 8 lakh Shallow Tube Wells. The State Govt. has also been exploring the potentialities of optimum utilization in the state with support from Central & State sponsored Schemes and EAP. However, there exists gap between irrigation potential created and actual utilization and thus there is less coverage of assured irrigation.

To attain the objective of optimum ground water use as assured means of irrigation there has been substantial increase in the installation of Shallow Tube Wells in last three years under the initiative of State Agriculture Department as more than 1.65 lakh STWs were installed covering 3.30 lakh hectare crop land. In addition, 0.39 lakh hectares of assured irrigation facilities were also created through installation of 0.20 lakh Low Lift Pump Sets during last three years.

The achievements made by Agriculture Department in providing irrigation facility to the farmers till 2011-12 is presented in the table below:

**TABLE– 5.27**  
**IRRIGATION POTENTIAL CREATED BY THE AGRICULTURE DEPARTMENT**  
(Cumulative status as on March 2012)

Component of irrigation	No. installed	No. in operation	Area under assured irrigation facility (hectare)
STW (Nos)	288099 (diesel) 92907 (electrical)	159415 (diesel) 92907 (electrical)	504644
LLP (Nos)	26414 (diesel) 10077 (electrical)	21330 (diesel) 10077 (electrical)	62814
Sprinkler / Drip Irrigation Set (nos)	2294	2294	2294
Flow Irrigation(ha)	5250	5250	5250
Micro Watershed Drainage(ha)	15915	15915	15915
Total :			590917 (21% of Net Cropped Area)

Source: Directorate of Agriculture, Assam.

## Crop Insurance

The state of Assam has been experiencing flood in almost every year and around 4.75 lakh hectare area in the State is chronically flood prone and around 0.94 lakh hectares area is draught prone. Therefore, the crop insurance is an area to help farmers at the time when there is crop loss/ crop damage due to recurring natural calamities, severe pest infestations and diseases in notified crops.

The Government of India launched a Crop Insurance programme under the nomenclature "National Agricultural Insurance Scheme" (NAIS). All farmers who avail loans from financial institutions are covered under the scheme and it is optional for non-loanee farmers. 50 percent of the premium amount is contributed as subsidy to small and marginal farmers which will be shared equally by Government of India and State Government. This scheme is expected to be a critical instrument for development in the field of crop production by providing financial support to the farmers in the event of crop failure and help in maintaining flow of agricultural credit. This programme covers 8 (Eight) crops i.e. 3 crops in Kharif and 5 crops in Rabi season.

Kharif Season : Autumn / Ahi Paddy, winter / Sali Paddy and Jute.

Rabi Season : Rape & Mustard, Wheat, Potato, Sugarcane and summer / Boro Paddy.

This scheme, under the **Area Approach**, not only facilitate insurance coverage to each of the notified crop damage within the defined area for widespread calamities but also on an individual basis for localised calamities such as hailstorm, landslide, cyclone and flood.

National Agriculture Insurance Scheme, unfortunately, has not been able to provide desired solution to the risk hedging in the agriculture sector in the State. Lack of awareness, low subsidy premium (10 percent) for small and marginal farmers, delayed claim settlement, slow response of banks in issuance of Kissan Credit Cards etc., affected large number of farmers of the State from getting benefit from the NAIS. Moreover, some important horticulture crops like ginger etc. are not covered under the Scheme.

Achievements made under the scheme till 2011-12 is as follows –

Farmers covered	:	2,84,347 no.
Area covered	:	203948.91 hectare
Sum Insured	:	₹ 474.70 crore
Premium received	:	₹13.342 crore
Claims paid	:	₹11.717 crore
Farmers benefited	:	43,650 no.

The performance of National Agricultural Insurance Scheme during the period 2006-07 to 2011-12 may be evident from the table below:

**TABLE- 5.28**  
**PERFORMANCE OF NATIONAL AGRICULTURAL INSURANCE SCHEME IN ASSAM**

Season & Year	No. of Farmers covered	Area covered (Ha)	Sum Insured (Rs in Crore)
Kharif 2006	8800	8304.30	10.84
Rabi 2006-07	5818	4757.90	9.12
Kharif 2007	8938	7541.80	11.72
Rabi 2007-08	10780	5854.91	13.60
Kharif 2008	7458	7332.90	8.26
Rabi 2008-09	28359	5565.22	41.71
Kharif 2009	24619	23616.62	48.02
Rabi 2009-10	27288	19486.44	57.20
Kharif 2010	21433	17277.05	46.26
Rabi 2010-11	14675	10464.97	31.03
Kharif 2011	23770	18281.07	62.03
Rabi 2011-12	32547	20317.33	73.91

Source: Directorate of Agriculture, Assam.

## Modified National Agricultural Insurance Scheme (MNAIS)

- The scheme is being implemented on pilot basis in 50 districts in the country. NAIS is withdrawn from those districts in which MNAIS will be implemented.
- Unit of insurance for major crops is Village / Village Panchayat.
- Scheme is compulsory for loanee farmers & voluntary for non-loanee farmers. Uniform seasonality norms will be applicable for both loanee & non-loanee farmers.
- Sum insured can be opted up to 150% of the value of average yield. Premium subsidy is available up to the value of threshold yield / loan amount only.
- Entire claim will be borne by the implementing agency. The scheme provides account payment up to 25% of likely claim for immediate relief to the farmers.
- Minimum indemnity level will be 70% against 60% in case of NAIS.
- Calculation of threshold yield: Average yield of last 7 years excluding up to 2 years of declared natural calamity.
- The scheme is implemented in two districts, viz., Kamrup & Dhubri from Rabi, 2010-11.

**TABLE- 5.29**  
**PROGRESS OF IMPLEMENTATION OF MODIFIED**  
**NATIONAL AGRICULTURAL INSURANCE SCHEME**  
**[MNAIS] YEAR 2010-11**

Season	Farmers covered (No.)	Area (hact)	Sum Insured (Rs. In crore)	Premium (Rs. In lakh)
Rabi,2010-11	2097	1564.19	4.98	11.81
Kharif,2011	4641	3192.02	13.89	80.20

Source: Directorate of Agriculture, Assam.

## Procurement of Paddy as a measure of price support

Assam has become marginally surplus in Rice production [total annual production is around 50 lakh MT] due to remarkable improvement in productivity through better input management practices and adoption of improved technology. But disposal of produce by the farmers at un-remunerative prices discouraged them in adopting measures that can result in more yields. Moreover, infrastructural limitations of storage facility caused serious problem in preservation of produced stock. Though Food Corporation of India (FCI) has been procuring Paddy regularly since 2008-09 in the State, the result of procurement is not very encouraging due to high moisture contents of **Assam Paddy** which is found to be around 20 – 22 percent against the standard permissible limit of 17 percent. According to the State Agriculture department, although there is scope to procure 6.00 lakh MT of paddy annually, the FCI procure much less quantity of Paddy under Minimum Support Price [MSP] in Assam.

Year wise status of procurement of Paddy by FCI is shown below:

**TABLE- 5.30**  
**STATUS OF PROCUREMENT OF PADDY BY FCI IN ASSAM**

Year	Minimum Support Price (Rs/quintal)		Quantity procured (MT)
	Common	Grade-A	
2008-09	900.00	930.00	4103.00
2009-10	1000.00	1030.00	12146.00
2010-11	1000.00	1030.00	23282.00
2011-12	1080.00	1110.00	34073.00

Source: Directorate of Agriculture, Assam.

### State Government initiatives for procurement in 2012-13

- The Assam State Agricultural Marketing Board (ASAMB) has been engaged in the procurement of Paddy at MSP of ₹1250.00 per quintal (for common grade) and ₹1280.00 per quintal (for Grade-A) apart from normal procurement by FCI.
- Target has been set to procure 1.45 lakh MT Paddy during the year 2012-13 and 32 nos. of Paddy Procurement Centres (PPC) have been set up for the purpose.
- To assure procurement of milling rice by the procuring agency viz., FCI from farmers, the department has given emphasis to secure MSP to the farmers with the procurement of Paddy involving GPSS to entrust the job of procurement from the farmers under direct initiative of District Administration so that after milling of rice by the GPSS, the finished rice can be procured by FCI. As per Hon'ble C.M.'s Special Package in 12<sup>TH</sup> Five Year Plan and Annual Plan 2012-13 as announced, for successful implementation of the programme an amount of ₹1000.00 Lakh has been proposed for the year 2012-13.

### Agriculture Marketing and Storage

Marketing of Agriculture produces in the State is a serious problem for the farming community. As most of the agriculture produces are perishable in nature, lack of organized marketing facility, lack of storage infrastructure near the field, poverty and need of money after harvest for repayment of agricultural debt push the farmers to dispose off their produces at the earliest immediately and too at low prices. However, there is a good potential for development of Agricultural Marketing Infrastructure with Private Sector Participation.

The Assam Agricultural Produce Market Act, 1972 has been amended in 2006 to make provisions for (a) Private Marketing (b) Direct Marketing (c) Consumer-Farmers Market and (d) Contract Farming as per guidelines of Govt. of India. The act also empowers Market Boards to levy cess and relieve existing restrictions on movement, storage and transportation etc of agricultural produces. At present the act is under implementation in 25 out of 27 districts of Assam.

The Assam State Agricultural Marketing Board (ASAMB) has established 24 Regulated Market Committees, 20 Primary Market Yards, 206 Sub-market Yards, 735 Rural Primary Markets and 405 Wholesale Markets. The Regulated Markets have been covered under AGMARKNET. As regards to cold storage infrastructure in the State, there are 26 numbers of cold storages (Govt. Sector-3, private sector-23) are available in the State at present. The State Agriculture Department has taken initiative for establishment of market infrastructure, storage facility and to eradicate transportation bottlenecks by distributing 224 numbers of auto van, 610 numbers Mini truck and transport subsidy for carrying the produces from remote area to the distant markets. The rural connectivity scheme implemented under PMGSY is also a major step that benefitted the farmers to take out their agricultural produces to nearest urban markets. The details of Agricultural Market infrastructure available in the State may be evident from the Table 5.30.

Government of India has introduced a centrally sponsored scheme for construction of rural godowns facilitating storage of farm produce and agricultural inputs. Recognizing the needs for better marketing infrastructure for agriculture, Government of India introduces Capital Investment Subsidy Scheme for Development / Strengthening of agricultural Marketing Infrastructure, Grading and Standardization during the year 2004-05. However, this scheme is reform linked and assistance for development of infrastructure projects is to be provided in those States/Union Territories which permit setting up of agricultural markets in private and cooperative sectors, allows direct marketing and contract farming. Assam has amended the APMC Act and scheme was notified for implementation in Assam from 17<sup>th</sup> April 2007. All these schemes are coming to an end by March 2012. These Schemes have given boost to creation of infrastructure in the form of cold storage and storage godowns. Nineteen (19) cold storage and about 117 rural godowns have been established in Assam under the scheme. Most of the constructed cold storages were located in Tinsukia, Nagaon, Cachar (Silchar), Karimganj, Golaghat, Kamrup and Barpeta districts while majority of rural godowns have been set up in Kamrup and Cachar Districts. The State Government also proposes to create storage capacity for additional 4 lakh tons for foodgrains at Nagaon, Silchar, Dhubri, Biswanath Chariali and Changsari (Kamrup District) with an estimated cost of ₹36800 lakh. [Source: State Focus Paper (Assam) 2012-13 published by NABARD]

**TABLE- 5.31**

**MARKET INFRASTRUCTURE AND PROCESSING UNIT DEVELOPED**

Regulated Market Committees	24 nos.
Principal Market Yard	20 nos.
Sub-market Yard	206 nos.
Total Regulated Market	226 nos.
Wholesale Market	405 nos. [Wholesale Market developed 21 nos (6 nos in progress)]
Rural Primary Market	735nos. [Rural Primary Market developed 272 (47 in progress)]
Total market	1140 nos.
Organic Market developed	1 no.
Godowns	<ul style="list-style-type: none"> <li>▪ Godown -52nos.</li> <li>▪ Seed Storage Godown – 21 nos.</li> </ul>
Cold Storage	26 nos. (Total capacity : 109540 MT)
Processing Unit	6 Nos.
Drying Platform	33 nos
Community Threshing floor	55 nos (under RKVY)
Grocery Society	680 nos.
Transportation	Three wheeler:162 nos, Four wheeler:470 nos.

Source: Directorate of Agriculture, Assam.

**FOOD & AGRO PROCESSING - a value addition & better commercial proposition**

Food processing is an instrument to give farmers an assured agricultural income. It encourages the farmers to produce market oriented variety and can play an important role to achieve food security. Implementation of post- harvest technology, initiation/ improvement of agro and food processing facility plays an important role in value addition, income and employment generation in rural areas. The successful implementation of Shallow Tube Well (STW) scheme in eighteen districts in Assam has lead to development of Rural Non Farm Sector (RNFS) through agro industries.

- The state produces surplus quantity of fruits & vegetables to the tune of 26 lakh MT. Due to lack of adequate marketing & processing facility about 20% of the produce is lost. In such scenario, processed food is a great boon for value addition & better commercial gain.
- 6 nos. of processing units of Pineapple, Orange are set up with support from MFPI. 1 more units are in the pipeline.
- A food processing Plant in Boko(Kamrup district) and Food Park in Nalbari district have been set up in the State.The Govt. of India has also approved for setting up of a Food processing Park at Chaygaon in Kamrup district.
- However, there is huge scope for processing industries in the State.

**Export Initiatives**

**Pineapple:** Pineapple cubes are being exported to meet the export demand of 300 MT.

**Orange:** Assam has started export of Orange recently.

**Flower:** Dendrobium Orchids are an attraction in Kolkata Market. Anthurium from Kamrup district has become a part of export from North-East.

**Bhot Jalakia:** Commercial cultivation of Bhot Jalakia, the hottest chilli (a special germ plasm of Assam) has been started recently.

## Problems of marketing

Assam is a surplus State in respect of production of Vegetables. The farmers faced a lot of problem for marketing of these perishable commodities. Moreover Rice and Jute is the main economic crop in Assam. But location of markets from fields is not within easily reach of the farmers. The State Agriculture Department assessed the market distance as at Table 5.32.

Besides there are some other related problems highlighted below:

- During peak season of harvest from January to March, the markets are overloaded with the Rabi Vegetables and farmers failed to catch remunerative price and compelled to dispose their produce at a very low price during the market day due to non availability of cold storage facility near the market.
- Inadequate availability of processing units/ cold storage / post harvesting infrastructure like godowns.
- Inability of small and marginal farmers to carry their produce to distant markets where they can fetch justified market prices.
- Inadequate transfer of off season Vegetable Technology.

Distance from Markets	Percentage of Markets
Up to 5 Km.	71%
5 – 10 Km.	22%
10 – 15 Km.	3%
15 – 20 Km.	1%
Above 20 Km.	2%

Source: Directorate of Agriculture, Assam.

## Agricultural Extension

With a view to decentralize decision making at the district level and to ensure effective participation of farmers in programme planning and resource allocation, it has been decided to adopt the model “Agriculture Technology Management Agency (ATMA)” to effect reforms in Agriculture Extension. ATMA is an autonomous participatory institution with all the key stake holders involved in Agricultural activity for sustainable agricultural development and has the flexibility to receive funds directly.

### STATUS OF IMPLEMENTATION OF ATMA IN ASSAM

#### [ATMA - Centrally Sponsored Scheme : (Since 2005-06)]

ATMA Districts	14 nos.
ATMA Registered	14 nos.
Farm Information and Advisory Centre (FIAC) formed	69 nos. (out of total 96 nos.)
Block Technology Team (BTT) Registered	96 nos.

#### ATMA - World Bank aided AACP sponsored : (Since 2005-06)

ATMA Districts	11 nos.
ATMA Registered	11 nos.
District Agricultural Development Strategy (DADS) approved	11 nos.
Block Resource Centre (BRC)	118 nos.
Block Action Plan in action	123 Blocks.

Source: Directorate of Agriculture, Assam.

## Convergence between Agricultural Research and Extension

For better coordination with ATMA activities, the Assam Agriculture University (AAU) has deputed Programme Coordinator and Subject Matter Specialist of KVKs in every ATMA district for monthly and time to time interface with the Project Director, ATMA and field functionaries’

Officials of Agriculture and allied departments as well as the scientists of KVKs have been actively participated in preparation of SREP, District Action Plan and field activities including training programmes.

### OPERATIONAL OF FARM SCHOOLS & OTHER ACTIVITIES IN ATMA CAFETERIA, 2010-11

Activities	Unit	Number	Amount (Rs. in lakh)
Farm Schools	Nos.	96	32.08
Training of Farmers	Nos.	96	36.00
Organizing of Demonstrations			
• Agriculture sector	Nos.	480	19.20
• Allied sector	Nos.	480	19.20

Source: Directorate of Agriculture, Assam

### Agri- Clinic

- ① 45 nos. of unemployed Agri-Graduates were trained up by MANAGE at Extension Wing, AAU, Jorhat for three months course in two batches.
- ① Out of the 45 nos. 12 nos. have already taken up the profession of Agri- Clinic and Agri –Business Centre.
- ① Nodal Agency, the Indian Society for Agri. Business Profession has trained 321 nos. of participants in 10 batches since 2007-08 and 110 nos. have already established various professions. 61 nos. are sponsored by NABARD.

### Involvement of State Functionaries in Kisan Call Centre

- ① Kisan Credit Card (KCC) is in operation since 2004.
- ① Objective of Kisan Call Centre are usually discussed in every ADO and VLEW meetings to bring awareness among the field functionaries.
- ① To bring awareness among the farming community about KCC toll free number and its objective, information are provided to the farmers in every training programme/ workshop etc. conducted in the district.
- ① KCC toll free number has been sent to the field functionaries through SMS for onward communication to the farming community.
- ① Single toll free number 1800-180-1551 (available from 6 am to 10 pm everyday)

PROGRESS OF KISAN CALL CENTRE DURING 2010-11 & 2011-12	
Year	No. of successful calls
2010-11	10358
2011-12 (till October, 2011)	5686

### Feedback on Mass Media Support to Agriculture Extension

- Doordarshan Kendra, Guwahati and Dibrugarh broadcast "Krishi Darshan" programme from 6.00 PM to 6-30 PM in six days in a week. Success stories of agriculture and allied activities, information on market intelligence, messages related to cultivation practices, pest and diseases, departmental schemes etc. are highlighted through this programmes.
- Live in phone in programme are also organized time to time both in Doordarshan and AIR, anchored by departmental officers to reply to the queries of the farming community.
- Measures to be taken by the farming community during flood, drought and pest attack etc. are also published in different local news paper and through printed leaflets to help the farming community to overcome any unavoidable situation.

INNOVATIVE ACTIVITIES UNDER AGRICULTURAL EXTENSION	
Engagement of Farmers Friend (Kisan Bandhu)	
No of Farmers Friend	1587
No. of villages involved	3174



## Status of Flagship Programmes/Projects

The Agriculture Department is implementing several flagship projects/programmes in the context of improvement of agricultural production in the state to meet the growing food demand of growing population. Impact of implementation of these projects/programmes may be evident from the table below:

**TABLE- 5.33**

### STATUS OF IMPLEMENTAION OF FLAGSHIP PROJECTS/PROGRAMMES IN ASSAM

Programme / Project	Year of starting of Programme / Project	Physical impact of the project in terms of production and productivity of crops
RKVY	2008-09	<ul style="list-style-type: none"> <li>▪ <b>Production (anticipated) of crops increased after 3 years (2011-12) over 2007-08 (Pre- Project) by –</b> Rice – 52%,Pulses – 19%,Oilseeds – 8%</li> <li>▪ <b>Productivity (anticipated) of crops increased after 4 years (2011-12) over 2007-08 (Pre Project) by –</b> Rice – 39%,Pulses – 6%,Oilseeds – 8%</li> </ul>
NFSM (Rice) NFSM (Pulse) A3P	NFSM (Rice) – 2007-08 NFSM (Pulse) – 2010-11 A3P – 2010-11	<ul style="list-style-type: none"> <li>▪ <b>Production</b> of Rice in 13 NFSM (Rice) districts after 5 years (2011-12) of Mission Period over 2006-07 (Pre Mission) increased by – 78%</li> <li>▪ <b>Productivity</b> of Rice in 13 NFSM (Rice) districts after 5 years (2011-12) of Mission Period over 2006-07 (Pre Mission) increased by – 59%</li> <li>▪ <b>Production</b> of pulses in 10 NFSM (Pulse District) increased after 2 years (2011-12) over 2009-10(Pre Mission)-9%.</li> <li>▪ <b>Productivity</b> of Pulses in 10 NFSM (Pulse District) increased after 2 years (2011-12) over 2009-10(Pre Mission)-2%.</li> </ul>
HMNEH (MM-II & MM-III)	2001-02	<ul style="list-style-type: none"> <li>▪ <b>Production</b> (anticipated) increased after 11 years (2011-12) of Mission Period over 2000-01 (Pre Mission) - Fruits 33% Spices – 31% Vegetables 87%</li> <li>▪ <b>Productivity</b> (anticipated) increased after 11 years (2011-12) of Mission Period over 2000-01 (Pre Mission) – Fruits – 6% Spices – 10% Vegetables – 37%</li> </ul>

Source: Directorate of Agriculture, Assam.

## Bring Green Revolution to Eastern India including Assam

Central and State Governments have chalked out a strategy to achieve the planned growth in agriculture sector particularly with a view to achieving self-sufficiency in food production to provide food security. Several interventions with emphasis such as Bringing Green Revolution to Eastern India (**BGREI**), double cropping, supply of improved seeds, fertilizer and technology equipment etc. have been taken. Under this new initiative **BGREI**, the Government of India covers the states namely Assam, Bihar, Chhatisgarh, Jharkhand, Odisha, Eastern U.P. and West Bengal because of having excellent potential for increasing food grain production and productivity but are mired by low credit availability, poor extension facilities and infrastructure bottlenecks etc. To remove these impediments on a priority basis and transform these States into the best performing States steps have been taken by putting better Seed Replacement Ratio, adequate and timely availability of critical inputs, improving infrastructure facilities and other required programmatic interventions including bank credit etc. In accordance with this new initiative for extending Green Revolution in Assam- BGREI, an attempt has been made to project the gaps in the existing system and to prepare a road map with a dynamic outlook to finally achieve the objective of Green Revolution in Assam in the days to come. The entire approach is based on Agro-Climatic Zone-wise strategies with precision concept to make it more and more realistic and need based. An initial budgetary allocation of ₹400.00 crore has been made for this purpose.

## APPENDIX – 5.1

### AREA, PRODUCTION AND AVERAGE YIELD OF SOME IMPORTANT CROPS IN ASSAM

(Area in thousand hectares, Production in thousand tonne and Average yield in Kg/hectares)

Crops	2010-11			2011-12		
	Area	Production	Average Yield	Area	Production	Average Yield
Autumn Rice	313	356	1155	276	338	1242
Winter Rice	1859	3649	1993	188	3298	1785
Summer Rice	399	1028	2577	394	1080	2744
Total Rice	2571	5033	1983	2546	4716	1874
Wheat	45	56	1256	40	49	1209
Maize	20	14	714	21	17	802
Total Pulses	126	72	572	132	73	560
Total food grains	2767	5178	1894	2743	4857	1792
Rape & Mustard	244	143	585	248	139	559
Total Oil Seeds (excluding coconut)	264	155	582	268	152	564
Potato	85	658	7735	98	683	6978
Sugarcane	30	1076	36196	28	1053	37055
Jute *	62	626	1808	66	608	1669
Coconut	19	159	63	N.A.	N.A.	N.A.
Arecanut	69	64	138	N.A.	N.A.	N.A.

\* Production in '000' bales of 180 Kg. per bale.

Source : Directorate of Economics and Statistics, Assam

## APPENDIX- 5.2

### AREA PRODUCTION AND AVERAGE YIELD OF SOME MAJOR HORTICULTURAL CROPS IN ASSAM DURING THE YEAR 2011-12)

Name of Crop	Area in '000' hectare	Production in '000 tonnes	Average Yield in kg/hect.
<b>FRUITS</b>			
Banana	49	745	15191
Pineapple	15	231	15645
Orange	15	176	11640
Papaya	8	130	15335
<b>SPICES</b>			
Chilly	20	13	668
Turmeric	15	13	860
Onion	8	24	2951
<b>TUBER CROPS (Estimated)</b>			
Potato	90	783	8765
Sweet Potato	9	36	3934
Topeoca	4	33	7860

Source: Directorate of Horticulture, Assam.



## CHAPTER – VI

### IRRIGATION

The goals and important policy objectives of India's development planning in respect of agricultural plans have aimed at food and fodder availability, growth in agriculture, sustainable agro practices, easy access to agro-inputs and creation of irrigation potential etc. Irrigation, therefore, has been considered as one of the six important components for the development of rural infrastructure under the Bharat Nirman and aims at creating more irrigation potential in the coming years to mitigate the drought situations whenever it is being experienced and increase agricultural production to feed the burgeoning population in the country.

Assam agriculture is primarily rain-fed. However, because of adverse & unpredictable weather condition experienced by the State time to time as well as to pursue multiple cropping and modernization of agricultural practices in the state agricultural sector to cope with the growing problem of food shortage due to formidable increase of population, natural calamities etc., irrigation is highly essential in Assam. Over and above, for a sustained development in the agricultural sector availability of assured irrigation facility is undoubtedly the most important pre-requisite. Thus, the importance of irrigation development bears special significance in the context of efforts towards economic development of the State too.

Land use pattern in Assam indicates that out of the total geographical area of 78.44 lakh hectares, the Gross Cropped Area of Assam is 41.60 lakh hectares [2010-11]. Against this, the ultimate irrigation potential i.e. the ultimate Gross Irrigation Potential (Annually Irrigable Area) has been estimated at about 27 lakh hectares, which constitutes 64.9 per cent of the Gross Cropped Area. It is planned to irrigate 17 lakh hectares through Minor Irrigation Schemes and 10 lakh hectares through Major and Medium Irrigation Projects out of the Ultimate Irrigation Potential. It is further planned to irrigate 10 lakh hectares through Minor Irrigation Schemes taken up by ground water sources and 7 lakh by surface water sources out of the 17 lakh under Minor Irrigation.

The development programmes for improvement of irrigation facility in Assam taken up under two broad heads, viz., Minor Irrigation and Major & Medium Irrigation. While the Irrigation Schemes are classified as Major, Medium and Minor, they are categorized as Surface Flow, Surface Lift (for Major / Medium and Minor) and Ground Water Lift (for Minor only). Three Departments, viz. Irrigation, Agriculture and Panchayat and Rural Development are associated with development of irrigation facilities in the State. While the State Irrigation Department, being the **Nodal Department** for development of irrigation in the State, executes and maintains Major, Medium and Minor Irrigation Schemes, the irrigation works of the other two departments are confined to minor irrigation schemes like Shallow Tube Wells, Low Lift Points and Temporary Minor Irrigation Schemes only.

Out of the Gross Cropped Area of 41.60 lakh hectares of the State the Irrigation Department created potential of 8.23 (appox) lakh hectares up to March, 2012 of which 2.54 lakh hectares through Major & Medium Irrigation Projects and the rest 5.68 lakh hectares through Minor Irrigation Schemes. Of the 5.68 lakh hectares of created potential under Minor Irrigation Sector, a potential of 4.19 lakh hectares was created through the Govt. Minor Irrigation Schemes executed by the State Irrigation Department and the rest 1.49 lakh hectares through Shallow Tube Wells (STWs) and Low Lift points (LLPs) installed by the Assam State Minor Irrigation Development Corporation (ASMIDC) Limited [Now merged with the State Irrigation Department]. The position of creation of irrigation potential under different sectors presented in Table-6.1.

**TABLE – 6.1**  
**IRRIGATION POTENTIAL CREATED (AIA) UPTO 2011-12**  
(in hectares)

Department/ Agency	Major & Medium Irrigation Sector	Minor Irrigation Sector	Total
Irrigation Department	254343	418955	673298
ASMIDC Ltd (now merged with Irrigation, Deptt.)	NIL	149205	149205
Total	254343	568160	822503

Source: Chief Engineer, Irrigation Department, Assam.

The State Agriculture Department has also created irrigation facility of 5.91lakh hectares till the end of 2011-12 through the Shallow Tube wells and Low Lift Points etc., under utilisable/assured irrigation. The achievements made by Agriculture Department in providing irrigation facility to the farmers till 2011-12 may be evident from the Table below:

**TABLE – 6.2**  
**AREA UNDER ASSURED IRRIGATION FACILITY CREATED BY AGRICULTURE DEPARTMENT**

(Area –in hect)

Component of irrigation	No. installed	No. in operation	Area
Shallow Tube Well (STW)	288099 (diesel) 92907 (elect)	159415 (diesel) 92907 (elect.)	504644
Low Lift Pump (LLP)	26414 (diesel) 10077 (elect.)	21330 (diesel) 10077 (elect.)	62814
Sprinkler / Drip Irrigation Set	2294	2294	2294
Flow Irrigation	5250 hectare	5250 hectare	5250
Micro Watershed Drainage	15915 hectare	15915 hectare	15915

Source: Directorate of Agriculture, Assam

### CREATION OF IRRIGATED AREA AND UTILISATION OF POTENTIAL

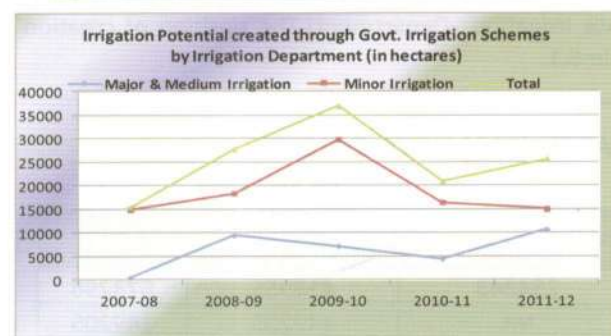
It is worth mentioning that no works of Irrigation Schemes could be successfully completed under normal State Plan due to low allocation of fund during VIII th to IX th Plan period. However since 1996-97 Central Assistance was obtained under **Accelerated Irrigation Benefit Programme (AIBP)** in respect of Major and Medium Irrigation Sector and subsequently in respect of Minor Irrigation Sector also since 2000-01. Such assistance was also received from other programmes like **Non Lapsable Central Pool of Resources (NLCPR)**, **Assam Rural Infrastructure for Agricultural Services Programme (ARIASP)** funded by World Bank and subsequently under RIDF-X and RIDF-XI from National Bank for Agriculture and Rural Development (NABARD) .With the above sources of funding the position of creation of irrigation potential could be achieved to some extent. The year wise irrigation potential created during the last five years is as follows.

**TABLE – 6.3**  
**IRRIGATION POTENTIAL CREATED THROUGH GOVT. IRRIGATION SCHEMES BY IRRIGATION DEPARTMENT**  
(in hectare)

Year	Major & Medium Irrigation	Minor Irrigation	Total
2007-08	484	14966	15450
2008-09	9425	18375	27800
2009-10	7162	29838	37000
2010-11	4426	16456	20882
2011-12	10678	15029	25707

Source: Chief Engineer, Irrigation Department, Assam.

#### a) MAJOR AND MEDIUM IRRIGATION SECTOR



At present there are 4(four) AIBP funded ongoing Major/Medium Irrigation Projects (Dhansiri I/P, Champamati I/P, Borolia I/P and Buridehing I/P) and all are in different stages of progress. But due to inadequate plan fund one project [Buridehing I/P] is targeted to wind up during 2011-12. The remaining 3(three) Irrigation Projects have been expected to be completed during 2012-13. The anticipated expenditure incurred during 2011-12 is ₹15163.00 lakh. Moreover, supply of water upto 18 km of main canal of Dhansiri

Irrigation Project has been made by completing a part of steel cladding works at Head Work site and aqueducts at different locations of main canal and thus created an additional potential of 4000 hectares.

Works of reconstruction of Bordikorai Irrigation Project (Major) has been taken up for ₹47.22 Crore under One Time ACA. Till March 2012, 86 percent physical progress has been achieved restoring a lost potential of 30,300 Hectares covering 93 villages out of 130 villages within its command in Sonitpur District.

Under Assam Bikash Yojana, improvement of Rupahi Irrigation Project (Medium) was taken up with the estimated amount of ₹2.47 Crore to restore lost potential of 5668 Hectares. The project is in progress. It is expected to be completed during 2012-13.

In addition to the above, arrangement to irrigate water to cover 10,000 hectares kharif season crop area has been made by modernizing the Sukla Irrigation Project (Major) in Baksa District during 2011-12.

During the year 2011-12, 3 nos. of 650 HP pump sets and 3300 volts transformer etc were repaired to put the Kollong and Sonai River Basin (Major) Irrigation Schemes into operation under Integrated Irrigation Scheme.

#### **b) MINOR IRRIGATION SECTOR**

627 nos. of Minor Irrigation Schemes have been taken up under AIBP funding at estimated amount of ₹2122.42 Crore to create a potential of 263678 Hectares. Upto March 2011, 209 nos. have been completed creating a potential of 78,678 Hectares. During the year 2011-12, 137 nos. of Minor Irrigation Schemes have been completed creating a potential of 36,321 hectares including restoration of lost potential.

Four Minor Irrigation Schemes under Non-Lapsable Central Pool of Resources (NLCPR) at an estimated cost of ₹960.05 Lakh to achieve a potential of 3010 Hectare are targeted to be completed during 2011-12. 2 nos. of Minor Irrigation Schemes have been completed creating a potential of 2010 hectares during 2011-12.

Two NEC funded Minor Irrigation Schemes are targeted to be completed during 2011-12 to achieve a potential of 400 hectare with budget allocation for 2011-12 of ₹610.00 Lakh.

Works of 2(two) Minor Irrigation Schemes with NABARD assistance are targeted to be completed to achieve a target of 1300 Hectares. The Budgetary allocation is ₹500.00 Lakh.

55(fifty-five) Minor Irrigation Schemes were taken up under Tribal Sub-Plan (TSP) schemes since 2005-06 at an estimated amount of ₹2758.338 Lakh to create potential of 8519 Hectares. Out of total schemes under TSP, 26 schemes have already been completed with created potential of 5389 Hectares. Execution of remaining 29 schemes is in progress. During the year 2011-12, 7 (seven) Minor Irrigation Schemes have been completed creating a potential of 1040 hectares.

Under Scheduled Caste Sub-Plan (SCSP), 117 Minor Irrigation Schemes were taken up since 2005-06 at an estimated cost of ₹6566.40 Lakh to create a potential of 13951 Hectares, out of which 43 schemes have already been completed creating a potential of 5839 Hectares. 14 (fourteen) out of the total remaining 74 nos. of Minor Irrigation Schemes have been completed during 2011-12 and created a potential of 1156 hectares.

Under Assam Vikash Yojana, 12 Minor Irrigation Schemes are proposed to be completed during 2011-12 to achieve a potential of 497 Hectares.

#### **c) COMMAND AREA DEVELOPMENT AND WATER MANAGEMENT (CADWM)**

During 2011-12, works of Kaldiya Irrigation Project, Dekadong Irrigation Project, Pahumara Irrigation Project and Bordikorai Irrigation Project are in progress.

#### **d) THIRTEENTH FINANCE COMMISSION : GRANT-IN-AID**

Under 13<sup>th</sup> Finance Commission's Grant-in-aid, ₹15.00 Crore is proposed for repairing of 78 nos. of Deep Tube Well points, 10 nos. of Lift Irrigation Schemes and 5 Nos. of Flow Irrigation Schemes in Minor Irrigation Sector to revive lost potential of 3940 Hectares during the financial year 2011-12. Another amount of ₹7.00 Crore are proposed for repairing of 3 Nos. Major/Medium Irrigation Projects to make them operational.

#### **e) UTILISATION OF IRRIGATION POTENTIAL**

The crop season wise utilisation of irrigation potential of State Government owned irrigation projects/schemes under Irrigation Department during the five years of XI<sup>th</sup> Five Year Plan period is shown in Table-6.4.

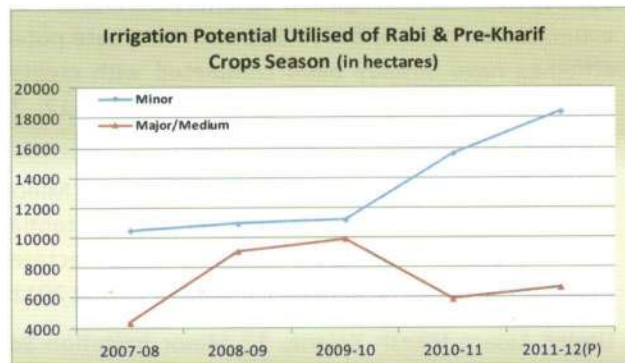
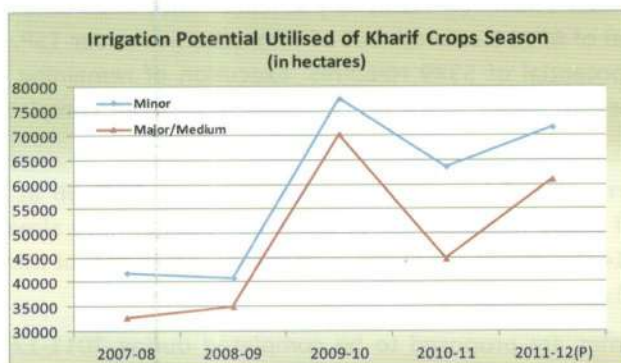
**TABLE – 6.4**  
**CROP SEASON WISE IRRIGATION POTENTIAL UTILISED**

(Figures in hectares)

Year	Crop Season								
	Kharif crops season			Rabi & Pre-Kharif crops season			Total		
	Minor	Major/ Medium	Total	Minor	Major/ Medium	Total	Minor	Major/ Medium	Total
2007-08	41795	32668	74463	10486	4322	14808	52281	36990	89271
2008-09	40775	34902	75677	10923	9071	19994	51698	43973	95671
2009-10	77495	70274	147769	11178	9907	21085	88673	80181	168854
2010-11	63649	44691	108340	15612	5874	15612	79261	50565	129826
2011-12(P)	71650	61028	132678	18360	6647	25007	90010	67675	157685

Source: Chief Engineer, Irrigation Department, Assam.

It is pertinent to mention that the utilisation of irrigation potential is not upto the expectation and there is a gap between the created irrigation potential and potential actually utilised. The primary reason of less utilisation of irrigation potential is that that the cultivators are reluctant to take advantage of irrigation facilities. However, the identified causes for less utilization of irrigation potential were - general wear and tear of the schemes, damage caused by natural calamities like flood, storm etc., erratic power supply in respect of the electrically operated schemes (Surface Lift schemes and Ground Water Lift schemes), damage of transformer, HT line and mechanical components, change of river course in respect of Surface Flow and Surface Lift Irrigation Schemes, damage of canal System, no demand from cultivators, reluctance of the cultivators to adopt multiple cropping system where assured irrigation is necessary, non-functioning of the schemes due to theft of motors/ pumps and other accessories, realization of Irrigation Service Charges [imposed by the government] from beneficiary cultivators, economically poor cultivators want to get free irrigation from Govt. Schemes.



In order to minimize the gap between irrigation potential created and irrigation potential utilised in the State as well as to encourage utilisation of irrigation facilities created by the state government departments following steps have been taken:

- 1) Emphasis has been given on Participatory Irrigation Management (PIM) where the farmers can take part in the system and process of irrigation as well as its maintenance. Under the PIM system Water Users' Associations (WUA) have been formed within the command area of Govt. Irrigation Schemes. Till March, 2012 a total of 847 WUA have been formed of which 412 WUA have already been registered under the 'Societies Registration Act, 1860'.
- 2) Out of State exposure visit in Tamil Nadu, Andhra Pradesh and Jharkhand have been organized for some Irrigation officials, NGOs and WUA farmers.
- 3) District Level Co-ordination Committees have been formed with the officials of Irrigation Department and Agriculture Department to motivate farmers for optimum use of water by motivating the farmers.
- 4) Farmers' Motivation Trainings are conducted in every district to encourage them to go for more and more multiple cropping using assured irrigation provided by Govt. Irrigation Schemes.

- 5) The Assam Irrigation Act, 1983 and The Assam Irrigation Rules, 1997 have been enacted providing safeguard to the Irrigation Schemes and the cultivators as well.
- 6) The Assam Irrigation Water Users' Act, 2012 has been enacted with a view to safeguarding the right of the beneficiary cultivators of the Govt. Irrigation Schemes wherein provision for active participation of the cultivators has been made. Necessary Rules under the Act is also being passed by the Govt.

**f) CREATION OF IRRIGATION POTENTIAL AND ITS UTILISATION [AS PER CENSUS OF MINOR IRRIGATION SCHEMES]**

The Fourth Minor Irrigation Census was conducted with reference year 2006-07 under the guidance and supervision of Ministry of Water Resources, Govt. of India. As per 4<sup>th</sup> Census of Minor Irrigation, 2006-07, there were 104312 Ground Water Schemes (Shallow Tube wells and Deep Tube wells) and 6442 Surface Water Schemes (Surface Flow and Surface Lift) creating 306905 hectares and 322856 hectares of irrigation potential respectively in the State under Minor Irrigation Sector. Of the total potential of 629761 hectares (306905 hectares + 322856 hectares) created under Minor Irrigation Sector, a total of 323297 hectares of area was irrigated (utilized) during that particular year 2006-07. Thus, there exists large gap between irrigation potential created and irrigation potential utilized.

The table below shows the category wise number of Minor Irrigation Schemes, creation of irrigation potential and its utilization.

**TABLE – 6.5**  
**IRRIGATION POTENTIAL CREATED AND UTILISED IN ASSAM IN 2006-07**

Category of Schemes	Total no. of Schemes	Schemes in use (No).	Irrigation Potential Created (In hect.)			Irrigation Potential Utilised out of the created potential in use ( in hect)
			In use	Not in use	Total	
Surface Water	104312	5025	207049	115807	322856	137786
Ground Water	6442	91453	244216	62689	306905	185511
Total	110754	96478	451265	178496	629751	323297

Source: Chief Engineer, Irrigation Department, Assam.

**IRRIGATED AREA AS PER AGRICULTURE CENSUS-2005-06**

As per Agriculture Census 2005-06 there is about 1.45 lakh hectare net irrigated area (including private sources) in the State of which 0.23 lakh hectare area irrigated from 'canal', 0.031 lakh hectare from 'tanks', 0.17 lakh hectare from 'tubewells' and 1.03 lakh hectare receives irrigation from 'other sources'. The table below shows the size class wise area receives irrigation from different sources in the State.

**TABLE – 6.6**  
**SIZE CLASS AND SOURCE-WISE AREA IRRIGATED IN ASSAM**

(Area in Hectare)

Sl. No.	Size Class (in Ha)	Area under Operational Holding	Area Receiving Irrigation from Sources					Net Irrigated Area
			Canal	Tanks	Wells	Tube wells	Other Sources	
1	Below 0.5	353051.83	1904.95	1197.90	28.13	1545.57	10486.60	15163.15
2	0.5-1.0	407092.81	2538.38	281.01	80.01	2374.69	9879.69	15153.78
3	1.0-2.0	718383.23	5499.75	331.41	66.71	4146.96	18333.57	28378.40
4	2.0-3.0	496982.96	3862.86	379.48	37.94	2471.65	10661.63	17413.56
5	3.0-4.0	349023.18	3354.49	198.91	25.41	2004.46	9996.45	15579.72
6	4.0-5.0	203932.59	1647.67	125.39	11.04	845.12	6617.06	9246.28
7	5.0-7.5	177267.26	2379.52	135.41	16.60	775.95	6222.10	9529.58
8	7.5-10.0	44203.07	395.95	64.33	0.00	415.22	2237.11	3112.61
9	10.0-20.0	34251.16	80.40	28.02	0.00	252.87	2398.58	2759.87
10	20 & above	264354.79	1456.23	400.01	65.06	1863.33	25580.87	29365.50
11	All Classes	3048542.88	23120.20	3141.87	330.90	16695.82	102413.66	145702.45

Source: Report of Agriculture Census, Assam 2005-06.

## 12<sup>TH</sup> FIVE YEAR PLAN: PROPOSAL FOR CREATION/IMPROVEMENT OF IRRIGATION FACILITY

### Minor Irrigation

The Irrigation Department has proposed ₹338058.07 lakh to achieve physical target of 228664 hectares during the 12<sup>TH</sup> Five Year Plan period (2012-17). At present, there are 685 nos. of on-going Minor Irrigation Schemes for completion at different stages for which about ₹41274.05 lakh will be required to achieve an additional potential of 59.664 thousand hectares by completing 132 nos. of on-going Schemes.

The department also proposed to take up 1493 nos. of new schemes amounting to ₹296400.00 lakh to create an additional potential of 185211 hectares in different districts of Assam subject to their feasibility.

### Major/Medium Irrigation

Out of the 4(four) on-going major/medium projects namely (i) Dhansiri Irrigation Project, (ii) Champamati Irrigation Project, (iii) Buridehing Irrigation Project and (iv) Borolia Irrigation Project, 3 (three) irrigation projects- Dhansiri Irrigation Project, Champamati Irrigation Project, and Borolia Irrigation Project have been targeted to complete during the first year of the 12<sup>TH</sup> Five Year Plan [2012-13] to achieve the potential of 53,709 hectares.

One Major Project viz., Puthimari Irrigation Project having potential of 12280 hectares and 3(three) Medium Irrigation Projects viz., (i) Burisuti Medium Irrigation Project, (ii) Dikhow Medium Irrigation Project and (iii) Buroi Medium Irrigation Project have a potential of 6500 hectares, 6000 hectares and 500 hectares respectively have been included in the 12<sup>TH</sup> Five Year Plan proposal for 595.62 crore for creating additional potential of 29780 hectares. All these 4 (four) new projects are proposed to be taken up during the 12<sup>TH</sup> Five Year Plan.

The proposed total Plan Size is ₹835.91 crore and potential targeted is 83489 hectares.

### Command Area Development and Water Management (CADWM)

It is estimated to an amount of ₹33421.62 lakh to cover an area of 96470 hectares during the 12<sup>TH</sup> Five Year Plan. The Five Year Plan is prepared covering 2 (two) on-going and 8 (eight) proposed projects as mentioned below.

#### On-going Projects:

- (1) Pahumara Command Area Development Project.
- (2) CAD to Bardikarai Irrigation Project.

#### New Proposed Projects:

- (1) Bhumki Command Area Development Project.
- (2) Moradiya Command Area Development Project.
- (3) CAD to LIS from River Burhi Dihing in Khowang Area.
- (4) Sapkata Command Area Development Project.
- (5) Longa Command Area Development Project.
- (6) Dhansiri Command Area Development Project.
- (7) Champamati Command Area Development Project.
- (8) New Minor Irrigation Scheme (17 nos. of Clust), under Tangla Division Irrigation.

### AREA IRRIGATED DURING 2011-12

The table 6.7 shows the crop season-wise area irrigated during the year 2011-12 in different districts of Assam from Government sources of irrigation:



**TABLE – 6.7**  
**DISTRICTWISE AND CROP SEASONWISE AREA IRRIGATED IN ASSAM(PROVISIONAL)**  
 Area Irrigated (in hectares)

Sl No	Name of District	Kharif		Rabi & Pre-kharif		Total	
		2010-11	2011-12	2010-11	2011-12	2010-11	2011-12
1	Dhubri	287	199	368	475	655	674
2	Kokrajhar	6521	13378	777	175	7298	13553
3	Bongaigaon	140	48	29	76	169	124
4	Goalpara	1440	1402	278	734	1718	2136
5	Barpeta	523	4298	543	256	1066	4554
6	Nalbari	88	451	81	100	169	551
7	Kamrup	248	2702	90	444	338	3146
8	Kamrup Metro	2442	1137	1604	2148	4046	3285
9	Darrang	5320	4047	1052	800	6372	4847
10	Sonitpur	5973	11097	25	24	5998	11121
11	Lakhimpur	670	426	188	458	858	884
12	Dhemaji	-	475	-	60	-	535
13	Morigaon	202	245	934	874	1136	1119
14	Nagaon	24812	20092	5150	4330	29962	24422
15	Golaghat	55	224	81	67	136	291
16	Jorhat	-	55	35	870	35	925
17	Sivasagar	35	951	-	29	35	980
18	Dibrugarh	-	1237	-	0	-	1237
19	Tinsukia	528	743	15	58	543	801
20	Karbi Anglong	18185	15679	5163	3457	23348	19136
21	Dima Hasao	4056	3819		0	4056	3819
22	Karimganj	-	50	23	200	23	250
23	Hailakandi	530	1055	-	902	530	1957
24	Cachar	1075	1130	2181	1961	3256	3019
25	Chirang	5511	7478	856	974	6367	8452
26	Baska	12079	15896	603	2625	12682	18521
27	Udalguri	17620	24364	1410	2910	19030	27274
	<b>Total</b>	<b>108340</b>	<b>132678</b>	<b>21486</b>	<b>25007</b>	<b>129826</b>	<b>157685</b>

Source: Chief Engineer, Irrigation Department, Assam.

#### REALISATION OF IRRIGATION SERVICE CHARGES

As sufficient fund is required for operation and maintenance of Irrigation Schemes and the fund provided in the state's budget is not adequate, the State Irrigation Department has introduced the system of realisation of service charges from the beneficiary cultivators since 1993. The rates of Irrigation Service Charges have been revised during 2000-01 to cope with the increasing cost of maintenance and in accordance with the Fiscal Reform Measures of the State Government. The current rates of Irrigation Service Charges are as follows:

**TABLE – 6.8**  
**IRRIGATION SERVICE CHARGES**

Crops	Rate/Bigha. (Rs)	Rate/Hect. (Rs)
Kharif	37.50	281.24
Wheat and Other Rabi	75.00	562.50
Early Ahu	100.00	751.00
Ahu	100.00	751.00
Jute	20.00	150.00
Sugarcane	29.60	222.00

Source: Chief Engineer, Irrigation Department, Assam.

The reasons for poor realisation of Irrigation Service Charges from the beneficiary cultivators are -

1. Poor economic condition of the cultivators;
2. General tendency of the beneficiary cultivators to get free water from Govt. Irrigation Schemes;
3. Absence of legal authority of Water Users' Associations empowering them to collect Irrigation Service Charges;
4. Some authorities have not permitted to collect the Irrigation Service Charges.
5. Adverse law and order situation in some areas for certain periods.

However, the Department is making its endeavour to realize the Service Charges from the beneficiary cultivators. A remarkable realisation of Irrigation Service Charges has been made during the year 2011-12 [₹12.06 lakh] as against ₹4.72 lakh during the year 2010-11. The year wise status of Irrigation Charges actually realised from beneficiary cultivators is presented below:

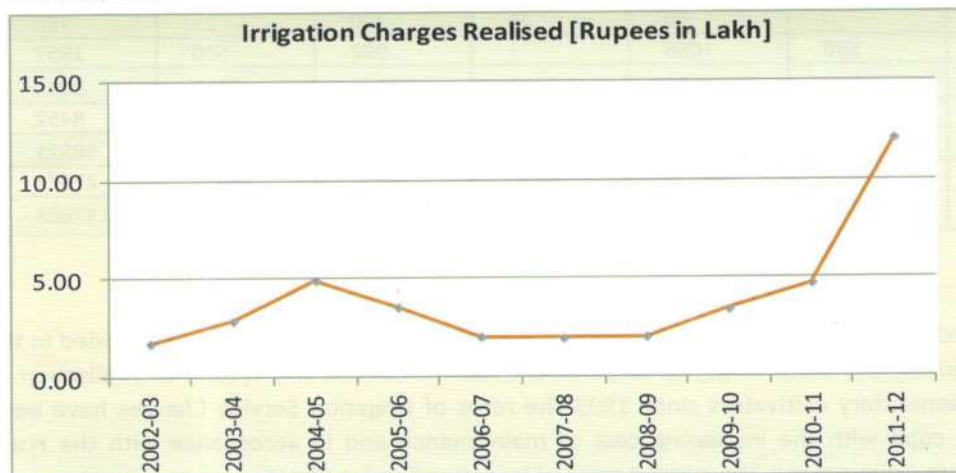
**TABLE – 6.9**  
**IRRIGATION CHARGES REALISED**

(Rupees in Lakh)

Year	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Amount realized	1.74	2.86	4.92	3.53	2.02	1.96	2.02	3.40	4.72	12.06

Source: Chief Engineer, Irrigation Department, Assam.

In order to improve the position of realisation of Irrigation Service Charges the Department has undertaken the following steps-



- a) The Assam Irrigation Act, 1983 as well as the Assam Irrigation Rules, 1997 was enacted;
- b) The Assam Irrigation Water Users' Act, 2004 has been enacted.
- c) District wise Farmers' Motivation Training Programmes are conducted time to time to create awareness about the utility of irrigation for Multiple

Cropping with a view to uplift their economic condition of cultivators through scientific agriculture.

- d) 795 Water Users' Associations (WUA) have been constituted in the Command Areas of Irrigation Schemes/Projects.
- e) District wise WUA Farmers' Training was conducted to adopt scientific agriculture in Irrigation Command.
- f) Out-of-State exposure visit in Tamilnadu, Andhra Pradesh and Jharkhand have been organised for officials of Irrigation Department, NGOs and WUA farmers.



## CHAPTER-VII

### FLOOD AND FLOOD CONTROL MEASURES

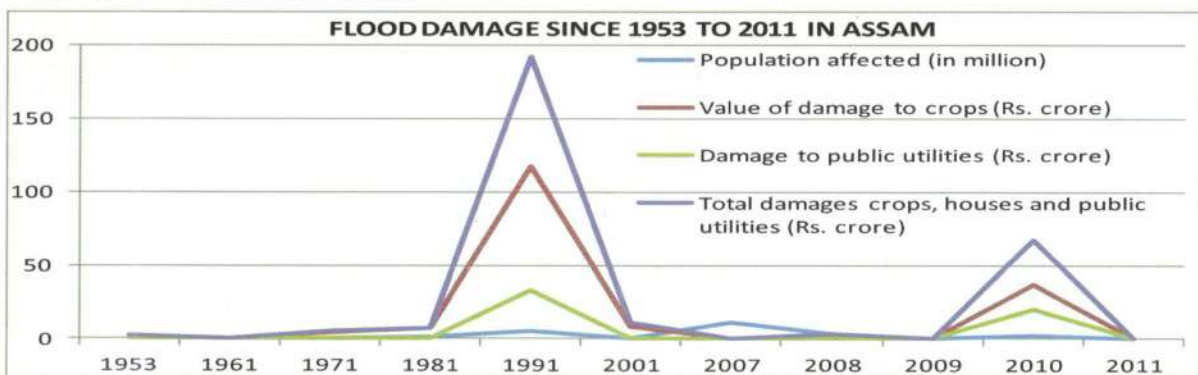
Assam is situated in the north-east of India between 90° to 96° North Latitude and 24° to 28° East Longitudes. The geographical area of Assam is 78,438 Sq. Km and the total land and water mass comprise of the Brahmaputra valley with an area of 56,194 Sq. Km. and Barak valley with an area of 22,244 Sq. Km. including the two hill districts viz. Karbi-Anglong and Dima Hasao. The unique geographical location consist of a vast network of 48 major and 128 small rivers originating from the hills and mountains surrounding the State is largely responsible for the recurrent floods and erosion of river banks. The rivers in Assam are either snow fed like the mighty Brahmaputra or rain fed and all the rivers are liable to floods, mainly because they receive heavy rainfall within a short time. Assam is highly vulnerable to floods, river bank erosion, sand casting, landslides and cyclonic storms. The exposure to such hazards is also aggravated because of the location of the State in the north-eastern region which is one of the most seismically active regions in the world. Assam is said to receive high torrential rainfall from 248 cm to 635 cm which also contribute to the flooding of the Brahmaputra River. [Source: Draft Report- Assam State Action Plan on Climate Change, 2012-2017 prepared for the Department of Environment and Forest, Govt. of Assam by the Energy and Research Institute, New Delhi]

The main river of the valley, the Brahmaputra is one of the largest rivers in the world and ranked fifth with respect to its average discharge. The Brahmaputra Valley has an average width of about 80 Km. The catchment area of the Brahmaputra in Tibet is 2,93,000 Sq. Km., in India and Bhutan is 2,40,000 Sq. Km. and 47,000 Sq. Km. in Bangladesh. The Brahmaputra basin extends over an area of 5,80,000 Sq. Km up to its confluence within Bangladesh. The average width of Brahmaputra is 5.46 Km. The maximum discharge of Brahmaputra at Pandu near Guwahati was recorded as 72,779 cumec on 23<sup>rd</sup> August 1962 and minimum discharge was recorded as 1,757 cumec on 22<sup>nd</sup> February 1963. The average annual discharge is about 20,000 cumec and average dry season discharge is 4,420 cumec.

The Barak valley has a geographical area of 6922.00 Sq. Km excluding 2(two) hill districts. The local rainfall run off of the valley along with that of adjacent hilly areas flows through river Barak and its various tributaries and is drained out to Bangladesh. The Katakhal, Jiri, Chiri, Modhura, Longai, Sonai, Ruksni and Singla are the main tributaries of the valley. The tributaries are mainly rain fed and cause flood problems when precipitation occurs.

Flood and erosion are two main natural disasters being faced by the State. The flood prone area of the state is 31,500.00 Sq Km as assessed by the Rastriya Barh Ayog which is about 40.16 percent of the total land area of Assam. This is about 9.40 percent of total flood prone area of the whole country (The flood prone area of the country as a whole stands at about 10.2 percent of the total area of the country). It signifies that the flood prone area of Assam is four times the national mark of the flood prone area of the country. Records show that average annual area affected by flood is 9.31 lakh hectares. The flood protected area of the State is 16,500.00 Sq. Km till date.

The severity of flood problem of the state has been further aggravated by the acuteness of erosion on both banks of the river Brahmaputra and its tributaries. The average annual rate of erosion is 8000.00 Hectare. Study reveals that an area of 4.27 Lakh Hectare has been eroded by the rivers in Assam since 1950 which is calculated as 7.40 percent of the total land mass of the State.



N.B.-Figures for 2009 and 2011 are not reported.

## FLOOD AND EROSION PROBLEM OF THE STATE

The Brahmaputra and Barak rivers with their 48 nos. of major tributaries and innumerable sub-tributaries have criss-cross the plains of both the valleys. Floods, bank erosion and drainage congestion are major problems faced by the state during the monsoon season. The flood of this region is a recurring phenomenon, every year several waves of flood cause damage to huge areas in the state. The loss to people in terms of houses, crops and cattle is immense. The figures of loss run into hundreds of crore every year apart from huge damages to roads, bridges, schools, communication systems and other such facilities. This diminishes the wealth of the nation as well as has adverse effects on the development of the state.

During post independence period, Assam faced major floods in 1954, 1962, 1972, 1977, 1984, 1988, 1998, 2002 and 2004. Almost every year three to four waves of flood ravage the flood prone areas of Assam. Average annual loss due to flood in Assam is to the tune of ₹200.00 crore. In 1998, this loss was about ₹500.00 crore and during the year 2004 it was about ₹771.00 crore.

After the unprecedented floods in the country in 1954, the Govt. of India announced a National Policy on Floods comprising three phases viz.-

- The immediate measures ;
- The short term measures ; and
- The long term measures.

The flood control activities in Assam started mainly after the announcement of National Water Policy. Subsequently, "Outlined plan for flood control in Assam" along with various comprehensive plans were prepared and the priority areas, which need immediate and urgent attention were identified.

Till date, the Water Resources Department has taken up works primarily for the general development of the rural sector and for the protection of major townships in both the Brahmaputra and Barak valley. Schemes have also been taken up to relieve the drainage congestion in the cities and other important areas.

- Construction of Embankments and Flood walls
- River training and river bank protection works
- Anti erosion and town protection works
- River channelization with pro siltation device
- Drainage improvement/ Sluices
- Raised Platform
- Flood forecasting and warning
- Flood zoning

The Water Resources Department, Assam has been implementing various flood management schemes from the beginning of second Five Year Plan and is still continuing.

The physical achievement up to the end of 11th Five Year Plan is as follows:

Sl. No.	Name of Infrastructure	Achievement during 10 <sup>th</sup> Plan	Achievement up to the end of 10 <sup>th</sup> Plan	Achievement during 11 <sup>th</sup> Plan	Achievement up to the end of 11 <sup>th</sup> Plan
1	<b>Embankment:</b>				
	New	6.85 Km.	4465.85 Km.	2.970 Km.	4473.82 Km.
Raising & Strengthening	360.236 Km.			527.758 Km.	
2	Drainage Scheme	3.49 Km.	854.19 Km.	20.776 Km.	874.966 Km.
3	Anti-erosion/ Protection works	70 Nos.	746 Nos.	138 Nos.	884 Nos.
4	Sluice (Major)	-	86 Nos.	8 Nos.	94 Nos.
	Sluice (Minor)	-	539 Nos.	6 Nos.	545 Nos.

Source: Draft Twelfth Five Year Plan (2012-2017) and Annual Plan 2012-13. (Volume-1), Planning & Development Department and Water Resources Department, Assam.

## Implementation of various Schemes and Achievements

The Water Resources Department of Assam has been implementing various schemes for tackling the erosion problem and to prevent inundation of the nearby area under different funding heads viz. Central sector schemes and State sector schemes.

### Flood Management Programme (FMP)

The First Empowered Committee Meeting on Flood Management Programme (FMP) under the Ministry of Water Resource, Government of India was held on 14th March 2008 and approved flood management schemes for the Eleventh Five Year Plan. The meeting recommended 73 numbers of flood management schemes under Water Resource Department, Assam with an estimated cost of ₹427.56 crore. However, two numbers of schemes out of 73 schemes are abandoned and accordingly total cost for the remaining 71 schemes reduced to ₹414.22 crore. The Empowered Committee in its third meeting on FMP recommended 9 numbers of schemes amounting to ₹274.87 crore on 27<sup>th</sup> January 2009. Empowered Committee on its 6th meeting held on 12<sup>th</sup> July 2010 recommended 3 Nos. of schemes with an estimated cost of ₹109.02 crore and 17 Nos. of schemes amounting to ₹341.45 crore were recommended on its 7th meeting held on 18th August 2011. Till date 79 numbers of schemes have been physically completed and the remaining 21 schemes are targeted to be completed by March 2013.

The Government of India has released a sum of ₹744.89 crore for the 90 ongoing FMP schemes till September 2012. The amount of Central share utilised against the ongoing schemes is ₹553.69 crore and the total State share utilised for aforesaid scheme is ₹95.02 crore. Amount of ₹280.71 crore is to be received as Central assistance.

Another 10 new schemes with an estimated cost of ₹274.51 crore have been submitted to the Ministry of Water Resource for placing before the Empowered Committee on FMP. The schemes will be taken up in 2012-13 after receiving necessary approval/ sanction. The targeted date of completion would be March 2013.

### North Eastern Council (NEC)

For controlling the river Jiadhal, Dhemaji and river Longai, Patharkandi, two schemes with benefited area of about 2,45,000 hectare at a cost of ₹1,993.13 lakh has been taken up and completed under NEC. An amount of ₹1,182.466 lakh have been utilised against these schemes.

During 2010-11, one scheme with an estimated amount of ₹374.00 lakh on benefited area of 1000 hectare for controlling the river Janali in Kokrajhar district was sanctioned. The work of the scheme is physically completed.

#### (a) Completed Schemes under NEC:

Year	No. of Schemes	Estimated amount (₹ in lakh)	Benefited area (in Hectare)	Achievement	
				Physical progress (in percentage)	Expenditure incurred (₹ in Lakh)
2009-10	2	1,993.13	2,45,000	100	1,182.46 *(59.3%)
2012-13	1	374.00	1,000	100	120.00 *(32.1%)

\*Expenditure incurred out of estimated amount.

#### (b) New scheme under NEC:

Year	No. of Schemes	Estimated amount (₹ in lakh)	Benefited area (in Hectare)	Achievement	
				Physical progress (in percentage)	Financial progress (₹ in Lakh)
2012-13	1	343.39	500	-	-

### Joint River Commission (JRC)

Under this head four schemes with an estimated cost of ₹374.187 lakh and benefited area of 16.88 hectare was taken up and have been completed successfully in 2009-10. An amount of ₹251.39 lakh have been utilised against this scheme.

### Non-Lapsable Central Pool of Resources (NLCPR)

Under NLCPR, a scheme with an estimated cost of ₹1150.327 lakh was taken up in Dhemaji District and has been completed successfully with the benefited area of about 10,000 hectare. Amount utilised for this scheme is ₹982.38 lakh.

Another two schemes under NLCPR with an estimated cost of ₹1,300 crore with benefited area of 1,315 hectares have been retained by the Ministry of DoNER for execution during 2012-13

### Additional Central Assistance (ACA)/SPA Schemes

Govt. of India approved five numbers of schemes under the ACA/SPA scheme for the year 2007-08 for an amount of ₹1,666.99 lakh. An amount of ₹1,640.84 lakh have been utilised for completion of the schemes with benefited area of about 9,378 hectare.

In the year 2008-09, 44 numbers of schemes with estimated cost of ₹13752.32 lakh were taken up under ACA/SPA with an anticipated benefited area of about 1,87,071 hectare. The works of all the schemes have been completed. An amount of ₹13,739.39 lakh have been utilised against these schemes till now.

During the year 2009-10, another 4 number of schemes with estimated cost of ₹2186.27 lakh have been sanctioned. These schemes have already been completed utilizing ₹2,186.27 Lakh. During the year 2011-12, another 2 numbers of schemes with an estimated cost of ₹1,283.50 lakh has been sanctioned under the Head untied SCA and out of these, one scheme has been physically completed. Amount spent against these 2 schemes is ₹735.00 lakh. The targeted date for completion of the ongoing scheme is March 2013.

### NABARD: NABARD (RIDF-XI)

Under RIDF-XI, 19 schemes were taken up with an anticipated benefited area of about 89,960 hectare. The costs of the schemes are estimated at ₹8,244.408 lakh. All the schemes have been completed. An amount of ₹8,093.89 lakh has been utilized against these schemes.

#### Schemes completed under RIDF-XI:

Year	No. of Schemes	Estimated amount (₹ in lakh)	Benefitted area (in Hectare)	Achievement	
				Physical progress (in percentage)	Expenditure Incurred (₹ in Lakh)
2006-07	2	450	35,000	100	438.18
2007-08	10	4664.16	61,345	100	4629.82
2008-09	5	1800.16	19,226	100	1756.3
2009-10	1	718.16	140	100	671.58
2010-11	1	611.93	5,750	100	598.01

### NABARD (RIDF-XII)

Under RIDF-XII, 20 numbers of schemes with an estimated amount of ₹9962.97 lakh, with benefited area of 99,800 hectare has already been completed. Expenditure incurred against these schemes is ₹9,818.63 lakh.

#### Schemes Completed under RIDF-XII:

Year	No. of Schemes	Estimated amount (₹ in lakh)	Benefitted area (in Hectare)	Achievement	
				Physical progress (in percentage)	Expenditure Incurred (₹ in Lakh)
2007-08	1	89	4,000	100	88.98
2008-09	8	4737.93	48,712	100	4737.73
2009-10	6	3359.24	25,590	100	3269.44
2010-11	5	1776.8	21,506	100	1722.48

## NABARD (RIDF XV)

Under RIDF XV, 13 Nos. of schemes with an estimated amount of ₹5,061.24 Lakh has been sanctioned with benefited area of 50,597 hectare. Out of these, only 3 schemes have been completed. An amount of ₹1,248.69 Lakh has been utilized against these schemes. The remaining ongoing schemes are expected to be completed by March 2013.

## NABARD (RIDF XVII)

The NABARD has sanctioned a loan amount of ₹3,567.28 lakh for 7 numbers of schemes for the year 2012-13 against the estimated amount of ₹3,755.06 lakh. Administrative approval for implementation of the schemes is awaited. Work is expected to be completed by 2014.

## STATE PLAN

Under State Plan, 5(five) schemes amounting to ₹1,155.26 lakh with expected benefited area of about 5,239 hectare have been taken up from 2007-08 to 2009-10. The Works of all these schemes have been completed. An amount of ₹955.09 lakh have been utilised against these schemes.

Another, four schemes amounting to ₹700.00 lakh with an anticipated benefited area 6,812.5 hectare was sanctioned under State Plan during the year 2010-11. The works of all these schemes have been completed and till date an amount of ₹697.60 lakh have been utilised.

Under the Head, 'State Specific Scheme', 3(three) numbers of schemes amounting to ₹1,676.00 Lakh with expected benefited area of 6,750 hectare is taken up during the year 2011-12. Work for one scheme is already completed and the other two are in progress. An amount of ₹450.00 Lakh has been utilized against these schemes. The targeted date of completion of the ongoing schemes is March 2013.

## Schemes proposed under the aegis of Asian Development Bank (ADB)

The Government of Assam has embarked upon a project under nomenclature "Assam Integrated Flood and River Bank Erosion Risk Management Project" with the financial assistance from the Asian Development Bank.

The project includes comprehensive river bank protection at Dibrugarh, Kaziranga, Palasbari – Gumi. The project also includes up-gradation and construction of embankment at Dibrugarh, Kaziranga and Palasbari. The project incorporates some new technology of international standards such as use of sand filled Geo-textile bags at apron of the river bank revetment.

### Dibrugarh sub-project:

Estimated Cost: - ₹80.235 crore, Benefited area = 32,614 Ha.

Objectives: - Securing the Dibrugarh Town and preventing the flood and Community based support program for flood by renovation of embankment of 9.5Km and provision for 4.7 Km of riverbank protection.

### Palasbari sub-project:

Estimated Cost: - ₹172.3559 crore, Benefited area = 62,152 Ha.

Objectives: - Securing the suburban and productive agriculture area of Palashbari-Gumi from Brahmaputra floods and preventing major river erosion and avulsion with renovation including retirement of embankment for 5.2Km with systematic provision of new riverbank protection for a length of 9.4 Km.

## NEW INITIATIVES TAKEN BY THE DEPARTMENT

For proper planning, design and execution as well as functioning of different flood management/ erosion control works the department has taken up new ideas from time to time.

### Use of Space Technology for Project Planning

Water Resources Department has adopted the latest space technology such the Remote Sensing (RS) and Geographic Information System (GIS) for understanding the flood, erosion and other related problems of various reaches of the Brahmaputra River with the technical help of the North Eastern Space Application Centre (NESAC), Shillong and ARSAC, Guwahati.

## Use of Geo-Synthetic material for construction of flood management structure

Basically the materials available for earthen embankment especially on the northern bank of the Brahmaputra are sandy soil which often do not possess required cohesion and stability. However, Geo-tubes, made up of geotextile materials with sufficient tensile strength can be used for construction of embankments. During the 11th Five Year Plan, geo-tubes were used for construction of embankment in Matmara of Dhakuakhana and the scheme is successfully completed.

Geo bags are being used in construction of bank protection works in Rohmorja area in Dibrugarh district against bank erosion protection works of river Brahmaputra.

Further, sand filled geo-mattress has been used at various reaches to arrest the active bank erosion.

## Use of Amphibian mini Dredger AMPD (Indigenous model) and other ancillary machinery and equipment for dredging/ re-sectioning of river bed

The department had initiated procurement of a fleet of machineries along with an indigenous amphibian mini dredger AMPD to remove the drainage congestion in river Bharalu and Mora-bharalu in Guwahati. Further the department has taken up similar projects of removal of drainage congestion from tributaries and channels with the help of machinery at Jorhat in upper Assam and Silchar in Barak valley.

## Reclamation of already eroded area

Water Resources Department has adopted the strategy to reclaim the land lost due to erosion and to safeguard the reclaimed land with porcupine and Jack Jetty System including revetment and apron by Geo bags.

## Selective Dredging

The dredging of the river bed of the tributaries at the selective reaches, railway bridge approaches, highly silt deposited reaches and the use of the excavated deposits in the raised platforms has also been adopted by the Department.

## Project proposed under Indo-German financial cooperation with India

A project concept note on assessing and analysing the integrated Hydrologic-hydraulic system dynamics of the Brahmaputra River Basin in North East India for integrated and sustainable river management to mitigate bank erosion and flood affect in Assam which has been accepted by the Ministry of Water Resources, Govt. of India, etc. In this regard, planning is under way for use of Jack-Jetty system with catchment area & morphology study in collaboration with IIT, Roorkee & Schiller University, Germany. A pilot project is proposed to be taken up at down of Saraighat Bridge erosion point backed with necessary R&D and study of river morphology for sustainability of the structures.

## Establishment of River Study Center

In order to extend R & D backup with modern technology, one River Study Center has already been set up under the aegis of FREMA which will take up various morphological study projects for the river Brahmaputra and its tributaries which will subsequently facilitate for designing various river training protection measures. The Center in the long run will be a center of excellence for river studies which will ultimately emerge as a premier research institution in the NE Region.

## Soil Conservation

The Schemes implemented by Soil Conservation Department have a link to the disaster management programme. Scheme for protection of riverine land are taken up to protect riverside land from the damage of flood. Similarly, gully control projects, protective afforestation works are taken up to control gully erosion, flash flood etc.



### Protection of Riverine Land

Protection of river bank from stream bank erosion, stabilization of eroded river bank, reducing of meandering action of river etc. is the main activities under the scheme. Activities such as construction of bamboo and boulder spur, bank easing, boulder revetment with vegetative support are being proposed to take up during the 12<sup>th</sup> Five Year Plan. Financial outlay to achieve a physical target of 12,000 R.M. for protection of riverine land is of ₹750 lakh.

### Protective Afforestation

All the riverine land along the streams, degraded wasteland not suitable for raising agricultural crops are brought under this component to provide permanent cover to the top soil as a protection measure and to restore the ecological imbalance. The Department has proposed 2650 hectare under this scheme during 12<sup>th</sup> Five Year Plan against financial outlay amounting to ₹500.00 Lakh.

### Gully Control Works

Gullies are formation in the soil by the surface runoff water which cannot be checked by normal agricultural practices. During rainy season the gullies results in unaccountable loss of top fertile soil due to erosion. The scheme of gully plugging is planned to implement during the Twelfth Five Year Plan with an estimated cost of ₹1500 lakh. The area benefitted due to implementation of the scheme will be 12,500 hectare.

### Land Reclamation and Water Distribution

The aim of the scheme is to construct drainage channel to drain out excess water from waterlogged or marshy areas, cutting of tilla and make it proper for raising agricultural crop, eradication and removal of ipomoea, water hyacinth etc. manually or by using herbicides and removal of sand from agricultural fields. Proposal for twelfth Five Year Plan is 5800 hectare against the outlay of ₹700 lakh.



## CHAPTER – VIII

### LIVESTOCK, ANIMAL HUSBANDRY AND DAIRY DEVELOPMENT

Assam economy continues to be an agrarian economy as more than 85 percent of the population is living in the rural areas and about 52 percent of the total labour force is found to be engaged in agriculture and allied activities. Animal Husbandry sector has significant impact on employment generation in the State and plays a vital role in income generation of both the rural and semi-urban economy. The Animal Husbandry and Veterinary Department of the State has been implementing various developmental programmes to create gainful employment/income opportunities in the rural areas with the objectives to boost up the socio-economic condition of the rural economy and act to enhance the volume of livestock and poultry products in the State to reduce the gap between demand and supply of these products. The Department has laid down the following objectives for improving the status of rural economy

- To provide health coverage to all the livestock and poultry of any breed/species in respect of contagious and non-contagious diseases.
- To improve livestock generating production viz- milk, egg and meat as well as to improve socio-economic status of the farmers and enhance contribution to the Gross Domestic Product of the State.

To achieve the goal, the Animal Husbandry and Veterinary Department of the State has been providing animal health care service and breed improvement facilities through 581 veterinary hospitals/ dispensaries, 767 Veterinary Sub-Centers, 10 ICDP centers, One Frozen Semen Production Centre, 7 Frozen semen Bank, 226 A.I. Centers, 14 hatcheries, 22 poultry farms, 12 pig farms, 2 sheep/goat farms, 4 Govt. Live stock farms etc. However, existence of a large and low productive population of non-descript animals and birds, the State has to depend on import of livestock products from outside the State to meet the increasing demand.

#### LIVESTOCK POPULATION

According to the Livestock Census 2007, the cattle population constitutes the largest group with more than one crore followed by goat population 43.20 lakh and pig 20.00 lakh. The buffalo and Horse -Ponies population, on the other hand, was only 5.25 lakh and 0.11 lakh respectively [shown negative growth by 22.41 percent and 5.92 percent respectively]. The table 8.1 provides the species-wise comparative picture of livestock population with growth rate in Assam as per Livestock Censuses 2003 and 2007.

**TABLE – 8.1**  
**LIVESTOCK AND POULTRY POPULATION IN ASSAM**  
[As per Livestock Census 1997, 2003 and 2007]

Sl No	Livestock species	1997	2003	2007	Growth rate (%) 2007 over 2003
1	Total cattle	8029865	8419647	10365583	23.11
	a. Crossbred cattle	369160	440321	690419	56.80
	b. Indigenous Cattle	7482293	7979326	9675164	21.25
2	Buffaloes	727707	677669	525835	(-)22.41
3	Sheep	83608	154597	360379	133.11
4	Goat	2677357	2986913	4376150	46.51
5	Horses & Ponies	12476	11642	10953	(-)5.92
6	Pigs	1082335	1543489	2133431	38.22
7	Dogs	857329	656354	782937	19.29
8	Elephant	1183	--	1033	-
9	Rabbit	2417	4647	6639	42.87
10	Fowls	12930514	14757979	25931081	75.71
11	Ducks	5049361	6888679	13181102	91.34

Source: Directorate of Animal Husbandry & Veterinary, Assam.

## POULTRY POPULATION

The poultry population of the State, as revealed from the Livestock Census 2007, has registered an increase of 81.0 percent over the previous census 2003. The category-wise population of these species during 2007 was fowls 259.31 lakh and duck 131.81 lakh as against 147.58 lakh fowl and 68.9 lakh duck recorded during the Livestock census 2003. The comparative analysis of Livestock census Reports shows that the growth of fowl population was about 76.0 percent during the census period 2003-2007. In respect of duck population the growth was above 91.0 percent during the said period.

On the other hand, the estimated fowl and duck population recorded 5.66 percent and 3.16 percent increase during 2011-12 over 2010-11 according to the State Animal Husbandry & Veterinary Department. The poultry population shows some recovery during the last two years after the outbreak of "bird flu" and other related diseases in the State during 2007-08 and 2008-09.

According to the State Animal Husbandry & Veterinary Department, the estimated population [Sample survey] of different category of livestock and poultry during 2011-12 was – indigenous cattle 84.69 lakh, cross breed cattle 4.70 lakh, buffaloes 5.44 lakh, goats 27.96 lakh, fowls 85.79 lakh and ducks 32.28 lakh. Table below shows the estimated population of livestock and poultry during the period 2005-06 to 2011-12.

**TABLE – 8.2**  
**ESTIMATED LIVESTOCKS/POULTRY POPULATION IN ASSAM**  
**PERIOD: 2005-06 TO 2011-12**

Year	Category-wise Livestock & Poultry Population (Numbers)					
	Indigenous Cattle	Crossbreed Cattle	Buffaloes	Goats	Fowls	Ducks
2005-06	7922556	401601	616349	2776664	10128936	4003028
2006-07	7814638	428884	589389	2769320	9461886	3566488
2007-08	7815062	430943	574820	2772275	10012032	3153441
2008-09	7729249	424544	561212	2807366	9035338	3343114
2009-10	7762572	446185	571756	2828529	7942817	3106136
2010-11	8040874	467546	573572	2579952	8119210	3129544
2011-12	8469106	469654	543575	2796448	8579096	3228485

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

## REVIEW OF SOME IMPORTANT ACTIVITIES

The aims and objectives of the 11<sup>th</sup> Five Year plan was to ensure availability of high – yielding variety of germ plasm to the society for production of milk, meat and egg as well as livestock health coverage for both curative and preventive purposes, up-gradation of skill to combat the dreaded diseases like bird flu, swine flu etc before it reaches the pandemic stage. To achieve the goal, action has been initiated for up-gradation of Animal Health Centre to a Regional Disease Diagnostic Laboratory to cater the need of entire NE Region, extensive health coverage programme for the livestock population through number of Veterinary dispensaries, Hospitals etc throughout the State.

The approved outlay for 11<sup>th</sup> Five Year Plan was ₹2637.80 lakh. But due to frequent occurrence of Bird flu etc., and due to implementation of some innovative schemes of Central Sector and Centrally sponsored schemes, the amount is exceeded.

### Breed up-gradation Programme

Despite having sizeable number of cattle, milk production in the State is not upto the satisfactory level as the major percentage of the cattle population in the State are of none-descript type. Implementation of World Bank funded scheme as well as the Scheme under National Project on Cattle-Buffalo Breeding [NPCBB] although assisted increase of milk production to a considerable extent in the State, achievements in case of production of cross breed animal was not very satisfactory. At present, breed up-gradation programme is carried out under AACP, RKVY and NPCBB Schemes.

The department also taken initiative to increase awareness about need of breed upgradation among the farmers in the remote areas by engaging private AI workers .This scheme is under implementation in the Nagaon District. Initiative also taken by the A.H.Vety and the Dairy Department jointly to enhance milk production in the Sonitpur District under Additional Central Assistance (ACA).In addition, 3 districts namely Sivasagar, Morigaon and Barpeta has been selected for additional milk production as the farmers of these districts are showing interest in breed upgradation through Artificial Insemination to enhance milk production for self employment.

### **Poultry Development**

The Animal Husbandry & Veterinary Department, Assam is encouraging backyard poultry rearing in the State for enhancing meat and egg production. To achieve the objective, emphasis has been given to assist poor farmers by supplying day old and month old chicks from Govt. farms at subsidized costs. However, the poultry industry in Assam is affected by the high cost of poultry feed. Since Assam is deficient in oilseed production, most of the oilcakes are imported from other states of the country. As a result although there are 23 poultry breeding farms including five Duck breeding farms, commercial egg producing farms are not gaining popularity in the State. Therefore, the Department is encouraging private investments for setting up poultry farms and feed meal in the State. The Department is committed to arrange finance assistance to the interested farmers. Special attention has also been given to encourage broiler farming in the State through private farmers and SHGs to enhance meat production and steps have been taken to arrange marketing facilities to attract the broiler rearing farmers.

### **Piggery Development**

The State of Assam produces highest quantity of pork in the country. But the production is found to be too little to meet the demand of the State and the region. To boost production of pork, the Animal Husbandry & Veterinary Department, Assam has planned to upgrade all the departmental Pig Farms to produce pure breed high yielding piglets for sale to the rural pig farmers. Steps have also been taken for breed upgradation of local pig through natural breeding by distributing quality Boar to meet the gap of meat production. The Department also took steps to encourage pig rearing through individual farmers, SHGs, CIGs etc., and establish "Pig Villages" to create organized network for more production of meat and to create gainful employment. Moreover, the department has proposed to introduce scheme for establishment of Breeder cum Fattener Farms through individual entrepreneur and SHGs by providing them subsidized financial assistance/loan and quality training.

### **Goat Development**

Considering the low productivity of meat and milk from local breed of goat, the Department has proposed to prioritized up-gradation of Assam hill goat through artificial insemination. Focused attention is also proposed to be given to encourage the people of rural areas to rear goat in a systematic way and the scheme is planned to be implemented through individual farmers and through SHGs. The Department also planned to upgrade Assam hill goat through natural breeding by distributing quality "Beetal" with a view to increase meat production and give gainful employment in rural areas.

### **Fodder Development**

The quantum of green fodder production in the State is 13683MT while the requirement is 21144MT. Due to heavy rainfall in the region and for availability of wild grass in the monsoon season; farmers are not habituated with fodder cultivation. The Department has planned to popularize fodder cultivation by providing free fodder seeds and also to develop VGR, PGR of the State for the purpose in cooperative sector. During the last 2-3 years, a noticeable change is observed among the progressive farmers in fodder cultivation. The department is proposed to distribute Fodder seed of 5 kg kit bag free of cost to 5000 families of each district for five years so that they can sow the same in half bigha of land and produce 30-35 qtls of fodder from each unit in 2 cuttings. The State government is also taking massive fodder production plan with financial support from Government of India under RKVY, AACP (World Bank assisted programme) and also under State Plan.

The following fodder development schemes have been undertaken during the year 2011-12

✦ **Grassland Development including Grass Reserves:**

It is a 100% Centrally Sponsored Scheme (100% CSS) launched with the objective of Grassland Development including Grass Reserves. Under this project 21 units of fodder plots have been developed in 18 selected districts. Each unit is of area of 75 bigha i.e. 10 hectare and cost ₹10.00 lakh. Total cost of the Project is ₹210.00 lakh and covered an area of 1575 bighas as a whole.

✦ **Fodder Seed Distribution :**

Under the **Rashtriya Krishi Vikash Yojana (RKVY)** Scheme 34,487 units of Oat seed of Kent variety were distributed along with requisite quantity of Urea and Zinc Sulphate among the farmers of 21 districts of the State. It produced around 1, 72,435 MT green grass during the year.

**TABLE – 8.3**

Sl No	Items Distributed	Total quantity (kg)	No. of beneficiaries	Total green grass produced (MT)
1	Oat Kent	4,48,331.00	34,487	1,72,435
2	Urea	4,13,844.00		
3	Zinc Sulphate	68,974.00		

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

### Health Coverage

The Department has upgraded Animal Health Centre, at Guwahati to a Regional Diagnostic Laboratory with financial assistance from Govt. of India. An ambitious programme “ASCAD” (**ASSISTANCE TO STATE FOR CONTROL OF ANIMAL DISEASE**) with financial assistance from Govt. of India has been undertaken to modernize the laboratory upto the ISO standard. The department has planned to set up District Diagnostic Laboratories in 13 districts and also proposed to introduce mobile laboratories. The Institute of Veterinary Biological is proposed to upgrade as an institute of a GMP & ISO standard to meet the entire vaccination requirement for the NE Region.

### LIVESTOCK PRODUCTS: ESTIMATED PRODUCTION OF MILK, EGG AND MEAT

The Directorate of Animal Husbandry & Veterinary, Assam prepares and publishes the estimates of livestock population and Livestock and Poultry products like milk, egg and meat on the basis of seasonal survey under the technical guidance of Indian Agricultural Statistical Research Institute (IASRI) New Delhi. The findings of the survey for the year 2010-11 have been documented as the “Report on Integrated Sample Survey for Estimation of Major Livestock Products-Milk, Egg and Meat-2010-11”.

It reveals from the report that after making all possible efforts by the Animal Husbandry & Veterinary Department for enhancement of livestock production, there still exists a large gap between the requirement and availability of livestock products in the State. The table below shows the requirement and availability of livestock products during the last five years:

**TABLE – 8.4**

#### REQUIREMENT AND AVAILABILITY LIVESTOCK PRODUCTS IN ASSAM

Year	Milk(million ltrs)		Egg (in million nos.)		Meat(in'000tones)	
	Requirement	Availability	Requirement	Availability	Requirement	Availability
2001-02	2025	750 (3.1)	4798	507 (10.6)	293	19.48 (6.6)
2005-06	2174	822 (37.8)	5149	535 (10.4)	314	26.63 (8.5)
2008-09	2254	827 (36.70)	5339	466 (8.7)	326	30.7 (9.4)
2009-10	2286	830 (36.3)	5414	486 (9.0)	330	33 (10.0)
2010-11\$	2308	833 (36.1)	5474	470 (8.6)	334	34 (10.2)

\$- Provisional; Figure in bracket shows the ‘Availability’ to ‘Total Requirement’

Source: Report on Integrated Sample Survey for estimation of production of Milk, Egg and Meat-2010-11.

## Milk Production

It reveals from the report that the total milk production of the State for the year 2010-11 has been estimated at 832.72 million liters as against estimated production of 829.86 million liters during the year 2009-10 which was about 0.34 percent more than the estimated production of milk during the previous year. The cattle milk contributes more than 84 percent of the total milk production during the year. The production of buffalo and goat milk shared, on the other hand, more than 15.0 percent of the total milk production. While the milk production of Crossbreed Cattle registered a positive growth, the milk production of Indigenous cattle and Buffalo recorded a negative growth over the previous year. The quantity of goat milk production remained more or less at the same level during the year with that of previous year.

**TABLE – 8.5**  
**TOTAL MILK PRODUCTION IN ASSAM DURING 2010-11**  
(in million liters)

Season	Cattle			Buffalo	Goat	Total
	Crossbreed Cattle	Indigenous Cattle	Overall			
Annual 2010-11	230.79	471.14	701.93	106.19	24.60	832.72
Annual 2009-10	202.15	495.55	697.70	107.52	24.64	829.86
Annual 2008-09	183.60	507.36	690.96	109.89	26.14	827.01
Annual 2007-08	181.33	506.42	687.75	109.26	27.38	824.39
Variation (%) 2010-11 over 2009-10	(+)14.2	(-)4.9	(-)0.6	(+)1.2	(-)0.2	(+)0.34

Source: Report on Integrated Sample Survey for estimation of production of Milk, Egg and Meat-various issues.

The per capita/per day milk availability in the State during the year was estimated at 74 ml, which was remained at the same level compared to per capita/per day availability of milk during the previous year. The availability of milk per capita/per day in the State during the year was far below the ICMR recommended milk requirement norms of 208 ml per head per day. During the year 2010-11 per capita national availability of milk was 281 grams.

## Egg Production

It is revealed from the Report that the estimated layer population of both fowl and duck in the State during the year 2010-11 was about 30.18 lakh and 11.55 lakh respectively as against 31.61 lakh layer fowl and 11.57 lakh layer duck population during 2009-10. It has also been revealed from the Report that while the growth of total layer population decreased more than 3.0 percent during the year over the previous year, the growth of the layer duck decreased by 5.0 percent and the growth of population of layer fowl increased by 0.16 percent during the same period. In respect of the growth of population of improved category of layer fowl and duck, the improved category of fowl recorded 40.0 percent increase and improved category of duck recorded 7.0 percent decrease over the previous year. According to the report, although the yield rate of layer bird of improved category of both fowl and duck is high, mixed growth of these two categories of layer birds effected to overall less production of eggs in the State. Moreover, rearing of birds mostly for meat purpose also one of the prime cause of less production egg in the State.

Total egg production in the State was estimated at 4700 lakh numbers during the year 2010-11 which was marginally above 4684 lakh numbers of eggs produced in the State during the year 2009-10. Annual average yield rate of Fowl egg was 107 and 108 numbers per layer/ per season for local and improved fowl respectively during the year. In respect of duck egg, the yield rate of per layer/ per season was 105 and 180 for local and improved duck respectively during the year under reference. The Table 8.6 shows seaso-wise total egg production in the State based on the estimated average egg yield per layer per season.

TABLE – 8.6

## EGG PRODUCTION AND AVERAGE YIELD PER LAYER IN THE STATE DURING THE YEAR 2010-11

Season	Total egg production (in lakh nos.)					Average yield per layer (in nos.)			
	Fowl		Duck		Total	Fowl		Duck	
	Desi	Improved	Desi	Improved		Desi	Improved	Desi	Improved
Summer	849.56	62.94	295.88	75.87	1284.25	31	60	28	53
Monsoon	820.08	67.91	298.81	66.78	1253.58	29	53	28	53
Winter	1406.24	195.56	487.32	73.12	2162.26	47	75	50	74
Annual 2010-11	3075.89	326.41	1082.02	215.78	4700.12	107	188	105	180
Annual 2009-10	3114.71	210.03	1120.34	238.97	4684.07	100	185	109	186

Source: The Report on Integrated Sample Survey for estimation of production of Milk, Egg and Meat-2010-11.

The per capita availability of egg in the State for the year 2010-11 was estimated at 15.45 numbers per head /per annum as against the ICMR recommended nutritional requirement norms of 180 number of egg per head per annum. Therefore, our State is not only remained far behind from the per capita availability norms but also from the nutritional requirement norms. In view of the on going shortfall, it can be stated that there is much scope for improvement in poultry activities for boosting up of egg production in the State. **According to the State Focus Paper -2012-13 published by NABARD, Assam Regional Office, "Presently, neighbouring States like West Bengal and Bihar are catering to the inputs demands like DOCs & feed for Assam. Besides there is an inflow of about 80 lakh eggs per week into the state, mainly from Andhara Pradesh. The local demand is estimated at about 270 crore eggs per year. To bridge the gap in the realistic demand, a minimum of 76 lakh hybrid layers would be required."**

## Meat Production

The total meat production in the State, according to the Report, is calculated on the basis of number of animals slaughtered per season/per year and average meat yield. The total meat production in the State during 2010-11 was estimated at 33.84 thousand tones comprising of both livestock and poultry as against estimated meat production around 31.59 thousand tones during 2009-10 showing about 7.0 percent increase in meat production over the previous year.

The Table 8.7 shows the number of animals/birds slaughtered, average meat yield per animal/bird and total production of meat during the year 2010-11. It reveals from the table that pig meat contributes 42 percent of the total meat production in the State followed by goat meat (24 percent) and poultry meat (15 percent) respectively during the year.

TABLE – 8.7

## MEAT PRODUCTION IN ASSAM DURING 2010-11

Item	Animals/Birds Slaughtered (No.)	Average meat yield per animal / bird(in kg)	Meat production (in Kg)
Cattle	93709	44	4121893
Buffalo	2165	47.7	103303
Goat	1408540	6.68	9411894
Sheep	32430	7.00	227131
Pig	596749	25	14914258
Fowl	4577556	0.819	3750117
Duck	1433510	0.916	1313270

Source: The Report on Integrated Sample Survey for estimation of production of Milk, Egg and Meat-2010-11.

## Livestock Products during 2011-12

The volume of milk production of the State was estimated at 838 million litres for the year 2011-12 against 832 million litres produced in 2010-11 showing a marginal increase of milk production over the previous year. During 2009-10 the production of milk in the State was 830 million litres. Meat production of the State was also showing marginal growth from 34.00 thousand tonnes in 2010-11 to 34.19 thousand tones in 2011-12. The production of meat was 31.59 thousand tonnes in 2009-10. Estimated production of egg in the State although shown some moderate increase during 2011-12 over the previous year but remained considerably low compared to the estimated egg production in 2005-06 [536 million no]. The trend of production of Livestock products from 2004-05 to 2011-12 is shown in the Table 8.8.

**TABLE – 8.8**  
**TRENDS OF PRODUCTION OF LIVE STOCK PRODUCTS IN ASSAM**

Item	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Milk (million litres)	812	821	823	824	827	830	832	838
Egg (million nos)	522	536	535	490	466	468	470	471
Meat (‘000 tonnes)	24.07	26.06	28.8	29.9	30.7	32.0	34.0	34.19

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

## Developmental Efforts

The various schemes being implemented by the Animal Husbandry and Veterinary Department supported by Assam Livestock Development Agency (ALDA), ARIASP, AACP, ASCAD, NERDDL and State Plans are discussed below briefly:

### Frozen Semen & Assam Livestock Development (ALDA)

The semen station at Khanapara, Guwahati was initiated during 1968-69 under Intensive Cattle Development Project (I.C.D.P). Later the station has been updated in the year 1975-76 under the Indo-Australian Cattle Breeding Project (IACBP) for production of chilled semen till the beginning of 1995-96. In the year 1995-96 under the ARIASP, Khanapara semen station was strengthened with new bulls and equipments for production of Frozen Semen. Of let the process of A. I. by using Frozen Semen to upgrade the local indigenous cattle with the objective to increase milk productivity has been gaining its popularity in the State.

ALDA was constituted under the society Act as per guidelines of National Project on cattle and Buffalo Breeding (NPCBB) and it started functioning from 2004. The main objective of ALDA is- to produce good quality semen, to improve training facilities for extending breeding network. All the objectives are targeted for improving milk production in the State. As per report of ALDA:

- The no. of semen distributed during the year 2011-12 = 303828 nos.
- The no. of A.I. done during the year 2011-12 = 266590 nos.
- The no. of Calf borne during the year 2011-12 = 89941 nos.

In addition, the ALDA has undertaken the following activities during the year 2011-12

#### ➤ Establishment of Frozen Semen Bull stations at Barpeta

Under NPCBB phase II relocation and establishment of new state of the art semen station near Barpeta Bull Mothers farm, to cater the need of whole North east region for coming 20 years has been planned by utilizing the comprehensive consultancy service from Uttarakhand Livestock Development Board (ULDB).



- Development of locally prevalent swamp Buffalo & its experimental cross breeding with Murrah breed  
As per the recommendation of the National seminar held under NPCBB phase-I special emphasis is to be given for preservation of Swamp Buffalo and its pure breeding in a selected Govt. farm, along with the cross breeding of the Swamp buffalo with Murrah bulls under controlled condition in Govt. farm.
- Livestock farm of Nagaon District under NPCBB phase-II  
ALDA has renovated 5 Buffalo-sheds of the Barhampur Livestock farm under the State PWD Department for housing of the buffaloes. The department has taken initiative for procurement of Murrah buffalo from the Punjab and Haryana Livestock Development board. A Technical Committee has also been constituted incorporating the experts from ICAR NETWORK Project on Swamp Buffaloes of College of Veterinary Science, Khanapara at Government level to undertake technical programme of cross breeding of Murrah and Swamp Buffaloes at Barhampur farm. Process for procurement of swamp buffalo has also been initiated.
- Supply of chain Management of Frozen semen and Liquid Nitrogen  
Besides clean semen production for implementing successful A.I. programme by arranging uninterrupted supply of viable frozen semen to all the field A.I. centres is prime objective. To achieve the objective, following two steps have been taken to strengthen the supply of liquid nitrogen in the State:
  - i) Regular Bulk supply of Liquid Nitrogen (LN) from Industrial source at Lohra, Guwahati to the strategically located 7 old and 3 new proposed Frozen Semen Banks (FSB), which acts as the buffer of Liquid Nitrogen and semen for distribution in the rural A.I. centres of respective districts. For Bulk storage of a buffer stock of LN in the FSBs ALDA under NPCBB Phase-II has installed **7 Bulk Storage Silos** in the 7 existing FSBs and one at proposed site of Barpeta semen station.
  - ii) Regular maintenance of propulsion of Liquid Nitrogen along with Frozen Semen in cryocans from FSB to all rural A.I. centres is a must. Accordingly in the NPCBB Phase-II ALDA is allowed to procure **10 Emergency Liquid Nitrogen carrying vans** for distribution of Liquid Nitrogen and Frozen Semen from the Frozen Semen Banks to the existing 813 rural village level A.I. centres and new 462 AICs.
- Livestock Insurance Scheme  
Livestock insurance scheme under Govt. of India was initiated in Jorhat and Barpeta districts of Assam during the year 2006-07. In the year 2009-10 another four districts, viz. Nagaon, Kamrup, Morigaon and Sonitpur has been brought under the coverage of the programme. Till date 77732 numbers of animals were insured and 2097 numbers of claims settled.

**TABLE – 8.9**

**PROGRESS OF IMPLEMENTATION OF LIVESTOCK INSURANCE SCHEME IN ASSAM**

Year	Physical Target (nos. of animal)	Nos. of beneficiaries involved (Nos.)	Nos. of Animal insured (Nos.)	Nos. of claims made (Nos.)	Nos. of claims settled (Nos.)	+Total premium paid (Rs. Lakh)	Amount of claim paid to the beneficiaries (Rs. Lakh)
2010-11	32000	16763	30641	948	939	225.00	153.49
2011-12	45000	17627	34696	1018	913	264.00	172.85

+Total Premium includes subsidy and farmer's share

Source: Directorate of Animal Husbandry & Veterinary Department, Assam.

**Co-ordinated Cattle Breeding Project [CCBP]**

The main component of the Veterinary Department is Cattle Breeding. India shares more than 20 percent of the World's Cattle population, but contributes only 15 percent of the live stock products due to poor productivity from the non-descript indigenous cattle breed. Therefore, CCBP was launched with the objective to get the progeny by artificial insemination with higher milk production ability with sole aim to enhance the milk production economically as well as to reduce the gap between demand and supply of milk.

**TABLE – 8.10**

Physical Target	Physical Achievement	Financial Achievement (Phase-I)		
		Year	Fund Available (in lakh)	Expenditure (in lakh)
i) Collection of semen and production of frozen semen doses.	6250 doses	2011-12	249466.00	22563.00
ii) Distribution of semen in FPR Area.	1015 doses			

Source: Directorate of Animal Husbandry & Veterinary Department, Assam

### Bovine Contagious Pneumonia Project [BCPP]

The **BOVINE CONTAGIOUS PNEUMONIA** eradication programme in Assam is implemented by the Department since 2001 as per the guidelines of NPRE, Govt. of India. Considerable success has been achieved in the clinical surveillance of BCCP eradication programme in Assam.

**TABLE – 8.11**  
**PHYSICAL ACHIEVEMENTS OF BCPP ERADICATION PROGRAMME IN ASSAM UNDER NPRE DURING YEAR 2011-12**

Item	Achievements during		
	2009-10	2010-11	2011-12
Village Search	8421	7447	5736
Institutional Search	1209	1005	842
Slaughter House Inspected material collected	102	98	1068

Source: Directorate of Animal Husbandry & Veterinary, Assam.

The State Animal Husbandry & Veterinary Department has set following action plan for **BCPP** eradication during the year 2012-13-

### Action Plan for C.B.P.P. Eradication in Assam under N.P.R.E., Govt. of India 2012-13

1.	Target for village search	All the 9690 nos of villages in the 8 endemic districts of Assam will be searched at least once per year during the 2012-13 to route out any possibility of CBPP occurrence.
2.	Target for institutional search	All the veterinary Institution especially the dispensaries & Hospitals (184 nos) will be inspected one in every month in the 8 endemic districts to follow any respiratory distress cases.
3.	No of Animal Inspected in Slaughter House	Inspection of all the Bovine Slaughter Places located in the endemic districts of Assam at least twice in a week will be carried out for PM, isolation and histopathological examination.
4.	Check post/ Stock Route Search	Examination of all the transportation cattle/ buffalo passing through the 7 CBPP check post will be carried out in the addition to inspection of cattle in market places and other routes of movements.
5.	Clinical Material/ Swab Collection	Materials such as pleural fluid, swab etc. will be collected from all inspected cases and will processing in the laboratory at central CBPP laboratory in Khanapara and also will be sent to IVRI Izatnagar.

### National Project on Rinderpest Eradication [NPRE]

The department has successfully completed all the three phases of the NPRE programme in the State as per the guidelines of Government of India. Surveillance programme are being conducted under NPRE for total eradication of **Rinderpest** and **Bovine Contagious Pluro Pneumonia**. OIE has already issued eradicate declaring "Freedom from Infection in respect of Rinderpest for India". At present surveillance work in the State is in operation and sero-surveillance work temporarily suspended and will restart on receipt of instruction from NPRE Government of India.

**TABLE – 8.12**  
**PHYSICAL AND FINANCIAL ACHIEVEMENTS UNDER NPRE**

Year	PHYSICAL ACHIEVEMENTS			FINANCIAL ACHIEVEMENTS (Rupees in lakh)		
	Village search	Institution Search	Stock Route Search	Amount released by Govt. of India	Amount released by Govt. of Assam	Amount Drawn
2009-10	7147	717	504	5.00	5.00	5.00
2010-11	7462	601	564	8.00	8.00	8.00
2011-12	6231	437	421	Nil	Nil	Nil

Source: Directorate of Animal Husbandry & Veterinary, Assam.

### NORTH EASTERN REGIONAL DISEASE DIAGNOSTIC LABORATORY (NERDDL)

The Animal Health Centre was upgraded to NERDDL during the year 2010-11. The NERDDL provided referral and consultancy services to the diagnostic laboratories located at various parts of the state during any outbreak of unknown disease. The NERDDL also has undertaken special programmes as per norms lay down by Government of India and notified from time to time. These include programmes formulated for Bird Flu, PRRS and BSE. Apart from these, screening of bulls and teaser animals as well as bovine semen against sexually transmitted diseases is also carried out in bulls meant for breeding and frozen semen production at NERDDL. The NERDDL also maintain a data bank on the epidemiology of the economically important diseases.

#### Details of diseases diagnosed in the laboratories

Year	Name of section	Name of disease diagnosed
2011-12	Parasitology	Fasciola, Ascariasis, Amphistomiasis, Strongyloidiasis, Bunostomiasis.
	Bacteriology	Haemorrhagic Septicaemia, Anthrax, E. coli, Strapto & Staphylococcosis
	Virology	PPR, FMD, New Castle disease Sera tested for Bird flu Morbid samples sent to HSASDL, Bhopal for HPAI
	Biochemistry & Toxicology	Aflatoxicosis, OP poisoning and supporting tests for other diseases
	Pathology	BSE negative status, Rabies and supporting diagnostic aids for other diseases.

### Veterinary Biological

The Institute of Veterinary Biologicals, Khanapara is producing and procuring vaccines against economically important diseases of animals and birds to fulfill the need of the State. This institute is mainly responsible to make vaccines available in the local dispensaries/ hospitals at free of cost through district network. Beside mass immunization, emphasis has also been given in prevention, diagnosis and treatment if the diseases. Subsequently economically important diseases like Duck Cholera, Duck Plasma, Ranikhet, Swan Fever, F.M.D. etc. prevalent all over the state are also covering by this project. During 2009-10 and 2010-11, 27.05 lakhs doses of different types of vaccines have been distributed to the field under the aid of ASCAD. During 2011-12, as many as 17.57 lakhs doses of different types of vaccines have also been distributed by the institution.

### Schemes for Women

Considering the specific needs and for development of economic conditions of womenfolk the Animal Husbandry & Veterinary Department has formulated strategies to involve them in livestock and poultry development programmes. Women SHGs will be given preference for selection of beneficiaries and special employment oriented schemes for women individually or through SHG's in the areas of Poultry & Duckery, Cattle, Piggery and Goatery. Schemes of Special training programme will also be provided to the women beneficiaries for capacity building.

## Dairy Development

The Dairy Development in Assam was initiated in the latter part of the Second Five Year Plan period with the basic concept to develop the Dairy industry in the State through establishment of Town Milk supply scheme almost in all important towns of Assam to feed the consumers hygienic, clean milk at reasonable price. Till February 1982 the Dairy Development activities were carried out by the Director of A.H. & Veterinary Department. To expand the role of Dairy activities in the state economy, the Govt. of Assam created a separate Directorate of Dairy Development bifurcating it from the Animal Husbandry and Veterinary Department during the year 1982. The primary focus areas of Dairy Development, Assam are:

- i) Procurement, processing and distribution of milk aiming at economic upliftment of rural milk producers and help urban consumers to get quality milk at a reasonable price.
- ii) Developing adequate infrastructure to ensure procurement and processing of milk produced in the State.
- iii) Organising milk producers for efficient procurement, processing and marketing
- iv) Awareness among milk producers, traders and consumers regarding clean milk production and consumption.
- v) To modernize the supply of inputs like A.I., Feed, Fodder, Animal Health coverage and Training etc. to the Dairy farmers in the milk shed areas linked with Milk Supply Schemes and Milk Plants.
- vi) To help the villagers in marketing their produce by setting up of suitable transport and marketing organization.

## Present Status

- The milk production in Assam has been increased from 824 million litres in 2006-07 to 838 million litres in the year 2011-12.
- The milk processing capacity has been increased from 15,000 litres per day in 2006-07 to 115,500 litres per day in 2011-12.
- Delivery of clean milk to the consumers, concept of Any Time Milk through Milk Vending machine has been started from 2008-09.
- Comprehensive network of Bulk Milk Coolers has been initiated in the state to facilitate processing of milk from the year 2009-10.
- Automatic Milk Collection units in 57 locations in the state are being setup since 2008-09.
- Organised 312 Dairy Cooperative Societies.
- Organised 300 Milk Producer Institutions.

**TABLE – 8.13**

### TRENDS OF MILK PRODUCTION IN ASSAM & INDIA

(In'000 Tonne)

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Assam	747 (0.77)	751 (0.74)	752 (0.72)	753 (0.69)	756 (0.67)	791 (0.69)	796 (0.62)
All India	97061	100869	104842	108587	112540	114305	127904

Figure in bracket shows the share of Milk production in Assam to All India.

Sources: 1. Agricultural Statistics at a Glance-2009 & 2010.

2. Directorate of Animal Husbandry & Veterinary, Assam.

## Strategies during Twelfth Five Year Plan

- ❖ To give thrust on the programmes to enhance the milk production of the state and programme benefitting the rural dairy farmers for economic upliftment through self employment scope.
- ❖ To continue all projects/schemes existing at the end of the eleventh five year plan with rational proposition for further strengthening wherever it feels to be necessary.
- ❖ To create one milk surplus district per year in convergence with Veterinary department.

- ❖ To avail more benefit out of centrally sponsored schemes under NEC, schemes under World Bank and schemes funded by other related agencies.

To achieve the objectives following ongoing schemes/projects under State Plan, Centrally Sponsored Scheme, World Bank Aided Projects and other schemes are proposed to be taken up during the twelfth Five Year Plan:

#### **Enhancement of Milk Production:**

To focus thrust upon the projects to enhance milk production of the State through integrated dairy activities, the Dairy Development Department proposed to create opportunities for economic upliftment and self-employment of both the rural dairy farmers as well as urban/peri-urban dairy farmers during the twelfth Five Year Plan period. Accordingly the following steps have been taken:

- Proposed to initiate Integrated Support Services Scheme to create a visible marketable surplus in one district and to make the district a role model so that the success story can be replicated in other districts. The Scheme envisages providing support services to the identified dairy clusters in one district per year, to make the targeted district as a milk surplus district as well as to create livelihood avenues to the poor dairy farmers. The Scheme will be executed in convergence with Veterinary department to ensure required support services like fodder, AI, medicine and health coverage. The Scheme has already been initiated in Nagaon and Sonitpur District during 2011-12. It is proposed to implement the Scheme in Barpeta, Sivasagar, Golaghat, Goalpara and Dibrugarh district during the twelfth Five Year Plan period.
- Establishment of Commercial Unit Scheme is proposed to initiate which envisages providing infrastructure and other inputs for commercial dairy farms with more than 80[eighty] high breed milch cattle/buffaloes, Milk processing and diversification unit at @ ₹95.64 lakh for local entrepreneur with a view to create employment generation. 60 percent of the total fund requirement will be arranged through bank loans and the remaining 40 percent will be arranged as Govt. margin money.
- Milk Village Scheme will be initiated under which cross breed cattle will be distributed among Scheduled Caste and Scheduled Tribe people of selected villages on a cluster basis in different sub-division of the State. Beneficiaries will be provided with Cattle with calf and other inputs like cattle insurance, cow shed, fodder etc under the Scheme.
- The Dairy Cooperative Societies, SHGs and Milk Producer Institutions in existence are proposed to be provided with support inputs viz., Cattle feed subsidy, Transportation subsidy in feed ingredients, Green fodder Milk procurement inputs etc.

#### **Milk processing facility**

To achieve the minimum per capita availability of 208 ml per day as recommended by ICMR, the Dairy Development Department has given thrust in increasing milk production as well as to increase milk processing facility to maintain cold chain covering the entire State for economic upliftment of rural dairy farmers. To achieve the goal following steps have been proposed to be taken:

- To re-establish and develop processing infrastructures of Dairy Development to assist milk producers in enhancing milk production and to establish market linkages.
- To renovate/upgrade the existing milk processing plants and set up new Central Dairy/Milk processing plants in potential milkshed areas to ensure remunerative price to the rural milk producers and to ensure availability of clean and wholesome milk to the urban consumers at reasonable prices.
- To establish Bulk Milk Coolers in milk potential areas.
- To incorporate INSULTED Milk Tankers for maintaining cold chain with Bulk Milk Coolers, Milk Processing Plants and Central Dairy.

- To establish Milk Vending machines in strategic locations ensuring Any Time Milk to the consumers.
- To establish milk booths and in major milk consuming areas.

The Dairy Development department also planned to organize rural farmers to Dairy Cooperative Societies (DCSs), SHGs and Milk Producer Institutions (MPIs) so that opportunities can be availed by the groups including training on clean milk production and management practices.

## IMPLEMENTATION OF VARIOUS PROJECTS

The State Dairy Development Department have been implementing various schemes/projects to increase milk production in the State.

### Assam Agricultural Competitiveness Project (AACP) (Externally aided project)

The objective of the project in respect of Dairy Development is to organize the dispersed dairy farmers into Dairy Cooperative Society (DCS) and Self Help Group (SHG) and Milk Producers Institutions (MPIs) to provide both forward and backward linkage to them in order to strengthen their capacity, make them more competitive and economically sustainable and to make them able to take advantage of emerging commercial opportunities. A substantial number of dispersed dairy farmers have been organized in viable groups with assured linkages under the Assam Agricultural Competitiveness Project (AACP).

### ADDITIONAL FINANCING UNDER AACP-2(EAP) [Proposed Period of Implementation-2012-15]

On completion of the term of operation of AACP in December 2011, the second phase of AACP will be continued as AACP-2 to provide support services and market access of targeted farmers , community groups, DCSs, SHGs, and MPIs with additional financing from World Bank. Dairy Development is included as a priority sector under this programme. Key indicators of success would be increased milk and milk products –complemented by an increase in the proportion of marketed surplus. An amount of Rs. 91.56 lakh is proposed under Annual Plan 2012-13 against total project cost of Rs.567.00 lakh for 21 nos of Milk Producer Institutions.

### Integrated Dairy Development Project (IDDP), PHASE-I (100% Govt. of India Funded)

Under IDDP-I, Tezpur Dairy Plant, Silchar Dairy Plant and Sarbhog Chilling Plant have been completed and started commissioning and are running under public-private collaboration till District Milk Union/State Federation is formed. The matter relating to management, procurement and marketing of the Silchar Dairy Plant is looking after by the Project Implementation Committee headed by the Deputy Commissioner, Cachar. Other Dairy Plants and Chilling Plants located at Barpeta, Panbari, Karimganj, Biswanath Chariali and Dhekiajuli are in various stages of completion. Under the provision of the project various inputs have been distributed to already form 350 DCSs.

### Intensive Dairy Development Programme (IDDP, PHASE-II) (100% Govt. of India Funded)

The project, like IDDP, Phase-I, is also a centrally Sponsored Project. The project has been sanctioned by the Govt. of India for the Upper Assam districts in order to strengthen processing and preservation of infrastructure in these districts as well as to organize the farmers into DCS.

- Area of implementation: Jorhat, Dibrugarh and Tinsukia district.
- Total project cost: ₹588.35 lakh. Lately the Government of India advised to modify the project in consultation with NDDB.
- Funding Pattern: 100% grant from Department of Animal Husbandry and Dairying, Ministry of Agriculture, Govt. of India.
- Present Implementation Status: Steps have been taken to bring up the Milk Union on 3 tier basis as per recommendation of World Bank. After setting up of the Milk Union the amount would be spent as per items of expenditure that are already earmarked.

A fresh proposal amounting to **₹19.19 Crore** was sent to Govt. of India for implementation of Intensive Dairy Development Programme in the district of **Jorhat, Golaghat, Nalbari and Kamrup (Metro) by West Assam Milk Union (WAMUL)**.

### Clean Milk Production, CMP -II

The project will be implemented in Darrang and Udalguri District with a total cost of ₹116.94 lakh. Out of which ₹97.63 lakh is of GOI share and the rest of ₹19.31 lakh is State Govt. share. Govt. of India and Govt. of Assam released fund of ₹20.00 lakh and ₹3.86 lakh respectively to the implementing agency during March'2009 and was utilized. The training to 862 Farmers of 31 DCSs has already been completed under the project.

### Employment Generation

- All the existing or new Schemes/projects under the Dairy Development, Assam will be carried out in synchronization with each other irrespective of source of fund to achieve the common objective: to increase overall milk production in the state, thereby giving livelihood avenues to the poor dairy farmers.
- The proposed acquisition of Bulk Milk Cooler which will be installed under different Dairy Cooperatives will create employment avenues in the State.
- The proposed one unit of Commercial Dairy Farm will directly generate 11 numbers and indirectly generate 10 number of Employment Avenue.
- The proposed new scheme "Support services to the identified dairy clusters" in the Barpeta district will create employment avenues to minimum 1200 numbers of dairy farmers.

### Schemes for Women

Though women play an important role in livestock management, their control over livestock and its product is negligible. The income from dairy animals does not remain in the hands of women and neither can they take decision regarding sale and purchase. The Dairy Development department has taken special initiative for empowerment and economic upliftment of the womenfolk involved in dairy farming through formation of women groups like Dairy Cooperative Societies, Self Help Groups so as to avail easy credit, inputs and marketing under the Milk Village scheme and Local Dairy Unit. The department also initiated training to give updated exposure and skill development on the animal rearing front and other management activities including marketing of their produce.



## CHAPTER – IX

### FISHERIES

The economy of Assam, the important North Eastern State is predominantly an agrarian economy with more than 85% of the population living in rural areas. Fishery sector contributes more than 2% of GSDP to the state economy and plays an important role in providing livelihood to a significant proportion of the population on the state. The growth anticipated in Fishing sector is 7.14 per cent in 2012-13 as compared to 6.78 per cent estimated in 2011-12. The state has vast and varied water resources suitable for development of inland fisheries. With about 3.9 lakh hectares of diversified water resources in the form of wetlands; low-lying and derelict water bodies, rivers, ponds & tanks etc., there are vast opportunity for enhancing the fish production in the State is really great. However, the State yet to attain the level of fish production to meet the growing demands. There is a large gap in between demand for fish and production of fish in the State. The present per capita fish production is 7.8 kg/year which was 6kg/year during 2001-02. Sustainable utilization of the available water resources will help to generate employment opportunities to thousands of un-employed youth and also contributing towards narrowing the production gap and demand in the State.

Considering the potential of the fishery sector on rural employment, income and livelihood, Government has been making a number of positive interventions for sustainable development of the sector and to meet the ever increasing demand for fish. The focus is on bridging the gap between the demand and supply of fish. Government is also taking various initiatives for conservation and propagation of local fish species including the indigenous fish having ornamental value. The fish seed production and its marketing are also regulated under the provisions of newly framed Assam Fish Seed Rules, 2010 to ensure quality fish seed to the farmers.

#### REVIEW OF 11TH PLAN (2007-08 TO 2011-12)

The State Fishery Sector has made consistent growth during the 11<sup>th</sup> plan period. The sector has registered an average growth of around 6.4% during the 11th plan. Fish production in the state has reached a level of 243 thousand tons during 2011-12 which is 28% more than that during 2007-08. Production of fish seed during 2011-12 is 4490 million fry making the state self-sufficient. However, there is still dearth of fish seed with preferable stoking size i.e. fingerlings. To address the issue of constraint on availability of quality fish, the State Govt. has framed the Assam Fish Rules, 2010.

Against total allocation of ₹19,572.50 lakh to Fishery sector during the 11<sup>th</sup> Plan period, the amount released was ₹12,342.63 lakh which has been utilized. During this five-year period, about 10,000 hectare of water area has been created/ developed for scientific fish farming through implementation of different schemes mainly under State Plan, Flagship programme of RKVY, World Bank funded Assam Agricultural Competitiveness Project and NFDB benefiting more than 44000 farmers contribution to additional cumulative production of about 40 thousand ton.

The productivity of fish in individual pond is increased to 2.7 tonnes/hectare during the years under 11<sup>th</sup> five year plan period from 1.2 tons/hectare before that. In case of beel fisheries and derelict water bodies it is increased upto 1.5 ton /hectare/year from 0.3 ton/hectare/year after development.

Year	Production of Fish Seed (in million Nos.)	Production of Fish (in tonnes)
2001-02	1801	161450
2005-06	3207	187378
2006-07	2062	181479
2007-08	3206	190320
2008-09	3429	206700
2009-08	3326	218823
2010-11	4264	232339
2011-12	4490	243869

Source: Department of Fishery.



Several infrastructures have been developed to support the growth of the Fishery sector during the 11th Plan period. Some important achievements are establishment of Fresh water prawn hatcheries, State Fishery Laboratory, Hygienic fish markets, 380 ha of nursery & Rearing Area, 48 Mini fish seed hatcheries and 2 fish feed mills.

## **SCHEMES /PROGRAMS IMPLEMENTED DURING THE LAST FIVE YEARS**

### **FISH & FISH SEED FARMING**

Fish production in the state of Assam during the year 2010-11 has reached to the level of 232 Million Kg. However, a considerable gap still exists between the present production and the demand of the State. Strategies, that may be adopted to narrow the gap is to increase fish production from the existing cultural areas and creation of new areas for fish culture. Fish farming in newly created areas are capable of yielding minimum of 3 MT/hectare per year through adoption of semi intensive farming practices and as much as over 10 MT/hectare per year through advanced technologies. Although initial expenditure for new pond construction is comparatively high, the break-even point can be achieved in a very short period through sustainable management practices. It also opens the avenue for self employment to address this rising issue.

Under the scheme "Fish and Fish Seed Farming", it is proposed to provide financial support to the selected beneficiaries for construction of new ponds on their sites for undertaking scientific fish culture. Under Amar Pukhuri Achoni, new pond constructed

In 182 hectares area and forty numbers of improved mini hatchery created during eleventh five year plan. Development of nursery and Rearing Tank established in 155 hectares. During the 12<sup>th</sup> Five Year Plan State Fishery Department have proposed to construction of new ponds in 1520 hectares area.

### **MUKHYA MANTRIR MATSYA MITRA ASONI UNDER FISHERY EXTENSION SERVICE**

Weather and climatic condition during the monsoon months make it difficult for the fishermen to go for fishing. Additionally, for conservation of indigenous fishes in the natural water bodies in Assam, a fishing ban period has been imposed from 1<sup>st</sup> April to 15<sup>th</sup> July as per Assam Fishery Rules 1953 and Assam Fishery Rules (Amendment) 2005. Thus, the poor fishermen earning their bread from fishing have to go through a distressed period during this lean season and practically they are left with no means of livelihood during this period.

It is therefore proposed to introduce the scheme- "Mukhya Mantrir Matsyamitra Asoni" under State Plan 2011-12 to relieve them from these sufferings. The main objective of the scheme is to provide one-time- financial assistance @ ₹10000/ to each fishermen for sustenance during the lean period. The respective District Fishery Development officer of State Fishery Department will select the beneficiaries, who are active fishermen by profession, living below poverty line and who had no other means of sustenance during the lean period.

### **DEVELOPMENT OF FRESH WATER AQUACULTURE THROUGH FFDA**

This is a centrally sponsored scheme with 75% of funding for development component being shared by the Government of India. The scheme aims at development of individual ponds through involvement of fish farmers by providing them with financial assistance in the form of subsidies and bank loans.

Aquaculture Development under FEDA	Unit	Eleventh Five Year Plan (2007-12)		Annual Plan, 2012-13
		Target	Achievement	Proposed Target
a) Water Area Development	Hectares	1215.00	710.00	500.0
b) Beneficiaries	No.	4600	2945	2000

### **RECLAMATION OF DERELICT WATER BODIES**

The State is having about 39,000 ha of derelict water bodies which are unsuitable for agriculture. There is great potential for fish farming in these water bodies by converting them into scientific fisheries. The objective of the Scheme is to reclaim the derelict water bodies for enhancement of fish production and to provide employment to the rural unemployed youth. After development, the management is vested with local communities/ SHGs supported by technical guidance of the Department. Number of SHG/Community created during Eleventh Five year Plan period was 1470 and reclamation of derelict water bodies area was 1532 hectares.

## FISHERIES EXTENSION & TRAINING

For increasing farm output, training and extension support with transfer of fish farming technologies has been accorded due importance. The aim and objective of the scheme is to impart training to the fish farmers on scientific fish farming and publication of training manual to popularise scientific fish farming among fish farmers.

### NATIONAL WELFARE FUND FOR FISHERMEN (Central Sector Scheme)

- Saving-cum-Relief:** The objective of Saving-cum-Relief scheme is to provide financial assistance to the fishermen during the lean fishing period. The contribution by the fisher folk is ₹600.00 which is collected over a period of 9 months. This contribution is matched by Govt. of India contribution of ₹900.00 and State Government's contribution of ₹300.00. The accumulated amount is distributed among the fishermen in three equal installments at the rate of ₹600.00 per month.
- Fishermen's Insurance:** Under the scheme, fisher folk licensed, identified or registered with the State Government could be insured for ₹1.00 lakh against death or permanent disability and ₹0.50 lakh for partial disability.

National Welfare Fund	11 <sup>th</sup> Five Yr Plan(2007-12) (Rs in lakh)	Annual Plan (2012-13) (Rs. in lakh)
a) Housing	43.60	9.00
b) Saving cum Relief	25.00	3.00
c) Fishermen Insurance	10.00	4.00

### DEVELOPMENT OF BEEL AND OPEN WATER FISHERIES (SCSP)

The objective of the scheme is to develop small beels and open water fisheries within SCSP areas followed by community based management. During the Eleventh Five Year Plan period (2007-08-2011-12), by spending ₹699.00 lakh the area developed under Beel/Open Water Fisheries was 518 hectares.

### RURAL INFRASTRUCTURE DEVELOPMENT FUND

This is a NABARD programme for infrastructure development in the rural areas contributing towards agriculture growth, rural connectivity and other social sector development. The programme is being implemented by Assam Fisheries Development Corporation.

### ASSAM AGRICULTURAL COMPETITIVENESS PROJECT (AACP)

During the period from 1995-96 to 2003-04 the Department of Fisheries, Assam has successfully implemented a multi-component World Bank Aided Project "Assam Rural Infrastructure and Agricultural Services Project" (ARIASP). As a follow up programme, the World Bank Aided Project namely the Assam Agricultural Competitiveness Project (AACP) is under implementation by the Department since 2004-05 with a total fund of ₹6076 lakh with the objective to increase competitiveness amongst poor and marginal farmers/communities dependent on fish farming as primary and secondary income. Up to 2010-11, an amount of ₹4468 lakh has been released by Project Coordination Unit, Khanapara under this program. Major achievements under this project is development of over 3750 hectares of water area covering individual ponds, community tanks, beels benefiting more than 29,000 farmers; establishment of 24 improved mini hatcheries and capacity building of over 1200 departmental officers & staffs.

### RASHTRIYA KRISHI VIKAS YOJANA (RKVY)

This Scheme aims at holistic development of Agriculture and allied sector. The pattern of funding is 100% Central Government grant. The Department has been implementing various schemes viz. construction of new ponds, development of low-lying areas, beels /wet lands, fresh water prawn farming, kuchia culture, establishment of fish feed mills, hatcheries, development of Departmental Farms etc.

Rastriya Krishi Vikash Yojona	Unit	Eleventh Five Year Plan(2007-12)	
		Target	Achievement
a) Development of existing pond	Water area in hect.	500	495
b) Low-lying area converted to community tank	Do	360	354
c) Construction of new pond	Do	280	275
d) Creation of nursery and rearing tank	Do	385	381
e) Pig cum fish culture	Do	30	30
f) Fresh water prawn farming	Do	45	41
g) Development of Beel/Open water fisheries	Do	20	16
h) Establishment of Fish Freed Mill	Nos.	2	2

### NATIONAL FISHERIES DEVELOPMENT BOARD (NFDB)

National Fisheries Development Board (NFDB) is established as a nodal agency to work towards **Blue Revolution** with a focused attention basically aimed at fish production in the country. For addressing the concept related to production of enhancement through sustainable approach, NFDB has formulated various activities.

### ASSAM FISHERIES INVESTMENT FACILITATION CENTRE

For facilitating easy access to institutional credit to the prospective fish farmers and fishery entrepreneurs, the Assam Fisheries Investment Facilitation Centre, a Single Window System was established at Panbazar, Guwahati, during the year 2008. The Centre has facilitated direct interaction of Bankers with the farmers besides assisting them in preparing fisheries projects for bank loan. As a result of this innovative initiative by the Department, an amount of ₹10.50 Crore has already been sanctioned till 31st January 2011 to 706 fish farmers by the various Banks like SBI, UBI, Assam Gramin Vikash Bank and Indian Overseas Bank. It is proposed to fully equip the Facilitation Centre with computerized facility, internet etc. for the benefit of the fish farmers.

### FRESH WATER PRAWN HATCHERY

Fresh water prawn is one of the most important aqua product. With a view to popularize and encourage prawn farming and to make prawn seed available in the State, the Department has established one Fresh Water Prawn Hatchery, in the Meen Bhawan Complex at Guwahati, the first of its kind in the State under RKVY. The works for establishment of two other such hatcheries in Dhubri & Silchar are under process.

### STATE FISH LABORATORY

A State Fish Laboratory has been established at the Directorate Complex, Guwahati under RKVY for testing of Soil and water quality parameters. Additionally the laboratory will also extend support to farmers for investigation on fish health and hygiene.

### LIVE GENE BANK

Live Gene Bank, a joint venture of Department of Fisheries, Assam and National Bureau of Fish Genetic Research, Lucknow established at Ulubari Fish Seed Farm, Guwahati in 2007 has been continuing. Under this programme, conservation through breeding and propagation of local endangered economically important fish species has been taken up for future use and research. Species like Chital and Pavo has been successfully bred and reared in improved ponds in the farm.

### NEW INITIATIVES

Air-breathing fishes like freshwater eel (Kuchia), Magur, Singhi, Kawoi etc. are preferred by the consumers and fetch high demand in the local market. Pilot project on Kuchia culture and small scale schemes for other air-breathing fishes are being taken up in the current year.

Sonali Pithia fish, known as 'King of Sports Fish' has been released in selected water bodies including 'Dighali Pukhuri', Guwahati on experimental basis to promote Fish-based Aqua Tourism in collaboration with Directorate of Cold Water Fishery Research, Bhimtal.



## CHAPTER – X

### FORESTRY

#### Forest Area

Forestry is a vital sector of the State . The State Forest Department has been entrusted the maintenance and management of Forest, Forest Produce and Wild life in the State. In the recent past the importance of environment protection and conservation of natural resources has been given wide attention at state and national level. As a result various NGO's with the Forest Department has come forward to protect and maintain the Forestry sector of the State. The State of Assam is enriched with extensive forest area and wealth like valuable forest products and also rich with different species and strains of floras and faunas. People of Assam from time immemorial have also depended upon the forests to meet their daily needs.

#### Forest Cover

The forest cover in the state, as per India State Forest Report 2011, based on interpretation of satellite data of November 2008-January 2009, is 27,673 sq km, which is 35.28% of the State's geographical area. The forest cover of the State has decreased by 19 sq km as compared to the satellite data of October 2006-January 2007, published in India State Forest Report of 2009. In terms of forest canopy density classes, the State has 1,444 sq km very dense forest, 11,404 sq km moderately dense forest and 14,825 sq km open forest. Forest cover in the State in different canopy density classes along with the changes compared to 2009 assessment are given in the following:

**TABLE-10.1**

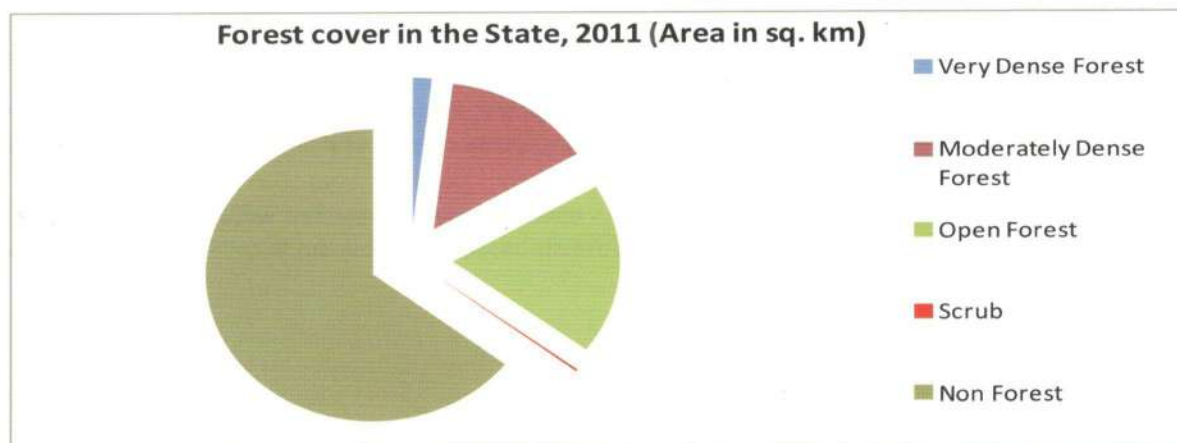
**Forest cover in the State (Area in sq.km.)**

	Very Dense Forest	Moderately Dense Forest	Open Forest	Scrub	Non Forest	Geographical Area
2011 Assesment	1,444 (1.8)	11,404 (14.5)	14,825 (18.9)	182 (2.33)	50,583 (64.5)	78,438
2009 Assesment	1,481 (1.8)	11,558 (14.73)	14,673 (18.71)	179 (0.23)	50,567 (64.47)	78,438
Net Change(-) / (+)	-17	-154	152	3	16	

Figures in Bracket are percentage to geographical area of the State.

Source : Forest Survey of India, 2011.

The information above reveals that there has been a decrease of 17 sq. km in very dense forest and 154 sq. km in moderately dense forest an increase of 152 sq. km in the open forest. The National Forest Policies (1952 and 1988) aim at having one third of country's land area under forest and tree cover.



## Reasons for change detected in 2011 assessment

Reason for changes observed in the current Report, Forest Survey of India, 2011 are as given below

- a) Prevalent shifting cultivation practices/ extension of encroachment in some areas.
- b) The positive changes are attributed mainly to:
  - i) The improvement of forest cover(shade trees) in tea garden.
  - ii) Natural regeneration /Plantation.
  - iii) Re-growth in areas affected by shifting cultivation.

## Tree cover

The estimated tree cover in State is 1564 sq. km which is 1.99 percent of the total geographical area of the State.

**TABLE – 10.2**

### Forest and Tree Cover in the State

Forest and Tree cover	Unit	2005	2009	2011
Area of Forest cover	Sq km	27645	27692	27673
Area of Tree cover	Sq km	1484	1590	1564
Total areas of Forest and tree cover	Sq km	29129	29282	29237
Forest and Tree cover to the total Geographical area of the State.	% age	37.13	37.33	37.27

Source : Forest Survey of India (F.S.I) Report, 2005,2009 and 2011.

## Bamboo Resources in the Forest

The North East Region has highest concentration of Bamboo, i.e. around 60 percent of the total Bamboo of the country. As a extensive Bamboo grown State, Assam has ample scope for Bamboo based industry. The extent of bamboo bearing area in the forests of the State is 7,238 sq. km. Density-wise details, are presented in the following Tables:

**TABLE – 10.3**

### Bamboo bearing area by density in recorded forest area.

(Area in sq. km)

Recorded Forest Area	Pure Bamboo	Dense Bamboo	Scattered Bamboo	Clumps hacked	Bamboo regeneration	Area without Bamboo
26,832	105	4,049	2,878	166	40	19,594

Source : Forest Survey of India,2011

## Forest Area

As per Forest profile of the State, the Reserved Forest area and Proposed Forest area is 13507 sq km and 1539 sq km respectively in 2011-12 as against 14212 sq km and 2102 sq km reported in 2010-11 by the State Forest Department. The Reserved forest area is 67 percent of the total forest area of the State. The total Forest area excluding unclassified State Forest is 20031 sq km and 4198 sq km area is under protected area in 2011-12, as reported. The reserved forest area constitutes around 17 per cent and total forest area excluding unclassified forest constitute around 26 per cent of the total geographical area of the State. However, the scenario within the notified area depicts a gloomy state in terms of degradation during the last 20 years due to various biotic factors and encroachment. As a result, considerable rich bio-diversity has been lost which need to be re-built again.

The thrust areas identified by the State Forest Department are as below:

- a) Preservation of the existing biodiversities.
- b) Arresting the trend of degradation and reverting the process by re-afforestation & extension forestry with multiple stake holders.
- c) Preservation and development of the existing Protected Area Network (PAN) and their expansion in suitable areas.
- d) Improvement of research and development activities in Forestry and Wildlife.
- e) Bridging the gaps in infrastructural & Logistical front.

## OUT-TURN OF FOREST PRODUCE AND REVENUE

The forest produces of the State mainly comprises of industrial wood, fuel wood, bamboo, stone, sand and gravel, thatch etc. A good amount of revenue is earned by the State Government from its various forest produces. During 2010-11, the Department has earned ₹5868.52 lakh as revenue from the forest product which is however, 24% less earning than the previous year. The out-turn of Major and Minor forest products for 2008-09, 2009-10 and 2010-11 are as follows:

**TABLE-10.2**  
**Production of Forest Product of the State**

Forest Produce	Unit	2009-10	2010-11	2011-12
<b>Major forest produce</b>				
Industrial Timber	Cubic Metre	9839	34142	19782
Fuel wood	Stack Cubic Metre	16063	1289	807
<b>Minor forest produce</b>				
Sand	Cubic Metre	2905333	2470587	3153610
Gravel/Stone	Do	34269919	1979815	1801173
Silt/Clay	Do	2243569	1730252	771577
Others		4192455	6579400	3164926

Source: Office of the Principal Chief Conservator of Forest, Assam.

The amount of revenue earned from the various forest products during the last few years are shown in the following table:

Items	Revenue earned (Rs. in lakh)		
	2009-10	2010-11	2011-12
Timber	68.79	815.17	713.80
Fuel wood	-	1.17	1.35
Sands	6857.72	2720.78	3153.60
Gravel/Stone		1360.39	2431.58
Silt/Clay	-	257.19	115.73
Others	7751.60	713.82	590.74
Total	14678.11	5868.52	7006.80

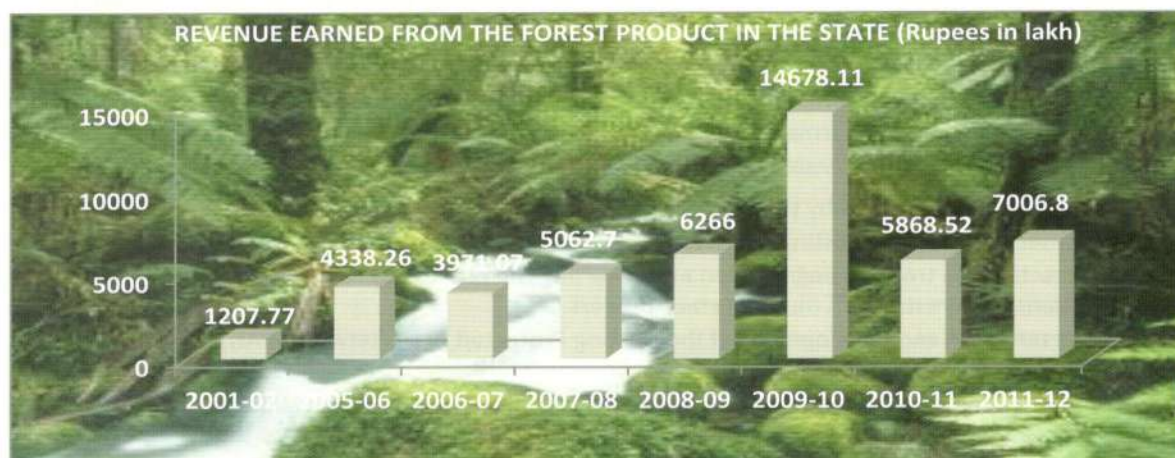
Source: Office of the Principal Chief Conservator of Forest, Assam.

**TABLE 10.2**  
**TREND OF REVENUE EARNED FROM THE FOREST PRODUCT IN THE STATE**

(Rs. In lakh)

Year	2001-02	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Revenue Earned	1207.77	4338.26	3971.07	5062.70	6266.00	14678.11	5868.52	7006.80

Source: State Forest Department, Assam.



## WILDLIFE AND NATIONAL PARKS & SANCTUARIES

The Wildlife Act provided for setting up national parks and sanctuaries for Wildlife. The total Wildlife Protected Areas in the State of Assam is 3925 Sq. Km. The category wise Wildlife Protected Area is as follows:

**TABLE –10.4**

**Area of the National Park and Wildlife Sanctuaries in Assam, 2007-08**

Name of the National Park	Location (District)	Area in Sq. Km.
Kaziranga National Park	Golaghat, Nagaon & Sonitpur	858.98
Manas National Park	Chirang and Baksa	500.00
Orang National Park	Udalguri and Sonitpur	78.81
Nameri National Park	Sonitpur	200.00
Dibru-Saikhowa National Park	Dibrugarh and Tinsukia	340.00

### WILDLIFE SANCTUARIES (WLS)

Name of the Wildlife Sanctuaries	Location (District)	Area in Sq. Km.
Bhejan-Borajan-Padumoni WLS	Tinsukia	7.22
Panidehing WLS	Sivasagar	33.93
Gibbon WLS	Jorhat	20.98
Nambor-Doigurung WLS	Golaghat	97.15
Garampani WLS	Karbi Anglong	6.05
Nambor WLS	Karbi Anglong	37.00
East Karbi Anlong WLS	Karbi Anglong	221.81
Marat Longri WLS	Karbi Anglong	451.00
Burhachapori WLS	Sonitpur	44.06
Laokhowa WLS	Nagaon	70.13
Pabitora WLS	Morigaon	38.80
Sonai-Rupai WLS	Sonitpur	220.00
Barnadi WLS	Udalguri	26.22
Chakrasila WLS	Kokrajhar	45.56
Dihing-Patkai WLS	Dibrugarh and Tinsukia	111.19
Barail WLS	Cachar	326.25
Amchang WLS	Kamrup (Metro)	78.64
Deepor Beel Wildlife Sanctuary	Kamrup (Metro)	4.1

### PROPOSED WILDLIFE SANCTUARIES :

Name of the Proposed Wildlife Sanctuaries	Location (District)	Area in Sq. Km.
North Karbi Anglong WLS	Karbi Anglong	96.00
Bardoibam Beelmukh WLS	Lakhimpur	11.25

Source: Chief Conservator of Forest (WL), Assam.

### Protected Area

The protected area network in Assam includes five (5) National Parks and eighteen (18) Wildlife Sanctuaries covering an area of 3592.94 sq km constituting 4.6 percent of the geographical area. During 12<sup>th</sup> five year plan a sum of ₹1550.00 lakh is proposed for implementation of development and management schemes for Wildlife and National Parks and a sum of ₹180.00 lakh is proposed for 2012-13.

### Project Tiger

The State has three Tiger Reserves, namely Kaziranga, Manas and Nameri. To ensure conservation of Tiger, Government has further notified the Tiger Conservation Rules, 2010 and Government of India has been requested for direct funding to these Tiger Conservation Foundations. However, most attentive issue is that the Tigers in these reserves have been decreasing to a larger numbers, as revealed by the Tiger Census Report. Kaziranga National Park and Manas Wildlife Sanctuary are in the list of World Heritage sites. A sum of ₹2200.00 lakh is proposed for under the component of 50: 50 Central and State share basis for preserve of Tiger population under Tiger Project Scheme.

Much emphasis has been given for conservation of one horned Rhinos, the pride of the state. The Rhino population in the State is increasing which is evident from the census report. The elephant population is also increasing in the State according to Elephant Census, held in 2009. Table below shows the Rhino and Elephant population in the State during different census period.

**POPULATION OF RHINO, ELEPHANT, TIGER, LEOPARD AND ANY OTHERS PRIMATES IN VARIOUS CENSUSES IN THE STATE**

Name of Animals	Year of Census	Number of Animals
Elephant	2002	5246
	2008	5281
	2009	5620
Tiger	1997	457
	2000	354
	2009	143
Rhino	2006	2006
	2009	2201
	2011	2503
Leopard	1993	239
	2000	248
Any others-Primate	2009	127502
i)Rhesus Macaque	Do	72674
ii)Assames Macaque	Do	30866
iii) Slow Loris	Do	431
iv) Pig Tailed Macaque	Do	649
v) Capped Langur	Do	17813
vi)Golden Langur	Do	2772
vii) Hoolock Gibbon	Do	1517
viii)Stumptailed Macaque	Do	648
ix)Phayre's leaf Monkey/ Spectacled langur	Do	132

For the famous one horned Rhinos of Assam and various species of unique flora and fauna a large number of Domestic and Foreign Tourists visits the State every year. Number of Tourist and revenue collection regarding arrival of Tourist in National Park for the last few years are as follows.

Name of National Park	Year/Month	No. of visitors		Revenue (Rs.in lakh)
		Indian	Foreign	
Kaziranga National Park	2009-10	1,05,264	7,580	121.68
	2010-11	1,12,392	7,447	136.73
	2011-12	1,17,308	7,521	149.46
Manas National Park	2009-10	8,030	139	16.96
	2010-11	10,843	503	14.67
	2011-12	19,705	237	21.17
Orang National Park	2009-10	1,628	325	3.11
	2010-11	1,702	180	1.82
	2011-12	2,678	159	2.44
Dibru-Saikhowa National Park	2009-10	2,613	62	0.61
	2010-11	2,351	40	0.55
	2011-12	3,970	42	0.89
Nameri National Park	2009-10	4,342	346	2.79
	2010-11	4,460	352	2.72
	2011-12	5,601	457	3.50



## Review of Eleventh Five Year Plan (2007-08 to 2011-12)

### Financial Progress

The total allocation for XIth five year plan period for Forestry sector was ₹26514.79 lakh against which expenditure has been made ₹19593.54 lakh.

(Rs.in lakh)

YEAR	ALLOCATION	EXPENDITURE
2007-08	1881.79	1312.52
2008-09	4225.00	3419.92
2009-10	6915.00	6019.56
2010-11	6546.00	1894.54
2011-12	6947.00	6947.00(Anticipated)
Total	26514.79	19593.54

### The Physical Achievements during 11<sup>th</sup> five year plan

- The total plantation raised in 41001Hctare area upto 2010-11
- World Bank Project (NaRMIL) have been implemented to support the livelihood of the forest fringe communities at a cost of ₹28.10crores through improved natural resources management with communities participation.
- The Chief Minister's special package for the sector, anew scheme "Assam Biksh Yojana" has been launched from 2008-08 onward and on the first phase extensive plantation has been in 1163 nos. of school and 1566nos. benefited from it
- Kaziranga National Park has been included in Tiger project
- Assam State Zoo cum Botanical garden has been modernized and night safari ride facility has been launched.
- For protection of Wild life, 2<sup>nd</sup> AFPF Battalion has been raised exclusively and for reforestation of extensive degraded area in Reserve Forest Ecological Task forces have been raised.

### STRATEGY FOR TWELFTH FIVE YEAR PLAN (2012-13)

- Strengthen forest protection machinery by development of necessary infrastructure and Logistic support like roads, buildings, barracks, Watch Towers, camp huts, demarcation of forest boundaries, procurement of vehicles and motor boats for patrolling, procurement of wireless sets and ammunition, anti poaching equipments etc.
- Increasing the productivity of forest through coverage of more and more degraded forest areas, forest areas with crown density less than 40% and available revenue land under plantation of Indigenous, fast growing and economically important species of timber, as well as Raising plant of Non Timber forest produces including Medicine plant & Bamboo plantation etc. The natural regeneration existing in forests needs to be assisted by silvi culture works and aided plantations.
- To strengthen research wing of department to create seed orchards, progeny trails for quality seed production. As Afforestation proceeds at current pace no guarantees can be given that area once afforested would not relapse to their old status given the high biotic factors responsible for degradations and the inadequate funding.
- To expand forest coverage of the state through private plantation by motivating people through awareness programmes, distribution of seedlings to people from forest nurseries. The strategy in this regard will be to associate various communities, groups, associations, NGO's/FDA's in such activities of the department even by providing them some financial assistance.
- To strengthen resources survey, planning, monitoring and evolution organization of the development of the building infrastructure for speedy collection of monitoring data, extension of computer facilities upto division level; and advance training of officers and staff.
- Strengthening wildlife conservation through intensive patrolling, deployment of adequate man power along with all requisite patrolling gears including arms, wireless etc.
- Develop short term and long term measures for reducing depredation of elephants and other wildlife.
- Enlisting support of local people through awareness programme and eco development activities.

Some other important schemes have been continuing and also newly taken up are as follows:

The Hon'ble Chief Minister, Assam has announced the following Schemes are included under the "Mukhya Mantrir Assam Bikash Yojana" for the year 2011-12.

- i. Seuji Dhora Achani for School children
- ii. Outside Forest area plantation
- iii. Guwahati Hills area plantation

During the 12<sup>TH</sup> Five year plan a sum of ₹3200.00 lakhs is proposed for creation School plantation-2000 numbers community plantation / Hills area plantation-1800 ha. and creation of nursery-40 numbers .etc under the above component.

A sum of ₹360.00 lakhs is proposed for the year 2012-13 for creation of school plantation-500 numbers, Plantation-300 ha. & Creation on Nursery-10 nos. etc. under the above component.

### **Scheme for Man-Elephant Conflict Resolution**

The Hon'ble Chief Minister, Assam has given emphasis to reduced the "Man-Elephant Conflict". Therefore, the following activities has been proposed for next five year i.e. 2012-17 which comprises-

- Erecting Solar Power fencing in 25 km long stretch of the vulnerable areas in effected district
- Raising of 100 ha. Plantation of species like outenga, kathal, sam, gamari, koroi, odal, cane & bamboo etc. palatable to the elephant shall be taken up in Assam. In this regard the total amount comes to ₹3439.00 lakhs for next five years. Against which a provision of ₹688.00 lakhs is earmarked during 2012-13.

### **Scope of Women Empowerment**

The Schemes implemented for Development of Forests & Wildlife are mostly labour oriented & these labours are engaged from the forest fringe dwellers. The Nursery, plantation works, maintenance of plantations by weeding, climber cutting etc. are done by engaging labours & in these works mostly women labours take active participation while the male members are busy in other Agricultural works. Therefore, these women folk from the forest fringe villages get the opportunity for their employment & thereby get their Livelihood.

### **Scope of Generation of Employment**

The Schemes/Projects proposed to be implemented during the 12<sup>th</sup> Five year Plan Period are labour intensive activities providing employment to people living in and around Forest areas. The total no. of mandays to be generated annually is estimated at 13,53,704.

### **Likings of the Schemes/Project with Disaster management**

The forests plays pivotal role in avoiding preventing natural disaster & for their role in amelioration of flood water dynamics, erosion control, soil and water conservation, carbon sequestration etc. Therefore, the forestry schemes as proposed in the Annual Plan 2011-12 comprise of the activities like Afforestation, Rehabilitation of Degraded Forest etc. by way of creating plantation. These schemes having the positive role in preventing & mitigating the calamities threatening human existence. So these schemes are to be placed at the top of the preference ladder.

### **Participation of NGO & peoples with the Schemes/ Project etc.**

Involvement of NGOs and civil players is integrated in project implementation and monitoring. These are quite a few NGOs playing very proactive role in forestry sector and they and others including academicians, prominent citizens may be taken on board in this matter.

"NGO" is running environmental awareness generation Programme in different Villages of the district & is kin to implementing the project in support of NAEB. The National Afforestation & Eco-Development Board(NAEB) is implementing the N.A.P(National Afforestation Programme) through Forest Development Agency(FDA) & Joint Forest Management Committee (JFMC) etc.

In the field of Wildlife, the role of N.G.O. in the State is quite appreciable. They are playing active part in awareness programme amongst people and Eco-Development Committees are formed in the fringe village of NAP.

**APPENDIX – 10.1**  
**AREA UNDER FOREST IN ASSAM (As on 30-01-2012)**  
 (Area in hectare)

Sl. No.	Forest Division	Reserved Forest	Proposed Reserved Forest	Protected Area	Total Forest (Excluding Un-classed State Forest)
1.	Goalpara	22946.563	11387.510	----	34334.073
2.	Kamrup East	37052.356	11596.460	----	48648.816
3.	Kamrup West	75648.727	568.850	----	76217.577
4.	North Kamrup	4412.197	1141.400	----	5553.597
5.	Dibrugarh	20728.678	----	11119.420	31848.098
6.	Digboi	49598.074	5479.150	8712.000	63789.224
7.	Doomdooma	29404.176	4252.750	----	33656.926
8.	Golaghat	98519.181	133.450	9715.000	108367.631
9.	Jorhat	26096.841	----	2098.621	28195.462
10.	Sivasagar	24092.903	----	3393.000	27485.903
11.	Hamren	27454.539	----	----	27454.539
12.	Karbi Anglong East	61995.937	84089.600	34042.000	180127.537
13.	Karbi Anglong West	90949.915	3525.000	451.000	94925.915
14.	Dima- Hasao	63776.154	----	----	63776.154
15.	Baksa	13542.551	----	----	13542.551
16.	Lakhimpur	31097.441	----	----	31097.441
17.	Dhemaji	42468.430	9400.000	1121.800	52990.230
18.	Nagaon	35310.086	3573.040	----	38883.076
19.	Nagaon South	64873.521	-----	----	64873.521
20.	Sonitpur East	73927.302	----	----	73927.302
21.	Sonitpur West	66163.372	910.000	----	67073.372
22.	Silchar (Cachar)	34199.791	----	7386.900	41586.691
23.	Hailakandi	78145.833	170.000	----	78315.833
24.	Karimganj	48057.303	6489.090	32625.000	87171.393
25.	Aie Valley	6144.969	5901.730	----	12046.699
26.	Dhubri	6082.060	865.770	----	6947.830
27.	Haltugaon	63806.919	2949.000	----	66755.919
28.	Kachugaon	82199.117	213.000	----	82412.117
29.	Dhansiri	17812.765	-----	----	17812.765
30.	Parbotjhora	28041.484	1234.980	----	29276.464
31.	Chirang	55957.550	----	----	55957.550
32.	West Assam Wild life	----	----	42000.000	42000.000
33.	Tinsukia Wild life	32677.785	-----	34722.000	67399.785
34.	Nagaon Wild life	2155.000	----	11417.040	13573.040
35.	Mangaldoi Wild life	-----	----	7881.000	7881.000
36.	Assam State Zoo	175.000	----	----	175.000
37.	Kokrajhar Wild life	-----	----	4556.000	4556.000
38.	Manas Tiger Project	2837.120	----	50000.000	52837.120
39.	Eastern Assam Wild life Bokakhat	1130.855	----	85898.000	87028.855
40.	Guwahati Wild life	----	----	12155.000	12155.000
<b>41.</b>	<b>Total Area</b>	<b>1419482.495</b>	<b>153880.760</b>	<b>359293.781</b>	<b>1932657.056</b>

Source : Office of the Principal Chief Conservator of Forest, Assam.

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## CHAPTER – XI

### INDUSTRY, TRADE AND MINING

Assam is a house of natural and precious mineral resources. During the pre- independence period, the chapter of industrial history of Assam began and Assam finds its place in the industrially developed map of the world. The crude oil was explored and India's first commercially viable oil well was drilled [seven years after the World's first commercial oil well was drilled in 1859 in Pennsylvania, USA], established first oil refinery [first in Asia and third in the world], the first organized petroleum marketing was commenced [the first batch of kerosene hit the market in January 1902] and explored first coalfield. Introduction of tea cultivation during the period, beginning of export of finished tea to the global auction market as well brought the economic boom to Assam. This continuous process of economic and industrial development of the State was almost stopped after attainment of independence and at present Assam is amongst the industrially under- developed States in the Country. Therefore, industrial scenario of the State is confined within the growth of employment oriented SSI Sector, which comprises of manufacturing and processing industries. Assam is still making efforts desperately for gearing up industrial activities by harnessing the un-tapped resources available in the State through various growth-inducing factors as well as by removing the infrastructure inadequacies in the power, communication and transport sector.

The Industries and Commerce Department of the State as well as some other agencies like Assam Industrial Development Corporation (AIDC) are closely associated with implementation of various promotional schemes meant for sustainable industrial development of the State. Despite various constraints impeding the growth of industries in the State, a favourable industrial climate is gradually being created in the State as discernible from the increasing interest shown by investors both from within the State as well as from outside. However, the Manufacturing Sector's contribution to the State economy maintains its downward trend in 2011-12 (Quick Estimates) and pegged at 4.05 percent at constant (2004-05 prices). The Index of Industrial Production in the State, on the other hand, shows some recovery and reached 147.75 in 2011-12 (Base-2004-2005=100) as against 140.38 in 2010-11. The Index of Industrial Production in 2009-10 was 143.35 (Revised).

**TABLE – 11.1**

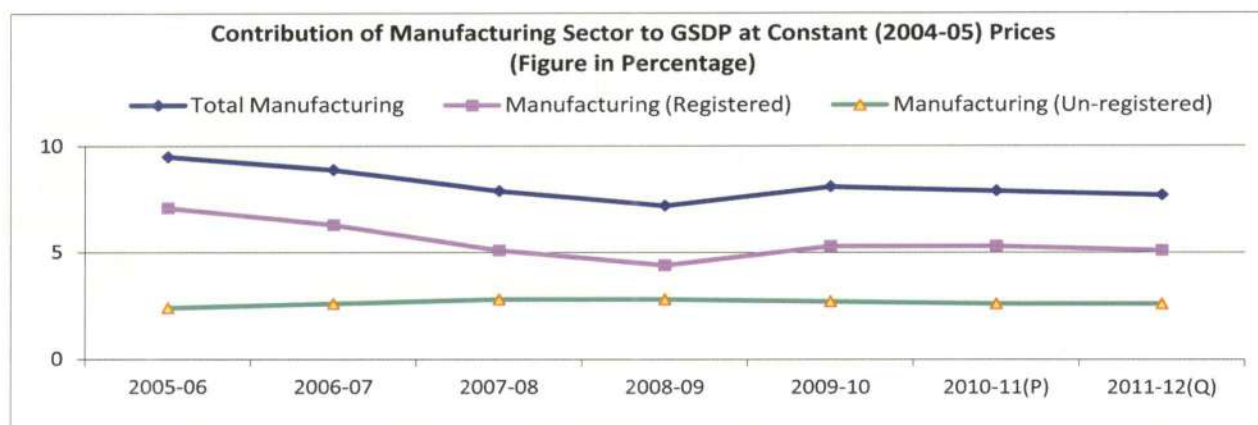
#### **TREND OF GROWTH OF MANUFACTURING SECTOR [GSDP at Constant (2004-05) PRICES]**

(Figure in percentage)

Year	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11(P)	2011-12(Q)
Contribution to GSDP	9.5	8.9	7.9	7.2	8.1	7.9	7.7
Annual Growth over previous year	(-)6.8	(-)1.8	(-)6.5	(-)4.3	22.1	5.74	4.1

Source: Directorate of Economics and Statistics, Assam

The declaration of the North East Industrial Investment Promotion Policy has been another important feature for industrialization of the State. The Central Government has approved a package of fiscal incentives and other concession for the entire North-eastern Region and Assam will be the leading State to exploit benefit from it. To supplement the NEIIPP, 2007 the Government of Assam has already announced State Industrial Policy, 2008 that would provide more support to the entrepreneurs. The thrust has been given by the State as well as Central Government in the industrial sector of this region by modifying and enhancing the benefits to those entrepreneurs' desirous to set up their units. The State Government in turn has to provide supplement effort by development of infrastructure and offers its participation in the form of Government share or partner in the PPP models of projects which are of prime importance considering the location of the State.



### Industrial Production of some selected Industries in Assam

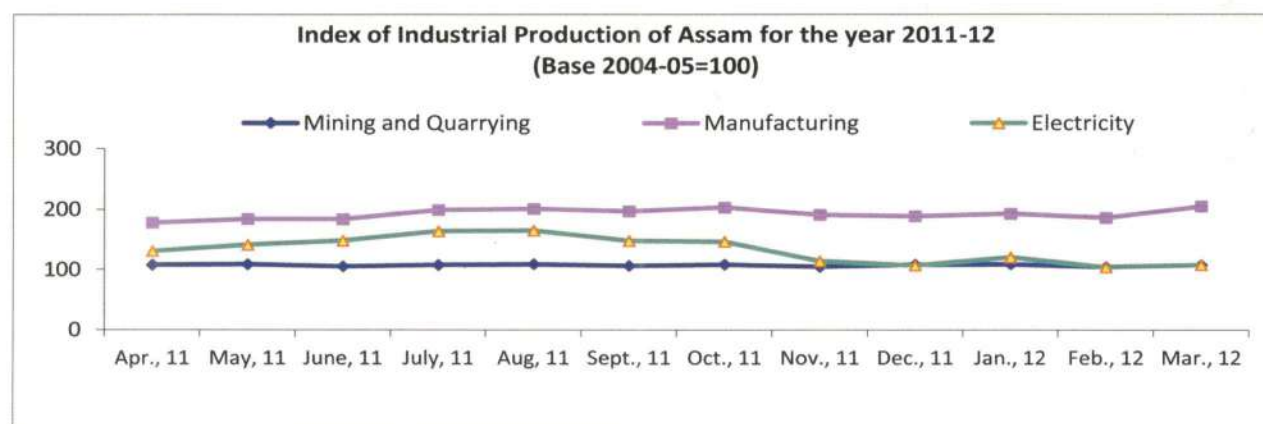
Although the manufacturing and processing industries have ruled the Industry Sector of the State, the contribution of these industries to the State's economy was not as much impressive as was expected. The contribution of the Registered Manufacturing sector to the total economy was 6.7 percent and accounted for 30 percent share of the total Industry Sector contribution to the [GSDP at constant 2004-05 prices] during 2010-11 (Quick Estimates). The Index of Industrial Production for the Manufacturing Sector, however, recorded positive trend during 2011-12 [194.17] compared to 184.32 in 2010-11 [Base 2004-2005=100]. The production of some selected items of the State for the last eight years may be seen at Table-11.2.

**TABLE – 11.2**

### PRODUCTION OF SOME SELECTED INDUSTRIES IN ASSAM

Item	Unit	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Tea	000 tonnes	443	655	531	486	484	498	525	501
Wheat Flour	-do-	207	220	202	837	848	1044	1198	1166
Coal	-do-	628	956	1058	1101	1147	1203	1110	590
Jute Textiles	Tonnes	7903	5910	7227	9494	11249	12511	12904	19956
Crude Oil	000 tonnes	4724	4429	4426	4361	4673	4738	4714	5023
Cement	-do-	341	251	175	213	446	644	736	863
Fertilizer	000 M. T.	203	222	308	346	313	338	325	394

Source: Tea: Tea Board of India; Minerals: Indian Bureau of Mines, Nagpur; Others: Individual Industrial Units



## Industrial Estate and Industrial Growth Centre

The prime function of the Commissionerate of Industries and Commerce Department, Assam is to create environment for industrialization by setting up Industrial infrastructure in the perspective of industrial development and attract investment through proper planning. At present, there are 16 Industrial Estates, 17 Industrial Areas, 11 Growth Centers under the Industries and Commerce Department of Assam spread over an area of 2155 thousand Sq.M land in different locations of the State. Apart from the aforesaid infrastructures, there are 11 Integrated Infrastructure Development (IID) Projects, 4 Industrial Growth Centers, 6 Mini Industrial Estates, One Export Promotion Industrial Park, two Food Processing Industrial Park spread over an area of 7343 thousand Sq.M land also provided additional infrastructure facilities to the entrepreneurs of the State. Till the end of March 2012, as many as 695 functioning Industrial units utilised the infrastructure provided by the Industry and Commerce Department. The Growth Centres and IID Centres are facilitated with excellent connectivity, dedicated power lines, adequate water supply, central effluent treatment plants etc.

### SOME ONGOING INFRASTRUCTURE PROJECTS:

#### Industrial Growth Centre

The Industries and Commerce Department of Assam has undertaken three centrally sponsored projects known as Industrial growth Centre project at Chariduar, Matia and Chaygaon–Patgaon under Central sponsored scheme.

#### Growth Centre, Chariduar

The Growth Centre, Chariduar is located in the district of Sonitpur. The total project cost of this Growth Centre is ₹2543.40 lakh and both the Central Government and State Government are sharing of cost of the project. Government of India has released ₹1216.00 lakh out of the total central share while the State Government has released ₹202.05 lakh upto 2010-11. The civil works like construction of boundary wall, internal road, water facilities, construction of power works etc are completed. Other works are also in the verge of completion. Already 20 bighas of land are allotted for setting up of a pharmaceutical unit. AIDC is implementing of this Growth Centre project.

#### Industrial Growth Centre, Matia

The Industrial Growth Centre Project located at Matia in the Goalpara district is being implemented by the AIDC Ltd. The total project cost of this project is ₹2200 lakh and the cost of the project is jointly shared by the Central and State Government. Till the end of 2010-11, the Government of India and the State Government has released ₹1170.00 lakh and ₹117.14 lakh respectively. The civil construction works and setting up of power sub-station etc. are in progress. The total expenditure incurred ₹1287.14 lakh up to the year 2010-11.

#### Industrial Growth Centre, Chaygaon-Patgaon

The Industrial Growth Centre project is located at split locations at Chaygaon-Patgaon including HMT campus in Kamrup district. The Assam Industrial Infrastructure Development Corporation (AIIDC) is being implemented the project. Both the Central and the State Government also jointly share the cost of the project amounting to ₹1615.24 lakh. The Government of India and the State Government has already released ₹1500.00 lakh and ₹115.24 lakh respectively. The first phase of Chaygaon project has already been completed.

The Industries and Commerce Department has proposed ₹50.00 Crore for Logistic Hub area Industrial Growth Centre, Chayagaon during the Annual Plan 2011-12 for preparation of Detail Project Report and preliminary works.

#### Integrated Infrastructure Development Centre

The Government of India has approved setting up of 9 (nine) numbers of Integrated Infrastructure Development Centre (IID) at different locations of Assam. Those are located at Bhomoraguri in Nagaon district, Dahudi in Nalbari district, Rangia in Kamrup district, Bandardewa in Lakhimpur district, Kunderbari (Titabar) in Jorhat district, Dalgaon in Darrang district, Malinibeel in Cachar district, Silapathar in Dhemaji district, Demow in Sivasagar, Parbatpur in Tinsukia district and Serphangguri in Kokrajhar district. The Government of India has released ₹2589.1 lakh and the Government of Assam has released ₹976.19 lakh against all the eleven IIDC projects up to the year 2010-11. The projects at Bhomoraguri, Dalgaon, Malinibeel, Titabar, Demow, Nalbari, Rangia, Bandardewa and Silapathar are already completed and the other projects are also in the verge of completion.

Three more IIDCs one at Moran in Dibrugarh District, second at Sonari in Sivasagar District and the other at Bajali in Barpeta district are in active consideration for sanction by Government of India.

#### **Export Promotion Industrial Park (EPIP)**

The Export Promotion Industrial Park located at Amingaon in Kamrup district was approved by the Government of India with a total project cost of ₹1462.0 lakh and both the Central and State Governments jointly share the project costs. The objective of the project is to create high standard infrastructure. The project has already been completed with national standard infrastructure. As many as 38 industrial units are producing wide range export oriented products there.

The Industries and Commerce Department has proposed an amount of ₹100.00 lakh in the Annual Plan 2011-12 as State share for up-gradation of existing facilities of the Export Promotion Industrial Park (EPIP).

#### **Assam Gas Cracker Project/Plastic Park**

The Assam Gas Cracker Project is a joint venture of GAIL, NRL, OIL and Government of Assam. The total project cost is in the tune of ₹5460.00 crore. The project profile indicates a total polymer production of 280 thousand tonnes per annum. Government of Assam will provide exemption for entry tax on capital goods; works contract tax and sales tax on feed and products for 15 years. The Central Government will provide excise duty and income tax relief for 10 years. A joint venture company viz., Brahmaputra Cracker and Polymer Limited has been formed and acquisition of land has been completed. The schedule time of completion of the project is 60 months. The project will offer direct employment to 800 persons and indirect employment to 1 lakh persons. The project will open up avenues of opportunities in multi-faceted directions. Besides opening of various socio-economic linkages, scope for setting up of chain of downstream industries is expected to open on completion of the project.

The Assam Gas Cracker Project is in the fast track and is expected to be completed within Twelfth Five Year Plan. Land acquisition process for the project is in progress. The State Government has sanctioned ₹58.17 crore as first installment of land acquisition cost during 2006-07. Though an amount of ₹2800.00 lakh has been earmarked in the financial year 2007-08, actually ₹154.00 lakh has been released during the said year. Since further amount will be required, an amount ₹6070.00 lakh has been proposed in the 11<sup>th</sup> Five Year Plan.

The Government of Assam has proposed to promote a plastic park around the project site to create opportunities for development of such downstream industries. The Project costs of the Plastic Park is ₹19583.00 lakh. This value addition will ensure more revenues to the State as well as generate more employment and will result in an overall socio-economic development of the region. A Techno-Economic Feasibility Report has already been prepared to assess the viability of the project. In order to initiate action for land acquisition activities and for preparation of the feasibility report, an amount of ₹495.00 lakh, ₹400.00 lakh and ₹1400.00 lakh has been released by the State Government in the Annual Plans 2008-09, 2009-10 and 2010-11 respectively. The land acquisition work is under progress till the end of March 2012.

#### **SOME PROPOSED PROJECTS:**

For industrial development, generation of employment and opening scope for investment from within the country, the Industries and Commerce Department proposed to be taken up some new schemes and projects during the Twelfth Five Year Plan period.

##### **Agri Hub**

For better utilization, value addition of agricultural produce and minimizing wastage at all stages in the food processing chain, it is proposed to set up an Agri-Hub project. An amount of ₹200.00 lakh has been proposed for the project.

##### **Chemical Hub at Chandrapur**

AIDC has proposed to set up a Chemical Hub at the premises of Assam State Fertilizers and Chemical Ltd. (ASFCI), Chandrapur, Guwahati, for accommodating 22-25 chemical based units. The project cost is estimated to be around ₹15.00 crore.

### Jute Park

The Ministry of Textile, Govt. of India has sanctioned a Jute Park under the Scheme of Integrated Textile Park (SITP) to M/S Assam Jute Park Developers Ltd (a SPV formed to implement the Jute Park). Government of Assam has approved participation of AIDC in Equity by way of cost of land for the project. An amount of ₹19.88 Crore has been proposed for the project.

### Air Cargo Complex

Cargo handling infrastructure at LGBI Airport, Guwahati is proposed to be upgraded including cold chain facility etc., to allow for storage of export cargo awaiting shipment. The Project Cost as estimated at ₹4.35 crore.

### Tea Park

The Tea Park will house a multi-storey ware house, tea packers, blenders, exporters under one roof. It would have a dedicated and State-of – the- art infrastructure and other facilities required for value addition. The Project cost would be ₹23.40 crore.

### Pharmaceutical Hub

Indian pharmaceutical industry is one of the fastest growing sectors. Assam is missing the Pharma boom. For attracting the pharma companies to the state, it is proposed to set up Pharmaceutical Hub at the project cost of ₹12.00 crore.

### Logistic Hub

Due to increased movement of trucks carrying Industrial/Commercial goods there is an urgent need for providing logistic support for transportation by road. The Project cost is estimated at ₹50.00 crore. The proposed logistic hub comprises of the following:

- Truck Parking Yard.
- Warehousing facilities.
- Transit camp with all amenities.
- Bank facilities
- Communication network etc.

### Infrastructural Development Project

The State Industry and Commerce Department has proposed to set up two Infrastructural Development Projects one at Moran under Dibrugarh District and the other at Pathsala under Barpeta District at the cost of ₹10.00 crore and ₹7.30 crore respectively

### Industrial Estates for Women Entrepreneurs

To facilitate setting up of industrial enterprises by women entrepreneurs, it is proposed to set up 4(four) Industrial Estates for Women Entrepreneurs in Assam during the Twelfth Five Year Plan.

### SMALL SCALE INDUSTRIAL UNITS (SSI)/

### MICRO, SMALL & MEDIUM ENTERPRISES AND HANDICRAFTS UNITS:

The Small Scale Industries have vital contribution in the process of industrialization, employment generation and in fulfillment of socio-economic objectives in Assam. In this context, special emphasis has been given by the State Government especially for generating rural income and employment. Presently the small-scale industries have been sub- divided into Micro, Small and Medium Enterprise under the Micro, Small and Medium Enterprises Act 2006. The categorization of enterprises is made based on their investment in plant and machineries in case of manufacturing sector or in equipments in case of service sector. For speedy growth of this sector, the Government of Assam has already brought some simplification in its procedures in respect of registration as well as declared incentives in its Industrial Policy – 2008.



There are 35717 SSI/MSME units in Assam and provided employment to 1.91 lakh persons till the end of March 2012. The Table – 11.3 shows some annual statistics in respect of setting up of SSI/MSME units' upto 31-03-2012.

**TABLE – 11.3**

**GROWTH OF SSI/MSME UNITS, EMPLOYMENT, INVESTMENT AND PRODUCTION IN ASSAM**

Year	No. of SSI / MSME units	No. of Employment	Average no of Employment per unit	Investment on Plants & Machinery (Rs. in lakh)	Average investment per Unit (Rs in lakh)	Production value (Rs. in lakh)	Average Production per unit (Rs. in lakh)
Upto 31.03.2005	23658	108467	4.6	46085.89	1.95	186371.51	7.88
2005-06	2082	10780	5.2	23776.88	11.42	22940.86	11.02
2006-07	2172	11852	5.5	9282.72	4.27	25514.67	11.75
2007-08	1692	10471	6.2	26637.42	15.74	44720.97	26.43
2008-09	1711	12914	7.5	26348.26	15.40	49635.10	29.00
2009-10	1678	12787	7.6	29901.68	17.82	58456.80	34.84
2010-11	1506	10458	6.9	27662.92	18.37	97497.48	64.74
2011-12	1218	13203	10.8	27007.84	22.17	NA	-

Source: Commissionerate of Industries & Commerce, Assam.

It is evident from the above table that average employment per unit of manufacturing enterprises in Assam is around 7(six) during the period 2005-06 to 2011-12. The average investment per unit is ₹15.0 lakh .The average production per unit is found to be ₹11.02 lakh in 2005-06 which has increased to ₹64.74 lakh in 2010-11.

The table 11.4 shows the number of new units of various types of industries established in the State during the last eight years.

**TABLE – 11.4**

**NUMBER OF NEW UNITS ESTABLISHED BY THE TYPE OF INDUSTRIES**

Item	2004	2005	2006	2007	2008	2009	2010-11	2011-12
Agro Based	327	317	311	279	268	275	221	0
Forest Based	144	89	102	83	96	50	35	0
Textile Based	626	671	827	440	378	415	313	0
Chemical Based	44	64	54	51	50	40	57	4
Engineering Based	536	529	686	483	445	488	399	263
Electronic Based	59	63	45	51	58	83	68	39
Mineral Based	111	111	140	112	125	135	182	0
Leather	14	15	7	5	15	10	3	0
Rubber/Plastic	16	18	19	27	25	38	27	26
Paper Product	-	-	-	-	79	79	55	256
Miscellaneous	184	256	18	187	213	146	146	630
Total :	2061	2137	2350	1719	1752	1759	1506	1218

Source: Commissionerate of Industries & Commerce, Assam.

## PRIME MINISTER ROJGAR YOJANA (PMRY) /

### PRIME MINISTER EMPLOYMENT GENERATION PROGRAMME (PMEGP):

The Prime Minister Rojgar Yojana (PMRY) was a Centrally Sponsored Scheme, which has been launched on 2<sup>nd</sup> October 1993 with the objectives of providing employment to the educated unemployed youth. The scheme facilitates self-employment through setting up of industries / service and business ventures. For these purpose a limited amount of Bank loan with an amount of subsidy are provided to the interested and qualified educated youth on the recommendation of Task Force Committees constituted for the purpose. The programme was effective up to 31<sup>st</sup> March '08. After 31<sup>st</sup> March '08, a new scheme namely Prime Minister Employment Generation Program (PMEGP) has been introduced by merging the PMRY and REGP with the same aims and objectives. The KVIC is implementing the PMEGP scheme as the nodal agency at the national level and at the State level. The State KVIC Directorate, State KVIB and the District Industries and Commerce Centres and Banks implement the scheme in Assam. The Government subsidy under the scheme is being routed by the KVIC through the identified Banks.

Table 11.5 shows implementation of PMEGP in Assam during the year 2008-09 and 2011-12.

**TABLE – 11.5**  
**TARGET AND ACHIEVEMENTS OF PMEGP [Period 2008-09 to 2010-11] IN ASSAM**

Year	Physical Target (in Nos)	Financial Target (Margin money) Rs in Lakh	Total Cases sanctioned (Rs in Lakh)	Physical Achievement (in Nos)	Financial Achievement (Rs in Lakh)	Remarks
2008-09	685	820.22	861	617	676.95	Information represents DICC part only
2009-10	1292	1550.00	2440	2440	1899.71	For the State
2010-11	3193	4469.66	4756	4756	4801.10	For the State
2011-12	5047	7065.8	5280	5280	5544.9	For the State

Source: Commissionerate of Industries & Commerce, Assam.

### National Programme on Rural Industrialization (NPRI)

Government of India has implemented two clusters one on brass metal craft in Jorhat district and the second on cane and bamboo in Nagaon district under NPRI. Sivasagar district has also been identified by the Govt. of India for promoting handloom under weaving cluster development. Under Scheme of Fund for Registration of Traditional Industries (SFURTI), KVIC has implemented cane and bamboo cluster in Barpeta district. Indian Institute of Entrepreneurs (IIE) through its Regional Resource Centre has implemented 3(three) clusters viz., Jute cluster in Dhubri, Eri cluster at Boko, Kamrup district and Handloom cluster at Nalbari. [Source: State Focus Paper (Assam) 2012-13 published by NABARD]

### Registered Factory

According to available report, as many as 268 new factories have been registered in the State during the year 2010-2011. As a result the total number of Registered Factories in the State stood at 4530 at the end of 2011 against 4262 in the previous year. Table-11.6 shows the growth of registered factories and employment of average daily workers in Assam during the period 2001-2011. This increase of registration of new factories help the Inspectorate of factories to earn revenue to the tune of Rs 81.26 lakh.

From the available data of District-wise distribution of Registered Factories it reveals that, the undivided Kamrup District recorded 1179 registered factories with 34712 workers during 2011 as against 1094 registered factories with 30314 workers during 2010.

On the other hand Dhemaji District recorded the lowest 4 number of factories with 67 workers during 2011.

**TABLE – 11.6**  
**NUMBER OF REGISTERED FACTORIES AND EMPLOYMENT**

Year	Number of Factories	Average Number of Daily Workers
2001	2512	98862
2002	2695	96031
2005	3070	105452
2006	3182	112794
2007	3319	114233
2008	3733	129435
2009	3971	137164
2010	4262	150485
2011	4530	159748

Source: Office of the Chief Inspector of Factories, Assam.

## Annual Survey of Industries (ASI)

The Annual Survey of Industries provides some basic characteristics of the industries under manufacturing sector. The ASI results reveal that during the year 2010-11 Assam has 2795 number of functioning Registered Factories with 166670 employees as against 2211 number of functioning Registered Factories with 149256 employees in 2008-09. The results also show that the value of output increased by more than 15.0 percent during the year 2010-11 over 2008-09. On the other hand, the net income of the factories has recorded a considerable increase with 142.0 percent during the year 2010-11 over 2008-09. The net income has increased from ₹2510.07 crore 2008-09 to ₹ 6083.48 crore in 2010-11. The Table-11.7 shows some basic characteristics of Annual Survey of Industries in Assam for last seven years.

**TABLE – 11.7**

### **SOME PRINCIPAL CHARACTERISTICS OF ANNUAL SURVEY OF INDUSTRIES**

Item	Unit	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10*	2010-11*
Factories	Nos.	1710	1864	1967	1859	2211	2247	2795
Fixed Capital	Rs. lakh	702998	752036	801962	891081	940427	980140	107413
Working Capital	-do-	204272	267665	329704	346159	335954	519604	716304
Invested Capital	-do-	1022608	1090977	1179526	1301965	1361928	1466773	1739924
Total Employees	Nos.	119548	128662	136568	134284	149256	148731	166670
Value of Output	Rs. lakh	2205002	2560914	3047619	3104360	3676790	3667156	4236700
Net Fixed Capital Formation	-do-	18319	47807	13597	7123	15744	63827	70947
Net Value Added	-do-	372082	357617	364199	327473	301389	506212	667349
Net Income	-do-	347551	329431	323795	284121	251007	462096	608348

\*- Provisional;

Source: Annual Survey of Industries, C.S.O Ministry of Statistics and Programme Implementation, Govt. of India

## Agro-Based Industries

The agro climatic weather of Assam is ideal for the growth of a variety of food crops as well as plantation of cash crops. Tea produced in Assam has high demand in the west particularly in Europe as a beverage. The abundant forest resources provide timber for industries like plywood, paper. Various kinds of fruits, vegetables as well as medicinal herbs available in the State are yet to be tapped for commercial purpose.

### FOOD PROCESSING INDUSTRY:

As per available report of Agriculture Department, implementation of the Technology Mission for Integrated Development of Horticulture (TMIDH) in Assam has brought tremendous change in production of fruits, spices and vegetables in the State thereby opening ample scope for setting up of food processing industries in the State.

At present less than 30 percent of agriculture produce are processed in the State. Among the total processed food, 80 percent are of primary food products like packaged milk, milled flour, rice, tea, spices etc. Processing and packaging of perishable fruits and vegetables, although has ample potential to grow with increasing demand, does not have desired importance due to non-availability of sufficient storage facility.

### Food Processing Industrial Park

The Government of India has approved for setting up of a Food Processing Industrial Park at Chaygaon in Kamrup district with a project cost (revised) of ₹496.00 lakh and the costs of the project will be borne by both the Central and the State Government. The ASIDC Ltd. is implementing the project.

## Setting up of small Food Park in rural areas

In Assam a good quantity of fruits and vegetables are produced in the villages of remote areas. To process such produce and to give financial support to the cultivators it is felt that the Food Processing Industrial Park[ under construction] at Chaygaon, in Kamrup district and Mega Food Park at Nathkuchi in Nalbari district will not be sufficient as these food parks will provide space to set up a limited number of food processing industries. To cater the needs of fruit producing cultivators, setting up of one more Food Processing Industrial Park in Tinsukia has been proposed. The proposed Food Processing Park will be set up at Ulup Pather in Tinsukia District. AIDC Ltd. will also implement this project.

## TEA INDUSTRY:

The Tea industry occupies an important place in Assam and plays a very special role in the State economy in particular and in the national economy in general. The first Indian tea was sent to United Kingdom for public sale in the year 1838. Although the tea cultivation was extended to other parts of the country between 50's and 60's of the last century, as of today, Assam Tea has maintained its international reputation and commands significant share in the World Tea Market. The tea industry in Assam also provides average daily employment to more than six lakh persons in the State, which is around 50 percent of the total average daily number of labour employed in the country.

**The total area under tea cultivation in Assam is accounting for more than half of the country's total area under tea. In addition to existing big & large tea gardens owned by reputed both Indian and multi national Companies, the profession of tea plantation in the State has been taken up by common people as business venture at present, especially by unemployed youths. "There are more than 50795 small tea growers [STG] in Assam producing about twenty percent of the State's total annual production (2006) in 80445 hectares of land. Most of the STGs in the State are confined to Dibrugarh (52%) and Sivasagar (41%)". [State focus paper, Assam-2012-13 by NABARD].** As per Tea Board of India information, there are 5053 small tea growers in Assam registered with Tea Board as on 18-6-2012 covering around 12590 hectare.

According to the State Government reports, there are about 70000 small tea holdings covering approximately 117,000 acres of land in 14 out of 27 districts in Assam. It is important to note that 87 percent of the cultivation is done in land area measuring less than three acres. Major concentration is in 5 Upper Assam Districts (64519) which is 94 percent of the total number of Small Tea Growers in 14 districts of Brahmaputra valley. [According to the All Assam Small Tea Growers Association, the number of small tea growers has swelled to 65000 in the last two decades and it is on the rise. At present more than 900,000 people are involved in the small tea growing business in Assam. Almost 250,000 hectares of land is covered for such plantations. The small tea growers accounted for 30 percent of the total tea produced in the State, which is 14 percent of the total tea production of India .With this current growth, 50 percent of the total tea produced in Assam is expected to come from the small tea growers by 2020].

On the finance front, according to NABARD, there is negligible finance to STGs from banks and they are depending on moneylenders to meet their credit requirements. In order to facilitate financing of STGs, a model scheme has been prepared by NABARD and circulated to banks. It is being successfully implemented in Udalguri District from 2005-06 onwards. [Source: State Focus Paper, Assam, 2012-13] The State Government is also showing concern for growth and development of STGs in the State. **"The Small growers segment in the State comprises around 78,000 tea growers. It is proposed to launch a massive awareness campaign on good plantation practices for ensuring quality tea production.....a corpus fund with proceeds of tea cess collected from the small growers for taking up schemes for development and welfare of the small tea growers."**[Source: Budget Speech of Finance Minister, Assam, 2012-2013].

Assam alone produces more than half of India's tea production. The estimated production of tea in Assam was 508.7 thousand tonnes in 2011, which was about 5.94 percent more compared to the estimated production of tea in 2010. Statistics of area and production of Tea in Assam are shown in the Table 11.8.

**TABLE – 11.8**  
**TEA STATISTICS OF ASSAM AND INDIA**

Year	No. of Tea Gardens		Area under Tea (in'000 hectare)		Total Tea Production (in 000 kg.)		Average yield (kg/ hectare.)	
	Assam	India	Assam	India	Assam	India	Assam	India
2001	40795	116659	269	510	453587	853923	1685	1675
2002	43272	127801	271	516	433327	838474	1601	1625
2003	43293	129027	272	520	434759	878129	1601	1690
2004	43293	129027	272	521	435649	892965	1603	1713
2005	49102	140712	301	556	487487	945974	1622	1703
2006	NA	NA	312	567	502041	981805	1610	1732
2007	65422	NA	321	578	511885	986427	1593	1705
2008	NA	NA	319	578	487497	980818	1513	1693
2009	NA	NA	319	NA	499887	NA	NA	NA
2010	NA	NA	318	NA	480286	NA	NA	NA
2011	NA	NA	318	NA	508741	NA	NA	NA

(E) Area, Production and Average yield estimated and subject to revision.

Source: Tea Board of India.

The Guwahati Tea Auction Centre is actively taking part in Tea trading of the Tea produced mainly in the North Eastern States since its establishment. Statistics of quantity and average price of tea sold in the Guwahati Tea Auction Centre is shown in the Table below:

**TABLE – 11.9**  
**QUANTITY AND AVERAGE PRICE OF TEA SOLD IN THE GUWAHATI TEA AUCTION CENTRE**

Year	Leaf				Dust			
	CTC		Orthodox		CTC		Orthodox	
	Quantity (million Kg.)	Average Price (Rs. per Kg)	Quantity (million Kg.)	Average Price (Rs. per Kg)	Quantity (million Kg.)	Average Price (Rs. per Kg)	Quantity (million Kg.)	Average Price (Rs. per Kg)
2005	101.94	61.11	0.61	61.62	40.30	59.19	-	-
2006	100.75	67.96	0.72	78.18	40.90	68.27	-	-
2007	106.88	70.09	4.16	73.93	41.51	73.02	0.001	50.00
2008	110.14	90.20	0.56	92.39	41.99	95.73	-	-
2009	98.33	108.52	0.44	111.21	39.74	115.10	-	-
2010	87.33	113.06	0.36	122.09	38.94	116.26	-	-
2011	86.2	108.74	0.254	109.28	36.23	107.93	-	-
2012 (Upto July)	35.6	126.84	0.201	136.97	16.487	123.29	-	-

Source: Guwahati Tea Auction Centre.

## Rubber Industry

The rubber cultivation has gained its popularity in Assam due to congenial agro-climatic condition as well as its eco-friendly environment. The Rubber Board has identified Assam as a "Potential State". From the "productivity" point of view, Assam too has huge scope of rubber plantation. Considering the said conditions, the Rubber Board has planned to enhance rubber plantation area to 2 lakh hectares at the end of Twelfth Five Year Plan from the 28102 hectare at present to cope with the growing demand of rubber in the country which is expected to touch 1.78 lakh MT at the end of 2025. The area under rubber cultivation has grown from 16.5 thousand hectares in 2006-07 to 32.1 thousand hectares in 2011-12 which was about 95.0 percent higher than that of the area under rubber cultivation in 2006-07. The production of rubber has also been increased considerably during the said period. The growth of coverage of the rubber plantation area as well as production in the State is presented in the Table 11.10. Considering the growth of plantation areas and rubber production trends, there is vast potential for setting up of rubber industries in the State.

**TABLE – 11.10**  
**AREA AND PRODUCTION OF RUBBER IN ASSAM**

Year	Area* (in hectare)	Production (in MT)	Tapping Area (in hectare)	Employment Generation (Mandays)
2006-07	16508	3050	NA	1503550
2007-08	18271	4750	3320	1762591
2008-09	20975	5097	3518	2040686
2009-10	23075	9832	6505	2710230
2010-11	27083	10213	7686	2767450
2011-12	32117.43	10950	8608	3034993

Source: The Rubber Board, Zonal Office, Guwahati

## Bamboo and Cane Industry

Assam has the highest concentration of bamboo having high potential for commercialization. The region has approximately 60 percent of the total bamboo of the country. There are also substantial areas under homestead cultivations and commercial cultivation of bamboo is taking place. Bamboo can be used as a substitute to timber and it is also a versatile raw material for industrial use. The major industrial use of bamboo in the country is paper manufacturing. As against the current annual requirement of about 6 million tonne of bamboo, the two paper mills of Hindustan Paper Corporation Ltd., located one at Panchgram and the other at Jagiroad, received only one million tonne annually. Due to non-availability of bamboo, both the paper mills are currently operating at only 41 percent of installed capacity.

Following the imposition of restriction on cutting and felling of trees by the Hon'ble Supreme Court of India to stop degradation of natural forest area, 75 units of plywood industries located in the N.E. Region is closed and about 2.5 lakh workers lost their jobs. The Government of Assam has also given thrust to promote and support the integrated development of the bamboo and cane sector in the State. Accordingly, the declaration of "Bamboo and Cane Policy" of the State of Assam is an important step in this direction. Apart from this, the Planning Commission of India has also given importance for revival of ply wood industries of the NE Region taking bamboo as raw material.

The Ministry of Agriculture, Government of India has launched the National Bamboo Mission (NBM) with focus in the North Eastern Region. Under this Mission, it is proposed to plant Bamboo on commercial basis and selected species in an area of 176000 hectare in both Government Forest Land and Non-Government Forest Land in 5 years time starting 2006-07 as base year. In this backdrop, the Government of Assam has taken necessary initiative to set up a Bamboo Park at Jagiroad which is 65 km. from Guwahati and adjacent to the NH-37. The objective of the bamboo park is to create an integrated infrastructure for promotion of bamboo based industrial and commercial activities. Government of Assam appointed AIDC as nodal agency to help local entrepreneurs for the bamboo sector and develop the bamboo park.

Bamboo Development Agency of Assam is the coordinating and executing agency of National Bamboo Mission. The Agency has so far cultivated 9751 hectare of bamboo plantation and improvement of degraded bamboo stock of 7351 hectare in various districts of Assam. The Agency has also implemented training programmes for capacity building of farmers, field functionaries and entrepreneurs. Special efforts have also been made for promotion of Bamboo Handicraft and marketing of various bamboo products for which three numbers of Bamboo Product Training cum Production Centres have been set up in Assam. **For promotion of marketing of bamboo handicrafts, bamboo bazaars have been set up in different districts headquarters.** Major achievements under National Bamboo Mission in Assam upto 31<sup>st</sup> December, 2010 were (i) establishment of 22 Central Nurseries under public sector, (ii) raising of bamboo plantation over 10044 hectares of forest areas, (iii) improvement of 6011 hectare (iv) establishment of one Tissue Culture Lab, 2 Bamboo Bazars, One Bamboo Information Centre, 2 Bamboo Museum, 3 Bamboo Treatment Plants etc. In addition to training of 3046 farmers, 660 field functionaries, 100 artisans and organizing 57 district level, 2 State level and 1 National Level workshop. [Source: State Focus Paper (Assam) 2012-13 published by NABARD]

A Bamboo Technology Park is under implementation at Chaygaon in Kamrup District in the Industrial estate being developed by AIIDC. The project is approved by Department of Industrial Policy & Promotion (DIPP) under the Industrial Infrastructure Up-gradation Scheme (IIUS) of Govt. of India.

The Cane and Bamboo Technology Centre (CBTC), Guwahati, one of the Bamboo Technical Support Group under National Bamboo Mission of the Ministry of Agriculture, Government of India is also rendering assistance to the eight NE States and the states of Bihar, Jharkhand, Orissa and West Bengal in the implementation of the NBM schemes in their respective state.

## IMPLEMENTATION OF SOME SPECIAL EMPLOYMENT ORIENTED PROGRAMME:

### Chief Minister Self Employment Scheme (CMSS) and Vocational Training under Assam Bikash Yojana

Government of Assam has launched a unique self-employment scheme called **Chief Minister Self Employment (CMSS) and Vocational Training** from the year 2008-09 in place of the scheme of the same nature called Chief Minister's Swa-Niyojan Yojana (CMSY), which had been continuing from the year 2001-02 to 2007-08.

There are two sectors of the scheme - one is CMSS and other is Vocational training. Under the CMSS sector, the educated unemployment youths are sent for 6 month training to reputed industrial unit and commercial houses throughout the country. During the period of the training stipend @ ₹4500/- per month are paid to each trainee by the State Government. While the organization gets the services of the trainees free of cost, the trainees gain practical knowledge and experiences by working for 6 months in the industrial units.

Under the vocational training sector the unemployed youths are provided six months industrial training within the State on their interested field. The cost of training is fully borne by the Government of Assam.

For the year 2011-12 an amount of ₹ 50.00 lakh was sanctioned for General, ₹ 50.00 lakh for SCSP and ₹14.00 lakh for TSP by the State Government for implementation of the Vocational Training Scheme.

The table below shows some statistics on physical achievement of CMSS and Vocational training under Assam Vikash Yojana.

**TABLE – 11.11**  
**IMPLEMENTATION OF CHIEF MINISTER SELF EMPLOYMENT SCHEME AND**  
**VOCATIONAL TRAINING UNDER ASSAM VIKASH YOJANA**

Year	Name of Scheme	Total Target	No. of Trainees Sponsored	No. of Trainees Completed	No of Trainees absorbed	Remarks
2008-09	CMSS	160	165	130	70	
	Vocational Training	2200	2200	2200	-	Sponsored from district
2009-10	CMSS	160	176	127	50	
	Vocational Training	3200	-	568	-	Sponsored from district
2010-11	CMSS	100	43	18	5	
	Vocational Training	2610	2610	2610	-	Sponsored from district
2011-12	CMSS					
	Vocational Training	1175	1175	1175	-	Implemented by GM DIC in their respective districts

Source: Commissionerate of Industries and Commerce, Assam.

### Udyog-Jyoti Scheme

The Industries and Commerce Department of Government of Assam have launched Udyog-Jyoti Scheme with the objective of the Scheme to motivate the student community of the State towards entrepreneurship. Under the Scheme, the young Graduate level college students of the State are taken to various industries, institutions, industrial organizations like Guwahati Refinery, CIPET, CTRTC etc, to give educational exposure about industrial activities at the 1<sup>st</sup> phase so that they can show their interest to start their own venture or get employment in such industries etc. At the 2<sup>nd</sup> phase, some of the selected trainees are sent outside the State for higher exposure in the field of entrepreneurship.

**TABLE – 11.12**  
**ACHIEVEMENTS OF THE UDYOG-JYOTI SCHEME**

Year	Financial Target (Rs. in lakh)	Financial Achievements (Rs in lakh)	Physical Target (Nos)	Physical Achievements (Nos)	Remarks
2005-06	100.00	88.89	2700	2449	-
2006-07	100.00	75.00	2700	2062	-
2007-08	100.00	26.17	Phase 1=1350 Phase 2=135	Phase-1=1350 Phase 2=118	Phase 3 under process
2008-09	100.00	20.34	Phase 1=1350 Phase 2=135	Phase 1=1350 Phase 2 =63	-Do-
2009-10	100.00	19.70	Phase 1=1350 Phase 2=135	Phase 1=1350 Phase 2 =84	-Do-
2010-11	30.00	5.40	Phase 1=657 Phase 2=81	-	Under process

Source: Commissionerate of Industries and Commerce, Assam.



To make the programme more effective, the implementation procedure has been modified in the year 2008-09. As per the revised provision, it will facilitate industrial and technical exposure as well as training program for specific target entrepreneurship segment that have maximum potential for development of entrepreneurship. The Scheme is implemented in four Phases.

Phase 1: EDP of one week at district level (50 participants per district)

Phase 2: EDP for 2 weeks at State level by IIE/NSIC etc  
(Total 135 participants @ 5 participants per district selected from Phase 1.)

Phase 3: Specialized training out side the State on identified ventures by IIE/NSIC  
(135 participants)

Phase 4: Participants of Phase 3 will be provided margin money against Bank loan sanctioned letter upto 90% of the promoters' contribution or ₹1.00 lakh per participant, whichever is less.

Achievements of implementation of the Scheme may be evident in the Table 11.11 above.

### Mukhyamantrir Karmajyoti Aachani

This is a Government of Assam sponsored scheme implemented from the year 2005-06. The basic objective of the scheme is for skill development and upliftment of traditional artisans through financial assistance from the Government. The scheme covers all the traditional trade viz., manufacturing of decorative textile, black smithy, pottery, carpentry, toy making etc.

The table 11.13 shows the implementation status of the Mukhyamantrir Karmajyoti Aachani during the year 2005-06 to 2011-12.

**TABLE – 11.13**  
**ACHIEVEMENTS OF THE MUKHYAMANTRIR KARMAJYOTI AACHANI**  
**[PERIOD 2005-06 to 2009-10]**

YEAR	TARGET		ACHIEVEMENTS	
	Physical (In Nos.)	Financial (Rs. in lakh)	No. of Artisans Benefited	Financial Achievements (Rs. in lakh)
2005-06	1,02,500	900.00	1,19,145	895.74
*2006-07 & 2007-08	54,000	195.00	54,000	192.52
2008-09	40,000	145.00	40,000	144.61
2009-10	2480((SHG)	200.00	24800	200.00
	21325** (Individual)	75.00	21325	75.00
2010-11	660(SHG) & 1000 (Individual / trained person) Total-1660	835.00	1381	537.00
2011-12#	2560 SHG/individual Train person	501.00	2096	428

Note: \*Implementation for both the years done together.

\*\*Under SCCP. # Under process

Source: Commisionerate of Industries and Commerce, Assam.

## Multi Disciplinary Skill Development Programme

The Multi Disciplinary Skill Development Programme is a flagship programme taken up by the State Industries and Commerce Department during the year 2011-12. It has been designed to effectively address the issue of skill development, enhance employability of rural youths as well as to take advantage of the growing demand for skilled manpower nationwide with the growth of the economy. The objective of the scheme is not only to train youths for acquiring skill but also plans to extend handholding support to these trained youths for placement by creating a Job Studio. The Scheme also has provision for training entrepreneurs to enhance their skills to compete internationally. Accordingly, sizeable number of entrepreneurs will be sent for training in reputed institutions within and outside the State so that they can acquire both hard and soft skills that are necessary to produce internationally standard Goods and Services and compete globally.

The State Government has decided construction of 4(four) numbers of Multi Disciplinary Skill Development Training Centres –Badarpurghat (Karimganj), Bilashipara (Dhubri), Bajiagaon (Nagaon) and Margherita (Tinsukia) along with up-gradation of existing training institute “Cottage Industries Training Institute” located at Kalapahar, Guwahati. In addition, another 23 numbers of Multi Disciplinary Skill Development Training Centres is going to be constructed during the year 2012-13 to provide one training centre in each district. Till completion of the training centres, the State Industries and Commerce Department will arrange training at a few recognized national institute of repute within and outside the State.

The achievements of Multi Disciplinary Skill Development Programme for the year 2011-12 is present below.

Year	Physical Target	Financial Target	No. of Trainee sponsored	No. of Trainees completed training
2011-12	1600	200.00 lakh	537	537

## Sericulture

Traditionally, sericulture is a major cottage industry in the State. Sericulture continues to be an important labour-intensive and agro based cottage industry providing gainful occupation to around 2.50 lakh person in rural and semi-urban areas of Assam. Of this a sizeable number of male workers belong to the economically weaker section of the society and women. Moreover, sericulture is a sustainable farm-based economic enterprise positively favouring the rural poor in the un-organized sector because of its relatively low requirement of fixed capital and higher returns on investment.

Non-mulberry silk in general and Muga silk in particular has been closely associated with the rituals and traditions of Assam and thus, silk production and its usage has been an important household activity in the State over the years. Muga Silk and Eri Silk have a good demand in the national and international market. Rearing of Eri, Muga and Mulberry silkworm are playing an important role in the economic development of a large section of rural population of the State. It is practiced in 10740 villages at present and provides employment to more than 2.5 lakh family of the State. Muga culture is endemic to Assam in the world. The State accounts for highest production of non-mulberry silk, muga and eri in the country. Assam has the monopoly in the world in the production of Muga, the “Golden Silk”, as more than 95 percent of Muga Silk is produced in Assam. Assam has also achieved the right of ‘Geographical Indication’ for Muga thread. The State is also a Major producer of Eri Silk (about 65 percent).

According to the State Sericulture Department, the State has produced 114.56 MT Muga Raw silk, 1061.61 MT Eri Raw Silk and 11.25 MT Mulberry Raw Silk during the year 2011-12 as against 113.28 MT Muga Raw Silk, 810.98 MT Eri Raw Silk, and 11.4 MT Mulberry Silk during the year 2010-11. During the year 2009-10, the production of Muga Raw Silk, Eri Raw Silk and Mulberry Silk in the State was 88.73 MT, 819.09 MT and 8.35 MT respectively. Tasar Silk worm rearing has been developed in the State and it is practiced mainly in the two hill districts.

The total area under Silkworm Food Plants has been recorded little increase to 21301 hectare[+0.34 percent ]during 2010-11 from 21229 hectare during 2009-10. During the year 2008-09, the area under silkworm food plant was 18556 hectare. It reveals from the Table 11.14 below that total Silk yarn production in the State has increased around 29.0 percent during the year 2011-12 over the previous year. While the production of Eri silk yarn recorded around 31.0 percent increase over the previous year, the production of mulberry silk yarn reported marginal decreased by 1.3 percent during the same period.

**TABLE – 11.14**  
**SERICULTURE ACTIVITIES IN ASSAM**

Item		2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
1.	Sericulture Villages (Nos.)	9683	9373	9373	9537	10532	10532	10740
2.	No. of Families Engaged	196152	191434	239281	238578	260707	254134	254516
3.	Area under Silk Worm food Plants (In Hect.)	18556	18392	18548	18556	21229	21301	24268
3.1	Eri	7293	7382	7531	7538	7623	7670	8044
3.2	Muga	7255	7299	7305	7305	8902	8908	9400
3.3	Mulberry	4007	3711	3712	3713	4704	4723	6824
4.	Yield of Cocoons							
4.1	Ericut Cocoons (in MT)	700	887	1046	1080	1089	1108	1622.51
4.2	Muga Cocoons (in lakh Nos.)	4905	4933	4302	5040	4436	6368	5812.4
4.3	Mulberry Reeling Cocoons (in MT)	119	92	110	100	84	110	129.28
5.	Production of Silk Yarn (in MT)	634	773	884.81	921	916.17	935.66	1187.42
5.1	Eri Raw Silk	525	665	784.26	810	819.09	810.98	1061.61
5.2	Muga Raw Silk	98	99	91.07	101	88.73	113.28	114.56
5.3	Mulberry Raw Silk	12	9	9.48	10	8.35	11.4	11.25

Source: Directorate of Sericulture, Assam.

**The State Sericulture Department although did not implemented any specific Scheme for the empowerment of women, the Sericulture activities have a significant gender domination as more than 65 percent of the people obtaining livelihood from this activities are women.** Under Centrally sponsored schemes (Catalytic Development Programme), the department has given priorities to women beneficiaries for taking up different projects. In such cases, 30 percent of all beneficiaries' oriented schemes are reserved for women beneficiaries. Women SHGs have been organized in different districts for taking up yarn processing weaving etc. for which credit linkages have been organized by the Department through the service area banks.

A cocoon bank at Boko, Kamrup District is at an advanced stage of implementation. This will benefit primary growers, reelers and spinners of Eri and Muga. Efforts are being made to increase production of Muga, Eri and Mulberry in the State. State Government has taken initiative for revival of numerous defunct sericulture farms and centres in the State. The State has been given special emphasis for implementation of various schematic plans especially for augmentation of silk food plant plantation and rejuvenation of old silk food plants area. Besides this, organization of private graineurs for production of quality muga and eri seeds, construction of scientific silk worm rearing houses, setting up of a Sericulture College etc are also prioritized for development of sericulture in the State.

Keeping the vision objective for overall development of Silk Industry in the State during the Twelfth Five Year Plan, the Sericulture Department has given emphasis to-

- Large-scale expansion of silkworm host plants including renovation of unproductive old plantation in the Govt. institutes and farmers field.
- Strengthen seed production base for effective multiplication of required basic and pre- basic Silkworm seeds.
- Support to Private/NGOs/SHGs etc. for setting up of commercial grainage to bridge the gap of demand and supply of quality commercial seeds.
- Adequate R&D support for improvement of quality and productivity of both silkworm and host plants.
- Integrated approach for reeling/spinning/weaving and marketing of silk products by setting up of silk micro-enterprises with individual/NGOs/SHGs etc so as to create demand oriented market for raw materials within the state.
- Support to Private Enterprise or design and product development market promotion through participation in Expo/Fair outside the State.
- Setting up of composite silk weaving composite centre especially for Vanya Silk (Eri/Muga) with CATD/Calendaring facility for training of silk Avulsions.

In addition to the above, support for setting up Common Facility Centre (CFC) for dyeing/processing of silk yarn in identified silk weaving cluster with NGOs/Society individuals as well as support to reelers/spinners/weavers for procurement of improved reeling device/accessories, organize exposure trip for silk artisans to advanced silk weaving clusters within the country etc., are the major steps proposed to be taken under the Twelfth Five Year Plan. It is also proposed to create a corpus fund of ₹50.00 lakh during the Twelfth Five Year Plan period.

## Handloom

In Assam, Handloom Weaving is a way of life. It is inexorably linked with Assamese Culture and Heritage. Handloom Industry of Assam is known for its rich glorious tradition of making handloom and handicraft products. It also plays a very important role in the socio-economic development of the State. Assam is a proud owner of more than 13.00 lakh looms out of the total 28.00 lakh looms in the country. In spite of being intensely connected with the culture of the State, the Handloom Industry has not flourished in commercial sphere to the required extent. At present about 2.05 lakh looms are being utilized for commercial weaving in the true sense. About 6.00 lakh looms run semi-commercially and earns subsidiary income. Rests are domestic looms and are run to meet the domestic requirements. Moreover, handloom weaving provides direct and indirect employment to about 25.0 lakh people in the State.

The cooperative coverage is about 45 percent of the State's weaver population which is far below the National coverage. In the Twelfth Five Year Plan period, the cooperative coverage has been targeted to be raised to 50 percent.

The Handloom and Textiles Department of Assam, at present, directly runs 102 Handloom Training Centres, 4 Handloom Training Institute and 1 power loom Centre under Training Programme, 98 Weavers' Extension Service Units and 20 Handloom Production Centre, one Handloom Research and Designing Centre and one Production Procurement Centre under production programme to assist the weavers with skill upgradation backward and forward linkages in taking handloom as a self employment venture. The Assam Government Marketing Corporation is the State Level organization to look after the weavers of the State. The three-pronged Cooperative (organized) Sector consists of more than 3634 Primary level, 22 District Level and 2 Apex Cooperative Societies covered about 33 percent weaver population of the State.

The State Government proposed to give major thrust on upgradation of technology and Skills to ensure higher value addition and higher income generation of reelers, spinners and weaver. Accordingly, emphasis has been given on R&D using CAD/CAM and other modern technologies for improvement quality production for which it is proposed for establishment of a CAD/CAM centre at the Handloom Research and Designing Centre (HRDC) for development of design in a high tech method. New designs and colour combinations in fabric will be categorically developed in the CAD/CAM. It is also proposed to establish a Design Museum at the HRDC to keep the traditional, ethnic, cultural designs of different caste, communities and that of different kingdoms of the north-eastern region as well as other parts of the country. Creation of awareness among weavers about the latest trend in handloom technologies and creation of provision of marketing facilities is also given high priority for development of handloom sector in the State.

At present, the Directorate of Handloom and Textiles cover 13078 villages of the State under its 209 Handloom Demonstration Circles with 1174675 weavers for its Handloom activities. The production of Handloom fabrics was 215 million meters during the year 2011-12 as against 217 million meters produced during the year 2010-11. During the year 2009-10, the production of handloom fabric was 174.11 million meters.

With a view to strengthen the handloom sector, various development State Sectoral and Centrally Sponsored schemes have been undertaken by the State Government to increase productivity, production and self-employment. The Government of Assam has proposed to establish one Handloom Trade Centre at Dibrugarh to give more exposure to the handloom fabrics produced in the State as well as to create commercial motivation amongst the weavers. In addition, the State Government has proposed for setting up of 6 dye houses [at Sualkuchi, Kokrajhar, Dibrugarh, Jorhat, Lakhimur and Silchar], 27 yarn banks in each district headquarter, one design studio and one garment factory[at Jorhat] in order to develop the state handloom sector. The State Government has also taken implementable programmes like Trade Related Entrepreneurship Development of Urban Weavers, Chief Employment Generation Programme, Economic Upliftment Package, Chief Minister's Special Schemes, Integrated Handloom Development Scheme, Assistance to poor weavers of Tea Garden areas for development of handloom sector in the State. **[Source: Budget Speech Of Finance Minister, Government of Assam, 2012-13]** During the year 2011-12, the Handloom & Textile Department trained 1390 artisans in its 102 Handloom Training Centres.

For empowerment and for creation of self-employment potentialities among the women weavers, the Department has taken special initiative to give benefit to 3.92 lakh women weavers of the State under the programme Incentive to Handloom weavers. Besides these under the Centrally sponsored schemes, like Project Package Scheme, Deen Dayal Hathkargha Yojana, Health Insurance, Integrated Handloom Development Scheme, Export of Handloom Products etc are also under implementation in the State. During the period 2007-08 to 2010-11, 45, 60,605 weavers under Assam Vikash Yojana have been benefitted. Under the Mahatma Gandhi Bunkar Bima Yojana as many as 34619 women weavers are covered during the year 2010-11. In addition, 57599 female weavers are brought under the coverage of Health Insurance scheme during the year 2011-12.

For publicity of the development programme as well as to create awareness about the handloom products of the State, the Department has organized 60 District level Fairs, 23 Special Handloom Expos and 6 National Handloom Expo in the State during the year 2011-12.

Apart from the above, a new programme, with an objective to assist the artisans of handicraft has been undertaken in Nalbari District under Baba Saheb Ambedkar Hasta Silpa Bikash Yojana with financial assistance from Government of India. This programme will cover around 1000 artisans directly and indirectly.

THE State Government also proposed to implement a new financial package to handloom sector involving issue of weavers' card, yarn passbook etc. through NABARD.

## Khadi and Village Industries

With a view to generate rural employment and uplift the rural economy, various khadi and village Industries are being promoted in the State by the Khadi and Village Industries Commission and Assam Khadi and Village Industries Board since their establishment. The performance of Khadi and Village Industries in the State may be evident from the following table.

**TABLE – 11.15**  
**ACHIEVEMENTS OF KHADI AND VILLAGE INDUSTRIES UNDER**  
**KHADI AND VILLAGE INDUSTRIES COMMISSION IN ASSAM**

Item	Production (Rs. in lakh)			Sales (Rs. in Lakh)			Employment (Nos)		
	2008-09	2009-10	2010-11	2008-09	2009-10	2010-11	2008-09	2009-10	2010-11
Khadi and Poly Vastra									
Cotton	43.70	44.57	52.28	86.84	94.17	56.17	2490	3000	3000
Silk	805.59	822.03	855.27	649.34	695.26	780.12	13000	14000	14000
Woolen	-	-	-	3.91	4.25	2.22	-	-	-
Poly-vastra	24.41	28.57	28.58	18.23	26.75	27.21	105	204	-
Total	873.70	895.17	936.13	758.32	820.43	865.72	15595	17204	17000
Village Industries	41544.57	47638.46	52239.19	69452.24	69628.85	74483.06	298000	359000	377000
Grand Total	42418.27	48533.63	53175.32	70210.56	70449.28	75348.78	313595	376204	394000

N.B. Products sold through directly aided institutions of KVIC and Assam KVI Board.

Source: Khadi and Village Industries Commission, Assam.

The Assam Khadi & Village Industries Board has proposed to undertake the following new schemes during the Twelfth Five Year Plan period:

- Mulberry plantation at Matia and Majakhali in Goalpara district and Ghagrapar in Nalbari District at Board's own land.
- Cultivation of sugarcane and production of gur as well as Bee keeping industry (production and training) at Jamugurihat in Sonitpur District at Board's own land.
- Steel fabrication and candle industries at Hengerabari Khadi Complex in Kamrup (Metropolitan) District at Board's own land.

In addition to the above, the Board has proposed to implement schemes to create employment opportunities for 20000 women beneficiaries during the Twelfth Five Year Plan period. During the Eleventh Five Year Plan period, the Board could create employment opportunities for 5542 women beneficiaries against the targeted 10072 numbers of women beneficiaries by implementing schemes under Khadi & Village Industries.

## TRADE AND INVESTMENT:

### North East Industrial Investment Promotion Policy (NEIIPP)

The announcement of the North East Industrial Investment Promotion Policy (NEIIPP), 2007 by the Government of India was another important step towards industrialization of the State where special emphasis has been given on the word "INVESTMENT". Through this Policy, the Government of India had approved a package of fiscal incentives and other concession for the entire North Eastern Region (NER) and Assam will be the leading State to reap benefit from it. Some of the important features incorporated in the Policy are-

- All new units as well as existing units (which go for substantial expansion) and commence commercial production within the 10 years period (w.e.f. 1-4-2007 to 31-3-2017) set up anywhere in the NER will be eligible for incentives for a period of 10 years.
- 100 percent Excise Duty Exemption will be continued on Finished Products made in the NER.
- 100 percent Income Tax exemption will continue as was available under NEIP – 1997.
- Capital Investment Subsidy @ 30 Percent will be available on investment of Plant and Machinery and limit for automatic approval at rate will be ₹1.5 crore etc.
- Interest Subsidy will be available @ 3 Percent on working capital loan.

Further, special provisions like providing comprehensive insurance subsidy, incentives for setting up of Bio-Technology Industry, Power Generating Plants (both from conventional and non-conventional sources) up to 10MW, Transport Subsidy Scheme etc are incorporated into the Policy to attract more and more investors to the region.

To achieve the objective, beside effective implementation of the policy, priority should be given on building up of a unified and integrated common market for the region, as NE States are economically interdependent.

Assam intends to attract maximum Foreign Direct Investment (FDI) and will put sustained efforts to achieve the objective. The State Government has constituted a separate cell – The Industrial Investment Secretariat Cell (IISC) to facilitate investment and a High Level Committee to accord fast track clearance for investment proposals. The Cell will function as a single point of contact for all inquiries for investors including supplying of information pertaining to permissions/procedures/ guidelines.

#### **INDUSTRIAL POLICY OF ASSAM-2008:**

To generate economic development by accelerating the process of industrialization and to generate employment and increase income, the Government of Assam has declared Industrial Policy 2008 with high expectations to attract more investment from other parts of the Country as well as to provide more support to the local entrepreneurs. The policy also aimed at revival of sick industries as well as gives more focus to Micro and Small Sector. The highlights of the policy are -

- Interest Subsidy on term loan provided to Micro industrial units @ 30 percent of the amount of interest paid to Bank/Financial institutions for a period of 5 years from the date of commercial production subject to a ceiling of ₹ 1.00 lakh per unit/year.
- Power Subsidy-30 percent subsidy on power traffic on actual unit consumed for 5 years upto connected load of 1.00MW subject to ceiling of ₹10.00 lakh per annum and 25 percent for connected load above 1.00MW subject of ₹25.00 lakh from the date of commercial production.
- Special incentive for mega projects with large investment with a minimum of ₹100 crore or generating a minimum of 1000 regular employment and having potential for development of ancillary industries and will receive all incentives including priority on land allotment, Tax concessions etc on case to case basis.
- Special incentive like exemption of VAT and Central Sales Tax for a period of 3 years for revival of sick industries.
- To encourage Micro and Small Scale Sector and to facilitate market linkage, Government will actively encourage trade with neighbouring countries and Countries in South-East Asia.
- 25 percent subsidy on Drawl of Power Line to the premises of the unit including the cost of transformer to Micro and Small industrial units.
- Special Incentives for Food processing /Electric/Agro based/Biotech Industries.
- Special Incentives to Women/Physically Challenged Entrepreneurs.
- VAT Exemption to all eligible units which manufacture goods in Assam under the Assam Value Added Tax Act, 2003 and the Central Sales Tax Act, 1956.
- Exemption of Stamp Duty and Registration Fee for setting up of Industrial Park/Estate.

## BORDER TRADE

### Border Trade Centre-Infrastructure Development

Assam is sharing international border with Bangladesh, Bhutan and Myanmar and thus has ample scope to enhance trade with these countries. To facilitate bilateral border trade with Bangladesh there are 8 Land Custom Stations (LCS) of India/Assam viz. Dhubri Steamer ghat, Mancachar, Golokganj, Silchar RMS, Karimganj Ferryghat, Sutarkandi, Mahisasan Railway Station and Guwahati Steamer ghat.

For bilateral trade with Bhutan there are 3 (three) Land Custom Stations- Darranga, Hatisar and Ultapani.

The work of the Border Trade Centre project located at Daranga in Baksa District is in progress. The project cost of the project is ₹1433.88 and the Govt. of India has released ₹104.99 lakh till the end of March 2012.

Another Border Trade Centre project is taken up at Jagun in Tinsukia District. The approved project cost of the project is ₹598.00 lakh. The Central Government has released ₹432.58 lakh till the end of March 2012. Till March 2012 about 70 percent work has been completed.

For facilitating the export-import business with various neighbouring Countries bordering North-East India, Government of India has taken a new initiative to create all infrastructure facilities for the exporter of the region. The Government of India has approved for setting up of two numbers of border trade centre- one at Sutarkandi in Karimganj district and the other at Mankachar in Dhuburi district to facilitate the border trade with the neighboring country of Bangladesh. The main objective of the Border Trade Centre is to provide high standard infrastructure, information and service facilities to the exporter and importer.

### Border Trade Centre, Sutarkandi

The Border Trade Centre, Sutarkandi project located in the Karimganj district was approved by Government of India in the year 2000 under Critical Infrastructure Balance (CIB) scheme at a project cost of ₹816.00 lakh, sharing between central and state as ₹653.00 lakh and ₹163.00 lakh respectively. The project has been completed and commissioned during the year 2011-12.

### Border Trade Centre, Mankachar

The Government of India has approved for setting up of a border trade centre at Mankachar town in Dhubri district. It is located at only 100 meters away from the border gate with Bangladesh. The centre has also a linkage with Tura of Maghalaya. The approved project cost of this project is ₹426 lakh. The central share is ₹340.83 lakh and the state government share is ₹85.17 lakh. The project has been completed and commissioned during the year 2011-12.

### Maniram Dewan Trade Centre:

The Industry and Commerce Department, Government of Assam in association with India Trade Promotion Organization (ITPO) set up a Trade Centre in Guwahati and christened the Trade Centre in the name of the first and most illustrious tea planters of the state and a martyr of India's First War of Independence in 1857 as "**Maniram Dewan Trade Centre**".

To manage the "Maniram Dewan Trade Centre" the Department of Commerce Government of India, advised the Government of Assam for formation of a Special Purpose Vehicle (SPV) under Section 25 of the Company Act, 1956. The Government of Assam accordingly formed the SPV, which was approved by the Department of Commerce, Government of India, in November, 2007 under Section 25 of the Companies Act with contribution of ₹10.00 Crore equity by Government of Assam (₹8.4 Crores in cash and ₹1.6 Crores as the notional value of Land). The newly formed Company has been named as "**Assam Trade Promotion Organization**".



The main objectives of Assam Trade Promotion Organization (ATPO) are:

- (a) To organize trade fairs and exhibitions and invite wider participation in export promotion activities like:
  - Buyers Sellers Meet;
    - Contact Promotion Programmes;
    - India Promotions with Departmental Stores;
    - Product Specific Promotions;
    - Product Development Adaptation;
    - Undertake market Studies, research work to determine Market Potential;
    - Export promotion Measures to tap export opportunities;
  - One to one interaction between the Companies, distributors, dealers for creating business opportunities, networking, Joint transfer, vendor developments and sales promotion.
- (b) To publicize in India and Overseas the International Trade Fairs and Exhibitions to be held in the states of North Eastern Region and other parts of India & Overseas and invite the foreign as well as Indian participants to participate in them.
- (c) To organize and undertake trade in commodities connected with or relating to the fairs and exhibition in India and abroad and to undertake the purchase, storing and transport of such commodities in India or anywhere else in the world.
- (d) To promote, organize, manage and participate in industrial trade, other fairs and exhibitions in India and abroad and to take, all measures incidental thereto for promoting Indian Industry, especially North East trade and enhance its global competitiveness.
- (e) To undertake promotion of exports and to explore new market for traditional items of export and develop exports of new items with a view to maintaining, diversifying and expanding the export trade.
- (f) To serve a reference point in the Northeastern Region for Indian Industry and International Business Community.
- (g) The Company's activities will also cover the management of all present and future Trade Centre and also acts as an agency for all activities related to promotion and development of trade and commerce by the Government of Assam.

The Maniram Dewan Trade Centre, in addition to holding of fifteen International Trade Fairs, also hold several trade related fairs exclusively on machineries, Printing equipments, Plastics, Building materials, Real Estate etc, so far.

The Assam Trade Promotion Organization (ATPO) as part of its mandate for the first time participated in the Thessaloniki International Trade Fair at Greece which was commenced from 10<sup>th</sup> Sept'2011 to 18<sup>th</sup> Sept'2011, wherein 11 women entrepreneurs from different part of the state were taken by ATPO to participate in the ATPO stall at Thessaloniki at Greece. The entrepreneurs showcased the traditional Handloom, Handicraft and natural soaps produced in the state. The eri and muga products evoked a keen interest amongst the Greek people. The entrepreneur manufacturing natural soap also evoked a strong interest and was able to attract export orders. The Ambassador to Greece His Excellency Tsewang Topden visited the ATPO pavilion and was happy to see the women entrepreneurs with their products drawing large crowds. Assam Trade Promotion Organization was the only government Organization which participated in the Greece fair.

After the successful participation in Greece, the Assam Trade Promotion Organization also proposes to participate in other foreign international trade fairs for the benefit and exposure of entrepreneurs of Assam.

The Assam Trade Promotion Organisation (ATPO) also as a part of its mandate to cover the management of all present and future Trade Centers has recently been authorized by Government of Assam to acts as an agency for all activities related to promotion and development of the Sutarkandi Border Trade Centre located near Indo-Bangladesh Border in Karimganj district of Assam. This Border Trade Centre Sutarkandi has been setup to explore the possibility of tapping the potential of the existing / contagious market in the neighboring country. Accordingly the physical and institutional infrastructure has been developed.

Statistics available up to 2010-11 for Export-Import through Sutarkandi LCS are as under:

Year	Export (Rs in lakh)	Import (Rs in lakh)	Trade Balance
2008-09	2939.91	2865.13	(+)74.78
2009-10	2856.95	4110.61	(-)1253.66
2010-11	1948.49	3053.95	(-)1105.46

Source: Maniram Dewan Trade Centre

## Tourism

Tourism is a fastest growing industry in the world. Tourism in Assam is based on wildlife, natural beauty, unique flora & fauna, holy shrines, lush green tea gardens, turbulent rivers, vibrant and colourful cultural festivals. Assam has immense tourism potentials, which are to be explored as commercial resources. Eco-tourism is one of the fastest growing tourism segments and therefore the Government of Assam has given tremendous thrust with relevant to natural beauty and bounty.

The State Tourism Department has witnessed a considerable success and all round development both in respect of infrastructure development and creation of other facilities over the years with the financial assistance from Government of India as well as the State Government.

Centrally Sponsored Fund				(Rs. in lakh)
Year	Amount Sanctioned	Amount Released	State share	No. of schemes undertaken
2010-11	2172.32	71.77	600.00	10
2011-12	2676.71	2219.55	740.00	13
State Plan Fund				(Rs. in lakh)
2010-11	739.97	739.97	-	13
2011-12	450.00	390.00	-	14

Source: Directorate of Tourism, Assam

For the growth of tourism sector, special emphasis has been given on Tourism Circuit Development, Destination Development, Wayside Amenities etc., through public and private partnership to tap the unexplored potential opportunities. Assam Tourism Policy, 2008 has also been adopted by the State Government giving special emphasis to encourage private investment in Tourism sector by providing financial and logistic support. Meanwhile, the State Government has made all basic arrangements for construction of chain of 5[Five] Star Hotels in collaboration with private investors.

Eco-tourism is aimed at the appreciation of both natural world and traditional cultures existent in natural areas and to protect natural and cultural assets. Assam has several ethnic groups residing in harmony in spite of the differences in rites and rituals, festivals and attires. One may discover the fascinating legacy of art and crafts in Assam, also the proud producer of three unique varieties of Silk, the Golden Muga, the White Pat and Warm Eri. In Assam, one can hear the rhythms of the shuttles of looms in the craft village, which get momentum with the advent of spring.

River cruise on the Brahmaputra from Guwahati, organised by Government as well as Private tour operators are major attractions. One can opt for short cruises or can avail longer sailing to Kaziranga National Park or to the ethno-religious island of Majuli or to the remnants of the Great Ahom Kingdom in Sivasagar.

The Table 11.16 shows the volume of tourist traffic and magnitude of revenue earning by the State over the last six years.

**TABLE –11.16**  
**NUMBER OF INDIAN AND FOREIGN TOURIST TO ASSAM**  
**AND REVENUE EARNED FROM THE TOURISTS**

Year	Tourist staying in Tourist Lodges of the Directorate		Tourist Staying in other accommodation like Hotel etc.		Total Revenue earned from Tourist Lodges only (Rupees in lakh)
	Indian	Foreign	Indian	Foreign	
2006-07	20279	649	3459591	13008	81.30
2007-08	24057	960	3465757	12839	94.99
2008-09	26439	674	3672267	13859	103.92
2009-10	25665	664	3869860	14030	131.63
2010-11	25831	594	4101616	15039	143.60
2011-12	26439	696	4381897	15964	184.49

Source: Directorate of Tourism, Assam.

The number of foreign tourists visited Kaziranga National Parks in Assam is growing positively. The number of foreign tourists visited the Kaziranga National Park has been increased more than 30 percent during the year 2011-12 over 2008-09. In respect of Indian tourist visiting the said National Park, this increase was around 17 percent. During the year 2011-12, as many as 1.17 lakh Indian tourist visited the Kaziranga National Park. The Table below shows the number of tourists visited various National Parks in Assam during the last five years.

**TABLE – 11.17**  
**NUMBER OF TOURIST VISITED NATIONAL PARKS IN ASSAM**

Year	Kaziranga National Park		Manas National Park		Orang National Park		Dibru-Saikhowa National Park		Nameri National Park	
	Indian	Foreign	Indian	Foreign	Indian	Foreign	Indian	Foreign	Indian	Foreign
2007-08	53640	6106	6391	624	1631	215	1766	53	4154	524
2008-09	100384	5767	1104	240	1285	267	2567	74	5489	479
2009-10	105264	7580	8030	139	1628	325	2613	62	4342	346
2010-11	112392	7447	10843	503	1702	180	2351	40	4460	352
2011-12	117308	7521	19705	237	2678	159	3970	42	5601	457

Source: The Principal Chief Conservator of Forest (Wildlife), Assam and Directorate of Tourism, Assam

### Employment Generation Scheme for Educated Unemployed youths

The State Government has been given thrust on Self-employment generation schemes. The “**Assam Bikash Yojana**” is an ambitious employment generation schemes undertaken by the Government of Assam. Under the Scheme the tourism department has taken up programmes like providing financial assistance to local educated unemployed youths so that the youths could engage themselves in tourism promotional activities like transport, wayside amenities, food kiosk, restaurants, dhabas, and Home stay facilities etc. For capacity building, youths studying in the institute of hotel management are provided with stipend and also incentive to the institutions. As many as 718 unemployed youths including 126 under graduate youths [remaining were graduate] have been provided with subsidy for purchase of tourist vehicles under the Scheme of “Assam Bikash Yojana”. It is contemplated that 1000 youths would be benefited within the span of 2008-2009 to 2010-2011. The department also introduced training facilities for the drivers conducting jeep safaris within the National Parks.

## Efforts to unveil Assam to national and foreign tourist

The Assam Tourism Department urgently needs a full scale branding exercise in order to establish an impeccable brand identity in the domestic and international market. Brand building is a long term exercise and it involves 360 degree communication. Further it is felt that the lesser known tourism products of the State are yet to be taken to the global market. To achieve positive response from the national and global market, the Assam Tourism Department participated in different tourism fairs to showcase the tourism product in the national and international market so as to attract domestic and foreign tourists to the region. During the year 2011-12 the Assam Tourism Department participated in the national level tourism fairs like Rath Yatra Festival at Puri, TTF Kolkata, Travel India, 2012, Kolkata, Surajkund Craft Mela, Buddhist Conclave, IITF New Delhi etc. In addition, the Assam Tourism Department also participated in several international tourism fairs during the year 2011-12- World Travel Meet, London-2012, Road Show in Dubai and Road Shows in Singapore, Malaysia, and Thailand as a part of publicity campaign and to draw tourists. The electronic and print media are also been extensively utilized for publicity and marketing campaign. The Assam Tourism Department has also started intensive media campaign through Domestic and National Level electronic media. Efforts have been made to establish linkages with the neighbouring North-eastern States and countries of Bhutan, Nepal, Bangladesh and Thailand for Assam as a regional tourism hub. The State Government has also proposed to create an East India circuit linking Assam, Bihar, Odisha, West Bengal and Sikkim.

An innovative Rural Tourism Scheme is being introduced by the State Government for women showcasing the rural lifestyle, culture, handicrafts etc., for development of rural tourism as well as income and employment generation of rural women.

## MINING

Assam is richly endowed with mineral resources. However, optimum exploitation could not be possible primarily due to existence of deposits in disadvantageous locations. At present, the exploitation of minerals in the State comprises of mainly Petroleum (Crude), Natural Gas (Utilised), Coal and Limestone. During the year 2011-12, the volume of production of coal was 590 thousand MT, Crude Oil 5023 thousand MT, Natural Gas (Utilised) 2726 MCM and Lime Stone 242 thousand MT as against the volume of production of 1110 thousand MT Coal, 4714 thousand MT Crude Oil, 2500 MCM Natural Gas (Utilised) and 334 thousand MT Limestone during the year 2010-11. It reveals from the data that while the production of Crude Oil and Natural Gas (utilised) recorded 6.6 percent and 9.0 percent increase respectively in 2011-12 against 2010-11, the production of Coal and Lime Stone recorded 46.8 percent and 27.5 percent decrease respectively during the same period. The Table -11.18 exhibited some statistics of minerals exploited in the State during the last nine years.

**TABLE – 11.18**  
**MINERAL PRODUCTION IN ASSAM**

Year	Coal ('000MT)	Crude Oil ('000MT)	Natural Gas Utilised (MCM)	Limestone ('000MT)
2003-04	738	4571	1999	460
2004-05	581	4702	2037	419
2005-06	956	4429	2195	410
2006-07	1058	4426	2238	296
2007-08	1101	4361	2397	381
2008-09	1147	4673	2603	363
2009-10	1203	4738	2476	402
2010-11	1110	4714	2500	334
2011-12	590	5023	2726	242

Source: Indian Bureau of Mines.

The index of mineral production in Assam (Base 1999-2000) was 100.31 in 2010-11 as against 100.99 in 2009-10. The index of mineral production was 100.39 in 2008-09. The Table 11.19 below shows the index of mineral production in Assam during the period 2002-03 to 2010-11.

**TABLE – 11.19**

**INDEX OF MINERAL PRODUCTION IN ASSAM**

MINERALS	2007-08	2008-09	2009-10	2010-11	2011-12
	Base : 1999-2000				Base:2004-2005
Coal	184.27	200.52	210.31	194.06	93.95
Petroleum (Crude)	78.56	92.94	94.23	93.75	106.33
Natural Gas (Utilised)	139.77	137.65	130.88	132.21	132.78
Limestone	91.29	90.30	100.00	83.08	60.35
All Minerals	87.90	100.39	100.99	100.31	108.35

Source: Directorate of Economics and Statistics, Assam.

The Directorate of Geology and Mining under the Mines and Mineral Department of Assam has played an important role in development of the mining and mineral sector involving coal, limestone, petroleum etc., on the strength of the mining leases granted to various government, private parties are being carried out in the State. Mining leases for petroleum, coal, limestone etc., and exploration/prospecting licenses have been granted to various organizations like Oil India Ltd, ONGC Ltd, Coal India Ltd, Cement Corporation of India Ltd etc., during the Eleventh Five Year Plan period.

The revenue in terms of royalty etc., earned by the State of Assam has since been increasing gradually. In the year 2010-11, the State Government has earned the royalty to the tune of ₹1696.46 crore which is the highest so far.

The Mines and Minerals Department, proposes to continue and intensify detailed survey and exploration in the previously exploration carried out areas with positive results for development of basic raw materials (minerals) with a view to setting up of mineral based industries like cement, lime, ceramics, glass, refractory materials sanitary wares etc.

Emphasis has also been given by the Department for assessment of ground water potential in both shallow and deeper aquifers as well as to delineate good source of underground water through hydro-geological studies for use in irrigation, domestic water supply and industrial use. Investigation of ground water will also help to identify fluoride and/or arsenic content in ground water which is also a major cause of concern in recent days.

**APPENDIX – 11.1**

**TOTAL NUMBER OF REGISTERED MSME UNITS AND  
TOTAL NUMBER OF WORKERS IN ASSAM**

Sl. No.	District	Unit Registration during the year			Total Workers		
		2009	2010-11	2011-12	2009	2010-11	2011-12
1.	Kokrajhar	1	6	9	215	30	67
2.	Dhubri	0	72	33	259	465	239
3.	Goalpara	0	20	34	286	257	198
4.	Bongaigaon	2	39	52	129	167	388
5.	Barpeta	0	52	33	297	353	240
6.	Kamrup (M)	0	0	0	0	0	0
7.	Kamrup (R)	86	391	301	4812	3455	4040
8.	Nalbari	7	42	68	281	207	391
9.	Darrang	1	35	54	134	184	244
10.	Morigaon	0	24	25	159	132	122
11.	Nagaon	9	164	70	604	938	586
12.	Sonitpur	2	41	85	295	323	561
13.	Lakhimpur	0	39	17	442	275	77
14.	Dhemaji	1	28	41	220	137	209
15.	Tinsukia	26	98	46	852	914	338
16.	Dibrugarh	6	91	58	607	577	625
17.	Sivasagar	6	81	35	789	584	2646
18.	Jorhat	4	34	47	212	183	856
19.	Golaghat	6	44	62	518	369	390
20.	K. Anglong	1	9	6	300	138	69
21.	Dima-Hasao	0	4	2	17	24	21
22.	Cachar	5	70	58	329	94	368
23.	Karimganj	1	21	22	220	128	126
24.	Hailakandi	1	25	23	224	95	100
25.	Chirang	0	4	22	86	37	208
26.	Baska	0	37	4	449	199	16
27.	Udalguri	0	35	11	161	193	78
<b>Total</b>		<b>165</b>	<b>1506</b>	<b>1218</b>	<b>12897</b>	<b>10458</b>	<b>13203</b>
<b>MSME- Micro, Small, Medium Enterprises</b>							

Source: Commissionerate of Industries and Commerce, Assam.

**APPENDIX – 11.2**  
**INDEX NUMBER OF INDUSTRIAL PRODUCTION OF ASSAM**  
(Base : 2004-2005 = 100)

NIC – 2004	Industry Division	Index Number				
		2004-05	2009-10	2010-11	2011-12	2012-13 (Ad.Esti)
15	Manufacturing of food products and beverages	92.65	132.58	132.93	124.67	130.06
16	Manufacture of tobacco products	135.35	150.25	176.44	149.84	158.84
17	Manufacturing of Textiles	73.76	140.66	178.31	138.80	152.59
21	Manufacturing of paper & paper products	114.15	107.20	112.38	114.90	111.49
22	Publishing, Printing & reproduction of recorded media	149.29	300.32	348.58	354.82	334.57
23	Manufacturing of Coke, refined petroleum products & nuclear fuel	116.82	148.42	144.73	162.35	151.83
24	Manufacturing of Chemical & Chemical Products	257.73	416.95	378.80	365.21	386.99
25	Manufacturing of rubber & Plastic Products	171.92	336.55	201.30	204.57	247.47
26	Manufacturing of other non-matellc mineral products	97.07	106.76	145.71	281.83	178.10
27	Manufacturing of basic metals	98.76	266.95	265.38	327.79	286.71
28	Manufacturing of fabricated metal products, except machinery & equipments	299.17	366.78	391.36	307.36	355.17
29	Manufacturing of machinery & equipments n.e.c.	212.89	205.29	213.95	111.50	176.91
31	Manufacturing of electrical machinery and apparatus n.e.c.	36.02	73.85	108.21	105.37	95.81
32	Manufacture of Radio, television and communication equipment and apparatus	66.02	68.51	78.45	87.24	78.07
33	Manufacture of medical, precision and optical instruments, watches and clocks	114.86	148.97	164.48	172.96	162.14
34	Manufacturing of motor vehicles, trailers and Semi trailers.	47.31	83.01	108.17	116.34	102.51
36	Manufacturing of furniture, Manufacturing n.e.c.	81.42	130.49	130.12	134.44	131.68
<b>15-36</b>	<b>Total Manufacturing</b>	<b>137.19</b>	<b>190.87</b>	<b>184.32</b>	<b>194.17</b>	<b>189.79</b>
10-14	Mining and Quarrying	99.39	103.73	103.08	108.35	105.05
15-36	Manufacturing	137.19	190.87	184.32	194.17	189.79
40	Electricity	100.00	124.11	126.83	133.45	128.13
	<b>Total in General</b>	<b>115.95</b>	<b>143.35</b>	<b>140.38</b>	<b>147.75</b>	<b>143.83</b>

Source : Directorate of Economics & Statistics, Assam.



## CHAPTER-XII

### POWER

In pursuance of the Indian Electricity Act 2003, and as a part of the Assam power sector development programme, the Government of Assam has set in motion the process of unbundling the Assam State Electric Board in 2004, into following government companies:

The Assam Power Generation Corporation Limited (APGCL),  
The Assam Electricity Grid Corporation Limited (AEGCL), and  
The Assam Power Distribution Company Limited (APDCL).

These initiatives are in the interest of all the stakeholders in the electricity sector in the State, i.e. consumers, shareholders, suppliers, creditors, infrastructure builders and the Government of Assam. The scheme like externally aided project, rural electrification, accelerated power development and reform programme (APDRP) which are yet being executed under Assam State Electricity Board (ASEB).

The Assam Power Generation Corporation Ltd. (APGCL) was constituted to look after power generation in the State Sector. The final Transfer Scheme was implemented on Aug' 2005. The company is mainly responsible for development of Thermal & Hydel Power Projects to Generate Electricity to meet the energy demand in the State to the extent feasible.

The present installed capacity of APGCL is 376.7 MW.

LTPS = 157.2 MW,  
NTPS = 119.5 MW &  
KLHEP = 100 MW.

#### 1. POWER PROJECTS IN OPERATION IN ASSAM

##### A) NAMRUP THERMAL POWER STATION (NTPS)

The power generation sources of Assam are basically thermal and hydro. After creation of ASEB with the sole objective of self sufficient of power, foundation stone was laid as “**Naharkatia Thermal Power Project**” in 1960. In course of time the name of this Power Station was changed to **Namrup Thermal Power Station**.

Namrup Thermal Power Station was the largest gas based power station, for base load amidst south-east Asia at that time. Though its capacity is 30 MW, it has never gone above 24.0 MW. Namrup TPS's units being very old and are operating at very high operating cost due to high designed heat rate, it has been decided to set up a 2X100 MW (Ph-I & Ph-II), CCGT at NTPS with low heat rate machines to ensure high efficiency and reliability and to phase out the existing GT units gradually, once the project is completed.

On 1<sup>st</sup> March'09 foundation stone of 100 MW (Phase-I) of Namrup Replacement Power Project (NRPP) was laid by Hon'ble Chief Minister of Assam. EPC of this project was awarded to BHEL and the construction work is going on in full swing which is expected to be completed within 2013.

##### OPERATIONAL DATA OF NTPS FOR THE YEAR: 2011-12

Generation in MU	Annual Plant availability factor (%)	Annual Plant load factor (%)	Gross station Heat Rate (Kcal/Kwh)	Auxiliary Consumption (%)
565.66	57	54	3972	4.8

##### B) LAKWA THERMAL POWER STATION (LTPS)

Lakwa Thermal Power Station is one of the pioneer power stations in the North Eastern region. It is situated at Maibella in the district of Sivasagar, Assam. It was the day 22<sup>nd</sup> May'1977, the then Hon'ble President of India, Sri Nilam Sanjeeva Reddy laid down the foundation stone of the power project and gave a major thrust for the upliftment of the area. After commissioning of the project in the year 1981, the power station has been serving to the nation and specially to the power starved state of Assam to a large extent.



Lakwa Thermal Power Station is today one of the major contributors of electrical energy in the entire north eastern region. It has been carrying out outstanding performance for the last consecutive three years by achieving its set target without fail. Moreover, it is able to maintain about 73% of PLF for the last three financial years from 2008-2011 which is almost at par with the Indian national standard. It is the endeavor of LTPS for continuous quality power generation that makes the Assam Power Generation Corporation a prestigious organization in the region. Its professional excellence, growth and experience gained for nearly three decades are reflected in its work, performance and service.

#### OPERATIONAL DATA OF LTPS FOR THE YEAR: 2011-12

Generation in MU	Annual Plant availability factor (%)	Annual Plant load factor (%)	Gross station Heat Rate (Kcal/Kwh)	Auxiliary Consumption (%)
732.66	74%	67%	3819	9.6%

#### C) KARBI LANGPI HYDRO ELECTRIC PROJECT

The river Borpani originates from Meghalaya in the name of Umkhen & flows into the Assam hill region in the name of Borpani (Langpi). The river has tremendous potential for Hydro Electricity generation. Assam State Electricity Board was entrusted the job of carrying out a detailed survey for harnessing power potentialities of Borpani basin during 1976-77.

The 2x50 MW Karbi Langpi Hydro Electric Project (KLHEP) is a run off the river project located in Karbi Anglong District of Assam. This is the last stage development of the Borpani River basin utilizing an average head of 235m. The Karbi Langpi Hydro Electric Project was sanctioned by the Planning Commission during 1979. The construction of the project was started during 1979-80 with infrastructure development activities. However, due to different factors the project could not be completed even after 20 years from starting. However, the whole work was finally completed in Jan 2007.

The first unit of 50MW was commissioned on 30.1.2007 and the second unit was commissioned on 20.3. 2007. The project was dedicated to the people of Assam by the Hon'ble Chief Minister of Assam on 6.4.2007.

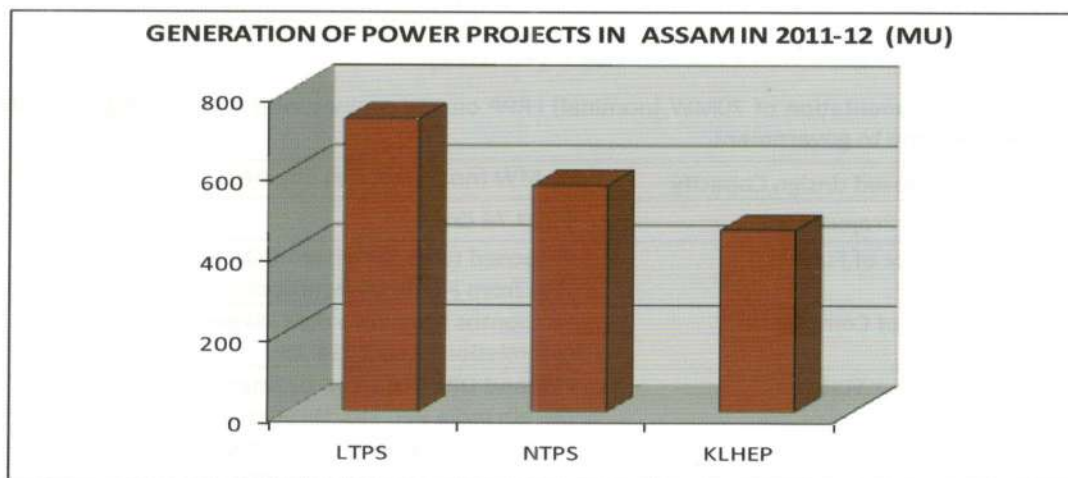
The power generated from KLHEP is evacuated through a 108.13 KM long double-ckt. 220 KV Transmission line to Guwahati.

The total project cost (Dec 2004 price level) is worked out as ₹373.09 Crore.

Since April'07 the 2x50 MW KLHEP is under commercial operation serving the people of Assam in its full capacity.

#### OPERATIONAL DATA OF KLHEP FOR THE YEAR 2011-12

Generation in MU	Capacity Index (%)	Annual Plant load factor (%)	Auxiliary Consumption (%)
454.96	92%	52%	0.5%



## 2. NEWLY COMMISSIONED PROJECT

The Main contract (EPC) for Turbine, Generator & Boiler was awarded to BHEL at a total project cost of ₹236.40 Crore in March 2006. The project was initially scheduled to be completed by 30<sup>th</sup> June 2008 but for some unavoidable reason, the project could be commissioned in January 2012. On 13th January 2012, the Honourable Chief minister of Assam, in the presence of Honourable Power Minister, inaugurated and dedicated the plant to the people of Assam. Finally, the commercial operation was started on 17-01-2012. Since then, the plant is running well and has generated 150 MU of power till end October 2012. The performance of the plant in terms of PLF is at par with the projected PLF of the DPR i.e. at 68.5 %.

<b>Funding Pattern:</b>	Total Project Cost:	₹ 236.40 Crore
	PFCL Loan:	₹ 165.48 Crore
	One Time ACA from GoA:	₹ 68.33 Crore

## 3. ONGOING PROJECTS (THERMAL)

### A) PROGRESS OF 1x100MW NRPP AS ON 31<sup>ST</sup> AUGUST'2012

The EPC contract for 1x100Mw Namrup Replacement Power Project was awarded to M/s BHEL on 31<sup>st</sup> Dec'2008 at a firm price of ₹564.6 crore and with a scheduled commissioning period of 35 months from the zero date as 9<sup>th</sup> Feb'2009. BHEL subcontracted implementation of the project to M/s NBPPL, a JV company of BHEL & NTPC on July'2009. M/s NBPPL engaged M/s Ramky Infrastructure Ltd (RIL), Hyderabad for civil works and M/s Arun Construction, New Delhi for elect/ mech works of the project.

#### COMMISSIONING SCHEDULE

The project was to be commissioned by Jan'2012 with open cycle commissioning on Oct'11. However, with the changed circumstances in engagement of the subcontractor and mobilization by the sub contractor, initially the start of civil work was delayed by about six months. Moreover, due to poor soil condition, repeated failure of test piles occurred, which resulted in delay in progress of civil work by about 4/5 months. BHEL later revised the target date of commissioning up to **Dec'2012**. Open cycle commissioning is expected by March'2013. BHEL requested for time extension **up to Dec'2013** for commissioning of the project.

#### Financial Progress up to 15<sup>th</sup> June'2012

- Total Project Cost: ₹ 693.72 crore [Equity-30% (GoA) = ₹ 208 crore  
Term loan-70% (PFCL) = ₹ 485 crore]

#### Payment till 31<sup>st</sup> Aug'12:

a) Total fund received	₹ 202 crore
b) Total fund released to the Implementing Agency so far	₹ 204.0 crore to BHEL ₹ 10.0 crore to other agencies
c) Funds utilized so far	₹ 214.0 crore

### B) LAKWA REPLACEMENT POWER PROJECT CAPP (70 MW)

APGCL approved implementation of 70MW (nominal) LRPP on gas engines with 0.36mmcmd available gas and has recommended same to government.

Proposed design Capacity	70 MW (nominal), Gas Engine
Total Project Cost	₹ 297.74 Crore
Source of Fund	Proposed to be 30% from GOA equity and 70% from Financial institution(s).
Date of Completion	18 months from zero date. Expected to be commissioned by 2014-15
Present Status	PFR and DPR prepared by engaging M/s Desein India Pvt. Ltd. through competitive bidding. Preparation of Bid document to engage EPC contractor is under process.

#### 4. NEW THERMAL PROJECTS IN PIPELINE

##### A) DISTRIBUTED IC ENGINE BASED GOLAGHAT POWER PROJECT (12 MW)

Proposed design Capacity	12 MW (nominal), Gas Engine
Total Project Cost	₹ 79.34/- Crore (approx)
Source of Fund	Proposed to be 30% from GOA/NEC equity and 70% from Financial institution(s).
Date of Completion	18 months from zero date. Expected to be commissioned by 2015-16
Present Status	<ol style="list-style-type: none"><li>1. ONGC has floated NIT in their website on 16-07-12 for allocation of Gas from oil field of Golaghat District. APGCL already participated in the Bid process.</li><li>2. Land selection done. Handover to APGCL in process</li><li>3. PFR prepared by engaging M/s Desein India Pvt. Ltd. Through competitive bidding.</li><li>4. DPR preparation under process.</li></ol>

##### B) DISTRIBUTED IC ENGINE BASED CACHAR POWER PROJECT (30 MW)

Proposed design Capacity	30 MW (nominal), Gas Engine
Total Project Cost	To be determined after preparation of DPR.
Source of Fund	Proposed to be 30% from GOA/NEC equity and 70% from Financial institution(s).
Date of Completion	18 months from zero date. Expected to be commissioned by 2015-16
Present Status	<ol style="list-style-type: none"><li>1. ONGC has floated NIT in their website on 16-07-12 for allocation of Gas from oil field of Cachar. APGCL will participate in the Bid process.</li><li>2. Land selection done. Handover to APGCL in process</li><li>3. PFR preparation under process</li></ol>

##### C) 2X250 MW MARGHERITA THERMAL POWER PROJECT

APGCL proposed to implement a 250 MW Coal Based Power Project at village Saliki NC under Makum Mauza of Margherita S/D with NEEPCO on Joint Venture mode to mitigate the power shortage of Assam. Later on, at the instance of the Govt. of Assam, a team of NTPC and CEA officials visited the proposed site and NTPC officials proposed for a coal based power project of 500 MW capacity for which they suggested to acquire approx. 1000 Acres of land. They also suggested to survey the land for final selection of the area. Accordingly, total 3022 Bighas of land was surveyed and boundary demarcation was done by APGCL. However, in view of poor response from NTPC during last two years, the process got slowed down. APGCL now has come forward again to implement the project and accordingly moved to the Govt. of Assam for transfer the proposed land to APGCL. Now the matter is under process for coal linkage with the Ministry of Coal, GOI, and various studies & surveys and also fulfillment of other formalities are going on for implementation of the project.

##### D) AMGURI THERMAL POWER PROJECT (100 MW)

MOP&NG has been requested for allocation of gas for 100 MW Amguri Power Project. Allocation is awaited.

##### E) NAMRUP EXTENSION POWER PROJECT (100 MW)

As the land and other infrastructures are available in the premises of existing NTPS, it is envisaged to start of the project after commissioning of on-going NRPP and completion of the same is expected in 13<sup>th</sup> plan period subject to availability of gas linkage.

## 5. PROJECTS UNDER JOINT VENTURE

### A) REVIVAL OF CHANDRAPUR THERMAL POWER STATION (60 MW, COAL FIRED)

APGCL is going to revive the abandoned 2X30 MW oil fired Chandrapur Thermal Power Station (CTPS) with coal through Joint Venture with M/s Imperial Energy & Construction Pvt. Ltd. (M/s Imperial Energy & Construction Pvt. Ltd. as a lead partner along with M/s Intelli-mine and M/s Imperial Fastners Pvt. Ltd.). The project is expected to be in operation from 2014-15, subject to allocation of coal.

## DEVELOPMENT OF HYDRO ELECTRIC PROJECTS IN ASSAM

### A) ONGOING PROJECTS UNDER STATE PLAN (PARTIAL FUNDING)

#### 1) MYNTRIANG SMALL HYDRO ELECTRIC PROJECT (Stage-I : 2 x 3.00 MW, Stage-II : 2 x 1.5 MW = Total 9 MW)

The Assam Power Generation Corporation Limited (APGCL) is implementing the Myntriang Small Hydro Electric Project on Myntriang river near Amtereng Village. The Myntriang Small Hydro Electric Project is located near Karbi Langpi Hydro Electric Project at Amtereng.

The project will be developed in two stages i.e. stage-I (6 MW) by utilizing head of 191m and 1.850 cumec of discharge (at 90% dependable year) in 2 (two) unit of 3.00MW each and Stage-II (3 MW) by utilizing head of 64.00m and 2.75 cumec of discharge (at 90% dependable year) in 2 (two) unit of 1.50 MW each.

The financing pattern of the project is as under:-

- i) NABARD loan ... ₹ 46.14 Crore
- ii) MNRE grant ... ₹ 15.75 Crore (applied)
- iii) Govt. of Assam grant/equity is ₹ 6.02 Crore
- iv) Remaining amount of ₹ 10.26 Crore is proposed to be arranged from Govt. of Assam.

### PROPOSAL FOR ENHANCEMENT OF INSTALLED CAPACITY:

During the implementation stage, the APGCL took up further studies of Power potential of the projects based on the hydrological data collected during the period from 2008-2010. On completion of these studies, the APGCL decided to enhance the installed capacity of the project from 9 MW to 13.50 MW after examination of the proposal through independent hydrological experts. An amount of ₹5.66 Crore will be required for the additional civil & hydro mechanical works to be taken up in order to keep provision for enhancing the capacity of Myntriang Small Hydro Electric Project. Targets for commissioning of Stage-I and stage-II are December'13 and December'12 respectively.

#### 2) LUNGNIT SMALL HYDRO ELECTRIC PROJECT (STAGE-I : 2 X 1.5 MW, STAGE-II : 2 X 1.5 MW = TOTAL 6 MW)

The project is located 25 km away from Diphu, District Headquarter of Karbi Anglong, This is a two stage development of the river Lungnit i.e. Stage-I (3 MW) by utilizing head of 48m and 2.83 cumec of discharge in two unit of 1.50MW each and Stage-II (3MW) by utilizing head of 43.00m and 3.24 cumec of discharge in two unit of 1.50 MW each. Forest land measuring 25.775 Hectors has been acquired for the implementation of the project.

The project is being implemented through EPC Contractor, a Consortium of M/s P. Das & Co. and M/s Jyoti Ltd. who had signed the EPC Contract on 22/7/2009 with 24 months as time of completion. The estimated cost of the project was ₹55.61 Crore. The date of order to commence was 17.08.2009. The financing pattern of the project is as under:

- i) PFCL ... ₹30.00 Crore (sanctioned)
- ii) MNRE ... ₹18.00 Crore
- iii) NEC ... ₹5.00 Crore
- iv) GoA ... ₹2.61 Crore

The EPC Contractor a consortium of M/S P.Das & Co (Lead Partner) and M/s Jyoti Ltd, Boroda entrusted with the implementation of Lungnit Small Hydro Electric project failed miserably to achieve their target. In fact, during the period of about 3(three) years from the date of order to commence i.e. 17.8.2009, the EPC contractor have achieved an overall progress of approximately 15% of the total work. Because of this poor performance of the contractor, the APGCL Board decided to terminate the EPC contract in August'12.

## **(B) LOWER KOPILI HYDRO PROJECTS**

### **1. LOWER KOPILI H.E PROJECT**

The installed capacity of the project is worked out as  $2 \times 55 \text{mW} = 110 \text{MW}$  for main power house and 10 MW for auxiliary power house with design energy (90% DY without overloading) will be 437.68 MU and 39.03MU for main and auxiliary power house respectively. The proposal is now under examination at APGCL.

APGCL requested Ministry of Defence for concurrence to implement the project. Response is still awaited.

## **(C) SMALL HYDRO PROJECTS ON PIPELINE**

### **1. AMRING SHP (20MW)**

APGCL engaged M/S Consulting Engineering Services (CES) for detailed survey and investigation and preparation of DPR of the project. NEC had extended financial assistance to tune of ₹211.00 lakhs for detailed survey and investigation of the project. As per the draft report of M/S CES the installed capacity of the project will be 3x7MW. The cost estimate will be ₹217.58 lakh. The DPR is now under examination at APGCL.

### **2. DEVELOPMENT OF SMALL HYDRO POWER PROJECT IN THE BORPANI VALLEY**

There is enormous scope for development of Hydro projects in the entire Borpani basin at the upstream of existing Karbi Langpi H.E Project. APGCL had prepared a DPR of Karbi Langpi H.E Project (Upper stage) 60MW and submitted the DPR to CEA during 2008. After examination of the same, CEA returned the DPR to APGCL for recasting the hydrology chapter and incorporation of additional geological information.

Subsequently APGCL has engaged the Assam power Project Development Company Limited (a Joint Venture of Govt. of Assam and ILFS) for rendering advisory services for development of entire Borpani basin from upstream of existing Karbi Langpi H.E project .A Memorandum of Agreement was signed between APGCL and APPDCL on 24.09.2010. After the valley optimization studies following projects have been identified:-

- i) Karbi Langpi Upper stage (60MW)
- ii) Karbi Langpi Intermediate stage-I (21MW)
- iii) Karbi Langpi Intermediate stage-II (25MW)
- iv) Karbi Langpi Dam Toe H.E Project (19MW)

APPDCL had invited bid for preparation of DPR of these projects. APPDCL selected M/S Lahmeyer international India for preparation of DPR for Karbi Langpi Intermediate stage-I (21MW), Karbi Langpi Intermediate stage-II (25MW), Karbi Langpi Dam Toe H.E Project (19MW) and work order was issued after getting due approval from APGCL. APPDCL has selected M/S Tata Consulting services Ltd (M/S TCS) for preparation of the DPR for Karbi Langpi Upper stage. Necessary order will be issued after approval of APGCL.

### **3. DHANSIRI SHP(20MW) AND BORDIKHARU SHP( 2MW)**

Execution of Dhansiri H.E Project was taken up by ASEB/APGCL from 1988. The work remained suspended from 1996 due to law & order, paucity of fund, reduction of discharge in the canal etc.

The Bordikharu SHP was commissioned in 1987. The project remained inoperative from 1991.

The Govt of Assam has decided that these projects be handed over to APPDCL for rolling them out to IPPs through tariff based competitive bidding factoring in the project development cost already incurred by APGCL/ASEB.

#### 4. DRONPARA SHP (1.6 MMW)

The project was earlier envisaged as DDG project. APGCL had engaged APPDCL for preparation of DPR of the project. After necessary hydrological study the earlier concept to implement the project as DDG was dropped and now planned as SHP project for generation of 1.60MW of Power. APPDCL (JV of Assam Govt and ILFS) has reportedly bid out the project for implementation.

#### 5. OTHER DDG PROJECTS

APGCL has engaged APPDCL for development of DDG projects. Till now, APGCL has forwarded 2 (two) Nos of DPRs namely Haru (2x20KW) and Langsomipi (2x40KW), (both located in the Karbi Anglong district) to REC for concurrence and extending necessary financial assistance for implementation of these projects.

#### 6. UNDER INVESTIGATION

APGCL is doing survey and investigation at the following locations:

- i) Sunani (Karbi Anglong)
- ii) Maine(Karbi Anglong)
- iii) Silbheta (Karbi Anglong)
- iv) Bonda( Kamrup)

#### 7. DEVELOPMENT OF OTHER SMALL HYDRO ELECTRIC PROJECTS IN ASSAM UNDER RENEWABLE ENERGY

The development of Small Hydro below 25 MW can play a key role in meeting up the need of electrification in the far flung area of the State, where needy villagers are deprived of electricity. The Govt. of Assam has decided to encourage generation of power through Small Hydro Electric Project (SHP) sources of energy and has framed a policy so that the development of this sector serves as an engine to achieve the objective of promoting the all round development of the region by including private sector participation. A policy to this effect has accordingly been framed up, which was notified in the gazette of during March 2007. On publication of the policy, an investment avenue for approximately ₹900.00 Crore has been opened up for Independent Power Producers (IPP)/User societies.

On the SHP policy of Govt of Assam, 90 locations have listed for development of SHP with power potential in the order of 148.90 MW. Out of these, few projects have already been developed by Assam Power Project Development Company limited (a Joint Venture of Govt of Assam and M/S Infrastructure Leasing & Financial Services Limited (ILFS) has already taken up some projects.

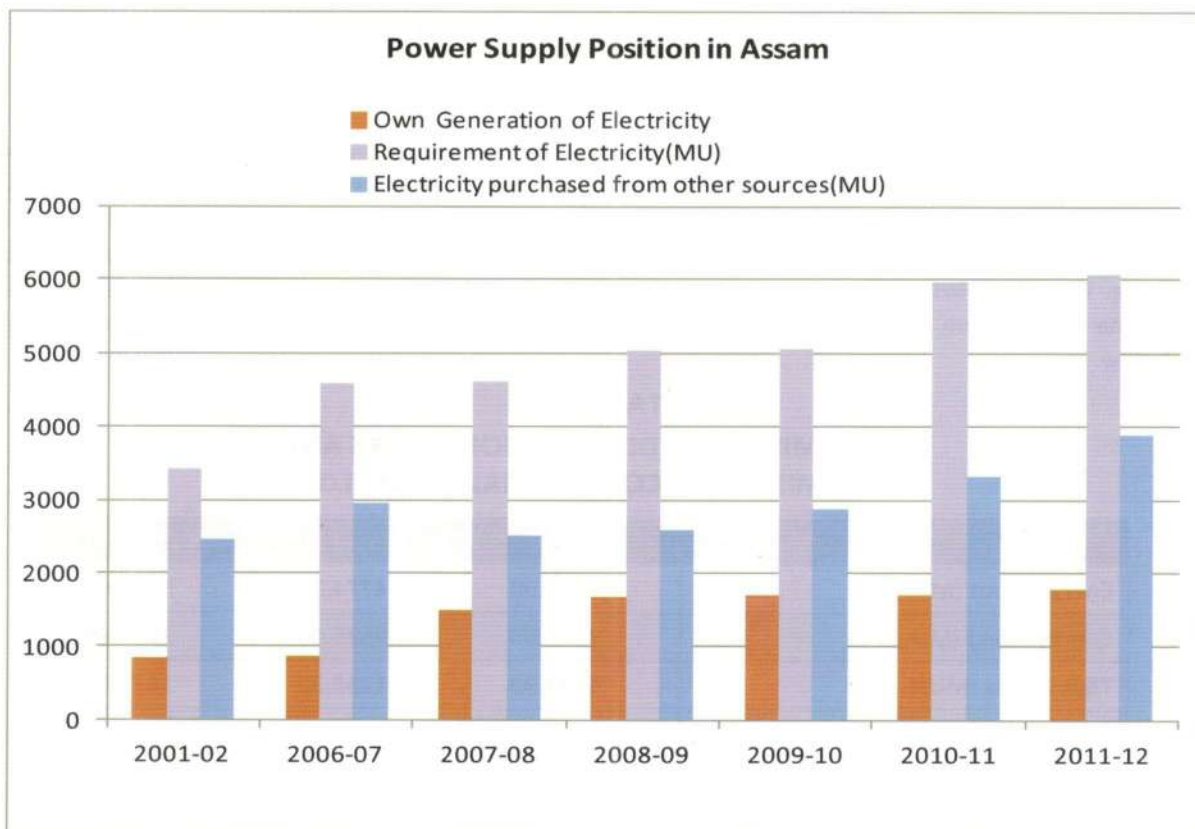
#### INSTALLED CAPACITY AND GENERATION OF POWER

The installed capacity of generating plants at present in the State is 401.5 MW which include Coal, Hydel and Gas plants of the state. The installed capacity for generating power has come down due to de-commissioning of Bongaigaon Thermal Power station (BTPs) and Mobile Gt sets and de-rating of age-old units of Namrup (NTPS).

The status of power generation in the state is not satisfactory from the point of power requirement of the consumer. There has been always a shortage of power supply in the state due to generation of less amount of power in comparison to its demand. However, the ASEB has been trying to meet the power shortage by importing power from other foreign sources. As a result of functioning of Hydel power project since 2006-07 the scenario in respect of power generation has slightly been improving and generation of power increased to 1541.32 mu in 2007-08 from 867.53MU in 2006-07. In 2009-10, generation of power increased to 1712.21MU from 1682.82MU in 2008-09. During 2010-11, generation of power have registered a nominal fall of 0.25% as compared to previous year. In 2011-12 power generation have increased to 1773.00MU. The installed capacity of various generating plants and the generation of power in the State during the last few years have shown in the table 12.1.

**TABLE-12.1**  
**INSTALLED CAPACITY AND GENERATION OF POWER BY ASEB**  
**(in million units)**

Year	Installed Capacity of Generating Plant(M.W)				Gross Unit Generated(MU)		
	Thermal	Hydal	Gas	Total	Hydal	Gas	Total
2006-07	60.0	102.0	253.5	415.5	15.438	852.10	867.54
2007-08	60.0	102.0	239.5	401.5	509.20	988.94	1498.13
2008-09	60.0	102.0	239.0	401.5	434.40	1248.20	1682.82
2009-10	60.0	102.0	239.0	401.5	401.91	1310.30	1712.21
2010-11	60.0	102.0	239.0	401.5	409.49	1298.27	1707.76
2011-12	60.0	102.0	239.0	401.5	455.0	1318.00	1773.00



### POWER SUPPLY POSITION

The energy requirement in the State has been worked out at 6081 Million Unit (MU) during the year 2011-12 as against 5967 MU in the previous year but the availability of energy during the periods was 5670 MU and 5028 MU respectively. To meet the demand of the requirement of power the ASEB has been purchasing power from other public and private sources. As per Census, 2011, out of the total population 37% population of the State are using electricity for lighting purposes.

**TABLE-12.2**  
**PER CAPITA AVAILABILITY STATUS**

Year	Electrical Energy (million unit)		*Population	Per capita Requirement (Kwh)	Per Capita Availability (Kwh)	Per Capita Shortage of Power (Kwh)
	Requirement	Avalability				
2001-02	3415	3302	**26655528	128	124	4
2005-06	4216	3536.90	28506000	150	124	26
2006-07	4585	3826.55	28896000	159	132	27
2007-08	4621	4018.00	29282000	158	138	20
2008-09	5039	4270.00	29660000	170	144	26
2009-10	5049	4590.00	30037000	168	153	15
2010-11	5969	5031.00	3041300	196	168	31
2011-12	6081	5670.00	**31169000	196	183	14

\* Estimated on projected population.

\*\*Estimated on Population Census 2001 and 2011

Source : Commercial Wing of ASEB.

#### TRANSMISSION AND DISTRIBUTION LOSSES

Power, which is supplied to various categories of consumers passes through various stages -from transformation to higher voltage level to final distribution in the premises of the consumers, involves energy losses is known as Transmission and Distribution losses. The Transmission and Distribution loss in the State was calculated as 29 percent during the year 2011-12, which includes commercial losses as well. The situation has been gradually improving. The power loss through transmission is however an area of concern for the power deficit State like Assam. The transmission and distribution losses in Assam during the last three years have shown in the Table 12.3 below.

**TABLE-12.3**  
**TRANSMISSION & DISTRIBUTION LOSSES AND**  
**TRANSMISSION & COMMERCIAL (AT&C) LOSSES**

Item	2009-10	2010-11	2011-12(P)
Energy Input (MUs)	4391.90	4774.30	5418.64
Energy Billed (MUs)	3247.00	3535.00	3969.89
T&D Losses (MUs)	1144.90	1238.30	1678.81
Percentage of T&D Losses (MUs)	26	26	29.72
Amount Billed (Rupees in lakh)	1463.19	1656.00	2084.81
Amount realized (Rupees in lakh)	1421.74	1596.10	2029.51
Collection Efficiency (Percentage)	97	96	97
Overall Efficiency (Percentage)	72	71	71
AT&C Losses (Percentage)	28	29	29

AT&C losses : Aggregate Transmission and Commercial Losses.



## NUMBER OF CONSUMER IN THE STATE

The number of consumers in the State, as reported by Assam Power Distribution Company Limited, for last two years were as follows:

**TABLE – 12.4**  
**TOTAL NUMBERS OF CONSUMER**

Year	Domestic	Commercial	Total
2010-11	1655207	166399	1821606
2011-12	1863424	173005	2036429

The demand for electricity consumption in the State has been increasing day by day. It is observed that total number of consumers both domestic and commercial have increased by around 12% in 2011-12 as compared to 2010-11, whereas the own power generation in the State has increased around 4% only and to meet the demand of the consumers in the State ASEB system has been purchasing power from other sources.

## RURAL ELECTRIFICATION

Rajiv Gandhi Grameen Vaidutikaran Yojana (RGGVY), a scheme for attaching the goal of provide access to electricity to 8348 nos. of un-electrified (UE) villages and 12967 nos. of Already Electrified (AE) villages requires creation of the following infrastructure in its 1<sup>st</sup> Phase of works within the State of Assam.

11 KV Lines	24301 KM.
Three Phase LT Lines	2292 KM.
LT Single Phase Line	17682 KM.
Distribution of Transformer	21284 Nos.
33/11 KV Sub-Station	32 Nos.
BPL Service connection (at free of cost)	Approximate 10 lakh Nos.

The status of village electrification in Assam before implementation of RGGVY as on 31.03.2007 was as under.

Total no. villages as per 2001 Census	25124
No. of electrified villages	18567
Percentage of Villages electrified	74
No. of un-electrified villages	8406
No. of remote villages	2202

## RGGVY PROJECT COST

Under Assam State Electricity Board (ASEB) 10<sup>th</sup> Five Year Plan ... ₹124.44 Crore  
 11<sup>th</sup> Five Year Plan ... ₹1595.51 Crore  
 Total ... ₹1719.95 Crore

Under Power Grid Corporation Ltd (PGCL) 10<sup>th</sup> Five Year Plan ... ₹64.09 Crore  
 11<sup>th</sup> Five Year Plan ... ₹323.75 Crore  
 Total ... ₹487.84 Crore

The task of electrification of 2202 nos. of remote villages is being taken up by the Remote Village Electrification Wing of ASEB (1120 nos.), Forest Department, Govt. of Assam (162.nos.) and Assam Energy Development Agency (920 nos.) through non-conventional method of Rural Electrification. The achievement as on Feb'2011 are as follows:

Institution	Villages Electrified (Nos.)		
	Target	Achievement	% of Achievement
Assam State Electricity Board	1120	923 nos.	82
State Forest Department	162	82 nos.	50
Assam Energy Development Agency	920	611 nos.	66

In Assam, implementation of the RGGVY was started in April 2007 in three Districts namely Tinsukia, Goalpara & Cachar under 10<sup>th</sup> Five Year Plan. Of these three projects, ASEB implemented Tinsukia & Goalpara Projects while implementation of Cachar District Project was entrusted to PGCIL. The works of these projects are completed. The sanctioned coverage and achievement up to **30.06.12** is in the following.

Under 11<sup>th</sup> Five Year Plan, 20 (twenty) district Projects have been sanctioned and implementing agencies are as under:

Sl. No.	District	Implementing Agency
1	Dibrugarh	PGCIL
2	Sibsagar	
3	Sonitpur	
4	Karimganj	
5	Hailakandi	
6	Kokrajhar	PGCIL & ASEB
7	Jorhat	A. S. E. B.
8	Golaghat	
9	Morigaon	
10	Nalbari	
11	Darrang	
12	Barpeta	
13	Kamrup	
14	Bongaigaon	
15	Dhubri	
16	Nogaon	
17	N. C. Hills	
18	Karbi-Anglong	
19	Lakhimpur	
20	Dhemaji	

Initially the project completion period of 11<sup>th</sup> Five Year Plan Projects was 18 months but it has been extended by Govt. of India to 24 months from the date of award of contract because of constraints encountered by the implementing agencies in the country.

#### PROGRESS OF RAJIV GANDHI GRAMIN VIDYUTIKARAN YOJANA (RGGVY)

##### ACHIEVEMENT DURING TENTH FIVE YEAR PLAN

Following three projects were sanctioned during the 10<sup>th</sup> Five Year Plan and the achievement in these projects were as follows:

District	Date of Award	Sanctioned			Achievement		
		UE Villages	AE Villages	BPL service connection	UE Villages	AE Villages	BPL service connection
Tinsukia	February'07	350	725	44548	350	725	51548
Goalpara	April'07	323	361	30905	323	361	30908
Cachar	March'07	230	660	45000	230	660	45000
Total		903	1746	120453	903	1746	127456

It may be seen from the above that the achievement is 100% in respect of all items of electrification of un-electrified (UE) villages, intensification of already electrified (AE) villages and providing connection to BPL families.

For Eleventh Plan, remaining 21 projects were sanctioned and the achievements are as follows:

#### ACHIEVEMENT IN ELEVENTH FIVE YEAR PLAN

District	Date of award	Sanctioned			Achievement		
		UE	AE	BPL	UE	AE	BPL
Jorhat (Incl. Ph-II)	June'08/25 <sup>th</sup> Feb'11	243	472	60529	243	472	39201
Golaghat (Incl. Ph.-II)	Sept'08/ 24 <sup>th</sup> Feb,11	483	508	71034	483	508	58955
Morigaon(inl. Ph-II)	June'08/8 <sup>th</sup> Dec'11	257	221	52654	243	215	35417
Nalbari (inl. Ph-II)	June'08/8 <sup>th</sup> Dec'11	145	653	85730	145	596	45672
Darrang (inl. Ph-II)	Sept.'08/15 <sup>th</sup> March'11	204	1082	66489	204	969	58506
Barpeta	February'09	226	710	63567	189	646	44609
Kamrup	January'09 & Jan'10	379	927	74943	356	867	66921
Bongaigaon(Incl.Ph-II)	January'09	351	501	41969	335	489	35213
Dhubri	January'09	393	782	74274	362	652	43726
Nagaon(Incl.Ph-II)	January'09 & Jan'10/16 <sup>th</sup> Dec'11	358	1003	116578	317	887	75296
N. C. Hills	January'09	242	128	4681	169	104	2705
Karbi-Anglong	January'09	1380	436	31504	1367	436	30340
Lakhimpur(inl. Ph-II)	March'09/26 <sup>th</sup> Mar'12	547	503	50300	531	494	32170
Dhemaji	March'09	631	294	21322	580	285	19613
Kokrajhar (2 packages under ASEB)	Nov'09	308	284	29570	243	166	4328
Total (ASEB)		6153	8504	872191	5769	7788	568919
Dibrugarh	Feb'09	245	686	24240	242	585	12348
Sivasagar	Feb'09	92	339	13505	92	313	9166
Sonitpur	Feb'09, Jan'09 & Dec'08	569	916	65817	528	913	45307
Hailakandi	March'09	63	249	9788	63	173	9788
Karimganj	May'09	210	459	27488	199	245	21246
Kokrajhar (1 packages under PGCIL)	Feb'09	122	130	11329	122	107	9954
Total (PGCIL)		1301	2779	152167	1246	2336	108809
Grand Total(ASEB+PGCIL)		7445	11283	1024358	7015	10124	677728
Total (X+X) the Plan		8357	13029	11144811	7918	11870	805184

As per information received from ASEB, out of the total 26395 number of villages as per Census,2011, in the State, the number of villages electrified was 22294 (84%) till 2011-12.

## ELECTRIFICATION OF VILLAGES IN ASSAM

(RGVY only)

District	No. of villages Electrified (Cumulative)	
	2010-11	2011-12
Dhubri	1122	1226
Kokrajhar	515	754
Bongaigaon	793	836
Goalpara	741	741
Barpeta	934	998
Nalbari	727	739
Kamrup(M)	1130	1292
Darrang	1275	1305
Sonitpur	1484	1542
Lakhimpur	963	1082
Dhemaji	740	1023
Morigaon	447	468
Nagaon	1216	1317
Golaghat	1027	1032
Jorhat	769	769
Sivasagar	452	452
Dibrugarh	912	1035
Tinsukia	1075	1075
Karbi-Anglong	1903	2211
N. C. Hills	366	445
Karimganj	675	749
Hailakandi	309	313
Cachar	890	890
Baksa*		
Chirang**		
Udalguri***		
Assam	20465	22294

N. B. : \* Baksa is included in Nalbari District

\*\* Chirang is included in Bongaigaon District

\*\*\* Udalguri is included in Darrang District

## REQUIREMENT AND SHORTAGE OF ELETRICITY IN ASSAM

Item	2001-02	2005-06	2007-08	2008-09	2009-10	2010-11	2011-12
Energy Requirement (MU)	3415	4216	4621	5039	5049	5967	6081
Availability(MU)	3302	3537	4018	4270	4590	5028	5670
Shortage(MU)	113	679	603	769	459	939	411
Shortage (in %)	3.33	16	15	13	9.1	15.68	6.75
Peak Demand(MW)	553	716	891	972	974	1066	1135
Peak Demand Met (MW)	519	576	775	824	885	828	1024
Shortage(MW)	34	140	116	148	89	238	111
Shortage(in%)	6.15	18	13.04	15.25	9.13	22.32	9.78



## CHAPTER – XIII

### TRANSPORT AND COMMUNICATION

Transport and Communication is the vital infrastructure for development of a modern economy. An efficient transport system integrates remote, backward and urban areas and plays a vital role in increasing productivity and improving quality of life. Moreover, development of this sector generated large employment opportunities.

Assam being the gateway of the North East India, the need for development of transport and communication sector in the State is of vital importance for speedy economic development of the region. Due to its geographical isolation, transport has been a major bottleneck in the process of economic progress of the State. The State although served by all the modern means of transport viz., roads, railways, waterways and airways, there is enough scope for further improvement of the facilities. However, contribution of this transport and communication sector calculated at 10.4 percent of State Gross Domestic Product in 2011-12(Q) at constant (2004-05) prices. The position of the State with regard to the existing means of transport and communications is described briefly in the following paragraph.

#### Roads

The principal function of the Public Works Department (PWD) is to develop the infrastructure for transport & Communication of the State and Residential & Non-residential accommodation facility in the State. The Assam PWD (Roads wing) is primarily responsible for improvement of road communication through construction and maintenance of roads, bridges and culverts for speedy development of the State.

The road network in Assam comprises of total 51878 Km of roads consisting of 2848 Km National Highways, 3134 Km State Highways, 4413 Km Major district roads, 2496 Km Urban roads, 36544 Km Rural Roads and 2443 Km Project & Other Non PWD Roads.

At present 47449.81 Km road network including 1949.81 Km National Highways [out of total 2848.32 Km NH Way length] is maintained by the State PWD. Excluding the National Highways, 21200 Km out of the total 45500 Km road length maintained by the PWD is blacktopped. Amongst the black topped roads 19963 Km is Single lane, 974 Km Intermediate lane, 263 Km are double lane or above. Presence of large number of submersible stretches and existence of large number of semi-permanent timber bridges have hampered all weather road communication on many of the roads in the State. Moreover, considerable portion of the maintenance fund has to be spent on maintenance of these bridges which hinder the interest of speedy development. However, about 5000 Km of road length and more than 1398 number of bridges is taken up for improvement by the State PWD under different projects.

**TABLE – 13.1**  
**ROAD NETWORK IN ASSAM**

Item	(in Km)				
	2007-08	2008-09	2009-10	2010-11	2011-12
Surfaced Road*	10488	13734	13163	18753	21200
Un-surfaced Road	24458	23187	24338	21047	24300
National Highway	2754	2755	2841	2841	2848
State Highway	3134	3134	3134	3134	3134
Major District Road	4414	4413	4413	4413	4413
Rural Road	26221	27283	28753	30844	36544
Urban Road	1177	1173	1202	1409	1409

\*Excluding National Highways

Source: Office of the Chief Engineer PWD (Roads), Assam.

The surfaced road kilometer [excluding NH Way] constitutes 43.24 percent of the total road length in the State as on March 2012. This indicates that as against total road length availability [including NH Way and Project roads] of about 66.14 km per 100 sq.km and about 166 km per lakh of population [2011 Census] as on March 2012, about 27.0 km per 100 sq.km of geographical area and about 67.9 km per lakh of population [2011 Census] of surfaced roads are available in the State during the same period.

To maintain smooth road communication, the State PWD has been maintaining a good number of RCC bridges on State Highways, Major District Roads, Rural Roads and Urban Roads. Among the maintained RCC bridges by the State PWD, 309 bridges were constructed upto the year 2001, 497 bridges constructed during 2001-2006 and 1456 bridges during 2006-2012( upto March). At present as many as 1398 RCC bridges are under construction. In addition to the RCC bridges, there are 2099 SPT bridges maintained by the State PWD that need to be converted to RCC bridges.

### National Highway Development Project

The National Highway Authority of India (NHAI) is mandated to implement National Highways Development Project (NHDP) in the country.

Out of the total 71772 km length of NH in the Country, Assam's share is only 4.00 percent. Compared to 21.83km NH length per thousand sq.km geographical areas and 5.93 km NH length per lakh of population (2011 Census) of the country as a whole, Assam has 36.3 km per thousand sq.km geographical areas and 9.14 km NH per lakh of population in the State.

As on 31st December, 2011, twenty six improvement works costing ₹930.96 crore, are in progress in Assam.

A length of 678 km [East West corridor, Assam portion] connecting Silchar to Srirampur via Lumding-Daboka-Nagaon-Guwahati, except for 31 km between Udarband and Harangajo [a portion of East-West corridor fall in Assam] has been entrusted to NHAI under NHDP Phase-II is in progress. For the 31 km stretch between Udarband and Harangajo, Detailed Project Report (DPR) for realignment is in progress and four laning works are in different stages of progress. The costs involvement for this 31 km stretch estimated amounting to ₹51.61 crore for improvement to 2-lane has been approved by the Ministry under NH (O). The work is in progress.

In addition, Government of India has proposed to construct/improve roads connecting Doboka (Assam) to Dimapur (Nagaland Border), Baihata-Chariali to Banardewā, Banardewā (Assam) to Arunachal Border, Assam/Meghalaya Border to Assam Tripura Border and Silchar (Assam) to Mizoram Border under NHDP Phase-II.

Under the CRF, eighty seven works amounting to ₹338.90 crore have been taken up so far for the improvement of state roads. Under the ISC & EI scheme, one work costing ₹4.95 crore are in progress.

Government has approved implementation of four laning of NH-37 from Numaligarh to Dibrugarh (201 km) along with construction of 4-lane Bridge over river Brahmaputra connecting Numaligarh and Gohpur on NH-52 on Built Operated and Transfer [BOT (Annuity)] basis and two laning with paved shoulders of single lane stretches of NHs of 1179 Km in the State of Assam under Phase 'A' SARDP-NE.

Government of India has approved implementation of Arunachal Pradesh Package of Roads & Highways covering 2319 Km of roads at an estimated cost of ₹11703 crore. Out of 2319 km, 139 km falls in Assam.

### Development under the Plan and Other Schemes

Besides State's own resources, the Assam Public Works Department [PWD] is implementing various Road, Bridge and Building projects funded from the Govt. of India, World Bank, NABARD and NEC. Some developmental activities as undertaken by the Assam PWD and as reported are briefly discussed below:

#### PMGSY (Pradhan Mantri Gram Sadak Yojana)

Under this programme, prioritized rural roads of the core network are funded with the objective of providing connectivity to the unconnected habitations. The programme was launched during the year 2000-01. The achievements of implementation under the scheme so far-

Up to date Road length sanctioned upto 2008-09	...	:	15909 Km
Road length completed	...	:	13151 Km
Amount sanctioned	...	:	₹8801.81 Cr
Amount released by GOI	...	:	₹7434.71 Cr
Fund Utilized	...	:	₹7146.79 Cr
Habitation sanctioned (1000+)	...	:	6102 Nos
Habitation already connected	...	:	5146 Nos
Balance length in progress	...	:	2758 Km
Balance Habitation (1000+) to be connected	...	:	956 Nos

In addition to the above, under the RCIP Trench-I to be funded by the ADB, (Loan no. 2881), an amount of \$ 56.429 million (**₹310.48 crore**) has recently been cleared by MoRD, Govt. of India for construction of **426.429 km** for connecting 239 habitations of 500+ population. It also includes 90 nos. of RCC bridges (39 nos. up to 15m length and 51 nos. above 15m up to 50m length).

Further, DPRs for construction of more all weather roads are under preparation.

### MPNA (Mukhyamantrir Pakipath Nirman Achani)

This programme has been launched by the Govt. of Assam with the objective of providing connectivity with all weather roads to unconnected habitations as in PMGRY. Under this scheme, 1039 Km of roadwork have been sanctioned. Progress of the scheme is detailed as under:

Total Length sanctioned	...	:	1039 Km
Length completed	...	:	1006 Km
Dropped due to land problem, etc	...	:	4 Km
Balance length in progress	...	:	33 Km
Bridge sanctioned	...	:	2 Nos
Bridge completed	...	:	2 Nos
Amount sanctioned	...	:	₹320.64 Cr
Fund Utilized	...	:	₹310.00 Cr

### MPDNA (Mukhya Mantrir Paki Dalang Nirman Achoni)

This programme has been launched by the Govt. of Assam with the objective to replace existing wooden bridges of remote rural areas by constructing RCC bridges for improvement of connectivity. Under this scheme, 199 RCC bridges have been sanctioned. Progress of the scheme is detailed as under:

RCC Bridges sanctioned	...	:	199 Nos
RCC Bridges completed	...	:	85 Nos
Ongoing	...	:	114 Nos
Total cost	...	:	₹119.93 Cr
Fund utilized	...	:	₹79.67 Cr

### Assam Vikash Yojana

Roadwork sanctioned	...	:	115 Km
Completed	...	:	102 Km
Ongoing	...	:	13 Km
Bridge sanctioned	...	:	13 Nos
Completed	...	:	8 Nos
Ongoing	...	:	5 Nos
Total cost	...	:	₹187.55 Cr
Fund Utilized	...	:	₹161.23 Cr

### Assam Agricultural Competitive Project (AACP)

This is a World Bank funded project. The GOI has received a credit from IDA on behalf of the State of Assam for the AACP that includes rural road component alongwith agricultural and its allied farm sector. The rural road component is to be implemented in nine districts of Assam viz., Jorhat, Sonitpur, Nalbari, Dhubri, Hailakandi, Barpeta, Goalpara, Morigaon and Karimganj. The physical achievements under the Project are detailed below:

Road work sanctioned	...	:	676 Km
Completed	...	:	676 Km
Bridges sanctioned	...	:	173 Nos
Completed	...	:	172 Nos
Total cost	...	:	₹502.45 Cr
Fund released	...	:	₹455 Cr

### NEC Scheme

Roadwork sanctioned	...	:	2119 Km
Completed	...	:	2025 Km
Ongoing	...	:	94 Km
Bridge sanctioned	...	:	347 Nos
Completed	...	:	338 Nos
Ongoing	...	:	9 Nos
Amount sanctioned	...	:	₹1311.91 Cr
Fund Utilized	...	:	₹1121.43 Cr

### RIDF [Loan assistance from NABARD] Projects

Roadwork sanctioned	...	:	832 Km
Completed	...	:	507 Km
Ongoing	...	:	325 Km
Bridge sanctioned	...	:	498 Nos
Completed	...	:	309 Nos
Ongoing	...	:	189 Nos
Total cost	...	:	₹1336.87 Cr
Fund utilized	...	:	₹832 Cr

### Central Road Fund (CRF) and Centrally Sponsored Schemes for State Road of Inter State Connectivity and Economic Importance

Roadwork sanctioned upto 2008-09	...	:	974 Km
Completed	...	:	798 Km
Ongoing	...	:	176 Km
Bridge sanctioned	...	:	28 Nos
Completed	...	:	27 Nos
Ongoing	...	:	1 No
Amount sanctioned	...	:	₹371 Cr
Fund Utilized	...	:	₹320.31 Cr

### Assam State Road Project (ASRP)

The objective of the project is to provide road users in Assam with good quality and better managed state highways and major district roads. Its progress will be monitored through – (i) road condition, (ii) traffic speed, (iii) level of service, (iv) performance on road maintenance, and (v) improvement of business procedures of PWD.



- The Assam State Roads Project with project costs of US\$ 400 million is being implemented for improving the State Highways (SH) and the Major District Roads (MDR) network in the State. The loan agreement for the project has been signed on November 5, 2012 between the World Bank and the Govt. of India on behalf of Govt. of Assam. The project is to be implemented with US\$320 million World Bank loan and US\$ 80 million State funding.
- The project components include: 1: Road Improvement, 2: Road Sector Modernization and Performance Enhancement and 3: Road Safety Management.
  - The road improvement component includes improvement and upgradation of 300 Kms of SHs; rehabilitation of 220 Kms of SH and MDRs; and construction of modern technology demonstration innovative bridges.
  - A road sector modernization Programme is to be implemented during 2012-17 for road sector improvement and performance enhancement.
  - A road safety management programme is to be implemented for road safety improvement projects on identified road sections; development and operationalization of a road accident database and management system; building road safety capacity for PWRD during design, construction and operation stages; and awareness programs on road safety and work zone safety.

### Present status

Signing of Contract Agreement for the awarded 6 improvement packages of length 144 Kms for ₹388.00 crore is in progress.

Tendering is in progress for another 3 improvement packages of length 69 kms for ₹215.61 crore and 5 rehabilitation packages of length 167 kms for ₹79.85 crore.

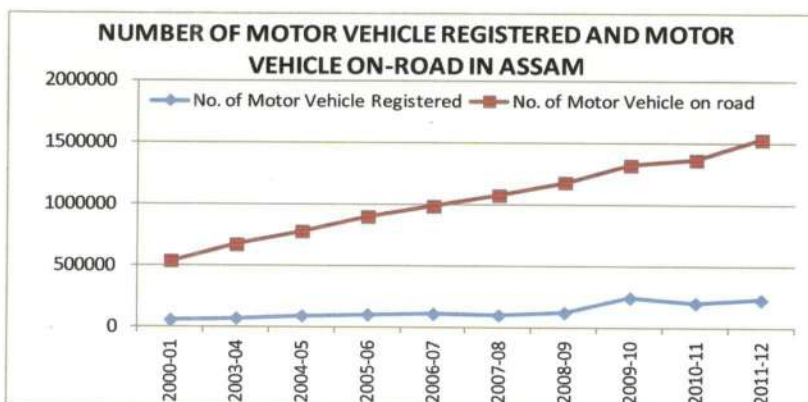
### ROAD TRANSPORT

Road transport is considered to be one of the most cost effective and preferred mode of transport, both for freight and passengers, keeping in view its level of penetration into populated areas. Thus, it is vital to economic development and social integration of the country. Easy availability, adaptability to individual needs and the cost savings are some of the factors which go in favour of road transport. Road transport also acts as a feeder service to railway, shipping and air traffic.

### Motor Vehicles

The rapid increase of the number of motor vehicles on road in Assam has been observed over the past few years. The on road vehicle population in the State has reached 1528269 as March 2012 as against 1363625 as on March 2011. An additional of 226010 vehicles was added during the year 2011-12 as against 199076 vehicles was added during the year 2010-11. Out of the total 226010 vehicles during the year 2011-12, according to the Motor vehicle registering authority of the State, about 63 percent vehicles were two wheelers. The growth of total number of registered vehicles recorded a compounded annual growth rate of 16.36 percent during the period 2004-05 to 2011-12.

Total number of Motor vehicles on road in the State, while recorded 12.0 percent as on March 2012(1528269) over the previous year, it indicates galloping increase around 186.0 percent when compared with the figures as on March 2001(534885). Among the total vehicles on road in the State as on March 2012, about 58 percent were two wheelers.



The density of motor vehicles in Assam was slightly above 19.0 per sq. km. during 2011-12 as against 17.38 per sq.km during 2010-11. During the year 2000-01, density of motor vehicles in Assam was 6.8 per sq. km.

The increase in the number of Motor vehicles registered as well as Motor vehicles on road in the State over the years may be evident from the Table 13.3.

**TABLE – 13.2**

**NUMBER OF MOTOR VEHICLE REGISTERED AND MOTOR VEHICLE ON-ROAD IN ASSAM**

Year	No. of Motor Vehicle Registered	No. of Registered Motor Vehicle per		No. of Motor Vehicle on road	No. of Motor Vehicle on road per	
		100 Sq.Km.	Lakh of Population		100 Sq. Km.	Lakh of Population
2000-01	52518	67	198	534885	682	2017
2003-04	67265	86	243	670580	855	2419
2004-05	88470	113	315	777328	991	2765
2005-06	98897	126	347	898926	1146	3153
2006-07	106666	136	369	983488	1254	3404
2007-08	96796	123	331	1074763	1370	3670
2008-09	119126	152	402	1180177	1504	3979
2009-10	241247	308	803	1320867	1684	4397
2010-11	199076	253	655	1363625	1738	4484
2011-12	226010	288	725	1528269	1948	4903

Source: Office of the Commissioner of Transport, Assam and Directorate of Economics and Statistics, Assam

With the increase of growth of motor vehicles, reporting of number of road accidents in the State is also increasing. During the year 2011-12, number of road accidents reported in the State was 6617 which was 11.6 percent higher compared to 5929 road accident cases reported in 2010-11. The number of persons killed and injured as a result of road accidents during 2011-12 were 2375 and 6741 respectively. While the number of persons killed recorded 5.6 percent higher during the year 2011-12 over the previous year, the number of persons injured reported 8.9 percent less during same period. The number of persons killed and injured during the year 2010-11 was 2250 and 7404 respectively. The number of persons killed per 100 accidents recorded 35.9 during the year 2011-12 compared to 38.6 during 2010-11.

The Road accidents severity in Assam may be evident from the Table below.

**TABLE – 13.3**

**NUMBER OF ROAD ACCIDENTS AND PERSONS INVOLVED IN ASSAM**

Year	Number of Accidents	Number of Persons		Accident Severity*
		Killed	Injured	
2000-01	2516	1021	3744	40.6
2005-06	4694	1841	5435	39.2
2006-07	4403	1604	5697	36.4
2007-08	4683	1807	5081	38.6
2008-09	4641	1803	5115	38.8
2009-10	5263	2099	6082	39.9
2010-11	5929	2250	7404	38.0
2011-12	6617	2375	6741	35.9

\*Accident Severity: Number of persons killed per 100 Accidents.

Source- Office of the Additional Director General of Police, Criminal Investigation Department, Assam.

The Commissionerate of Transport has proposed/intended to construct driving track in every district in a phased manner in order to have a sound Transport System to check road accidents throughout the State. A Driving Training Institute has been constructed at Betkuchi (Guwahati City) at a cost of ₹437.36 lakh. To make the Institute functional, construction of the Driving Track become essential for which the State Government has allotted a plot of land measuring six (6) bighas to the Institute and released ₹100.00 lakh during 2010-11. In addition the department has proposed to install a Driving Simulator in the said Institute at an estimated cost of ₹100.00 lakh during 2012-13. The District Administrations of Nalbari and Barpeta have also made available a plot of land measuring four (4) bighas and eight (8) bighas respectively for their respective districts for construction of driving track.

Apart from providing fast and comfortable services to the commuters as well as to create self-employment avenues among the unemployed youths, Trekkers services have been introduced in the State, which became not only very popular in the greater Guwahati and in adjoining areas but also in various parts of the State.

The collection of transport revenue by the Department of Transport during the year 2011-12 was ₹307.24 (P) Crore as against ₹281.00 crore in 2010-11. The collection of transport revenue during the year 2011-12 was 9.34 percent more than that of 2010-11. During the year 2009-10, the amount of revenue collected by the department was ₹213.79 crore.

### Assam State Transport Corporation

The Road Transport is the most important means of communication for the movement of goods as well as passengers traffic in the State. In the road transport system of the State, both public and private sector operators are playing equally important role. Earlier, the Assam State Transport Corporation (ASTC), a State Government undertaking and one of the premier public enterprises of the State with its headquarter in Guwahati, is mainly concerned with the movement of passenger traffic on the nationalized routes of the State, while the private sector road transport operators are involved in the Intra-State movement of both goods and passenger traffic throughout the State. With the changing scenario, both the ASTC and private operators are providing transport services equally in the interest of passenger traffic. The ASTC has been providing efficient, safe, reliable, economic and dedicated services to the people especially in the rural and other backward areas since its inception and have earned the appreciation of the people of the State. ASTC has luxury and regular buses for normal bus routes and special mini buses for hill routes. ASTC operates Night Super deluxe, Executive class, air conditioned class and Volvo coach buses providing affordable fares and reliable road transport to passengers. Besides providing online ticket booking facility to passengers, ASTC also provides courier services, cargo services.

As a step towards improvement of passenger amenities the State Government has already constructed two Inter-State Bus Terminus (ISBT) one at Guwahati and the other at Silchar to facilitate Inter-State transportation of passengers. At present, both the Inter-State Bus Terminuses are fully functional. Inter-State Bus Terminuses have also been constructed at Jorhat, Dibrugarh and Sivasagar by the ASTC with all modern facilities for passengers and bus operators. For providing better passenger amenities, it is proposed to construct new Bus Terminuses at Guwahati City (City Service), Bongaigaon, Halflong, North Lakhimpur and Nalbari. The ASTC has also proposed to construct a modern Inter-State Bus Terminus at Adabari to cater to the demands of the increased number of buses and passengers and to reconstruct /improve the present status of 100 numbers of Station buildings, both major & minor, spread all over the State during 12<sup>TH</sup> Five Year Plan.

To improve its performance and for better transport connectivity, as a part of the Public Transport Policy of the Govt. of India, the ASTC needs to purchase new Buses every year for replacing the old and over-aged ones as well as to augment its fleet position to further mobilize its earnings. During the period of first four years of the 11<sup>TH</sup> Five Year Plan (2007-2011), ASTC acquired as many as 281 new vehicles and planned to acquire 200 more vehicles during the year 2011-12. The performance of ASTC during the last three years may be evident from the table 13.4.

**TABLE – 13.4**  
**PERFORMANE OF ASSAM STATE TRANSPORT CORPORATION (ASTC)**

Year	Average nos of own vehicle held	Av. No of own Vehicle on road	Fleet utilisation (%)	Total km operated during the year (in lakh)	Monthly Av. Net income from own buses (₹ In lakh)	Staff-Bus ratio	No of Private Buses operated under ASTC	Monthly Av. Income from Privately operated buses (₹ in lakh)
2009-10	312	271	87	148.92	70.42	8:01	1317	103.92
2010-11	357	299	84	159.45	85.30	6:01	1189	95.12
2011-12	538	441	82	222.36	123.61	5:01	1170	92.25

Source: Assam State Transport Corporation.

At present, ASTC is having a fleet of 550 nos. of vehicles. To cater the transportation needs of the ever increasing population in both the urban and rural areas of the State, the ASTC has planned to increase its number of vehicles from the present position of 550 buses to over 1550 buses [@ 330 buses per year] by the end of the Twelfth Five Year Plan. With the augmentation of fleet, the procurement of bus chassis will increase which will assist the small scale industries engaged in fabrication of bus bodies and ancillary business to boost their business as well as help in employment generation. Moreover, the ASTC is having a substantial area of un-utilised land within its Station Complexes spread all over the State and these properties can be utilised for commercial purposes, such as, construction of market complexes, parking yard for small segment vehicles etc., which can be let-out to educated un-employed youth of the State, thereby, generating employment opportunity as well garnering additional revenue for the Corporation. For creating the necessary infrastructure the ASTC has planned to invest ₹100.00 lakh during the 12<sup>TH</sup> Five Year Plan period.

The ASTC is implementing **Dharmajyoti Scheme** under which 50 percent bus fare is charged from the pilgrims visiting religious places within and outside the State of Assam. The Scheme has become very popular that more than 2(two) lakh pilgrims have availed the facility.

### Railways

As per information available from the N.F. Railway, Headquarters, Maligaon, Guwahati, the railway route length in Assam at the end of 2011-12 was 2458.93 km comprising of 1470.06 km under Broad Gauge and 988.87 km Meter Gauge compared to was total railway route length of 2433.99 km comprising of 1443.03 km under Broad Gauge and 990.96 km Metre Gauge in 2010-11. During the year 2009-10, total railway route length in Assam was 2433.34 kms comprising of 1376.22 kms under Broad Gauge and 1057.12 kms under Metre gauge. The proportion of Board Gauge railway route length in the State, although, is 59.78 percent, it shares only 2.63 percent of the country's total broad gauge railway route length. Taking into account of 64600 kms [March 2012] the total railway route length of for the country as a whole, Assam shares only 3.8 percent of the total railway route length of the country till the end of March 2012.

The Ministry of Railways has undertaken various developmental activities in the Railway Sector in the State including extension of railways line to link the other States of North-Eastern States Meghalaya, Arunachal Pradesh, and Mizoram through Assam. Among the ongoing railway projects, Bogibeel rail cum Road Bridge and gauge conversion of Lumding–Silchar–Jiribum–Badarpur & Badarpur to Baraigram–Kumarghat, Rangia–Murkongselek, Bhairabi–Sairang projects are declared as national projects and the works are on progress. The survey work of proposed construction of new line connecting Azara–Tetelia–Byrnihat, also a National Project has been completed and land acquisition proposal has been submitted to the Govt. of Assam for the portion fall within Assam. The construction of 19.75 km stretch connecting Dudhnoi (Assam) – Mendipathar (Meghalaya) is under progress and expected to be completed by March 2013. Construction of new Broad Gauge lines connecting Harmuti (Assam) and Naharlagun (Arunachal Pradesh)–20 km, New Mainaguri to Jogighopa (257 km) are under progress.

In addition, the survey work for construction of new lines connecting Jogighopa – Guwahati via Barpeta–Sarthebari–Hajo–Sualkuchi, North Lakhimpur–Along–Silapathar, Misamari–Tawang, Pasighat–Tezu–Rupai are under various stages of progress.

The Bogibeel rail–cum–road bridge, which will perhaps be the longest railway bridge in the country and the fourth bridge across the Brahmaputra River is under construction and targeted to be completed by December 2014. The rail link connecting north and south bank across the Bridge is also under various stages of completion. The Moranhat- Chawlkhowa (44 km) rail link on South Bank of Bogibeel Project commissioned on 8-12-2009 and handed over to open line on 29-01-2010.

During the year 2010-11 following works have been completed in Assam under the North–East Frontier Railways:

- New Guwahati–Digaru Patch doubling Phase-I: Doubling work of Thakurkuchi–Digaru(15.30 km) section has been completed and commissioned for passenger traffic on 30-1-2011.
- New Guwahati-Narangee (5 km) section has already been commissioned on twin single line system for passenger traffic on 19-12-2010.
- Narangi-Thakurkuchi (9.8 km) section except 1.0 km (settled portion) work is completed.

During the last couple of years a good number of new passenger trains were introduced to connect different places within the State viz., inter–city trains linking Guwahati and Dibrugarh, Dimapur, Jorhat, Nagaon, Bongaigaon and Fakiragram, apart from daily trains between Lumding and Badarpur. The Railways run a number of inter-State trains linking Guwahati and Dibrugarh with other important places of the country, such as Delhi, Kolkata, Mumbai, Chennai, Tiruvantapuram, Bangalore, Cochin, and Jammu etc. The Northeast Frontier Railway authority has also started plying direct train service between Lumding (Assam) and Agartala (Tripura).

A “**Rail Heritage Park**” having railway museum was established in New Tinsukia Railway Station to showcase ancient memorials ranging from ancient turntable built during British period of 1892, railway wheels used by British Army during the Second World War to narrow gauge Steam Engine built in 1889. With the theme dedicated to Dibru-Sadyia Railways and Assam – Bengal Railways, the heritage park was developed at approximate cost of ₹2.0 crore.

### **Air Transport**

Assam is well connected with the rest of the country through Air Transport. The State has the highest numbers of operational civil airports and these are located at Guwahati, Tezpur, Jorhat, Dibrugarh, North Lakhimpur and Silchar. All major airlines including private commercial airlines viz., Indian Airlines, JetLite, Kingfisher, Go-air etc. operate regular flights to and from Guwahati. There are regular intra-state air services also connecting aforementioned airports of the State. In addition to these civil airports, small private airstrips in the interior areas are present in large numbers. Some small and remote airstrips are being operated under private operators like tea gardens and PSUs.

In the Guwahati sector movement of air traffic as well as passenger traffic [both domestic and international] has been rapidly increasing during the last seven years. This increase was 80 percent and 170 percent respectively during the year 2009-10 over 2003-04. The freight of cargo has also shown 12 percent increase during the year 2009-10 over 2004-05.

**TABLE – 13.5**  
**AIR TRANSPORT STATISTICS OF ASSAM**

Item/Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Air Traffic Movement (No.)	19492	20334	21218	26699	32903	34855	35270
Passenger Handled (No.)	739507	828640	947798	1371105	1664404	1693319	1997506
Freight loaded /Unloaded (Tonne)	5137	5199	5349	4520	2810	2404	5829
Mail loaded/ unloaded (Tonne)	863	1320	820	555	433	453	469
Average number of flight per day	55	57	57	73	90	196	97
Average number of passenger handled per day	2026	2270	2597	3756	4563	11921	15513
Average Cargo Handled per day (Tonne)	16	18	17	14	8	9	17

Source: Directorate General of Civil Aviation Statistical Division, New Delhi.

The Lokapriya Gopinath Bordoloi International Airport, Guwahati is the only International Airport in the North-East India. The number of aircraft movement recorded 54 percent decrease during the year 2009-10 compared to 2008-09. Similarly passenger handled also recorded about 26 percent fall during the same period. During the year 2008-09, aircraft movement and passenger handled in the airport recorded 2.0 percent and 256 percent increase over the previous year. While the loads of cargo handled in the airport recorded decline of 88 percent during 2008-09 over the previous year, no loads of cargo handled in the airport during the year 2009-10. The number of aircraft movement, passengers as well as freight handled in the airport during the period from 2003-04 to 2009-10 detailed in the Table 13.6.

**TABLE – 13.6**  
**AIRPORT STATISTICS OF GUWAHATI INTERNATIONAL AIRPORT**

Year	Aircraft Movement	Passenger handle (No)		Freight loaded/ unloaded (Tonne)
		Embark/ Disembark	Transit	
2003-04	36	2832	1538	113
2004-05	50	361	895	2
2005-06	288	4956	4909	140
2006-07	88	2876	1358	50
2007-08	98	2044	1393	6
2008-09	100	7282	0	2
2009-10	46	5421	0	0

Source: Directorate General of Civil Aviation Statistical Division, New Delhi.

### Inland Water Transport

Inland water transport is generally accepted as the most efficient mode of transportation from the point of energy consumption. It is also considered as the cheapest mode of transportation as well as labour intensive and environment friendly in nature. Assam is a riverine State. As much as 32 percent of the water resource of the country flow down through the river Brahmaputra, Barak and their myriad tributaries weave a vast network of waterways in the State. The Brahmaputra has 891 Km navigable length of water ways from Sadiya to Dhubri while the Barak has 121 Km length of navigable waterways. The Sadiya – Dhubri stretch of the Brahmaputra River has been declared as the 2<sup>ND</sup> National waterways of the country in the year 1988 and afterwards the proposals to activate the Commercial service have been moved for overall economic development of the North-eastern Region.

For effective exploitation of the waterways, being the cheapest mode of transport and in order to cater to the growing need for goods and passenger movement, two Government owned organisations of Assam viz, Central Inland Waterways Corporation and Directorate of Inland Water Transport (IWT), are operating the water transport services on the river Brahmaputra and Barak on commercial basis and have been trying to improve the water transport system in the region. The Brahmaputra has several small river ports. In addition, there are more than thirty pairs of ferry ghats on the Brahmaputra transporting both passengers and cargo. However, there is need to augment the IWT fleet by suitable type of vessels to ensure adequate cargo support.

At present the Directorate of Inland Water Transport is operating 98(ninety-eight) ferry services under 3( three) IWT Divisions on the river Barak, Brahmaputra and its tributaries for the purpose of public utility, out of which 74 ferry services are plying in the Brahmaputra valley and 24 in the Barak valley. The IWT Department has introduced 61 nos. of cargo cum passenger service also in Assam for transportation of commuters throughout the nook and corner of the State where no road communications are available. At present the IWT department has 240 nos of passenger ferry vessels and 17 nos of commercial vessels of its own. Besides these Government owned organisations, large number of private owners conducted ferry services [commonly known as Bhoot-bhooty services] to transport goods and passengers to the remotest hinterlands under un-organised sector.

To exploit the potential, there is a need to augment the IWT by adding suitable type of fleet of vessels to increase passenger services as well as to provide adequate cargo support. Therefore, the IWT Directorate planned to procure 20 numbers of higher speed 16.0 M long steel Shallow Draft Boat for plying as Water Taxi on the river Brahmaputra and Barak, 8 numbers of 22.0 M long steel RPL and 4 numbers of 22.0 M long steel Marboat for plying on the river Brahmaputra, 6 numbers of 18.0 M long steel single boat for plying on the river Barak etc., during the Twelfth Five Year Plan period.

### Other Activities

The IWT department has introduced Air-conditioned long distance river cruise service for the development for river tourism. The department has leased out a vessel M.K.Charaidew to private entrepreneur on hire basis. The department has also introduced two luxurious A/C cruise vessels on the river Brahmaputra and they are being operated by the department itself at Guwahati.

The IWT department has also constructed a RCC jetty on the 11 nos. of floating restaurants (A/C & Non A/C) on board of IWT vessels and three river cruise services on the river Brahmaputra. The department has also constructed 7 nos. of 25m long single Decker floating terminal at north bank and 2 nos. of 28m long double Decker floating terminal at the south bank of the Brahmaputra at Guwahati under centrally Sponsored scheme.

## COMMUNICATION

### Postal Communication

The Assam Postal Circle was created in the year 1988 with its Headquarter at Guwahati serves the entire State of Assam. To streamline the Postal Services, Assam Postal Circle was reorganised into Assam Circle and Dibrugarh Circle from April 1990 with Headquarters at Guwahati. The Dibrugarh Regional Headquarter was started functioning from Dibrugarh wef 7-6-1995. The Assam Circle is headed by the Chief Postmaster General whereas the Dibrugarh Region is placed under a Postmaster General.

The Assam Postal Circle has a network of 4007 Post Offices out of which 3721 post offices are located in rural areas. On an average, each Post Office serves a population of 7779 persons and covers 19.58 sq.km areas. There are 3 Night Post Offices also functioning in the State located at Guwahati GPO, Dibrugarh HO and Silchar HO for convenience of the people. Apart from the above, there are 4 National Speed Post Centre and 16 Speed Post Centre in the State and Postal Mail Conveyance covers 4428 railway kilo metre.

The Circle is utilising services of Indian Airlines & Jet Airways for transmitting outward airmails from all the Air Centres of the region. From Guwahati, outward airmails are transmitted in direct flight for Kolkata by Indian Airlines and for Delhi Sector by Jet Airways. For mail transmission in the North East Region freighter air craft service has been used which is running in the Kolkata- Guwahati-Imphal- Agartala Sector. The service of ASTC and Private Night Super Buses are utilised In respect of transmission of local mails to all District Headquarters except Morigaon and Dhemaji. The Department of Posts has introduced a facility for opening of "0" balance Savings Account for the MNREGA beneficiaries. To upgrade the Postal services, one Parcel Post Centre has been established and 306 Instant Money Orders centres were set up by the Indian Posts Department in Assam. 125 motor cycles were provided as a part of mechanised delivery. 10 Franchisee outlets, 8 Branch Post Offices and 5 Sub-Post Offices have been opened/ relocated during the year 2011-12.

### Telecommunication

Assam Telecom Circle of Bharat Sanchar Nigam Limited (BSNL) is the largest telecom operator in Assam which was formed in 1987, providing comprehensive range of telecom services in the State. BSNL, Assam Circle is the only service provider, making focused efforts and planned initiative to bridge the rural-urban Digital Divider ICT sector. BSNL is reaching the nook and corner of Assam with focused development thrust. At present 597 telephone exchanges are functioning in the State (as on December 2011).

It is evident from the status of telecom facilities in Assam shown in the Table 13.7 that the overall tele-density (Telephone per 100 of population) of the State as on December 2011 was 45.85 percent as against the national average of 76.86 percent. Disaggregated figures however show that the telecom penetration has been uneven across the urban and rural segments. While the urban tele-density of Assam stood at 144.72 percent, the rural tele-density was only 28.21 percent. However, the tele-density of urban and rural segments of Assam was marginally below the national average (urban-167.46 percent and rural-37.52 percent).

**TABLE – 13.7**  
**TELECOM FACILITIES IN ASSAM**

Item	2007-08	2008-09	2009-10	2010-11	2011-12#
Direct Exchange Lines	1348990	1324128	1449647	1739591	1827575
Rural Telephone Connections	443150	436504	481092	594291	619730
Village Public Telephones (VPTs)	22407 (89.2%)	23369 (93.0%)	23992 (95.49%)	24221 (96.41%)	24326 (96.82%)
Total Telephones	4343409	6161988	9064392	11928394	14158164
A)Wire line Phones=Fixed DELs	430310	351030	308339	257683	231683
Ai)PSU Operators	430310	351022	307725	255584	229088
Aii)Private Operators	0	8	614	2099	2595
B)Wireless Phones (GSM+CDMA)	3913099	5810958	8756053	11670711	13926481
Bi) PSUs Operators	918680	973106	1141922	1484007	1598487
Bii)Private Operators	2994419	4837852	7614131	10186704	12327994
Tele-density[%] (Phones Per 100 of Persons)	14.74 Urban-76.30 Rural-4.44	20.65 Urban-86.98 Rural-9.36	29.99 Urban-96.54 Rural-18.49	38.98 Urban-124.45 Rural-23.93	45.85 Urban-144.72 Rural-28.21
Public Call Offices [Local+STD+Highway]	34518	33862	33862	27380	23271

#Information upto 31-12-2011

Source: Annual Report-2008-09, 2009-10, 2010-11&2011-12 of Department of Telecommunication, Govt. of India.



The subscriber base basic services provided by the BSNL in the State was 1827575 as on December 2011 as against 1739591 as on March 2011 which included fixed line subscribers, WLL subscribers and CMTS subscribers. Out of the total BSNL subscribers, 619730 (33.91 percent) were rural. The number of telephone connections as on December 2011 was 5.1 percent more than that of March 2011. There were 1324128 number of telephone subscribers in the State as on March 2009.

According to the Annual Report 2011-12 of the Department of Telecommunications, Govt. of India, there were 14158164 telephones in Assam as on December 2011 which constitutes 1.53 percent total telephones in the Country. Out of the total telephones in Assam 52.21 percent were rural phones. BSNL alone covered 24326(96.82%) inhabited villages of Assam by providing Village Public Telephones (VPTs) as on December 2011.

In respect of wireless phone [mobile segment] connections, the number of mobile subscriber figures crossed one crore as on March 2011. There were 1.23 crore mobile subscribers in Assam as on December 2011. While BSNL alone provides around 13 percent of the total mobile connections in the State the private mobile service operators' share 87 percent with more than 93 lakh mobile connections during the same period. Bharati Televentures (Airtel), Disnet Wireless (Aircel), Reliance, Tata Indicom and Vodafone are the main private mobile service providers in Assam.



### APPENDIX –13.1

#### DISTRICT-WISE LENGTH OF PWD ROADS BY TYPE IN ASSAM as on 31.03.2012

(in Km.)

District	Black Topped	Earthen/Gravelled	Total
Dhubri	704	450	1154
Kokrajhar	688	1153	1841
Chirang	398	262	660
Bongaigaon	501	304	805
Goalpara	633	917	1550
Barpeta	920	904	1824
Baksa	480	621	1101
Nalbari	610	355	965
Kamrup (Rural)	1926	1309	3235
Kamrup (M)	405	52	457
Darrang	660	406	1066
Udalguri	485	1343	1828
Sonitpur	984	1664	2648
Lakhimpur	590	501	1091
Dhemaji	532	808	1340
Morigaon	510	640	1150
Nagaon	1708	1412	3120
Golaghat	1164	1316	2480
Jorhat	848	1203	2051
Sivasagar	1053	1821	2874
Dibrugarh	962	776	1738
Tinsukia	809	956	1765
Karbi-Anglong	1320	2989	4309
Dima-Hasao	816	1060	1876
Karimganj	481	455	936
Hailakandi	299	174	473
Cachar	714	449	1163
<b>Total</b>	<b>21200</b>	<b>24300</b>	<b>45500</b>

Source : P.W.D. , Assam.

**APPENDIX– 13.2**

**DISTRICT-WISE LENGTH OF ROADS ACCORDING TO DIFFERENT CLASSES  
UNDER PWD IN ASSAM, as on 31.03.2012**

(in Km.)

District	State Highway	Major District Road	Rural Road	Urban Road	Total
Dhubri	56	53	1007	38	1154
Kokrajhar	61	131	1632	16	1841
Chirang	0	223	429	8	660
Bongaigaon	41	16	712	36	805
Goalpara	137	48	1354	10	1550
Barpeta	158	171	1463	31	1824
Baksa	97	43	961	0	1101
Nalbari	119	45	779	22	965
Kamrup (Rural)	89	230	2916	0	3235
Kamrup (M)	0	0	0	457	457
Darrang	143	119	785	20	1066
Udalguri	56	125	1639	9	1828
Sonitpur	55	402	2133	59	2648
Lakhimpur	121	97	828	44	1091
Dhemaji	45	42	1168	86	1340
Morigaon	142	86	909	13	1150
Nagaon	297	327	2409	88	3120
Golaghat	160	157	2131	33	2480
Jorhat	162	89	1714	86	2051
Sivasagar	100	310	2425	40	2874
Dibrugarh	155	163	1357	63	1738
Tinsukia	63	171	1479	52	1765
Karbi-Anglong	337	561	3341	70	4309
Dima-Hasao	380	199	1237	60	1876
Karimganj	35	343	539	19	936
Hailakandi	17	99	351	6	473
Cachar	107	165	848	42	1163
<b>TOTAL</b>	<b>3134</b>	<b>4413</b>	<b>36544</b>	<b>1409</b>	<b>45500</b>

Source : P.W.D., Assam.

**APPENDIX – 13.3**

**LENGTH OF ROADS PER LAKH OF POPULATION AND PER '00' SQ. KM.  
OF GEOGRAPHICAL AREA IN ASSAM  
(AS ON 31.03.2012)**

District	District wise Road length	Road length per lakh of population	Road length per '00' Sq. Km. of geographical area
Dhubri	1154	59.22	69.35
Kokrajhar	1841	207.55	58.16
Chirang	660	136.98	33.42
Bongaigaon	805	109.88	46.66
Goalpara	1550	153.62	84.98
Barpeta	1824	107.73	68.13
Baksa	1101	115.44	54.84
Nalbari	965	125.34	95.59
Kamrup (Rural)	3235	213.22	92.86
Kamrup (M)	457	36.26	72.87
Darrang	1066	117.39	57.60
Udalguri	1828	219.51	109.20
Sonitpur	2648	137.49	50.15
Lakhimpur	1091	104.84	47.91
Dhemaji	1340	194.75	41.40
Morigaon	1150	120.06	74.15
Nagaon	3120	11.40	78.53
Golaghat	2480	234.26	70.82
Jorhat	2051	187.94	71.94
Sivasagar	2874	249.86	107.72
Dibrugarh	1738	130.90	51.40
Tinsukia	1765	134.02	46.57
Karbi-Anglong	4309	446.36	41.29
Dima-Hasao	1876	878.57	38.38
Karimganj	936	76.91	51.74
Hailakandi	473	71.75	35.64
Cachar	1163	66.98	30.72
<b>TOTAL</b>	<b>45500</b>	<b>186.35</b>	<b>69.56</b>

**APPENDIX – 13.4**

**COLLECTION OF REVENUE AND TARGET OF THE DEPARTMENT OF TRANSPORT, ASSAM**

(Rupees in crore)

Name of D.T.O & Check Gate	2008-09		2009-10		2010-11		2011-12	
	Target	Revenue Realised	Target	Revenue Realised	Target	Revenue Realised	Target	Revenue Realised
Kamrup (R & L)	48.30	45.02	49.52	58.24	70.00	73.97	82.60	94.19
Kamrup (R.T.A)	0.48	0.41	0.45	0.81	1.00	1.17	1.75	0.99
Kamrup(Enforcement)	1.05	1.26	1.39	1.49	2.00	1.61	2.00	2.04
Kamrup (Rural)							2.55	2.41
Barpeta	2.56	2.69	2.87	3.68	4.50	4.97	5.82	7.09
Nalbari	2.22	2.93	3.13	3.05	3.40	3.27	3.68	3.81
Goalpara	2.14	2.45	3.13	3.58	4.00	4.48	5.08	5.98
Dhubri	2.82	2.92	2.62	3.49	4.10	4.72	5.27	6.32
Sonitpur	5.09	5.93	6.52	7.48	8.50	8.74	10.40	12.32
Mangaldoi	1.38	1.61	1.70	2.35	3.00	3.07	3.40	3.82
Lakhimpur	2.66	2.94	3.24	3.87	4.50	5.26	6.40	7.62
Dibrugarh	8.36	8.46	9.28	11.11	12.00	13.77	17.70	18.74
Tinsukia	7.54	8.47	9.30	11.37	11.00	12.60	14.00	15.72
Dhemaji	1.22	1.55	1.63	1.88	2.50	2.79	3.51	3.43
Sivasagar	8.20	8.06	8.85	9.34	9.00	10.02	12.40	14.10
Jorhat	7.64	7.76	8.52	8.96	10.00	12.16	13.30	14.73
Golaghat	2.88	2.94	3.23	3.44	4.75	4.43	4.92	5.83
Nagaon	5.66	5.81	6.40	7.64	9.00	10.10	12.12	14.80
Morigaon	1.76	1.58	1.66	2.50	2.70	3.06	3.35	3.72
Dima Hasao	0.51	0.42	0.44	0.35	0.55	0.35	0.58	0.85
Karbi-Anglong	1.66	2.05	2.16	2.83	3.00	3.54	4.18	4.40
Karimganj	1.55	1.58	1.66	1.95	2.00	2.09	2.75	3.30
Hailakandi	1.36	1.56	1.65	2.08	2.40	2.72	3.00	3.06
Silchar	5.57	5.60	6.17	6.96	9.00	9.03	10.40	13.47
Srirampur M.V. Check gate	15.30	6.07	6.68	6.33	4.00	2.83	2.80	1.85
Boxirhat M.V. Check gate	13.62	16.08	17.69	16.84	11.00	8.95	7.10	4.05
Kokrajhar	2.01	2.47	2.72	2.90	3.40	4.14	5.20	5.80
Bongaigaon	2.82	3.40	3.63	4.25	4.60	5.11	6.40	7.82
S.T.A.	11.58	14.33	15.76	18.59	10.00	24.36	21.40	17.50(P)
Digharkhal M.V. Check gate	3.48	3.84	4.22	3.85	2.00	1.22	1.34	1.08
Udalguri	0.36	0.71	0.75	1.11	1.30	1.36	2.00	2.26
Chirang	0.45	0.77	0.81	0.99	1.50	1.74	2.00	2.37
Baksa	0.15	0.21	0.22	0.48	1.00	1.15	1.60	1.77
<b>A s s a m</b>	<b>172.38</b>	<b>171.88</b>	<b>188.00</b>	<b>213.79</b>	<b>221.70</b>	<b>248.78</b>	<b>281.00</b>	<b>307.24(P)</b>

Source : Office of the Commissioner of Transport, Assam.

## APPENDIX – 13.5

### DISTRICT-WISE NUMBER OF MOTOR VEHICLE REGISTERED IN ASSAM

District	Total Number of Vehicles Registered					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Dhubri	1125	1292	1681	3428	4884	5803
Kokrajhar	1764	1574	1857	2599	4242	4953
Bongaigaon	3070	2822	21755	21879	6430	6863
Goalpara	1186	980	1306	2238	3478	4729
Barpeta	3556	3628	4096	5490	8410	10087
Nalbari	2133	2229	1852	2230	2864	2930
Kamrup	35599	28224	29291	43457	57509	64815
Darrang	1187	1309	2139	31430	4472	4840
Sonitpur	5669	4851	5889	55514	10041	11681
Lakhimpur	4042	2953	3157	4808	7250	8524
Dhemaji	1211	1329(P)	2915	1958	3664	3784
Morigaon	1445	1088	1286	1470	2980	3193
Nagaon	5544	5017	5552	7948	12156	13966
Golaghat	2924	8738	2144	4603	4342	4693
Jorhat	8168	7575	6909	8568	14576	14279
Sivasagar	6188	4604	4806	13080	8654	9327
Dibrugarh	8007	7383	7780	9945	11434	14866
Tinsukia	7020	4978	5428	5925	10375	10882
Karbi-Anglong	1449	1251	1788	2342	4154	4211
N.C Hills	586	408	505	136	229	411
Karimganj	929	951	1048	1332	1814	1954
Hailakandi	1047	1097	1363	1555	2018	2209
Cachar	2817	2515	3214	5952	6599	9314
Baksa	-	-	324	362	2095	2468
Chirang	-	-	1041	1373	2442	2631
Udalguri	-	-	1625	1625	1964	2597
<b>A S S A M</b>	<b>106666</b>	<b>96796</b>	<b>119126</b>	<b>241247</b>	<b>199076</b>	<b>226010</b>

Source : Office of the Commissioner of Transport, Assam.

**APPENDIX – 13.6**  
**DISTRICT-WISE NUMBERS OF MOTOR VEHICLE ON ROAD IN ASSAM**

District	Total No. of Vehicles on Road					
	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Dhubri	9587	10816	12233	22437	18443	23329
Kokrajhar	9885	11723	8917	9573	5520	6739
Bongaigaon	24783	2665	19338	40816	32573	37511
Goalpara	12548	13447	14729	17606	19992	24692
Barpeta	22630	26250	30289	30669	36263	44562
Nalbari	5152	5382(P)	22079	23664	23609	28611
Kamrup	333828	392769	421332	423943	532933 (p)	584217
Darrang	25143	28183	29951	35393	34489	34191
Sonitpur	55754	60605	65505	121019	18736	21693
Lakhimpur	29113	34019	37409	42360	43868	49597
Dhemaji	8440	8702(P)	3920	4403	5036 (p)	16947
Morigaon	9275	9968	11055	2304	16023	16733
Nagaon	54771	59821	63391	64538	80044	85063
Golaghat	14687	15278	12359	16842	10167	6872
Jorhat	87337	99716	104252	116677	131467	145667
Sivasagar	108663	113209	118554	120348	89084	98127
Dibrugarh	55843	59657	70526	80952	91770	107057
Tinsukia	47202	50009	53514	55034	66314	71526
Karbi-Anglong	14278	14464	14371	15716	18787	21703
N C Hills	4887	5082	5434	5165	5079	5405
Karimganj	10807	11529	12725	14006	12725	13248
Hailakandi	7060	8208	9496	9880	9006	10905
Cachar	31815	33261	35299	40905	47121	53960
Baksa	-	-	978	1059	3255 (p)	3483
Chirang	-	-	2521	3882	6284	8808
Udalguri	-	-	1676	1676	5037	7623
<b>A S S A M</b>	<b>983488</b>	<b>1074763</b>	<b>1180177</b>	<b>1320867</b>	<b>1363625</b>	<b>1528269</b>

Source : Office of the Commissioner of Transport, Assam.



## CHAPTER – XIV

### INSTITUTIONAL FINANCE

#### Banking

Banks are playing an important role in sustaining economic development by mobilizing deposits and credits. With the objective to bring as many as people within the bank coverage, the banking network has been increased by opening new branches in the State. As a result, the number of reporting Bank Offices of all Scheduled Commercial Banks in Assam has been increased to 1574 as on March 2012 from 1262 as on March 2007. With the increase in the bank networking, the dependence per bank offices in Assam has been considerably decreased over the years and reduced from 62.15 Sq.km as on March 2007 to 49.83 Sq.km as on March 2012. However,, according to the “Quarterly Statistics of deposits and credit of Scheduled Commercial Banks of Reserve Bank of India, March 2012” the average population covered per bank branch office in Assam was 19.8 thousand (based on the provisional Population Census 2011) compared to All India average of 12.8 thousand during the same period. The table 14.1 shows the number of Scheduled Commercial Bank Offices in Assam as well as in India and the trend of deposits and credit over the period of past nine years.

**TABLE – 14.1**

#### **GROWTH OF SCHEDULED COMMERCIAL BANKS IN ASSAM AND INDIA**

(As on March)

Year	Number of Offices*		Deposits (Rs. in Crore)		Credit (Rs. in Crore)	
	Assam	India	Assam	India	Assam	India
2004	1256	68645	14507	1511273	4612	880312
2005	1272	69969	17782	1746814	6271	1152468
2006	1234	68681	20872	2093042	8763	1517497
2007	1262	70711	25757	2598823	11154	1949567
2008	1317	74326	31666	3228817	13057	2394566
2009	1369	79058	39427	3937336	15115	168977
2010	1434	83997	49545	4601926	18311	3345619
2011	1504	89110	59101	5426510	21053	4076868
2012	1574	96059	67455	6174147	25171	4821527

\*Reporting Offices only.

Source: (1) 2004–2006, Basic Statistical Return of Scheduled Commercial Banks in India, Reserve Bank of India (Various issues).  
(2) Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2007 to March 2012 of RBI.

The spread of bank-network in the Country as well as in the State have been grouped under (i) State Bank of India and its Associates, (ii) Nationalized Banks, (iii) Foreign Banks, (iv) Regional Rural Banks and (v) Private Sector Banks. These Groups of Bank have a distinctive role to play in the economic scenario of the State. A comparative status of performance of the Bank Groups in Assam and India may be evident from the Table 14.2.

The network profile of All Scheduled Commercial Banks further indicates that majority of the Bank Branch Offices in the State are located in rural areas. Out of the total 1574 reporting offices (as on March 2012), 810 bank branch offices (52 percent of the total bank branch offices) are located in the rural areas of Assam and share more than 18 percent of the total bank deposits in the State. On the other hand, the bank branch offices in semi-urban and urban areas with 414 and 350 branch offices shared 30 percent and 53 percent of the total bank deposits respectively. The credit –deposit ratio of rural bank branch offices was 49 percent compared to semi-urban branches with 36 percent and urban branches with 34 percent during the said period.



**TABLE – 14.2**  
**BANK GROUP-WISE SCHEDULED COMMERCIAL BANKS IN ASSAM AND INDIA**  
 [As on March 2012]

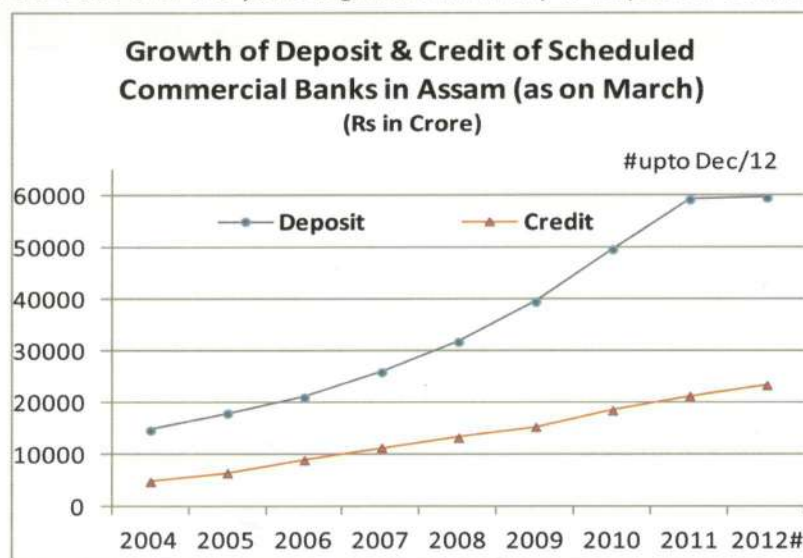
Bank Group	Assam/ India	No. of offices*	Deposits (Rs. in crore)	Credit (Rs. in crore)
State Bank of India and its Associates	Assam	270	28172	10116
	India	18685	1345033	1084442
Nationalised Banks	Assam	786	30332	10115
	India	48284	3270747	2506067
Foreign Banks	Assam	2	195	93
	India	306	272949	232173
Regional Rural Banks	Assam	407	5168	2777
	India	16170	183009	116567
Old Private Sector Banks	Assam	14	818	244
	India	5211	297563	232488
New Private Sector Banks	Assam	95	2769	1827
	India	7403	804826	649791
All Scheduled Commercial Banks	Assam	1574	67455	25171
	India	96059	6174147	4821527

\*Reporting Offices only

Source: Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks March, 2012, Reserve Bank of India.

### Growth of Deposits and Credit

The expansion of banking facilities in the State over the years augmented not only in respect of volume of deposits but also in respect of disbursement of credit. The aggregate deposit with Scheduled Commercial Banks in Assam, which was ₹31666 crore in March 2008, has increased to ₹67455 crore in March 2012. The volume of deposits has been increased by 113 percent in March 2012 over March 2008. The per capita deposit in the State has also been increased from ₹10808 in March 2008 to ₹21620 in March 2012. Thus, the per capita deposit in the State has recorded 100 percent increase during the last five years.



Like deposits, disbursement of credit by Scheduled Commercial Banks also recorded an impressive growth in Assam. The total volume of credit disbursed by the banks has been increased to ₹25171 crore in March 2012 from ₹13057 crore in March 2008 thereby recorded a growth of 92.8 percent during the last five years period. The credit disbursement by the Scheduled Commercial banks in Assam shared only 0.52 percent of the total credit disbursement in the country as a whole during March 2012. The per capita credit has been increased to ₹8068 in March 2012 compared to ₹4456 in March, 2008.

## Credit – Deposit Ratio

With the growing credits in the State, the Credit-Deposit ratio of all Scheduled Commercial Banks in Assam has been increased to 37.3 percent as on March 2012 from 35.6 percent of the previous year. However, it was far below when compared with the All India ratio of 78.1 percent. The following table shows the Credit - Deposit ratio of all scheduled commercial banks in Assam and India for some few years.

**TABLE – 14.3**  
**CREDIT DEPOSIT RATIO OF ALL SCHEDULES COMMERCIAL BANKS IN ASSAM AND INDIA**  
(as on March)

Year →	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Assam	32.0	31.7	29.3	31.8	35.2	41.9	43.3	41.2	38.3	37.0	35.6	37.3
India	56.7	58.4	59.2	58.2	65.9	72.5	75.0	74.2	72.6	72.7	75.1	78.1

Source: (i) Basic Statistical Return of Scheduled Commercial Banks (2001-2006); and  
(ii) Quarterly Statistics on Deposits and Credit of Scheduled Commercial Banks, March 2007 to March 2012, Reserve Bank of India.

## Priority Sector Advances

The volume of aggregate advances under priority sector, according to the State Level Bankers' Committee reports, have increased from ₹6148.70 crore in 2006-07 to ₹13242.59 crore in 2010-11 and further increased to ₹16080.72 crore in 2011-12. Thus, the volume of aggregate advances recorded 161.5 percent growth during the last six years. This growth was recorded as 415.41 percent in 2011-12 when compared with the credit extended to the priority sector during the year 2004-05. During the period from 2004-05 to 2011-12, the priority sector advances have been above the bench-mark of 40 percent of net bank credit.

**TABLE – 14.4**  
**ADVANCES OUTSTANDING UNDER PRIORITY SECTOR**

(Rupees in Crore)

Sectors	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Aggregate Advances	6497.59	9811.15	12989.44	16081.43	17750.99	20910.97	23843.62	30363.22
Total Priority Sector Advance	3119.99 [48.02]	4248.21 [43.30%]	6148.70 [47.34%]	8322.25 [51.75%]	10705.50 [60.31]	11314.92 [54.11]	13242.59 [55.54]	16080.72 [55.83]
Agriculture & Allied Activities	616.15 [9.48]	1212.84 [12.36]	1596.74 [12.29]	2158.80 [13.42]	2345.86 [13.22]	3868.37 [18.50]	4557.40 [19.11]	5733.91 [19.91]
Industries	515.87 [7.94]	685.52 [6.99]	1018.13 [7.84]	1281.63 [7.97]	1460.25 [8.23]	2054.15 [9.82]	2490.30 [10.44]	2819.38 [9.79]
Per capita Priority Sector Advances [Figure in Rupees]	1170	1594	2307	3122	4016	4245	4968	5154

\* Figure within bracket indicates percentage share to Aggregate Advances.

❖ Per Capita Priority Sector Advances calculation based on the Population Census 2001 and for 2011-12, Census-2011

Source: Various Reports of State Level Bankers Committee, Assam.

The percentage share of priority sector loans extended to agriculture & allied activities achieved all India bench mark of 18 percent during the year 2009-10 in the State. The disbursement of advances to agriculture & allied activities has steadily increased from ₹616.15 crore [9.48%] in 2004-05 to ₹3868.37 crore [18.50%] in 2009-10 and further to ₹4557.40 crore [19.11%] in 2010-11. The disbursement of advances to agriculture & allied activities, during 2011-12, was ₹5733.91 crore [19.91% of the total priority sector advance] according to the report published by the State Level Bankers' committee.

The per capita priority sector advances has significantly increased to ₹5154.00 from ₹1170.00 (about 441 percent increase) during the period 2004-05 to 2011-12.

### Regional Rural Banks

Regional Rural Banks [RRBs] were established under the Regional Rural Banks Act, 1976 with a view to give a boost to rural economy by providing rural credit to farmers, agricultural labourers, artisans and small entrepreneurs etc.

At present, the State has presence of two **RRBs** - Assam Gramin Vikash Bank [AGVB] and Langpi Dehangi Rural Bank [LDRB]. While the Assam Gramin Vikash Bank is operating both in the Brahmaputra Valley and Barak Valley covering 25 districts with 369 bank branches, the service area of the Langpi Dehangi Rural Bank is confined within the two hill districts of Assam with 50 bank branches as on March 2012.

The aggregate deposits of RRB was ₹5180.33 crore at the end of March 2012 compared to ₹4653.08 crore at the end of March 2011 thereby registering a growth of 11.33 percent. The aggregate deposit of RRBs was ₹3691.39 crore at the end of March 2010. The volume of credit disbursed by these banks was also increased to ₹2784.25 crore as on March 2012 compared to ₹2230.87 crore as on March 2011 indicating an increase of 24.81 percent. The volume of credit disbursed by these banks was ₹1753.55 crore as on March 2010. Credit-Deposit ratio of these banks reached 53.75 level as on March 2012 compared to 47.9 as on March 2011. The credit-deposit ratio of RRBs as on March 2012 thus reached slightly above the level of 53.60 as on March 2007. Performance of Regional Rural Banks may be evident from the Table below:

**TABLE – 14.5**  
**ACHIEVEMENTS OF REGIONAL RURAL BANKS IN ASSAM**

(Rupees in lakh)

Period (as on)	Achievements under Annual Credit Plan			Credit - Deposit Ratio(%)	
	Annual Target for All Banks	Achievement of All Banks	Achievement of RRBs	All Banks	RRBs
31.3.2006	92903.27	117699.69	22665.38 (19.25)	45.51	50.49
31.3.2007	114100.11	144984.66	26362.38 (18.18)	48.03*	53.60
31.3.2008	175518.40	155511.33	32211.73 (20.71)	50.48*	52.64
31.3.2009	221924.24	150226.67	37082.91 (24.68)	45.85*	49.62
31.3.2010	257892.21	250725.49	52181.55 (20.81)	42.05*	47.50
31.3.2011	354847.18	289468.82	70261.61 (24.27)	39.71*	47.94
31.3.2012	449985.62	458541.64	76721.43 (93.18)	44.64*	53.75

Figure in bracket shows the percentage share of achievements of RRBs to All Banks.

\*Lending by NEDFi and under RIDF by NABARD has been incorporated as priority sector advances.

Hence C.D ratio figure is different from the figure shown in the Table-14.3.

Source: State Level Bankers Committee reports of various years.

### Agricultural Credit

Credit is an essential requirement for revitalizing agriculture sector. Within the priority sector, while the share of agriculture advances in the State had been the highest with 35.66 percent as on March 2012 compared to 34.41 percent as on March 2011, the agricultural credit constitute 19.91 percent to the total bank credit as on March 2012 [according to the figures published by the State Level Bankers' Committee, Assam]. The agricultural credit, thus, remain above the All India Bench Mark of 18.0 percent for three consecutive years since 2009-10 to 2011-12 in Assam. During the period as on March 2010, the share of agricultural advances was 34.19 percent of the total priority sector credit. According to the State Level Bankers' Committee Report, banks operating in the State have disbursed agricultural credit of ₹2002.47 crore during the year 2011-12 against the annual commitment of ₹2123.18 crore which was 94.0 percent of the targeted amount. During the year 2010-11, the annual achievement of disbursement of agricultural credit was 67.0 percent of the targeted amount.

**TABLE – 14.6**

**CREDIT FLOW TO AGRICULTURE AND ALLIED ACTIVITIES UNDER ANNUAL CREDIT PLAN**

Year	Advance to Agriculture & Allied Activities (Rs. in crore)	Crop Loans (Rs. in crore)	% Share of crop Loan to Total Agricultural Advances	Per Capita Crop Loan (Rupees)	Crop Loan per farmer family# (Rupees)
2003-04	100.81	43.82	43	16.44	161
2004-05	243.76	79.46	33	29.81	293
2005-06	331.89	84.31	25	31.63	311
2006-07	468.91	79.44	17	29.80	293
2007-08	566.71	121.61	21	45.62	448
2008-09	523.38	203.12	39	76.20	749
2009-10	814.69	359.39	44	134.82	*1307
2010-11	876.76	373.63	43	139.94	*1359
2011-12	2002.47	1082.03	54	346.80	*3935
@CAGR (%) 2007-2012	33.69	68.59	-	63.37	68.12
(%) Growth 2011-12 over 2010-11	128.39	189.60	-	147.82	189.55

@CAGR: Compound Annual Growth Rate.

# Total Farmer Family=27.12 lakh as per Agriculture Census 2000-01.

\* Total Farmer Family =27.50 lakh as per Agriculture Census 2005-06.

Source: Reports of State Level Bankers Committee, Assam.

The annual growth of advances to agriculture & allied activities during the year 2011-12 was 128.39 percent over 2010-11. The growth of crop loans, on the other hand, recorded 189.50 percent during the said period.

**AGRICULTURAL CREDIT AND GOVERNMENT INITIATIVE:**

**Government of Assam's Interest Subvention Scheme**

In view of severe drought like situation experienced in the State during the year 2006-07, Government of Assam in consultation with NABARD prepared a scheme to provide 2 percent interest relief to the farmers availing crop loans from the banks. NABARD was designated as implementing agency. The Scheme was continued for the last three years [2006-07, 2007-08 and 2008-09]. During the period, 173772 borrowers were provided with the interest relief. The State Government extended the scheme for the year 2009-10 also with enhanced interest relief at 3 percent for farmers. The State Government has decided to continue the 3 percent interest subvention scheme for the year 2011-12 also with an enhanced limit of up to ₹35000 per farmer loan account. With the implementation of the State Government's 3.0 percent interest subvention scheme in addition to the Government of India's 3.0 percent interest subsidy, the final interest burden of crop loans on the farmers of Assam is reduced to 4.0 percent only. As many as 195749 crop loan account holders were benefited under the scheme during the period 2009-10 and 2010-11.

The achievements under the Government of Assam's interest relief scheme during the period 2006-07 to 2010-11 shown in table 14.7 below-

**TABLE – 14.7**

**SETTLEMENT OF CLAIMS UNDER GOVT. OF ASSAM'S INTEREST RELIEF SCHEME**

Year	Total Loan Disbursement		Total Relief Settled	
	Account(Nos)	Amount (Rs in lakh)	Account(Nos)	Amount (in Rs)
2006-07	39832	7267.85	39832	6504829.00
2007-08	53448	10466.70	52986	10792470.00
2008-09	82225	16269.03	80954	14419765.00
2009-10#	106127	24565.09	106127	28282936.00
2010-11#	89928	22760.92	89622	20844314.00

# Interest relief @3%

Source: Finance (Institutional Finance) Department, Assam.

### Financing Under Kishan Credit Card Scheme

The Kishan Credit Card [KCC] Scheme was introduced in 1998-99 to cater adequate, timely, cost effective and hassle free credit support to the farmers from the formal banking system.

During the year 2011-12, 371474 numbers of KCCs were issued and ₹1303.29 crore was sanctioned by the banks as against 163063 numbers of KCCs were issued and ₹504.96 crore was sanctioned by the banks in 2010-11. During the year 2009-10, the numbers of KCCs issued banks were 1498822. Since inception of the scheme, cumulatively about 9.67 lakh KCCs have been issued in the State up to March 2012. The Scheme, thus, covered around 35.2 percent of the total farmer family (there are 27.50 lakh farmer families as per Agriculture Census 2005-06) of the State.

**TABLE – 14.8**  
**ADVANCES UNDER KISHAN CREDIT CARD SCHEME**

(Rupees in lakh)

Year	Annual Achievement		Cumulative Achievement	
	Card Issued (No.)	Amount	Card Issued (No.)	Amount
2003-04	94377	9728.64	-	-
2004-05	86822	9382.86	172965	22202.28
2005-06	70238	9677.79	339750	38839.94
2006-07	50067	7862.03	359395	40580.52
2007-08	62132	16365.83	329932	67908.97
2008-09	103361	37589.23	480393	104682.06
2009-10	149822	43055.94	630070	158372.04
2010-11	163063	50495.87	793801	209071.23
2011-12	371474	130329.35	967220	307834.01

Source: Reports of State Level Bankers Committee, Assam.

### Micro-Finance

The Micro Finance Scheme is an effective instrument for financial inclusion which was launched to meet the small entrepreneurs as well as regarded as an effective programme for reducing poverty as well empowerment of the poor. The micro-finance programme of NABARD, which began in 1992 with formation of 500 Self Help Groups (SHGs), has emerged as the largest micro-finance programme in the world. The Self-Help Group – Bank linkage programme, the main micro-finance model and institutional finance mechanism to provide financial credit support to the micro-entrepreneurs (including farmers) in the country as a whole, has been proved to be the most cost effective credit delivery system in India. The programme has also helped in providing banking services to the uncovered rural poor.

The focus of SHG-Bank linkage programme is seen to be picking up its importance a little late in the State of Assam. However, the programme has gathered momentum from the year 2001-02 onwards. Till the end of March 2012 all total 499183 SHGs have been bank linked in the State out of which 226361 SHGs were credit linked.

Cumulative position of bank linked SHGs presented in the Table –14.9.

**TABLE – 14.9**  
**SELF-HELP GROUPS FINANCED BY BANKS**

(Rupees in lakh)

Year	Total bank linked SHGs		Deposit linked		Credit Linked	
	Number	Amount	Number	Amount	Number	Amount
2004-05	122304	20975.75	79592	3409.05	42712	17566.70
2005-06	269917	48239.13	175565	9846.77	94352	38392.36
2006-07	230902	58040.52	121474	5261.61	109428	52778.91
2007-08	257863	57417.70	142147	6044.72	115716	51372.98
2008-09	305132	77365.49	166740	7485.51	138392	69879.98
2009-10	374745	92724.79	210890	9123.46	163855	83601.33
2010-11	433954	118051.17	240032	11195.29	193922	106855.88
2011-12	499183	139741.00	272822	10928.00	226361	128813.00

Source: Reports of State Level Bankers Committee, Assam.

## Micro-Finance Promotion by NABARD

The NABARD, Assam Regional Office has played a vital role by extending grant assistance of ₹416.06 lakh to 119 NGO-SHPI projects for promotion and credit linkage of 16409 SHGs in the State upto 31<sup>st</sup> October 2012. Besides, NABARD has sanctioned grant assistance of ₹85.00 lakh to three NGOs for promotion and credit linkage of 850 women SHGs in four backward districts of Dhemaji, Dima Hasao, Karbi-Anglong and Kokrajhar under Women Self Help Group Development Fund.

In areas where the NGOs and Bank network is weak, a scheme for associating Individual Rural Volunteers (IRVs) in promotion and linkage of SHGs was introduced. The scheme is currently implemented through Assam Gramin Vikash Bank [AGVB] with grant assistance of ₹108.00 lakh for promotion of 6000 SHGs through 600 IRVs in 22 districts of Assam.

With a view to increase the flow of credit, particularly to the small borrowers having limited or no collateral to offer, a new concept of Joint Liability Group (JLG) lending has been evolved wherein social collateral substitutes the physical collateral in respect of small loans. Of late, the commercial banks like Indian Bank, ICICI Bank, SBI, UCO Bank and Assam State Co-Operative Apex Bank have also adopted the JLG mode for financing the mid-segment clients. JLG mode of financing has also been adopted for financing production credit and handloom weaving activities. As a part of promotional efforts, NABARD, Regional Office had sanctioned an amount of ₹45.86 lakh and ₹40.60 lakh each to AGVB and LDRB for formation and credit –linkage of 2293 JLGs and 2030 JLGs over a period of three years. Apart from this the NABARD Regional Office also sanctioned ₹1.80 lakh to UCO Bank for promotion and credit linkage of 90 JLGs in Barpeta District during 2011-12.

## SHG-Bank linkage under SGSY

Swarnajayanti Gram Swarojgar Yojana is the mother programme of all poverty alleviation programmes. The objective of the programme is to uplift economic status of the rural people living below the poverty line by providing sustainable economic activities with bank loan and Government subsidy.

Up to the end of March 2012, as many as 2.26 lakh SHGs have been covered under the ambit of bank credit in the State out of which 1,23,473 SHGs have been covered SGSY programme. Till the end of March 2010, as many as 1.64 lakh SHGs have been covered under bank credit out of which only 84678 SHGs were given loans by banks under the afore-mentioned programme. Cumulative progress of SHG-Bank linkage programme under SGSY shown in the Table -14.10 below:

**TABLE – 14.10**  
**SHG-BANK LINKAGE UNDER SGSY**

(Rupees in lakh)

Year	Total Credit Linked SHGs		Credit linked SHGs under SGSY	
	Number	Amount	Number	Amount
2004-05	42712	17566.70	20388	11273.74
2005-06	94352	38392.36	48235	25024.66
2006-07	109428	52778.91	54735	36549.70
2007-08	115716	51372.98	54790	31006.57
2008-09	138392	69879.98	69144	45898.88
2009-10	163855	83601.33	84678	55161.36
2010-11	193922	106855.88	102166	74784.79
2011-12	226361	128813.00	123473	94423.5

Source: Reports of State Level Bankers Committee, Assam.

## National Bank for Agriculture and Rural Development (NABARD)

During 2011-12, the NABARD disbursed refinance to banks in the State to the tune of ₹168.37 crore as against ₹172.85 crore refinance disbursed to the banks during 2010-11 which was 2.59 percent less than that of the previous year. Agency wise, purpose wise and activity wise refinance disbursed by the NABARD are shown in the Table 14.11.

**TABLE – 14.11**  
**AGENCY WISE, PURPOSE WISE AND ACTIVITY WISE REFINANCE DISBURSED BY NABARD**  
(Rupees in lakh)

Purpose	2010-11			2011-12		
	Commercial Banks	RRBs	Total	Commercial Banks	RRBs	Total
Minor Irrigation	0.000	0.000	0.000	0.000	13.664	13.664
Land Development	0.000	0.000	0.000	0.000	0.000	0.000
Farm Mechanisation	744.123	83.824	827.947	28.300	1186.239	1214.539
Plantation & Horticulture	84.800	115.823	200.623	100.410	12.446	112.856
Animal Husbandry (Dairy, Poultry, Sheep, Goat & Piggery)	1053.543	386.196	1439.739	400.824	286.570	687.394
Fisheries	46.810	27.810	74.620	0.000	0.000	0.000
IRDP/SGSY	0.000	0.000	0.000	1041.816	0.000	1041.816
NFS (i/c Rural Housing)	10524.693	0.000	10524.693	10207.623	167.724	10375.347
Agro processing	0.000	0.000	0.000	1.500	12.890	14.390
PMRY	0.000	0.000	0.000	0.000	0.000	0.000
Others (SHG, SRTO-Truck etc)	3959.944	257.927	1803.960	3346.855	29.662	3376.517
<b>Total</b>	<b>16413.913</b>	<b>871.580</b>	<b>17285.493</b>	<b>15127.328</b>	<b>1079.195</b>	<b>16836.523</b>

Source: National Bank for Agriculture and Rural Development.

#### Rural Infrastructure Development Fund (RIDF)

The Government of Assam has taken initiative for development of infrastructure in rural areas with the financial assistance from NABARD under RIDF. Since the inception of RIDF during 1995-96, NABARD has sanctioned 1601 projects involving RIDF loan of ₹2255.32 crore under RIDF II to XVIII in the State. Out of the total loans sanctioned ₹2255.32 crore, ₹1517.39 crore has been disbursed to the State Government as on 31-10-2012. As against 1601 projects sanctioned, 674 projects have been completed and remaining projects are under various stages of implementation.

The activity wise number of projects and amount sanctioned including amount released under RIDF - II to XVIII are given below:

**TABLE – 14.12**  
**PROJECT WISE INFRASTRUCTURE DEVELOPMENT LOANS SANCTIONED**  
**AND DISBURSED BY NABARD UNDER RIDF (II to XVIII)**

Activity	No. of Projects	(Rupees in crore)	
		Loan sanctioned	Loan disbursed (as on 31-10-2012)
Rural Bridges	1072	1312.40	882.59
Rural Roads	164	317.60	238.04
Irrigation	73	191.80	124.72
Flood Control	59	252.79	196.52
MA & AH Project	7	27.96	8.39
Small Hydel Project	2	46.14	46.14
Marketing Infrastructure	6	33.99	10.20
Beel Fisheries Projects	17	12.07	4.39
Pay & use toilets (50 units)	21	8.30	2.49
Meat Processing	1	3.92	3.91
Revitalisation of sericulture Farms	40	23.04	0.00
Rural Godowns to be constructed by PACS	139	25.32	0.00
<b>Total</b>	<b>1601</b>	<b>2255.32</b>	<b>1517.39</b>

Source: NABARD Regional Office, Guwahati.

## North Eastern Development Finance Corporation Ltd. [NEDFi]

NEDFi, since its inception has been playing a crucial role in catalyzing the development of economy of the Northeast India. NEDFi has been instrumental for identifying, financing and nurturing eco-friendly and commercially viable industries, infrastructure and agro-horticultural projects in the region. NEDFi is also giving special emphasis to cover small enterprises and micro finance to the needy at the grassroots in the region.

Over the past seventeen years, growth momentum of the Corporation has accelerated and with cumulative loan sanctions of ₹2481.34 crore at the end of March 2012, it has been able to make a noticeable mark, synchronizing development across all the North East States. In Assam alone, NEDFi has sanctioned an amount of ₹1585.90 crore to 1011 projects and disbursed ₹1073.81 crore.

The Government of India in the Budget of 1998-99 appointed NEDFi as the Nodal Agency for disbursement of Central Government subsidies under its Industrial Policies for the eight North-eastern States. The Corporation is also a nodal agency for disbursement of Central Subsidies under NEIP 1997 and NEIIPP 2007, which is administered by the Department of Industrial Policy & Promotion, Ministry of Commerce, Govt. of India. The Corporation thus facilitating disbursement of subsidies under the Central Transport Subsidy Scheme, Central Capital Investment Subsidy, Central Interest Subsidy Scheme and Central Comprehensive Insurance Subsidy Scheme to all the NER States. The summary of disbursement of Central Subsidy to NER States by NEDFi is given below:

**TABLE – 14.13**  
**DISBURSEMENT OF CENTRAL SUBSIDIES UNDER VARIOUS SCHEMES BY NEDFi**

(Amount in Crore)

Subsidy Schemes	No. of Claims for the year 2011-12	Amount Disbursed during the year 2011-12	No. of Claims (cumulative) As on March 2012	Amount Disbursed (cumulative) As on March 2012
Transport Subsidy	687	342.26	8953	2020.28
Investment Subsidy	10	0.62	1187	201.85
Interest Subsidy	105	11.97	1537	122.48
Comprehensive Insurance Subsidy	172	2.74	757	10.18

Source: Annual Report 2011-12, NEDFi.

### MSME Sector

The pace of industrial development in the north-eastern region, particularly the Micro and Small Enterprises [MSE] sector is slow despite abundant natural resources and supportive government policies and initiatives. Lack of entrepreneurship is one of the major factors for slow industrial development in the region. To promote this Sector as well as to maintain the balance in economic growth in the region, the NEDFi has adopted the following strategies:

- ✓ Enhancing the limit of the project size to be handled by MSE department to put more emphasis on the sector
- ✓ Updating and improvising its various loan products to cater the specific needs of the sector.
- ✓ Conducting various Business/Entrepreneurs Meets, Workshops and Entrepreneurship Development Programmes [EDPs] all over North-Eastern Region for dissemination of information on schemes and programmes of the Corporation.
- ✓ Effective utilisation of the services of Business Facilitation Centres and Representative Offices to encourage large number of entrepreneurs to take up income generating activities.
- ✓ Encouraging local entrepreneurship through promotion of eco-friendly products like water hyacinth, banana bark, designer candles etc., in the Region.
- ✓ Arranging capacity building trainings and facilitating market linkages by organising fairs, exposures & participations in National and International Trade fairs.



To provide further fillip to the growth of this Sector, The Corporation has signed MOUs with the Small Industries Development Bank of India (SIDBI) and the National Backward Classes Finance & Development Corporation (NBCFDC) for fund assistance as well as for joint initiative for generating awareness among entrepreneurs in the Region.

## NEDFi's Initiative to Promote Sustainable Livelihood

### (a) Promotion of Water Hyacinth Craft

NEDFi has been promoting Water Hyacinth Craft as a viable means for sustainable livelihood in rural areas. This is a joint initiative of NEDFi & NEC. Although it is a 3 year project and commenced in April 2010, most of its development in terms of technology and Skill-upgradation took place during the second year of the project i.e., 2011-12. Under this project, the NEDFi has completed the capacity building of 1294 artisans of the region out of which 120 were male and 1174 female artisans. As many as 1065 artisans from Assam have completed the basic capacity development programme. During execution of the project, thrust was on the continual improvement in the production process and in value addition to the products. Experts from National Institute of Design, Ahmedabad and Department of Industrial Promotion, Royal Govt. of Thailand helped to achieve the desired result.

State	No. of Artisans
Arunachal Pradesh	57
Assam	1065
Manipur	82
Meghalaya	49
Tripura	41

Source: Annual Report 2011-12, NEDFi.

### (b) Promotion of Banana Bark based Craft

NEDFi took up Banana Bark as another media for producing handicraft products. An integrated Design and Skill Development Programme on producing handicraft items from Banana Bark was organized at Sesawang Village in Mizoram where techniques of using of various tools for processing of banana bark and using it for making various products like mats, gift boxes, bags etc., were taught.

### (c) Promotion of Handloom and Handicrafts

During the year 2011-12, NEDFi has taken initiative for promotion of handloom and handicraft sector through skill up-gradation and market linkage under sustainable livelihood programme.

- NEDFi has provided financial support to Mulberry a NEDFi assisted NGO located at Sonapur, Kamrup, Assam to facilitate design intervention of reputed designers. This has helped to unit to bag orders from **Fab India**, a reputed retail chain known for its quality.
- The NEDFi Hatt, a platform created by NEDFi for providing market linkage to the handloom and handicraft sector of the region, has successfully facilitated the support during the year 2011-12:

**TABLE – 14.15**

Year	Item		Participants							
	No of Fairs held	Sales (in lakh)	NGO	SSI	Co-Op	SHGs	Others	Total	Men	Women
2011-12	32	456.22	53	131	6	93	672	955	145	810
<b>Cumulative Total</b>	<b>278</b>	<b>2607.73</b>	<b>714</b>	<b>1605</b>	<b>289</b>	<b>2036</b>	<b>2220</b>	<b>6864</b>	<b>1308</b>	<b>5556</b>

Source: NEDFi

#### (d) Promotion of entrepreneurship in Medicinal & Aromatic Plant Sector through the NEDFi R&D Centre for MAP

The NEDFi R & D Centre for Medicinal and Aromatic Plants at Khetri has taken up various extension works on lemongrass, Citronella and Agar plantation during the year 2011-12. The Centre is presently running NMPB sponsored project on RET Medicinal plants of North East India.

- ✓ One new accession of *Kaempferia parviflora* collected from Khetri, Kamrup District of Assam. The local Karbi people called the species as "Durik ada"- a fleshy tuberous roots used by them as spice.
- ✓ Identity of "*Smilax china*" collected from Paham, Ri-bhoi district of Meghalaya has been confirmed after consulting the literature of Flora of China series and recorded the detail morphology of the species.
- ✓ To create awareness about the Medicinal Plants, a Two days national Workshop for Medicinal Plants has been organized on 10-11<sup>th</sup> November, 2011 at Guwahati where 75 scientists and other officials participated.
- ✓ One day Awareness Programme on Voluntary Certification Scheme for medicinal plant produces was conducted on 12<sup>th</sup> November, 2011 at Guwahati. The programme was sponsored by the NMPB. 129 participants participated in the programme.

#### Micro Finance Scheme

The **Micro Finance Scheme**, an effective instrument, through which NEDFi supports Non-Government Organizations (NGO) to meet the needs of smaller entrepreneurs (preferably Self-Help Group or individual) of the region for taking up productive activities in the field of agriculture, micro industries and service sectors including transportation, etc. During the financial year 2011-12, aggregated loans sanctioned under the scheme were ₹63.79 crore covering 39 projects and 88801 beneficiaries. During the year 2011-12, total sanctioned and disbursements in Assam was ₹47.43 crore and ₹39.08 crore respectively.

Till the end of March 2012, the Corporation succeed to reach out to 250000 beneficiaries [of which 89 percent are women] in the NE Region through 460 NGOs/MFIs (Micro Finance Institutions)/CBOs of 8 North Eastern States with cumulative sanctions and disbursements amounting to ₹165.77 crore and ₹149.36 crore respectively. **In Assam, total cumulative sanctions and disbursements figures are ₹128 crore and ₹116 crore.**

**TABLE – 14.16**  
**SUMMARY OF AMOUNT SANCTIONED AND AMOUNT DISBURSEMED**  
**UNDER MICRO FINANCE IN ASSAM (as on March, 2012)**

(Amount Rupees in Lakh)

Item	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Amount Sanctioned	3	40	119	154	243	93	150	501	1170	1344	1196	3031	4743
Amount Disbursed	3	26	82	145	204	140	140	499	515	1120	1490	3346	3908

Source: Annual Report 2010-11, NEDFi.

Apart from loan, NEDFi has also extended equity support to two of the prominent and leading Microfinance institutions of the region viz. one, RGVN (North East) Microfinance Ltd and the other Konoklota Mahila Urban Co-Operative Bank Ltd, a well-known Urban Co-operative Bank in the region.

Recently, the Corporation has created separate fund under Micro Finance named **North East MF Support Fund for Un-served and Under-served Areas**, wherein the fund will be utilized through MFIs for on-lending to beneficiaries of un-served and under-served areas of North Eastern Region at subsidized interest rate of 8%. In Assam, Dima Haso, Karbi Anglong and BTAD districts have been covered under this scheme.

## Business Development Initiatives

To fulfil its mandate to promote entrepreneurship, especially in the micro and small enterprise section, the Corporation has initiated various business development programmes, promotional activities, research & development programmes and other socially relevant activities. Some of them are mentioned below:

- A. **Business Facilitation Centre (BFC):** The Corporation has opened several Business Facilitation Centres in NE States including one at Silchar to assist and guide potential entrepreneurs in selection of projects, preparation of DPR and providing necessary credit linkages.
- B. **Participation in Seminar/ Business Meet/Workshop for development of MSME in the Region:**
- “The North East Connect 2011” at the India Habit Centre, New Delhi on Investment Opportunities in North-East India in Agriculture and Allied Sectors organized by NERAMAC with the support of National Skills Foundation of India (NSFI).
  - Seminar on “Attracting Investments for Development of Power Sector in NER” organized at Guwahati.
  - Seminar on “Role of Entrepreneurship & Bank Credit for Development of MSMEs” organized by Dun & Bradstreet & Central Bank of India.
  - “Awareness Programme on BIOMASS power project in Assam” at Guwahati organized by COGEN India.
  - Business meets were arranged in various places of Assam where NEDFi’s role, various schemes, the process and documentation required to avail facilities under the schemes were explained. In addition to this, one-to-one counselling was provided to prospective entrepreneurs.
  - NEDFi also participated in RBI Financial Outreach Camp in Assam.
  - NEDFi participated in various seminars/workshops organized by industry associations like FINER, ICC, etc. and highlighted NEDFi Schemes for the benefit of participating entrepreneurs.

C. **Tour Operator Meet:**

The Corporation organized a one day ‘Tour Operators Meet’ on the theme “Spectacular North East: Explore, Experience, Exult” with sponsorship from the Ministry of DoNER at Guwahati which brought together tour operators from the region and their all India counterparts on a common business to business platform for enhancing flow of domestic tourists to the North East. While around 150 tour operators and hospitality sector promoters of the N.E. States participated in the Meet, the Association of Domestic Tour Operators of India (ADTOI) brought in a team of 34 tour operators from various parts of the country.

## NEDFi’s Performance in Assam and NER

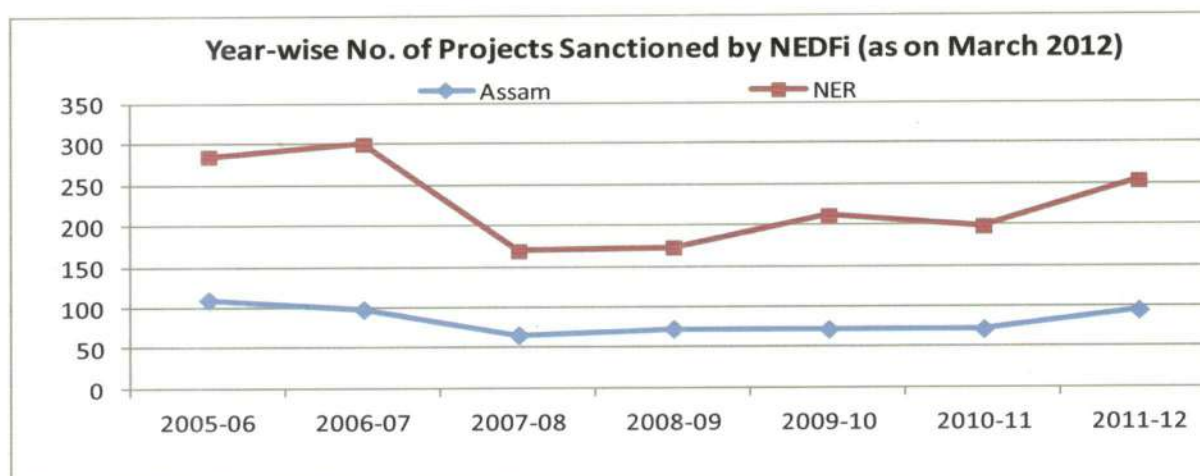
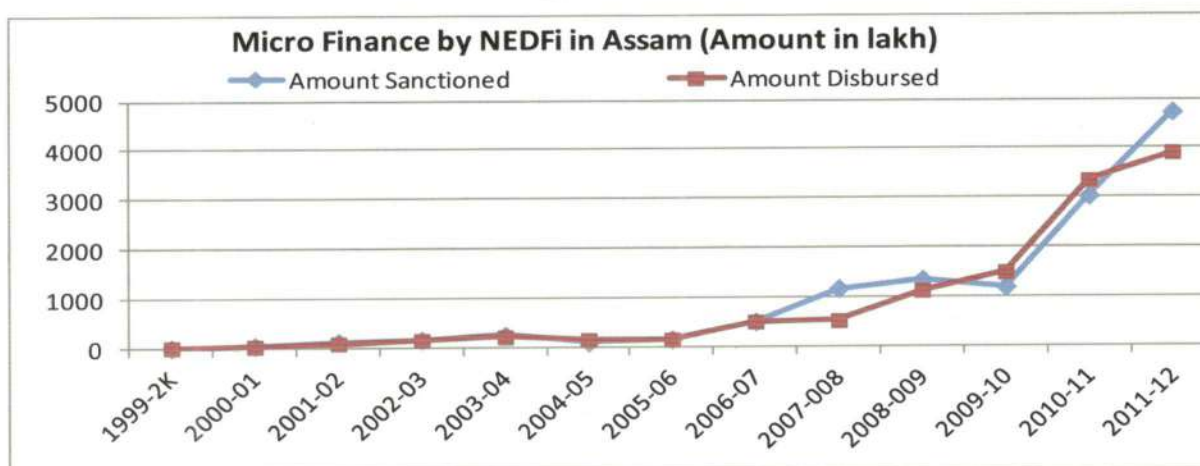
The slowdown in the national economy coupled with the law and order situation in many of the NE States had an adverse impact on the economic activities in the region. Against this unfavourable situation loans sanctioned and disbursed by NEDFi during the year 2011-12 recorded a positive sign and registered increase of 2.57 percent and 18.90 percent respectively. However, In respect of Assam, the loan sanctioned by NEDFi was 19.89 percent less during the year 2011-12 than that of previous year. On the other hand, loans disbursed in Assam have been 19.5 percent higher during 2011-12 over the previous year. Loan sanctioned and disbursed by the NEDFi to the North-Eastern States including Assam during the last seven years may be evident from the table 14.17.

**TABLE – 14.17**  
**YEAR-WISE SANCTIONS AND DISBURSEMENTS BY NEDFi**  
**(As on March 2012)**

(Rupees in lakh)

Year	Sanctions		Disbursements	
	Total NER	Assam	Total NER	Assam
2005-06	13132	7053	10431	5342
2006-07	13872	8545	9424	6680
2007-08	27945	16588	11643	8872
2008-09	26689	21351	18409	13071
2009-10	33341	22370	20808	13512
2010-11	42138	33135	28138	19963
2011-12	43223	26544	33456	23854

Source: NEDFi



**TABLE – 14.18****Year-wise Number of Projects Sanctioned (as on March 2012)**

States	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Assam	110	98	66	73	72	72	95
NER	285	300	169	173	211	198	253

Source: NEDFi

**Assam Financial Corporation**

The Assam Financial Corporation is considered to be the torch bearer of the industrial development of the region. The Corporation has been striving to boost up its performance and persistently working for it. On the sanction and disbursement front, in spite of various constraints, the Corporation is continuing its lending operations. At present the Corporation has 2 numbers of DGM level branches, 4 numbers of Manager level branches, 4 numbers of Assistant Manager level branches and 4 numbers Field Offices to provide need based customer service.

During the Financial year 2011-12, overall loan sanctions by the Corporation touched ₹3039.38 lakh as against the sanction figure of ₹1438.62 lakh in 2010-11. The total disbursement of loan, during 2011-12 stood at ₹1017.71 lakh against ₹704.67 lakh in the previous year. On the recovery front, the Corporation achieved a total recovery of ₹960.64 lakh during the Financial Year 2011-12 as against ₹881.74 lakh in the previous year.

Micro finance, which has added a new dimension in the economy recorded exponential growth in credit delivery through SHG (Self Help Group) and JLG (Joint Liability Group), has been recognized as an effective means of empowering the rural and economically backward section of the society. The Corporation is implementing the Chief Minister's Micro Finance Scheme (CMMF) for which the Govt. of Assam has provided a low cost loan of ₹1000.00 lakh. The Corporation has sanctioned an amount of ₹950.00 lakh to 3 numbers of units as against ₹415.00 lakh to 7 numbers of NGOs/MFIs/NBFC in the previous year. The Corporation disbursed an amount of ₹200.00 lakh involving 1(one) number of unit under the Micro Finance Scheme. On the other hand, the Corporation recovered an amount of ₹334.19 lakh out of which the interest amount recovered is ₹12.86 lakh.

Under MSME Sector, the Corporation received 69 numbers of applications involving an amount of ₹3571.22 lakh and sanctioned an amount of ₹2089.38 lakh as against 35 numbers of applications involving an amount of ₹1023.62 lakh in the previous year [i.e. 2010-11]. Further, against the previous year's disbursement of ₹333.67 lakh, the Corporation could disburse an amount of ₹817.71 lakh. On the other hand, the total principal recovery under MSME Sector is ₹375.76 lakh in 2011-12 as against ₹395.80 lakh in the previous year. The Corporation has recovered ₹225.54 lakh as interest as against previous year's recovery of ₹220.76 lakh.

A new 'Venture Capital Fund' with a corpus of ₹400.00 lakh has been introduced to encourage the new and first generation entrepreneurs with innovative activities. The fund was provided by the Government of Assam for the purpose. The Corporation, under the Scheme, has sanctioned 1(one) no. loan amounting to ₹55.00 lakh during the year. At present, 6 numbers of loan proposals amounting to ₹570.60 lakh is pending with the Corporation which are under scrutiny.

The State Government has proposed to provide ₹10.00 crore as equity contribution and ₹40.00 crore as soft loan to AFC. The soft loan may be deployed to finance MSME, Tea Sector, Tourism, Plastic Processing, Health Care, Micro Finance and such other needy sectors at reasonable rates of interests [Source: Budget Speech of Finance Minister, Assam 2012-2013].

## APPENDIX – 14.1

### DISTRICTWISE DISTRIBUTION OF THE NUMBER OF REPORTING OFFICES, AGGREGATE DEPOSITS AND GROSS BANK CREDIT OF SCHEDULED COMMERCIAL BANKS IN ASSAM (March, 2012)

(Amount in Million Rupees)

District	Reporting Offices	Deposits	Credit
Baksa	22	3440	1686
Barpeta	62	14518	6316
Bongaigaon	32	9765	3176
Cachar	92	37942	12842
Chirang	15	5511	1951
Darrang	34	6963	3656
Dhemaji	19	4887	2975
Dhubri	49	11716	4832
Dibrugarh	107	54683	14798
Goalpara	37	7789	3301
Golaghat	57	11423	5645
Hailakandi	23	6033	2054
Jorhat	79	27550	11155
Kamrup (Rural)	68	15837	7896
Kamrup (M)	226	288023	97962
Karbi-Anglong	51	10176	3796
Karimganj	49	14336	4723
Kokrajhar	28	10145	3081
Lakhimpur	51	9462	5829
Morigaon	30	6350	3578
Nagaon	101	27847	12081
Nalbari	45	9618	4867
Dima-hasao	15	4570	1153
Sivasagar	73	20195	8714
Sonitpur	98	23335	11116
Tinsukia	86	27812	9538
Udalguri	25	4620	2991
<b>ASSAM</b>	<b>1574</b>	<b>674546</b>	<b>251712</b>

Source : Quarterly Statistics on Deposits and Credit of  
Scheduled Commercial Banks, March, 2010 (RBI).



## CHAPTER – XV

### CO-OPERATION

The Cooperative Movement begins dates back to the year 1904 when the first Cooperative Act was promulgated. After independence cooperative has been earmarked as state subject. The main task of the Co-operation Sector is to facilitate the formation and working of Co-operative Societies in the State for the purpose of promoting self-help and mutual aid among agriculturalists, artisans and other persons with common economic needs so as to bring about a higher standard of living, better business, better method of production and equitable distribution. The cooperative institutions have inherent advantage in tackling the problems of poverty alleviation, food security and employment generation and are considered as potential instrument for delivery of goods and services. Such delivery mechanism of goods and services to the people through cooperative window is considered to be the best as it associates with the target group in its process of implementation.

Since the economy of Assam is predominantly rural in character, an extensive network of sound and viable co-operatives can help tremendously in giving right shape to the socio-economic structure of Rural Assam in particular and for achieving the much needed overall economic growth and social transformation of the State. In Assam, the co-operative sector failed to achieve its desired objective due to its limited impact and existence of uneconomic and dormant cooperatives.

With a view to strengthen the role of existing Cooperative Societies towards socio-economic development particularly their impact on poverty reduction, employment generation and social integration the Assam Cooperative Act,2007 has been enacted which will give renewed fillip to the effort of the State Government to promote voluntary formation, autonomous functioning, democratic control and professionalism to the cooperative societies. In addition, the State Government has taken initiative to set up Cooperative Management University in Assam, first of its kind, in the form of Assam Rajiv Gandhi University of Cooperative Management under academic guidance of Indian Institute of Management, Ahmadabad. The State Govt.'s step for setting up of the University is one of the important steps as it will cater education and research need of to support the Cooperative movement in the State in right direction.

**TABLE – 15.1**

#### STATISTICS OF CO-OPERATIVE SOCIETIES IN ASSAM

Year	Number of Societies	Membership (in '000 nos)	Share Capital (Rs. in Crore)	Working Capital (Rs. in Crore)
2005-06	10134	4499	106.84	1393.30
2006-07	10028	4473	120.90	1390.96
2007-08	10150	4482	123.91	1394.54
2009-10	7696	4608	112.56	2186.37
2010-11	7906	4612	107.36	2724.29

Source: Registrar Co-operative Societies, Assam.

The Cooperative Department of Assam has given special thrust in certain areas at present for revival of the cooperative structure in the State so as to attain the objective of upliftment of the economic conditions of the poor people of the society by providing low cost credit to the farmers and employment generation programmes. The Government of Assam proposed to strengthen the cooperative societies by giving logistic support in terms of better regulation, better facilitation and by closing the sick cooperatives and nurturing the good and economically viable cooperatives.

The 11<sup>th</sup> Five Year Plan was prepared with the objectives of making the Cooperatives more members oriented, democratically governed autonomous organizations so that the Cooperatives may function freely without any outside interference. To achieve the goal, the State Cooperation Department has taken various schematic programmes during the 11<sup>th</sup> Five-Year Plan-

- Revival of short term and long term Cooperative credit structure in the State.
- Rejuvenation of Consumer Cooperatives.
- Involving women in the economic activities.
- Providing housing facilities to economically backward classes.
- Revival of potentially viable Cooperative enterprises and closure of sick units.
- Enlargement of farming activities through Dairy, Fishery, Agricultural farming and other allied activities.
- Strengthening of Cooperative movement through spread of Cooperative Education, Training and leadership development.

### Twelfth Five Year Plan: Thrust areas

The State Cooperation Department has formulated 12<sup>th</sup> Five Year Plan with a view to ensure the functioning of the Cooperatives as autonomous, self-reliant, democratically and professionally managed institution which can make a significant contribution to the State economy. As the aim of the 12<sup>th</sup> Five Year Plan is inclusive growth having Agriculture & allied activities, Education, Health Care, social welfare and development of rural infrastructure as an thrust area with an object to employment generation and improve quality of life especially of the downtrodden strata of the society, the Department has given emphasis to attain the goal through special focus on the thrust areas like –

- 1) Micro Finance-Financial inclusion;
- 2) Implementation of ICDP under Central sector Scheme;
- 3) Revamping of GPSS and women Multipurpose Cooperative Societies;
- 4) Organization of a State Level consumer Marketing Federation;
- 5) Diversification of new areas and activities like Health Care, Education, Cold Storage, Food Processing;
- 6) Dairy and Fishery;
- 7) Rehabilitation of potentially viable weak cooperatives;
- 8) Administrative reforms etc.

### Micro finance-Financial Inclusion

It is proposed to provide soft loan to the needy poor in cooperative fold by linking SHG-Cooperative credit Institutions during the 12<sup>th</sup> Five Year Plan Period under National Rural Livelihood Mission(NRLM) with a view to facilitate a platform to reach the poor people into formal banking system for their financial need. It will generate employment, women employment and will contribute towards State GDP in a modest way.

### Integrated Cooperative Development Project (ICDP)

Integrated Cooperative Development Project (ICDP) stands for creation of Rural Infrastructure, employment generation, enhancement of farm production that are the thrust areas of 12<sup>th</sup> five Year Plan. It is proposed to cover all the 26 Districts of Assam during the 12<sup>th</sup> Five Year Plan.

### Revamping of PACS

The Primary Agricultural Credit Societies (PACS) are the backbone of the Cooperative movement to address socio-economic issues of farmers' vis-a-vis vehicle for development of Rural India. It is felt that the PACS need to be re-oriented for dealing in fertilizer, pesticides, farm mechanization, agriculture credit through KCC, Supply of quality seeds and provide forward and backward linkages of Micro-Finance. It is proposed to facilitate creation of new PACS co-terminus with the existing Gaon Panchayats of the State by providing them adequate support of infrastructure development during the 12<sup>th</sup> Five Year Plan period.



## Women Cooperatives

There are more than 2700 women Cooperative Societies including 2486 numbers of Gaon Panchayat level Multipurpose Women Cooperatives in Assam with membership exclusively confined to women. These societies are organized with the objective of improving the socio-economic status of women by harnessing their talent and individual skill for achieving higher standard of living. Govt. has been providing financial assistance to the women cooperative societies for activating women multipurpose cooperative societies in phased manner. During the 12<sup>th</sup> Five Year Plan it is proposed to provide ₹625.00 lakh for the benefit of women of 625 numbers of women Cooperative societies. In addition to the above, other Cooperative Societies having more than 40 percent women members will be covered under the purview of the scheme. Thus, out of the proposed allocation women members of various types of cooperative societies like GPSS, Consumer Cooperative Societies, and other cooperative societies will be benefited. During the year 2008-09, financial assistance of ₹100.00 lakh was given to 200 nos. of Women Cooperative Societies @ ₹50,000/- each under Assam Bikash Yojana. In the year 2009-10, financial assistance of ₹130.00 lakh was provided to 229 nos. of such cooperative societies for taking up women oriented schemes suitable for their local situation. The State Government has decided to provide assistance to 50 numbers of women cooperatives @ ₹1.60 lakh each (total ₹80.00 lakh) during the year 2012-13.

## Organization of a State Level consumer Marketing Federation

A state level consumers and Marketing Federation has been organized and registered in the month of November, 2011 with all PACS, Wholesale Consumers Cooperatives and Marketing Cooperatives as its member for undertaking wholesale of general merchandise to the PACS besides maintaining departmental stores in the strategic location of the district headquarter. This Federation will act as an instrument for price stabilization of essential commodities. It is proposed to provide budgetary support from State Govt. and promotional support under CSS during the 12<sup>th</sup> five Year Plan period.

## Diversification of Activities

It is proposed to diversify the business activities of the existing PACS, Women Multipurpose Cooperative Societies which have multipurpose objectives in the field of Health care, Education, Eco-tourism, Surface transport etc., with the support from Government during the 12<sup>th</sup> Five Year Plan period.

## Animal Husbandry

It is proposed to set up District Dairy Federation in the districts where viable and also a state level Dairy Federation exists. The objective of setting up of dairy federation in the district federations is to create awareness and for propaganda of white revolution. Poultry and Piggery cooperatives, which are both directly and indirectly involved in employment generation, are proposed to be covered under financial support during the 12<sup>th</sup> Five Year Plan.

## Fishery sector

As Scheduled Caste and backward communities are direct beneficiaries of Fishery Sector as most of the people of these communities are fishermen by profession and fishery is taking place as most remunerative commercial venture for all unemployed irrespective of caste and creed, the Cooperative department has proposed to create District Level federation of Fishery Cooperatives during the 12<sup>th</sup> Five Year Plan period and such cooperative federations will be provided with budgetary support.

## Revival of various Cooperative Societies

The Cooperation Department has taken various schematic programmes for revival of various sick cooperatives in the State.

## Multipurpose Rural Co-operatives (Strengthening of Primary Agricultural Credit Co-operatives)GPSS:

There are 709 nos. of Gaon Panchayat level Samabai Samitees (GPSS) in the State that deals in Agricultural produces, distribution of essential commodities etc. The main objectives of these cooperatives are (1) Production, (2) Procurement and (3) Distribution of essential commodities. The State Government has proposed to have at least one GPSS in each Gaon Panchayat area for distribution of PDS items. The State Government also proposed for registration and setting up new GPSS particularly in those Gaon Panchayats which do not have a GPSS and are being service by the GPSS located outside their Gaon Panchayat areas.

Financial assistance of ₹15.00 lakh was provided to 90 nos. of GPSS in the year 2008-09. An amount of ₹5.00 lakh has been provided as financial assistance to 8 nos. of GPSS in the year 2009-10. An amount of ₹23.00 lakh is proposed to be provided to such cooperatives during the year 2011-12.

## Credit Co-operatives

There are three types of Cooperative Bank in the State viz.: 1) ASCARD Bank, 2) Assam Cooperative Apex Bank and 3) Guwahati Urban Cooperative Bank with their branches spread all over the State. These Societies are providing credit to local entrepreneurs for undertaking various types of business activities thus providing employment to unemployed youths. ASCARD Bank is the only pioneer organization to provide long-term credit in the cooperative sector in the State. The State Government has taken several steps for revival of Long Term Cooperative credit Structure, the State Government has planned to work out strategy and roadmap which will help revival of the ASCARD Bank Ltd. In addition, Government of Assam provided financial assistance to Assam Cooperative Bank and Guwahati Urban Cooperative bank amounting to ₹11.50 lakh each during the year 2011-12.

The Government of Assam has proposed to provide financial assistance of ₹.50.00 lakh to the ASCARD Bank and ₹.10.00 lakh to the Guwahati Urban Cooperative bank during the year 2012-13.

## Processing Co-operatives

A large number of processing units have been set up in the State under Co-operative Sector comprising of Rice and Oil Mill, Mustard Oil Mill, Spinning Mill, Jute Mill etc. The Assam Polyester Cooperative Society Ltd. (APOL), a downstream spinning industry, is one of the prestigious organizations under the Cooperative sector in the State. This organization remained non-functional for sometime. To revive the organization, the State Government has provided an amount of ₹15.00 lakh and ₹110.00 lakh to APOL during the year 2007-08 and 2008-09 respectively. An amount of ₹60.00 lakh was also provided to APOL during the year 2009-10. Similarly; financial assistance has been provided to two another Spinning Mills of Assam Viz., the Swahid Kushal Konwar Samabai Sutakal Samitee Ltd located at Golaghat District and Assam Co-operative Spinning Mill located at Boitamati under Bongaigaon District by the Government of Assam.

The Government of Assam provided financial assistance amounting to ₹80.00 lakh to APOL, ₹1077.00 lakh to Assam Cooperative Spinning Mill, Boitamari and ₹4.00 lakh to the Swahid Kushal Konwar Samabai Sutakal Samitee Ltd, Golaghat during the year 2011-12.

It is proposed to provide financial assistance of ₹35.00 lakh to APOL and ₹10.00 lakh to ASCOF during the year 2012-13.

## Consumer Co-operatives

There are 36 Urban Wholesale Consumer Stores with 474 affiliated Primary Consumer Stores and 640 Tea Garden Consumer Stores in the State. These Cooperative Societies extended yeoman service to the urban population and in maintaining price line. During the financial year 2008-09, an amount of ₹40.00 lakh was released @₹1.00 lakh each to 40 nos. of such Cooperative Consumers Societies. It was decided to provide financial assistance to six nos. of such Consumer Cooperative Societies during the year 2009-10. During the year 2011-12, an amount of ₹23.00 lakh was provided as financial assistance to these Societies. Now it is proposed to provide ₹40.00 lakh to these societies during the year 2012-13.

## Co-operative Sugar Mill

There were two cooperative Sugar Mills in Assam - Assam Cooperative Sugar Mill at Dergaon and Nagaon Co-operative Sugar Mill. Out of two Co-operative Sugar Mills in Assam, only Nagaon Co-operative Sugar Mill was functioning prior to 2003-04. Due to financial constraint and other various reasons, it had to stop its production for last couple of years. Now both the Mills have been sent in liquidation. The closure liabilities of the Assam Cooperative Sugar Mills have been released by the Government and are being disposed off. The closure of Nagaon Co-operative Sugar Mills Ltd. has been assessed at ₹2146.65 lakh. The State Government has decided to provide 25 percent of the total liability during the financial year 2011-12.

## Housing Co-operative

There are 418 numbers of Primary Housing Co-operatives with one Apex Level Society- HOUSEFED, Assam is rendering service to its members. This Federation has also provided housing facilities to the Government departments and loan for dwelling houses to the low and middle-income people in the urban and rural areas. During the year 2008-09, an amount of ₹210.00 lakh was provided to HOUSEFED for providing houses to the poor members of housing cooperatives including TSP and SCSP areas. Another amount of ₹304.40 lakh has been provided to the Society during the year 2009-10. The State Government has proposed to provide ₹ 40.00 lakh to this Society during the year 2012-13.

## Revival of Dairy Co-operatives

There are three Regional Level Milk Co-operative Unions, viz. - the West Assam Milk Producers Cooperative Union Ltd. (WAMUL); the East Assam Milk Producers Cooperative Union Ltd. (EAMUL) and the Central Assam Milk Producers Cooperative Union Ltd. (CAMUL) and 320 Primary Milk Unions in the State and out of these CAMUL is in a defunct stage. The other two are providing good quality Milk at reasonable to the consumers and providing remunerative returns to the producers. The State Government has decided to revive the WAMUL by handing over its management to NDDDB. During the year 2007-08, the State Government released an amount of ₹164.00 to WAMUL for refurbishment of its liquid milk plant and the cattle feed plant and payment of liabilities like employees' salaries and other dues. During the year 2008-09 an amount of ₹54.00 lakh and during the year 2009-10 ₹40.00 lakh have been released to the WAMUL for the purpose of liquidation of past losses under revival scheme of Government of India assistance to cooperatives.

Similarly, the State Government has also taken steps for revival of the EAMUL and released financial assistance of ₹70.00 lakh provided to the EAMUL in the year 2008-09. An amount of ₹50.00 lakh has also been provided during the year 2009-10 to EAMUL.

The State Government has decided to provide financial assistance of ₹91.86 lakh to Primary Dairy Cooperative societies and ₹8.14 lakh to WAMUL in the year 2012-13.

## Assam Cadre Management Co-operative Society Ltd

The Assam Cadre Management Co-operative Society Ltd was registered under the Assam Co-operative Societies Act, 1949 to look after the establishment matters of the Secretaries of the GPSS. Though the Secretaries were provincialized, the society is still involved in settlement of dues to societies. Secretaries and other allied matters are yet to be settled by the Society. Therefore, the State Government proposed to provide an amount of ₹2.50 lakh to the society to meet the establishment expenditure during the year 2011-12.

## Other Cooperatives

In addition to the above mentioned Co-operative Societies, there is large number of functional Co-operative like Poultry, Piggery, Duckery, Pisciculture, Cane and Bamboo Industries, Brick Industries, Transport and Communication, Rickshaw puller, Bee-keeping, Blacksmith, Carpentry etc. in the State. The financial assistance to these societies will go a long way in enabling economically weaker section of the society to achieve their economic upliftment. In the year 2008-09, an amount of ₹16.00 lakh was given to 32 nos. of such type of Societies. During the financial year 2009-10, the State Government decided to provide assistance of ₹20.00 lakh to FISHFED and ₹10.00 lakh to Assam Bell Metal Utensil Manufacturing Co-operative Society and ₹10.00 lakh to 12 nos. of other types of Cooperative Societies. In 2011-12, the State Government provided financial assistance amounting to ₹70.00 lakh to the above societies. Now it is proposed to provide financial assistance of ₹104 .00 lakh to these societies including ₹50.00 lakh to FISHFED during the financial year 2012-13.

## PERFORMANCE OF STATE LEVEL COOPERATIVE SOCIETIES:

The performance of some of the State Level Credit and Non-Credit co-operative institutions elaborated below:

### Assam State Co-operative Apex Bank Limited

The Assam State Co-operative Apex Bank Limited is a pioneer Co-operative institution in channelizing credit for agricultural operation to boost up the development process of the rural economy as well as financing other urban business and industrial activities through co-operative channel in the State. The bank, which has been functioning since 1948, has 67 branches in the State at present. The bank has failed to provide desired service to the rural sector through its adopted PACS due to its ill health. The Government of Assam has decided to implement the Government of India's Scheme of revival of Short Term Co-operative Credit Structure [STCCS] including the Assam State Cooperative Apex Bank Limited. The State Government has taken steps accordingly by implementing the Revival Package for STCCS being administered by NABARD so that GPSS become eligible for fresh finance. A Memorandum of Understanding (MOU) was signed between the Government of Assam, NABARD and representative of Government of India. As a part of the Government of India's package for revival of the Short term Cooperative Credit Structure, an amount of ₹19.65 crore has been provided by the State Government. The State Government also decided to provide ₹20.0 crore to the Assam State Cooperative Apex Bank Ltd for one-time settlement of outstanding dues of various cooperative institutions from the non-plan budget during the year 2012-13.

As per available information, the membership of the bank has increased from 59 thousand in 2005-06 to 82 thousand in 2011-12. The share capital has increased to ₹8.84 crore in 2011-12 from ₹5.94 crore in 2005-06. The working capital is also increased to ₹1777.40 crore in 2011-12 from ₹812.20 crore in 2005-06.

In addition, 503 GPSS and 25 LAMPS are under adoption of Assam State Cooperative Apex Bank. The Bank provided an amount of ₹748.93 lakh to 170 numbers of such adopted societies during the year 2011-12.

The performance of the Assam State Co-operative Apex Bank during the last six years may be evident from the table below.

**TABLE – 15.2**

### THE PERFORMANCE OF ASSAM STATE CO-OPERATIVE APEX BANK LTD

Particulars	Unit	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Bank Branches	No	68	68	68	68	68	68	67
Members	'000 No	59	64	68	72	76	78	82
Paid up Share Capital	Rs. crore	5.94	6.32	6.69	7.20	7.80	8.13	8.84
Reserve	-do-	23.19	22.55	22.76	23.54	23.82	96.84	22.15
Deposits	-do-	552.38	587.21	641.67	823.57	118.88	1544.51	1559.47
Working Capital	-do-	812.20	586.68	643.93	846.78	1225.06	1775.03	1777.40
Borrowing outstanding	-do-	2.62	1.85	1.26	2.13	Nil	Nil	7.0
Investments	-do-	211.92	251.02	284.97	230.85	781.12	1144.95	1019.56
Loans Advances	-do-	146.44	163.13	142.44	186.21	150.23	215.50	419.58
Loan Outstanding	-do-	283.62	266.93	288.94	311.75	322.82	313.44	504.84
Loan Overdue	-do-	142.57	-	95.16	24.39	101.22	99.83	98.98
Profit (+) / Loss(-)	-do-	+5.18	+2.78	-11.85	-1.40	+6.44	+45.66	+25.98

NB. Total may not be equal due to rounding off.

Source: Registrar of Cooperative Societies, Assam.

### Assam Cooperative Agricultural and Rural Development Bank Ltd. (ASCARD)

The Assam Cooperative Agricultural and Rural Development Bank [ASCARD], which was formerly known as Assam Coop. Central Land Mortgage Bank Ltd was established in the year 1955. The functioning of the bank was hampered due to ill financial health for several years. The Govt. of Assam has decided to revive the bank by correcting all deficiencies and to implement the revival package rules formulated by the Govt. of India for revival of the Rural Cooperative Credit Structure [Long Term] based on Report of the Task force headed by Prof. A. Vaidyanathan. For revival of Long Term Cooperative credit Structure, the State Government has planned to work out strategy and roadmap which will help revival of the ASCARD Bank Ltd.

As on 31<sup>st</sup> March 2012, the bank has 28 branches throughout Assam with more than 39 thousand members. The paid up share capital of the bank has decreased to ₹633.75 lakh in 2011-12 from ₹647.28 lakh in 2008-09. The deposit also decreased to ₹20.53 lakh in 2011-12 from ₹48.67 lakh in 2008-09. The working capital too decreased from ₹4913.83 lakh in 2008-09 to ₹1641.63 lakh in 2011-12. Although the bank after two years suspension [i.e., 2006-08] resumed its loaning business and issued loan of ₹11.53 lakh during the year 2008-09, the amount of loans & advances decreased to ₹4.33 lakh in the year 2011-12. The loan outstanding with the bank recorded continuous fall from ₹1196.77 lakh in 2005-06 to ₹877.51 lakh in 2011-12.

The data containing important indicators of bank performance are presented in the Table below.

**TABLE – 15.3**  
**PERFORMANCE OF A.S.C.A.R.D BANK**

Particulars	Unit	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Bank branches	No	33	33	32	30	28	28	28
Membership	No	34286	34286	34340	34390	37372	30056	39106
Paid up Share Capital	Rs. Lakh	660.40	656.18	652.53	647.28	641.67	636.95	633.75
Working Capital	-do-	2711.57	2605.92	4596.12	4913.83	4993.18	1702.32	1641.63
Deposits	-do-	59.95	97.45	72.02	48.67	37.81	30.35	20.53
Loans and Advances	-do-	26.09	Nil	Nil	11.53	7.65	5.68	4.33
Loan Outstanding	-do-	1196.77	1192.57	1124.23	1028.44	965.42	922.16	877.51

Source: Registrar of Cooperative Societies, Assam

### Urban Cooperative Banks

The State has a presence of 8 numbers of functioning Urban Cooperative Banks (UCBs) with 23 branches. Till recent past, multiplicity of command, absence of clear-cut demarcation between the functions of State Government and RBI, led to operational difficulties in implementing regulatory and supervisory measures pertaining to UCBs. To sort out the difficulty, an MOU between RBI and Government of Assam was signed in connection with regulatory control of RBI over UCBs during the year 2008 so that functioning of such banks can be improved and confidence of depositors can be restored.

As per available report, total membership of the functioning UCBs are more than 29 thousand in 2011-12 as against 37 thousand in 2005-06. The paid up share capital of UCBs has been increased to ₹5.65 crore in 2011-12 from ₹5.06 crore in 2009-10. However the Paid up share capital remained low compared to ₹6.72 crore in 2008-09. The working capital of the banks, on the other hand, increased to ₹574.16 crore in 2011-12 from ₹348.24 crore in 2009-10. The loans and advances also increased to ₹275.24 crore from ₹101.00 crore in 2008-09 but remained low compared to loans and advances disbursed in 2010-11. Loan overdue has shown also some improvement during the last three years. Loan overdue came down to ₹16.80 crore in 2011-12 from ₹45.83 crore in 2009-10.

**TABLE – 15.4**  
**STATISTICS RELATED TO PERFORMANCE OF URBAN COOPERATIVE BANKS**

Particulars	Unit	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Bank Branches	No	21	15	15	15	16	22	23
Membership	'000' No	37	24	25	23	15	28	29
Paid up Capital	Rs.Crore	3.93	3.40	3.76	6.72	5.06	4.89	5.65
Working Capital	-do-	244.82	240.80	289.46	253.83	348.24	513.98	574.16
Deposits	-do-	197.80	202.56	231.28	280.50	315.04	446.31	492.28
Loans/Advances	-do-	299.36	155.67	94.49	101.00	275.24	393.85	307.38
Loan Outstanding	-do-	111.40	112.03	130.29	98.50	163.27	179.85	223.98
Loan Overdue	-do-	16.44	6.40	6.58	7.25	45.83	10.43	16.80

NB. Total may not be equal due to rounding off.

Source: Registrar of Cooperative Societies, Assam

## Kanaklata Mahila Urban Cooperative Bank Ltd [KMUC]

Kanaklata Mahila Urban Cooperative Bank Ltd is the only women bank in Assam with its Head office located at Jorhat. The bank is exclusively run by women and also meant for women. The bank was registered on 22<sup>ND</sup> May, 1998 under Assam Co-operative Societies Act, 1949 and Reserve Bank of India granted license to the bank on 16<sup>th</sup> February 2000 to commence banking business under the New Mahila Urban Cooperative Bank Policy 1989-90. Since then the bank is offering services to the needy poor women of the society and make them aware of their fundamental rights to live respectfully in the society. At present, the bank having more than six thousand shareholders mostly from the lower section of the society, is functioning with three branches within its operation district i.e., Jorhat District. Besides daily deposit scheme, recurring deposit scheme the bank has introduced re-investment plan, Pariwar Kalyan Nidhi etc are implemented by the bank. Microfinance scheme of the bank is also beneficial to the street vendors who are informal part of the informal sectors. Through Microfinance, the bank is helping these women to pursue their small/micro business for better livelihood. The bank is also providing loans to 315 women SHGs those are engaged in various activities like agriculture, goatery, poultry, piggery etc. The bank is trying to enhance women entrepreneurial activities and work for their economical empowerment so that they can contribute more to overall development of the society.

### State Level Non-Credit Co-operative Societies

There are a few State Level Non-Credit Co-operative Societies functioning in the State. The performance of these societies is presented in the Table below.

**TABLE – 15.5**  
**STATISTICS RELATED TO STATE LEVEL NON-CREDIT CO-OPERATIVE SOCIETIES IN ASSAM**

Name of Societies	Year	No. of Societies	No. of Members	[Rupees in Lakh]		
				Paid up Capital	Working Capital	Value of Sales
Assam Co-operative Jute Mill Ltd.	2008-09	1	8263	1207.80	1207.06	2085.08
	2009-10	1	8262	1309.27	1143.44	2660.29
	2010-11	1	8262	333.01	1151.83	3324.14
	2011-12	1	1816	333.02	1006.80	3169.18
FISHFED	2008-09	1	217	218.35	180.66	16.78
	2009-10	1	241	253.35	369.81	16.27
	2010-11	1	496	97.36	1423.14	1643.20
	2011-12	1	225	24.20	97163.00	20135.64
HOUSEFED	2008-09	1	417 Member Societies	1337.10	7364.00	186 Houses
	2009-10	1	418 Member Societies	1560.13	8167.00	237 Houses
	2010-11	1	418 Member Societies	1550.19	12572.99	330 Houses
	2011-12	1	418 Member Societies	1547.84	13152.31	85 Houses
Eastern Agro Processing & Tea Warehousing Co-op. Society Ltd.	2008-09	1	493	95.12	1267.05	1799.07
	2009-10	1	493	97.08	1455.21	1474.45
	2010-11	1	496	97.36	1423.14	1643.20
	2011-12	1	505	97.98	2187.02	2138.01
Assam Polyester Co-operative Society Ltd.	2008-09	1	12759	1608.07	1176.02	990.01
	2009-10	1	13129	1608.07	1152.32	1149.68
	2010-11	1	4591	1608.13	170.00	1748.07
	2011-12	1	-	1628.11	171.01	1710.10

Source: Registrar of Cooperative Societies, Assam.



## CHAPTER-XVI

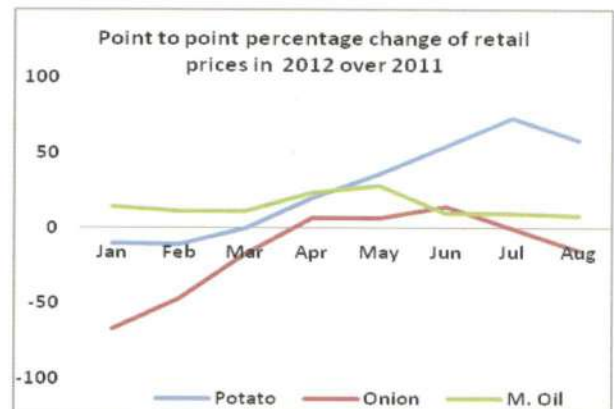
### PRICES AND PUBLIC DISTRIBUTION SYSTEM

The economic activities as well as the purchasing power of the people of a country are greatly influenced by the changes in commodity prices. Rising prices leads to increase in income inequality and also affects the fixed income groups of a country. It is crucial to have a continuous watch on the price behavior to regulate economic policies. The State in particular and the Country as a whole is experiencing price rise in varying degree in the last few years. The country is going through high inflation, at times hovering around the double digit forcing the Government to take various measures to control it. Inflation is measured taking into account the Wholesale Price Index (WPI) based on the prices in wholesale markets and the Consumer Price Index (CPI) based on the prices the consumer purchases from the retail trade market.

#### Price Situation in Assam

The Directorate of Economics and Statistics, Assam collects retail prices of essential commodities from different urban and rural centres of the State.

During the first eight months of 2012, prices of some essential commodities such as Rice, Atta, Moong and Arahara depict a decreasing trend over the corresponding period of 2011. Though prices of Potato and onion decreased during the first three months of 2012 in comparison to the prices first three months of 2011, the prices of the same commodities show a high increase during the period April to August of 2012 over the corresponding period of 2011. The point to point percentage change of prices of Mustard oil during first eight months of 2012 over the corresponding month of 2011, show an increase in the range 8 percent to 30 percent both in rural and urban areas of the State.



#### Wholesale Price Index (WPI)

The Wholesale Price Index (WPI) is released on weekly basis by the Office of the Economic Advisor, Ministry of Commerce and Industries, Government of India. The annual rate of inflation, based on monthly WPI (Base: 2004-05=100), stood at 7.24 percent (provisional) for the month of November, 2012 over November, 2011 as compared to 7.54 percent (provisional) for the previous month and 9.46 percent during the corresponding period of the previous year. The buildup inflation in the financial year up to the month of November is 4.84 percent which depicts a decrease from 5.28 percent in the corresponding period of the previous year.



The all India WPI for all commodities during 2011-12 was 156.13 as against 143.32 in 2010-11 showing an increase of 8.94 percent in WPI. The WPI for food articles was 192.74 in 2011-12, an increase of 7.30 percent over 179.63 in 2010-11.

The year on year inflation rate for all commodities up to November of 2012-13 is 7.24 as compared to 9.46 for the corresponding period of 2011-12 and rate of inflation for food articles is 8.32 and 8.50 and for fuel and power 15.48 and 10.02 during first eight months of 2011-12 and 2012-13 respectively.

The Directorate of Economics and Statistics, Assam compiles the Wholesale Price Index of Agricultural Commodities with base 1993-94=100 in Assam. The WPI of agricultural commodities during 2011-12 was 287 as compared to 272 in 2010-11 showing an increase of 5.51 percent against an increase of 9.24 percent in 2010-11 over the previous year. The WPI during the financial year up to the month of July shows no change over the corresponding period of the previous year. The table 16.1 depicts the Index from 2005-06 to 2011-12 and the percentage of price change over the previous year.

**TABLE – 16.1**  
**INDEX NUMBER OF WHOLESALE PRICES OF**  
**AGRICULTURAL COMMODITIES IN ASSAM**

**BASE: 1993-94=100**

Year	Index	Price Change over the year (in percentage)
2005-06	176	3.53
2006-07	185	5.11
2007-08	204	10.27
2008-09	221	8.33
2009-10	249	12.67
2010-11	272	9.24
2011-12	287	5.51

Source: Directorate of Economics and Statistics, Assam

### Consumer Price Index (CPI)

The analysis of different Consumer Price Indices is presented in the paragraph given below.

### Consumer Price Index Number (General) for Rural, Urban and Combined on Base 2010=100

The Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation had introduced a new series of Consumer Price Indices (CPI) on base 2010=100 for all-India and States/UTs separately for rural, urban and combined with effect from January, 2011. Monthly price data are collected from 310 selected towns by the Field Operations Division of NSSO and the specified State/UT Directorates of Economics and Statistics and from 1181 selected villages by the Department of Posts. Price data are received through web portals being maintained by the National Informatics Centre.

Provisional annual inflation rate based on all India CPI (Combined) for October 2012 on point to point basis is 9.75 percent over October 2011 as compared to 9.73 percent (final) for the previous month of September 2012. The corresponding provisional inflation rates for rural and urban areas for October 2012 are 9.98 percent and 9.46 percent respectively. Inflation rates (final) for rural and urban areas for September 2012 are 9.79 percent and 9.72 percent respectively.

The annual average Index for Rural, Urban and Combined in 2011 in the State was 112,108 and 111 as against the National average of 110.95, 107.96 and 109.65 respectively. The average CPI (General) for Rural, Urban and Combined of the first eight months of 2012 increased by 9.2 percent, 9.3 percent and 9.4 percent respectively over the corresponding period of 2011. The Consumer Price Index for Rural, Urban and Combined (Base=100) in Assam is given below.



**TABLE – 16.2****Consumer Price Index Number (General) for Rural, Urban and Combined of Assam**

Base 2010=100

Month	Rural	Urban	Combined	Rural	Urban	Combined
	2011			2012		
January	105	104	105	115	112	115
February	106	103	105	116	113	116
March	106	104	106	116	114	116
April	108	104	107	118	115	118
May	110	105	109	120	116	120
June	111	107	111	121	117	120
July	112	109	112	123	119	122
August	114	110	113	123	119	123
September	116	111	115			
October	118	112	117			
November	117	112	116			
December	115	112	115			
Annual average	112	108	111			

Source: Directorate of Economics and Statistics, Assam

**Consumer Price Index for Working Class Population**

The Consumer Price index number with base 2001=100 for working class population for the State is compiled by the Directorate of Economics and Statistics, Assam taking into account the weighted average of the indices of the three centres viz. Guwahati, Silchar and Tinsukia. The annual average of Consumer price Index for Working Class Population (Base 2001=100) in Assam increased by 6.10 percent in 2011 over 2010 as compared to 10.81 percent in 2010 over the previous year. The Centre-wise increase is comparatively high in Guwahati (7.69%) followed by Tinsukia (6.25%) and Silchar (4.49%).

**TABLE – 16.3****Consumer Price Index Number for Working Class Population in Assam**

Base: 2010=100

Year	Guwahati	Silchar	Tinsukia	Assam
2006	115	121	116	117
2007	120 (4.35)	130 (7.44)	125 (7.76)	125 (6.84)
2008	128 (6.67)	143 (10.00)	133 (6.40)	134 (7.20)
2009	143 (11.72)	155 (8.39)	147 (10.53)	148 (10.45)
2010	156 (9.09)	178 (14.84)	160 (8.84)	164 (10.81)
2011	168 (7.69)	186 (4.49)	170 (6.25)	174 (6.10)
2012 (upto August)	181 (9.04)	193 (4.32)	178 (6.59)	184 (6.98)

(Figures in bracket indicate the percentage change over the previous year)

Source: Directorate of Economics and Statistics, Assam

During the first eight months of 2012, the average CPI for working Class Population in Assam was 184 against the average 174 of the corresponding period of 2011 thereby showing an increase of 6.98 percent in 2012. During the same period Guwahati had a high average index of 181 in 2012 compared to 168 of the previous year amongst the three centres.

### Consumer Price Index for Industrial Workers (CPI-IW)

CPI-IW is mainly used for the determination of Dearness Allowance (DA) being paid to millions of public sector employees besides fixation and revision of minimum wages in scheduled employment. It is based on retail prices of essential commodities and services in industrially developed 70 selected centres in the country. In Assam, the Consumer Price Index for Industrial Workers with base 2001=100 is constructed and compiled by taking weighted average of the indices for the five centres, namely Guwahati, Doomdooma (Tinsukia), Labac (Silchar), Morioni (Jorhat) and Rangapara (Tezpur). During the year 2011 the CPI for Industrial Workers in Assam increased 8.07 percent as against 9.09 percent at all India level over 2010. The rate of increase of the Index in different centres in 2011 was recorded higher by 8.23 percent in Morioni, followed by 7.69 percent in Guwahati, 6.25 percent in Doomdooma, 5.84 percent in Rangapara and 4.49 percent in Labac over the previous year.

The average Index for Industrial Workers during the first eight months of 2012 in Assam increased by 6.51 percent as against a decrease of 2.38 percent at all India level over the corresponding period of 2011. Centre-wise the average Index in Guwahati recorded 9.04 percent during the first eight months of 2012 over the corresponding period of 2011 followed by 7.10 percent in Mariani, 6.59 percent in Doomdooma, 3.73 percent in Rangapara and 0.54 percent in Labac. The annual average Consumer Price Index for Industrial Workers from 2006 to 2011 is given in the table below.

**TABLE – 16.4**  
**Consumer Price Index Number for Industrial Workers in Assam and India**  
(Base 2001=100)

Year	Guwahati	Morioni	Doomdooma	Labac	Rangapara	Assam	All India
2006	115	116	116	121	114	116	123
2007	120	127	125	130	126	125	131
2008	128	133	133	143	131	133	142
2009	143	147	147	155	144	147	157
2010	156	158	160	178	154	161	176
2011	168	171	170	186	163	174	192

Source: Directorate of Economics and Statistics, Assam and Labour Bureau, GOI

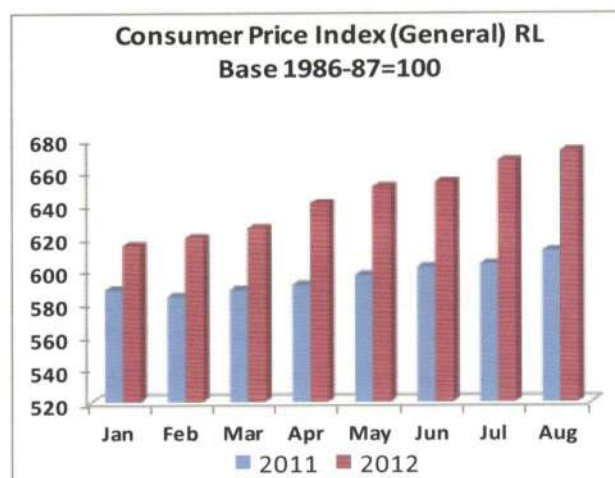
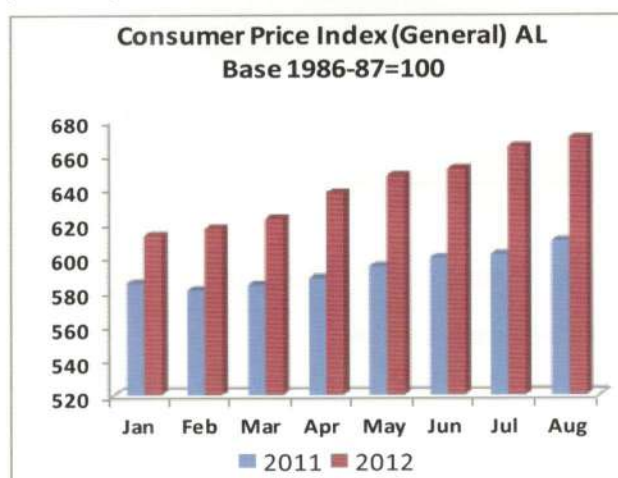
### Consumer Price Index for Agricultural Labour (CPI-AL) and Rural Labour (CPI-RL)

The Consumer Price Index number for Agricultural and Rural Labour with base 1986-87 is compiled by the Labour Bureau, Government of India. During 2011-12, the annual average CPI-AL in Assam was 609 as against 564 in 2010-11, showing an increase of 7.98 percent in the General category and in Food category the CPI-AL during 2011-12 was 608 with an increase of 6.48 over 571 in 2010-11.

The Consumer Price Index number (General) for Rural Labour during 2011-12 was 612 showing an increase of 7.75 percent over 568 in 2010-11 and CPI-RL (Food) during 2011-12 was 615 showing an increase of 6.22 percent over 579 in 2010-11.

## Consumer Price Index for Rural Population in Assam

The Consumer Price Index number for Rural Population in Assam (Plain Districts) with base 1999-2000 during 2011-12 was 220 in comparison to 205 in 2010-11. The percentage change of CPI during 2011-12 over the previous year was 7.32 which depicts an increase from 5.67 percent change in 2010-11 over the previous year.



## Public Distribution System

Public Distribution System is a major instrument of the Government's economic policy for ensuring availability of food grains at affordable prices as well as to provide food security to the poor. It is an important component for poverty eradication and is intended to serve the poor who are nutritionally at risk. It is generally accepted that availability of food cannot ensure food security to the poor who do not have sufficient means to purchase food and hence the PDS mechanism is to provide food to the poor at subsidized prices. Public Distribution System with a network of about 5.07 lakh fair price shop in the country is perhaps the largest distribution system of its type in the world.

Public Distribution System is operated under the joint responsibility of the Central and the State governments. The Central Government has taken the responsibility for procurement, storage, transportation and bulk allocation of food grains etc. The responsibility of distribution to the consumers through the network of fair price shop rests with the State governments. In Assam, the Food and Civil Supplies Department looks after the allocation and distribution of food grains, identification of families below poverty line, issue of ration cards and supervision and monitoring of the fair price shops. The department is also entrusted with the responsibility of procurement of paddy and rice under 'Minimum Support Price' scheme under the 'The Food Management Policy' of the Ministry of Food and Public Distribution of Govt. of India to ensure remunerative price to the producers for their agricultural produce and to provide the procured food grains to the consumers fairly at reasonable and affordable price.

## Fair Price Shops

The fair price shop is opened taking into consideration the convenience of the card holders and topography of the area. There are 37,126 Fair Price Shop operating in the State as on 31<sup>st</sup> March 2012. The Food Corporation of India (FCI) is responsible for procurement of food grains and their allocation to the States for distribution under Public Distribution System.

During the year 2010-11 the scheme with the brand name and logo of "Amar Dukan" and "Jagok Grahok Jagok" was introduced through selected Fair Price Shops. The scheme has facilitated distribution of 21 essential non PDS MRP based food items at subsidised rates through selected Fair Price Shops, throughout the State. The number of AAY and BPL card holders for the last four years is given below. At present, 2694 Fair price Shops are actively involved throughout the State in the sale of non-PDS items and 71 shops in Guwahati. It is intended to take 10,000 Fair Price Shops under the scheme each year from 2011-12 to 2013-14. To make the PDS network more effective, it is proposed to provide interest subsidy to the weak Fair Price Shop to increase their solvency.

**TABLE – 16.5**  
**NUMBER OF CARD HOLDERS**

Year	Type of card		
	AAY	BPL	Total
2008-2009	7,04,000	12,02,000	19,06,000
2009-2010	7,04,000	12,02,000	19,06,000
2010-2011	7,04,000	12,02,000	19,06,000
2011-2012	7,04,000	12,02,000	19,06,000

Source: Directorate of Food & Civil Supplies, Assam.

The Food Corporation of India (FCI) is responsible for procurement of food grains and their allocation to the States for distribution under Public Distribution System. The present quantity of commodities distributed to the BPL, AAY and APL families per month and their rates in Assam is shown in the table-16.6.

**TABLE – 16.6**  
**QUANTITY AND RATES OF COMMODITIES DISTRIBUTED PER MONTH**  
**UNDER DIFFERENT SCHEMES IN ASSAM, 2011**

Commodities	Schemes	Quantity (per month)	Rates (Rs. Per Kg/L)
Rice	BPL	35 kg	6.27-7.00
	AAY	35 kg	3.00
	APL	8-10 kg per card	9.17-10.00
Wheat (Atta)	APL	3-4 kg per card	7.75-8.00
Sugar	APL	0.686 Kg per head	13.50-14.00
K. Oil	APL	4-5 litre per card	12.00-13.00

Source: Directorate of Food & Civil Supplies, Assam.

### Targeted Public Distribution System

The Targeted Public Distribution System (TPDS) is introduced to provide food grains to the poor families of the State under Minimum Common Need Programme of Govt. of India. Under TPDS the states are required to identify the poor families and to distribute food grains at the Fair Price Shop in a transparent and accountable manner. Govt. of India has been making allocation of subsidized food grains for the 6.52 Crore BPL families including about 2.43 Crore AAY families at the rate of 35 Kg per family per month. Allocation of subsidized food grains are also made to APL families based on the availability of food grains in the Central Pool and past off-take in the range between 15 Kg and 35 Kg per family per month. During the year 2011-12, total allocation of Wheat and Rice for APL, BPL, AAY and other welfare schemes under TPDS was 20.57 lakh tonnes for Assam of which 16.92 lakh tonnes were Rice and 3.66 lakh tonnes were Wheat. The present monthly requirement, allocation and release of commodities for Public Distribution System for the State are shown in table-16.7.

**TABLE – 16.7**  
**QUANTITY AND RATES OF COMMODITIES DISTRIBUTED PER**  
**MONTH UNDER DIFFERENT SCHEMES IN ASSAM, 2012**

Commodities	Schemes	Monthly Requirement (In MT/KL)	Average Monthly Allocation (In MT/KL)
Rice	BPL	42,070	39,602
	AAY	24,641	24,641
	APL	1,02,850	60,155*
Wheat (Atta)	APL	46,137	32,840*
Sugar	APL	24,080	18,337
K. Oil	APL	56,104	27,344

\*Includes additional APL rice.

Source: Directorate of Food & Civil Supplies, Assam.

Presently the following schemes are being implemented by the department for welfare of the masses.

#### The Above Poverty Line (APL) Schemes

At present 40.91 lakh APL families are provided with APL rice, S.K. Oil, Sugar and Iodized salt as per quantum of allocation in each month. During the year 2011-12, out of the total allocation under Targeted Public Distribution system (TPDS), the share of wheat was 3.28 lakh tones an increase of 6 percent and rice was 6.70 lakh tones an increase of about 18 percent over the previous year for APL families of the State.

#### The Below Poverty Line (BPL) Schemes

The State has achieved the target of selecting 19.06 lakh beneficiaries from BPL families and provided distinct ration cards for issuance of PDS items at subsidized rates. Out of 19.06 lakh selected beneficiaries, 12.02 lakh of beneficiaries have FIC cards and take benefits as BPL families and the rest 7.04 lakh of beneficiaries are brought under AAY category families as per directions and guidelines of the Central Government. Under TPDS, total allocation of rice for BPL families of the State up to March 2012 was 4.75 lakh tonnes against an allocation of 5.81 lakh tonnes in 2010-11. The BPL families are provided with 35 Kg of rice per family at the rate of ₹7.00 per Kg.

#### The Antyodaya Anna Yojana (AAY)

The Scheme is in implementation in the State since November 2001 as per guidelines of the Govt. of India. At present there are 7.04 lakh families under AAY category. Under this scheme, the selected beneficiaries are provided with 35 Kg. of Rice per family per month at a highly subsidized rate of ₹3.00 per Kg. The transportation charge @ ₹30.00 per quintal for carrying AAY Rice from the food storage depots of FCI to the various outlets for distributing of Rice amongst the selected beneficiaries is provided by the State Government under Non-plan. Total allocation of rice for the AAY category of the State was 2.96 lakh tonnes during 2011-12.

#### Village Grain Banks (VGB) Scheme

To provide food security to the BPL families, the State Government has implemented the Village Grain Banks Scheme by setting up 100 nos. of Grain Banks in chronically flood and natural calamities affected areas for every 40 poor families. Every VGB were allotted 40 Qtls. of grade-A rice at ₹1150 per quintal. The total expenditure for each Bank is ₹60,000, which includes cost of rice, transportation cost, training, storage, weighing equipments and administrative cost. Out of the targeted 100 VGB's, 88 Village Grain Banks have been formed. The scheme is being implemented by the Deputy Commissioners in their respective districts. The necessary fund available for setting up of Village Grain bank is ₹13,87,800.00, out of which ₹8,50,400.00 has been utilized, ₹2,81,000.00 is lying with the districts unutilized and the remaining ₹2,56,400.00 has been surrendered. The fund for the Village Grain Banks is shared by both the Central and State Govt. under Non-plan head.

## Randhan Jyoti Scheme

The scheme is in implementation in the State since August 2003. The State has already implemented 1st, 2nd, 3rd, and 4th phase of the scheme by providing LPG connection at free of cost to 1,68,221 numbers of person selected from BPL families in order of preference of widow, women members of the Self-Help groups and any other female members of the BPL families of lower income groups. This scheme is sponsored by the State Government. The cost per LPG connection borne by the Government during 2011-12 is ₹1782.00. The 4<sup>th</sup> phase of the scheme with a financial grant of Rupees One hundred fifty lakh has already been completed covering 8,726 selected beneficiary families increasing the number to 1,79,456 benefitted BPL families in the State.

The 5th and 6th phase of Randhan Jyoti Scheme is in the process of implementation. For the 5<sup>th</sup> phase of the scheme, a sum of Rupees Two hundred lakh has already been drawn by the Department for giving benefit to 11,235 numbers of new beneficiary families.

## Consumer Protection Affairs

Under the provisions of Consumer Protection Act 1986, the Food and Civil Supplies Department being the State Nodal Centre has one State Commission with Head Quarter at Guwahati and eight numbers of regular District Forum and another fifteen numbers of part time District Fora in rest of the Districts to dispose off the cases and complaints lodged before the Commission/Fora as per the provisions of the aforesaid Act.

At present, the District Fora receive complaints up to Rupees Twenty lakh, the State Commission undertakes the complaints from Rupees Twenty lakh to Rupees One crore and National Commission takes complaints of value Rupees One crore and above for necessary redressal.

Several Consumer Clubs are proposed to be set up at various schools of the State with an intention to provide knowledge to the student community to safeguard them from the exploitation from scrupulous businessmen.

## Mukhya Mantrir Anna Suraksha Yojana

Under the Targeted Public Distribution System (TPDS), a total of 19.06 lakh families are covered as per target fixed by the Planning Commission of Govt. of India based on the population as well as family status of 1993-94 and no extra target for inclusion of more deserved families is taken into consideration by the Central Govt. Hence, to bring the deserved poor families i.e. lowest strata of APL families under the ambit of food security, the Anna Suraksha Yojana has been launched under the leadership of Hon'ble Chief Minister of Assam.

At present twenty lakh families are being benefitted under the scheme. Initially 10,000 families per Legislative Assembly Constituency were selected by notified Selection Committees under the supervision of the Deputy Commissioner or the Principal Secretary but now the target has been increased to 15,000 families per Legislative Assembly Constituency. Such identified families are being provided 20 kgs of subsidized rice at BPL rate to each beneficiary upon production of distinctive Ration card to be issued by the concern department. In rural areas, the beneficiaries are selected by the selection committee comprising of Block Development Officer as Chairman and another five members including one PRI member and one social worker and in urban areas the committee is headed by the local Revenue Circle Officer and another five members to select the beneficiaries for the scheme.

## APPENDIX –16.1

### WHOLESALE PRICE INDEX NUMBER OF AGRICULTURAL COMMODITIES IN ASSAM

(Base 1993 - 94 =100)

Year	Annual Average
1996 – 1997	130
1997 – 1998	137
1998 – 1999	149
1999 – 2000	172
2000 – 2001	162
2001 – 2002	163
2002 – 2003	161
2003 – 2004	165
2004 – 2005	170
2005 – 2006	176
2006 – 2007	185
2007 – 2008	204
2008 – 2009	221
2009 - 2010	249
2010-2011	272
2011-2012	287

### MONTHLY AVERAGE FOR THE YEAR 2011-12

April/2011	286
May	288
June	290
July	295
Aug	296
Sept	292
Oct	283
Nov	281
Dec	282
Jan	282
Feb-2012	281
Mar-2012	283

Source : Directorate of Economics and Statistics, Assam.

**APPENDIX – 16.2**  
**CONSUMER PRICE INDEX NUMBER FOR**  
**WORKING CLASS POPULATION IN ASSAM**  
**(Base 1982 = 100)**

Period	Guwahati	Silchar	Tinsukia	Assam
1991 Annual Average	208	193	195	200
1992 Annual Average	235	217	216	224
1993 Annual Average	252	233	233	241
1994 Annual Average	280	251	255	264
1995 Annual Average	312	274	281	291
1996 Annual Average	341	295	309	318
1997 Annual Average	357	312	320	333
1998 Annual Average	405	345	362	374
1999 Annual Average	436	375	386	403
2000 Annual Average	460	370	389	412
2001 Annual Average	471	372	384	415
2002 Annual Average	480	374	398	424
2003 Annual Average	496	383	416	439
2004 Annual Average	516	411	430	459
2005 Annual Average	531	415	450	473
2006 Annual Average	551	442	470	495
2007 Annual Average	575	476	504	525
2008 Annual Average	615	521	536	563
2009 Annual Average	684	565	592	621
2010 Annual Average	748	648	644	686
2011 Annual Average	808	678	687	732
January, 2012	835	679	695	746
Feb, 2012	835	679	699	747
Mar, 2012	845	683	703	754
Apr, 2012	854	697	715	765
May, 2012	878	712	723	781
Jun, 2012	888	715	727	787
Jul, 2012	907	730	743	804
August, 2012	898	734	747	803

Source : Directorate of Economics and Statistics, Assam.



**APPENDIX – 16.3**  
**CONSUMER PRICE INDEX NUMBER FOR**  
**WORKING CLASS POPULATION IN ASSAM**  
**(Base 2001 = 100)**

Period	Guwahati	Silchar	Tinsukia	Assam
2006 Annual Average	115	121	116	117
2007 Annual Average	120	130	125	125
2008 Annual Average	128	143	133	134
2009 Annual Average	143	155	147	148
2010 Annual Average	156	178	160	164
2011 Annual Average	168	186	170	174
January,2012	174	186	172	177
Feb, 2012	174	186	173	177
Mar, 2012	176	187	174	179
Apr, 2012	178	191	177	182
May, 2012	183	195	179	186
Jun, 2012	185	196	180	187
Jul, 2012	189	200	184	191
August,2012	187	201	185	191

Source : Labour Bureau, Govt. of India.

**APPENDIX 16.4**  
**CONSUMER PRICE INDEX NUMBER FOR**  
**INDUSTRIAL WORKERS IN ASSAM AND INDIA**  
**(Base 2001 = 100)**

Period	Guwahati	Doom- Dooma	Labac	Ranga- para	Mariani	Assam	All India
2006 Annual Average	115	116	121	114	116	116	123
2007 Annual Average	120	125	130	126	127	125	131
2008 Annual Average	128	133	143	131	133	133	142
2009 Annual Average	143	147	155	144	147	147	157
2010 Annual Average	156	160	178	154	158	161	176
2011 Annual Average	168	170	186	163	171	174	192
January, 2012	174	172	186	161	173	173	198
Feb, 2012	174	173	186	162	177	174	199
Mar, 2012	176	174	187	163	177	175	201
Apr, 2012	178	177	191	166	183	179	205
May, 2012	183	179	195	166	184	182	206
Jun, 2012	185	180	196	170	184	183	208
Jul, 2012	189	184	200	175	186	187	212
August, 2012	187	185	201	175	186	187	214

Source : (i) Directorate of Economics & Statistics, Assam.

(ii) Labour Bureau, Govt. of India

## APPENDIX – 16.5

### CONSUMER PRICE INDEX NUMBER FOR INDUSTRIAL WORKERS IN ASSAM AND INDIA

(Base 1982 = 100)

Period	Guwahati	Doom- Dooma	Labac	Ranga- para	Mariani	Assam	All India
1991 Annual Average	208	195	193	209	205	203	212
1992 Annual Average	235	216	217	230	229	226	237
1993 Annual Average	252	233	233	246	244	243	252
1994 Annual Average	280	255	251	266	264	264	278
1995 Annual Average	312	281	274	295	296	293	306
1996 Annual Average	341	309	295	323	324	320	334
1997 Annual Average	357	320	312	340	339	335	358
1998 Annual Average	405	362	345	390	389	380	405
1999 Annual Average	436	386	375	412	416	407	424
2000 Annual Average	460	389	370	408	418	412	441
2001 Annual Average	471	384	372	419	411	415	458
2002 Annual Average	480	398	374	417	411	420	477
2003 Annual Average	496	416	383	427	432	435	496
2004 Annual Average	516	430	411	433	441	450	514
2005 Annual Average	531	450	415	439	449	461	536
2006 Annual Average	551	470	442	476	464	485	569
2007 Annual Average	575	504	476	526	509	522	605
2008 Annual Average	615	536	521	548	532	554	656
2009 Annual Average	684	592	565	600	591	611	727
2010 Annual Average	748	644	648	643	635	667	815
2011 Annual average	808	687	678	678	685	732	887
January, 2012	835	695	679	671	694	720	917
Feb, 2012	835	699	679	676	710	725	921
Mar, 2012	845	703	683	680	710	729	931
Apr, 2012	854	715	697	692	734	743	949
May, 2012	878	723	712	692	738	753	954
Jun, 2012	888	727	715	709	738	761	963
Jul, 2012	907	743	730	730	746	777	982
August, 2012	898	747	734	730	746	776	991

Source : Labour Bureau, Govt. of India.

**APPENDIX – 16.6**  
**CONSUMER PRICE INDEX NUMBER FOR**  
**INDUSTRIAL WORKERS IN ASSAM AND INDIA**  
**(Base 2001 = 100)**

Period	Guwahati	Doom-Dooma	Labac	Rangapara	Mariani	Assam	All India
2006 Annual Average	115	116	121	114	116	116	123
2007 Annual Average	120	125	130	126	127	125	131
2008 Annual Average	128	133	143	131	133	133	142
2009 Annual Average	143	147	155	144	147	147	157
2010 Annual Average	156	160	178	154	158	161	176
2011 Annual Average	168	170	186	163	171	174	192
January, 2012	174	172	186	161	173	173	198
Feb, 2012	174	173	186	162	177	174	199
Mar, 2012	176	174	187	163	177	175	201
Apr, 2012	178	177	191	166	183	179	205
May, 2012	183	179	195	166	184	182	206
Jun, 2012	185	180	196	170	184	183	208
Jul, 2012	189	184	200	175	186	187	212
August, 2012	187	185	201	175	186	187	214

Source : (i) Directorate of Economics & Statistics, Assam.  
(ii) Labour Bureau, Govt. of India

**APPENDIX – 16.7**  
**CONSUMER PRICE INDEX NUMBER FOR RURAL POPULATION IN ASSAM**  
**(Plain Districts)**

Period	Consumer Price Index Number (Base 1944=100)	Period	Consumer Price Index Number (New Base 1999-2000=100)
1991 Annual Average	1735	2000-01	104
1992 Annual Average	1962	2001-02	108
1993 Annual Average	2112	2002-03	112
1994 Annual Average	2309	2003-04	109
1995 Annual Average	2505	2004-05	128
1996 Annual Average	2709	2005-06	130
1997 Annual Average	2748	2006-07	139
1998 Annual Average	3046	2007-08	158
1999 Annual Average	3278	2008-09	177
		2009-10	194
		2010-11	205
		2011-12	220

Source : Directorate of Economics and Statistics, Assam.



## CHAPTER – XVII

### LABOUR, EMPLOYMENT AND WAGES

The objective of economic policy planning in India is to achieve high rates of growth of economy and sustained improvement in the standards of living of people. To realize this objective it is essential to generate productive and gainful employment, on a sufficient scale, to absorb the growing labour force coupled with rising GDP growth to achieve the goal of inclusive growth. The Country as a whole and the State in particular has experienced high rates of economic growth during the post reforms period. The State has witnessed an increase in employment in the construction sector and the service sector. Considering the present employment – unemployment scenario in the country, the Eleventh Five Year Plan strategizes rapid growth in employment opportunities along with improvement in the quality of employment. It recognizes the need to increase the share of regular employment in total employment and a corresponding reduction in casual employment.

The State Government has initiated various programmes to lessen the burden of unemployment. To study the unemployment problems in the State, a study on the potential employment avenues available in the state is necessary. The population census, different quinquennial rounds of National sample Survey on employment data, Employment and Unemployment Survey conducted by the Labour Bureau and Economic Census provides us data on human resource, employment structure and workforce. The data available from the Employment Exchanges does not give a clear picture on unemployment as a large number of unemployed people either did not register their names with Employment Exchanges or those who secure employment through other channels do not delete their names from the records of Employment Exchanges.

#### Employment Scenario

The employment-unemployment surveys conducted by the National Sample Survey Organisation (NSSO) in various rounds gives a glimpse on various characteristics of employment and unemployment situation in the country as well as in the states. The result of the 66th round of the NSSO survey conducted during the year July 2009-June 2010 is presented in the table 17.1. The table gives the distribution of population for 1000 person in the age group of 15-59 with rural, urban and both at all India and at State level.

**TABLE – 17.1**  
**DISTRIBUTION OF POPULATION PER 1000 PERSON IN THE AGE GROUP 15-59**  
**AS PER 66<sup>TH</sup> ROUND NSS (JULY 2009-JUNE 2010)**

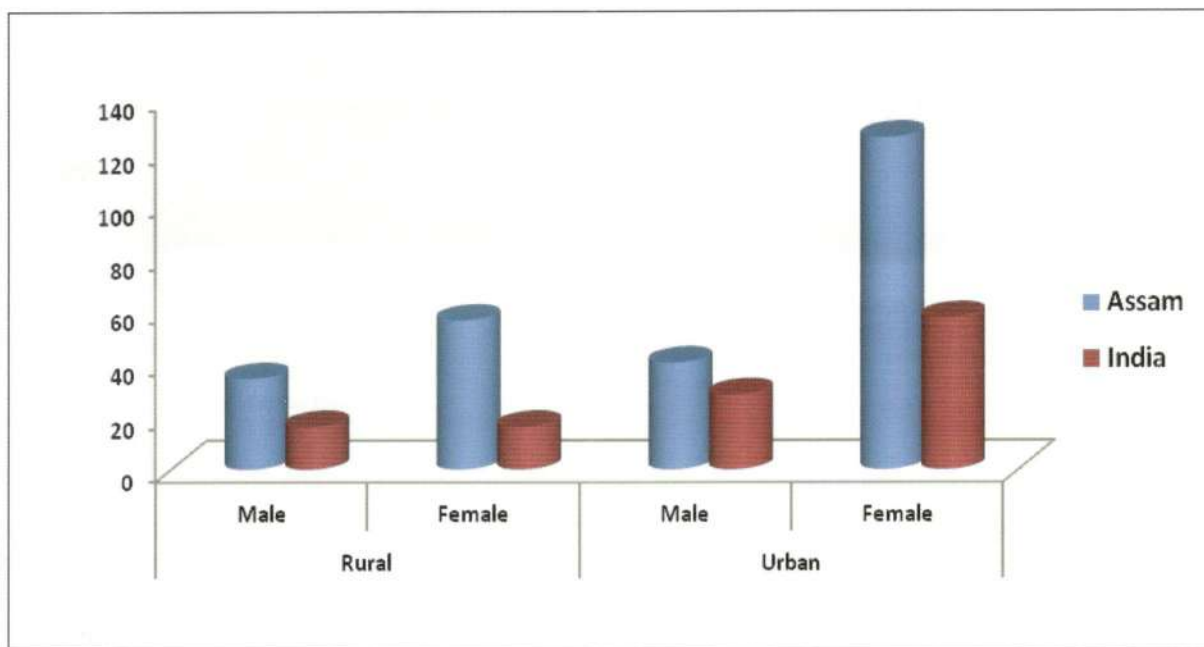
	Rural		Urban		Rural+Urban	
	Male	Female	Male	Female	Male	Female
Assam	607	642	661	713	613	649
India	589	607	656	660	608	622

The population in the age group 15-59 years, which is considered to be active for discharging different types of activities, comprised about 61 percent of males and 64 percent of females in rural areas of Assam as against 59 percent of males and 61 percent of females in rural areas at all-India level. Similarly, the population in the same age group comprises of 66 percent of males and 71 percent of females in urban areas of Assam compared to at all-India level of 66 percent males and 66 percent females.

The Labour Force Participation Rate i.e. number of persons in the labour force per 1000 person in the age group 15-59 years according to usual status (both principal and subsidiary status) approach is 865 male, 243 female and 542 both for male and female in Assam and at all-India level is 836 male, 345 female and 596 for male and female taken together.

The study of the 66<sup>th</sup> round reveals that the unemployment rate i.e. the number of persons unemployed per 1000 persons in the labour force (which includes both the employed and unemployed) according to the usual status (adjusted) approach also shows that as against 20 males, 23 females and 20 males and females combined together at all-India level there is 35 males, 61 females and 40 males and females in Assam.

### Unemployment Rate in Usual Status (adjusted) Approach



The findings of sex-wise rural and urban distribution of workers (per 1000) according to usual status (both principal and subsidiary status) approach by broad employment status in Assam and at all-India level during the year July 2009-June 2010 of the survey are shown in the Table 17.2.

**TABLE – 17.2**

#### DISTRIBUTION OF WORKERS (PER 1000) BY BROAD USUAL ACTIVITY STATUS

	Assam			India		
	Rural	Urban	Rural+Urban	Rural	Urban	Rural+Urban
Self employed	705	490	685	542	411	510
Regular wage/ Salaried employees	94	438	127	73	414	156
Casual labour	201	72	189	386	175	335
All	1000	1000	1000	1000	1000	1000

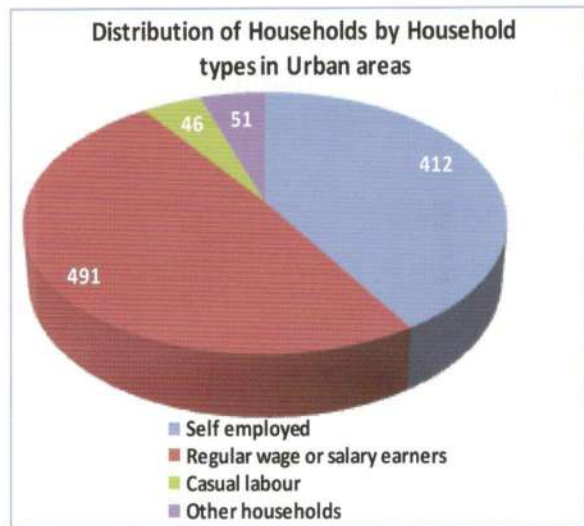
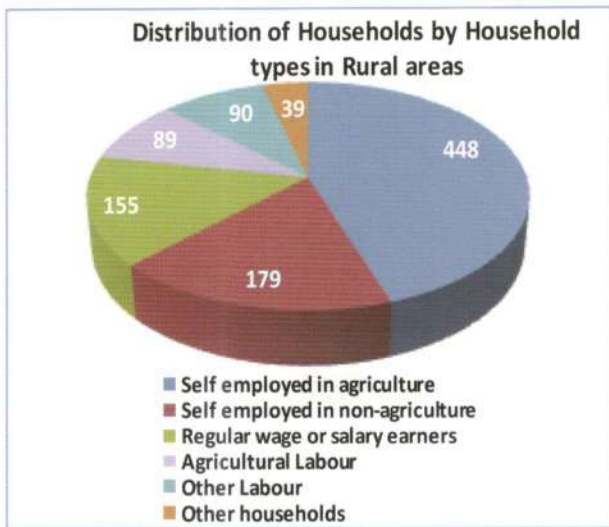
N.B. Total may not be equal due to rounding off.

Source: Key Indicators of Employment and Unemployment in India, 2009-10, NSSO.

#### Second Annual Employment Unemployment Survey, 2011-12

The Ministry of Labour and Employment, Govt. of India has entrusted the task of conducting Employment and Unemployment surveys on regular basis to the Labour Bureau, Govt, of India. The second annual Employment and Unemployment survey was conducted throughout the country taking the agriculture year, July 2010 to June 2011 as the reference period. A brief analysis on the estimates of some labour parameters in the context of the State is discussed in the paragraphs below.

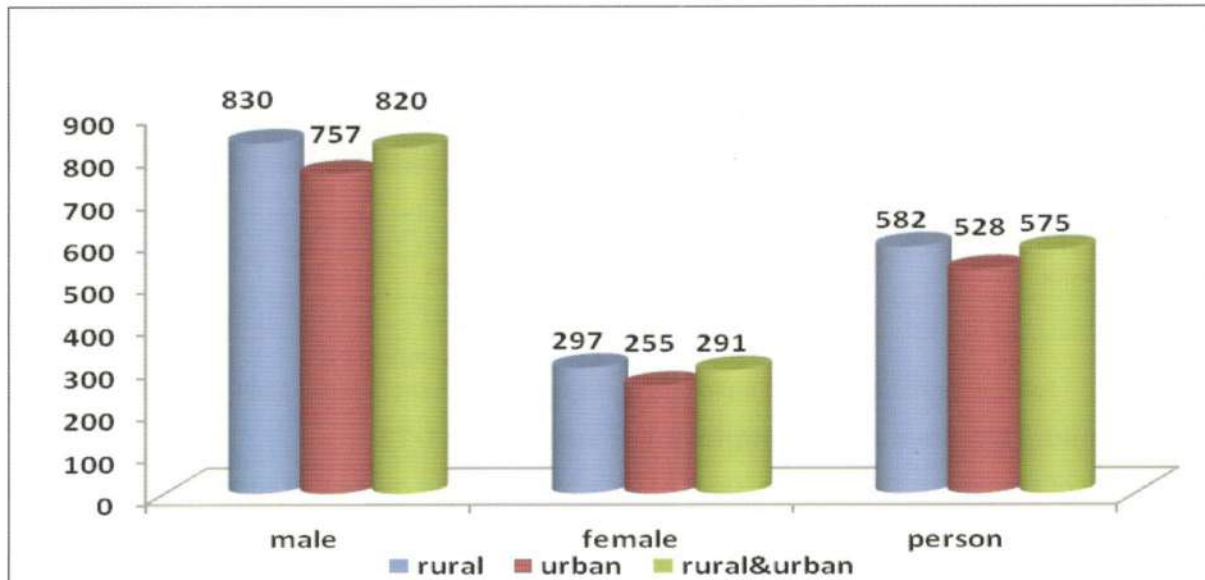
In the rural areas of the State, the study reveals that 44.8 percent households are self employed in agriculture, 17.9 percent are self employed in non-agriculture, 15.5 percent are regular wage or salary earners, 8.9 percent are agricultural labour and 9.0 households are other labour in comparison to 39.6 self employed in agriculture, 11.3 self employed in non-agriculture, 11.1 regular wage or salary earners, 20.7 agricultural labour and 12.5 households are other labour at all India level. The distribution per thousand of households by household type in the State is depicted through the pie chart given below.



### Labour Force Participation Rate

The result of the second Annual Employment Unemployment survey, 2011-12 conducted by the Labour Bureau reveals that the Labour Force Participation rate of age 15 years and above according to usual status approach for both principal status and subsidiary status in Assam is 582 in rural areas, 528 persons in urban areas and 575 persons taking urban and rural areas as a whole per 1000 persons respectively against the all India rate of 579, 480 and 554 respectively.

**Labour Force Participation Rate (per 1000) for Persons of age 15 years and above according to Usual Status Approach (ps+ss) in Assam**

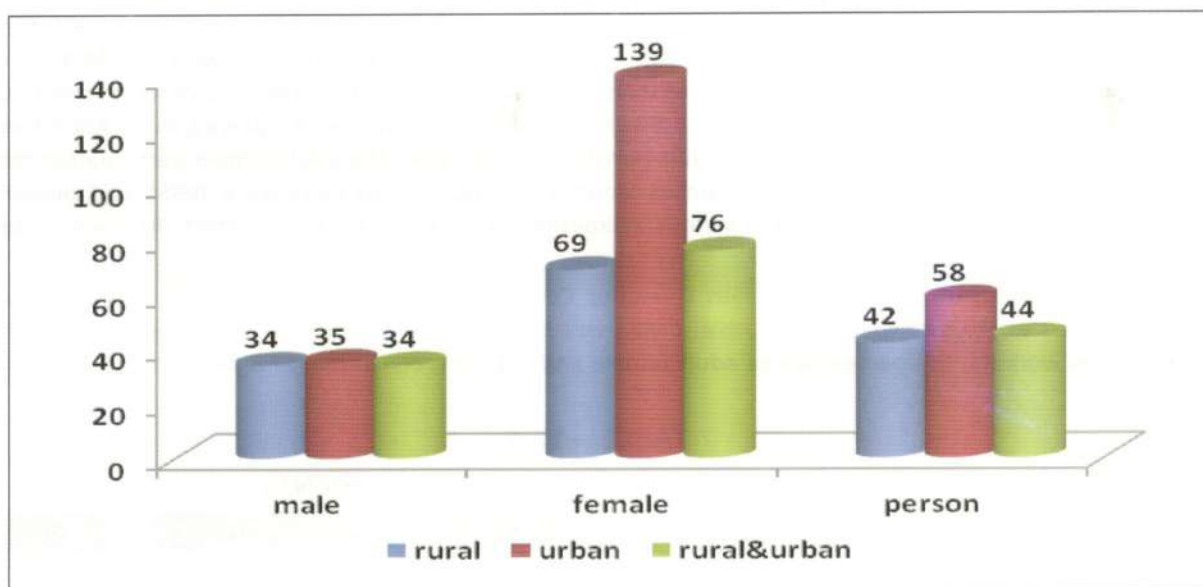


Source: 2<sup>nd</sup> Employment Unemployment Report, 2011-12, Labour Bureau, GOI

### Unemployment Rate

The Unemployment Rate (per 1000) for persons of age 15 years and above according to usual status approach for both principal status and subsidiary status in Assam is 42 persons in Rural areas, 58 persons in Urban areas and 44 persons in Rural and Urban areas as against 29, 47 and 33 at all India level respectively. The details of unemployment rate for male, female and persons in rural, urban and both is reflected in the figure below.

**Unemployment Rate (per 1000) for Persons of age 15 years and above according to Usual Status Approach (ps+ss) in Assam**



Source: 2<sup>nd</sup> Employment Unemployment Report, 2011-12, Labour Bureau, GOI

**Census of Assam Government Employees**

As per the Assam Government Employees Census, 2004, the total number of employees stood at 3.24 lakh as on 31st March, 2004 as against 3.26 lakh as on 31st March, 1999. Thus, the number of employees recorded a decrease of (-) 0.61 percent during the period from 01.04.99 to 31.03.04. The Table 17.3 shows the distribution of Government Employees according to the status/caste/tribes and sex as per Employees Census, 2004.

**TABLE – 17.3**

**DISTRIBUTION OF ASSAM GOVERNMENT EMPLOYEES ACCORDING TO THE CENSUS, 2004**

STATUS	S.C.		S.T.(H)		S.T.(P)		OBC		OTHERS		TOTAL	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
CLASS-1	453	70	94	30	690	99	1545	245	5296	733	8078	1177
CLASS-II	437	46	79	17	515	46	1759	211	4523	548	7313	868
CLASS-III	11712	2234	3144	1423	19955	4915	56858	16180	103369	23490	195038	48242
CLASS-IV	5007	672	1369	132	4929	371	13741	895	22033	1464	47079	3534
Fixed/Consolidated Pay	555	333	307	228	700	851	1981	1220	3873	2801	7416	5433
<b>Total</b>	<b>18164</b>	<b>3355</b>	<b>4993</b>	<b>1830</b>	<b>26789</b>	<b>6282</b>	<b>75884</b>	<b>18751</b>	<b>139094</b>	<b>29036</b>	<b>264924</b>	<b>59254</b>

Source: Directorate of Economics and Statistics, Assam.

As per the Census, the proportion of different categories of employees by status to the total State Government employees as on 31st March, 2004 were, Grade I-2.9 percent, Grade II-2.5 percent, Grade III-75.1 percent, Grade IV-15.6 percent and Fixed/Consolidated Pay-4.0 percent. The female employees accounted for about 18.3 percent of the total employees. Of the total State Government employees, the percentage of employees belonging to Scheduled Caste, Scheduled Tribe (Plains), Scheduled Tribe (Hills) and Other Backward Classes were 6.6 percent, 10.2 percent, 2.1 percent and 29.2 percent respectively.

## Economic Census

The findings of the 5th Economic Census, 2005 pertaining to the State of Assam reveals that there were 2208169 persons engaged in economic activities in the State. Out of the total, 1442854 persons were engaged in rural establishment and 765315 persons were in urban establishments. Out of the total workers, 44.9 percent workers were found to be working in the establishments operating in rural areas and 57.1 percent in the urban areas. While Adult Female workers account for 11.64 percent of the total persons employed, Rural Adult Female workers constitute 73.5 percent of the total adult female working force. The adult female participation rate is 8.89 percent compared to male worker. The census report also indicates that there were 36952(1.67 percent of the total worker) child workers engaged in various establishments in the State out of which 4048 were female child.

It is also evident from the results of the 5th Economic Census that 49.1 percent of the total workers were engaged as hired workers of which rural/urban divide was 59.7 percent and 40.3 percent respectively. Among the total hired workers, the percentage of adult female and children, constitute 17.5 percent and 2.3 percent respectively.

**TABLE – 17.4**  
**NUMBER OF EMPLOYMENT IN ESTABLISHMENTS**

Sl No.	Item	Rural	Urban	Combined
<b>1</b>	<b>ALL ESTABLISHMENTS:</b>			
1.1	Total Employment	1442854 (44.9)	765315 (57.1)	2208169 (49.1)
1.1.1	Female	189006 (70.8)	68019 (82.3)	257025 (73.9)
1.1.2	Children(Male)	24752 (62.4)	8152 (90.8)	32904 (69.4)
1.1.3	Children(Female)	3388 (57.5)	660 (81.1)	4048 (61.3)
<b>1.2</b>	<b>Agricultural Activity</b>	80017	6131	86148
1.2.1	Female	14168	959	15127
1.2.2	Children(Male)	3524	236	3760
1.2.3	Children(Female)	350	8	358
<b>1.3</b>	<b>Non-Agricultural Activity</b>	1362837	759184	2122021
1.3.1	Female	174838	67060	241898
1.3.2	Children(Male)	21228	7916	29144
1.3.3	Children(Female)	3038	652	3960

Source: Fifth Economic Census, Assam, 2005.

## Employment in Shops and Commercial Establishments

The Labour Bureau, Ministry of Labour and Employment, Govt. of India publishes report on employment in shops and commercial establishments covered by the various State Acts as well as the Central Act on the basis of returns or reports submitted by the States and Union Territories. The report on Shops and establishment in Assam is prepared on the areas covered under the Assam Shops and Establishment Act, 1971. The provisional report published by the labour Bureau shows that the total number of establishments in Assam covered under the Act and persons employed therein during 2009 were 71 thousand and 96 thousand respectively. Out of these 57 thousand (80.28 percent) were shops, 10 thousand (14.09 percent) were commercial establishments and 4 thousand (5.63 percent) were Cinemas, theatres, Hotels and Restaurants employed 53 thousand (55.21 percent), 30 thousand (31.25 percent) and 13 thousand (13.54 percent) persons respectively. A comparison of number of shops and establishment in Assam during 2008 and 2009 (P) is shown below.



**TABLE – 17.5**  
**EMPLOYMENT IN SHOPS AND COMMERCIAL ESTABLISHMENTS IN ASSAM**

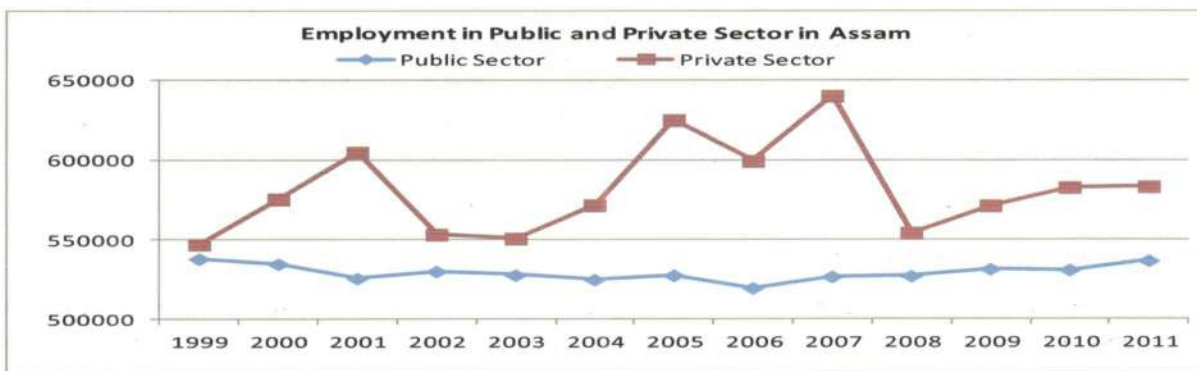
('000 number)

Year	Shops		Commercial Establishment		Restaurants, Theatres etc.		All Establishment	
	Number	Workers	Number	Workers	Number	Workers	Number	Workers
2008	61	55	10	29	5	14	76	98
2009(P)	57	53	10	30	4	13	71	96

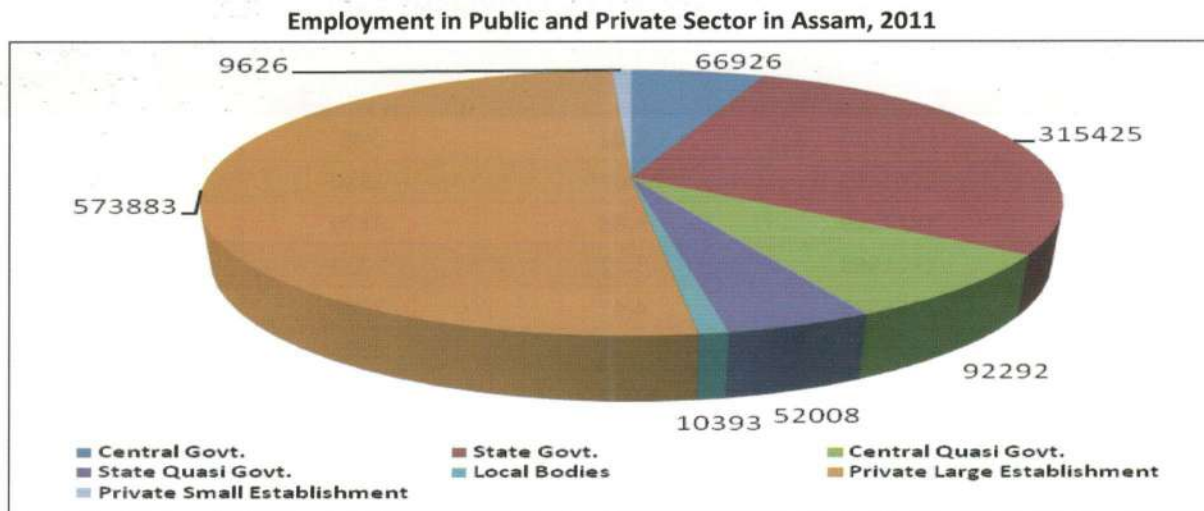
Source: Labour Bureau, Shimla, Ministry of Labour and Employment, GOI.

### Employment Market Information (EMI) Programme

The EMI programme gives information about the level of employment in the organised sector of the economy, which comprises all establishments in the public sector and non-agricultural establishments employing 10 or more persons in the private sector. Collection of data under the EMI programme is reported through an 'Establishment Reporting System'. The trend of employment in public and private sector from 1999 to 2011 as per data collected through Employment Market Information Programme is shown below.



The total employment in the public and private sector establishments under EMI programme in 2011 was 11.20 lakh (in public sector 5.37 lakh and in private sector 5.83 lakh ) compared to 11.14 lakh ( in public sector 5.31 lakh and in private sector 5.83 lakh ) in 2010 and thus stands 1.00 percent more than in 2010. In these sectors, female employment was 33 percent of the total employment. Out of the total 5.37 lakh employment in public sector, share of local bodies was 1.94 percent and share of State Quasi Government was 9.68 percent during the year. The pie, given below shows the composition of public and private sector employment in Assam during 2011.



## Employment of Women in Organised Sector

The employment of women in organised sector of the State was 369.0 thousand during 2011 which is 32.95 percent of the total employment. In the year 2010 the number of women employee was 360.3 thousand showing a share of around 32.91 percent to total employment.

**TABLE – 17.6**  
**EMPLOYMENT OF WOMEN IN ORGANISED SECTOR**

(In thousand nos.)

Year	Public Sector		Private Sector		Public and Private Sector		Percentage Share of Women in Organised sector
	Women	Total	Women	Total	Women	Total	
2003	77.4	528.0	241.1	551.1	318.5	1079.2	30.0
2004	77.3	525.1	255.6	572.0	332.9	1097.2	30.0
2005	81.5	524.5	268.4	605.2	350.0	1140.0	30.7
2006	81.8	519.7	299.0	599.7	380.7	1119.4	34.0
2007	84.9	527.0	310.8	640.5	395.7	1167.5	33.9
2008	85.6	527.3	266.5	554.6	352.1	1081.9	32.5
2009	87.3	531.7	273.0	571.7	360.3	1103.4	32.7
2010	87.0	531.1	279.7	583.0	366.7	1114.1	32.9
2011	89.0	537.0	279.9	583.5	369.0	1120.6	33.0

Source: Directorate of Employment and Craftsmen Training, Assam.

## Un-Employment Scenario in the State

The State has 82 employment exchanges comprising of 49 general, 1(one) special, 3 Employment Information and Guidance Bureau and 29 Employment Information and Assistance Bureau. Two Districts of BTAD, Baksa and Chirang have no Employment exchange. The table below shows that the number of unemployed as per Live Register decreased by 9.54 percent in 2011 over 2010. According to the records of the Employment Exchanges of Assam, the total job seekers in the Live Register recorded fall during 2011 with 1729029 numbers compared to 1911431 numbers in 2010. This may perhaps be due to non-renewal of registration by the job-seekers or non-reporting by the job-seekers about their engagement in services. However, percentage of placement is not encouraging against the number of notified vacancies through Employment Exchanges.

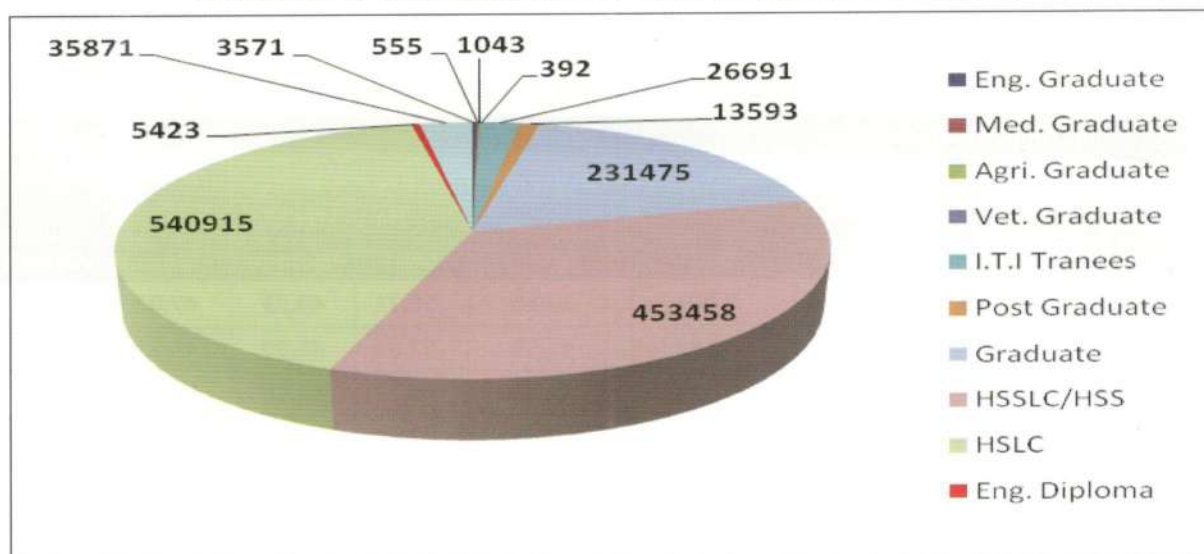
**TABLE – 17.7**  
**EMPLOYMENT THROUGH EMPLOYMENT EXCHANGES**

YEAR	No. in Live Register	Percentage increase in Live register	No. of Vacancies Notified	No. of Placement Against Vacancies
2004	1631216	4.02	703	253
2005	1763430	8.01	2380	148
2006	1827149	3.61	3170	551
2007	1921563	5.17	2023	540
2008	2006389	4.41	2383	628
2009	2079558	3.65	2506	501
2010	1911431	(-)0.08	2606	455
2011	1729029	(-)9.54	1401	436

Source: Directorate of Employment and Craftsmen training, Assam.

The size of the educated job seekers is considerably high, which is a challenge to the growing economy of the State. From the records of the live register of Employment Exchanges, the registered educated job seekers stood at 1312987 during 2011 and recorded decrease by 8.39 percent over 2010. The percentage of educated job seekers constitutes about 76 percent of the total job-seekers. The distribution of total educated job seekers in 2011 as per the live register of Assam is reflected in the pie-chart given below.

**Distribution of Educated Job Seekers in the Live Register of Assam, 2011**



Source: Directorate of Employment and Craftsmen training, Assam.

The overall registration of educated job seekers as per record of Employment Exchanges has decreased by 3 percent in 2011 over the previous year. During 2011, there is a decline in registration of Medical Graduate, Agriculture Graduate, Veterinary Graduate, Post Graduates, ITI trainees and HSLC passed over the previous year. Increase of registration in Engineering Graduates (98%), Diploma in Engineering (25%), HSSLC (22%) and others (2100%) during 2011 is a matter of concern in the context of socio-economic profile of the state. The detail distributions of the educated job seekers are shown in the table below.

**TABLE – 17.8**  
**DISTRIBUTION OF EDUCATED JOB-SEEKERS**

Level of Education	Registration		Percentage Increase/ Decrease in Registration	Placement		Numbers in live register	
	2010	2011		2010	2011	2010	2011
Engineering Graduate	385	764	98	0	16	2839	3571
Medical Graduate	197	60	(-)70	0	9	681	555
Agriculture Graduate	156	113	(-)28	0	3	1167	1043
Veterinary Graduate	53	43	(-)19	0	-	512	392
Passed out Trainees							
a) Engineering Trade	1574	973	(-)38	78	28	16212	23474
b) Non- Engineering Trade	893	610	(-)32	13	8	3858	3217
Post Graduates	3002	1082	(-)64	0	8	21352	13593
Graduates	34012	30694	(-)10	106	93	283471	231475
H.S.S.L.C.	47681	58194	22	142	94	427451	453458
H.S.L.C.	93054	71287	(-)23	69	88	661155	540915
Diploma Holders(Eng.)	249	873	25	33	23	10431	5423
Others	487	10716	2100	14	20	4089	35871
Total	181743	175409	(-)3	455	390	1433218	1312987

Source: Directorate of Employment and Craftsmen Training, Assam.

## Average Daily Wage Rate in Rural Areas

As per data collected by the Directorate of Economics and Statistics, Assam, the Average Daily Wage Rate of skilled, unskilled and other agricultural labours shows a more or less steady upward trend. The trend of the wage rate in rural areas shows that the skilled labour wage rate grew in between 6 and 8 percent during the period 2002-03 to 2011-12. During the same period the average growth of un-skilled male labour wage rate is between 9 and 12 percent while growth of female wage rate is around 8 percent.

**TABLE – 17.9**

### AVERAGE DAILY WAGE RATE IN RURAL AREAS IN ASSAM (in Rupees)

Year	Skilled Labour Wage		Un-skilled Labour Wage				Other Agricultural Labour	
	Carpenter	Black-smith	Ploughman	Herdsman	Reaper and Harvester		Man	Women
	Man	Man	Man	Man	Man	Women		
2001-02	87.01	62.17	52.01	37.56	50.71	40.73	47.02	42.16
2002-03	92.93	68.02	52.32	48.53	52.05	46.50	49.21	47.47
2003-04	102.4	85.11	57.53	52.05	60.13	42.18	55.40	49.32
2004-05	108.77	88.25	62.05	54.85	63.90	49.18	59.27	48.52
2005-06	113.91	94.45	64.19	63.01	65.02	49.02	61.44	47.69
2006-07	120.80	100.69	71.02	63.07	68.09	52.61	65.46	53.88
2007-08	123.53	97.29	76.44	72.19	74.27	59.53	72.11	58.04
2008-09	133.89	104.64	84.65	82.72	82.55	66.76	83.47	66.60
2009-10	147.08	121.33	92.91	92.08	93.25	74.05	102.83	87.00
2010-11	149.54	131.11	119.58	116.66	111.66	87.21	136.66	92.11
2011-12	154.45	133.11	124.58	119.66	118.45	93.21	137.11	98.25

Source: Directorate of Economics and Statistics, Assam.

## Employment Generation Programme

Our economy is developing at a fast pace but still a major part of the population who are poverty ridden, illiterate and lack of skill needs support to earn. Keeping this in mind the Central Government and the State Government has initiated and implemented many programmes for generation of self and wage employment and also for creation of production of assets through various organisations like, the Panchayat and Rural Development Department, Directorate of Industries and Commerce, Agriculture Department, etc. The achievements of some of these programmes are briefly discussed as follows:

### Swarnajayanti Gram Swarojgar Yojana (SGSY)

The objective of the Swarnajayanti Gram swarojgar Yojana is to uplift the economic status of rural people by providing sustainable income generating activities to the people living below poverty line with bank loan and Government subsidy. Since inception up to 2011-12, a total of 266141 numbers of SHG's was formed of which 90036 number of SHG has taken up economic activities. Total women SHG's up to 2011-12 in the State is 172584 out of which 12564 SHG's has taken up economic activities. During the year 2011-12, numbers of women SHG's formed in the State was 15394. Total fund available for 2011-12 under SGSY in the State was ₹24,363.94 lakh as against ₹27,239.32 lakh during 2010-11 and total expenditure incurred under SGSY in the State during 2011-12 was ₹21,627.37 lakh as against ₹22,233.40 lakh during 2010-11. The total fund available for 2011-12 constitute opening balance as on 1<sup>st</sup> April, 2011 is ₹6,757.22 lakh, Central release ₹15,006.75, State release ₹1,808.01 lakh and other receipt ₹791.96 lakh.

## Mahatma Gandhi National Employment Guarantee Act (MGNREGA)

The Mahatma Gandhi National Employment Guarantee Programme was introduced during the 11<sup>th</sup> five year Plan for giving wage employment opportunities to the rural poor during the lean agricultural season when they require wage employment for boosting their purchasing power to supplement their income requirement for livelihood. There are two broad divisions of expenditure under wage employment programme. The presently implemented MGNREGA has 60 percent wage component paid through Bank or Post office accounts of the job card holders and 40 percent material component is spent for purchase of materials. To minimize misuse of fund under MGNREGA, Management Information System (MIS) is made compulsory. MGNREGA is being implemented in all the 27 districts with the objective to provide 100 days employment to the job card holders in a financial year. Under this programme 39.13 lakh job cards were issued up to the year 2011-12. Out of 13.53 lakh no. of household who demanded for employment, 13.47 lakh no. of households were provided with employment up to the year 2011-12. A Total number of 17050 household completed 100 days employment up to 2011-12 and number of disabled persons provided with employment under this programme was 2250. Under this programme up to 2011-12, 353.52 lakh person days were generated of which person days generated for SC, ST and women was 19.64, 80.43 and 88.05 lakh respectively.

## Prime Minister Employment Generation Programme (PMEGP)

The Prime Minister Rojgar Yojana (PMRY) was a Centrally Sponsored Scheme. The programme was effective up to March 2008 and thereafter a new scheme under the nomenclature, 'Prime Minister Employment Generation Program' (PMEGP) has been introduced by merging the PMRY and REGP with the objective of providing employment to the educated unemployed youth. The scheme facilitates self-employment through setting up of industries/service and business ventures with a limited amount of Bank loan with subsidy on the recommendation of Task Force Committees constituted for the purpose. The KVIC is the nodal agency for implementing the PMEGP scheme at the national level and at the State level the scheme is implemented by the state KVIC Directorate, State KVIB and the District Industries and Commerce Centers and Banks. The Government subsidy under the scheme is being routed through the KVIC to the identified Banks.

**TABLE – 17.10**

### TARGET AND ACHIEVEMENT OF PMEGP DURING THE YEAR 2008-09 TO 2011-12

Year	Physical target (in nos.)	Financial Target (margin Money) (Rs. in Lakh)	Total Cases sanctioned (Rs. in Lakh)	Physical achievement (in no.)	Financial achievement (Rs. in lakh.)	P.C. of Physical achievement	P.C. of Financial achievement
2008-09	685	820.22	861	617	676.95	90.07	82.53
2009-10	1292	1550.00	2440	2440	1899.71	189	122.56
2010-11	3193	4469.66	4756	4756	4801.10	148.95	107.42
2011-12	5047	7065.80	5280	5280	5544.90	104.62	78.48

Source: Directorate of Industries and Commerce, Assam.

**TABLE – 17.11**

### PHYSICAL AND FINANCIAL TARGET OF PMEGP FOR THE YEAR 2012-13

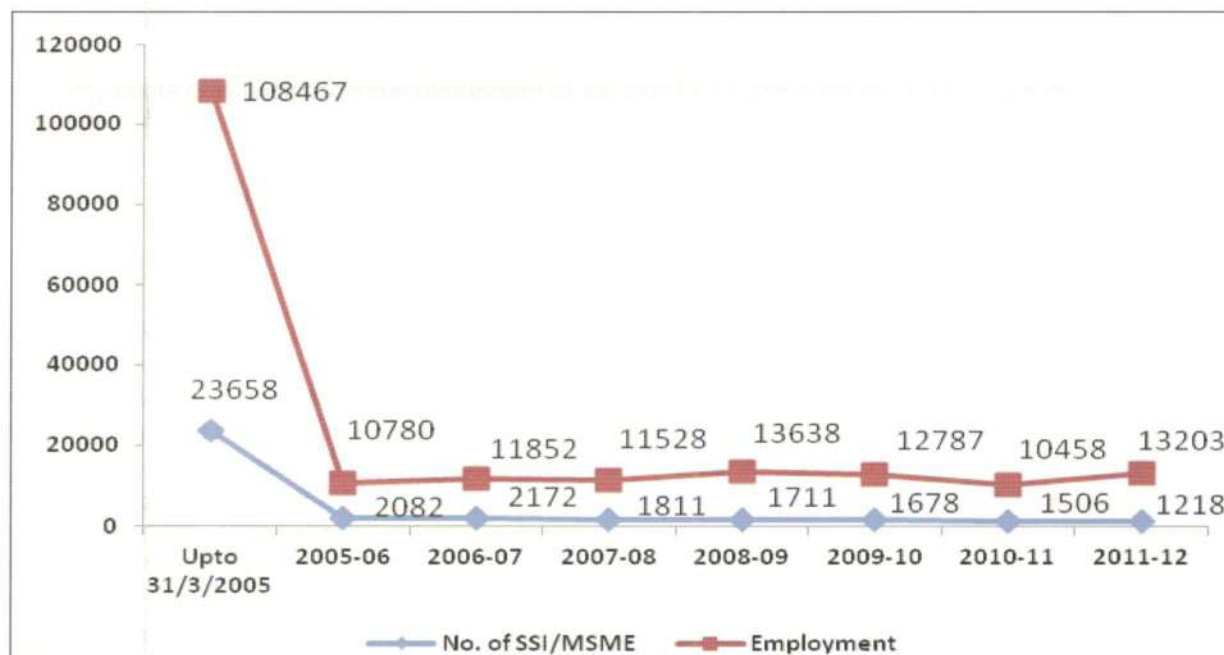
Name of implementing agency	Physical Target (in nos.)			Margin money target (Rs.in lakh)
	Rural	Urban	Total	
KVIC	1286	-	1286	1800.40
KVIB	1286	-	1286	1800.40
DI&CC	881	833	1714	2399.60
Total for the state	3453	833	4286	6000.40

Source: Directorate of Industries and Commerce, Assam.

## Small Scale Industries/Micro, Small and Medium Enterprise (MSME):

The small scale industries sectors have a vital contribution towards the process of industrialization of the state. Presently the small-scale industries have been sub-divided into Micro, Small and Medium Enterprise under the Micro, Small and Medium Enterprises Development (MSMED) Act 2006. There are 35836 numbers of SSI/ MSME units in Assam providing employment to 192713 of persons till the end of 2011-12 compared to 34327 units giving employment to 178054 persons in 2010-11.

**Employment in Small Scale Industry**



Source: Directorate of Industries and Commerce, Assam.

## Multi Disciplinary Skill Development programme

The Multi Disciplinary skill Development Programme is a flagship programme taken up by the Department of Industries and commerce for the Twelfth Five Year Plan to create skilled manpower and employment for the rural youth. The scheme also has provision for training of entrepreneurs to enhance their skills. Construction of four Multi Disciplinary skill Development centre has been stated at Karimganj, Dhubri, Nagaon and Tinsukia district along with up gradation of existing training institute-Cottage Industries Training Institute, Kalapahar in Kamrup (M). Another 23 training centres are going to be constructed during 2012-13 to provide one training centre in each district of the State. Till the construction of the training centres are completed, the Department has initiated to provide training at few recognized national institutes of repute within and outside the State. During the year 2011-12, the Department sponsored 537 persons and the same number completed their training against physical target of 1600 and a financial target of ₹200.00 lakh.

## Mukhya Mantrir Karmajyoti Aachani

The basic objective of the scheme is to uplift the economic status and skill development of traditional artisans through financial assistance from the Government. Traditional trade like manufacturing of decorative textile, black smithy, pottery, carpentry, toy making etc will cover under the scheme. The scheme is under implementation from the year 2005-06 under the sponsorship of the Government of Assam. During the year 2011-12, 2096 artisans were benefited with a financial assistance of ₹428.00 lakh. The scheme is still in progress with a physical target of 2560 SHG's and individual trained person with a financial target of ₹514.00 lakh for the year 2011-12.

## Vocational Training

The Vocational Training Programme is being continued by the Department of Industries and Commerce, Assam to provide assistance to the interested unemployed youth of the State for self employment. The following table shows the target and achievement for the year 2011-12 and 2012-13 under the Vocational Training Programme.

**TABLE – 17.12**

### VOCATIONAL TRAINING PROGRAMME

Year	Physical target (in nos.)			Financial Target (Rs. in Lakh)			No. of trainees sponsored			No. of trainees completed training		
	Gen	SCSP	TSP	Gen	SCSP	TSP	Gen	SCSP	TSP	Gen	SCSP	TSP
2011-12	520	520	135	50.00	50.00	14.00	520	520	135	520	520	135
2012-13	310	350	67	30.00	34.00	7.00	-	-	-	-	-	-

Source: Directorate of Industries and Commerce, Assam.

## Factory Employment

During 2011, there was 3325 number of factories (registered under Factory Act, 1948) in the State with 41319 average numbers of daily workers of which 37560 were male and 3759 were female showing an increase of 9 percent in the number of factories employing 13 percent more than that of 2010. The table below shows the number of factories and average number of daily workers from 2000 to 2011 in Assam.

**TABLE – 17.13**

### REGISTERED FACTORIES AND EMPLOYMENT IN ASSAM

Year	Number of Factories		Average Number of Daily Workers		
	Gen	SCSP	Gen	SCSP	TSP
2000	2406	432	98142	95964	2178
2001	2512	386	99316	97876	1440
2002	2695	396	96031	94196	1835
2003	2760	370	94478	92514	1964
2004	2925	308	32882	29830	3052
2005	1876	340	35865	33644	2221
2006	2073	387	43144	39324	3820
2007	2299	339	36768	33858	2910
2008	2506	336	35804	32414	3390
2009	2759	336	34786	31343	3443
2010	3048	342	36636	32906	3730
2011	3325	360	41319	37560	3759

Source: Office of the Chief Inspector of Factories, Assam.



## CHAPTER-XVIII

### RURAL DEVELOPMENT

The Panchayat & Rural Development largely works to enhance livelihood opportunities, addresses chronic poverty, provides social security and works for economic inclusions of rural poor families. The Rural Development Department has been implementing a number of programmes in the rural areas of the State by empowering rural poor through power of rights based law, aiming to transform the geography of poverty in the State. The main objectives of various poverty alleviation and employment generation programme are as follows:

- i) Reduction Rural Poverty.
- ii) Employment Generation in Rural Areas.
- iii) Development of Rural Infrastructure.
- iv) Removal of Regional Imbalances.
- v) Housing for Rural Poor.
- vi) Community Participation.

Rural Development Programmes are being implemented through the Panchayat Raj & Rural Development Department at State level and by the Zilla Parishad at the District level. At present 21 Zilla Parishad, 188 Anchalic Panchayat and 2202 Gaon Panchayat are in existence in the State. The activities of Panchayat and Rural Development Department are implemented through the Panchayati Raj Institutions (PRIs). There is no PRI System in the 6<sup>th</sup> Schedule districts. The Backward Region Grant Fund (BRGF) and DDP Schemes of 6<sup>th</sup> Schedule districts are implemented through the Zilla Parishad. Some of the Schemes under District Development Plan (DDP) are implemented through both Rural and Urban local bodies.

The Department is implementing mainly MGNREGA, IAY SGSY (all flagship schemes), NSAP, BRGF, DDP etc. schemes through PRIs. Under the Rural Development Sector, some programmes/schemes has been introduced which are of the following nature –

- i) Self-employment Programme, ii) Wage -employment Programme, and iii) Social Welfare scheme.

In order to ensure transparency and accountability in implementation of the schemes, intensive monitoring system has been introduced through online reporting system. The Panchayati Raj Institutions Accounting Software (PRIA Soft) has been adopted for sound accounting and audit system of the Panchayat at all levels.

#### i) Self Employment Programme : Swarnajayanti Gram Swarozgar Yojana (SGSY)

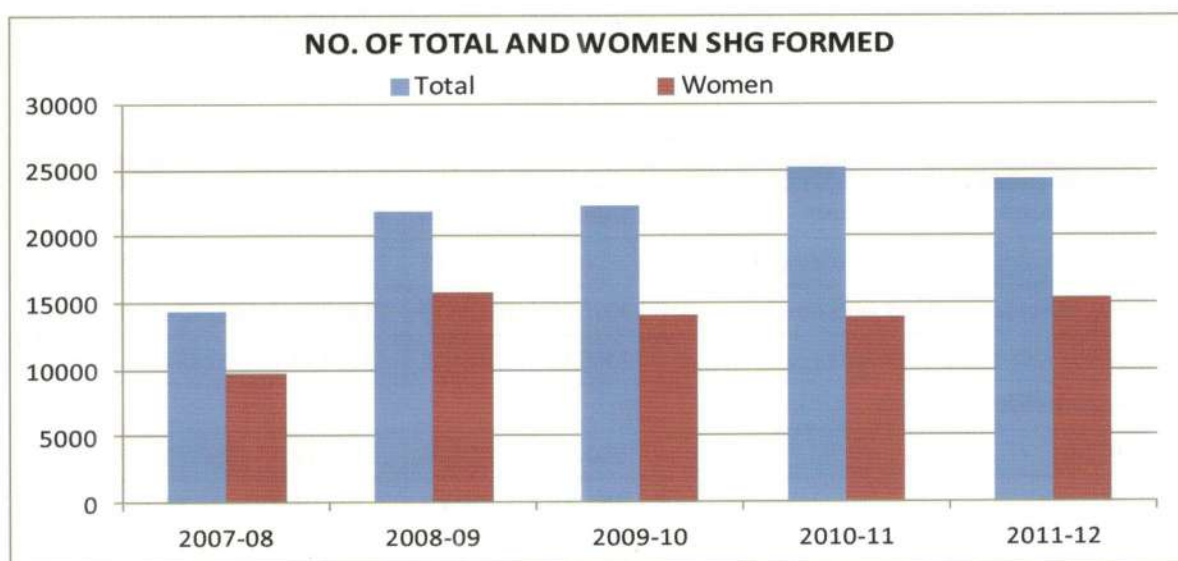
With the objective of upliftment of economic condition through the process of sustainable income generation of the BPL households of rural area so as to enable them to come up of poverty line, the SGSY programme has been implemented since 01-04-1999. Under the programme, the SHGs and individual Swarozgaris are trained through various stages of development and provided bank loan with government subsidy for their self employment. After obtaining the bank loan with subsidy, the beneficiaries can increase their income leading to upliftment of their quality of life. The comparative position of progress under SGSY for the year 2010-11 and 2011-12 is given below to show economic development with increasing purchasing power of the rural poor under self employment schemes thereby alleviation of poverty of the rural poor. Total number of SHGs formed during the year 2011-12 is 24218. Out of this, 14941 SHGs has been elevated to Grade-II and they have been provided bank loan with subsidy for crossing over the BPL level, compared to 25197 SHG formed in 2010-11, 15053 numbers of SHG elevated to Grade II and availed bank loan and subsidy out of the total SHGs formed during the year 2010-11 and 2011-12. The numbers of women SHGs were 13934 and 15394 in 2010-11 and 2011-12 respectively. These women SHGs have been playing a significant role in transforming socio-economic scenario in poverty alleviation of the rural areas in the state. The gestation period of schemes are varied from 3 to 5 years. During the period from the year 1999-2000 to 2011-12, total number of SHGs provided with bank loan and subsidy is 90036. During the year 2011-12 as many as 12564 numbers of SHG has taken up Economic activities. In 2011-12 highest numbers of Women SHG have been exercising economic activity in Udalguri district.



This programme has now been modified and renamed as National Rural Livelihood Mission (NRLM) with effect from April'2012. In the 1<sup>st</sup> phase, 42 numbers of Community Development Blocks have been covered under Programme and the remaining Blocks will be brought under the Programme in the coming years in a phased manner.

**TABLE-18.1**  
**PHYSICAL ACHIEVEMENT UNDER SGSY IN ASSAM DURING 2011-12**

No. of SHG formed			No. of SHG taken up Economic activities		No. of Women SHG formed		No. of women SHG taken up Economic activities
Total since inception (1.4.1999)	During the current year	No. of that have defunct since inception	Total since inception (1.4.1999)	During the current year	Total since inception (1.4.1999)	During the current year	
266141	24218	5906	90036	15747	172584	15394	12564



#### **Wage Employment Programme :**

The National Rural Employment programme introduced during 6<sup>th</sup> Plan have undergone several round of modifications like Jawahar Rozgar Yojana (JRY), Employment Assurance Schemes(EAS), National Rural Employment Generation Schemes (NREGA) and finally Mahatma Gandhi National Rural Employment Generation Schemes (MGNREGA) in 11<sup>th</sup> Plan. MGNREGA works a paradigm shift from all these precedent wage employment programmes. As a right based and demand driven programme, it provides a legal mandate of providing employment in a time bound manner. The objective of this Act is to provide for the enhancement of livelihood activity of the households in rural areas of the country by providing at least one hundred days of guaranteed wage. It also provides social protection to the vulnerable people through supplementary source of income.

There are the broad divisions of expenditure under this programme. 60% wage component and 40% material component. The material is spent for purchase of materials which also combine with the profit share of the suppliers what generally come from the rural areas giving them indirect employment. The wage portion is 100% paid to the job card holders through their Banks/Post office account to ensure fairness and transparency in wage payments. To minimize the leakage due to misuse/mis-utilization of fund under MGNREGA, Management Information System (MIS) is made compulsory.

An amount of ₹748.89 crore has been spent during 2011-12 compared to ₹913.95 crore during the year 2010-11 under MGNREGA.

Another primary objective of the programme is to create rural infrastructure. Altogether 4603 numbers of assets were created under the following permissible works of the MGNREGA programmes during the year 2011-12.

List of permissible works under MGNREGA -

1. Road connectivity
2. Flood control
3. Water Conservation & Water harvesting
4. Drought proofing
5. Micro Irrigation
6. Provision of Irrigation facility to Land Development
7. Renovation of Traditional Water bodies
8. Land Development
9. Others ...Rajiv Gandhi Sewa Kendra etc.

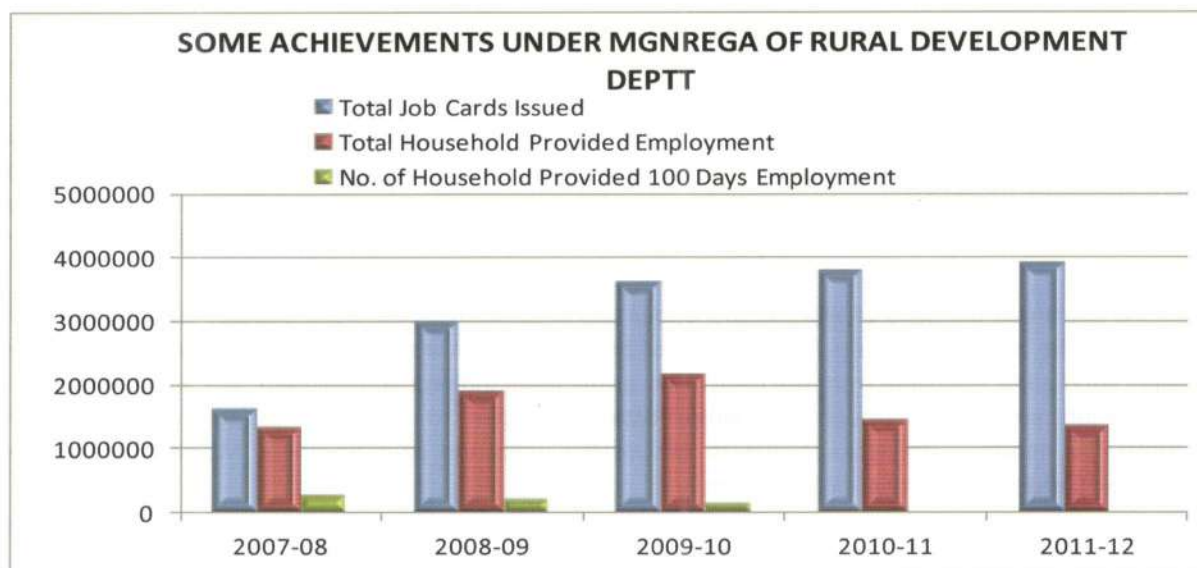
During 2011-12, 0.26 lakh numbers of job cards have been issued and 353.52 lakh mandays have been created. Total household provided employment is 13.47 lakh and average mandays created is 26.21 days.

Under MGNREGA, since 2006-07 total rural roads constructed was 25260.73 km. out of which 5326.35 km. constructed during 2011-12.

**TABLE-18.2**  
**ACHIEVEMENT UNDER MGNREGA FROM 2007 TO 2012**

Indicator	2007-08	2008-09	2009-10	2010-11	2011-12
Households issued Job card*	1599659	2969266	3611714	3769559	3913176
Households demanded employment	1359089	2151579	2139111	1443689	1352700
Households provided with employment	1301078	1873629	2137270	1432424	1347201
Housholds completed 100 days	239543	176757	130457	22497	17050
Persondays generated					
Total	500.19	748.78	735.17	358.29	353.3
Women	151.11	203.7	203.03	83.84	88.04
Number of disable person provided employment	2949	2936	1989	2152	2250

\* Cumulative since inception of NREGA



**TABLE-18.3**  
**ANNUAL PLAN 2011-12 AND 2012-13 UNDER RURAL DEVELOPMENT SECTOR**  
(Rupees in lakh)

Item	Annual Plan(2011-12)				Annual Plan (2012-13)	
	Outlay		Actual Expenditure		Amount Allocated	
	Central Share	State Share	Central Share	State Share	Central Share	State Share
Rural Housing(IAY)	80952.67	12000.00	76769.33	9958.94	0.00	12000.00
SGSY	19586.66	3500.00	10828.33	2381.79	0.00	3000.00
NREGA	122179.12	12909.22	42685.80	5485.56	0.00	12300.00
Other Scheme (SIRD)	1100.00	500.00	3212.82	500.00	0.00	600.00

### iii) Other Social Welfare Schemes

**Indira Awaas Yojana (IAY) :** IAY is an important poverty alleviation scheme of the Govt. of India for the houseless/shelterless rural BPL people. For the purpose, a permanent wait list of the BPL families requiring housing assistance has been prepared in 2007. All the IAY beneficiaries are being selected from this wait list. During the year 2011-12, against the targeted 166913 number of houses 143770 (86.57%) number of houses were completed and the remaining houses were under various stages of construction. The expenditure incurred for construction of houses was ₹91573.69 i.e. 75.03% out of total fund available ₹122050.56. During the year 2010-11 number of houses completed was 142028 (83.13%) against the targeted number 170849. It is proposed to construct 184408 numbers of houses during the year 2012-13.

**Backward Region Grant Fund (BRGF):** It is designed to redress regional imbalance in development through 100% Govt. of India grants. The fund is to provide financial resources for supplementing and converging existing developmental inflows into 11 identified districts viz Kokrajhar, Bongaigaon, Goalpara, Barpeta, Morigaon, Lakhimpur, Dhemaji, Karbi-Anglong, Cachar, Hailakandi and Dima Hasao. The fund is flexible for taking up any scheme to meet the critical gaps for development of the backward areas both in rural and urban areas. The scheme has two components:

- i) Capacity building, ii) Development Grant.

During the year 2011-12 ₹132.15 crore was released to different districts of the state.

**IWDP/Hariyali:** The objective of the programme is to develop the top soil of the degraded/wasteland for making feasible for agricultural production.

The modified Integrated Watershed Management schemes have now been entrusted with the soil conservation Department of the State for implementation.

**TABLE-18.4**  
**PHYSICAL TARGET AND ACHIEVEMENT DURING ANNUAL PLAN 2011-12 AND 2012-13 UNDER RURAL DEVELOPMENT SECTOR**

ITEM	Annual Plan 2011-12		Annual Plan 2012-13 (Proposed) Target
	Target	Achievement	
Rural Hosing(IAY) (No of new Houses constructed)	166913	143770	150000
SGSY(No of member SHG)	128380	135808	134000
SGRY(No of Individual Swarojgaries)	7038	8075	8000
NREGA(Person days generated) (in lakh)	No Target	353.31	800
Other Schemes(SIRD) (Persons trained)	1000	69311	8000

**National Social Assistance Plan (NSAP):** The GOI had introduced the plan to lay foundation for national policy for social assistance for the poor which came into effect from 15<sup>th</sup> Aug'1995. The components of this scheme are a) IGNOAPS, b) IGDNDPS, c) IGNDWPS, d) NFBS, and e) Annapurna. The **IGNDPS** and **IGNWPS** is newly introduced scheme for disability and widowed person. It is a Central Sector (Earmarked Fund) Scheme and the fund is borne by the Govt. of India on 100% basis. However, the State Govt. is to pay the Minimum Mandatory Provision (MMP) under IGNOAPS @ ₹50/- per month against the GOI's share of ₹200/- per month. In respect of the other schemes there is no provision for MMP. GOI has taken decision for providing ₹500/- per month under IGDNDPS is applicable for the persons who have attained the age of 80 and above. Previously, the persons at the age of 65 and above but living below poverty line were assisted under IGNOAPS and from the year 2011-12 the age limit has been reduced to 60 years. At the death of the bread earner of a BPL family, an amount of ₹10,000/- is paid to the family as onetime ex-gratia.

The comparative achievement under different schemes of NSAP during 2010-11 and 2011-12 is given below:

**TABLE-18.5**

Name of the scheme	2010-11 (in nos.)		2011-12 (in nos.)	
	Target	Achievement	Target	Achievement
IGNOAPS	629949	629949	785836	598965
IGNWPS	159473	NIL	111477	44910
IGNDPS	47068	NIL	42577	7534
NFBS	25000	25000	18580	8830
Annapurna	25508	25508	25508	25308

### State Plan Scheme

**District Development Plan (DDP):** DDP has been implemented in all 21 PRI districts of the State since 2007-08. During the year 2011-12, an amount of ₹122.02 crore was allocated and released to different Zilla Parishads of the State for taking up schemes approved by District Planning Committee. Schemes of all 12 Sectors/Sub-Sectors have been taken up under DDP for creation of development infrastructure both in urban and rural area. The fund is now being utilized through the urban local bodies and rural local bodies. Previously the schemes were implemented through line departments. The schemes are flexible under this plan and implemented for economic growth and development of the under developed areas.

**Achievement of SIRD :** During the year 2011-12, 69311 number of trainees were imparted training under Central Sector and Centrally Sponsored schemes like RGSY, BRGF, PMEYSA, MGNREGA and Lab to Land initiative. For this purpose, an amount of ₹1558.56 lakh was received from Govt. of India and ₹5225.56 lakh was received from the State Govt., totaling ₹6784.12 lakh out of which ₹1555.01 lakh has been spent in the same year.

Similarly, under the Chief Ministers' Jeevean Jyoti Swanojan Yojana, 9727 number of youths both boys and girls were given skill development training under CM's Special Skill development training programme. Again 4727 number of trainees obtained various Self Employment skills as well as capacity building training at the cost of ₹1387.27 lakh during the year 2011-12.

The SIRD is constantly pursuing for the utilization of skill of the younger generation and their latent skill to mobilize for the rural economy of the state.



## CHAPTER-XIX

### SOCIAL SECTOR

#### EDUCATION

Education is the key input for the development of individual as well as the society. Education is accepted as one of the crucial inputs for nation building. In line with the goal of nation building, India has been committed to providing free and compulsory education to all children. Towards this end, Indian Parliament has enacted a legislation making free and compulsory education a Right of every child in the age group 6-14 years which has come into force from 1st April, 2010. Rashtriya Madhyamik Shiksha Abhiyan has been launched recently as a step to universalize secondary education. Simultaneously, efforts are being made to create a robust and vast system of higher and technical education.

As per 2011 Census, Literacy Rate of Assam is 73.18 with male literacy rate 78.81, which is behind the National rate of 74.04 and male literacy rate 82.14 respectively. The female literacy rate with 67.27 stood above the National rate of 65.46. To achieve the goal of Universal Elementary Education, educational programmes of Sarva Siksha Abhijan (SSA) along with various innovative schemes are being implemented by the State Government. The State Government equally gives emphasis in providing qualitative technical education to build technical skills to cater the needs of the economy. Keeping in view of importance of education in the socio-economic development the State Government has been implementing various educational programmes.

#### Right to Education

The Bill for providing free and compulsory education to all children up to the age of 14 years was passed in the parliament in 2009 and 'The Right of Children to Free and Compulsory Education' came into force in April, 2010. It is mandatory for the State Government to implement the act and accordingly the Government of Assam issued notification on 11<sup>th</sup> July 2011 as "The Assam Right of Children to Free and Compulsory Education Rules, 2011'.

#### Elementary Education

The Directorate of Elementary Education (DEE), Assam has been functioning to achieve the goal of Universalisation of Elementary Education in the State to provide useful and relevant elementary education to all children in the age group of 6 to 14 years. It aims to bridge all gender and social category gaps at primary stage with focus on elementary education of satisfactory quality. All schemes for elementary education are implemented through SSA. The DEE at present is functioning with a network of 35061 primary schools with 77195 number of teachers and 7302 upper primary schools with 32011 teachers. In this functioning process the DEE is involving 5620 Non-Government Institutions in the State. The State Government has taken many steps to promote quality education and to attract children of all social groups and also implement various Central Government schemes/programmes. The DEE provides Mid-day Meal for students of Primary and Upper Primary Schools, Teaching Learning Material to Govt. & Provincialised LP & UP schools, free text books up to class viii (eight) to all categories of schools including institutions not-receiving financial assistance, free uniforms to students up to class-viii and other incentives like bicycles and umbrella to girl students.

The Budget Outlay in 11<sup>th</sup> Five year Plan is ₹66813.00 lakh which is ₹5939.00 lakh less than that of the Budget Outlay of the 10<sup>th</sup> Five Year Plan but the expenditure has grown up by ₹16867.32 lakh in 11<sup>th</sup> Plan, the excess being met up by re-appropriation from the non-plan head. The major part of expenditure has been incurred for releasing the State share for implementation of SSA and Mid-Day Meal schemes. The major achievement of the 10<sup>th</sup> Five Year Plan is conversion of the liabilities of salaries for plan to non-plan.

Over view of 10 <sup>th</sup> and 11 <sup>th</sup> Five Year Plan		
Plan Period	Outlay (Rs. in lakh)	Expenditure (Rs. in lakh)
10 <sup>th</sup> Plan	72852.45	74129.68
11 <sup>th</sup> Plan	66813.00	90997.00

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

## Key Achievements in Elementary Education during 11<sup>th</sup> Five Year Plan (2007-2012)

During the Eleventh Five Year Plan the State has achieved a lot at the lower primary and upper primary level. Some of the key achievements during this period are as follows:

- ❖ The 'out of school children' has come down from 24.38 percent in 2002-03 to 2.07 percent in 2010-11.
- ❖ Enrolment in the age group of 6-14 years has increased by 41.7 percent during the period 2002-03 to 2010-11.
- ❖ Gender gap in enrolment has come down from 3.74 percent in 2002-03 to 2.73 percent in 2010-11.
- ❖ Muslim minority children out of school have dropped to 2.3 percent in 2010-11 from 25.55 percent in 2002-03.
- ❖ During the Plan period, 5015 Education Guarantee Scheme (EGS) centers have been upgraded to Govt. Lower Primary Schools.
- ❖ To make the Elementary Cycle of eight years, Class-V has been amalgamated to Lower Primary and Class-VIII to Upper Primary as like the rest of the Country.
- ❖ Computer laboratory has been set up in 140 Block Resource Co-ordination Centres.
- ❖ State curriculum has been reformed in the light of National Curriculum Framework (NCF), 2005 for class-I to VIII and new text books are introduced accordingly from January, 2011. The NCERT text books for core subjects-Maths, Science, English and Hindi are being introduced in the State.
- ❖ Health check-up programme is introduced through Education Guarantee scheme, Sanjogi Siksha Kendra, Jyoti Kendras and in the Schools of Special Focus areas in convergence with NRHM.

### Drop-out Rates

The drop-out rates at Lower Primary level in the age group 6 years to 11 years in the State during 2009-10 as per the Abstract of Selected Educational Statistics 2009-10, Ministry of Human Resources Development, Govt. of India was 35.89 in total with 38.99 for boys and 32.67 for girls as against the all India drop-out rates of 28.86, 30.25 and 27.25 respectively. The drop-out rates at the Elementary Level (Class I to Class-VIII) in the age group 6 years to 14 years in the State was 61.21 (total) and 59.94 for boys and 62.55 for girls as against the all India rate of 42.39, 40.59 and 44.39 respectively during 2009-10.

The table below shows the drop-out rates during 2009-10 in the NE States and at all India level.

**TABLE –19.1**

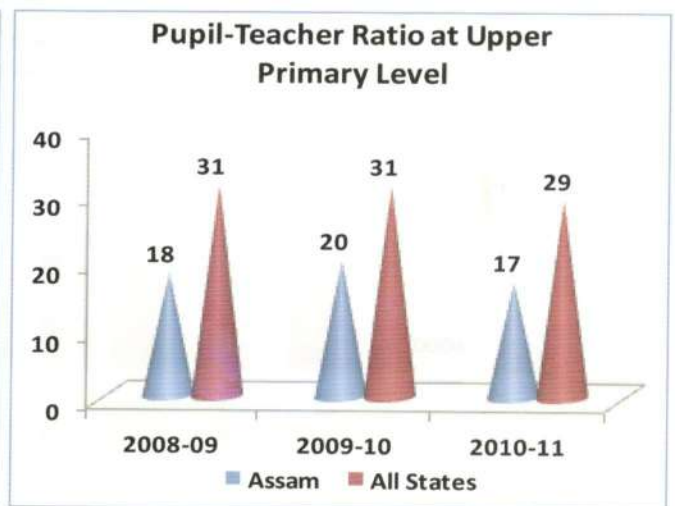
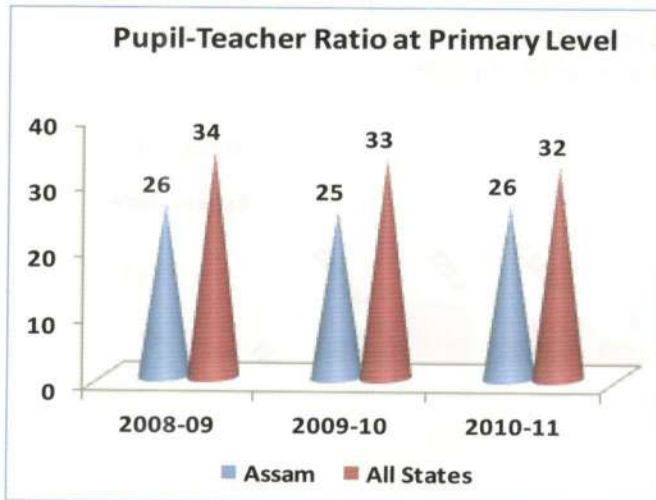
#### **DROP-OUT RATES IN NORTH-EASTERN STATES AND ALL INDIA, 2009-10**

States	Classes I-V (6-11 years)			Classes I-VIII (6-14 years)		
	Boys	Girls	Total	Boys	Girls	Total
Arunachal Pradesh	43.14	39.23	41.35	48.49	45.13	46.96
Assam	38.99	32.67	35.89	59.94	62.55	61.21
Manipur	33.05	40.08	36.48	57.65	56.59	57.13
Meghalaya	60.52	54.51	57.60	74.25	70.23	72.29
Mizoram	44.68	47.46	46.03	56.37	53.70	55.10
Nagaland	40.10	39.78	39.95	32.55	30.52	31.58
Sikkim	24.57	11.98	18.58	50.98	38.15	44.57
Tripura	25.95	24.97	25.48	45.42	41.77	43.66
<b>India</b>	30.25	27.25	28.86	40.59	44.39	42.39

Source: Abstract of selected Educational Statistics, 2009-10, Ministry of Human Resources Development, Govt. of India

### Pupil-Teacher Ratio

The Pupil-Teacher Ratio in the Primary and Upper Primary Levels of the State and at all States level from 2008-09 to 2010-11 as per the Flash Statistics: Elementary Education in India: Progress Towards UEE, 2010-11 is depicted as under.

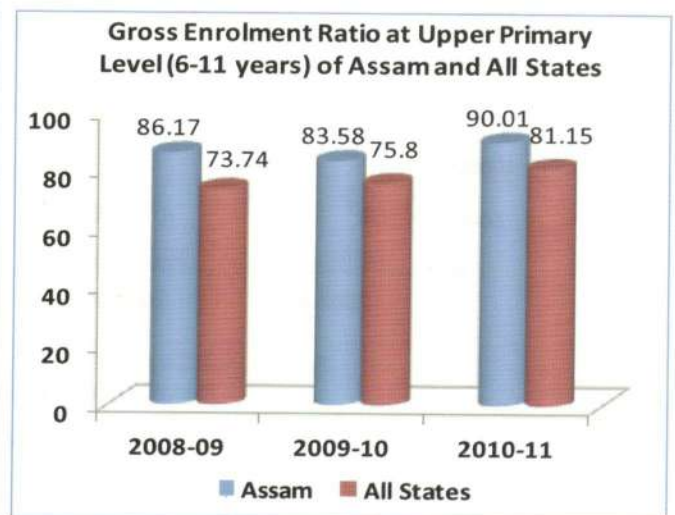
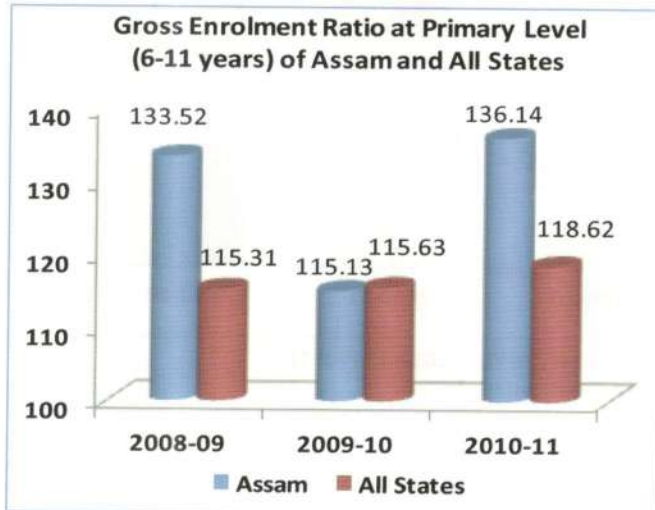


Source: Flash Statistics: Elementary Education in India: Progress Towards UEE, 2010-11

According to the report, the percentage of Single-Teacher Schools with 15 and more students in the State during 2008-09, 2009-10 and 2010-11 was 26.66, 15.03 and 19.75 respectively and the percentage for all Schools during the same periods was 19.88, 11.10 and 14.05 respectively.

### Enrolment Ratio

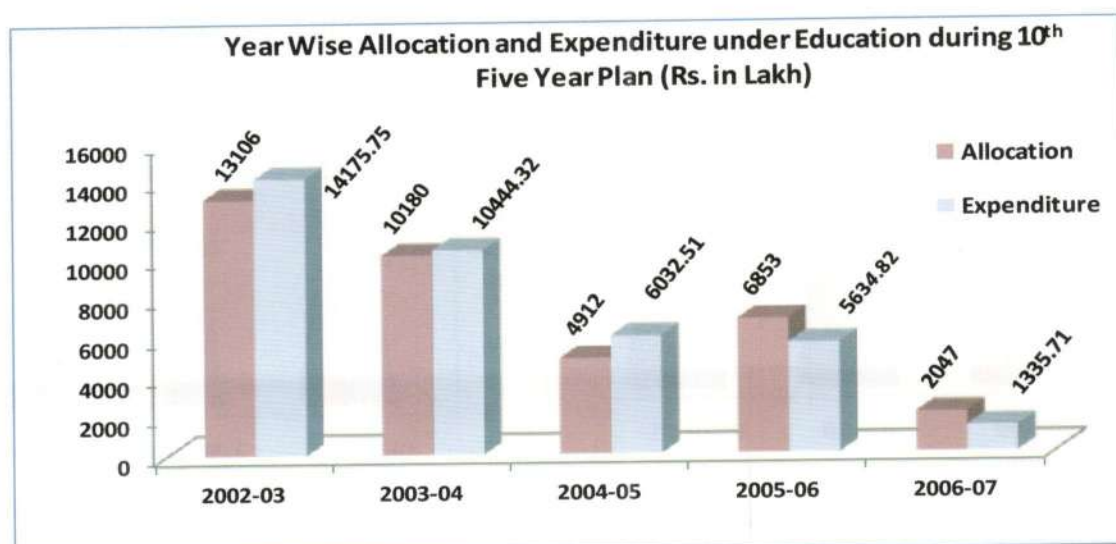
The Gross Enrolment Ratio (GER) at Primary Level during 2008-09, 2009-10 and 2010-11 was 133.52, 115.13 and 136.13 and at Upper Primary Level, the GER during the same periods was 86.17, 83.58 and 90.01 respectively in the State.



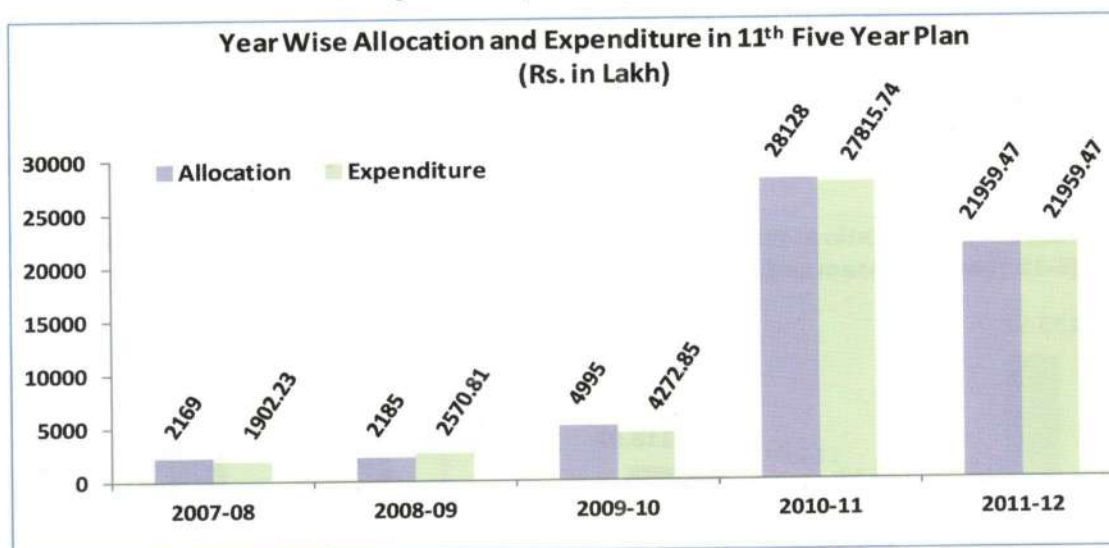
Source: Flash Statistics: Elementary Education in India: Progress Towards UEE, 2010-11

### Secondary Education

The secondary education is a crucial stage after passing out the stage of elementary education to prepare the student with higher level of knowledge and skills for higher education. In Assam, Secondary Education covers Class IX to Class X for the age group of 14 years to 16 years and Higher Secondary stage covers Class XI to Class XII for the age group 17 years to 18 years. However, amalgamated Secondary Schools are imparting education from Class VI onwards. Achievements during 10<sup>th</sup> Five Year Plan and 11<sup>th</sup> Five Year Plan and a comparison of both the plans is presented as follows.



Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.



Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

### Achievement of 11<sup>th</sup> Five Year Plan Period

- Financial grant to 100 years or above old 36 numbers of Secondary Schools.
- Grant to 156 numbers of Secondary Schools for distinguished performance.
- Scholarship to 14583 numbers of BPL students of Secondary Schools.
- Repair/ Renovation Grant of Rupees five lakh to each of 1016 numbers of Secondary Schools.
- Financial assistance to 2021 numbers of recognised High School/ High Madrassa, 185 permitted Higher Secondary School and 199 plus two stage Govt. Concurrence Junior Colleges.
- Remuneration to 6735 numbers of teachers engaged on contractual basis in Govt. Secondary Schools.
- Under State Plan non-recurring building grant to 200 Secondary Schools, Girls' Common Room grant to 125 Secondary Schools, Book Grant to 125 Secondary Schools and Furniture Grant to 125 Secondary Schools under SCCP.
- Under State Plan non-recurring building grant to 27 numbers of Secondary Schools under TSP.



## Notable achievements of 11<sup>th</sup> Plan period in comparison to the 10<sup>th</sup> Plan period.

- Infrastructures of the Secondary Schools improved considerably.
- The venture educational institutions received financial assistance to provide incentive to the teachers for their work.
- Quality of imparting education in core subjects improved due to engagement of contractual teachers.
- Computer education was introduced in large scale with the implementation of the scheme "ICT at Schools".
- Regular Head Master appointed in provincialised High Schools.
- Drop-out rate at secondary level reduced to a large extent.
- Participation of girls' in Secondary Education increased in the State.

## Proposal for the 12<sup>th</sup> Five Year Plan (2012-2017)

An outlay of ₹38833.86 lakh is proposed for the Annual Plan 2012-13 and ₹210829.88 lakh is proposed for the Twelfth Five Year Plan 2012-17.

The ongoing schemes under the 12<sup>th</sup> Five Year Plan are as follows-

- *Engagement of contractual Teacher.*
- *Anundaoram Borooh Award.*

The scheme was launched by the Govt. of Assam in the year 2005 to encourage healthy competition amongst the student community and to enrich them with up-to-date knowledge and information with the help of IT education. The scheme provides desktop computers to the students who secure first division in HSLC exam. From 2011, laptop computers replaced to desktop computers.

To implement the scheme, an amount of ₹12,000.00 lakh is proposed for the Annual Plan 2012-13 and an amount of ₹77,000.00 lakh is proposed for the Twelfth Five Year Plan.

## Providing various kinds of scholarship

The Directorate of Secondary Education, Assam is dealing with various kinds of scholarship sponsored by the both State and Central Government.

The Government of Assam's scholarships are-

1. Scholarship to the meritorious BPL students under the Chief Ministers Assam Bikash Yojana scheme (pre & post HSLC).
2. Scholarship to 20 numbers meritorious BPL students from each district for Class-XI & X.
3. Incentive to Girl students of Class IX-XII under Gender Responsive.

The Central Government's scholarships are-

1. National Means-cum-Merit Scholarship Scheme.
2. National Talent Search Examination (Scholarship).
3. Incentive to Girl Students (Scholarship).

To implement the scheme an amount of ₹15.00 lakh has been proposed in the Annual Plan 2012-13 and an amount of ₹109.00 lakh has been proposed in the 12<sup>th</sup> Five year plan (2012-17).

- Introduction of Information and Communication Technology (ICT) in Secondary Schools.
- Financial assistance and provincialisation of HS/HM/HSS and Jr. Colleges.
- Financial assistance under the scheme of Distinguished Performance.
- Introduction of Vocational Education in 1000 Secondary Schools.
- Implementation of Rastriya Madhyamik Siksha Abhijan (RMSA).
- Vocational Education through National Vocational Education Qualification Framework (NVEQF), introduction thereof through RMSA.
- Establishment of Model Schools.
- Establishment of Girls' Hostel.
- Non-recurring grant to Secondary School under TSP and SCCP.

### New Schemes taken up are-

- The State Government has decided to send three students securing top three positions in H.S.L.C examination to NASA every year. For this purpose an amount of ₹28.00 lakh is proposed in the Annual Plan 2012-13 and an amount of ₹140.00 lakh is proposed for the 12<sup>th</sup> Five Year Plan.
- An amount of ₹76.00 lakh is proposed in the Annual Plan Budget 2012-13 and an amount of ₹380.00 lakh is proposed for the 12<sup>th</sup> Five Year Plan for providing free bi-cycles to the Girl Students in Class IX and Class X under BPL family.
- Introduction of Science and Commerce in all provincialised Higher Secondary Schools and Junior Colleges in the State and for this purpose an amount of ₹137.79 lakh is proposed for the Annual Plan 2012-13 and ₹1035.34 lakh is proposed for the 12<sup>th</sup> Five Year Plan.

### Rashtriya Madhyamik Shiksha Abhiyan (RMSA)

The Rashtriya Madhyamik Shiksha Abhiyan, Assam has taken up various activities such as infrastructure development, teacher's recruitment, establishment of model schools, establishment of girls' hostel and teachers in service training to uplift Secondary Education in Assam. All the scheme of RMSA is centrally sponsored and the State has to provide only 10 percent matching share to the RMSA.

The RMSA has taken up establishment of 24 model schools and will implement the National Vocational Education Qualification Frame Work with 10 percent State share in the State.

### Major Activities of RMSA during Twelfth Five Year Plan

- Establishment of new school and up gradation of Upper Primary School to Secondary School. The total requirement in the State is 3957 schools of which 2607 already exists.
- Establishment of new Higher Secondary School and up gradation of existing Upper Primary School to Higher Secondary School. The total requirement in the State is 3100 schools of which 645 already exists.
- To establish 23623 Additional Classrooms as per population projection at Secondary level in the State of which 2204 has already been approved by the Govt. of India.
- To establish 19293 Additional Classrooms as per population projection at Higher Secondary level in the State of. The total requirement is 31000 classrooms of which 1887 already exist and 9820 rooms of new school.
- Integrated Science Laboratory. The total requirement is 2607 of which 149 laboratories exist and 1038 has already been approved by the Govt. of India. The target to achieve is 1420 Science laboratories in the Secondary section.
- Subject wise 3 Science Laboratory per school for Higher Secondary sections.
- Lab equipments for all 7057 Secondary and Higher Secondary Schools of which approval for 1038 schools is being granted by the Govt. of India.
- Construction of Headmaster and Principal room.

For construction of Model School, Girls' Hostel, NVEQF through RMSA an amount of 10 percent State share amounting to ₹10033.50 lakh is proposed for the Annual Plan 2012-13 and ₹52682.77 lakh is proposed for the 12<sup>th</sup> Five Year Plan 2012-17.

### Madrasa Education

A separate Directorate of Madrasa Education was created in 2005; earlier it was a part of Directorate of Secondary Education. At present, there are as many as 524 pre-senior Madrassas, 164 Senior Madrassas, 5 Arabic Colleges, 14 Title Madrassas, 500 Voluntary Moktab and 700 Khariji Madrassas continuing Madrasa education in the State. During 2011-12, the State had 74 provincialised institutions with 1222 numbers of male teachers and 12 numbers of female teachers imparting education to 14090 boys and 5849 girl students.

## Achievements during the Eleventh Five Year Plan

Establishment of the Directorate of Madrassa Education, 700 Khariji Madrassa have been provided with financial assistance for infrastructure development, the Govt. of India has released an amount of ₹1498.53 lakh as 100 percent Central assistance under the 'Scheme for Providing Quality Education in Madrassa (SPQEM)', a Centrally Sponsored Scheme.

## New Initiatives for 12<sup>th</sup> Five Year Plan

- Establishment of Madrassa University and Training College.
- Establishment of six Zonal Offices.
- Construction of Hostel for Boys and Girls.

Both the Central and State Government are equally concerned for upliftment of Madrassa Education in the State. The proposed Annual Plan Budget for 2012-13 is ₹4543.00 lakh and the amount proposed for the 12<sup>th</sup> Five Year Plan (2012-17) is ₹71350.00 lakh.

## Adult Education

Adult Education programme was started on National Basis in the year 1978-79. Subsequently after constitution of National Literacy Mission (NLM) in 1988, the total literacy campaign came into being. During the year 2009 the **Sakshar Bharat Mission** was launched by the Government of India to boost literacy drive dovetailed with skill development. The Adult Literacy Programme is implemented to eradicate illiteracy of the age group 15 years and above in the population.

The strategic primary focus of the programme is on women, Scheduled Castes, Scheduled Tribes, Backward Communities, Char Areas, Hill Areas and Tea Tribes to achieve 80 percent literacy within 2012 as stipulated in Sakshar Bharat Mission. The 11<sup>th</sup> Five Year Plan targeted to cover 31 lakh illiterates of age 15 years and above. Achievement under the Sakshar Bharat Mission up to 2010-11 was 13 lakh 62 thousand and the programme is still going on to achieve the target.

The size of adult illiterates to cover during the 12<sup>th</sup> Five Year Plan is 15.08 lakh uncovered gap of 11<sup>th</sup> Five Year Plan and 17.62 lakh new entrants.

To fulfill the national commitment of achieving 80 percent literacy an amount of ₹60.00 lakh is required for 12<sup>th</sup> Five Year Plan and an amount of ₹8.00 lakh is proposed in the Annual Plan 2012-13.

## SCERT

SCERT, Assam is the State Academic Authority engaged in academic resource development through various programmes such as organizing long and short term training, workshops, seminars, research and evaluation activities for teachers and teacher educators to make them professionally competent for effective teaching. The present picture of trained and untrained teachers as per DISE 2009-10 and Directorate of Secondary Education is shown in the table below.

**TABLE-19.2**  
**TEACHER EDUCATION IN ASSAM**

Level	Total teachers	Total trained teachers	Percentage of trained teachers	Total untrained teachers	Percentage of untrained teachers
Primary	85717	73293	86	12424	15
Upper Primary	40593	26311	65	14282	35
Secondary	57255	17578	31	39677	69
Sr. Secondary	17238	6532	38	10706	62

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

To create infrastructure facilities for teacher training an amount of ₹3500.00 lakh is proposed for the Annual Plan 2012-13 and ₹8440.00 lakh is proposed for the Twelfth Five Year Plan (2012-17).

### Higher Education

The Directorate of Higher Education and Directorate of Secondary Education is established to give primary focus on expansion and promotion of Higher Education by granting financial assistance to the needy educational institutions besides implementing various programmes for development of general education and assisting for infrastructure development in general with special focus to rural and backward areas.

The number of institutions under the administrative control of Higher Education in Assam is as follows-

**TABLE-19.3**

Name of the Institutions	State (General)	Sixth Scheduled/BTAD	Central	Private	Total no. of Institutions
Universities	5	1	2	2	10
Govt. Colleges	4	3	-	-	7
Provincialised Colleges	180	9	-	-	189
Non-Govt. Colleges	145	30	-	-	175
Adhoc Law Colleges	5	-	-	-	5
Provincialised Sanskrit & Pali Tols	78	4	-	-	82
Non-Govt. Sanskrit Tols	100	-	-	-	100
Literary & Voluntary Organisation	17	-	-	-	17
<b>Total</b>					<b>582</b>

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

The year wise approved allocation and expenditure for development of higher education during the Eleventh Five Year Plan (2007-12) is as follows-

**TABLE-19.4**  
**ALLOCATION AND EXPENDITURE DURING 11<sup>TH</sup> FIVE YEAR PLAN**  
(Rs. in lakh)

Year	Allocation	Expenditure
2007-08	1550.00	1379.36
2008-09	990.00	963.00
2009-10	3637.86	3427.86
2010-11	9003.00	8033.00
2011-12	10050.00	10050.00(anticipated)

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

Few major achievements during 11<sup>th</sup> Five Year Plan:

- Provided ₹490.00 lakh for Gauhati University, ₹975.00 lakh for Dibrugarh University and ₹49.00 lakh for Cotton College for infrastructure development.
- Private University Act and Rules passed.
- Don Bosco University and Down Town University formed.
- K.K. Handique State Open University established.
- 5 year LLB course in B.R.M. Govt. Law College and 4 wholetime and 4 part time lecturer posts created.
- The Bodo Land University Act passed.

**TABLE-19.5**  
**PHYSICAL ACHIEVEMENT DURING THE 10<sup>TH</sup> AND 11<sup>TH</sup> FIVE YEAR PLAN**

Institutions	Up to the end of 10 <sup>th</sup> Five Year Plan (in no.)	Achievement during the 11 <sup>th</sup> Five Year Plan (in no.)	Total at the end of 11 <sup>th</sup> Five Year Plan (in no.)
Universities	7	3	10
Govt. Colleges	6	1	7
Provincialised Colleges	188	1	189
Non-Govt. Colleges	142	33	175
Provincialised Sanskrit & Pali Tols	82	-	82
Non-Govt. Sanskrit Tols	67	33	100
Literary & Voluntary Organisations	14	5	19

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

For the Twelfth Five year Plan (2012-17) an amount of ₹103100 lakh is proposed for the development of Higher education and an amount of ₹15460 lakh has been proposed for the Annual Plan 2012-13.

### Technical Education

The Directorate of Technical Education, Assam prepares, supervises and implements the plans and schemes for overall development of Technical Education in the State. A brief review about allocation of fund for State Plan and centrally sponsored schemes during the 11<sup>th</sup> Five Year Plan and physical achievement is presented through the tables below.

**TABLE-19.6**  
**YEAR WISE APPROVED ALLOCATION OF FUND FOR TECHNICAL EDUCATION DURING THE 11<sup>TH</sup> FIVE YEAR PLAN**

(Rs. in lakh)

Year	State Plan Fund		Centrally Sponsored Scheme	
	Allocation	Utilisation of fund	Allocation	Utilisation of fund
2007-08	200.00	41.52	40.00	40.00
2008-09	1078.00	556.20	41.40	41.40
2009-10	2338.00	966.76	132.00	106.46
2010-11	4291.60	3039.57	128.00	41.57
2011-12	3330.00	3330.00(anticipated)	200.00	200.00(anticipated)

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

Comparison of physical achievements during 11<sup>th</sup> Five Year Plan and up to the end of the 10<sup>th</sup> Five Year Plan is presented in the table below.

**TABLE-19.7**

Institution	Achievement up to the end of the 10 <sup>th</sup> Five Year Plan		Achievement during the 11 <sup>th</sup> Five Year Plan		Total	
	No. of Institution	Intake capacity	No. of Institution	Intake capacity	No. of Institution	Intake capacity
Engineering College	2	510	2	465	4	975
Polytechnic	9	1270	1	175	10	1445
Junior Tech. College	2	30	-	-	1	30
University of Science & Technology	-	-	1	-	1	0
Women University	-	-	1	-	1	-

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1), Planning and Development Department, Assam.

To implement various programmes for overall development of Higher Education in the State an amount of ₹43400 lakh is proposed for the 12<sup>th</sup> Five Year Plan period which includes a proposal of ₹10000 lakh under the scheme, 'Chief Minister's Mission for Technical Education'. The proposed amount for the Annual Plan 2012-13 is ₹4000 lakh which includes ₹2000 lakh for the 'Chief Minister's Mission for Technical Education' plan.

#### Some important achievements of Technical Education in the State during 2011-12

1. Administrative approval and financial sanction of ₹38.09 crore, ₹30.00 crore and ₹40.00 crore to establish Engineering Colleges in Golaghat, Karimganj and Dhemaji District.
2. One Engineering College was established at Tezpur under PPP mode and another at Goalpara is under process.
3. Grants-in-Aid for establishment of the Assam Science and Technology University have been provided and Vice-Chancellor appointed.
4. Administrative approval to establish a Women University at Jorhat has been accorded and financial sanction of ₹5.00 crore has been provided.
5. Administrative approval and financial sanction has been accorded for an amount of ₹258.30 crore to establish 21 numbers of new Polytechnics in different districts of Assam under CSS and necessary fund has been released.
6. Establishment of Indian Institute of Information and Technology Advance Science under PPP mode is under process.
7. Bineswar Brahma Engineering College at Kokrajhar and Jorhat Institute of Science and Technology at Jorhat has been started.

#### Medical Education

The Directorate of Medical Education, Assam is entrusted with the task of generating human resources like Doctors, Nurses, Technicians, Physiotherapists, Pharmacists and other Health personnel to meet the growing needs of not only the State but the entire North Eastern region.

The Directorate has a host of institutes under its control that is Assam Medical College(AMC) & Hospital, Gauhati Medical College(GMC) & Hospital, Silchar Medical College (SMC) & Hospital, Jorhat Medical College, Regional Dental College, Guwahati; Regional Nursing College, Guwahati; Govt. Ayurvedic College, Guwahati; S.J.N. Homeopathic Medical College, Guwahati; Dr. J.K. Saikia Homeopathic Medical College, Jorhat; Assam Homeopathic Medical College, Nagaon, three pharmacist institutes associated with AMC, GMC and SMC, Medical Institute at Jorhat and three Institute of Paramedical Sciences at Guwahati, Dibrugarh and Silchar. The Srimanta Sankaradeva University of Health Services, Assam and Jorhat Medical College & Hospital have started functioning from 2009-10.

Besides the above institutes, steps have already been taken for establishment of three more medical college's viz. Fakaruddin Ali Ahmed Medical College, Barpeta; Tezpur Medical College Tezpur; Assam Hills Medical College and Research Institute, Diphu. Steps have also be taken to establish three more medical college at Lakhimpur, Kokrajhar and Dhubri.

### Physical Achievement during the 11<sup>th</sup> Five Year Plan (2007-12)

- Jorhat Medical College has started functioning from the session 2010 with an intake capacity of 100 students. Hospital section of Fakaruddin Ali Ahmed Medical College and Hospital started functioning from February 2011.
- The Srimanta Sankaradeva University of Health Science has started functioning fully from 2009-10.
- Three new institutes of Para medical sciences have been established at GMCH, AMCH and SMCH and the courses have already been started from the session 2008.
- A new Directorate of AYUSH has been established during 2010-11.
- Two new Nursing Colleges at AMCH and GMCH has been established.

### Twelfth Five Year Plan

Director of Medical Education with a mission to accomplish accelerated development and to carry out the processes, an amount of ₹78000.00 lakh including ₹4500.00 lakh under ACA for establishing another three new institutes for opening of Diploma in Medical Rural Health Care course at AMCH, GMCH and SMCH is proposed for the Twelfth Five Year Plan. Under ACA for the Annual Plan 2012-13 an amount of ₹600.00 lakh is proposed to construct building for opening of Diploma in Medical Rural Health Care course at AMCH, GMCH and SMCH.

Comparative Statement of Plan Allocations during 10<sup>th</sup>, 11<sup>th</sup> and proposed outlay during 12<sup>th</sup> Five Year Plan is presented below.

**TABLE-19.8**  
**PLAN ALLOCATION AND EXPENDITURE FOR MEDICAL EDUCATION IN ASSAM**  
(Rs. in lakh)

Plan Period	Plan allocation/ Proposed Outlay	Actual Expenditure/ Anticipated Expenditure
10 <sup>th</sup> Five Year Plan	5960.00	6661.27
11 <sup>th</sup> Five Year Plan	75013.71	69793.48
12 <sup>th</sup> Five Year Plan	78000.00	78000.00

Source: Draft Twelfth Five Year Plan and Annual Plan, 2012-13 (Vol-1),  
Planning and Development Department, Assam.

### Public Health and Family Welfare

The United Nation Organizations programme "Health for all by 2020 AD" contemplates to expand the infrastructure for public health and medical care in order to ensure quality medical services to common men. To achieve this goal, the State Government has been undertaking various programmes and continuously increasing allocation of fund to the health sector in State Plans. Some of the major health facilities in the State, both under Public sector and Private sector are shown in the following table.

**TABLE – 19.9**  
**HEALTH INFRASTRUCTURE OF ASSAM, 2011**

Particulars	Required	In position	shortfall
Under Public Sector			
State Level Hospital		1	
District Hospital(DH)		22	
Sub-Divisional Hospital		13	
Homeopathic Hospital		3	
Cancer Hospital		1	
Tuberculosis Hospital		3	
Leprosy Hospital		3	
Sub-centres	5841	4604	1237
Primary Health Centre	953	938	15
Community Health Centre	238	108	130
Health worker (Female)/ANM at Sub Centres & PHCs	5542	8723	
Health Worker (Male) at Sub Centres	4604	2386	2218
Health Assistant (Female)/LHV at PHCs	938	452	486
Health Assistant (Male) at PHCs	938	NA	NA
Doctor at PHCs	938	1557	
Obstetricians & Gynecologists at CHCs	108	101	7
Pediatricians at CHCs	108	46	62
Total specialists at CHCs	432	216	216
Radiographers at CHCs	108	61	47
Pharmacist at PHCs & CHCs	1046	1262	
Laboratory Technicians at PHCs & CHCs	1046	1211	
Nursing Staff at PHCs & CHCs	1694	2844	
Under Private Sector			
Nursing Home		235	
Cinic/Poly Clinic		222	

(Source: RHS Bulletin, March 2011, M/O Health & F.W., GOI.)

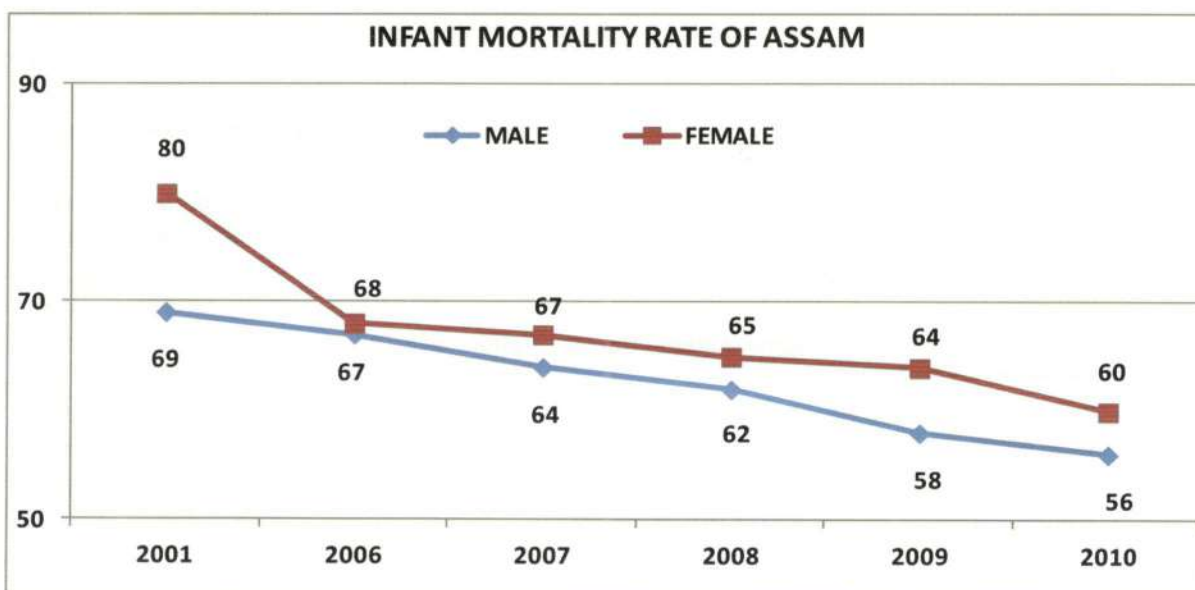
The main objectives of Eleventh Five Year Plan (2007-12) with respect to enhance and strengthen health services at various stages, to remove regional and intra-regional disparities by improving health services in rural, hilly and tribal areas, to decentralize & strengthen regional referral services and to reduce Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR), and Crude Birth Rate (CBR). Status of selected health indicators is shown in Table -19.10

**TABLE – 19.10**  
**HEALTH PROFILE OF ASSAM STATE AS COMPARED TO INDIA FIGURES**

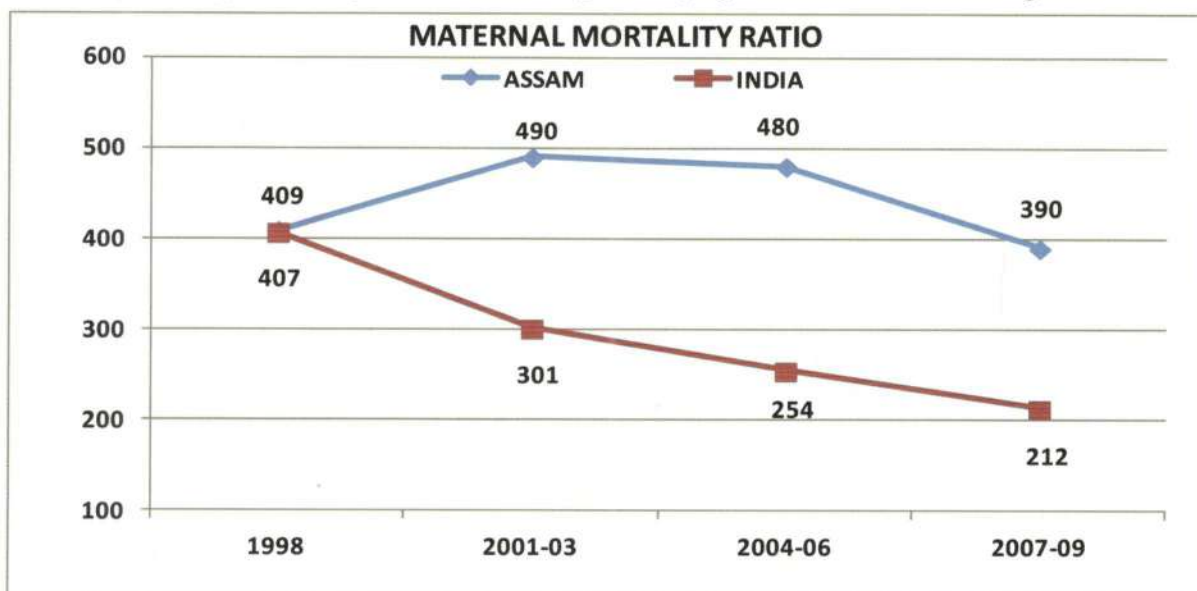
Indicator	ASSAM	India
Total population(in crore) (Census 2011)	3.12	121.01
Decadal Growth (%) (Census 2011)	16.93	17.64
Crude Birth Rate ( SRS 2011)	22.8	21.8
Crude Death Rate ( SRS 2010)	8.0	7.1
Natural Growth Rate ( SRS 2010)	14.8	14.7
Infant Mortality Rate ( SRS 201)	55	44
Maternal Mortality Rate (SRS 2007-09)	390	212
Total Fertility Rate (SRS 2010)	2.5	2.5

(Source: RHS Bulletin, March 2011, M/O Health & F.W., GOI.)





The Infant Mortality Rate (IMR) is a very serious indicator to judge the health status of a society. In Assam IMR has been declining in a very positive way but still remained significantly higher than the national average 44 in 2010.



Reduction of women mortality in child birth is an area of serious concern for the Governments across the globe. The Millennium Development Goals (MDG) of the United Nations has set the target of achieving 200 maternal deaths per lakh live births by 2007 and 109 per lakh of live births by 2015. The Maternal Mortality Ratio (MMR) is the highest in Assam in all over the country.

The State Government has been implementing various schemes, to provide better health care among the people of the State, as in the following:

- The scheme called '**Mamoni**' has ensured the compulsory three Ante Natal Checkups (ANCs) besides Institutional Delivery and cash assistance of ₹1000/- in two installments for the nutrition of the pregnant women during their pregnancy. Up to 2011(till September) total of 8,38,019 number pregnant women received 1<sup>st</sup> installment and 6,73,896 pregnant women received 2<sup>nd</sup> installment since inception.

- The scheme called '**Majoni**' has been launched for new born girl child to provide social assistance, safeguard the educational help, nutritional right and to empower them equal to male counterpart. Under this scheme, an amount of ₹5000/- is given in the form of Fixed Deposit every girl child born in health institutions. Total of 1,54,580 number of fixed deposits have been issued, till 2011 since inception.
- The **Janani Suraksha Yojana** aims at institutional delivery of pregnant women with regular ante-natal and post-natal check-up through active participation of the ASHAs. The mother is provided with cash assistance of ₹1400/- in rural areas and ₹1000/- in urban areas.
- The scheme Sushrusa is taken up to provide grant of ₹1,00,000 as financial assistance to people who have undergone Kidney transplantation after 1<sup>st</sup> April,2010. The fund was provided by the Govt. of Assam.
- More than 500 children with congenital heart disease has been operated till date at Narayana Hrudayala , Bangalore and Kolkata at free of cost. Fund was provided by the Govt. of Assam.
- Under the scheme of 'Operation Smile' more than 4000 number of children undergone surgery for repair of cleft palate and lip till 2012.

The proposed outlay for 12<sup>th</sup> five year plan is ₹1588.68 crores to continue and implement the various schemes for better health care and for Annual Plan 2012-13 is ₹398.09 crores.

### Achievements under NRHM

- The Maternal Mortality Ratio (MMR) per 100000 live birth has been decreasing. As per Annual Health Survey Report, 2010-11, the MMR of the State is 381.
- The Infant Mortality Rate(IMR) , has decreased to 55 in 2011, as per SRS Bulletin,2012.
- There is a steady increase of Institutional Delivery from 1,49,003 (2005-06) to 4,64,710 (2011-12).
- The Percentage of fully Immunization of Children has been increasing from 70%(2005-06) to 84%( 2011-12).
- The number of beneficiaries for female sterilization has increased to 75643 (2011-12) from 24201(2005-06).
- The number of IUD insertion has increased to 68,684(2011-12) from 38,073(2005-06).
- At present 13 number of special new born baby care corner is functional to take care of sick new born baby.
- Mobile Medical Unit (MMU) has been functioning in all 27 districts since 2007-08 and providing services to the patients by organising camps in various parts of the State.
- Boat clinics are functional in the State covering Char and Riverine areas since 2008-09.
- To provide health care services in Tea garden areas, 245 Tea gardens have been taken up under Public Private Partnership (PPP).
- '**Sanjeevani**'- a Village Health Outreach programme for early screening, diagnosis and follow up for non-communicable and lifelong diseases.

These are some progress in achievements made by NRHM in the State. Apart from these some special schemes have been proposed to curtail Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR) as follows-

### To reduce the IMR

**Infant and Young Child Nutrition Initiatives(IYCN):** During the year 2012-13 it is proposed to be trained up ASHAs/AWWs in 15 districts as breast feeding support group for exclusive breast feeding in the communities.

- New Born Care Corner (NBCC) - 545 NBCC are made functional out of 712 Delivery point and another 167 are being taken up to be made functional shortly.
- Special New Born Care: To provide special new born care to sick new born 13 such SCNUs are functional in the State.

## To reduce the MMR

- Facility Based Maternal Death Review (FBMDR): The FBMDR are conducted for maternal death occurring in Medical Colleges Hospital, Dist. Hospital and First Referral Unit (FRU). The Private Hospital with High Delivery load (>500 in a year) for FBMDR are identified during 2012-13.
- To ensure quality Ante Natal Care (ANC) for pregnant women (PW) ASHAs are incentivized @ ₹100/- per PW for completion of 4 ANCs, consumption of 100/200 IFA Tablets and TT/Booster.
- IV Irons Sucrose for Anemic PW was started in 8 districts in 2011-12 and all district will be covered in 2012-13
- Job Aids for ANMs are developed with support from UNICEF in vernacular for all the Sub Centres(SC) in 2011-12 except K.Anglong, Dima Hasao and Barak Velly District.Job Aid will be provided to these districts also in 2012-13
- Promotion of Institutional Delivery by increasing the number of delivery Points throughout the State.
- Special Nutrition Supplements, containing atleast 300Kcl and 15 gm protein for a period of 6 months during the period of pregnancy, to high risk pregnant women.

## Family Welfare

The Family Welfare Programme is being implemented in the State since 1956 to reduce the birth rate to stabilize the population and to improve the health of mothers and child. At present Family Welfare Programme is implemented under National Rural Health Mission (NRHM) a centrally sponsored programme. However, socio-economic factors such as female literacy, age at marriage of girls, status of women and discouragement of strong preference for son influence the main objective of the programme. Though the sterilization was the mainstay of family welfare programme in the past, spacing between births of two children is also an equally important aspect under the programme. The Government is giving more stress on propagations of spacing methods like Copper-T, Intra Uterine Device (IUD), Conventional contraceptives (CC) etc. Performance of Family Welfare programme is shown in the following table. During eleventh five year plan (2007-12) for implementation of various schemes of Family Welfare Programme and of better health services to the people of Assam the State share to NRHM on centrally sponsored schemes was ₹54361.29lakh

**TABLE-19.11**

Name of Scheme	2009-10		2010-11		2011-12 .	
	Target	Achievement (in %)	Target	Achievement (in %)	Target	Achievement (in %)
Sterilization	150000	54.15	127000	63.89	6460	98.53
I.U.D.Insertion	NA	NA	90000	57.20	4820	57.34
C.C Users	90000	55.84	90000	77.95	4800	164.92
O.P.Users	90000	72.07	90000	94.62	4800	110.81

Source: Director of Health (FW) Services, Assam

## Immunization Programme

Immunization of children against 6 ( six) vaccine preventable diseases ( TB, Diphtheria, pertusis, Poliomyelitis and Measles) has been carried on in our State also on a priority basis. Children (below one years of age) who have received BCG, Measles and three doses each of DPT & Oral Polio Vaccine are considered to be Fully Immunized. Besides expectant mother are vaccinated with Tetanus Toxoid (TT) these activities are covered under the Universal immunization Programme (UIP).

During the year 2011-12, the state has achieved 77 percent with full Immunization of 5,37,223 children (below 1 year of age) out of its annual target. During the year 2010-11, the state has achieved 86 percent, i.e. 5,86,135 number children ( below 1 year) with full immunization, out of the annual target set for. TT coverage was 83 percent, i.e. 674124 Out of the annual target was set for 816012 Pregnant women. It is found that during the year 2011-12, the State has shown improvement on Immunization Activities over the achievement of the previous year 2011-12.

The state is trying to extend the services of immunization Programme for the Hepatitis-B vaccine to infant children all over the state.

JE Vaccination is also being carried out in 9 districts in Routine Immunization programme with inclusion of 2 (two) new districts during 2011-12 i.e. Nagaon and Udalguri districts.

The Pulse Polio Immunization Programme has also been implemented in the state in successful manner. It may be stated that the Universal Immunization Programme in the State is taking a positive step to bring down the Infant Mortality Rate. The target and achievement in last three years can be seen from the following table.

**TABLE-19.12**

**THE ACHIEVEMENT OF IMMUNIZATION PROGRAMME IN THE STATE**

Year	Antigen	Target	Achievement	Percent	
2009-2010	DPT 3	710332	614009	86.44	
	OPV 3	710332	611994	86.16	
	BCG	710332	657555	92.57	
	Measles	710332	598334	84.23	
	Fully Imm	710332	579217	81.54	
	TT ( PW)	808001	595597	73.71	
	HEP-B (JORHAT & SIVASAGAR)				
	HEP-B 1	54827	39698	72.41	
	HEP-B 2	54827	39934	72.84	
	HEP- B 3	54827	39094	71.30	
2010-2011	DPT 3	676265	614202	90.82	
	OPV 3	676265	612723	90.60	
	BCG	676265	665172	98.36	
	Measles	676265	601018	88.87	
	Fully Imm	676265	586135	86.67	
	TT ( PW)	754892	609247	80.71	
	HEP-B (JORHAT & SIVASAGAR)				
	HEP-B 1	52333	39273	75.04	
	HEP-B 2	52333	38936	74.40	
	HEP- B 3	52333	38634	73.82	
2011-2012	DPT 3	694349	629349	91.00	
	OPV 3	694349	582408	84.00	
	BCG	694349	651670	94.00	
	Measles	694349	640387	92.00	
	Fully Imm	694349	537223	77.00	
	TT ( PW)	816012	674124	83.00	
	HEP-B (JORHAT & SIVASAGAR)(till Jan)				
	HEP-B 1	465217	51747	10.91	
	HEP-B 2	465217	32027	6.88	
	HEP- B 3	465217	25963	5.58	

Source: Director of Health (FW) Services, Assam

## Social Welfare

The Government of Assam has been taking various welfare schemes for Women and Child, Old aged persons, Handicapped person, Backward communities and Weaker section of the society for their upliftment in the society. Some of the schemes are as follows-

Welfare of handicapped: -

- Social Welfare Deptt. is implementing the Person with Disability Act (PD Act) by taking some vital action to provide development schemes for person with disability of the State. As per provision of the P.D Act, State Commission of Disability is set up. Through the Act, the State is trying to provide rehabilitation to Blind person. Schemes for disable person are taken -
- Stipend to Disabled students,
- Rehabilitation grants to persons with Disabilities,
- Maintenance of special institutions for hearing impaired and visually challenged students,
- Grants-in-aid to NGOs for running such institutions,
- Issue of disability cards to person with Disability found as disable above the gradation of 40 degree through district medical board,

## Women Welfare

This scheme is being implemented for the welfare of Women. Different homes are established by the Govt. of Assam for the Welfare of Women.

Major schemes for Women Welfare are:-

- Maintenance of five VTRCs for economically backward Women.
- Grants-in-aid to Assam State Commission for Women to provide legal help to women in distress .
- Implementation of Domestic Violence Act,2005.
- Financial incentives under the schemes, namely, **Nabau** and **Baideu**, to single widow and unmarried single women above the age of 45 years .
- Marriage assistance to BPL girls after attaining 20 years.
- Anganwadi Karjakartay Bima Yojana-All the Anganwadi Workers and Helpers are insured under this scheme providing medical and health coverage in collaboration with Govt. of India LIC/ Govt. of Assam.
- **Sawaymsidha**:- This is a major intervention for empowerment of women. This is the scheme outside the plan and fully funded by Govt. of India. The activities undertake are:-  
In 24 ICDS projects uptill now 3250 SHGs has formed and activated.  
Micro-credit facilities to SHGs for training on capacity building and skill up gradation.  
Interloaning-Under the Swayamsidha scheme 2143 SHGs have been engaged in interloaning activities, both in cash as well as kind.  
Building management capacity and activities specified.  
Skill up gradation- Training facilities for skill up gradation, of the members of SHG, on traditional trades and necessary inputs are also provided.
- **SABLA**:-The Scheme under the nomenclature of Rajib Gandhi Scheme for Empowerment of Adolescent Girls (RGESA) is introduced for the all round development of Adolescent Girls. The scheme is implementing in Dhubri, Darrang, Hailakandi, Kokrajhar, Karbi-Anglong, Kamrup and Jorhat district of Assam.

## Mukhya Mantrir Jiban Jyoti Bima Achoni

Social Welfare Deptt. is implementating this Achoni which covers all the residents of Assam of the age groups of 03-80 years and the eligible persons shall be able to claim financial assistance both for medical treatment and in case of injury caused due to accidents as per the prescribed norms under this scheme.

### Welfare of old & Infirm (Health Care for the Aged)

- Objective of the scheme is to take care of the people who have attained above 70 years of age for male and above 65 years of age for female and who needs care, Financial assistance is provided to aged people to enable them to purchase medicine. A one time grant of ₹1000/- is given to eligible aged persons.
- For Maintenance of Senior Citizen Act 2007, 23 appellate authorities are constituted under the Chairmanships of District Magistrate/ Deputy Commissioner in each districts and District Social Welfare Officer is the Protection Officer.
- Constructed Old Age Home for women at Boko and Sonapur.

### Temporary Night Shelter Home

To provide temporary night shelter to homeless people during the night hours, the State Social Welfare Department has raised some homes for such people. The Department have taken necessary steps to ensure that no life is lost in the absence of Night Shelter with basic facilities there in.

### Aam Amdī Bima Yojana

This is a subscription based Insurance policy for giving medical and death coverage to land less labour above 18 years and below 60 years of age group in collaboration with Govt. of India/LICI/Govt. of Assam under the scheme.

### Child Welfare

Integrated Child Development Services scheme, has been continuing intervention to address the social, health, educational and nutritional needs of children in the age of 0-6 years.

Social Welfare Deptt. Govt. of Assam have taken various steps for protection of Child rights in the state

- Adoption-Orphaned, abandoned or surrender child by his/her family, the means of adoption is considered as the best rehabilitation for those children.
- Child Welfare Committee work as bench of Magistrates and all members of the committee have equal power. Committee is the final authority to dispose of cases for the care, protection, treatment, development and rehabilitation of the children. Child Welfare Committee is constituted in every district of the state.
- Juvenile Justice Board reviews the pending of cases and take necessary steps for disposal of the cases.
- Child Line- If a child found in distress or the child himself or herself, who in distress, can avail this services by simply, dialing 1098, a toll free number.
- Non-Institutional Care is introduced for Foster care, adoption, sponsorship etc for welfare of the needed child.

### Integrated Child Development Services Schemes (ICDS)

ICDS is a centrally sponsored scheme where in the central Govt. provides 90 percent of the total programme cost and the Govt. of Assam bears only 10 percent. The Scheme covered the entire state. At present there are 231 ICDS projects covering 58279 Nos. of Anganwadi Centres including Mini Anganwadi Centres in the States.

The main object of the schemes is to improve nutrition and health status of children below the age of 6 years and pregnant and lactating mothers and also to look after proper psychological, physical and social development of child and to reduce the rate of mortality, malnutrition and school dropout.

### Indira Gandhi Matritya Sahayog Yojana

To provide conditional cash transfer to the pregnant & lactating mother belonging to BPL family to compensate loss of wages during pregnant & lactating period. The scheme is implementating in two districts i.e in Kamrup and Goalpara so far.



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