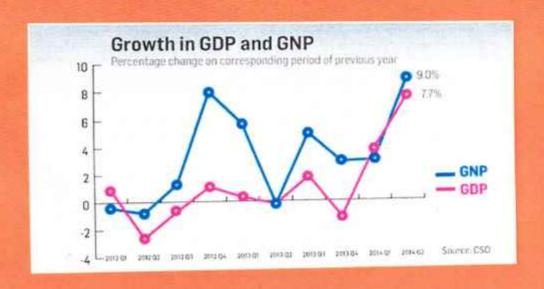


# ECONOMIC SURVEY REPORT OF ARUNACHAL PRADESH

2017



DIRECTORATE OF ECONOMICS AND STATISTICS GOVERNMENT OF ARUNACHAL PRADESH ITANAGAR - 791113 Mimum Tayeng, IAS Secretary (Economics & Statistics) Govt. of Arunachal Pradesh Civil Secretariat, Itanagar



Dated Itanagar the 6th March 2018

# FOREWORD

I am delighted to know that the "Economic Survey Report of Arunachal Pradesh" has been prepared by the Directorate of Economics and Statistics for the first time incorporating the Economic scenario of the State in different sectors.

The report gives a comprehensive overlook of the state's well being in all the sectors of the Economy. The information presented here would fulfill the need of the planners and policy makers interested in the State's Economy.

I place on record for the tireless efforts put by all the officers associated with the "Economic Survey Report of Arunachal Pradesh". This Report could not have been possible without the valuable guidance of Shri Bebing Megu, Director of Economics & Statistics and the service rendered by Shri Leleen Regon, Research Officer, Shri Minli Kaye, Research Officer, Shri Kasep Tayom, Research Officer, Miss Hage Mope, Research Officer and Shri Kago Talo, Research Officer for bringing out this report.

Sd/ Mimum Tayeng, IAS Secretary to Govt. of Arunachal Pradesh

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# CHAPTER-1

### ECONOMY OF THE STATE

#### Economy

Economy is a system to determine the value evolved during the set of processes that involves in its cultural activities, educational process, technological evolution, social organization, political Structure, Legal systems, its geography, natural resources endowment and ecology. In other words, the economy is the social domain of human practices and transaction. In laymen term, we can say it as the progress report card of the state through which we can easily locate our state's growth position.

#### Economy of Arunachal Pradesh

Arunachal Pradesh is the largest among the seven states located in the north- east of India, with an area of 83,743sqkm. The Economy of Arunachal Pradesh is largely agrarian with a massive 77% of rural population. The status of growth and development of state economy is assessed and affirmed through the estimates of Sate Domestic Product (SDP). Thus, the economy of Arunachal Pradesh is measured in terms of Sate Domestic Product (SDP) which is broadly classified into 3 major Sectors (i.e. Primary, Secondary and Tertiary) comprised of 13 sub-sectors as follows:-

#### (A) Primary Sector: -

- (i) Agriculture
- (ii) Forestry & Logging,
- (iii) Fishing & Aquaculture,
- (iv) Mining & Quarrying.

#### (B) Secondary Sector: -

- (i) Manufacturing
- (ii) Construction,
- (iii) Electricity, Gas, Water Supply & Other utility Services.

#### (C) Tertiary Sector:-

- (i) Trade, Repair, Hotels and Restaurant
- (ii) Transport, Storage, Communication & Services,
- (iii) Financial Services,
- (iv) Public administration
- (v) Real Estate, Ownership of Dwelling & Professional services,
- (vi) Other Service.

The estimates of Gross Domestic Product are prepared for each sector separately by adopting one or more of the three alternative methods. Ideally each approach must give the same value. Production or Value Added Approach accounts for the value of all goods and services produced within the state during the year after deducting the value of intermediate inputs. The Income Approach determines the income generated from economic activity within the state. In this method, the aggregate income is considered to be the total of four factor incomes i.e. rent, salaries & wages, interest and profit. In Expenditure Approach, estimation is done considering all the expenditures in the state.

TABLE: 1.1 Sectoral Composition of Gross State domestic Product of Arunachal Pradesh at market price along with its Share of Percentage.

(Rs. In Lakhs)

	At Cur	rent Prices (In	Percentage	Share)	At Con	stant Prices(In	Percentage	Share)
Year	Primary Sector	Secondary Sector	Tertiary Sector	GSDP	Primary Sector	Secondary Sector	Tertiary Sector	GSDP
2011-12 (R)	44.08	19.31	38.73	1106269	44.08	17.19	38.73	1106269
2012-13 (R)	46.80	19.06	36.97	1254665	45.25	16.53	38.21	1129917
2013-14 (R)	45.32	19.50	38.23	1458106	43.76	17.20	39.05	1233824
2014-15 (R)	43.72	24.02	34.38	1793115	41.15	23.78	35.07	1437596
2015-16 (P)	48.18	29.11	32.89	2037343	47.86	20.36	31.79	1660821
2016-17 (Q)	44.72	30,86	33.80	2209961	44.78	22.49	32.73	1743873

R- Revised Estimates, Q- Quick Estimates

# COMPREHENSIVE ANALYSIS ON THE STATE ECONOMY OF ARUNACHAL PRADESH

The table 'A" highlights the Sectoral composition of GSDP in percentage share distribution of the Arunachal Pradesh's economy by considering 2011-12 as a base year, since base year has been change from 2004-05 to 2011-12.

#### PRIMARY SECTOR

The Contribution of primary sector has been a slight rise from 44.08% in 2011-12(R) to 44.72% in 2016-17(Q) i.e. by 0.64% at current prices. It may increase in percentage share when the estimates of data for the 2016-17 get revised. At the GDSP Constant price, also, it reveals a gradual increase in Primary sector from 44.08% in 2011-12(R) to 44.78% in 2016-17 (Q) i.e. by 0.7% at constant prices. This gradual rise at constant 2011-12(R) prices reveals the fact that there has been considerable rise in the prices of primary products.

#### SECONDARY SECTOR

Secondary sector, which contributed 19.31% in 2011-12(R), enhance its share to 30.86% in 2016-17(Q) at current price and 22.49% in 2016-17(Q) at constant price. Net increased in its share was 11.55% at current price and 5.3% at constant prices over the period of six years. Contribution of Secondary sector has significantly increased over this period.

#### TERTIARY SECTOR

Tertiary Sector, which contributed 38.73% in 2011-12, decreases its share to 33.80% in 2016-17(Q) at current price and 32.73% in 2016-17(Q) at constant price. Net decrease in contribution of tertiary sector over the period of six years was -4.93% at current price and -6% at constant prices, as taking 2011-12 as base year. This decline at constant 2011-12(R) prices reveal the fact that prices enhance for tertiary product was lower than other sectors. The growth in primary sector is relatively higher than tertiary sector. If we see the overall changes in the sectoral pattern, it reveals that the economy of Arunachal Pradesh continues to retain its position of being more of agricultural.

#### REVIEW OF ESTIMATES OF STATE DOMESTIC PRODUCT (S.D.P.)

At current prices, GSDP is estimated at Rs. 2216628 lakhs in 2016-17 as against Rs. 1106269 lakhs in 2011-12 whereas at constant prices, GSDP is estimated at Rs. 1747553 lakhs in 2016-17. It reveals that the growth of GSDP during the years from 2011-12 to 2016-17 is 50.09 % at current prices and 63.30% at constant prices. In 2015-16, Net State Domestic Product (NSDP) is estimated at Rs.1776412 lakhs at current prices and Rs. 1296627 lakhs at constant prices as against Rs. 1022946 lakhs in 2011-12. The growth of NSDP during the years from 2011-12 to 2015-16 is 173.66% at current prices and 126.75 % at constant prices. Thus, the trend of overall growth and development in Economy of Arunachal Pradesh is at increasing state.

TABLE: - (B) Gross State Domestic Product by economic activity at current (2011-12) prices

Item	2012-13 (R)	2013-14 (R)	2014-15 (R)	2015-16 (P)	2016-17 (Q)
1. AGRICULTURE SECTOR	545406	603498	728463	751716	760337
1.1 Crops (Agriculture & Horticulture)	331962	359897	406630	365598	328432
1.2 Livestock	24249	34028	38418	47935	63248
1.3 Forestry and logging	183780	204038	275223	327837	357088
1.4 Fishing and aquaculture	5415	5535	8192	10346	11569
2. Mining and quarrying	35024	43616	36957	201435	201820

1	2	3	4	5	6
Primary	580430	647114	765420	953151	962157
3 Manufacturing	14827	19714	70380	70450	83629
Electricity, gas, water supply & other utility services	78766	90521	112202	131794	155819
5. Construction	107821	124594	200955	172220	222744
Secondary	201415	234829	383537	374464	462193
INDUSTRY SECTOR	236439	278445	420494	575899	664013
6. Trade, repair, hotels and restaurants	50878	70494	67500	65046	78164
6.1. Trade & repair services	47880	67273	63744	60896	73773
6.2. Hotels & restaurants	2999	3222	3755	4150	4391
7. Transport, storage, communication & services related to broadcasting	27306	33661	36456	43731	49358
7.1. Railways	34	47	59	65	76
7.2. Road transport	13618	16307	16165	19318	21987
7.3. Water transport	0	0	0	0	1
7.4. Air transport	0	0	0	0	0
7.5. Services incidental to transport	89	100	, 108	118	135
7.6. Storage	0	0	0	0	1
7.7. Communication & services related to broadcasting	13565	17208	20124	24230	27159
8. Financial services	21562	23571	25207	27548	28846
<ol> <li>Real estate, ownership of dwelling &amp; professional services</li> </ol>	41869	44949	47552	49088	51952
10. Public administration	149466	183105	232024	247175	272185
11. Other services	167431	190012	193201	217964	246790
Tertiary/ SERVICES SECTOR	458513	545792	601939	650552	727296
12. TOTAL GSVA at basic prices	1240357	1427735	1750897	1978167	2151645
13. Taxes on Products	43899	60039	72311	87437	97187
14. Subsidies on products	29591	29668	30093	28000	32204
15. Gross State Domestic Product	1254665	1458106	1793115	2037604	2216628
16. Population ('00)	14280	14570	14870	15160	15470
17. Per Capita GSDP (Rs.)	87862	100076	120586	134407	143286

Gross State Value Added by economic activity at constant (2011-12) prices

Item	2012-13 (R)	2013-14 (R)	2014-15 (R)	2015-16 (P)	2016-17 (Q)
1. AGRICULTURE SECTOR	472794	491472	541984	509780	484768
1.1 Crops (Agriculture & Horticulture)	281052	295749	303811	267588	207024
1.2 Livestock	23953	31123	37765	38919	48892
1.3 Forestry and logging	163051	160038	194673	197524	222961
1.4 Fishing and aquaculture	4738	4562	5735	5749	5891
2. Mining and quarrying	32615	37071	35021	260197	273089
Primary	505409	528543	577005	769977	757857
3. Manufacturing	14037	18285	64950	73790	86181
<ol> <li>Electricity, gas, water supply &amp; other utility services</li> </ol>	70428	78503	96076	112548	118794
5. Construction	100177	110947	172447	141210	175733
Secondary	184643	207735	333472	327548	380708
INDUSTRY SECTOR	217258	244806	368493	587745	653797
Trade, repair, hotels and restaurants	46755	60539	52886	48556	56827
6.1. Trade & repair services	44029	57863	49953	45468	53646
6.2. Hotels & restaurants	2726	2676	2933	3088	3181
<ol> <li>Transport, storage, communication &amp; services related to broadcasting</li> </ol>	25073	29155	31121	36473	40413
7.1. Railways	34	43	51	54	62
7.2. Road transport	12375	14078	13786	16095	17982
7.3. Water transport	0	0	0	0	1
7.4. Air transport	0	0	0	0	0
7.5. Services incidental to transport	82	86	92	99	110
7.6. Storage	0	0	0	0	1
7.7. Communication & services related to broadcasting	12582	14948	17192	20226	22257
8. Financial services	21639	22758	24101	25668	26619
<ol> <li>Real estate, ownership of dwelling &amp; professional services</li> </ol>	39148	40330	37888	37305	38360
10. Public administration	139107	157024	188670	193873	208027
11. Other services	155062	161855	156996	169571	183734
Tertiary/ SERVICES SECTOR	426784	471661	491662	511446	553980
12. TOTAL GSVA at basic prices	1116835	1207938	1402139	1608971	1692546
13. Taxes on Products	40644	51961	61878	76770	83864
<ol><li>Subsidies on products</li></ol>	27562	26075	26421	25524	28857
<ol><li>Gross State Domestic Product</li></ol>	1129917	1233824	1437596	1660217	1747553
16. Population ('00)	14280	14570	14870	15160	15470
17. Per Capita GSDP (Rs.)	79126	84682	96678	109513	112964

The given Table :-(B) Shows the estimate of GSDP by economic activity for the year 2011-12 to 2017 at constant price, keeping 2011-12 as new base year. The industries wise analysis of sectors has been discussed below:-

#### Agriculture Sector

Agriculture is the highest contributor in the economy of the It comprises Crops (Agriculture and Horticulture), Livestock, Forestry and Logging, Fishing and Aquaculture. In the new series of base year 2011-12 at constant market price, the GSDF of this sector for the year 2011-12 has been estimated at Rs 465707 lakhs and for the year 2016-17 is estimated at Rs 717015 lakhs. Thus, the GSDP in agriculture sector has increased by Rs 641282 lakhs, which mainly on account of increase in inputs of Livestock and its market charges. In general, the sub-sector Crops (Agriculture & Horticulture) and Fishing & Logging are turn out as a highest contributor of agriculture sector. But in particular, the sub-sectors, Fishing and Aquaculture sub-sectors are showing significant growth from Rs 4523 lakhs in 2011-12 to Rs 5891 lakhs in 2016-17, besides, the sub-sectors Forestry and Logging are also showing considerable growth from Rs. 165510 lakhs in 2011-12 to Rs. 222961 lakhs in 2016-17.

#### Industry Sector

The industry Sector is comprises of Mining & Quarrying, Manufacturing, Construction, Electricity, gas, Water Supply & Other utility Services. The GSDP of Industry Sector is marked as the least contributor in the growth of economy of Arunachal Pradesh. At constant price, the GSDP of Industry Sector has increased from Rs 209581 lakhs in the year 2011-12 to Rs 306751 lakhs in the year 2015-16, with an enhancement of Rs 97,170 lakhs, it shows steady growth from the year 2011-12 to 2015-16. The Manufacturing industries has achieved an impressive growth Rs 12900 lakhs in 2011-12 to Rs 653797 lakhs in 2016-17. The contribution of Manufacturing activities is considered as highest in growth of industry Sector of State Economy. The power sector of state is playing important contributor of state Economy, as it is composed of four economic activities i.e., Electricity, Gas, Water Supply & Other utility Services, yet the major constituent is Electricity, recorded as second highest contributor in GSDP of Industry Sector at given reference period.

#### Service Sector

The Service Sector is composite of Six Sub-Sectors (i.e. Trade, Repair, Hotel and Restaurant, Communication & Services, Financial Services, Public administration, Real Estate, Ownership of Dwelling & Professional Services and Other Services). As per the estimate of GSDP at

constant prices, the services sector has marked an impressive growth from Rs 420385 lakhs in 2011-12(R) to Rs 553980 lakhs in 2016-17(Q), i.e. massive increased by Rs 133,595 lakhs. Within this Service Sector, the sub-sector Public administration has shows the major contributor in the rapid growth of Service Sector of the state economy as per the its GSDP at constant price, the estimated figure has registered the abundant growth of Rs 135418 lakhs in 2011-12(R) to Rs 208027 lakhs in 2016-17 (Q).

Table (c): PER CAPITA INCOME OF GSDP & NSDP AT CONSTANT PRICES (2011-12)
ALONG WITH PERCENTAGE CHANGE OVER PREVOUS YEAR

Year	Per Capita GSDP at Constant price	Percentage change in GSDP over previous year at Constant price	Per Capita NSDP at Constant price	Percentage change in NSDP over previous year at Constant price
2013-14 (R)	84682	7.02	77044	5.80
2014-15 (R)	96678	14.16	87966	14.17
2015-16 (P)	109553	13.31	99489	13.09
2016-17 (Q)	112726	2.89	102238	2.76
2017-18 (A)	119092	5.64	107932	5.56

#### PER CAPITA OF GSDP/NSDP OF ARUNACHAL PRADESH

In the above given table (C), the per capita GSDP of Arunachal Pradesh at constant prices has rose from Rs 79019 lakhs to Rs 112964 lakhs in 2016-17(Q) from the base year 2011-12 (R) with a maximum of 7.74 percent in 2016-17(Q) and minimum of 0.03 percent in 2012-13 (R). It reveals that there had been a mixed growth in per capita of GSDP.

At constant prices, the per capita NSDP, which is indicative of the level of net output of goods and services available to the people of the Arunachal Pradesh, has gone up from Rs 1022946 lakhs in 2011-12(R) to Rs. 85529 lakhs in 2015-16 (Q) and Rs. 1585160 lakhs in 2016-17(Q) showing positive growth.

# CHAPTER-2

#### PUBLIC FINANCE

While measure has been taken by the state government to increase its revenue receipt, on account of its obligations to meet demands of the state, revenue expenditure has gone up over the years. The outcome of which is reflected in the increase in the fiscal deficit and decline in the revenue surplus as per the budget estimates of 2016-17

#### RECEIPT OF THE STATE

The total receipts of the state government include revenue receipts and capital receipts. The total receipt of the government during 2015-16 (actual) was Rs. 7568418.00 lakhs, and Rs.9680157.00 lakhs in 2016-17 (Revised) increased to Rs. 10399563.00 lakhs in 2017-18 (Budget).

The total expenditure of the Government indicates Rs. 7610565.00 lakhs in 2015-2016 (Actual) Rs.9608460.00 lakhs in 2016-17 (Revised) and Rs. 10303320 lakhs in 2017-2018 (Budget). The budgeted expenditure of 2017-18 (Budget) is only 6.74% higher than Revised Expenditure budget of 2016-17.

#### REVENUE RECEIPTS

In 2015-2016 (Actual) total Revenue Receipts was Rs.1055314 lakhs of which Tax Revenue collection was Rs.761065 lakhs (72.12%), Non-Tax Revenue collection was Rs.39216 lakhs (3.71%) and Grants in Aid from Centre was Rs. 255033 lakhs (24.17%) respectively. In the Revised estimates of 2016-2017, total Revenue collection increased to Rs.1212240 lakhs (14.87%) over 2015-2016 (Actual) of which Tax Revenue contributed Rs.903893 lakhs (74.56 %). The Budgeted estimates of 2017-2018 shows a total Revenue Receipts of Rs.1459881 lakhs which is (16.96 %) over 2016-2017 (Revised) i.e. from previous year. Tax Revenue contribution is Rs.1004928 Lakhs, (68.83 %), Non-Tax Revenue contribution was Rs.53629 Lakhs (3.68 %) and Grant in Aid from The Centre is Rs.401324 lakhs (27.49%) respectively.

The Budget highlights in increase contribution of Tax Revenue from 72.12% in 2015-2016 to 74.56% in 2016-2017 and decrease contribution of 68.83% in 2017-2018, thereby decreasing percentage contribution of Grants in Aid from Centre in total Revenue Receipts from 24.17% in 2015-2016 to 21.25% in 2016-2017 but an increase in Central Grant in Aid by 6.25% during the current year 2017-2018. Non-Tax Revenue contributed Rs.50679 lakhs (4.18%), and Grant in Aid from Centre was Rs.257668 lakhs (21.25%) respectively.

#### REVENUE EXPENDITURE

The total Revenue expenditure in 2015-2016 (Actual) was Rs.836274 lakhs of which expenditure on General Services was Rs.7984 lakhs (1%), Social Services was Rs.127626 lakhs (15.26%), and on Economic Services was Rs.66606 lakhs (7.96%) respectively.

In the Revised Estimates of 2016-2017 total expenditure was Rs.978107 lakhs of which expenditure on General Services was Rs.13162 lakhs, (1.34%), on Social Services was Rs.131686 lakhs (13.46%) and on Economic services was Rs.74307 lakhs (7.59%) respectively.

The Budget estimate of 2017-2018 shows a total Revenue expenditure of Rs.1119732 lakhs of which expenditure on General Services was Rs.11120 lakhs (1%) on Social services was Rs.173191 lakhs (15.46%) and on Economic services was Rs.109357 lakhs (9.77%) respectively.

The percentage of expenditure of General services was 1% of total Revenue expenditure in 2015-2016 which increases to 1.34% in 2016-2017 and decreased to 1% on 2017-2018. Social services expenditure was 15.26% in 2015-2016, 13.46% in 2016-2017 and increased to 15.46% in 2017-2018. On Economic services, it was 7.96% during 2015-2016, decreased to 7.59% in 2016-2017 and increased to 9.77% during the current year 2017-2018 respectively. The net expenditures stood at Rs.836274 lakhs in 2015-2016 (Actual), Rs.978107 lakhs in 2016-2017 (Revised) and Rs. 1119732 lakhs in 2017-2018 (Budget) respectively.

#### CAPITAL BUDGET

#### Capital Receipts

The total capital Receipts in 2014-2015 (Actual) was Rs. 62658 lakhs of which receipts from Internal debt was Rs. 62110 lakhs (99.13%), Recoveries Rs. 548 lakhs (0.87%) respectively.

In 2016-2017 (Revised), total Capital receipts increases to Rs. 104219 lakhs of which Rs. 101135 Lakhs (97.04%) shared from Internal Debt, Rs. 3084 lakhs (2.96%) from Recoveries respectively.

The Budget of 2017-2018 shows a total Capital receipt of Rs.143676 lakhs, of which contribution from Public Debt is Rs.140283 Lakhs (97.64%) and Recoveries is Rs.3393 Lakhs (2.36%) respectively.

#### Capital Expenditures

Total capital expenditure in 2015-2016 (Actual) was Rs.329267 lakhs of which expenditure outside Revenue account was Rs.199325 lakhs (60.54 %), Public Debt accounted for Rs.128644 lakhs (39.06%) and Loans & Advances was Rs.1298 lakhs (0.40%) respectively.

Total Capital expenditure in 2016-2017 (Revised), was Rs.309150 Lakhs of which expenditure outside Revenue Account was Rs.243824 lakhs (78.87 %) "Public Debts was Rs.63262 lakhs (20.46%) and Loans & Advances was Rs.2064 lakhs (0.67%) respectively.

The Budgeted total Capital expenditure of 2017-2018 is Rs.481461 lakhs of which expenditure outside Revenue Account is Rs.410511 lakhs (85.26%), on Public Debt is Rs.68990 lakhs (14.33%) and on Loans & Advances is Rs.1960 lakhs (0.41%) respectively.

Capital Expenditure on General Services were 10.35% in 2015-2016, 13.78% in 2016-2017 & 25.35% in 2017-2018, on Social services 12.82 % in 2015-2016, 18.67% in 2016-2017 & 23.06% in 2017-2018, and on Economic Services 37.22% in 2015-2016, 46.42% in 2016-2017 and 33.88% in 2017-2018 respectively.

#### PUBLIC ACCOUNTS

Total Receipts in Public Accounts show Rs.6450445 lakhs in 2015-2016 (Actual), Rs.8363697 Lakhs in 2016-2017 (Revised) and Rs.8796007 Lakhs (Budget) respectively.

Total disbursement from Public Accounts was Rs. 6574966 Lakhs (Actual), Rs.8386529 Lakhs (Revised) and Rs.8773077 Lakhs (Budget) respectively.

The account shows a deficit balance of Rs.124521 lakhs in 2015-2016 (Actual), Rs.22832 lakhs deficit balance in 2016-2017 (Revised) and Surplus balance of Rs.22930 lakhs in 2017-2018 (Budget) respectively.

#### NON DEVELOPMENTAL AND DEVELOPMENTAL EXPENDITURES

Total Expenditures from Revenue Account was Rs.836274 lakhs (Actual) of which Non-Developmental expenditures accounted for Rs..251808 lakhs (30.11%) and developmental expenditure was Rs.584466 lakhs (69.89%) respectively during the year 2015-2016 (Actual).In 2016-2017 (Revised estimates) total Revenue expenditure was Rs.978107 lakhs of which expenditure on non-developmental head was Rs.281785 Lakhs (28.80%) and on developmental expenditures was Rs.696322 lakhs (71.20%) and Budgeted Revenue expenditure for 2017-2018 (Budget estimates) is Rs.1119732 lakhs of which Non-developmental expenditure is Rs.314613 lakhs (28.07%) and Developmental expenditure is Rs.805419 lakhs (71.93%) respectively.

In 2016-2017 (Revised) out of total expenditure of Rs.243824 lakhs, Plan expenditure was Rs.243583 lakhs (99.90%) and Non-Plan expenditures was Rs.2241 lakhs (0.10%) respectively. Out of Plan expenditures of Rs.243583 lakhs, Non-developmental expenditure was Rs.42591

lakhs (17.49%) and developmental expenditure was Rs.200992 lakhs (82.51%) respectively. Non-Plan share was Rs.241 lakhs of which was used fully in developmental expenditures.

The budget account of 2017-2018 shows a total expenditure of Rs.410511 lakhs meant for Capital only. From current financial year, PLAN/NON-PLAN shall be replaced by CAPITAL/REVENUE. From total capital expenditures Non-Development expenditure is Rs.122043 lakhs (29.73%), Developmental expenditure is Rs.288467 lakhs (70.27%) respectively. The budgetary accounts highlight a trend of higher developmental or productive expenditure than Non-Developmental or unproductive expenditures.

#### PER CAPITA RECEIPTS AND EXENDITURES

The per capita Receipts and Expenditures shown in the following table show higher per capita total budgetary expenditures over per capita receipts during 2015-2016 (Actual), but in 2016-2017 (Revised), 2017-2018 (Actual) the expenditure is within the total receipts.

The per capita Revenues receipts are higher than Revenue expenditure during 2015-2016 (Actual), 2016-2017 (Revised) and 2017-2018 (Budget).

In Capital Receipts & Expenditures, Per Capita expenditure is higher than the Per Capita Receipts during 2015-2016 (Actual), 2016-2017 (Revised) and 2017-2018 (Actual) respectively.

Per Capita expenditure on Economic Services higher over per capital expenditures on General and Social Services in 2015-2016 (Actual) & 2016-2017 (Revised). During 2017-2018 (Budget) per-capita expenditure on Economic services are less than the Social services but higher than the General services.

# CHAPTER-3

# AGRICULTURE AND ALLIED SECTOR

Agriculture is considered the backbone of the state economy. Arunachal Pradesh is principally an agrarian economy making the single largest contribution to the state economy from agriculture and its allied sectors. The numerous festivals are centered on agriculture and its practices. Rice, being the staple crop of the state covers about 70 percent of the net cultivated area registering a production of 4,54,190 MT during 2014-15 and a targeted production of 4,82,080 MT in 2015-16. The other major crops include maize, linseed, potato, pulses, soya bean, sugarcane, jute, gram, cotton, and castor. However, self-sufficiency in food grain is yet to be achieved and state is still dependent on imports.

Agriculture is the largest employer of the workforce in the state. Although the working population has significantly decline from 96.5 per cent during 1950s to 60 per cent by 2013, it continues to form a indispensable source of livelihood for the people. Shifting and terrace cultivation practices remain the dominant form of land use in the state.

#### 3.1 AGRICULTURE

Despite the importance of agriculture to the state's economy and livelihood, the contribution of this sector to the Gross State Domestic Product (GSDP) showed a downward trend from 31.82 percent in 2013-14 to 29.74 per cent in 2015-16. The annual growth rate during the same period is projecting inconsistent trend with 7.83 per cent during 2015-16 at constant prices (2011-12).

#### LAND USE PATTERN

The state with a total geographical area of 83,743 sq.km, is the biggest state among the eight states of North Eastern region. But due to vast terrain and mountain the total area that can be brought under cultivation remains low. The table \* gives a glimpse of the land use pattern for the State of Arunachal Pradesh.

Out of the total geographical area of the State, Net area shown accounts for 2.22 percent, Current fallow land 0.50 percent, Uncultivated land excluding fallow land 0.42 percent, Fallow land other than current fallow land 0.63 percent, Cultivable waste land 0.38 percent, Land not available for cultivation 0.45 percent and Gross cropped area accounts for 2.88 percent

DISTRICT-WISE LAND USE STATISTICS IN RESPECT OF ARUNACHAL PRADESH AS PER AGRICULTURALCENSUS, 2010-11

	ope	Operational		Contracts	Uncultivate	Fallow fand other		tone base	Grossere	Gress cropped Area	į
Districts	Ž	Area	Net Area Sown	fallow	d land excluding fallow land	than current fallow land	Cultivable waste land	available for cultivation	irrigated	Un- irrigated	migated Area
Tawang	6.420	4539.79	3185.16	99,42	220.55	249,09	157.91	627.66	348.93	4915.77	345.51
West Kameng	6416	13968,01	6061.36	1104.47	1919.27	2491.55	1100.15	129121	354.92	7949.58	354.91
East Kameng	0869	21108.84	5894.1	877.64	2230,84	5987.02	1789.58	4329,66	897.86	6323.02	884.14
Papum Pare	7009	18936.13	13684.76	347.94	1477.98	1327.92	726.72	1370,81	5168.20	13508.86	5126.28
.ower Subansiri	8510	15042.77	10450.11	978.94	1324.41	503.22	821,37	964.72.	6430.62	10509.95	6233.67
Kurung Kumey	3496	247(18.79	11971.99	2163.76	2285.08	2506.73	2197.80	3483,43	5058.86	8246.35	4718,42
Upper Subansiri	7299	54213.61	15573.12	19510	4193.64	6846.78	3949.41	4140.66	2385.30	22924.24	2385.31
West Stang	11586	48233,57	22295.64	4282.48	5427.89	7156.65	3910.15	5160.76	10011.13	18697.49	71,0686
East Stang	10234	35975,13	21538.43	7131.25	1356.85	1819.27	1948.67	99'0861	8357.59	19057,76	8262.52
Upper Stang	3715	18153.70	9435.22	1912.18	1279.78	2113.84	1566.20	1846.48	2010.62	10112.97	2008.16
Dibang Valley	1246	3780.70	2911.12	312.93	129.24	123.60	94.73	209.08	93.65	3259.05	93.65
. Dibang valley	2245	13613.42	3429.18	410.33	957.93	2896.25	4515.80	1403.93	1632.53	2830.83	1624.71
Lohit	10284	19595.21	12293.87	652.26	2173.02	1257.42	1516.08	1702.56	3106.16	11954.02	3068.38
Anjaw	271.3	9323.83	29'616'	256.79	1590,91	1410.48	806.53	1339.47	14.17	4577.37	131.77
hanglang	8882	49350.16	27369.67	ま927	4537.07	6542.77	3830.95	6023.36	3977.37	27582.42	3977.31
Tirap	10363	33327,87	15227.26	932.24	3485.32	9459.92	2759.78	1463.35	662.34	18222.99	622.31
Total Arunachal Pradesh	109298	383871.53	185510.64	41748.97	34789.78	52792.51	31691.83	37337.8	50642.13	190692.67	49727.42

Source: Directivitie of Agriculture, Naharlagun

#### AGRICULTURE PRODUCTION AND PRODUCTIVITY

With the state population projected at 13,83,727 as per census 2011, emphasis on improving the production and productivity of agriculture is crucial to bridge the gap between the demand and supply of food grains. So far, appropriate technologies focusing on 'Hill Agriculture' supported by the use of quality inputs, farm mechanization, infrastructure support, market linkages, value addition and extension services have been introduce in the state. In addition to these efforts, attention is required on the resource management and sustainable agriculture practices to negate the adverse impact of climate change on the state's agriculture.

Table: District wise Production of Food Grains during 2016-17

(Area in hectare & Production in Metric Tons)

	Pad	ldy	Mai	ize	Mil	let	W	neat
Districts	Area	Prodn	Area	Prodn	Area	Prodn	Area	Prod <sup>n</sup>
Tawang	850	1101	678	1635	1199	2484	605	871
West Kameng	881	1133	1971	4139	798	1413	591	668
East Kameng	3647	6826	1837	3460	74	187	185	247
Papum Pare	4139	11651	1756	4390	314	627	288	414
Lower Subansiri	3589	10886	576	1270	-	-	738	947
Kra Daadi	121	236	115	225	-	141	54	62
Kurung Kumey	123	251	123	246			46	51
Upper Subansiri	2338	5421	821	1478	-	9	698	1004
West Siang	7087	15489	1863	4275	· ·		854	867
Upper Siang	3119	6392	1091	1800		-	627	733
East Siang	4206	12605	1963	5201	34	88	836	1070
L. Dibang Valley	4539	10551	5006	9712	406	772	644	680
Dibang Valley	1161	1524	1346	2423	14	-	246	340
Lohit	2173	6536	2629	4740	264	524	27	31
Anjaw	1886	2378	2301	3451	36	87	906	1077
Namsai	2985	9536	3849	6543	375	756	39	45
Changlang	4069	13590	721	1081	410	762	688	607
Tirap	1406	1826	911_	2141	1 48	-	628	574
Longding	1634	2376	1102	2731	•		995	1110
Siang	4319	9945	1509	3395	•	-	446	518
A. P.	54272	130253	32168	64336	3910	7700	10141	1191

Source: Directorate of Agriculture, Naharlagun

In 2015-16, the total area under food grain was 1,06,687 hectares. Out of which Paddy occupied 53.25 percent, Maize occupied 30.06 percent, Millet occupied 10.34 percent and Wheat occupied 6.33 percent of the total area under food grains.

Table: District wise Production of Commercial Crops: 2016-2017

Districts         Area           Tawang         296           West Kameng         321           East Kameng         1253           Papum Pare         2106           Lower Subansiri         1036           Kra Daadi         65           Kurung Kumey         55           Upper Subansiri         434           West Siang         214           East Siang         214           L Dibang Valley         5466           L Dibang Valley         5466	Prodn 438 470 1480 2459 1281 65 520 520	Area 510 460	Prod	Area	Prod								Street, Square of Street, Square, Street, Square, Street, Stre
neng neng ane di di Kumey ubansiri ng ng ang		510				Area	Prod"	Area	Prod	Area	Prod	Area	Prod"
neng neng ane abane di Kumey abanesiri ng ang g Valley	470 1480 2459 1281 65 53 520 1869	091	4289	9	427	30	66	115	261	c	ř	376	1621
	1480 2459 1281 65 53 520 1869		3398	117	260		θÃ	86	282	)	,	838	1034
	2459 1281 65 53 520 1869	33	626	135	634	Ă.	×	144	419	0	ř	474	1941
	1281 65 53 520 1869	326	2857	226	1726	46	243	121	398	238	4928	393	1501
++++++	65 53 520 1869	384	3092	259	1436	ı	·	192	541	124	3542	3240	10183
	53 520 1869	100	130	17	125		7	126	328	109	1256	105	220
	520	80	230	14	66		,	66	220	69	822	98	172
++++	1869	274	2215	232	1736		ı	262	709	72	2080	1161	10906
g.		350	2410	196	1459	63	271	180	474	101	3229	316	1459
	208	189	1459	298	1216	i	116	286	585	200	3437	391	995
H	4011	701	4468	740	7167	163	650	244	758	231	10290	1469	4823
	5649	424	3080	2951	23174	121	815	200	563	134	2427	886	3189
Dihang Valley 259	256	162	891	156	765	ı		68	161		٠	133	226
Lohit 4379	4011	380	3102	155	1222	99	300	63	262	30	730	3280	14444
Anjaw 264	282	23	392	63	317	39	129	22	167			715	1878
Namsai 6564	6136	999	4693	775	6387	84	458	126	339	40	086	4921	21571
Changlang 4804	4511	159	1048	572	4238	102	291	762	2570	595	8389	4196	24460
Tirap 266	411	169	1255	42	224	i	(4)	75	208	700		1052	111155
Longding 290	332	83	420	39	247	7	ı	68	279		t	1219	3695
Siang 2051	2182	427	2664	461	3572	93	350	150	442	132	2295	734	2554
	36624	5885	43092	7777	56758	800	3600	3541	9915	2075	44405	25985	12732

Source: Directorate of Agriculture, Naharlagun

The production of Oilseed during 2016-17 was 36624 MT, Potato 43092 MT, Ginger 56758 MT, Turmeric 3600 MT, Chilly increased 9915 MT, Sugarcane 44405 MT and Vegetables 127327 MT.

In the long run, on account of the limitations in expansion of cultivable land, achieving higher growth in agriculture will be determined by increase in yield. Focus should therefore be increasing productivity through adaptation of suitable technology, use of inputs such as use of high yield varieties of crops. With favourable monsoon prevailing during the last few years the productivity level of all the major crops showed an upward trend except for the oilseeds and commercial crops with declined marginally.

#### CONSUMPTION OF FERTILIZERS

With the adoption of modern technologies, maintenance of soil health congenial for growth and development of crops is essential. And although use of organic manure is advocated, on account of its insufficiency for large scale cultivation, use of fertilizers and pesticides as inputs has become significant in increasing the productivity of crops.

District-Wise Consumption of Chemical Fertilisers '

In metric tons

TSU ALC A		Chemical Fert	rilizers	
District	Nitrogenous(N)	Phosphoric(P2O5)	Potassic (K2O)	Total(NPK)
Tawang	73	37	14	124
West Kameng	73	37	14	124
East Kameng	8	5	2	15
Papum Pare	10	8	5	23
Lower Subansiri	6	4	4	14
Kra Dadi	3	2	2	7
Kurung Kurney	4	2	2	8
Upper Subansiri	8	6	3	17
West Siang	18	12	4	34
Upper Siang	6	4	3	13
East Siang	23	17	4	44
L/ Dibang Valley	8	7	4	19
Dibang Valley	7	4	4	15
Lohit	12	7	3	22
Namsai	17	10	5	32
Anjaw	10	4	5	19
Changlang	10	4	5	17
Tirap	4	2	2	8
Longding	6	4	3	13
Siang	19	10	3	32
TOTAL	325	186	`89	600

Source: Directorate of Agriculture, Naharlagun

#### 3.2 HORTICULURE

Given its diverse agro-climatic potential, Arunachal Pradesh is suitable for cultivation of tropical, sub-tropical and temperate fruits, vegetables, spices and other crops of economic potential like medicinal and aromatic plants. Development of horticulture is important as this sector can generate employment opportunity and increase rural income. To provide remunerative prices to the farmers and also to provide substantial job opportunities amongst the local educated youths, the main objective and thrust for development of horticultural activities, emphasis on income generation crops like spices and mushrooms and low volume high value fruits, stress on compact area plantation of orchids and development of marketing network for surplus produces. Further, considering the potential for floriculture in the state, stress is on production of quality flowers, seeds and bulb etc.

The horticulture is one of the promising sectors for the state in terms of employment generation and income addition along with reducing nutritional poverty. The varied agro climatic zones of the state provides conditions that are suited for cultivation of fruits, vegetables, flowers, spices, plantation crops, medicinal and aromatic and other horticultural crops.

Table: Production of Horticultural Crops: 2016-2017

#### A. Fruit

Sl.No.	Name of Crops	Area (in Hect)	Production (in M.T)
1	Citrus (Oranges)	32850.45	79212.50
2	Pineapple	2918.77	22952.23
3	Apple	6179.38	11665.67
4	Banana	2346.56	14650.96
5	Kiwi Fruit	4022.63	9428.57
6	Walnut	1523.00	511.23
7	Others fruits	5.00	5.00
	Total	49845.79	138426.2

Source: Directorate of Horticulture, Itanagar

#### B. Vegetables

Sl.No.	Name of Crops	Area (in Hect)	Production (in M.T)
1	Cabbage	445.32	5606.30
2	Cauliflower	290.92	1821.34
3	Tomato	263.90	2153.38
4	Others	134.40	1441.05
	Total	1134.54	11022.07

Source: Directorate of Horticulture, Itanagar

#### C. Spices

Sl.No.	Name of Crops	Area (in Hect)	Production (in M.T)
1	Large Cardamom	5873.81	3161.41
2	Black Pepper	37.00	168.00
3	Ginger	3838.15	24555.65
4	Turmeric	1393.84	8674.09
	Total	11142.8	36559.15

Source: Directorate of Horticulture, Itanagar

Over the years, there has been an increase in awareness of the nutritional value of fruits, vegetables and spices among the people which triggered its demand in the State. Among the major fruits, Orange occupies the first position in term of both area and production.

Vegetables form an important part of the dietary requirement of the people in the state. However, a major chunk of the vegetable requirement of the state is met through imported products. Realizing this, the Department of Horticulture has undertaken an area expansion for cultivation of vegetable through its various programmes. Consequently, significant progress has been reported both in term of area and production.

#### 3,3 LIVESTOCKS

Livestock rearing is an integral component of the rural economy. It plays an important role in improving the economy of the rural population. Arunachal Pradesh being a State predominated by agrarian society, cattle occupies an important place in the tribal populous. One of the rarest cattle 'Mithun' (Bos Frontalis) could be found and it is considered as a property. Apart from Mithun cattle's like Goat, Pig, Ox etc and Poultry are also equally important and reared by the people of the State.

As such, for livestock development attention in the state is paid on (i) Animal and disease control (ii) Cattle Development, (ii) Poultry Development, (iv) Piggery Development, (v) Dairy Development (vi) Education and Training.

#### Animal Health Care

Apart from that, the Department of Animal husbandry and Veterinary Science also facilitates with breeding farms of Pig, Cattle and Poultry in some of the districts of the State.

INFRASTRUCTURE FACILITIES FOR ANIMAL HUSBANDRY IN ARUNACHAL PRADESH AS ON 31-03-2017

District	Veterinary Hospital	Veterinary Dispensary	Veterinary Aid Center	Cattle up Grading center	District Diagnostic Laboratory	Sheep & Wool Extension Center	Cattle Breeding Farm	Poultry Breeding Farm	Pig Breeding Farm
Тамапд	,	5	11	∞	,	4		-	-
W/Kameng		14	14	15	r.	3	_	2	٠
East Kameng	1	7	7	12	A		1	1	34
Papumpare	1	7	15	9	1	***		-	-
L/Subansiri		œ	11	5	Ni.	,	1	-1	-
Kurung Kumey		==	7	-	i	î	٠		ř
U/Subansiri		7	17	8		1	-	1	0.49
W/Siang	4	16	18	19	-			-	-
E/Siang	i	80	80	UN I	ú	3558	1	-	-
U/Siang		10	6	3	ï	1	-	٠	
Dibang Valley	r.	-	4	1	5540.5		1	4	ı
L/Dibang Valley	7	9	7	4	Ä	,	*	1	1
Lohit	Ä.	7	6	14	1			2	1
Anjaw		2	9	2	¥		1	٠	
Changlang	k.	80	11	8			1	1	3
Tirap	3	7	16	11			1	1	
Kra Daadi		+	13						
Total for A.P.	1	113	183	120	3	7	10	14	11

Source: Department of Animal Intshandry and Veterinary Science, Nirjuli

As per 19th Livestock Census conducted in 2015-16, the total livestock population of the state is shown below. The following table also compares with the previous Livestock Census data in the State.

Livestock Census (2003 and 2007)

Sl.No.	Category	Livestock census (2003)	Livestock census (2007)	Percentage variation
1	Cattle	5,03,124	456270	-9.31
2	Buffaloes	3,189	5885	+84.54
3	Mithun	2,19,784	253215	+15.21
4	Yak	5,754	11899	+106.79
5	Sheep	19,889	12877	-35.25
6	Goat	2,96,196	301193	+1.68
7	Horse & ponies	5,975	3995	-33.13
8	Pigs	3,57,069	349590	-2.09
	Total livestock	14,10,980	1394924	-1.13
9	Poultry	13,44,219	1141173	-0.15
Total (Li	vestock + Poultry)	27,55,199	2536097	-7.95

Source: Directorate of Animal Husbandry & Veterinary Science, Nirjuli

#### 3.4 FISHERY

Pisciculture has gradually gained acceptability and confidence among the farmers of Arunachal Pradesh and fish farming has become a subsidiary occupation of the farmers for gainful employment to supplement their income from agriculture. Piscicultural activities in the state ensure three basic requirements like generating self-employment, supplementing proteineous food and a source of income. There are a large number of beels, ponds, streams and rivers in Arunachal Pradesh. But the production of fish is very low in the state for which internal demand for fish to a great extent is met through supplies from outside the state.

Production and Area under Fish Cultivation

			(In hectar	es)		(	in Nos.)
Year	Govt. Fish Farms	People Fish Ponds / Farms	Govt. Beels/ Lakes	Paddy – cum – Fish Culture	Total area Developed	Hatcheries	Fingerlings Distributed
2014-2015	35.69	32,000	104.00	1000	3200	17	57,000000
2015-2016	35.69	32,100	104.00	1010	3220	17	65,000000
2016-2017	35.69	47,000	104.00	1020	3250	32	2,00,0000

Source: Directorate of Fisheries, Itanagar

The above table shows that, the total area covered under fish culture has not improved much over the last six years. However, the total number of Hatcheries and Fingerlings distributed shows a very positive trend in the State over the last six years. If we compare the number of Hatcheries and Fingerlings in 2011-2012 with 2016-2017, there has been an increase of 433.33 percent and -98.66 percent respectively.

#### Fish Production

In tons

Thomas		Ye	ar	
Item	2013-14	2014-15	2015-16	2016-17
Fish Production (Inland)	35.00	40.00	40.50	41.10

Source: Directorate of Fisheries, Itanagar

During 2016-17, the total quantity of Inland fish production in the State was 4110 Tons. The production of fish in the State is much lower than the demand and hence to meet the gap between demands and supply the state is further supplemented by imported fish.

Arunachal Pradesh has large tract of land with potential for fisheries activities. However, only a negligible area is utilized for the purpose.

#### 3.5 FORESTS, ECOLOGY, ENVIRONMENT AND WILDLIFE

Forest has traditionally been primary source of livelihood in Arunachal Pradesh. It is one of the 'Hot Spots' of bio-diversity in the world because of abundance of varied flora and fauna including medicinal and aromatic plants, therefore, State's endeavour is to maintain the ecological balance and conserve bio-diversity. The forests have pervaded the life and culture of the tribal people of the State who directly depend upon forests for timber, fuel wood and variety of minor forest produces.

Before 1996 the forest generated the largest employment and source of revenue for the State. Imposition of the Supreme Court's restriction on the timber operation has resulted in the substantial revenue losses. The provisions of forest legislation cost the State very dearly. The provisions of law prevent the local people from providing tree cover through horticulture and plantation crop, which normally provide employment. In fact, Arunachal Pradesh has been panelized economically for its self-sustaining role.

The important types of forests found in the state are Tropical Ever Green, Semi Green, Wet ever Green, Wet Temperate, Deciduous Mixed coniferous, Alpine, Bamboo brakes etc. The state is very rich in fauna and flora. It has 20% Species of country's fauna and about 4500

species of flowering plants, 400 species of pleridophytes, 23 species of coniferous, 35 species of bamboo, 20 species of canes, 25 Rhododendron species and more than 500 species of orchids. Forest creates large employment avenue and it is the single largest source of revenue for the state.

The climate of the state ranging from tropical to temperate conditions, promotes diversity of vegetation and biomass. Most of the rural population live in the vicinity of the forest area and are dependent on natural forest resources and non timber forest products for their livelihood. The Forest sector not only maintains the bio diversity and ecological balance but also significantly contributes to the state's economy. Unfortunately, over the years, degradation of forest and natural resources have been issues of concern primarily caused by unsustainable development practices, increase in population, migration, urbanization and increased used of forest products for economic activities.

#### Forest Cover of Arunachal Pradesh

The greatest asset, nature has gifted to Arunachal Pradesh is her forests. The recorded forest area of the state is 51,539.99 Sq. Km. which is about 62.55% of the total geographical area. Thus the state is fortunate to have such high percentage of her area under valuable forests cover. The legal status wise forest area in the state is shown below

SI No	Legal Classification	Area (Sq. Km.)	% of Geographical Area
1	Reserved Forest	10,089.39 km <sup>2</sup>	12.04 %
2	Protected Forests	7.80 km <sup>2</sup>	0.009 %
3	Anchal Reserved Forests	625.37 km <sup>2</sup>	0.75 %
4	National Parks	2,290.82 km <sup>2</sup>	2.74 %
5	Wild Life Sanctuary	7510.9 km²	8.97 %
6	Unclassified State Forests	31,038.86 km <sup>2</sup>	37.06 %
	Total	51,539.99 km²	61.56 %

Source: Principal Chief Conservator of Forest, Itanagar

#### District-Wise Forest Cover

Area-wise, Dibang Valley district has the largest area under forest cover (6655 sq Km) in the state followed by Lohit district (6532 sq km) and Kurung Kumey district (596406 sq km).

DISTRICT WISE CLASSIFICATION OF FOREST AREA IN ARUNACHAL PRADESH, AS ON 31-03-2016

		Anchal	Destroy	Forest Under	Under	Other	Proposed	Unclassified	TOTAL
District	Forest	Reserved Forest /VRF	Forest	Wild life Sanctuary	National Park	purpose	reserved	State Forest	AREA
Тамапе			5.98	,	,			1079.00	1084.98
West Kameng	708.35	4.57	0.51	317.00				2922,00	395243
Fast Kamene	1063.86		0.27	861.95		*)	1	1207.74	3133.82
Papum Pare	1007.75			140.30	1		*	1368.25	2516.30
Lower Subansiri	347.07			337.00	,			2064.66	2748.73
Kurung Kumey			t		,			5964.60	5964.60
Upper Subansiri	504.00	2.00	ř.	,		1		3076.00	3582.00
West Siang	248.18	7		428.00	,	,	,	2727.00	3403.18
East Siang	467,39	3.00		190.00		,		1131.61	1792.00
Upper Siang	ı	٠		W	483.00			686.00	1169.00
Dibang Valley	·	٠		4149,00		11	·	2506.00	6655.00
L Dibang Valley	678.96	•	,	281.50	¥	,		699.04	1659.50
Lohit	4233.53	249.19	9	783.00		,	•	1266.481	6532.20
Changlang	830.30	146.68		ÿ)	1807.82		200	1347.84	4132.64
Tirap	,	219.93	1.04		*		+	1290.03	1511.00
Anjaw	,	,	7	4	9	,	-	1701,799	1701.80
Longding									0
Total for A.P.	10089.39	625.37	7.80	7487.75	2290.82	0	¥	31038.87	51540

Source: Principal Chief Conservator of Forest, Itanagar

#### 3.6 IRRIGATION AND FLOOD CONTROL

With topography of undulating terrains and mountainous landscapes, hill slopes, narrow valleys and perennial streams and rivers, availability of natural water bodies for irrigation purposes are rare. Although, irrigation is one of the primary inputs for agriculture, people are dependent on the monsoons for cultivation. Absence of irrigation facilities, make people take up jhum cultivation. Unsustainable practices of Jhum cultivation aggravate the problems of soil erosion. In order to arrest the problem of deforestation and soil erosion, the Department of Water resource has undertaken a number of Irrigation Projects.

A characteristic feature of Arunachal Pradesh is frequent occurrence of natural calamities like heavy rainfall, landslides and floods etc. Coping with such natural calamities places a further heavy burden on the meager resources of the State. The economy of the State, being a largely agrarian, a good deal of emphasis was given initially to the creation of extensive irrigation facilities so that dependence on nature and uncertainty in agriculture production could be minimized. This resulted in the impressive growth of irrigation potential during the four decades long planning in Arunachal Pradesh. Expansion of irrigation facilities and controlling of flood menace will continue to be given emphasis. The focus is on maximizing utilization of created potential through augmentation, renovation and maintenance of irrigation projects and other Command Area Development works apart from survey and exploitation of ground water for irrigation in the foot hill areas of the State.

Over a period of twenty years, i.e. from 1995 to 2016, 4.9 thousand hectares of area was made accessible to irrigation facility in the State. Till 2015, 74,210 hectares potential irrigation area was created. During 2016 another 1592 hectares or 5.63 percent potential irrigation area was added to the already existing area.

# DISTRICT-WISE IRRIGATION / POTENTIAL IN ARUNACHAL PRADESH (1995 to 2016)

In hectares

					212 120 0 0 0 0 0
District	Irrigation potential created as on (31/03/2015)	Irrigation potential created during the year 2015-16	Cumulative irrigation potential created	Not area irrigated	Gross area irrigated
Tawang	3240	40	3380	2185.59	2483,62
West Kameng	3379	126	3505	2266.42	2575.47
East Kameng	5554	75	5629	3639.85	4136,19
Papum pare	7276	96	7372	4766.91	5416.95
Lower Subansiri	5443	06	5500	0.000.40	1070 0
Kurung Kumey	3443	86	5529	3575.18	4062,71
Upper Subansiri	4096	77	4173	2698.36	3066.32
West Siang	8514	183	8697	5623.69	6390.56
East Siang	8524	162	8686	5616.58	6382.47
Upper Siang	6262	59	6321	4087.31	4644.67
Dibang Valley					
Lower Dibang valley	5080	134	5214	3371.50	3831.25
Lohit	5756	198	5954	3850.00	4375.00
Anjaw	803	28	831	537.34	610.62
Changlang	5952	198	6150	3976.74	4519.02
Tirap	4231	130	4361	2819.93	3204.46
TOTAL	74210	1592	75802	49015.39	55699.31

# CHAPTER-4

# SOCIAL SECTOR

#### 4.1 EDUCATION

Education is the process of facilitating learning, or the acquisition of knowledge, skills, values, beliefs and habits. Educational methods include storytelling, discussion, teaching, training and directed research. It creates environment for improvement of the quality of life. Successful educational policy leads to effective population policy, for women to be specific. The launching of Right of Children to Free and Compulsory Education Act, 2009 by the Govt. of India retain education as a priority sector in Arunachal Pradesh.

#### Literacy

Literacy has both economic and social motives of individual's well being. It improves selfesteem, enhances social status & decision making and gains confidence level of individual in the society. It impacts human development outcomes both as input and output. Arunachal Pradesh attained 65.38 percent against national average of 72.99 percent in Census 2011 registering a decadal increase of 11.08 percent between 2001 and 2011. As per Census 2011, male literacy rate stands at 72.55 percent and female literacy rate stands at 57.7 percent in Arunachal Pradesh as against all India male literacy rate of 80.89 percent and 64.64 percent female literacy rate.

Literacy Rate of Arunachal Pradesh (1961 to 2011)

Year	Person	Male	Female
1961 Census	7.23%	4.62%	0.41%
1971 Census	11,29%	8.72%	1.70%
1981 Census	20.09%	16.40%	5.14%
1991 Census	41.59%	44.00%	24.94%
2001 Census	54.30%	63.80%	43.50%
2011 Census	65.38%	72.55%	57.70%

Source: Census of India

The state gender gap in literacy rate stands at 14.85 percent as against 16.6 percent at the national level. This indicates Arunachal Pradesh has performed better in gender disparity in educational attainment.

District-wise Literacy Rate and Gender Gap Status (as per 2011 Census)

Sl.	Districts		Literacy	Rate (%)	
No.		Total	Male	Female	Gender Gar
1	Tawang	59.00	67.54	46.53	21.01
2	West Kameng	67.07	73.45	59.05	14.40
3	East Kameng	60.02	68.65	51.69	16.96
4	Papum Pare	79.95	86.06	73.72	12.34
5	Lower Subansiri	74.35	80.53	68.08	12.45
6	Kurung Kumey	48.75	55.12	42.64	12.48
7	Upper Subansiri	63.80	70.02	57.59	12.43
8	West Siang	66.46	72.81	59.63	13.18
9	East Siang	72.54	78.47	66.49	11.98
10	Upper Siang	59.99	66.45	52.63	13.82
11	Dibang Valley	64.10	68.07	59.16	08.91
12	Lower Dibang Valley	69.13	75.55	62.19	13.36
13	Lohit	68.18	75.52	60.04	15.48
14	Anjaw	56.46	66.81	43.71	23.10
15	Changlang	59.80	68.93	49.84	19.09
16	Tirap	52.19	61.87	41.89	19.98
Aruna	achal Pradesh	65.38	72.55	57.70	14.85

Source: Census 2011

To achieve the goal of universalisation of elementary education, primary schools have been established in almost all the villages. Till 31st March 2016 there were 3318 numbers of various schools functioning in the state. Out of which 2051 were Primary Schools, 1003 were Upper Primary Schools, 165 were Secondary Schools and 99 were higher Secondary schools.

The following table clearly shows, there has been an increase in total numbers of schools taken together over a period of 5 years. However, due to upgradation of Primary Schools to Upper Primary Schools during 2015 the total numbers of Primary Schools has gone down by (-25) as compared to the strength in 2014.

SI.	Type of Educational		No. of	Educatio	nal Instit	utions	
No.	Institutions	2012	2013	2014	2015	2016	2017
1	Primary School	2098	2176	2226	2201	2051	2202
2	Upper Primary Schools	945	970	1121	1186	1003	1300
3	Secondary Schools	220	229	227	250	165	294
4	Higher Secondary Schools	118	122	138	143	99	158
Arun	achal Pradesh	3381	3497	3712	3780	3318	3954

Source: Directorate of Elementary Education & Secondary Education, Itanagar

The mould and shape of students for the future and to effectively manage the educational system teachers are instrumental. Teachers impart knowledge, skills, attitude and values in children. Efforts are being made by the govt. to maintain a reasonable teacher-pupil ratio. The total number of teachers has increased from 16347 in 2011 to 21607 in 2015, but it decline to 15476 during 2016. This might have happened due to mass retirement on attaining superannuation age. Till 31st March 2016 there were 8902 Primary School teachers, 4264 Upper Primary teachers, 1629 Secondary teachers and 681 Higher Secondary teachers working in Education sector of the State. The number of teachers in various stages of school is presented in Table below

	Type of Educational			No. of T	eachers		
Sl. No.	Institutions	2011	2012	2013	2014	2015	2016
1	Primary School	4997	5157	5466	5296	5336	8902
2	Upper Primary School	5836	6442	7832	9095	9300	4264
3	Secondary School	2749	2845	3794	3350	3765	1629
4	Higher Secondary School	2765	2954	3020	3165	3206	681
	al Pradesh	16347	17398	20112	20906	21607	15476

Source: Directorate of Elementary Education & Secondary Education, Itanagar

As per the Right to Education Act (2009) the teacher pupil ratio at Primary level should be 1:30 and for that of Upper Primary be 1:35. For Secondary and Higher Secondary level 1:30 has to be maintained. However, in Arunachal Pradesh the teacher-pupil ratio at both Primary as well as Upper Primary levels is quite satisfactory. However, in Higher Secondary stage as it is evident from the table below, is below the average norm. As such, the government should formulate a policy to bring the ratio as per the prescribed norm of teacher-pupil ratio.

District wise Teacher-Pupil ratio: 2016-17

Districts	Primary	Middle	Secondary	Higher Secondary
Tawang	1:08	1:08	1:19	1:45
West Kameng	1:13	1:16	1:21	1:28
East Kameng	1:14	1:19	1:34	1:70
Papum Pare	1:16	1:16	1:26	1:47
Lower Subansiri	1:14	1:11	1:25	1:59
Kurung Kumey	1:23	1:16	1:17	1:12
Kra Dadi	1:27	1:18	1:18	1:28
Upper Subansiri	1:31	1:26	1:40	1:96
Siang	1:16	1:12	1:21	1:22
West Siang	1:11	1:14	1:22	1:44
East Siang	1:10	1:12	1:18	1:37
Upper Siang	1:11	1:15	1:20	1:19
Dibang Valley	1:09	1:11	1:17	1:34
L. Dibang Valley	1:19	1:16	1:18	1:37
Changlang	1:25	1:28	1:38	1:59

Lohit	1:16	1:20	1:31	1:56
Namsai	1:17	1:25	1:31	1:43
Tirap	1:18	1:21	1:30	1:46
Longding	1:55	1:48	1:96	1:57
Anjaw	1:13	1:09	1:22	1:23
TOTAL FOR A. P.	1:17	1:18	1:26	1:44

Source: Directorate of Elementary Education & Secondary Education, Itanagar

Tawang with 1:08 teacher pupil ratio in Primary stage is the best district followed by Dibang Valley with 1:09 and East Siang with 1:10. The bottom place is hold by Longding with 1:55 followed by Upper Subansiri with 1:31.

In Upper Primary stage once again Tawang with 1:08 is in first place followed by Anjaw 1:09 and Lower Subansiri & Dibang Valley with 1:11 each. The worst district with 1:48 is once again Longding followed by Changlang with 1:28.

In Secondary stage the best district is Kurung Kumey & Dibang Valley with 1:17 each followed by Kra Daadi, East Siang & Lower Dibang Valley with 1:18 each. Longding with 1:96 is once again at the bottom followed by Changlang with 1:38.

District wise Total Enrolment in Different stages in the state during 2016-2017

Sl. No.	District	Primary Stage	Middle Stage	Secondary Stage	Higher secondary Stage
1	Tawang	2726	1394	965	588
2	West Kameng	5508	2874	1635	1002
3	East Kameng	8637	3515	2134	1889
4	Papum Pare	18650	9823	6031	4149
5	Lower Subansiri	8302	3430	2539	2133
6	Kurung Kumey	8629	2592	478	247
7	Kra Dadi	9539	2930	442	221
8	Upper Subansiri	15391	6409	2807	1823
9	Siang	3967	1702	1135	822
10	West Siang	9026	5380	3546	2924
11	East Siang	7601	5079	4032	3235
12	Upper Siang	3416	1933	1312	634
13	Dibang Valley	797	215	150	102
14	L. Dibang Valley	5607	2683	1532	1176
15	Changlang	15223	8207	4970	3750
16	Lohit	3930	2554	1983	1335
17	Namsai	8268	4970	2883	1646
18	Tirap	5083	2826	1691	1054
19	Longding	8625	3758	1815	793
20	Anjaw	2369	1072	454	280
Aruna	chal Pradesh	151294	73346	42534	29803

Source: Directorate of Elementary Education & Secondary Education, Itanagar

During 2016-17, a total of 2,96,977 students were enrolled in different stages of School in the State. At Primary stage a total of 1,51,294 students were enrolled which accounts 50.94percent, Middle Stage 73,346 students were enrolled which accounts for 24.70 percent, Secondary Stage 42,534 students were enrolled which accounts for 14.32 percent and Higher Secondary Stage with an enrolment of 29,803 students were enrolled which accounts for 10.04 percent.

District wise Papum Pare recorded the highest enrolment in Primary stage with 18650 followed by Upper Subansiri with 15391 and Changlang recorded 15223 enrolments.

With an enrolment of 9823, Papum Pare is in first place followed by Changlang 8207 in Upper Primary stage.

District wise Total Enrolment of Boys and Girls in different stages: 2016-2017

District	Primary	Stage	Middle	Middle Stage		Secondary Stage		Higher secondary Stage	
23211111	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	
Tawang	1161	1565	457	937	362	603	184	404	
West Kameng	2499	3009	1267	1607	743	892	467	535	
East Kameng	4262	4375	1575	1940	1068	1066	989	900	
Papum Pare	8935	9715	4532	5291	3054	2977	2092	2057	
Lower Subansiri	4207	4095	1682	1748	1262	1277	1090	1043	
Kurung Kumey	4302	4327	1130	1462	259	219	140	107	
Kra Dadi	4789	4750	1369	1561	247	195	107	114	
Upper Subansiri	7471	7920	2813	3596	1363	1444	927	896	
Siang	1968	1999	820	882	573	562	414	408	
West Siang	4358	4668	2502	2878	1755	1791	1500	1424	
East Stang	3640	3961	2278	2801	2071	1961	1606	1629	
Upper Siang	1613	1803	849	1084	698	614	327	307	
Dibang Valley	387	410	124	91	68	82	41	61	
L. Dibang Valley	2829	2778	1370	1313	800	732	601	575	
Changlang	7680	7543	4077	4130	2615	2355	1946	1804	
Lohit	1926	2004	1262	1292	1049	934	697	638	
Namsai	4025	4243	2485	2485	1514	1369	819	827	
Tirap	2483	2600	1330	1496	925	766	571	483	
Longding	4287	4338	1861	1897	1030	785	467	326	
Anjaw	1096	1273	470	602	243	211	148	132	
Total A.P.	73918	77376	151294	34253	21699	20835	15133	14670	

Source: Directorate of Elementary Education & Secondary Education, Itanagar

#### 4.2 HEALTH

Health is the level of functional and metabolic efficiency of a living organism. In humans it is the ability of individuals of communities to adapt and self-manage when facing physical, mental or social changes. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental and social wellbeing and not merely the absence of disease of infirmity". However, inhospitable terrain and low population density make rendering of health services rather difficult in Arunachal Pradesh. Though there has been a perceptible improvement in the public health facilities, most of the health care facilities are not well equipped with basic infrastructure like buildings, trained manpower, equipment and life saving drugs. The existing District Hospitals, General hospitals require up gradation in terms of physical infrastructure and essential supply. Rendering of health services in the State has been proved to be a formidable task and challenge in the context of low density of population, widely scattered small habitations, altitudinal and climatic variations found within short distances and difficult slopes require to be negotiated in many areas. Notwithstanding such enormity of the problem of physical accessibility, the sustained efforts made over the last successive plan periods, the Department of Health & Family Welfare with its institutional network extended health care facilities to the people of Arunachal Pradesh. As per the latest data made available by the Directorate of Health Service, Naharlagun there were 811 Health Institutes in the State. The following table shows different categories of Allopathic Health Institutes functioning as on 31st March 2015.

#### Numbers of Health Institutes in Arunachal Pradesh as on 31-03-2017

Sl. No.	Health Institution	
1	State Hospital	1
2	General Hospital	6
3	District Hospital	8
4	Community Health Centre	63
5	Primary Health Centre	144
6	Sub-Health Centre	586
runa	hal Pradesh	808

Source: Directorate of Health Service, Naharlagun

Health sector is such a sector which need highly skilled and professional persons specialized in the field. For ensuring the populous with sound health, highly qualified Medical professionals are serving in those institutions. The strength of Medical professional is presented below in Table below

# Numbers of Medical Professionals as on 31-03-2017

Number of Doctors	Number of ANM	Number of GNM
554	633	492

Source: Directorate of Health Service, Naharlagun

There is no referral hospital in the State. The proposed establishment of 500-bedded Referral Hospital at Itanagar would bridge the long felt gap in tertiary care sector. The performance of Family Welfare Programme in terms of acceptance of family planning methods and coverage of immunization needs to be improved to reduce further reduction in IMR. The focus will be on to provide integrated preventive, promotive, curative and rehabilitative services for communicable, non-communicable and nutrition related health problems.

#### Chief Minister Universal Health Insurance Scheme (CMUHIS)

The Arunachal Pradesh Chief Minister's Universal Health Insurance Scheme (APCMUHIS) was made operational in the state on 16th September, 2014, which aims to provide quality and affordable health care services to the people of Arunachal Pradesh, a vision plan by then Chief Minister Nabam Tuki. The Arunachal Pradesh State Health Society (APSHS) is the implementing authority for the scheme entered a Memorandum of Understanding (MoU) with The New India Assurance Co. Ltd. as the Insurer. The beneficiaries are entitled for cashless treatment subject to a maximum of ₹ 2 lakhs per annum. Later on the amount was enhanced to ₹ 3 lakhs per annum.

The scheme provides free Medical and Surgical treatment for Hospitalization in empanelled Government and Private Hospitals in cashless manner. The bill is paid by the Insurer and in return the Government pays the Insurer by ways of annual premium on behalf of the beneficiaries. But due to some administrative inconvenience the scheme came to a halt. However, the present government under Chief Minister of Pema Khandu constituted a committee headed by Tezu legislator Mahesh Chai as the chairman and members from the state health department associated to re-structure the scheme - to make it more people friendly.

The sudden halt of the scheme gave a shock wave to the beneficiaries especially the poor who are unable to afford the medical expenses if they are happened to be referred to multi-specialty Hospitals outside the state.

District wise Number of Beds in Medical Institutions as on 31-03-2107

		BEDS INS	FALLED IN	
District	General Hospital	District Hospital	CHC/PHC/S HC	Total
Tawang	-	45	25	70
West Kameng	-	75		75
East Kameng		62	90	152
Papum Pare	146		118	264
Lower Subansiri	100	+1	21	121
Kurung Kumey		5:	148	148
Upper Subansiri	V -	74	51	125
West Siang	100	-	61	161
East Siang	120	. 2	107	227
Upper Siang		30	34	64
DibangValley	(4)	50	6	56
Lower Dibang Valley	-	80	62	142
Lohit	88		29	117
Anjaw'	-		47	45

1	2	3	4	5
Changlang		83	122	205
Tirap	60		32	92
Longding	-		52	52
TOTAL A. P.	614	499	1005	2116

Source: Directorate of Health Service, Naharlagun

#### Event of Births & Deaths registered

Year	Live Birth	Deaths	Infant Death	Still Birth	Maternal Deaths
2013	32513	1560	5	28	4
2014	41619	1711	5	11	7
2015	43246	2439	13	16	4

Source: Directorate of Economics & Statistics, Itanagar

The national programmes like Control of blindness, Malaria, Eradication of Leprosy will combat major health problems. The Infant Mortality Rate (IMR) and Maternal Mortality rate (MMR) are comparatively high in Arunachal Pradesh. The main thrust is on consolidation of PHC, CHC and General Hospital etc., control of communicable and non-communicable diseases, improvement of family welfare measures.

#### Civil registration System (CRS)

The Civil Registration System may be defined as a unified process of continuous, permanent and compulsory recording of the vital events and characteristics thereof, as per legal requirements in the country. In India, the Civil Registration System covers registration of births and deaths. It provides the best source of information on the vital rates at the levels.

The requirement for a complete and up to date Vital Statistical System to yield reliable data on vital events hardly needs any emphasis. These data are essential for socio-economic planning and development and also to evaluate the effective implementation of various public schemes and programs. The main sources of data on vital events in India are Civil Registration System (CRS), Sample Registration System (SRS) and Population Census. Though Population Census is the main source of information on population and its characteristics; however, being a decennial exercise, it does not provide the measure of changes in population from year to year. The measure of fertility and mortality derived from census are centered on the midpoint of the decade and as such do not provide yearly change in the population.

The registration records are primarily useful for their value as legal documents and secondarily as the source of vital statistics. Civil Registration as a source of vital statistics is relatively less expensive, as the statistics generated from the registration records are the byproducts of an essential administrative process. The registration records can also generate current and continuous statistics, which can be more accurate than any other method of data collection apart from being a continuous source of such data.

In Civil Registration System (CRS) the data are required to be uploaded online with the system. However, the state being topographically hilly and mountainous, internet facility is not available in all the registration units. Most of the units feed their data offline and it is centrally uploaded online at the state headquarter. This again results in delay in feeding the data at the national level. Having understood, such technical difficulties the government is pushing hard to the competent authority to provide internet facilities to all the registration units in the state.

District-Wise Disabled Population: Census 2011

District	In seeing	In hearing	In speech	In movement	Mental Retardation	Mental Illness	Any other	Multiple Disability
Tawang	307	295	74	196	18	18	106	112
West Kameng	597	698	108	301	43	35	298	242
East Kameng	368	528	78	210	92	35	261	13
Papum Pare	547	851	134	286	154	47	566	214
Lower Subansiri	251	423	78	144	77	25	203	98
Kurung Kumey	380	938	139	241	67	43	277	255
Upper Subansiri	365	736	56	168	92	26	310	144
West Siang	477	543	113	247	126	30	261	200
East Siang	405	611	120	272	110	60	221	178
Upper Siang	139	254	47	107	30	16	80	76
Dibang Valley	28	83	10	46	9	6	29	23
Lower Dibang Valley	268	371	90	137	78	38	110	157
Lohit .	479	454	181	292	115	. 85	305	167
Anjaw	125	148	16	38	16	23	61	46
Changlang	481	725	188	284	118	79	308	264
Tirap	435	489	106	266	119	-65	482	120
Arunachal Pradesh	5652	8127	1538	3235	1264	631	3878	2409

Source: Census 2011 (Primary Abstract)

### 4.3 EMPLOYMENT

Employment is a relationship between two parties, usually based on a contract where work is paid for, where one party which may be a corporation for profit, not-for-profit organization, co-operative or other entity is the employer and the other is the employee. As per the Census 2011, the total workers in the State of Arunachal Pradesh was 5,87,657. Out of which 3,50,273 were male and 2,37,384 were females. The total number of workers according to Census 2011 was 5,87,657 persons. The percentages of different categories of workers to the total workers were - cultivators 51.51%, Agricultural labourers 6.16%, workers in Household industry 1.42% and other workers 40.91%. With the increase in population of the state from 10,96,702 to 1,383,727 during the last decade of 2001-2011, the number of workers has also increased from 4,82,206 to 5,87,657 showing an increase of 1,05,451 workers. The proportion of workers to total population is 42.47% in 2011 as against 43.97% in 2001.

Total workers, Non-workers and Work Participation rate

Year	Total worker	Total Non-worker	Work Participation Rate (WPR)
1991	399782	464776	46.24
2001	482902	615081	43.98
2011	587657	796070	42.47

Source: Census 2011 (Primary Abstract)

# Sector wise Work Participation rate by Sex:

er	e constant	Carr		Census Year	
SI. No.	Sector	Sex	1991	2001	2011
		Persons	46.24	43.98	42.47
1	1 Total Worker	Male	53.76	50.63	49.06
		Female	37.49	36.54	35.44
		Persons	45.22	37.80	34.60
2	Main Worker	Male	53.52	46.11	42.18
		Female	35.57	28.50	26.52
		Persons	1.02	6.18	7.87
3	Marginal Worker	Male	0.24	4.52	6,89
		Female	1.92	8.04	8.92

Source: Census 2011 (Primary Abstract)

### Labour Market

Generally the labour market is a place where workers and employees come in contact with each other for sale and purchase of labour. As in March 2017, the number of unemployed youth on the Live Register of Employment Exchange was 60,248 out of which 33,666 were males and 25,582 were females.

Live Register in Employment Exchanges

	Numb	er in Live re	egister	Percentage	No. of persons employed through Employment Exchange	
Year	Male	Female	Total	increase in Live register		
2013	23,486	16,125	39,611		# ##W	
2014	22,115	20,120	42,235	6.62		
2015	28,499	21,954	50,453	19.46		
2016	37,505	27,200	64,705	28.25		
2017	33,666	25,582	60,248	- 6.88		

Source: Directorate of Employment & Training, Itanagar

There has been a gradual increase in the job seekers, in the state as recorded, but, slightly declined by -6.88% during 2017. However, it is not very much evident that the registering offices or authorities are of substantial helps and assistance in securing jobs. Moreover, the figure might be illusionary since many educated unemployed persons do not get themselves registered. On the other hand many people who are registered with the Employment Exchange also do not withdraw their names even after they get employed.

#### 4.4 SANITATION

The state has 3,863 inhabited villages with 2,61,614 households as per Census 2011. Drinking water supply facilities are in existence in all the 17 urban centres but many of these are very old and as such require augmentation and extension to cater the need of growing population. As per Census 2011, 41.06 % households are having drinking water facility within the premises.

In last two decades, there has been a phenomenal growth of population in all districts both in Rural and Urban areas in Arunachal Pradesh. The existing water supply system which was installed in 1960s and 1970s are quite inadequate to cater to the present need. Considering the deficiency of existing water supply system, various strategies/plans have been taken up by the Public Health Engineering & Water Sanitation Department (PHED & WS) to take up the comprehensive water supply systems with elaborate arrangements for treatment of water to be supplied to the consumers.

Source of Drinking Water: Census 2011

Source of drinking water	Total Households	0/6	Rural	9/6	Urban	0/0
Тар	1,71,473	65,54	1,16,024	67.66	55,449	32.34
Hand pump/Tube well/Bore Well	34,165	13.06	29,447	86.19	4,718	13.81
Well	14,885	5.69	11,556	77.64	3,329	22.36
Tank/Pond/Lake/River/Canal Spring	41,091	15.71	38,696	94.17	2,395	5.83
Total Household	2,61,614	100	1,95,723	74.81	65,891	25.19
By Loca	tion of Sources	of drin	king wate	r		
Within Premises	1,07,429	41.06	61,534	57.28	45,895	42.72
Near the Premises	97,755	37.37	82,558	84.45	15,197	15.55
Away	56,430	21.57	51,631	91.50	4,799	8.50
Total Household	2,61,614	100	1,95,723	74.81	65,891	25.19

Source: Census of India, 2011

There is lack of awareness about the sanitation and personal hygiene among the general public in rural areas. Therefore, under rural sanitation programme construction of Low Cost sanitary latrine and garbage clearance in selected administrative headquarters are carried out. However, no appreciable impact could be made on the sanitation environment due to lack of awareness among the people. The Census 2011 data reveals that 42.57 % of the households are having latrine facility within premises.

These days under the central government's flagship program "Swatch Bharat Abhiyan" financial assistance is being provided to households for construction of toilets. The department of PHE & WS is the nodal agency in implementing this program. The households are provided financial assistance of ₹ 12,000 to ₹ 15,000 for the purpose of construction of Latrine within their premises. Now, the State is one of the State's in the country which has achieved 100% Open Defection Free (ODF).

# Sanitation Facilities: Census 2011

Type of Household	Total HH	9/6	Rural	9/0	Urban	%
No. of Household having bathroom facility with the house	111,366	42.57	58,225	52.28	53,141	47.72
No. of Household <i>not</i> having bathroom facility with the house	150,248	57.43	1,37,498	91.51	12,750	8.49
Type of Latrine within the l	nouse:					
Pit Latrine	49,148	18.79	39,969	81.32	9179	18.67
Water Closet	100,465	38.40	51,136	50.90	49,329	49.10
Other Latrine	12,503	4.78	12,034	96.25	469	3.75
No Latrine	99,498	38.03	92,584	93.05	6,914	6.95
Type of Drainage connectiv	rity for Waste V	Vater out	let:	1		
Closed drainage	15,571	5.95	5,254	33.74	10,317	66.26
Open Drainage	70,960	27.12	37,651	53.06	33,309	46.94
No Drainage	175,083	66.92	1,52,818	87.28	22,265	12.72

Source: Census of India, 2011

# DISTRICT-WISE NUMBER OF TOWNS/ VII.LAGES COVERED UNDER DRINKING WATER SUPPLY INARUNACHAL PRADESH AS ON 31-03-2017

Andrew Control of	No. of towns fully covered	No. of Villages fully covered with	Total no. of habitation (Rural &	Percentage of Villages covered with water	Population B (In thousa	
District	under drinking water supply	drinking water supply.	Urban fully covered with water supply)	supply to total villages	Urban	Rural
Tawang	1	233	234	52.48	14851	21725
West Kameng	1	157	158	29.90	11867	32537
East Kameng	1	236	237	52.33	26573	39547
Papum Pare	3	243	246	38.94	129954	40252
Lower Subansiri	1	163	164	24.47	21935	28112
Kurung Kumey	1	188	189	21.20		17636
Upper Subansiri		264	264	35.63	-	27700
West Siang	1	203	204	29.81	37433	35627
East Siang	1	80	80	23.39		28699
Upper Siang	-	79	79	37,26		17263
Dibang Valley	-	93	93	47.94	-	6580
Lower Dibang Valley	1	189	190	47.13	17920	37358
Lohit	1	84	85	23,93	20828	22084
Changlang	2	216	2018	44.72	11470	49123
Tirap		216	218	43.24		31537
Anjaw	1	54	55	17.09	982	4139
Kra Dadi	1	123	. 123	30.90		17696
Longding	-	48	48	47.03		24644
Namsai	1	83	84	41.91	14246	36990
Siang	2	62	62	39.74	-	16687
TOTAL	15	2910	2925	36.45	308059	535936

Source: Chief Engineer, PHED, Itanagar.

### 4.5 PUBLIC DISTRIBUTION SYSTEM

In the State, the Food and Civil Supply Department is responsible for allocation and distribution of food grains, issue of ration cards, supervision and monitoring of the functioning of Fair Price Shops (FPS). The Public Distribution System is focused as one of the national agenda under Basic Minimum Services. The PDS has spread over the whole of Arunachal Pradesh with a network of 1683 Fair Price Shops (Cooperative & Others) to ensure regular supply of essential commodities to the people at a uniform and reasonable price across all the districts. The State Govt. is making all out efforts to bring hitherto uncovered/partially covered areas under PDS.

### Arun ePDS

The Justice Wadhwa's report and Honb'le Supreme Court order of September 2010 raised a numbers of issues in the existing Public Distribution System (PDS). The issues raised by the report include bogus ration card, pilferage of supply chain, accurate targeting of beneficiaries, wastage of food grains, and pilferage of PDS commodities. The Honb'le Supreme Court recommended for computerization of PDS and four States / Union Territory namely Chattisgarh, Gujarat, Assam and Chandigarh were chosen for piloting ePDS initiatives with varied degree of success. As a matter of fact, Arunachal Pradesh took the initiative in 2008 and came successful in piloting ePDS in Tirap district with the help of District Administration and the Department concern.

Arunachal Pradesh due to its topography, effective implementation of PDS is always a hurdle. The hilly and mountainous regions of the State pose a challenge for accessibility. To supplement those challenges the state does not have a civil supply corporation to manage the movement of food grains from Food Corporation of India (FCI) godowns to Fair Price Shops (FPS). Apart from that; to check issuance of bogus ration card; a mechanism to achieve accuracy in projecting requirements, in 2008 the District Administration and Department of Food & Civil Supply Tirap district formulated a plan for streamlining PDS. Institutions like Indian Institute of Management-Ahmadabad, Indian Institute of Technology-Delhi and Beacon Analytics were involved in conceptualizing the process of Tirap ePDS. Formally the project was launched on 31<sup>st</sup> May 2010 in Tirap district by the Speaker Arunachal Pradesh Legislative Assembly. After successfully piloting Tirap model ePDS, the state government replicated the Tirap model ePDS with the rest of the district and named it Arun ePDS. The Arun ePDS had two phases;

- I. The first phase involves digitization of ration cards and coupons through department website
- II. Second phase aims at achieving intra-state connectivity and monitoring the entire system from the Headquarter through a transparent web portal.

Through this model the beneficiaries are issued 12 coupons (one for each month) at the time of issuance/renewal of ration cards. Those coupons have to be submitted to the FPS one for each month at the time of purchasing their monthly ration quota. The FPS would in turn submit those coupons to the ePDS counter at the DFCS office to get allocation for the next month. Once the coupons are submitted at the DFCS office, the system will automatically generate monthly sub-allocation order to the FPS dealer.

District Wise Number of Fair Price Shops in Arunachal Pradesh as on 31.3.2017

District	Co-operative Society	Private Sector	Total
Tawang	24	17	41
West Kameng	11	57	68
East Kameng	10	123	133
Papum Pare	5	79	84
Lower Subansiri	4	132	136
Kurung Kumey	1 -	102	103
Upper Subansiri	6	126	132
Kra Dadi	3	54	57
Capital Complex	12	115	202
West Siang	3	199	202
East Siang	08	91	99
Upper Siang	04	58	62
Siang	01	83	84
Dibang Valley	2	28	30
Lower Dibang Valley	9	46	55
Lohit	15	18	33
Namsai	14	15	29
Anjaw	2	29	31
Changlang	7	91	98
Tirap	7	64	71
Longding	2	54	56
TOTAL	150	1581	1806

Source: Directorate of Food & Civil Supply, Naharlagun

Procurement of Selected Commodities in Arunachal Pradesh

District	Rice (in M T)	Wheat (in M T)	Sugar (in M T)	S.K.Oil (KL) IOC AOD & MD
Tawang	4210.9	533.0	59.2	414
West Kameng	6374.2	595.0	104.0	954
East Kameng	5436.0	444.0	94.0	576
Papum Pare	8372.6	728.6	202.4	1056
Capital Complex	3576.2	216.4		360
Lower Subansiri	5422.4	412.0	107.4	324
Kurung Kumey	5227.4	322.0	105.2	750
Upper Subansiri	5835.2	442.0	100.8	720
West Siang	6743.0	550.0	134.0	1200
East Siang	5320.0	566.0	116.4	948
Upper Siang	2533.1	235.0	44.4	432
Lower Dibang valley	3657.7	467.0	66.0	288
Dibang Valley	1516.4	172.0	10.0	216
Lohit	8508.2	559.0	169.4	1164
Anjaw	2422.4	247.0	26.0	186
Changlang	8640.8	649.0	174.8	960
Tirap	4653.9	411.0	70.0	648
Longding	3790.6	311.0	64.0	282
DST. Org	1380.0	12-1		
Total for A.P.	93,621.0	7860.0	1648.0	11,478

Source: Directorate of Food & Civil Supply, Naharlagun

During 2013-2014, 93,621 MT of rice, 7860 MT of wheat, 1648 MT of sugar and 11,478 Kilolitres of Superior Kerosene Oil (SKO) was procured. District wise highest allocation of rice was made to Changlang (8640.8 MT) followed by Lohit (8508.2 MT) and Papum Pare (8372.6 MT).

In terms of Wheat, Papum Pare received the highest allocation (728.6 MT) followed by Changlang (649.0 MT) and West Kameng (595.0 MT). The highest consumer of sugar during the same block tear was Papum Pare (202.4 MT) followed by Changlang (174.8 MT) and Lohit (169.8 MT).

Census 2011 record reveals that, there are 2,61,614 households in the State. Out of that 43,000 households are dependent on Kerosene as the only source of lighting which is 18.46 percent of the total households of the State. Therefore, 11,478 Kilolitres of Superior Kerosene Oil (SKO) was procured from Authorised Oil Depot (AOD) during 2013-2014. West Siang, Dibang Valley and Papum Pare were allocated 1200 Kilolitres, 1164 Kilolitres and 1056 Kilolitres respectively.

# CHAPTER-4

# **INFRASTRUCTURE**

# 5.1 POWER AND ELECTRICITY:

Electricity is a great boon of modern science. Today life without electricity is almost impossible. It is the basic infrastructure for overall development of the state. In addition to its role as infrastructure, it has huge potential for employment generation.

# Installed Capacity and Generation of Electricity:

The state had an installed capacity of 81.48 MW in 2014–15 which has increased to 84.38 in 2016-17; comprising of hydro 63.63MW and Diesel 20.45MW. Aggregate generation of power during the year 2016-17 was 62.87MU comprising hydro 62.17and diesel 0.70. In addition to that the State had to import 654.216 MU of power from other state to meet its requirements. This implies that the State imports 92.70 percent of its power requirements.

Installed Capacity and Electricity Generated

Year	Installed Capacity (M W)			Ge	nerated (M	Imported from outsid the state (M U)	
	Total	Hydel	Diesel	Total	Hydel	Diesel	
1	2	3	4	5	6	7	8
2011-2012	75.490	59.220	16.270	61.040	58.460	2.580	670.440
2012-2013	78.490	59.220	19.270	51.540	49.950	1.590	741.240
2013-2014	95.4	23.16	72.24	3.251	2.97	0.281	108.45
2014-2015	81.48	61.91	19.57	51.54	49.95	1.59	654.216
2016-2017	84.38	63.63	20.45	62.87	62.17	0.70	825.94
						3.11	

Source: - Chief Engineer Hydro Power Development & Power (Western Zone), Itanagar

# Consumption of Electricity:

Consumption of electricity has been increasing steadily over the years. From the year 2011-12 to the year 2014 - 15 the total consumption of electricity increased 244.67 KWH to 322.04 KWH. During 2014-15, 41.69 percent of electricity was consumed for domestic consumption, 10.44 for commercial, 24.59 for industrial, 3.47 for public lighting and 19.79 for agriculture & others respectively.

# Consumption of Electricity by Uses in A.P

### UNIT-KWH

Year	Domestic	Commercial	Industrial	Public Lighting	Agriculture & Others	Total Consumpti on
2011-12	67,72	19.29	94.84	6,79	56.03	244.67
2012-13	64426159	21271110	96148761	5524009	50229419	237599458
2013-14	85,37	25.38	48.40	5.78	68.21	233.14
2014-15	134290737.95	33637330.70	79201098.72	11175249.00	63736988.61	322041405

Source: - Chief Engineer (Power) cum Member Secretary (ADPA) Arunachal Pradesh, Itanagar Distribution of Household by Source of Lighting

Sl. No.	Source of lighting	Total	%n	Rural	9/0	Urban	0/0
1	Electricity	1,71,821	65.68%	1,08,550	63.18%	63,271	36.82%
2	Kerosene	48,300	18.46%	46,175	95.60%	2,125	4.40%
3	Solar energy	7,597	2.90%	7,553	99.42%	44	0.58%
4	Any other	6,340	2.42%	6,124	96.59%	216	3.41%
5	No Lighting	27,556	10.53%	27,321	99.15%	235	0.85%
6	Total	2,61,614	100%	1,95,723	74.81%	65,891	25.19%

Source: Table H-9: Census of India 2011

# 5.2 ROAD, TRANSPORT AND COMMUNICATION

Well developed communication system is vital for socio-economic development of any economy. In a land-locked and hilly state like Arunachal Pradesh road network is vital as lying and maintenance of railway line and airport is economically not viable. There is only one railway head at Naharlagun, while the only airport for the State capital is yet to see its light. Therefore, the only means of transportation of goods and service at other parts of state is road transport.

# CATEGORY WISE LENGTH OF ROADS UNDER APPWD AS ON 31-03-2015

(in KM)

			Asses w
Type of Road	Surfaced	Unsurfaced	Total
National Highways	2590.990		2590.990
State Highways			
Major District Roads	3721.510	540.582	4262,092
Other District	6066.332	7063.332	13129.722
Rural roads	915.730	915.730	952,080
TOTAL	12415.240	8519.644	20934.884

Source: - Statistical Abstract of Arunachal Pradesh, 2015

# Total Length of Road

A detail status of road maintained by various agencies in the State during the last 5 years is shown below.

(In Km)

Department	2013	2014	2015	2016	2017
PWD	8902.434	8939.234	8055.253	8034.181	S = 1
RWD(PMGSY)	3738.82	4244.84	4774.43	7561.101	5951.52
RWD(State Plan)	2669.25	2703.06	2735.36	2782.790	2528.63
BRTF	3978.842	3978.842	3978.842	3592.735	761.61
Dept. of Forest	887.73	887.73	1032.982	NA	

Source: - Statistical Abstract of Arunachal Pradesh, 2015

# ARUNACHAL PRADESH STATE TRANSPORT SERVICE

APST has been providing services in to almost all the districts having road connectivity. At present the Department operates on 119 routes covering distance of 120 kms per bus per day carrying 8219 passengers per day. It has fleet strength of 218 buses.

# Operational Statistics of State Transport Commercial Wing

Sl. No.	Particulars	Unit	2014-2015	2015-2016	2016-2017
1	Strength of Bus fleet	in No.	218	239	218
2	Total Bus Km operated	in lakh Km.	0.85		82.07 kms
3	Bus Route coverage	in Nos.	119	119	119
4	Distance of Bus route covered per bus per day	in Kms.	120	120	120 kms
5	Daily Passenger carried (Average)	in Nos.	8915	2676	8219
6	Traffic receipt	Rs. in lakhs	16.54	13.32	15088 Laks
8	Total operational Expenditure	Rs. in lakhs	58.41	29.58	83.36 Lakhs
9	Net Operational Loss	Rs. in lakhs	41.87	16.26	*

Source: - Statistical Abstract of Arunachal Pradesh, 2013, 2014, 2015 & 2016

### COMMUNICATION NETWORK

Communication network includes Postal Services, Telecommunication and Information Technology enabled communication services. It serves as link for all segment of the society and is vital for dissemination information.

### POSTAL SERVICES

At present, there are 301 Post Offices operating in the state with its Head office located at Itanagar. The role of postal service in the modern era is gradually losing its historical importance. Gone are the days, when people used to fully dependent on the postal service for transmitting messages. These all has happened due to the fast growing importance of internet. Now a days' internet service is easily accessible in one's mobile phones, where messages could be transmitted faster. Despite, substitution of internet over postal services, still it is occupying its presence and it would definitely continue to serve the nation.

Number of Postal Institution in Arunachal Pradesh

SL.NO.	PARTICULARS	2013	2014	2015	2016
1	Head post office	1	1	1	1
2	Sub-post office	48	48	48	48
3	EDBPO's	248	248	252	252
	TOTAL	297	297	301	301

Source: - Statistical Abstract of Arunachal Pradesh, 2013, 2014, 2015 & 2016

### TELE COMMUNICATION

Growth of telecommunication system has been slow in Arunachal Pradesh, but in recent years it has grown steadily. At present there are 110 Telephone Exchanges operating in the state. The present scenario of telecommunication facility is given in table. The table shows that the numbers of telephone (fixed line) connections are decreasing while the numbers of mobile connections are increasing.

These days, more or less all the mobile phones are compatible for internet access. The rapid growing of social networks; like Facebook, whatsApp, Instagram etc. the mobile phone connection has been increasing over the years. As on 2017 there were 8,44,485 mobile phone connections, which we can say that 1 mobile phone for every 1.638 persons was available in the state.

The following table would give a comprehensive scenario of Tele-Communication in the State. As one can easily find out how the mobile connection is substituting fixed line connection since introduction of mobile in the State.

# Scenario of Telecommunication Facility

Particulars	2013	2014	2015	2016	2017
No. of Telephone exchanges	103	105	110	110	92
No. of Tele phone connections	25,639	24,836	24,453	24,092	24,011
No. of mobile connections	4,01,077	5,26,511	6,39,860	7,80,137	8,44,485
No. of Broad band connections	5506	6317	7429	NA	7616

Source: - Statistical Abstract of Arunachal Pradesh, 2013, 2014, 2015 & 2016

### 5.3 TOURISM

Arunachal Pradesh is the Land of Dawnlit Mountains – the habitat of the most splendid, variegated, multilingual tribal people of the world. Located in North eastern tip of India is one of the most sought of tourist destination of India. Tourism sector in the state is at its nascent stage. There are lots of spots which are yet to be identified and developed to attract tourists. A well developed tourist sector not only generates employment and income but also helps to show case our rich traditional culture to the rest of the world.

### Inflow of Tourist in the State

Inflow of both domestic and foreign tourist to the state has been increasing year by year. Details are given below in the table:

Year	No. of Tourist Visited			
Tear	Foreign tourist arrival	Domestic tourist arrival		
2006-2007	1143	50612		
2007-2008	1939	31100		
2008-2009	3020	149292		
2009-2010	3945	195147		
2010-2011	3534	139829		
2011-2012	4753	237980		
2012-2013	5135	317243		
2013-2014	10846	125461		
2014-2015	5204	180964		
2015-2016	5283	326362		
2016-2017	6598	385875		

Source: Directorate of Tourism, Itanagar

# Tourist Accommodation

Accommodation facilities in the tourist centers are crucial. Without such facilities promotion of tourism cannot take place. The total numbers of tourist lodges operational in the state are given in table

In numbers

		Yea	r	
	2013-2014	2014-2015	2015-2016	2016-2017
No. of Tourist Lodges	23	43		26

Source: Directorate of Tourism, Itanagar

# Development of Tourist Attraction Spot

Arunachal Pradesh is blessed with abundant natural resources and scenic beauty. There are as many as 309 tourist spots identified by Department of Tourism, Government of Arunachal Pradesh. These tourist spots lack amenities like watch tower, wayside amenities, tourist lodge, etc. Therefore, these facilities are to be set up at those tourist spots to attract tourist to those destinations.

	Year				
	2013-2014	2014-2015	2015-2016	2016-2017	
No. of Tourist Spots	309	309	313	323	

Source: Directorate of Tourism, Itanagar

# REGISTRATION OF BIRTHS AND DEATHS IS COMPULSORY AS PER RBD ACT 1969



# ENSURE REGISTRATION OF BIRTHS AND DEATHS TO HELP YOU AS

BIRTHS: Age Proof, School/Service entry, Driving Licence/Legal contact, Marriage / Voting rights etc.

DEATHS: Inheritance settlement, insurance Claim, Family allowances, Other Social Security etc.

For Details:

# Contact :- Your respective District Statistics Office.

All are reguested to Co-operate with NSS field staff when they approach you for survey work by providing correct and complete information.

The success of the survey depends on your response. Incorrect information will thus lead to a wrong database, which will result in faulty planning.