Skills Gap Study of the
North-East

About National Skill Development Corporation

National Skill Development Corporation (NSDC) is a pioneering Public Private Partnership (PPP), set up under the aegis of the Ministry of Finance, in July 2008, with a mandate to skill 150 million by 2022.

NSDC's mission is as follows:

- Upgrade skills to international standards through significant industry involvement and develop necessary frameworks for standards, curriculum and quality assurance.
- Enhance, support and coordinate private sector initiatives for skill development through appropriate PPP models; strive for significant operational and financial involvement from the private sector.
- Focus on underprivileged sections of society and backward regions of the country thereby enabling a move out of poverty; similarly, focus significantly on the unorganised or informal sector workforce.
- Play the role of a 'market-maker' by bringing financing or viability gap funding, particularly in sectors where market mechanisms are ineffective or missing.
- Prioritise initiatives that can have multiplier or catalytic effect as opposed to one-off impact.

Globally, NSDC is a unique PPP in the area of skill development. NSDC's key differentiators are as follows:

- Funds as well as provides strategic support to the skill development activities of stakeholders and potential partners.
- Monitors implementation over entire life of the project.
- Enables skill development in high growth and unorganised sectors.
- Facilitates creation of 'Train the Trainer', centres
- Accountable for raising skills to international standards through sector specific industry involvement and setting systems and frameworks for standards, curriculum and quality assurance.
- Set up Sector Skill Councils
- Commissions periodic reports including skill gap surveys
- Support of industry associations, hence access to the best industry data enabling creation of industry specific curriculum, employability, etc.
- Facilitates creation of Labour Market Information Systems (LMIS)

Foreword

The North Eastern States comprise Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim, and Tripura.
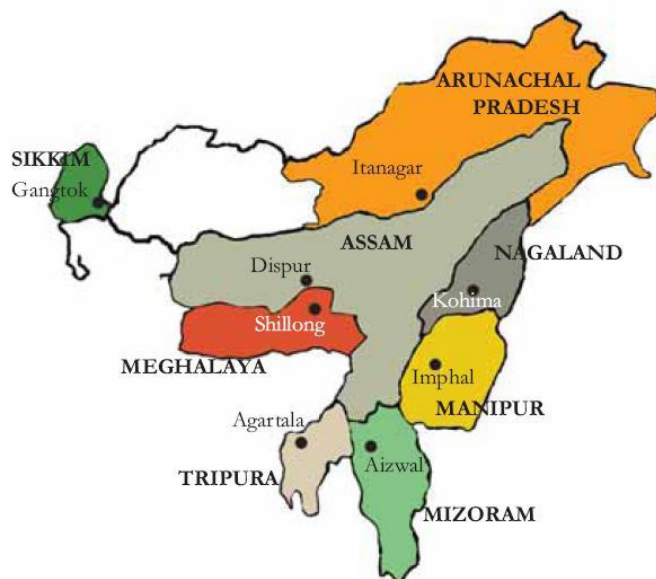
The eight States located in India's North-East cover an area of 2,62,179 sq. km. constituting 7.9 per cent of the country's total geographical area, and 46million people or about 4 per cent of the total population of the country (Census 2011).

Most North Eastern States have remained one of the under developed and untapped regions of the country. Some of the reasons are as follows:

- Remoteness and isolation because of being mostly landlocked
- Lack of access to markets
- Limited connectivity to the rest of India
- Limited infrastructure
- Challenges in land acquisition
- Widespread use of traditional cultivation methods that are inefficient
- Lack of facilities such as cold storage for warehousing fruits and transporting to market
- Inadequate infrastructure that could help transport goods from the region
- Difficulty in accessing bank credit for enterprises
- Lack of confidence in seeking credit by small and tiny sector enterprises

- Poor awareness of markets, changing demand patterns, raw material sourcing, technology, branding and quality standards
- High and widespread dependence on Governments' programmes for market access, subsidy and training
- Educated seeking, mostly, Government jobs or relocating out of the region
- Stigma against labour oriented jobs
- Dependence on, mainly, local market for selling products from small and tiny sector
- Inadequate telecommunications connectivity

Despite these disadvantages, there are success stories of entrepreneurs who have started on small scale, overcome the difficulties and have grown in the last 15-20 years to make a name for themselves in the region. Though small now, their number is likely to grow as more people travel outside the region, attain education, training and skills, investing is made attractive by the States, markets linkages are developed, substantial buyers are attracted to the products from the region and, trained and skilled persons can be gainfully employed within the region.

It is in this context that the North Eastern Council (NEC) and the Ministry of Development of North Eastern Region (DoNER) have prepared Vision 2020 for the North Eastern Region.

The Vision 2020 envisages the following targets by 2020:
- Overall GSDP growth at a CAGR of 11.64 per cent between 2007-09 and 2019-20.
- Overall per capita income growth of 12.95 per cent between 2007-09 and 2019-20.

To support this vision, the Ministry of Development of North Eastern Region has formulated a Strategic Plan 2010-16 focusing on three broad dimensions:

(A) Rapid socio-economic development:
- Facilitating preparation of Strategic Plans for key sectors such as Agriculture, Road, Civil Aviation, Railways, Inland Water Transport, Power, Tele-Communication & IT, HRD, Health and Handloom & Handicrafts and implementation of the Plans so prepared by the line-Ministries and North Eastern States.
- Facilitating formulation of Projects, Schemes and Programmes by major Central Ministries in consonance with the requirement of the North-Eastern Region.

- Increasing the effectiveness of developmental expenditure in the North-East Region through higher levels of transparency, systemic improvements and independent monitoring mechanism.
- Creating an in-house database on important socio-economic indicators in the Region and its periodic assessment.
- Facilitating preparation of Regional Plan by the NEC.
- Providing critical support to the NEC for identification of appropriate regional projects and their implementation.
- Facilitating funding by External Agencies in critical Sectors in the North Eastern States.
- Undertaking pilot or demonstration projects in the North-East Region in certain sectors to provide fillip to these sectors.

(B) Building capacities and competencies in critical sectors in the North Eastern States

- Preparation of a Plan of Action for building capacities and competencies in critical sectors in the North Eastern States.
- Identifying institutes and organizations for imparting training and building capacities in the North Eastern Region.
- Setting up of Training Institutes in the Region in important fields through line Ministries, NEC or States.
- Augmenting the capacity of the existing training institutes in the North Eastern States.
- Use of IT as a tool to upgrade skills.

(C) Promote the strengths of the Region

- Preparation of a 'Plan of Action' for projecting and promoting key strengths of the Region.
- Promoting student and cultural exchanges among the States of the Region on one hand and between the Region and the rest of the country.
- Organizing business summits, exhibitions and cultural festivals to promote the Region.
- Undertaking well-conceived promotional campaigns in the print and electronic media for projecting a positive image of the Region.
- Arranging festivals and cultural exchanges between the Region and the neighbouring countries.
- Highlighting the achievements and success stories from the Region in mainstream media.
- Instituting an Award Scheme to honour and showcase the achievements of talented people of the Region.

While this requires substantial investment, implementation of Action Agenda outlined in the Vision and Strategic Plan, it also requires imparting of skills at all levels.

The North Eastern States, clubbed together, have some common attributes. But they also have significant variations related to culture, language, values, work preferences and ethics, and overall environment related to Government, infrastructure, terrain, proximity to or availability of markets and services. Hence, the skilling interventions may vary across states and districts despite, similarities of activities.

Given the above background, ICRA Management Consulting Services Limited (IMaCS) has been mandated by the NSDC to assist in identifying development and employment potential of districts of North Eastern States.

Assam is known for its rich culture and diversity. It attained statehood in 1947 and is the fulcrum of the North Eastern Region, in terms of the connectivity, economic activity and location. The total land area is 78,550 sq km and it has a population of 31,169,272 people (Census 2011).
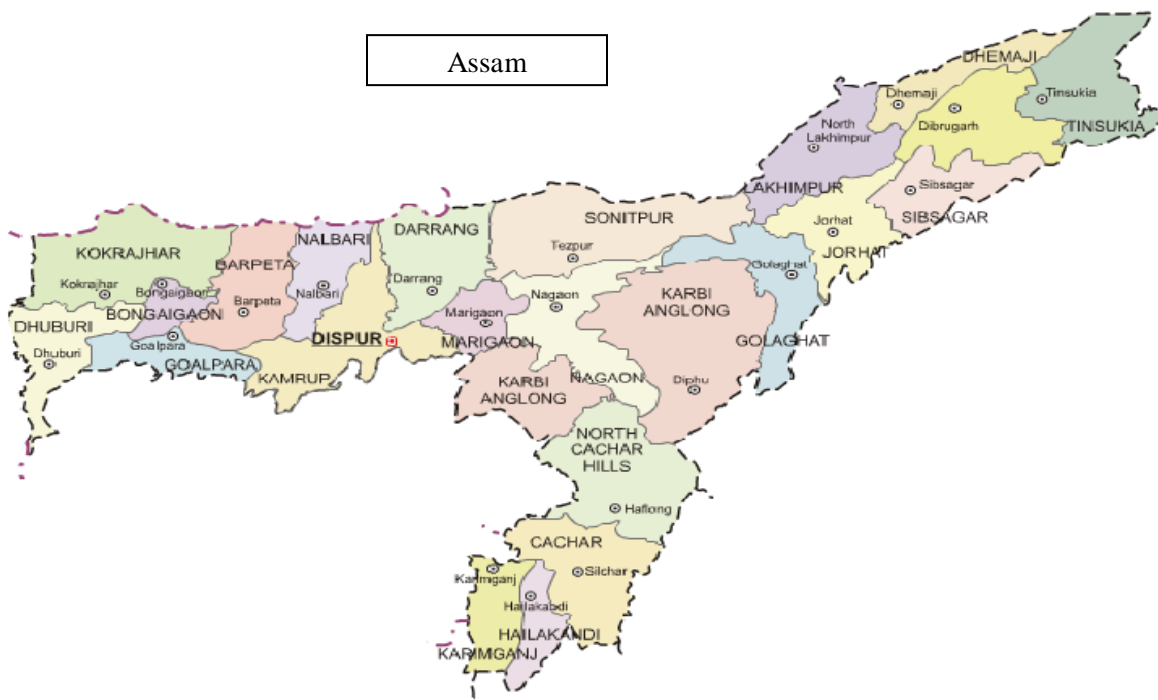
This report has been structured in three parts:

Part I includes Foreword, Acknowledgements, Approach and Methodology, and Study Limitations.

Part II concentrates on the diagnostic analysis of Assam, human resources requirement, skill gaps assessed for Assam.

Part III presents a detailed set of recommendation for Assam.

Acknowledgements

Carrying out a large scale survey is always a challenge. However, this task was made easy for the team by the support that they received from various stakeholders. The team acknowledges, with grateful thanks, useful information, references and support provided by NSDC and Ministry of Development of North Eastern Region.

IMaCS team has travelled extensively through the districts of the eight North Eastern States to conduct the surveys for this study. The team has interacted with cross-section of stakeholders. This survey exercise would not have been possible without the support of key stakeholders in Assam some of whom we have listed below.

- Dr. Surojit Mitra, Additional Chief Secretary of Assam
- Mr. Ravishankar Prasad, Commissioner Labour and Employment, Assam
- Mr. Prithviraj Raba, DGET, Assam
- Ms. Mousmi Sen, DGET, Assam

In addition, there are many persons or organisations who have contributed greatly towards the successful completion of this study. The team conveys sincere thanks to all of them for their generous support and contribution.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

PART – I: Introduction

1. Report Objectives

National Skill Development Corporation (NSDC) has mandated ICRA Management Consulting Services Limited (IMaCS) to assess the development and employment generation potential of eight North Eastern states of India. As per the Terms of Reference, the report objectives are as follows:

   i.   Review the socio-economic profile of the North Eastern Region

   ii.   Identify developmental opportunities keeping in mind factor endowments and stakeholder perspectives

   iii.   Identify specific developmental initiatives/projects which also have impact on employment generation

   iv.   Assess skills required to aid in such employment generation

2. Approach and Methodology

The study has been conducted in three phases:

Phase – 1: Diagnostic Phase

The objective of this phase was to understand the socio-economic profile of the North Eastern Region. The focus was on analyzing the economic and social position of the Region based on evolution of the level and type of economic activity and social development in each State. The factor advantages, constraints facing the Region either due to Regional factors or common among the states, and the challenges going forward have been analysed. We have thus identified the factor endowments of the State and the potential it holds. At the end of this stage, we have presented a snapshot of the State on economic and social aspects and a SWOT analysis of the State.

Phase – 2: Synthesis Phase

This was carried-out in two modules:

Module 1: Assessment of Development Potential

Module 2: Assessment of Employment Potential and Gaps

Module 1: Assessment of Development Potential:

The objective of this phase was to identify development opportunities across formal and informal sectors which provide livelihood opportunities for employment. We have also kept in mind the opportunities for

employment/livelihood generation identified as per the Vision 2020. This leads to the framework for identification of formal and informal sector employment/skilling opportunities

For this exercise, we have interacted with a cross-section of stakeholders of the Government/Industry to understand the following:

- What are the key developmental areas to focus?
- What needs to be done to leverage key strengths and factor endowments?
- How can bottlenecks to development be cleared?
- What various stakeholders need to do for development?

Based on the factor endowments and primary surveys conducted, we have identified potential and high growth opportunities for North Eastern States.

Module 2: Assessment of Employment Potential

For the developmental opportunities identified, we have assessed the following:

- Employment potential in the Region and on account of these identified developmental opportunities
- Skills required to be developed among the North Eastern Region workforce to tap into the same.

This phase has been executed by: Profiling skills required sustaining traditional skills and tapping into factor endowments, especially in the informal sector (wherever scalable) and Interacting with industry (small, medium and large) and groups engaged in formal and informal sectors.

Phase – 3: Recommendations

Our interventions focus on various measures/potential ideas/projects required to be pursued for Development and Employment Generation. These interventions focus on the following:

- What is the enabling environment to be created to further development and employment generation?
- What are the interventions to enhance employment generation/job creation?
- What are the potential opportunities that can be tapped thereof and structured for private sector investment and NSDC interventions?

The report derives content for analyses from both, primary survey and secondary sources.

- The surveys were undertaken by visiting several districts of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura and meeting key stakeholders identified with

the help of State/District Government Departments of Labour, Planning or Industries and using internal research and databases.

- Significant secondary research was also carried out in order to validate the findings of primary survey.

3. Study Limitations

While care has been taken to ensure correctness of information, the report outcomes for entire North East are affected by the following circumstances:

- While the field survey has been conducted keeping in mind maximum coverage, the survey has been constrained by factors such as - weather: a major part of the survey was conducted in the rainy season with landslides and flooding; availability of transportation; proper road connectivity; availability of persons to interview at select locations and offices; lack of documented and latest information; and inaccessible distances from within the State.

- While some districts had updated statistics, for others approximations have been made because of dated or non-existent data, particularly, for industries and institutions that have come up in recent years.

- Approximations include use of past growth rates for projections, regional average, national average, productivity growth, benchmarks with other States and others.

PART – II (a): Diagnostic Analysis of Assam

4.1 Macro Economic Overview

The GSDP of Assam is about Rs 75,082 crore, at constant prices. In the last six years to 2010-11, the Assam's GSDP has grown at a CAGR of 5.8 per cent, from Rs 53,398 crore in 2004-05. The Assam GSDP growth rate is lower than that of India GSDP growth rate (8.6 per cent).

FIGURE 1: GSDP GROWTH OF ASSAM
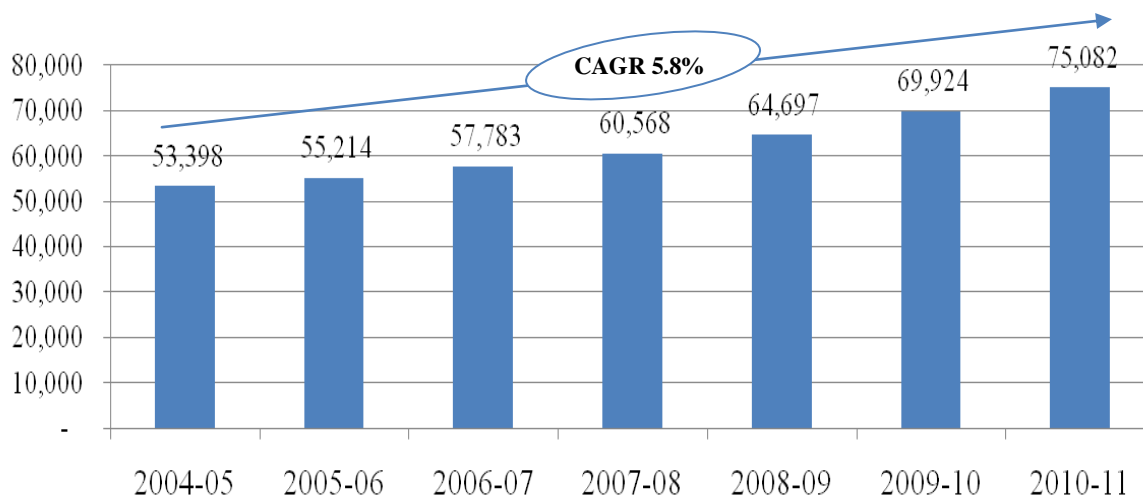
Source: Central Statistical Organisation; IMaCS Analysis

TABLE 1: GSDP COMPARISON

Country / Region/ State	GSDP, Rs Crore, 2010-11	GSDP growth rate, 2010-11
India	4,877,842	8.6%
North East Region*	129,816	6.7%
Assam	75,082	5.8%

GSDP – Gross State Domestic Product
Source: CSO; GSDP growth rates have been calculated at 2004-05 prices.
IMaCS Analysis

Overall, the tertiary sector share has grown over the years, while the primary sector share has decreased between 2004-05 and 2010-11. The services sector, particularly, hotels, trade and restaurants, public administration and storage are the key drivers of tertiary share growth. In the coming years, other services such as education and healthcare are expected to play a key role in this sector.

FIGURE 2: GSDP DISTRIBUTION - PRIMARY, SECONDARY & TERTIARY SECTORS

(Rs Crore)
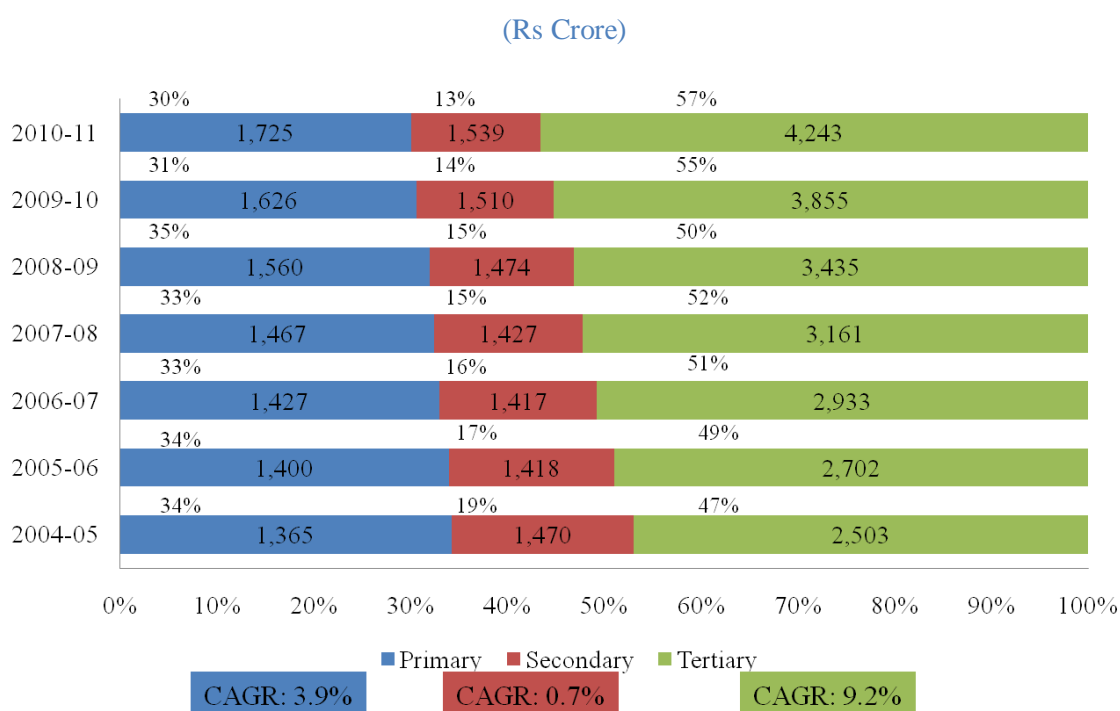
Source: Central Statistical Organisation; IMaCS Analysis

In value terms, agriculture, trade, hotels and restaurants and other services are the key drivers of the economy. Manufacturing dominates the secondary sector. Between 2004-05 and 2010-11, the distribution of the percentage shares has remained more or less constant.

FIGURE 3: CHANGE IN GSDP SHARES ACROSS ECONOMIC ACTIVITIES
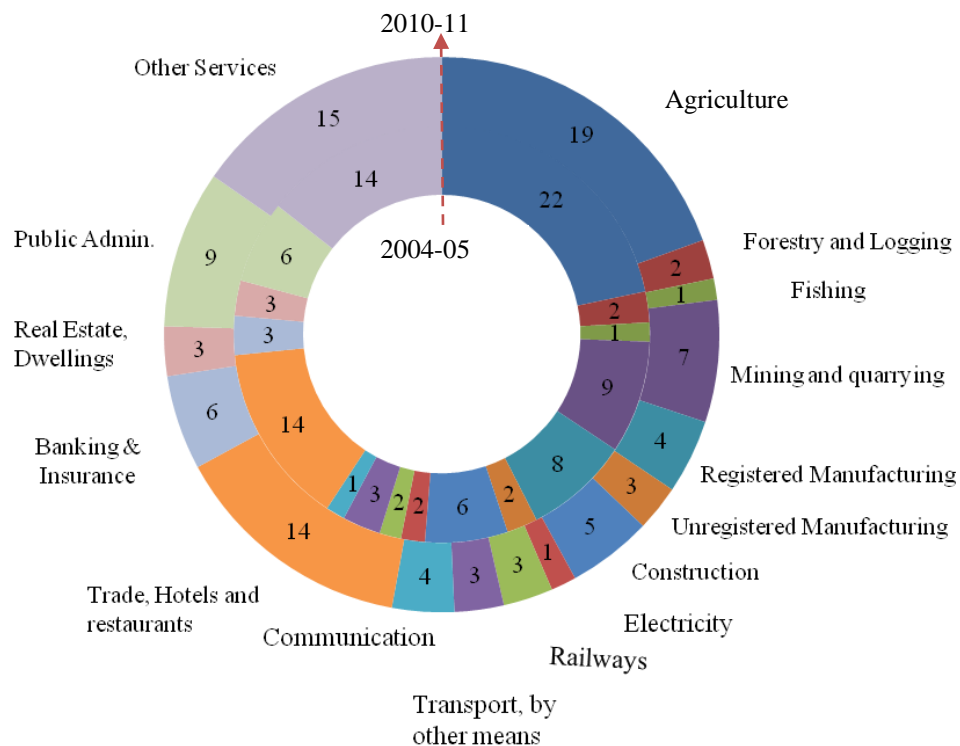
Source: Central Statistical Organisation; IMaCS Analysis
^Other services include education, medical and health, religious and other community services, legal services and entertainment service

Assam has 27 districts. Of these Sivsagar, Dibrugarh, Kamrup (M), Tinsukia, Kamrup, Nagaon, Jorhat and Cachar contribute to over 50 per cent to the GSDP.

FIGURE 4: GROSS DISTRICT DOMESTIC PRODUCT

(2007-08, Rs Lakh)
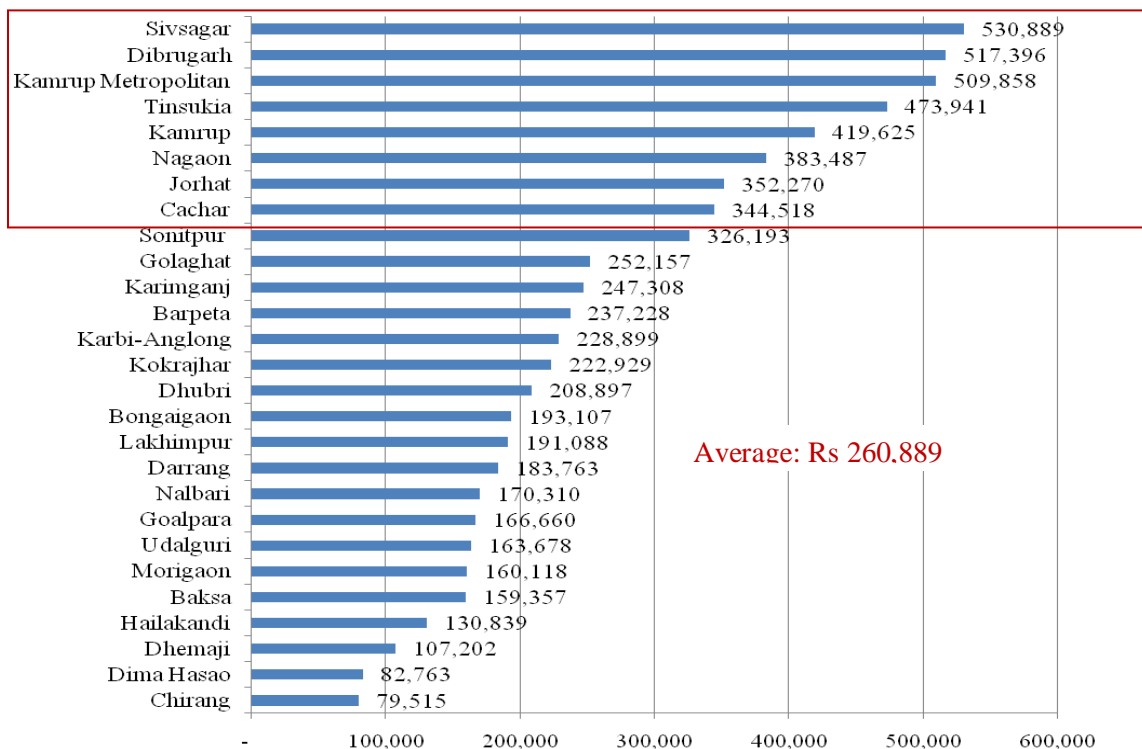
Source: IMaCS Analysis, Directorate of Economics and Statistics, Assam

FIGURE 5: PER CAPITA DDP OF ASSAM

Country / Region/ State	Per Capita Income, Rs, 2010-11
India	54,835
North East Region	49,506
Assam	24,769
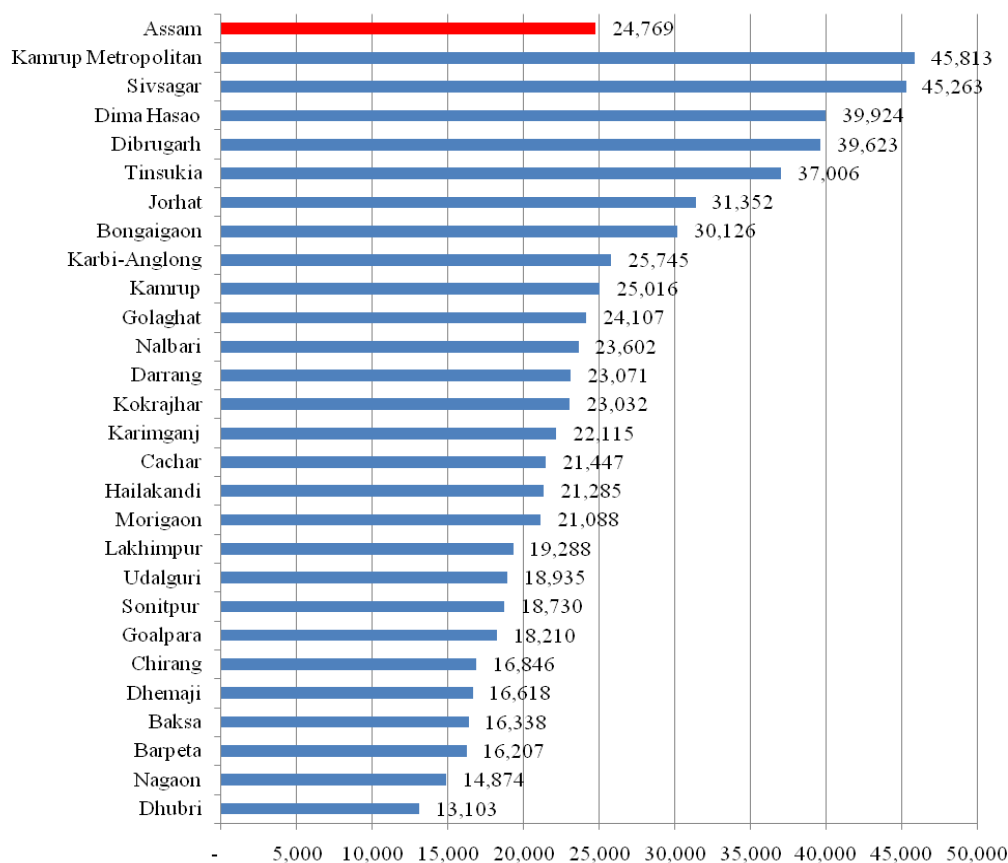
TABLE 2: PER CAPITA DDP COMPARISON

At current prices
Sources: Directorate of Economics and Statistics of Assam

4.2 Industrial Activity Overview

Assam Industrial Infrastructure Development Corporation (AIDC) was established for the purpose of rapid and orderly establishment of industries in industrial areas, industrial estates and growth centres. As compared to the other North Eastern States, Assam boasts of an impressive industrial infrastructure. The Assam Government has set up several industrial parks to facilitate growth.

TABLE 3: DETAILS OF INDUSTRIAL PARKS IN ASSAM

Infrastructure	Description
Software technology park	A software technology park has been set up at Guwahati, near the Lokpriya Gopinath Bordoloi International Airport, by the Software Technology Parks of India Limited (STPI).
Food processing park	The Government of India has sanctioned a food processing park with a total project cost of Rs. 5.95 crores. The park is being set up near Chaygaon in the district of Kamrup (rural). The implementing agency is Assam Small Industries Development Corporation Limited.
Agri-export zone for ginger	The Government of India has sanctioned an agri-export zone for the state, for fresh and processed ginger. The nodal agency for implementing this project is Assam Industrial Development Corporation Limited.
Biotech park	Considering the importance of biotechnology, an integrated park to provide all infrastructural and other related services, is being developed in Guwahati. The Guwahati Biotech Park would also undertake research activities in the area of biotechnology.
Export promotion industrial park EPIP	AIDC has implemented a 68.1 acre-EPIP at Amingaon, near Guwahati, in Kamrup district, at an estimated cost of Rs. 14.62 crores. In 2008, there were 37 companies and firms in the park, of which 17 were engaged in manufacturing activities.
Industrial growth centres	Industrial growth centres have been set up at Balipara in the Sonitpur district and Matia in Goalpara. The 700 acre-Matia industrial growth centre has a project cost of Rs. 22.00 crores. The 400 acre-Balipura industrial growth centre has a project cost of Rs. 25.44 crores.
Integrated infrastructure develop. centres (IIDC)	IIDCs have been set up at Balipara, Matia, Chaygaon, Dalgaon, Demow, Bhomoraguri, Malinibeel, Dahudi, Silapathar, Rangiya, Banderdewa and Titabor.
Border trade centres (BTC)	BTCs are located at Mankachar (Dhubri), Sutarkandi (Karimganj) and Darranga (Kamrup).

As reflected in Assam's GSDP contributions, there are a number of manufacturing units that contribute significantly to the employment in Assam. It has over 3,900 units that give employment to over 137,000 people. A majority are employed in the food products and beverage manufacturing units.

FIGURE 6: DISTRIBUTION OF REGISTERED MANUFACTURING UNITS

(2009)
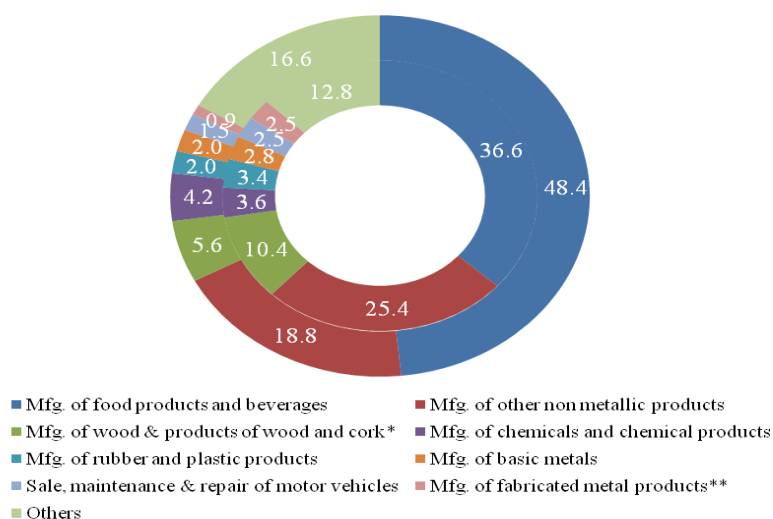
Source: IMaCS Analysis, Economic survey of Assam, 2010-11

Assam is also the state with the maximum number of SSIs. Cumulatively, as of 2009-2010, Assam had 32,984 SSIs, with an employment of 167,216 persons. Over 50 per cent of these SSIs are involved in engineering and textile based industries alone. Majority of these SSIs are concentrated in the Kamrup district. In the last 10 years, the number of registered manufacturing units has increased at a CAGR of 5.2 per cent, while the employment in the same has increased by 3.7 per cent.

FIGURE 7: SSI BY TYPE OF INDUSTRY
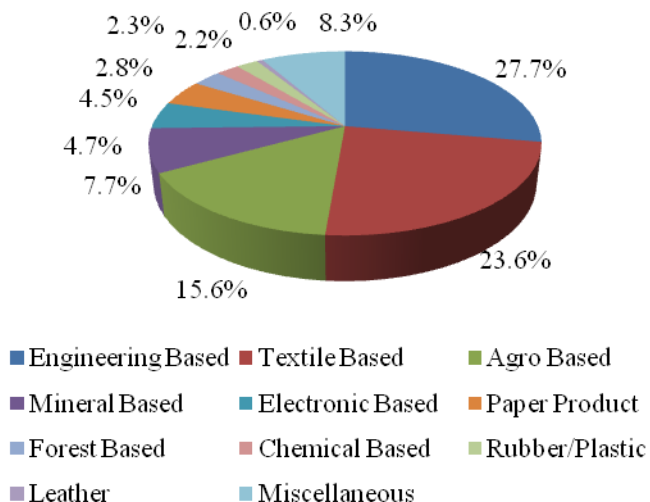
Note: In Assam, SSIs are classified into micro, small and medium (MSME) industries.
Sources: Economic Survey of Assam 2010-11

Assam has 0.98 million informal industry units which provide employment to 2.21 million people. Of these over 60 per cent are involved in activities related to retail trade and informal manufacturing.

FIGURE 8: OAEs AND ESTABLISHMENTS IN ASSAM
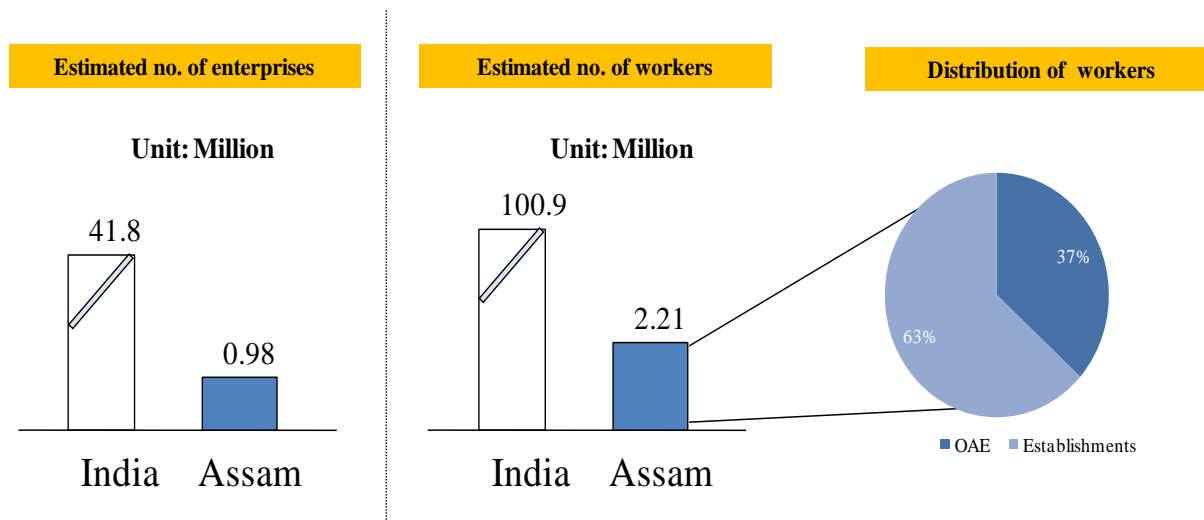
OAE: Own Account Enterprises
Source: Fifth Economic Census 2005

TABLE 4: DISTRIBUTION OF EMPLOYMENT IN ASSAM

District	Main Workers	Marginal Workers	Non-Workers	Working population as a % of total population
Kokrajhar	234,771	100,078	570,915	37.0%
Dhubri	399,201	71,159	1,166,984	28.7%
Goalpara	209,928	63,997	548,110	33.3%
Barpeta	408,537	108,551	1,130,113	31.4%
Bongaigaon	233,087	60,156	611,592	32.4%
Kamrup	697,810	144,443	1,680,071	33.4%
Nalbari	291,665	92,267	764,892	33.4%
Darrang	404,428	123,565	976,327	35.1%
Lakhimpur	288,052	209,693	391,265	56.0%
Dhemaji	155,431	94,715	321,798	43.7%
Tinsukia	349,847	116,504	683,711	40.6%
Dibrugarh	342,708	129,711	712,653	39.9%
Sivasagar	287,319	143,204	621,213	40.9%
Jorhat	285,092	129,256	584,873	41.5%
Golaghat	269,896	118,744	557,639	41.1%
Karbi Anglong	231,638	98,842	482,831	40.6%
Dima Hasao	35,031	15,168	117,880	37.3%
Cachar	364,814	100,920	979,187	32.2%
Karimganj	235,016	68,278	704,682	30.1%
Hailakandi	138,216	41,665	362,991	33.1%
Marigaon	200,132	62,692	513,432	33.9%
Nagaon	566,195	161,446	1,586,988	31.4%
Sonitpur	465,283	169,440	1,046,790	37.7%
Assam	**7,094,097**	**2,424,494**	**17,116,937**	**35.8%**

OAE: Own Account Enterprises
Source: Fifth Economic Census 2005

Pottery and beekeeping are the biggest employers in the Khadi and Village industries in Assam.

Figure 9: EMPLOYMENT IN KHADI AND VILLAGE INDUSTRIES

(2009)
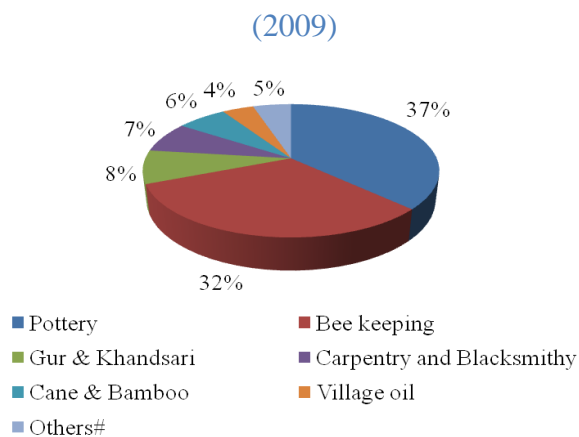
 # includes processing of cereals and pulses
Sources: Statistical Handbook of Assam, 2010

Thrust areas have been identified under the Industrial Policy of Assam, 2008-2013 which will provide local employment. These sectors/areas are:

- Multi-cropping
- Tea
- Plywood
- Agarwood oil
- Silk
- Bamboo
- Horticulture
- Food processing
- Oil/gas/coal
- Tourism

4.3 Demography and Employment Overview

Districts in Upper and Lower Assam cover over 57 per cent of Assam's land area, while their population share is over 66 per cent. The literacy of Assam is 73 per cent with the district of Kamrup (M) having a literacy of 88 per cent.

TABLE 5: POPULATION OVERVIEW OF ASSAM

District	Area share	Population*	Population share	Population density* (per sq km)	Rural as a % of total population	Male to Female* population	Percentage of tribal population	Towns	Inhabited villages	Literacy Rate*
Kokrajhar	4.0%	886,999	2.8%	280	93.9%	1.04	33.7%	3	1,014	66.6%
Dhubri	2.7%	1,948,632	6.3%	1,171	87.4%	1.05	1.9%	8	1,016	59.4%
Goalpara	2.3%	1,008,959	3.2%	553	91.9%	1.04	16.0%	3	761	68.7%
Barpeta	3.4%	1,693,190	5.4%	632	91.0%	1.05	7.5%	7	834	65.0%
Bongaigaon	2.2%	732,639	2.4%	425	84.3%	1.04	12.2%	4	593	70.4%
Chirang	2.5%	481,818	1.5%	244	93.9%	1.03	0.0%	2	409	64.7%
Kamrup	3.5%	1,517,202	4.9%	436	96.0%	1.06	9.9%	2	1,012	72.8%

District	Area share	Population*	Population share	Population density* (per sq km)	Rural as a % of total population	Male to Female* population	Percentage of tribal population	Towns	Inhabited villages	Literacy Rate*
Kamrup M	1.6%	1,260,419	4.0%	2010	19.4%	1.08		7	230	88.7%
Nalbari	1.3%	769,919	2.5%	763	96.1%	1.06	17.6%	2	449	79.9%
Baksa	2.6%	953,773	3.1%	475	100.0%	1.03	0.0%	0	692	70.5%
Darrang	1.8%	908,090	2.9%	491	94.7%	1.08	16.6%	2	571	64.6%
Udalguri	2.1%	832,769	2.7%	497	95.6%	1.04	0.0%	2	801	66.6%
Lakhimpur	2.9%	1,040,644	3.3%	457	92.7%	1.04	23.5%	2	1,139	78.4%
Dhemaji	4.1%	688,077	2.2%	213	93.2%	1.05	47.3%	3	1,236	69.1%
Tinsukia	4.8%	1,316,948	4.2%	347	80.5%	1.05	5.8%	10	1,107	70.9%
Dibrugarh	4.3%	1,327,748	4.3%	393	80.7%	1.05	7.5%	9	1,309	76.2%
Sivasagar	3.4%	1,150,253	3.7%	431	90.8%	1.05	7.9%	5	866	81.4%
Jorhat	3.6%	1,091,295	3.5%	383	82.9%	1.05	12.3%	7	787	83.4%
Golaghat	4.5%	1,058,674	3.4%	302	91.4%	1.04	9.9%	6	1,066	78.3%
Karbi Anglong	13.3%	965,280	3.1%	93	88.7%	1.05	55.7%	6	2,633	73.5%
Dima Hasao	6.2%	213,529	0.7%	44	68.4%	1.07	68.3%	4	605	79.0%
Cachar	4.8%	1,736,319	5.6%	459	86.1%	1.04	0.0%	7	1,020	80.4%
Karimganj	2.3%	1,217,002	3.9%	673	92.7%	1.04	0.3%	3	915	79.7%
Hailakandi	1.7%	659,260	2.1%	497	91.9%	1.06	0.2%	3	327	75.3%
Marigaon	2.0%	957,853	3.1%	618	95.1%	1.03	15.5%	2	592	69.4%
Nagaon	5.1%	2,826,006	9.1%	711	88.0%	1.04	3.8%	10	1,375	73.8%
Sonitpur	6.8%	1,925,975	6.2%	365	89.5%	1.06	11.6%	6	1,765	70.0%
Assam	*100.0%*	*31,169,272*	*100.0%*	*397*	*87.1%*	*1.05*	*12.4%*	*125*	*25,124*	*73.2%*

*Sources: *Census 2011; Census 2001.*
Source: Economic Survey of Assam 2010-11, Census 2011 provisional results

Around 56 per cent of Assam's population is in the working-age group and measures are being taken to tap the demographic dividend.

TABLE 6: WORKING AGE PROFILE OF ASSAM

District/Age group	0-14	15-59	60+	Others*	0-14	15-59	60+	Others*
Kokrajhar	360	499	46	1	39.7%	55.1%	5.1%	0.1%
Dhubri	699	848	89	1	42.7%	51.8%	5.4%	0.1%
Goalpara	339	437	43	1	41.3%	53.3%	5.2%	0.1%
Barpeta	661	882	102	3	40.1%	53.5%	6.2%	0.2%
Bongaigaon	356	496	52	1	39.3%	54.8%	5.7%	0.1%
Kamrup	832	1,541	144	4	33.0%	61.1%	5.7%	0.2%
Nalbari	401	671	76	1	34.9%	58.4%	6.6%	0.1%
Darrang	574	841	86	3	38.2%	55.9%	5.7%	0.2%
Lakhimpur	336	501	53	1	37.7%	56.2%	5.9%	0.1%
Dhemaji	227	312	30	-	39.9%	54.8%	5.3%	0.0%
Tinsukia	414	673	64	1	35.9%	58.4%	5.6%	0.1%
Dibrugarh	401	718	65	1	33.8%	60.6%	5.5%	0.1%
Sivasagar	348	637	63	2	33.1%	60.7%	6.0%	0.2%
Jorhat	321	615	62	1	32.1%	61.6%	6.2%	0.1%
Golaghat	338	558	51	1	35.7%	58.9%	5.4%	0.1%
Karbi Anglong	328	443	40	1	40.4%	54.6%	4.9%	0.1%
Dima Hasao	69	110	9	-	36.7%	58.5%	4.8%	0.0%
Cachar	516	831	97	1	35.7%	57.5%	6.7%	0.1%
Karimganj	389	549	69	1	38.6%	54.5%	6.8%	0.1%
Hailakandi	217	293	33	1	39.9%	53.9%	6.1%	0.2%
Marigaon	316	416	45	-	40.7%	53.5%	5.8%	0.0%
Nagaon	910	1,258	146	2	39.3%	54.3%	6.3%	0.1%
Sonitpur	619	968	93	1	36.8%	57.6%	5.5%	0.1%
Assam	**9,971**	**15,097**	**1,558**	**29**	**37.4%**	**56.6%**	**5.8%**	**0.1%**

Others-non-respondents; Note: (1) Data from Census 2001, (2) Does not include districts Kamrup metropolitan, Chirang, Baksa and Udalguri, as they were created after the 2001 Census.

Source: Statistical Handbook of Assam 2010

4.4 Infrastructure Overview

About 40 per cent of the roads in the state are all weather roads (black topped), 60 per cent of the roads are still earthen / gravel. Presence of large number of submersible stretches and nearly 4,000 semi-permanent timber bridges have hampered all weather road communication on many of the roads in the State.

FIGURE 10: ROAD LENGTH IN ASSAM

(Km, 2009)
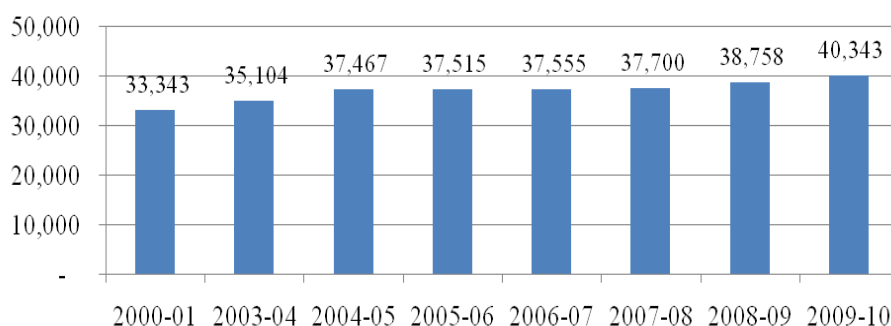
Sources: Statistical Handbook of Assam 2010

In 2008-09, the NEF Railways carried 50 million passengers, and ran across 424 stations. The railways run a number of interstate trains linking Guwahati and Dibrugarh with other important places of the country, such as Delhi, Kolkata, Mumbai, Chennai, and Bangalore. Inter-city trains link Guwahati with Nagaon Dibrugarh, Dimapur, Jorhat, Bongaigaon and Fakiragram, apart from daily trains between Lumding and Badarpur. Assam also has six airports. The Lokpriya Gopinath Bordoloi airport at Guwahati is an international airport.

The Directorate of Inland Water Transport of Assam operates water transport services on the rivers Brahmaputra and Barak on commercial basis. Assam's major river routes are the Brahmaputra and the Barak rivers with a combined navigable length of around 1,000 km. Seven port locations are operational in the state for import and export to the Kolkata and Haldia ports. The river Brahmaputra is known as the National Waterway No 2 (The Ganges is known as the National Waterway No 1). These services are used for the transportation of passengers and goods across the state and to West Bengal. In 2008, the cargo handling capacity of the fleet was nearly 10,000 million tonnes. Container Corporation of India Limited

(CONCOR) operates an inland container depot (ICD) at Amingaon, 10 km from Guwahati. Two bonded warehouses of CONCOR along with a private warehouse (total area of 6,400 sq m) operate from the ICD.

Assam is dependent on the central grid for 51 per cent of the power requirements. In 2009-2010, the total energy requirement in the state was 5,049 MU. Of this, 4,590 MU was met through own generation and through share in the Central sector plants. The state has achieved village electrification of 67 per cent.

Mobile telephony has grown rapidly in the state. As of March 2010, the state had over 87 lakh mobile phones. While BSNL accounted for 13 per cent of the mobile connections, other private players together accounted for the rest 87 per cent.

TABLE 7: TELEDENSITY IN ASSAM

	Telephone lines	% share	Tele density
Total	9,064,392	100%	30
Rural	4,759,338	53%	18
Urban	4,305,054	47%	97

Source: Statistical Handbook of Assam 2010

Assam's health infrastructure is inadequate. In 2009, there were 10,099 beds translating into 34 beds per lakh population. Number of medical and paramedical staff was 19,413. To improve the health status of the population of undeserved/uncovered area, the State Government has initiated the Public Private Partnership (PPP) mode. The State Government has launched a comprehensive fund of Rs 100 crore each for setting up of three medical colleges, alongside revamping PHCs all across the state.

TABLE 8: HEALTH INDICATORS

Health indicators, as of 2009	
Birth Rate	23.6
Death Rate	8.4
Infant Mortality Rate	61.0

As of September 2010, Assam had 47,666 schools. The medium of instruction at the school level is generally Assamese; however, some schools also use English as their medium of study. Most of these

schools mainly follow Secondary Education Board of Assam (SEBA). Students from other North Eastern states often migrate to Assam for receiving higher and technical education.

TABLE 9: SCHOOL EDUCATION INFRASTRUCTURE OF ASSAM

	Primary	Middle	High	Higher Secondary	Junior College
Institutions	30,054	11,038	5,506	851	217
Enrolment	2,298,928	1,739,082	1,085,506	175,108	58,855
Teachers	82,929	77,168	62,196	17,285	2,913
Teacher pupil ratio	28	23	17	10	20

Sources: Statistical Handbook of Assam 2010, as of Sep 2010

Most of the upcoming projects in Assam are cement, power or petrochemical based.

TABLE 10: UPCOMING PROJECTS IN ASSAM

Project	Promoter	Status
Power Plant, 750 MW, at Bongaigaon	NTPC	Under execution
Cement Plant, 0.45 mln tpa at Siali, Goalpara	Ultratuff Industries LLP	Planning
Petrochemical Plant, 220,000 TPA(Ethylene) 60,000 TPA (Propylene) at Dibrugarh	Brahmaputra Cracker & Polymer Limited (BCPL)	Under Execution
Bridge over Brahmaputra river to connect Phulbari, in West Garo Hills, and Dhubri, in Assam.	Ministry of Road Transport & Highways	Planning
Methanol plant at Namrup, capacity 5,000 tpd	Assam Petrochemicals (APL)	Under Execution
Community Health Centres in Bongaigaon, Dhubri and Nagaon	National Rural Health Mission	Planning
550 Tpd Clinker And 600 Tpd Cement Mfg Project, Kamrup	G M G Cement Industries	Planning
Expanding biscuits capacity from 14,711 tpa to 40,711 tpa at Boragaon, Gotanagar, Guwahati in Kamrup district	Sunrise Biscuit Company Pvt. Ltd.	Under Execution

Project	Promoter	Status
Printed books unit in Kamrup district	Bhabani Print & Publication Ltd	Planning
Wagons manufacturing unit at Amingaon, Guwahati in Kamrup	North East Frontier Railway	Under Execution
Water treatment plant at Sibasagar	Oil and Natural Gas Corporation	Planning
A 150,000 TPA coal washery at Ambhar, Kamrup	Pride Coke Pvt Ltd	Planning
A 1.6 MTPA cement grinding unit and a 10 MW ABFC based CPP at Mirza, Kamrup	Cement Manufacturing Co Ltd	Planning
Construction of directorate complex at Betkuchi, Guwahati	Government of Assam	Planning
A one-million-tonne cement plant at Umrangsu, North Cachar hills	Birla Corporation	Planning
Construction of substations at Kamrup and Sonitpur districts	Assam Electronics Devp. Cropn.	Planning
A 2.48 Mw Biogas Based Power Unit	Cleanopolis Energy Systems India	Under Execution

4.5 Key Findings from the Diagnostic Analysis

Macro-economic:

Assam's GSDP has increased at a CAGR of 5.8 per cent in the last six years. Tertiary sector has the biggest share in GSDP at 57 per cent, due to a high share of public administration. Manufacturing dominates the secondary sector. This reflects the changing face of Assam with more industrial units setting up base in the important centres in the state as a consequence of the North East Industrial and Investment Policy (NEIIP). Assam's economic activity is the maximum in the districts of Sivsagar, Kamrup (M), Kamrup, Tinsukia and Dibrugarh due to the presence of natural resources like oil and coal and the historical presence of industries in the same.

Industrial Activity:

There are 3,900 registered manufacturing units in Assam which are distributed across all the districts in Assam offering employment to around 1.4 lakh people. The majority of these units are involved in food processing sector. Informal sector plays a key role in the economy, providing employment to over 22 lakh people. Most of these are employed in public administration, retail trade and agricultural activities.

Demography:

Upper and Lower Assam are undergoing modernization with increased literacy rates in the districts in these parts, with Kamrup (M) having a literacy rate as high as 88 per cent. However, central Assam districts are largely agrarian with lower literacy rates. Close to 56 per cent of the State population is in the working age group, and over 37 per cent is in the age-group of 0 to 14 years. Overall, Assam has a 73 per cent literacy rate.

Government Policy:

The State Industrial Policy, released for the time frame 2008-13 has a few areas as thrust sectors. Out of those, oil, gas and tea have been traditionally present in Assam. Sectors like sericulture, *agarwood* and bamboo look for modernization which will also enhance establishment of market linkages. Other sectors like IT/ITeS, plywood, tourism look for enhancing the man power creation to take these sectors forward.

Infrastructure:

Assam has better infrastructure than most other states in the North East. Construction activity has picked up in the last few years and the Government is focusing on development of roads, railways and telecom infrastructure. Social infrastructure including health and education is mostly concentrated in Guwahati. Students prefer to move out for education either to Upper and Lower Assam to pursue education, with cities in Upper Assam like Jorhat being considered as the education capital of Assam. For vocational training, the State has nine polytechnics and 23 ITIs. The courses and trades offered are in line with domestic demand, which is much higher than the number of seats available in these institutes

4.6 SWOT Analysis of Assam

Strengths

- Better connectivity to other parts of the country – Gateway to NER
- Most industrially advanced in NER
- Rich in natural resources: oil & gas, limestone, coal, tea, coffee and rubber
- Rich flora and fauna
- Strong industrial infrastructure
- Railway connectivity
- Growing education and training

Opportunities

Investment & Employment opportunities:
- Oil & gas
- Cement and coal based industries
- Tourism and hospitality
- Construction and power
- Handloom & Handicraft
- Fisheries
- Horticulture, Tea and rubber
- IT/ITES, Healthcare, Education

Weaknesses

- Armed insurgency and conflict
- Poor supply of electricity
- Regular floods in the Brahmaputra river
- Low working population ratio
- Strong preference for government jobs among youth
- Inability to scale up traditional industries

Threats

- Strong competition from other states
- Security perception
- Transportation cost higher for NER
- Porous borders

PART – II (b): Identification of growth sectors

5.1 Criteria for selecting growth sectors

- Resident skills that will continue to be a source of employment generation in next 10 years – skill development required for enhancing competitiveness.

- Sectors with policy support from Central and State Government for expansion, training and marketing.

- Product is unique to the region or occurs abundantly because of factor advantages, but has just started to be exploited as an economic activity.

- Infrastructure investment required to support industrial and economic growth; investment which has started or is planned.

- Common service trades such as electricians, plumbers and repair mechanics – those which require service quality enhancement.

5.2 Framework for identifying growth engines
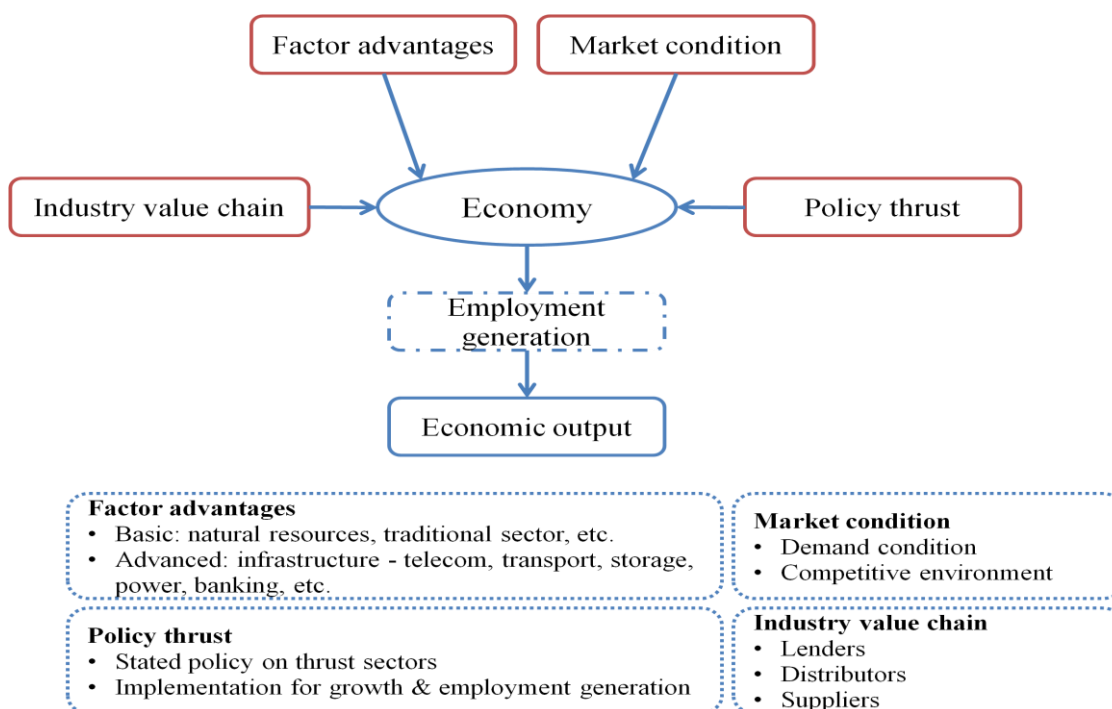
The above framework has been used to identify potential sectors where economic activities will create employment between 2011 and 2021.The growth engines for a state's economy are driven by the factor advantages within the state, market conditions, industry value chain available and Government policy support. These factors lead to growth in economic output which in turn determines the annual incremental employment opportunities within the state.

5.3 Identified sectors for livelihood opportunities

Based on the framework mentioned above, sectors have been identified for skilling and upgrading skills. These sectors are expected to provide employment opportunities in the coming 10 years. Sectors for domestic demand have been identified based on factor endowments, policy thrust, market potential, historical presence, availability of trained manpower, availability and quality of training centre, time taken to train and employment opportunities.

TABLE 11: DOMESTIC DEMAND IN ASSAM

Sector	Factor endowments	Policy Thrust	Market Potential	Historical Presence	Availability and quality of training Centre	Time taken to train*	Employment opportunities**
Livelihood Opportunities							
Agriculture	√	√	√	√	×	Low	-
Fishery	√	×	√	√	×	Low	-
Animal Husbandry	√	√	√	√	×	Low	-
Sectors for domestic demand							
Sericulture	√	√	√	√	√	Medium	High
Handicrafts	√	√	√	√	√	Medium	Medium
Horticulture	√	√	√	√	×	High	High
Tea	√	√	√	√	√	High	High
Food Processing	√	√	√	×	×	Low	High
Hospitality	√	√	√	√	√	Medium	Low
IT/ITES	×	√	√	×	×	High	Medium
Forest based, bamboo	√	√	√	√	×	Low	High
Oil, gas and plastic	√	√	√	√	×	High	High

Sector	Factor endowments	Policy Thrust	Market Potential	Historical Presence	Availability and quality of training Centre	Time taken to train*	Employment opportunities**
Construction	√	√	√	√	×	Low to Medium	High
Healthcare	√	√	√	×	×	Medium to High	Low
Other services: Motor Repair	√	×	√	×	×	Low	Low to High

* Low: Up to one year; Medium: One to two years; High: More than two years. ** Low: Incremental employment potential of 0 to 1,500 persons; Medium: 1500 to 3,000 persons; High: More than 3,000
Source: IMaCS Analysis

5.4 Identified sectors for migration

Sectors for migration have been identified based on natural aptitude, youth aspiration, market potential, availability of trained manpower, availability and quality of training centre and time taken to train

TABLE 12: MIGRATION OPPORTUNITIES IN ASSAM

Sector	Natural aptitude	Youth aspiration	Market Potential	Availability and quality of training Centre	Time taken to train*
Sectors for Migration					
Beauty and Wellness	√	√	√	√	Low to Medium
Hospitality	√	√	√	√	Medium to High
IT / ITES	×	√	√	√	Medium to High
Retail Services	√	√	√	×	Low
Music	√	√	√	×	Medium to High
Sports	√	√	√	×	Medium to High
Fashion Designing	√	√	√	×	High
Flight attendants	×	√	√	×	Medium to High
Ground staff at the airports	×	√	√	×	Low to Medium

Sector	Natural aptitude	Youth aspiration	Market Potential	Availability and quality of training Centre	Time taken to train*
Healthcare	×	√	√	×	Medium to High
Language Skills	√	√	√	×	Low to Medium
Trainers	√	√	√	×	Medium to High

* Low: Up to one year; Medium: One to two years; High: More than two years.
Source: IMaCS Analysis

5.5 Type of skilling required in identified sectors

The identified sectors require skilling across three categories viz. Speciality, New skills or Skill up gradation.

TABLE 13: TYPE OF SKILLING

Sectors	Specialty skills	New skills	Skill up-gradation
Livelihood opportunities			
Agriculture			✓
Fishery		✓	✓
Animal Husbandry		✓	✓
Sectors for domestic demand			
Handloom and Handicraft	✓	✓	✓
Horticulture		✓	✓
Food Processing		✓	✓
Hospitality		✓	
IT/ITES	✓		✓
Forest based products	✓	✓	
Construction	✓		
Tea	✓	✓	✓
Oil, gas and plastic	✓	✓	✓

Sectors	Specialty skills	New skills	Skill up-gradation
Healthcare	✓	✓	✓
Others including motor repair	✓	✓	✓

Specialty skills: technical or specific knowledge base essential
New skills: training centres largely non-existent
Skill-up-gradation: outdated techniques and knowledge base
Source: IMaCS Analysis

5.6 Type of skilling required in sectors identified for migration

As done for the domestic demand, the migration sectors also can be skilled for Speciality, New skilling or Skill up gradation.

TABLE 14: TYPE OF SKILLING REQUIRED

Sectors	Specialty skills	New skills	Skill up-gradation
Sectors for migration			
Beauty and Wellness	✓	✓	✓
Hospitality		✓	✓
IT / ITES		✓	✓
Retail Services		✓	✓
Music		✓	✓
Sports		✓	✓
Fashion Designing	✓	✓	✓
Flight attendants		✓	✓
Ground staff at the airports		✓	✓
Healthcare	✓	✓	✓
Language Skills		✓	✓
Trainers		✓	✓

Specialty skills: technical or specific knowledge base essential
New skills: training centres largely non-existent
Skill-up-gradation: outdated techniques and knowledge base
Source: IMaCS Analysis

PART – II (c): District level analysis of Assam

6.1 Barpetta

Barpeta district is known for its bell metal traditional work and Shaivaite shrines which bear religious importance.

6.1.1 Economy

The GDDP of Barpetta was Rs 237,228 lakh as of 2007-08. The per capita DDP was Rs 16,207. Barpetta has one of the lowest per capita DDP in Assam. In fact, Barpetta is listed as one of the 250 most backward districts in India which receives Government aid.

6.1.2. Demography

Barpeta was carved out of the Kamrup district in 1983 and is bounded by Bhutan in north, Nalbari in east, Kamrup in south and Bongaigaon in west. The population is 1,693,190 and the literacy rate is 65 per cent. Barpeta is one of the districts with the lowest literacy rates in Assam.

6.1.3 Infrastructure

Barpeta has 1,050 villages. The fact that only about 50 per cent of the villages in the district are provided with electricity is one of the main contributors to the poor economic activity in Barpeta.

TABLE 15: SOCIAL INFRASTRUCTURE OF BARPETA

Facilities	Number of villages
Drinking water facilities	1 ,050
Safe drinking water	1 ,045
Electricity supply	775
Electricity – domestic	768
Electricity – agriculture	41

Source: Census 2001, IMaCS Analysis

TABLE 16: EDUCATION INFRASTRUCTURE OF BARPETA

Type of Institute	Number of villages
Primary school	927
Middle schools	603
Secondary/Sr Secondary schools	327
College	36

Source: Census 2001, IMaCS Analysis

6.1.4 Employment pattern

Barpeta is predominantly a rural economy with non-workers at a whopping number of 1,130,113. The main workers are involved in agriculture and handicrafts production. The number of main workers was 408,537, marginal workers are 108,551.

FIGURE 11: EMPLOYMENT PATTERN OF BARPETA
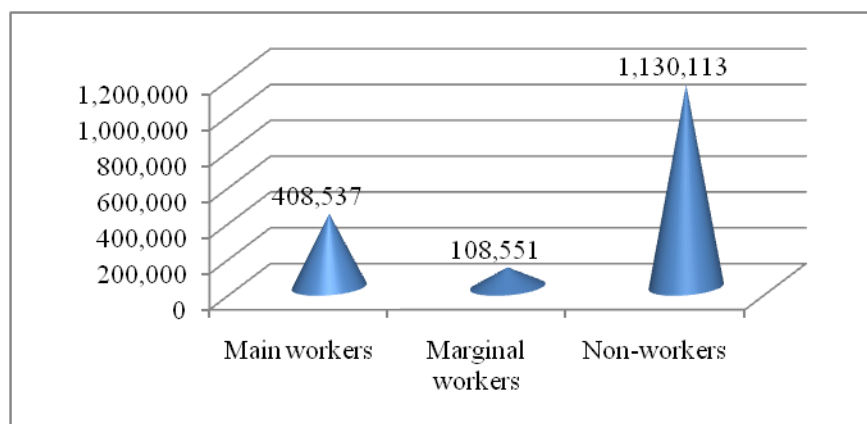
Source: Census 2001, IMaCS Analysis

6.1.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handloom and handicrafts

- Barpeta has a strong presence of traditional handicrafts and the bell metal products of Sarthebari town are quite famous within the State.
- However, products need to be marketed aggressively outside in North and North East India.

Horticulture

- The climate is conducive for large scale exploitation of pineapple and bananas in horticulture.

6.2 Bongaigaon

The Bongaigaon district is home to one of the major petrochemical industries of Assam, the Indian Oil Corporation. In 2004, the Chirang district was also carved out of Bongaigaon.

6.3.1 Economy

The GDDP of Bongaigaon was Rs 193,107 lakh, as of 2007-08. The per capita DDP was Rs 30,126. In 2006, the Government of India named Bongaigaon one of the country's 250 most backward districts. It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.3.2 Demography

Bongaigaon district has an area of 2,510 sq km. It is surrounded by Barpeta in the east, the Brahmaputra in the south and Kokrajhar in the north. According to the Census 2011, Bongaigaon district has a population of 732,639 and a literacy rate of 70.4 per cent.

6.2.3 Infrastructure

Bongaigaon has 1050 villages. In terms of infrastructure of safe drinking water and the electricity penetration, Bongaigaon is ahead of most districts in Assam due to the presence of IOCL.

TABLE 17: SOCIAL INFRASTRUCTURE OF BONGAIGAON

Facilities	Number of villages
Drinking water facilities	1,050
Safe drinking water	1,045
Electricity supply	775
Electricity – domestic	768
Electricity – agriculture	41

Source: Census 2001, IMaCS Analysis

TABLE 18: EDUCATION INFRASTRUCTURE OF BONGAIGAON

Type of Institute	Number of villages
Primary school	927
Middle schools	603
Secondary/Sr Secondary schools	327
College	36

Source: Census 2001, IMaCS Analysis

6.2.4 Employment pattern

Bongaigaon is also agrarian economy but the presence of IOCL has generated employment in alternate sectors. The number of main workers was 233,087 and non workers are 611,592. The marginal workers are 60,156.

FIGURE 12: EMPLOYMENT PATTERN OF BONGAIGAON
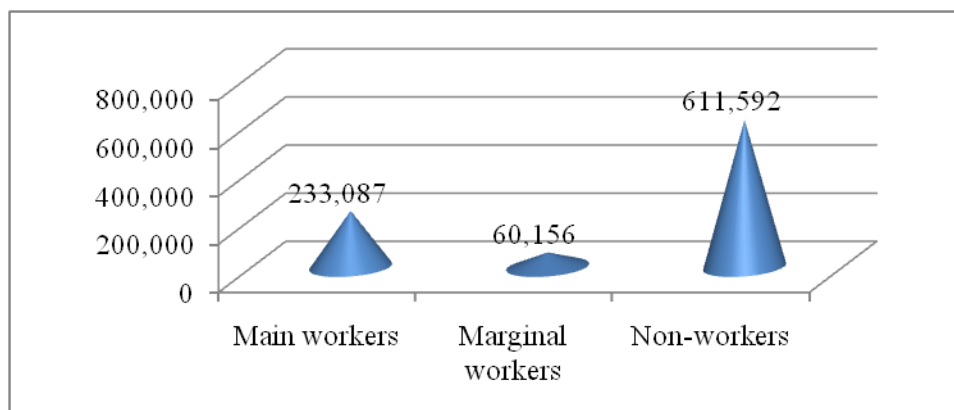
Source: Census 2001, IMaCS Analysis

6.2.5 Potential sectors in district
Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Horticulture

- The climate is conducive for large scale exploitation of pineapple and bananas in horticulture.

Tourism Circuit

- The Manas natural park lies in the northern part of this district.
- Bongaigaon is also home to beautiful vistas which have to be developed to provide employment to local population.

6.3 Cachar

Cachar district is historically one of the most significant districts. The contribution of the citizens for the Indian freedom struggle has given Cachar a special place in history.

6.3.1 Economy

The GDDP of Cachar was Rs 344,518 lakh, as of 2007-08. The per capita DDP was Rs 21,447. In 2006, the Government of India named Cachar one of the country's 250 most backward districts. It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.3.2 Demography

Cachar district has an area of 3,786 sq km. The district headquarters of Cachar is Silchar which is an important town in Assam equipped with an airport. According to the Census 2011, Cachar district has a population of 1,736,319 and literacy rate of 80.36 per cent.

6.3.3 Infrastructure

Cachar has 1,020 villages. In terms of infrastructure, Cachar is one the districts that are ahead due to gaining district hood early. Cachar is also equipped with an airport at Silchar, whose capacity has to be expanded.

TABLE 19: SOCIAL INFRASTRUCTURE OF CACHAR

Facilities	Number of villages
Drinking water facilities	1,020
Safe drinking water	945
Electricity supply	741
Electricity – domestic	715
Electricity – agriculture	52

Source: Census 2001, IMaCS Analysis

TABLE 20: EDUCATION INFRASTRUCTURE OF CACHAR

Type of institution	Number of villages
Primary school	902
Middle schools	381
Secondary/Sr Secondary schools	155
College	17

Source: Census 2001, IMaCS Analysis

6.3.4 Employment pattern

Predominantly, people are engaged in agriculture and pursue traditional handicrafts and handlooms. The number of main workers was 364,814 and non workers are 979,187. The marginal workers are at a number of 100,920

FIGURE 13: EMPLOYMENT PATTERN OF CACHAR
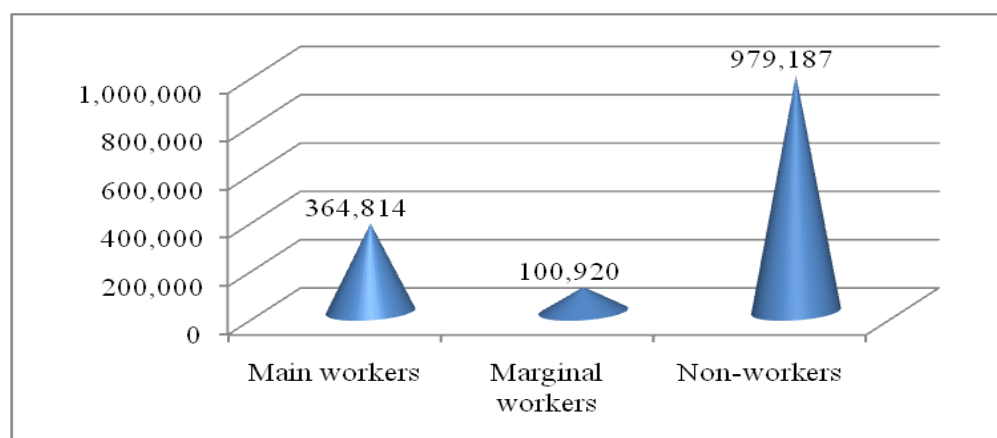
Source: Census 2001, IMaCS Analysis

6.3.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Cachar has to be ramped up to make it economically prosperous
- Construction for enhanced road network and development of hospitality infrastructure is the main focus for skilling

Horticulture

- The climate is conducive for large scale exploitation of pineapple and bananas in horticulture.

Tourism Circuit

- Cachar is rich in wildlife with many exotic species being found
- The southern part of Cachar is thus home to the Dhaleswari wildlife sanctuary where local guides are required.

6.4 Darrang

Darrang district is known for its food processing units with Brittania and Horlicks plants located there. Darrang was a big district that had Sonitpur carved out of it. In 2004 the district of Udalguri was also carved out of it.

6.4.1 Economy

The GDDP of Darrang was Rs 183,763 lakh, as of 2007-08. The per capita DDP was Rs 23,071. Other than food processing, agriculture and traditional handicrafts and handlooms, Darrang doesn't have any big industries.

6.4.2 Demography

Darrang district has an area of 3,481 sq km. The district headquarters of Darrang is Mangaldoi. According to the Census 2011, Darrang district has a population of 908,090 and literacy rate of 64.55 per cent.

6.4.3 Infrastructure

Darrang has 1,319 villages. In terms of infrastructure, Darrang has good road network due to its proximity to Guwahati.

TABLE 21: SOCIAL INFRASTRUCTURE OF DARRANG

Facilities	Number of villages
Drinking water facilities	1,319
Safe drinking water	1,280
Electricity supply	1,032
Electricity – domestic	1,023
Electricity – agriculture	11

Source: Census 2001, IMaCS Analysis

TABLE 22: EDUCATION INFRASTRUCTURE OF DARRANG

Type of Institute	Number of villages
Primary school	1,246
Middle schools	457
Secondary/Sr Secondary schools	196
College	12

Source: Census 2001, IMaCS Analysis

6.4.4 Employment pattern

Predominantly, people are engaged in agriculture and pursue traditional handicrafts and handlooms and food processing. There are 404,428 main workers and non workers are 976,327. The number of marginal workers was 123,565.

FIGURE 14: EMPLOYMENT PATTERN OF DARRANG
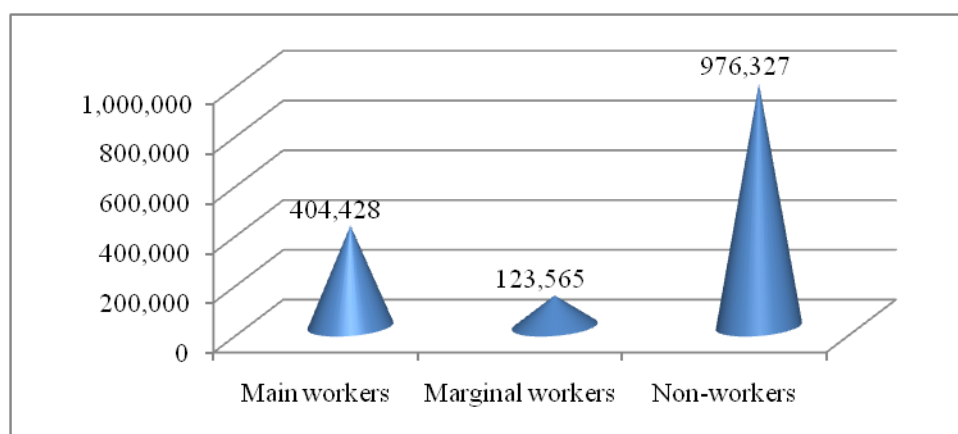
Source: Census 2001, IMaCS Analysis

6.4.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Darrang has to be ramped up to make it economically prosperous
- Construction to aid the food processing industry is especially required

Horticulture

- The climate is conducive for large scale exploitation of pineapple and bananas in horticulture.

Food processing

- Darrang has established food processing units that can be expanded
- The local population is also interested in food processing careers.

6.5 Dhemaji

It is one of the remotest districts of Assam. From Guwahati, it takes about 10-12 hours by road to reach Dhemaji. It is also a flood-prone district.

6.5.1 Economy

The GDDP of Dhemaji was Rs 107,202 lakh as of 2007-08. The per capita DDP was Rs 16,618. Other than fishing, agriculture and traditional handicrafts and handlooms, Dhemaji doesn't have any big industries.

In 2006, the Government of India named Dhemaji one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme

6.5.2 Demography

Dhemaji district has an area of 3,217 sq km. The district headquarters is Dhemaji town. According to the Census 2011, Dhemaji district has a population of 688,077 and literacy rate of 69.07 per cent.

6.5.3 Infrastructure

Dhemaji has 1,236 villages. In terms of infrastructure, Dhemaji is one the poorest. Power supply has penetrated to hardly 20 per cent of the villages and no village has electricity for agriculture. The education infrastructure also has to be built but, could be a challenge due to its remoteness. The road network is poor in Dhemaji and often is affected by the floods.

TABLE 23: SOCIAL INFRASTRUCTURE OF DHEMAJI

Facilities	Number of villages
Drinking water facilities	1.236
Safe drinking water	1,235
Electricity supply	253
Electricity – domestic	253
Electricity – agriculture	-

Source: Census 2001, IMaCS Analysis

TABLE 24: EDUCATION INFRASTRUCTURE OF DHEMAJI

Facilities	Number of villages
Primary school	1,068
Middle schools	505
Secondary/Sr Secondary schools	172
College	19

Source: Census 2001, IMaCS Analysis

6.5.4 Employment pattern

Dhemaji has 321,798 non workers. The number of main workers is 155,431 and marginal workers 94,715. Predominantly, people are engaged in agriculture and pursue traditional handicrafts and handlooms.

FIGURE 15: EMPLOYMENT PATTERN OF DHEMAJI
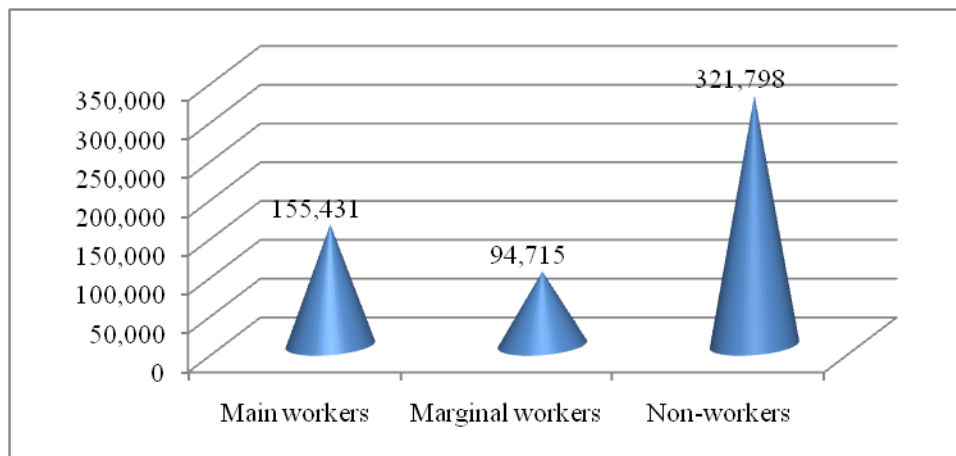
Source: Census 2001, IMaCS Analysis

6.5.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Dhemaji has to be ramped up to make it economically prosperous
- Efforts are especially required in road network construction
- This translates to more jobs in the construction sphere.

Handloom and handicrafts

- Dhemaji has sericulture as one of the traditional crafts. Capacity has to be built in this to include more designs in the weavers' repertoire.
- The weaves of Dhemaji district are sold at the NEDFi Haat in Guwahati

6.6 Dhubri

Dhubri is one of the main centre of Jute in Assam and is the second most populous district after Nagaon. It is also home to the Chakrashila sanctuary. Dhubri is mainly driven by agriculture and forest based sectors.

6.6.1 Economy

The GDDP of Dhubri was Rs 208,897, as of 2007-08. The per capita DDP was Rs 13,103 lakh. Other than forest based, agriculture and traditional handicrafts and handlooms, Dhubri doesn't have any big industries. In fact, Dhubri has the lowest per capita DDP of Assam due to its high population and low industrial activity.

6.6.2 Demography

Dhubri district has an area of 2,838 sq km. The district headquarters is Dhubri town. Dhubri has an airport at Rupshi which is about 23 km away from the town but is not in operation. It had a port, which is also

defunct now. According to the Census 2011, Dhubri district has a population of 1,948,632 and literacy rate of 59.4 per cent.

6.6.3 Infrastructure

Dhubri has 1261 villages. In terms of infrastructure, Dhubri is one the poorest. The airport of Rupshi and port have to be reinstated to encourage the economic growth.

TABLE 25: SOCIAL INFRASTRUCTURE OF DHUBRI

Facilities	Number of villages
Drinking water facilities	1,261
Safe drinking water	1,247
Electricity supply	904
Electricity – domestic	897
Electricity – agriculture	11

Source: Census 2001, IMaCS Analysis

TABLE 26: EDUCATION INFRASTRUCTURE OF DHUBRI

Type of institute	Number of villages
Primary school	1,138
Middle schools	612
Secondary/Sr Secondary schools	205
College	6

Source: Census 2001, IMaCS Analysis

6.6.4 Employment pattern

The number of main workers is 399,201 and marginal workers 71,159. Predominantly, people are engaged in forest-based industries, agriculture and pursue traditional handicrafts and handlooms. The number of non-workers was 1,166,984.

FIGURE 16: EMPLOYMENT PATTERN OF DHUBRI
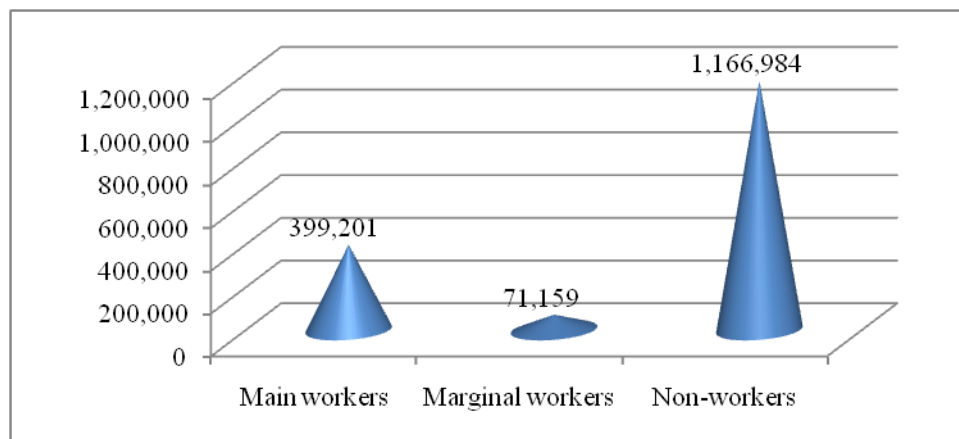
Source: Census 2001, IMaCS Analysis

6.6.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Dhubri has to be ramped up to make it economically prosperous
- Construction is especially required in making Rupshi airport functional
- This translates to more jobs in the construction sphere.

Handlooms and handicrafts

- Dhubri's terracotta products are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.7 Dibrugarh

Dibrugarh is known for oil and tea. In fact, Dibrugarh has the largest area under tea in the world. The entire district is covered with tea plantations and factories.

6.7.1 Economy

The GDDP of Dibrugarh was Rs 517,316 lakh, as of 2007-08. The per capita DDP was Rs 39,623. Dibrugarh is one of the top eight districts that contribute to over 50 per cent of Assam's DDP.

Tea and oil are the major revenue earners for the district. The entire district has many oil and natural gas rigs owned by the Oil India Limited and Oil and Natural Gas Commission.

6.7.2 Demography

Dibrugarh district occupies an area of 3,381sq km. The district headquarters of Dibrugarh is Dibrugarh town which is one of the industrial hubs of Assam. Dibrugarh has an airport which has flights from all major carriers. According to the Census 2011, Dibrugarh district has a population of 1,327,748 and literacy rate of 76.2 per cent.

6.7.3 Infrastructure

Dibrugarh has 1390 villages. Dibrugarh also has an airport which has major carriers operating. Due to the presence of major PSUs, it has good infrastructural development.

TABLE 27: SOCIAL INFRASTRUCTURE OF DIBRUGARH

Facilities	Number of villages
Drinking water facilities	1,309
Safe drinking water	1,309
Electricity supply	1,195
Electricity – domestic	1,169
Electricity – agriculture	30

Source: Census 2001, IMaCS Analysis

TABLE 28: EDUCATION INFRASTRUCTURE OF DIBRUGARH

Type of institutions	Number of villages
Primary school	1,169
Middle schools	382
Secondary/Sr Secondary schools	177
College	9

Source: Census 2001, IMaCS Analysis

6.7.4 Employment pattern

Dibrugarh is a one of the most industrially advanced districts of Assam due to the presence of natural resources. Also historically, Dibrugarh has been accessible due to early provision of railways by the Britishers for the tea plantations. The number of main workers was 342,708 and marginal workers are 129,711. The number of non workers was 712,653.

FIGURE 17: EMPLOYMENT PATTERN OF DIBRUGARH
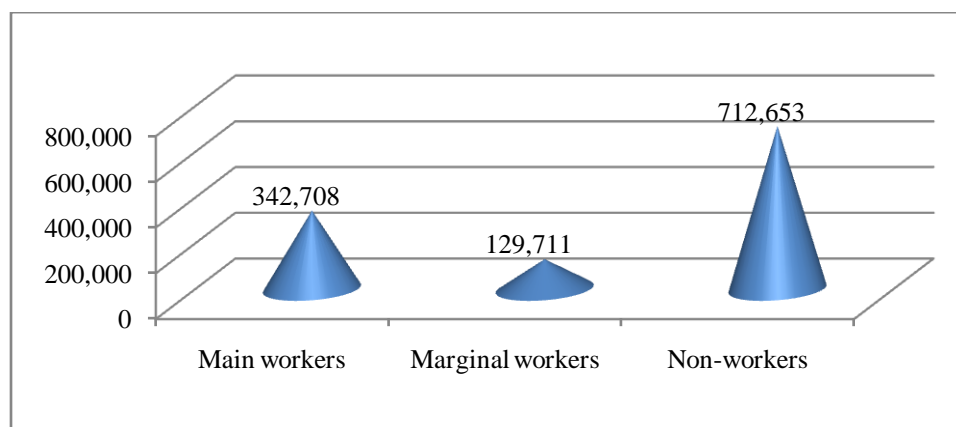
Source: Census 2001, IMaCS Analysis

6.7.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Tea

- The number of small tea growers have increased in Dibrugarh

- This is due to the favourable land and number of plantation employees who have set up the new small gardens.
- Small tea growers need to be skilled in modern methods associated with tea cultivation

Plastic

- Dibrugarh will have a plastic park by 2012-13
- This will give room for the local to have opportunities in the operation of the plastic park

6.8 Goalpara

Goalpara is a religiously significant place with Sri Surya Pahar, a Shaivaite landmark with 99,999 lingas. Other than this religious attraction, Goalpara is an agrarian economy.

6.8.1 Economy

The GDDP of Goalpara was Rs 166,660 lakh, as of 2007-08. The per capita DDP was Rs 18,210. In 2006, the Government of India named Goalpara one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.8.2 Demography

Goalpara district has an area of 1,824 sq km. The district headquarters is Goalpara town which is one of the industrial hubs of Assam. According to the Census 2011, the district has a population of 1,008,959 and literacy rate of 68.7 per cent.

6.8.3 Infrastructure

Goalpara has 761 villages. In terms of infrastructure, electricity has penetrated to most of the villages and if this is extended to agriculture also, Goalpara could well be on the path to economic prosperity. Goalpara has poor road infrastructure.

TABLE 29: SOCIAL INFRASTRUCTURE OF GOALPARA

Facilities	Number of villages
Drinking water facilities	761
Safe drinking water	759
Electricity supply	689
Electricity – domestic	688
Electricity – agriculture	1

Source: Census 2001, IMaCS Analysis

TABLE 30: EDUCATION INFRASTRUCTURE OF GOALPARA

Type of institute	Number of villages
Primary school	723
Middle schools	311
Secondary/Sr Secondary schools	130
College	13

Source: Census 2001, IMaCS Analysis

6.8.4 Employment pattern

The number of main workers was 209,828, marginal workers 63,997 and non workers 548,110. People are mainly dependant on agriculture.

FIGURE 18: EMPLOYMENT PATTERN OF GOALPARA
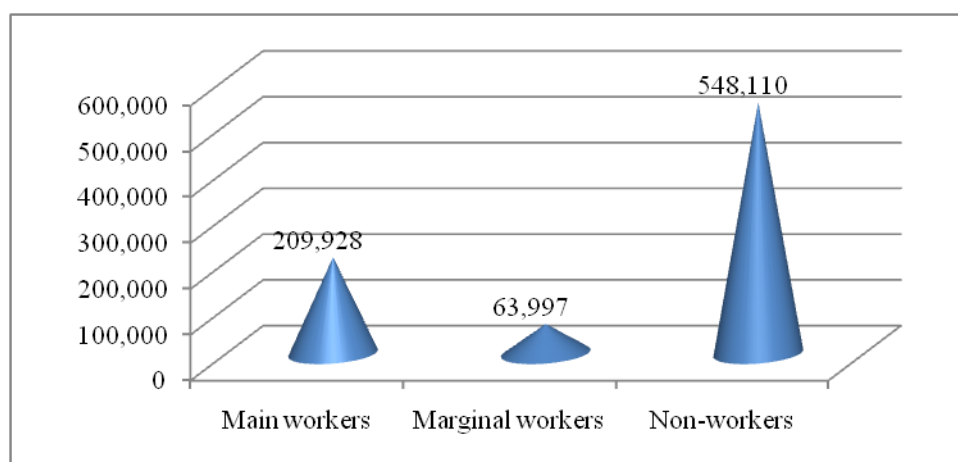
Source: Census 2001, IMaCS Analysis

6.8.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Goalpara's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.9 Golaghat

Golaghat is home to the world renowned Kaziranga National park. The district has come into limelight after the prominence gained by this Park.

6.9.1 Economy

The GDDP of Golaghat was Rs 252,157 lakh, as of 2007-08. The per capita DDP was Rs 24,107. The economy of Golaghat district is agriculture-based. Tea, rice and sugar cane are the main agricultural crops grown in the district, with tea being is the largest agricultural sector. There are 63 large tea gardens producing about 20,000 tonnes of tea per year. Moreover, the emergence of small tea growers has proclaimed a new improvement in the district. The only big industry in the district is the Numaligarh Refinery.

6.9.2 Demography

Golaghat district occupies an area of 3,502 sq km. The district headquarters of Golaghat is Golaghat town which is one of the industrial hubs of Assam. According to the Census 2011, Golaghat district has a population of 1,058,674 and literacy rate of 78.3 per cent.

6.9.3 Infrastructure

Golaghat has 1,066 villages. In terms of infrastructure, Golaghat is better equipped with electricity in 50 per cent of the villages. The agricultural electrification has penetrated to 14 villages.

TABLE 31: SOCIAL INFRASTRUCTURE OF GOLAGHAT

Facilities	Number of villages
Drinking water facilities	1,066
Safe drinking water	1,064
Electricity supply	595
Electricity – domestic	575
Electricity – agriculture	14

Source: Census 2001, IMaCS Analysis

TABLE 32: EDUCATION INFRASTRUCTURE OF GOLAGHAT

Type of institute	Number of villages
Primary school	769
Middle schools	305
Secondary/Sr Secondary schools	139
College	23

Source: Census 2001, IMaCS Analysis

6.9.4 Employment pattern

The number of main workers was 269,896, marginal workers are 118,744 and non workers are 557,639.

People are mainly dependent on agriculture in Golaghat.

FIGURE 19: EMPLOYMENT PATTERN OF GOLAGHAT
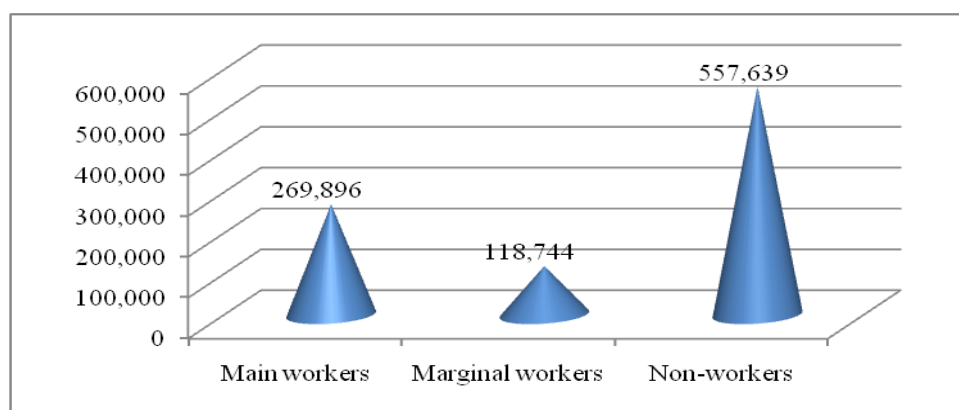
Source: Census 2001, IMaCS Analysis

6.9.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Golaghat has to be ramped up to make it economically prosperous
- Construction has to channelized towards increasing the tourism infrastructure
- This translates to more jobs in the construction sphere.

Handlooms and handicrafts

- Golaghat's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Tourism

- The presence of Kaziranga can be used to build more tourism infrastructure in the district to give opportunities to the local people

6.10   Hailakhandi

Hailakhandi became a district in 1989, when it was split from Cachar district. As of 2011 it is the third least populous district of Assam, after North Cachar Hills district and Chirang.

6.10.1 Economy

The GDDP of Hailakhandi was Rs 130,839 lakh, as of 2007-08. The per capita DDP was Rs 21,285. In 2006, the Government of India named Hailakandi one of the country's 250 most backward districts (out of a total of 640).It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.10.2 Demography

Hailakhandi district occupies an area of 1,326 sq km. Hailakhandi town is the district headquarters. According to the Census 2011, Hailakhandi district has a population of 659,260 and literacy rate of 75.3 per cent.

6.10.3 Infrastructure

Hailakhandi has 327villages. In terms of infrastructure, Hailakhandi is better equipped with electricity in 70 per cent of the villages. The agricultural electrification has penetrated to 14 villages. The road network has to be improved in Hailakhandi.

TABLE 33: SOCIAL INFRASTRUCTURE OF HAILAKHANDI

Facilities	Number of villages
Drinking water facilities	327
Safe drinking water	308
Electricity supply	268
Electricity – domestic	263
Electricity – agriculture	14

Source: Census 2001, IMaCS Analysis

#### TABLE 34: EDUCATION INFRASTRUCTURE OF HAILAKHANDI

Type of institute	Number of villages
Primary school	**308**
Middle schools	206
Secondary/Sr Secondary schools	60
College	-

Source: Census 2001, IMaCS Analysis

6.10.4 Employment pattern

The number of main workers was 138,216, marginal workers are 41,665 and non workers are 362,991. The people are mainly dependant on agriculture

FIGURE 20: EMPLOYMENT PATTERN OF HAILAKHANDI
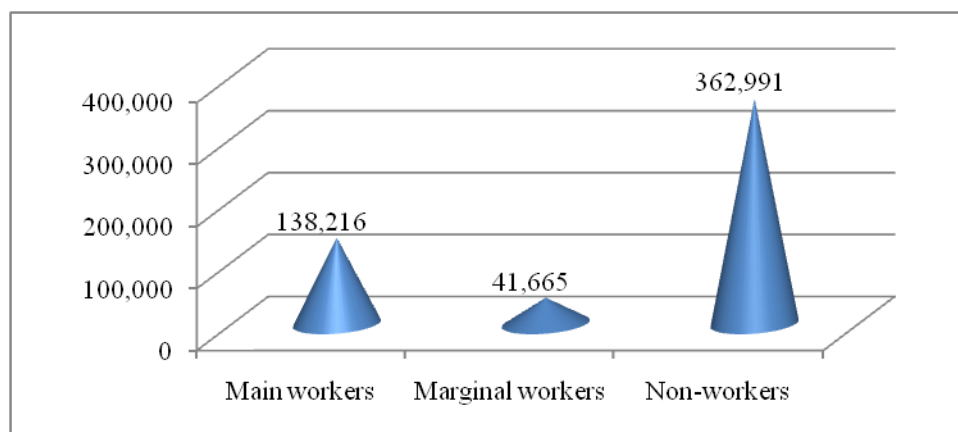
Source: Census 2001, IMaCS Analysis

6.10.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Hailakhandi's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.11   Jorhat

Jorhat is considered to be the educational capital of Assam. It is also known for its sprawling tea gardens and is home to the world renowned Teckolai Tea Research Institute. Majuli, one of the world's largest rivurine islands is also very close to Jorhat, which is a culturally significant place.

6.11.1 Economy

The GDDP of Jorhat was Rs 352,270 lakh, as of 2007-08. The per capita DDP was Rs 31,352. There are about 135 tea gardens, including out gardens, and the predominant field crop is rice; making it a predominantly agrarian economy.

6.11.2 Demography

Jorhat district occupies an area of 2,851 sq km. The district headquarters of Jorhat is Jorhat town. On the north of the district, the river Brahmaputra forms the largest riverine island of the world, Majuli, spreading over 924.6 sq km. With a population of about 1.50 lakh being threatened by the constant erosion by this mighty, unstable river Majuli had been the principal place of pilgrimage of Vaishnavites.

According to the Census 2011, Jorhat district has a population of 1,091295 and literacy rate of 83.4 per cent. Jorhat has one of the highest literacy rates in Assam.

6.11.3 Infrastructure

Jorhat has 787 villages. In terms of infrastructure, Jorhat is one of the most advanced districts. Almost 80 per cent of the villages have safe drinking water and electricity for agriculture is also provided for 23 villages. Jorhat has an airport that connects from Guwahati and Kolkata. Steps are being taken to expand it.

TABLE 35: SOCIAL INFRASTRUCTURE OF JORHAT

Facilities	Number of villages
Drinking water facilities	787
Safe drinking water	785
Electricity supply	650
Electricity – domestic	635
Electricity – agriculture	23

Source: Census 2001, IMaCS Analysis

TABLE 36: EDUCATION INFRASTRUCTURE OF JORHAT

Type of institute	Number of villages
Primary school	308
Middle schools	206
Secondary/Sr Secondary schools	60
College	-

Source: Census 2001, IMaCS Analysis

6.11.4 Employment pattern

. The number of main workers was 285,092, marginal workers are 129,256 and non workers are 584,873.

Jorhat has number of the local population involved in tea plantations and small industries like Ayurveda.

FIGURE 21: EMPLOYMENT PATTERN OF JORHAT
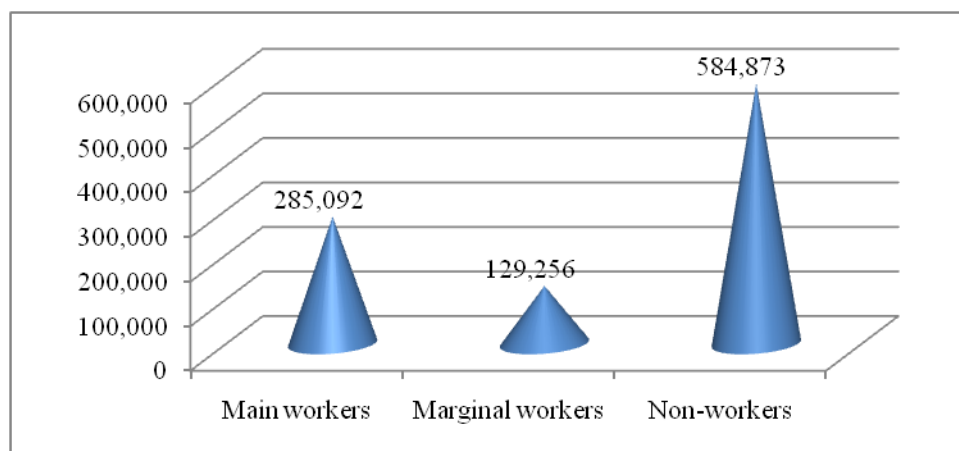
Source: Census 2001, IMaCS Analysis

6.11.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Jorhat's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Religious Tourism Circuits

- Majuli represents immense potential for developing a religious circuit.
- This is an important Vaishnavaite cultural center
- Locally, the population is not equipped to handle the tourism potential

Ayurveda

- Jorhat has immense potential to develop Ayurveda as an industry and hence a center for healing
- The locals have recipes that are popular locally

6.12   Kamrup

Kamrup is the nerve center of Assam. This district has been split to Kamrup (M), which houses Guwahati and the capital complex Dispur. Kamrup (M) is also home to the burgeoning industrial activity in Assam and acts as connection hub to rest of the NER. The bridge over Brahmaputra separates Kamrup and Kamrup (M). Kamrup is known for the silk industry and small scale industries.

6.12.1 Economy

The GDDP of Kamrup was Rs 419,625 lakh, as of 2007-08. The per capita DDP was Rs 25,016. The staple crop of the district is rice, of which there are three crops. The indigenous manufactures are confined to the weaving of silk and cotton cloths for home use, and to the making of brass cups and plates.

6.12.2 Demography

Kamrup district occupies an area of 6,882 sq km. In the immediate neighbourhood of the Brahmaputra the land is low, and exposed to annual inundation.

According to the Census 2011, Kamrup district has a population of 3,596,092 and literacy rate of 73 per cent. Kamrup is one of the districts in Assam that is losing area after Barpeta and Kamrup (M) being carved out.

6.12.3 Infrastructure

Kamrup has 1,342 villages. In terms of infrastructure, Kamrup is one of the most advanced districts. Almost 80 per cent of the villages have safe drinking water and electricity for agriculture is also provided for 23 villages. The educational infrastructure of Kamrup is the best in the state of Assam.

TABLE 37: SOCIAL INFRASTRUCTURE OF KAMRUP

Facilities	Number of villages
Drinking water facilities	1,342
Safe drinking water	1,311
Electricity supply	1,042
Electricity – domestic	1,014
Electricity – agriculture	23

Source: Census 2001, IMaCS Analysis

TABLE 38: EDUCATION INFRASTRUCTURE OF KAMRUP

Type of institute	Number of villages
Primary school	1,190
Middle schools	592
Secondary/Sr Secondary schools	286
College	21

Source: Census 2001, IMaCS Analysis

6.12.4 Employment pattern

The number of main workers was 697,810, marginal workers 144,443 and non workers 1,680,071. Kamrup has number of the local population involved in small industries and silk weaving.

FIGURE 22: EMPLOYMENT PATTERN OF KAMRUP
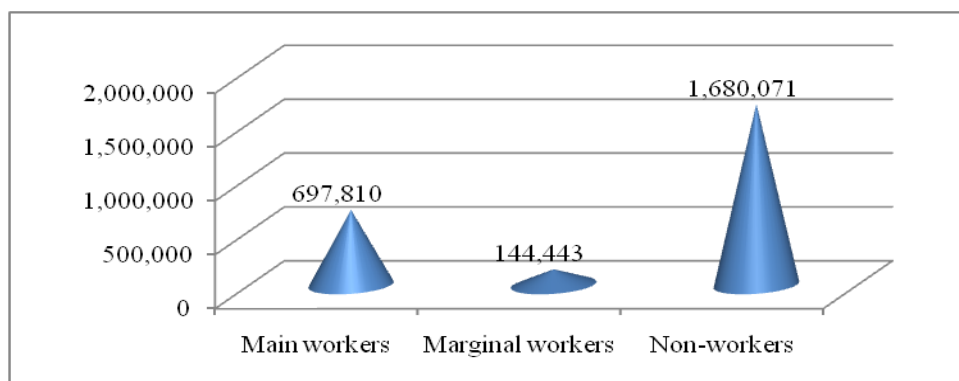
Source: Census 2001, IMaCS Analysis

6.12.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Sericulture

- Kamrup's sericulture is renowned
- The town of Sualkuchi is given the sobriquet, "Manchester of the East"
- There are village tourism circuits which are developed to highlight the silk potential of Kamrup
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Religious Tourism Circuits

- The district has numerous temples that have religious significance, prominent being the Hajo temple

- Circuits can be built to give opportunity to the local population for more jobs

IT/ITeS

- Kamrup has immense potential to develop IT/ITeS due to proximity to the rest of India

- Also, the youth are educated and are looking for opportunities

6.13   Karbi Anglong

Karbi Anglong district is the largest amongst the 27 administrative districts of Assam. It makes up a large part of central Assam.

6.13.1 Economy

The GDDP of Karbi Anglong was Rs 419,625 lakh, as of 2007-08. The per capita DDP was Rs 25,016. In 2006, the Government of India named Karbi Anglong one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF)

6.13.2 Demography

Karbi Anglong District occupies an area of 10,434 sq km. The district is bounded by Golaghat district on the east, Meghalaya state and Marigaon district on the west, Nagaon and Golaghat districts on the north and Dima Hasao district and Nagaland state on the south. According to the Census 2011, Karbi Anglong district has a population of 965,280 and literacy rate of 73.6 per cent.

6.13.3 Infrastructure

Karbi Anglong has 2,633 villages. In terms of infrastructure, Karbi Anglong needs to build on its infrastructure as only about 25 per cent of the villages have electricity. The agricultural electrification has penetrated to 50 villages. The district is connected to state capital only by road.

TABLE 39: SOCIAL INFRASTRUCTURE OF KARBI ANGLONG

Facilities	Number of villages
Drinking water facilities	2,633
Safe drinking water	1,943
Electricity supply	780
Electricity – domestic	733
Electricity – agriculture	50

Source: Census 2001, IMaCS Analysis

TABLE 40: EDUCATION INFRASTRUCTURE OF KARBI ANGLONG

Type of institute	Number of villages
Primary school	1,209
Middle schools	392
Secondary/Sr Secondary schools	79
College	4

Source: Census 2001, IMaCS Analysis

6.13.4 Employment pattern

The number of main workers is 231,638, marginal workers 98,842 and non workers 482,831. The people are involved in agriculture and traditional handlooms.

FIGURE 23: EMPLOYMENT PATTERN OF KARBI ANGLONG
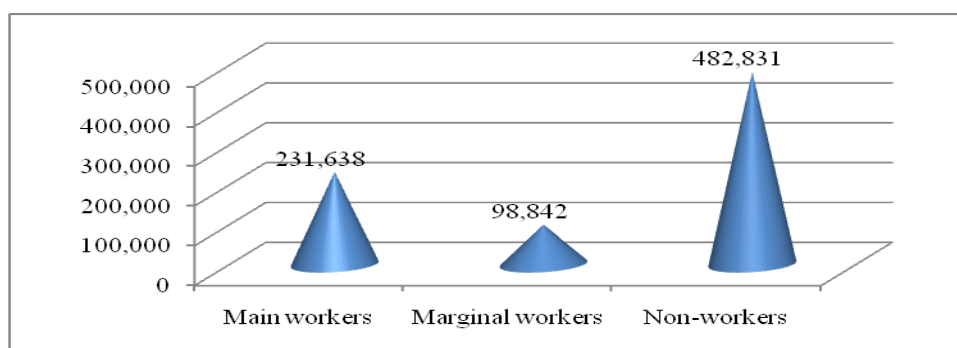
Source: Census 2001, IMaCS Analysis

6.13.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Karbi Anglong has to be ramped up to make it economically prosperous
- This translates to more jobs in the construction sphere.
- This is especially required in the road network strengthening

Handlooms and handicrafts

- Karbi Anglong's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.14   Karimganj

Karimganj is a district that has gained significance due to its role in the Indian independence struggle.

6.14.1 Economy

The GDDP of Karimganj was Rs 247,308 lakh, as of 2007-08. The per capita DDP was Rs 25,016. Karimganj town is an important centre of trade and commerce in the North East India. Its river port, with elaborate infra-structures like cargo-terminal, jetty, warehouses etc., is capable of handling large volumes of cargoes carried by steamers plying through river ways via Bangladesh.

6.14.2 Demography

Karimganj District has an area of 1,809 sq km. It is bounded on the northeast by Cachar District, on the east by Hailakandi District, on the south by Mizoram state, on the southwest by Tripura state, and on the west and northwest by Bangladesh. Karimganj town is the administrative headquarter. According to the Census 2011, Karimganj district has a population of 1,217,007 and literacy rate of 79.2 per cent.

6.14.3 Infrastructure

Karimganj has 915 villages. In terms of infrastructure, Karimganj needs to build on its infrastructure. The agricultural electrification has penetrated to 4 villages.

TABLE 41: SOCIAL INFRASTRUCTURE OF KARIMGANJ

Facilities	Number of villages
Drinking water facilities	915
Safe drinking water	908
Electricity supply	639
Electricity – domestic	622
Electricity – agriculture	4

Source: Census 2001, IMaCS Analysis

TABLE 42: EDUCATION INFRASTRUCTURE OF KARIMGANJ

Type of institute	Number of villages
Primary school	865
Middle schools	347
Secondary/Sr Secondary schools	99
College	9

Source: Census 2001, IMaCS Analysis

6.14.4 Employment pattern

The number of main workers was 235,016, marginal workers 68,278 and non workers 704,682. The people are dependent on agriculture and traditional handicrafts.

FIGURE 24: EMPLOYMENT PATTERN OF KARIMGANJ
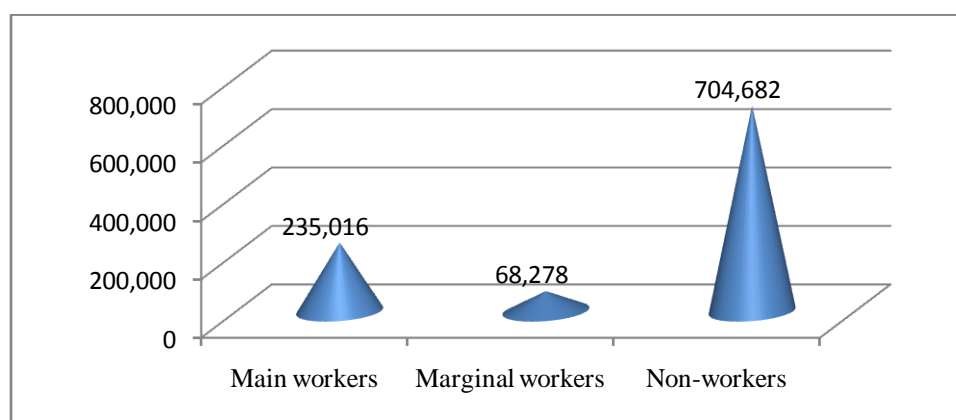
Source: Census 2001, IMaCS Analysis

6.14.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Karimganj's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- The handicrafts made out of bamboo are also very intricate.
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.15   Kokrajhar

Kokrjhar is a district that was divided from Goalpara in 1983 and it has also subsequently lost area due to the carving out of Bongaigaon.

6.15.1 Economy

The GDDP of Kokrajhar was Rs 222,929 lakh, as of 2007-08. The per capita DDP Rs 23,032. In 2006, the Government of India named Kokrajhar one of the country's 250 most backward districts (out of a total of 640).It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.15.2 Demography

Kokrajhar District has an area of 3,129 sq km. Kokrajhar district is located on the northern bank of the Brahmaputra river. According to the Census 2011, Kokrajhar district has a population of 886,999 and literacy rate of 66.6 per cent.

6.15.3 Infrastructure

Kokrajhar has 951 villages. The agricultural electrification has penetrated to 14 villages. Kokrajahr has poor road network which is a reason for it to be economically backward.

TABLE 43: SOCIAL INFRASTRUCTURE OF KOKRAJHAR

Facilities	Number of villages
Drinking water facilities	951
Safe drinking water	949
Electricity supply	704
Electricity – domestic	690
Electricity – agriculture	14

Source: Census 2001, IMaCS Analysis

TABLE 44: EDUCATION INFRASTRUCTURE OF KOKRAJHAR

Type of institute	Number of villages
Primary school	906
Middle schools	354
Secondary/Sr Secondary schools	118
College	10

Source: Census 2001, IMaCS Analysis

6.15.4 Employment pattern

The number of main workers was 234,771, marginal workers 100,078 and non workers 570,915. The people are heavily dependent on agriculture.

FIGURE 25: EMPLOYMENT PATTERN OF KOKRAJAHR
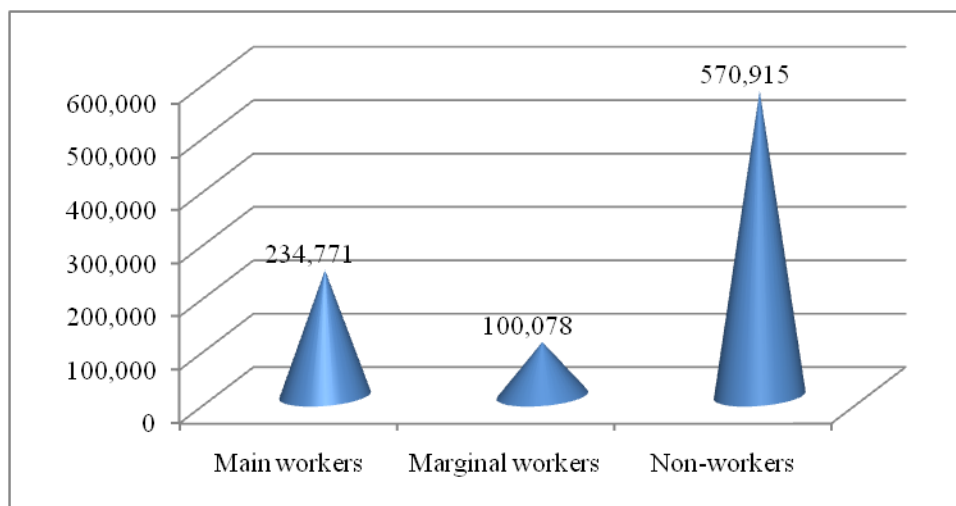
Source: Census 2001, IMaCS Analysis

6.15.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Kokrajhar has to be ramped up to make it economically prosperous
- This translates to more jobs in the construction sphere.
- Efforts have to be taken in the direction of having improved road and railway infrastructure

Handlooms and handicrafts

- Kokrajhar's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

6.16 Lakhimpur

Lakhimpur district lies in Upper Assam which is known for its fertile soil. This districts also suffers extensively in the monsoons due to the Brahmaputra flooding the lower areas.

6.16.1 Economy

The GDDP of Lakhimpur was Rs 191,018 lakh, as of 2007-08. The per capita DDP of Lakhimpur was Rs 19,288. In 2006, the Government of India named Lakhimpur one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.16.2 Demography

Lakhimpur District has an area of 2,277 sq km. It is bounded on the north by Lower Subansiri and Papumpare Districts of the state of Arunachal Pradesh and on the east by Dhemaji District. Lakhimpur

also has an airport Lilabari. According to the Census 2011, Lakhimpur district has a population of 1,040,644 and literacy rate of 78.39 per cent.

6.16.3 Infrastructure

Lakhimpur has 1,139 villages. In terms of infrastructure, Lakhimpur needs to build on its infrastructure. The agricultural electrification has penetrated to five villages and only about 50 per cent of villages have electricity for domestic purposes. The Lilabari airport needs modernization efforts.

TABLE 45: SOCIAL INFRASTRUCTURE OF LAKHIMPUR

Facilities	Number of villages
Drinking water facilities	1,139
Safe drinking water	1,136
Electricity supply	680
Electricity – domestic	677
Electricity – agriculture	5

Source: Census 2001, IMaCS Analysis

TABLE 46: EDUCATION INFRASTRUCTURE OF LAKHIMPUR

Type of institute	Number of villages
Primary school	1,046
Middle schools	697
Secondary/Sr Secondary schools	265
College	16

Source: Census 2001, IMaCS Analysis

6.16.4 Employment pattern

The number of main workers was 288,052, marginal workers 209,693 and non workers 391,265. The main sector where the majority is employed is agriculture.

FIGURE 26: EMPLOYMENT PATTERN OF LAKHIMPUR
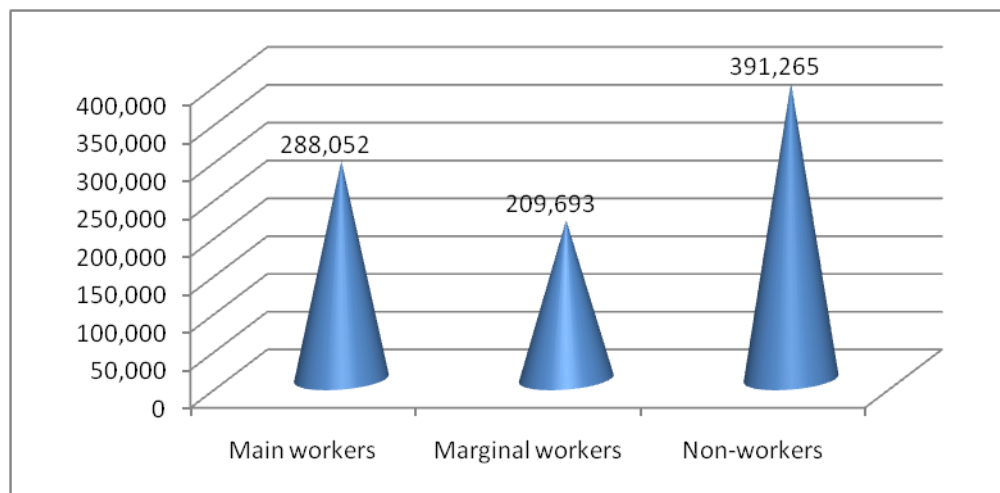
Source: Census 2001, IMaCS Analysis

6.16.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Lakhimpur's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- Lakhimpur is also known for its sericulture weaves
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Horticulture

- The fertile nature of Lakhimpur's soil renders it suitable for horticulture
- Pineapples, bananas, oranges can be cultivated in parks

6.17 Marigaon

Marigaon is known for the Pobitora Wildlife sanctuary and the occult cradle town of Mayong, which attracts people from all over the nation.

6.17.1 Economy

The GDDP of Marigaon was Rs 160,118 lakh, as of 2007-08. The per capita DDP was Rs 21,088. The economy is mainly agrarian. In 2006, the Government of India named Marigaon one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.17.2 Demography

Marigaon District has an area of 1,704 sq km. The district is bounded by the River Brahmaputra on the North, Karbi Anglong district on the South, Nagaon District on the East and Kamrup District on the West. The greater part of the district is an alluvial plain, criss-crossed with numerous rivers and water ways and dotted with many beels and marshes. According to the Census 2011, Marigaon district has a population of 957,853 and literacy rate of 69.37 per cent.

6.17.3 Infrastructure

Marigaon has 592 villages. The agricultural electrification has penetrated to 42 villages. Marigaon is connected only by roadways to the rest of the State.

TABLE 47: SOCIAL INFRASTRUCTURE OF MARIGAON

Facilities	Number of villages
Drinking water facilities	592
Safe drinking water	592
Electricity supply	389
Electricity – domestic	349
Electricity – agriculture	42

Source: Census 2001, IMaCS Analysis

TABLE 48: EDUCATION INFRASTRUCTURE OF MARIGAON

Type of institute	Number of villages
Primary school	531
Middle schools	255
Secondary/Sr Secondary schools	104
College	8

Source: Census 2001, IMaCS Analysis

6.17.4 Employment pattern

The number of main workers was 200,132, marginal workers 62,692 and non workers 513,432. People are dependent on agriculture sector and employed maximum there.

FIGURE 27: EMPLOYMENT PATTERN OF MARIGAON
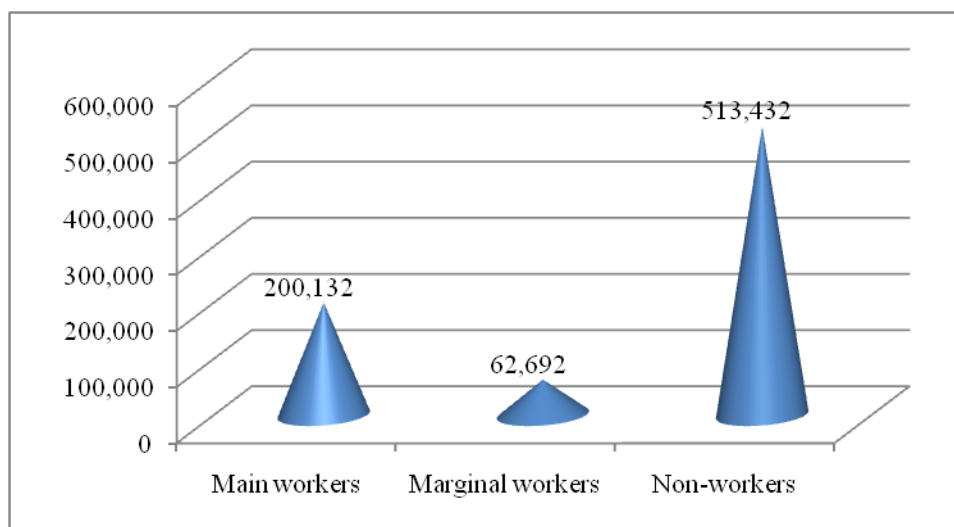
Source: Census 2001, IMaCS Analysis

6.17.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of Marigaon has to be ramped up to make it economically prosperous

- Skilling, especially for building roadways and ports to utilize the water resources can be given to the locals
- This translates to more jobs in the construction sphere.

Handlooms and handicrafts

- Marigaon's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Fisheries

- The district is blessed with beels that are rich sources of fish
- Locals, who practise this as traditional skill can be given training to commercialize and scale up the operations

6.18 Nagaon

Nagaon is known for its Agar perfume industry and, as of 2011, it is the most populous district in Assam.

6.18.1 Economy

The GDDP of Nagaon was Rs 383,487 lakh, as of 2007-08. The per capita DDP was Rs 14,894. The economy is mainly agrarian. The DDP contribution of Nagaon makes it one of the top eight states in Assam that contribute to over 50 per cent to state DDP.

6.18.2 Demography

Nagaon District has an area of 3,831 sq km. Nagaon has many religious significant spots and shares the Kaziranga with Golaghat. According to the Census 2011, Nagaon district has a population of 2,826,006 and literacy rate of 73.8 per cent.

6.18.3 Infrastructure

Nagaon has 1,374 villages. In terms of infrastructure, Nagaon is a front runner district with well developed facilities for electricity and safe drinking water.

TABLE 49: SOCIAL INFRASTRUCTURE OF NAGAON

Facilities	Number of villages
Drinking water facilities	1,374
Safe drinking water	1,369
Electricity supply	1,190
Electricity – domestic	1,147
Electricity – agriculture	110

Source: Census 2001, IMaCS Analysis

TABLE 50: EDUCATION INFRASTRUCTURE OF NAGAON

Type of institute	Number of villages
Primary school	1,257
Middle schools	680
Secondary/Sr Secondary schools	309
College	17

Source: Census 2001, IMaCS Analysis

6.18.4 Employment pattern

Horticultural crops can be grown in Nagaon along with agricultural crops. The number of main workers was 566,195, marginal workers are 161,446 and non workers are 1,586,988.

FIGURE 28: EMPLOYMENT PATTERN OF NAGAON
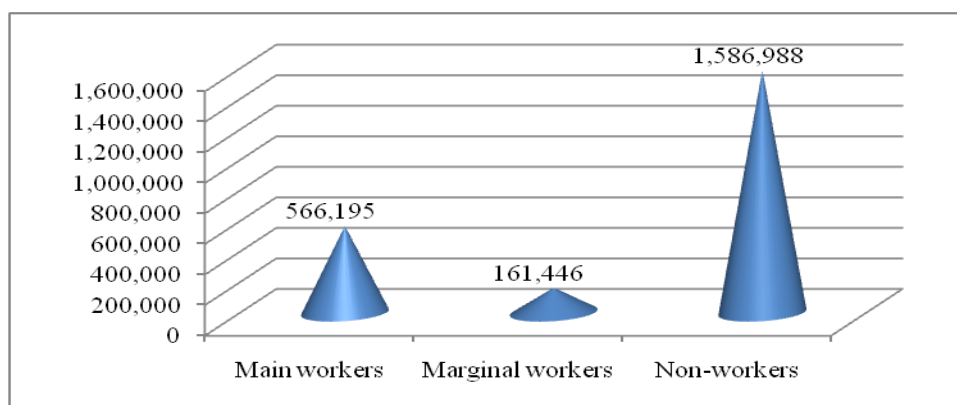
Source: Census 2001, IMaCS Analysis

6.18.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Nagaon's handloom weaves like shawls and saris are very intricate and have gained popularity in Assam
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Perfume

- The already popular Agar perfume industry has to be expanded to give it greater visibility outside
- The locals are already well versed in this sector.

6.19   Nalbari

Nalbari is a district in lower Assam known for confluence of tributaries that make the soil fertile. This district is also known for cane based handicrafts, especially Jhappi making.

6.19.1 Economy

The GDDP of Nalbari was Rs 170,310 lakh, as of 2007-08. The per capita DDP was Rs 23,602. The economy is mainly agrarian. The tributaries of the Brahmaputra, the Nona, Buradia, Pagaldia, Borolia and Tihu, which originate in the foothills of the Himalayan Range, are wild in nature and make an enormous contribution to the agrarian economy of the district

6.19.2 Demography

Nalbari District occupies an area of 2,257 sq km. According to the Census 2011, Nalbari district has a population of 769,919 and literacy rate of 79.9 per cent.

6.19.3 Infrastructure

Nalbari has 798 villages. In terms of infrastructure, Nalbari is reasonably well developed, benefiting from its proximity to Guwahati. Nalbari has good road network which extend to even the interior villages.

TABLE 51: SOCIAL INFRASTRUCTURE OF NALBARI

Facilities	Number of villages
Drinking water facilities	798
Safe drinking water	796
Electricity supply	733
Electricity – domestic	609
Electricity – agriculture	52

Source: Census 2001, IMaCS Analysis

TABLE 52: EDUCATION INFRASTRUCTURE OF NALBARI

Type of institute	Number of villages
Primary school	769
Middle schools	481
Secondary/Sr Secondary schools	226
College	23

Source: Census 2001, IMaCS Analysis

6.19.4 Employment pattern

Horticultural crops can be grown in Nalbari to substitute traditional agriculture. The number of main workers was 291,665, marginal workers 92,267 and non workers 764,892.

FIGURE 29: EMPLOYMENT PATTERN OF NALBARI
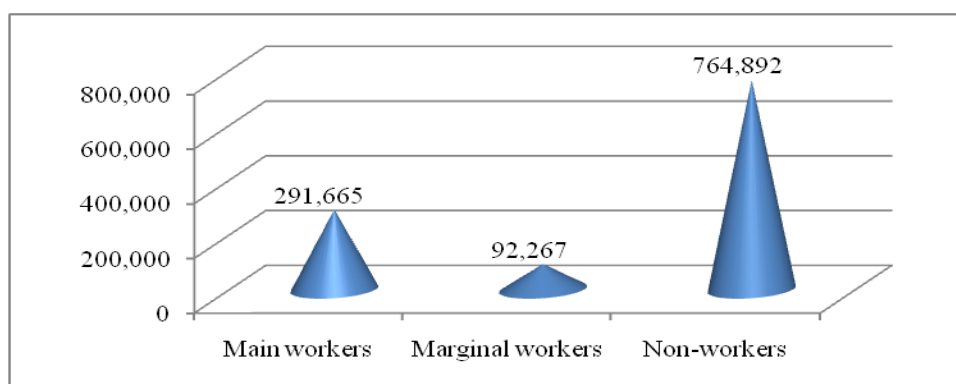
Source: Census 2001, IMaCS Analysis

6.19.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Nalbari's handicrafts which are based on cane and bamboo are very intricate

- The making of Jhappis is done by the locals here driven by NGOs

- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand

- This will provide employment to the locals who already are well versed in this craft

Food Processing

- The district has small food processing units

- Skilling to develop scientific food processing methods

- Also, latest technology can be taught.

6.20 North Cachar Hills

North Cachar Hills has been re-christened as Dima Hasao and it is the least populous district as of 2011.

6.20.1 Economy

The GDDP of North Cachar Hills was Rs 82,763 lakh, as of 2007-08. The per capita DDP was Rs 39,924. The economy is mainly agrarian. In 2006, the Government of India named Dima Hasao one of the country's 250 most backward districts (out of a total of 640). It is one of the 11 districts in Assam currently receiving funds from the Backward Regions Grant Fund Programme (BRGF).

6.20.2 Demography

North Cachar Hills District has an area of 4,888 sq km. The headquarters is at Haflong. The Dimasas of Dima Hasao district, being agrarian, celebrates various agricultural festivals. Mostly Dimasas inhabiting North Cachar Hills and Karbi Anglong districts are successful in preserving their age old traditional religious beliefs and practices in and through the celebration of several festivals.

According to the Census 2011, North Cachar Hills district has a population of 213,529 and literacy rate of 79 per cent.

6.20.3 Infrastructure

North Cachar Hills has 605 villages. The NC Hills have poor infrastructure and is connected by road to rest of the state.

TABLE 53: SOCIAL INFRASTRUCTURE OF NORTH CACHAR HILLS

Facilities	Number of villages
Drinking water facilities	605
Safe drinking water	473
Electricity supply	197
Electricity – domestic	190
Electricity – agriculture	1

Source: Census 2001, IMaCS Analysis

TABLE 54: EDUCATION INFRASTRUCTURE OF NORTH CACHAR HILLS

Type of institute	Number of villages
Primary school	565
Middle schools	164
Secondary/Sr Secondary schools	39
College	2

Source: Census 2001, IMaCS Analysis

6.20.4 Employment pattern

Horticultural crops can be grown in North Cachar Hills. The number of main workers was 55,031, marginal workers 15,168 and non workers 117,880.

FIGURE 30: EMPLOYMENT PATTERN OF NORTH CACHAR HILLS
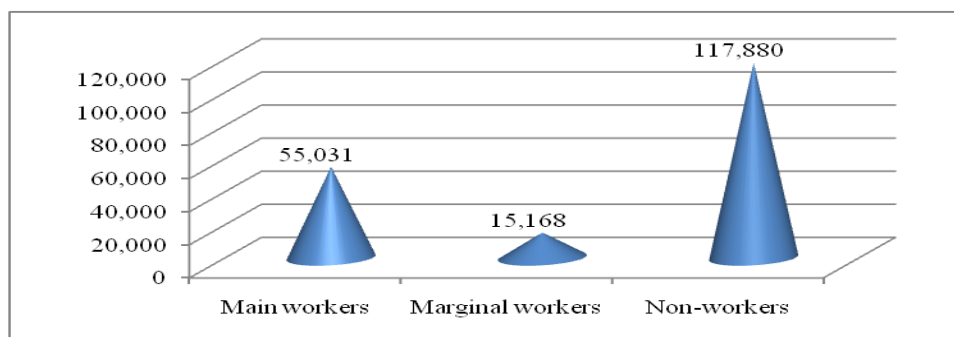
Source: Census 2001, IMaCS Analysis

6.20.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Construction

- The infrastructure of North Cachar Hills has to be ramped up to make it economically prosperous
- Skilling initiatives are required in enhancing the roadways.
- Also, hospitality infrastructure at Jatinga has to be built
- This translates to more jobs in the construction sphere.

Handlooms and handicrafts

- North Cachar Hills's handicrafts which are based on cane and bamboo are very intricate
- The artifacts prepared are used locally
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Tourism

- This district is also known for the village of Jatinga where birds commit suicide
- The infrastructure has to be built here to encourage more tourists to visit and observe this phenomenon.

6.21   Sibsagar

Sibsagar is the district that contributes maximum to the state DDP and also a culturally significant place as this was the capital of the Ahom rulers.

6.21.1 Economy

The GDDP of Sibsagar was Rs 530,889 lakh, as of 2007-08. The per capita DDP was Rs 45,263. The economy is mainly agrarian and is also home to tea plantations. Sibsagar was the highest agricultural output producing district in the state of Assam in 2010-11.

6.21.2 Demography

Sibsagar District has an area of 2,668 sq km. The headquarters is at Sibsagar town. Sibsagar is a heritage place in Assam famous for the monuments of Ahom kingdom. Now it is a multi-cultural town. According to the Census 2011, Sibsagar district has a population of 1,150,253 and literacy rate of 81.4 per cent.

6.21.3 Infrastructure

Sibsagar has 866 villages. The infrastructure of Sibsagar is one of the best in Assam with electricity penetrating to 766 for domestic purposes. The electrification for agriculture has been achieved for 15 villages. Sibsagar is well connected by road from Jorhat and Tinsukia.

TABLE 55: SOCIAL INFRASTRUCTURE OF SIBSAGAR

Facilities	Number of villages
Drinking water facilities	866
Drinking water facilities	861
Safe drinking water	772
Electricity supply	766
Electricity – domestic	15

Source: Census 2001, IMaCS Analysis

TABLE 56: EDUCATION INFRASTRUCTURE OF SIBSAGAR

Type of institute	Number of villages
Primary school	825
Middle schools	464
Secondary/Sr Secondary schools	243
College	7

Source: Census 2001, IMaCS Analysis

6.21.4 Employment pattern

The number of main workers is 287,319, marginal workers are 13,204 and non workers are 621,213. Sibsagar's agriculture output is the highest in Assam due to modern methods used.

FIGURE 31: EMPLOYMENT PATTERN OF SIBSAGAR
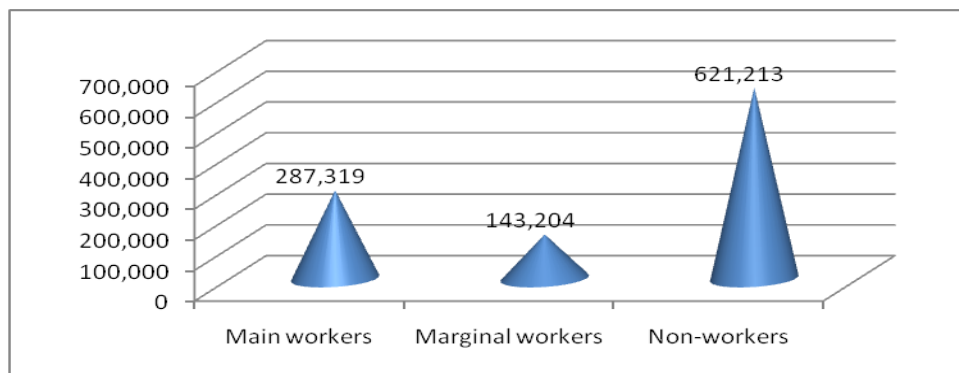
Source: Census 2001, IMaCS Analysis

6.21.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Sibsagar's handicrafts which are based on cane and bamboo are very intricate
- The artifacts prepared are used locally
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Tourism

- The Sibsagar town has many structures and culturally different places as this was the capital city of the Ahoms
- Infrastructure, to boost and portray this unique aspect, ha to be built in the form of hospitality sector.

6.22   Sonitpur

Sonitpur is one of the hubs of Assam. There are tea gardens and other small industries that drive this agrarian economy. The district headquarters are located at Tezpur. As of 2011 it is the third most populous district of Assam

6.22.1 Economy

The GDDP of Sonitpur was Rs 326,193 lakh, as of 2007-08. The per capita DDP was Rs 18,730. The economy is mainly agrarian and is also home to tea plantations.

6.22.2 Demography

Sonitpur District has an area of 5,324 sq km. The headquarters is at Tezpur, which is considered the cultural capital of Assam with notable personalities who have contributed to the freedom movement. According to the Census 2011, Sonitpur district has a population of 1,925,975 and literacy rate of 70 per cent.

6.22.3 Infrastructure

Sonitpur has 1,784 villages. The infrastructure of Sonitpur is one of the best in Assam with electricity penetrating to 1,209 for domestic purposes. The electrification for agriculture has been achieved for 74 villages and steps are being taken to increase this number.

TABLE 57: SOCIAL INFRASTRUCTURE OF SONITPUR

Facilities	Number of villages
Drinking water facilities	1,784
Safe drinking water	1,772
Electricity supply	1,331
Electricity – domestic	1,209
Electricity – agriculture	74

Source: Census 2001, IMaCS Analysis

TABLE 58: EDUCATION INFRASTRUCTURE OF SONITPUR

Type of institute	Number of villages
Primary school	1,372
Middle schools	405
Secondary/Sr Secondary schools	172
College	13

Source: Census 2001, IMaCS Analysis

6.22.4 Employment pattern

There is good potential of horticulture produce to be cultivated and exported. The number of main workers was 465,283, marginal workers 169,440 and non workers 1,046,790.

FIGURE 32: EMPLOYMENT PATTERN OF SONITPUR
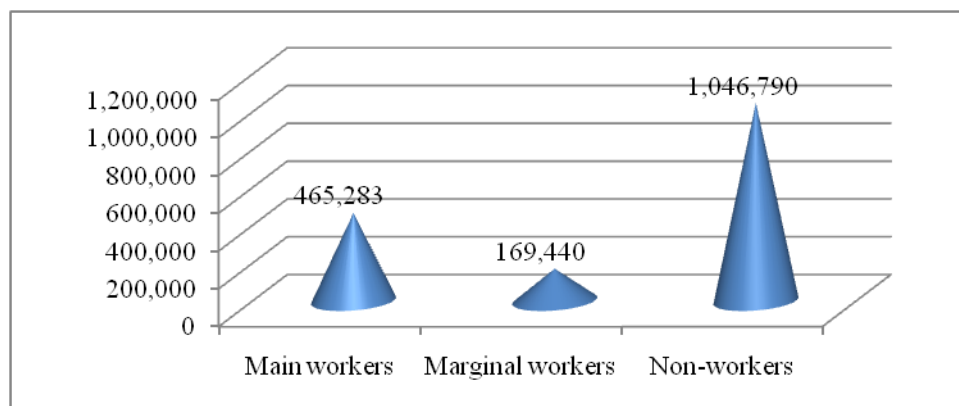
Source: Census 2001, IMaCS Analysis

6.22.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Sonitpur's handicrafts which are based on cane and bamboo are very intricate
- The artifacts prepared are used locally
- The handloom weaves of shawls and saris are also very popular with tribal designs
- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Horticulture

- The awareness about horticulture has to be spread
- Pineapples, oranges and bananas can be cultivated
- Subsequent processing of these can also be done

6.23   Tinsukia

Tinsukia is one of the premier commercial centres in Assam. It is an industrial district, yet it produces a sizeable amount of tea, oranges, ginger, other citrus fruits and paddy (rice). The site of Digboi is located in Tinsukia.

6.23.1 Economy

The GDDP of Tinsukia was Rs 473,941 lakh, as of 2007-08. The per capita DDP was Rs 37,006. The economy is mainly agrarian and is also home to tea plantations and horticultural produce.

Considered as the commerce capital of Assam, the district is known for its best quality tea production, wood related products like Kitply, Merino ply, National ply etc. Chamber Road, situated at the centre of the town, is the oldest area of business activities especially grocery. Grocery items are exported from here to neighbouring state of Arunachal Pradesh.

6.23.2 Demography

Tinsukia District has an area of 3,790 sq km. The headquarters is at Tinsukia town. According to the Census 2011, Tinsukia district has a population of 1,316,948 and literacy rate of 71 per cent.

6.23.3 Infrastructure

Tinsukia has 1,107 villages. The infrastructure of Tinsukia is slowly being improved upon with electricity penetrating to 810villages for domestic purposes. The electrification for agriculture has been achieved for 11 villages and steps are being taken to increase this number.

TABLE 59: SOCIAL INFRASTRUCTURE OF TINSUKIA

Facilities	Number of villages
Drinking water facilities	1,107
Safe drinking water	1,104
Electricity supply	871
Electricity – domestic	810
Electricity – agriculture	11

Source: Census 2001, IMaCS Analysis

TABLE 60: EDUCATION INFRASTRUCTURE OF TINSUKIA

Type of institute	Number of villages
Primary school	936
Middle schools	246
Secondary/Sr Secondary schools	86
College	7

Source: Census 2001, IMaCS Analysis

6.23.4 Employment pattern

There is good potential of horticulture produce to be cultivated and exported. The number of main workers was 349,847, marginal workers 116,504 and non workers 683,711.

FIGURE 33: EMPLOYMENT PATTERN OF TINSUKIA
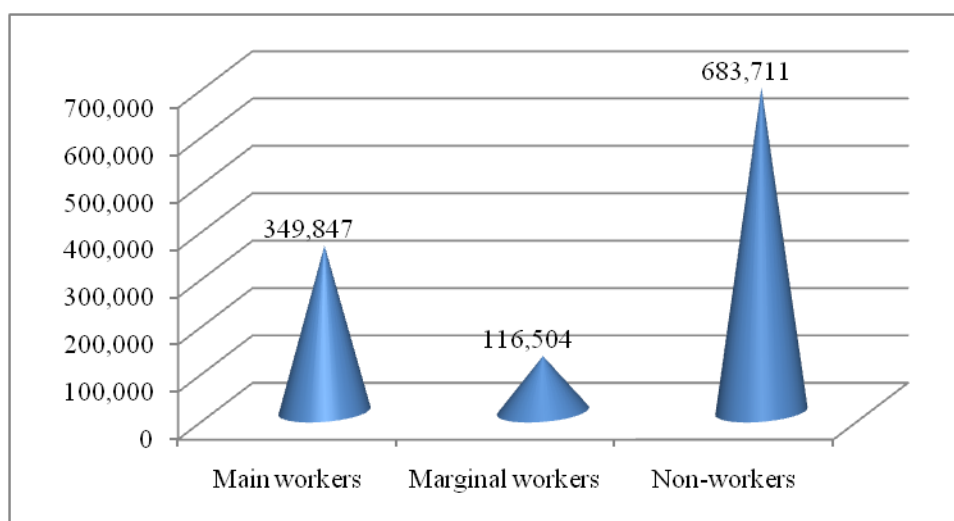
Source: Census 2001, IMaCS Analysis

6.23.5 Potential sectors in district

Based on the existing socio-economic profile and availability of resources, the following sectors have been identified for skilling and upgrading skills in the district:

Handlooms and handicrafts

- Tinsukia's handicrafts which are based on cane and bamboo are very intricate
- The artifacts prepared are used locally
- The handloom weaves of shawls and saris are also very popular with tribal designs

- These have to be aggressively marketed outside Assam to increase the visibility and hence drive up the demand
- This will provide employment to the locals who already are well versed in this craft

Tourism

- Dibru Saikhowa National Park is famous for birds and is one of the bio-diversity-hot-spots with over 350 species of avifauna providing unique habitat for globally threatened species.
- Infrastructure has to be ramped up to develop this into a circuit.

PART – II (d): Skill Gap Analysis

7.1 Handloom and Handicrafts

Handloom weaving is a way of life and intensely linked with Assamese culture and heritage. Assam has the highest number of looms in India, at over 13 lakh (46 per cent of India total). The handloom sector is also a major employment provider next to agriculture sector in the rural areas. In 2009-10, the state produced 174 million metres of handloom fabric. About 33 per cent of the state's weaver population is covered by the co-operatives. The Assam Government Marketing Corporation is the State Level organization to look after the weavers of the State.

Infact, Assam is home to the town of Sualkuchi, which is given the sobriquet of Manchester of the East. The muga silk is woven here and the Sualkuchi Institute of Fashion Technology has been setup with faculty from NIFT, Kolkata.

The state government has undertaken various development schemes for strengthening the sector. These include:

- Providing weavers with quality fabrics

- Modernisation of looms

- Creation of commercial motivation amongst the weavers

- Extension of training facilities

- Development of textiles designs etc.

State Institute of Rural Development (SIRD) provides training to women for product diversification in handloom for value addition.

- SIRD has established linkages with NIFT, New Delhi and Kolkata to provide upgraded training to weavers on handloom technology for value addition.

- For taking up livelihood activities in a sustainable way, SIRD has set up eight Skill Development Training Centres for providing skill, design, technology etc.

Silk Industry in Assam:

Assam is home to the muga silk – the costliest and the best quality silk in the world. Sericulture is a major cottage industry in the state. Over 10,500 villages and 2.6 lakh people are involved in this. Maximum number of sericulture villages are in Kokrajhar, Nagaon and Karbi-Anglong districts. Assam has the

monopoly in production of Muga silk in the world – 99 per cent produced in Assam. Muga production is concentrated in Lakhimpur and Sivasagar districts.

FIGURE 34: PRODUCTION OF SILK YARN (MT)

(2009)

Figure 34: Production of Silk Yarn (MT) (2009)

Year	Eri Raw Silk	Muga Raw Silk	Mulberry Raw Silk
2005-06	525	98	12
2006-07	665	99	9
2007-08	784	91	9
2008-09	810	101	10
2009-10	819	89	8
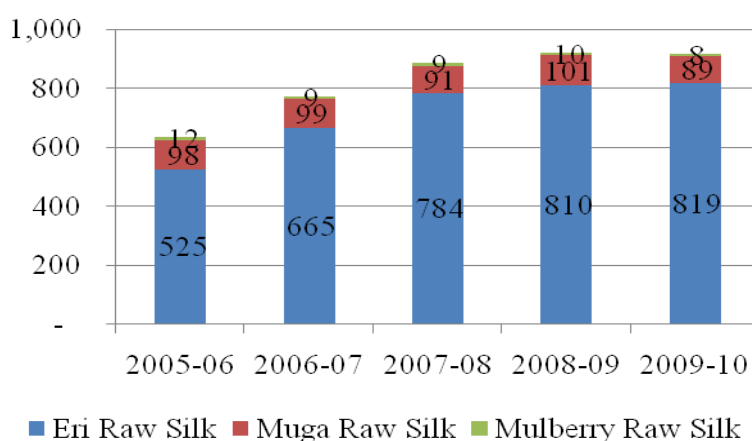
Source: Economic Survey of Assam 2010-11, Statistical Handbook of Assam 2010, Assam 2011 A Development Perspective

Handicrafts of Assam:

1. *Cane and Bamboo*: The cane and bamboo industry is scattered throughout the state in rural as well as in certain urban areas. Commercial production of cane furniture in the state is mainly concentrated in Silchar, in Cachar district of Assam. The other important centres in Assam are Mangaldoi, Nalbari, Jorhat, Golaghat etc.The range of products produced from cane include sofa sets, chairs of different shapes and types like easy chairs, arm chairs, rocking chairs, dining chairs, tables of different types like side tables, central tables and basket wares for different uses. *Japi* (hat) is another famous bamboo craft.

2. *Bell metal*: Bell metal craft is one of the hereditary crafts of Assam. Bell metal is an alloy of copper and tin. A large number of utility items are made out of this metal. For example, plates, cups, tumblers, pitchers, bowls, sarais, pots, hookahs, ban, bota, lota, and musical instruments. The main production centre is at Sarthebari, in Barpeta district. In this centre there are many cooperative societies of producers of this metal craft. Most of the units are cottage based.

3. *Sitalpati*: 'Sitalpati' which means cool spread is made from green cane slips. This mat is made from a reed which grows abundantly in marshy spots. The finest sitalpati is used in Assam to

sleep on, as it is cool for summer nights. Another special feature of this is, women do the weaving while men take other processes.

4. *Jute craft*: Assam is the third largest jute producer in the country, followed by West Bengal and Bihar. A variety of products are made by the artisans of Assam, i.e., jute decorative which include materials of home furnishing, dress goods, harts, belts, shoes, table and floor mats, hammocks etc.

5. *Banana fibre craft*: Some artisans in Assam have also started using banana fiber, which comes from the banana tree trunk for making various handicraft items. The work is currently concentrated in the Darrang district. The products are in demand and are even sold in Andhra Pradesh.

6. *Water hyacinth-based craft*: The initiative was taken by North Eastern Development Finance Corporation (NEDFi) in August 2008, mainly due to the fact that there was abundant raw material, can be a replacement for jute, cane and bamboo and artisans experienced with braiding and weaving work can easily pick up the trade once provided the training. The project is now supported by the NEC for capacity development of 1,000 artisans. Micro-credit linkage and marketing linkage is also facilitated. Design inputs are provided by National Institute of Design (NID), Ahemdabad. Products like chairs, bags, jewellery, footwear, hats, mats, baskets etc. are being produced. NEDFi has branded the product under the name of "Aqua Weaves", which is leading to high visibility. Showrooms for these products are currently located at Dhubri, Nagaon and Guwahati. The products are also being promoted by DRDAs of Nagaon, Goalpara, Dhubri and Darrang districts.

7.1(a) Skill mapping and gap analysis: Sericulture sector

Entity	Role	Expected competencies	Skill gaps
Silk Grower	Rearing, spinning, reeling and weaving of silk	• Understanding of rearing of silk worms • Knowledge of spinning of cocoons • Ability to kill pupae by either exposing them to sun or by heating them in a special drying chamber • Ability to sort cocoons for reeling. In case of Muga, cooking of cocoons in an alkaline solution of soda ash to soften the natural gum • Understanding of the reeling process. After reeling, drying of Muga threads for three-four days, following which they are wound into skeins on a sereki • Ability to use raw silk to spin and weave into cloth of different shapes and designs	• Lack of understanding of complex weaving techniques • Inability to make fancy designs. Only tribal geometrical designs are in use

Sources: IMaCS Survey and Analysis

7.1(b) Skill mapping and gap analysis: Handloom sector

Entity	Role	Expected competencies	Skill gaps
Handloom worker	Produce quality handloom products	• Knowledge of pre loom processing, including dyeing • Knowledge of spinning and weaving • Knowledge of post loom processing • Knowledge of new technology • Understanding of market developments • Understanding of customer preferences • Ability to create new designs • Ability to create new product differentiation • Ability to manufacture consistent quality products • Ability to reduce lead-time • Ability to market products • Create market oriented products	• Inability to make different colour combinations. Mostly a colour combination of red and white is used. • Lack of knowledge of new technology • Lack of understanding of customer preferences • Inability to create new designs and create product differentiation • Inability to market products and create market oriented products

Sources: IMaCS Survey and Analysis

7.1(c) Skill mapping and gap analysis: Cane and bamboo handicraft sector

Entity	Role	Expected competencies	Skill gaps
Handicraft craftsperson	Manufacture handicrafts using cane, and bamboo	• Knowledge about use of tools and materials • Ability to perform intricate work / finishing • Hand control to preserve intricate designs • Knowledge and skills for design • Ability to transfer skills to inexperienced craftsman • Ability to conceptualise and create new designs • Ability to market products and create market oriented products • Ability to make value addition to crafts	• Inability to create market linkages • In case of cane products, there is inability to transfer skills to an inexperienced craftsman in a short time. There is a long lead time both in training and in creation of products.

Sources: IMaCS Survey and Analysis

7.1(d) Skill mapping and gap analysis: Bell metal handicraft sector

Entity	Role	Expected competencies	Skill gaps
Artisans	Using bell metal to create different artifacts	• Ability to use coal to melt the raw material, which is different types of metals like copper, silver, gold etc. • Ability to give different shapes to the raw materials • Ability to cool down the made product and make it solid • Ability for hammering and finishing • Ability to make intricate designs • Understanding of the market demand • Ability to create market linkages • Ability to price the product suitably	• Lack of knowledge of customer preferences • Inability to make intricate designs • Inability to price the products suitably • Lack of marketing skills • Lack of finishing skills

Sources: IMaCS Survey and Analysis

7.2 Horticulture

Horticulture in Assam is a sector with potential due to the following factors:

- **Conducive landscape:** Assam's diverse and unique agro-climatic condition is conducive for growing wide range of horticultural crops like various fruits, vegetables, flowers, spices, nuts, tuber crops and medicinal and aromatic plants.

- **Current coverage:** Horticultural crops occupy about 15 per cent of the gross cultivated area of the state. However, commercialization of horticulture sector in Assam is not yet achieved.

- **Steps for promotion:** As a part of the "Technology Mission for Integrated Development of Horticulture", the Directorate of Horticulture of Assam has been taking steps for promotion of horticulture in the state.

- It is training farmers on the improved practices of horticultural crops, deputing the farmers outside the state for exposure visit, etc.

- Currently, Assam is exporting orange and ginger.

Specific potential areas:

1. *Flowers*: A variety of flowers are grown in Assam. However, recently, it has started laying focus on commercial production of anthurium and orchids. In fact, Assam houses more than 600 varieties of tropical orchids, which have a huge potential and can be made commercially viable. Currently Kamrup and Kokrajhar districts of Assam are emerging as major commercial growers of anthurium, orchid and tuberose under protected conditions. These crops are being grown commercially by Self Help Groups under buy back arrangement with flower exporters. During the year 2007-08, 10,932 sticks of orchids and 8,000 numbers of anthurium sticks were sent out of the State.

2. *Medicinal plants*: Assam, with its vast hills and forests, is a home to a variety of medicinal herbs and plants. About 300 types of medicinal herbs and plants are found in abundance in the state with the Brahmaputra valley, itself, having 150 varieties of herbs and plants of commercial value. Under the "National Mission on Medicinal Plants", which was launched in 2009-10, the government is also giving thrust to medicinal plants in Assam. Some of the thrust plants are chirata, ashol, beal, sarpagandha, amla, ashwagandha, giloi, pipali and tulsi.

3. *Organic farming*: The state is also focusing on promotion of organic farming, by using green manure, adopting crop rotation management and ecologically sounds plant protection measures. In organic farming system, priority in use of bio-fertiliser is also given.

7.2(a) Skill mapping and gap analysis: Horticulture

Entity	Role	Expected competencies	Skill gaps
Grower	To grow the crop with best possible productivity and quality	• Knowledge about the growing pattern of different crops • Knowledge of different seasons in which different crops should be harvested and planted • Knowledge about pest control, which includes management of weeds, insects / mites, and diseases • Good understanding of cultural practices which include crop rotation, culling, cover crops, intercropping, double cropping, composting etc. • Understanding of international standards to ensure best quality and higher production	• Lack of knowledge about the growing pattern of different crops • Lack of knowledge of different seasons • Lack of knowledge about high yielding varieties of seeds • Lack of understanding of international standards to ensure best quality and higher production

Entity	Role	Expected competencies	Skill gaps
Growers / Labourer	Harvesting and Post harvesting management of the crops	• Awareness on appropriate methods and time of harvesting • Prevention of microbial contamination of fresh produce • Understanding of sanitization of vegetables and fruits by dipping and flowers by spraying • Understanding of best practices of sorting, grading and packing • Ensuring worker hygiene and sanitation practices •	• Presently, horticulture is not exploited commercially on a big scale in the state. • It is slowly gathering momentum due to the thrust provided by the government,. • Thus, growers lack most of the skills required for post harvesting management of the crops.
Marketing agents	Marketing of crops in raw or processed forms	• Understanding of basic processing technologies, like processing fruits into pulp, juice, jam, jelly, pickle etc. for sale in local market and even outside the state • Capability to establish market linkages • Understanding of market demand • Understanding of pricing methodology	• Lack of capability to establish market linkages • Lack of understanding of market demand • Lack of understanding of pricing methodology • Lack of capability to strike good bargains with the

Entity	Role	Expected competencies	Skill gaps
		• Capability to strike good bargains with the potential buyers both in domestic and international markets • Ability to ensure timely transportation of cost to prevent it from getting perished and wasted • Soft skills to deal with clients	potential buyers • Lack of soft skills

Sources: IMaCS Survey and Analysis

7.3 Fisheries

Assam is one of the richest states in the country in respect of surface water resources. River Brahmaputra is a rich source of fishes. There are about 3.91 lakh hectare of water area in the State in the form of rivers, beel, derelict water bodies and ponds and tanks. Fish seed production is mainly concentrated in Barpeta, Nagaon, Karimganj, Hailakandi, Chiring and Nalbari districts. Fish production is concentrated in Nagaon, Kamrup, Karimganj, Dhubri, Barpeta, Lakhimpur and Jorhat districts.

FIGURE 35: FISH PRODUCTION IN ASSAM (IN TONNES)
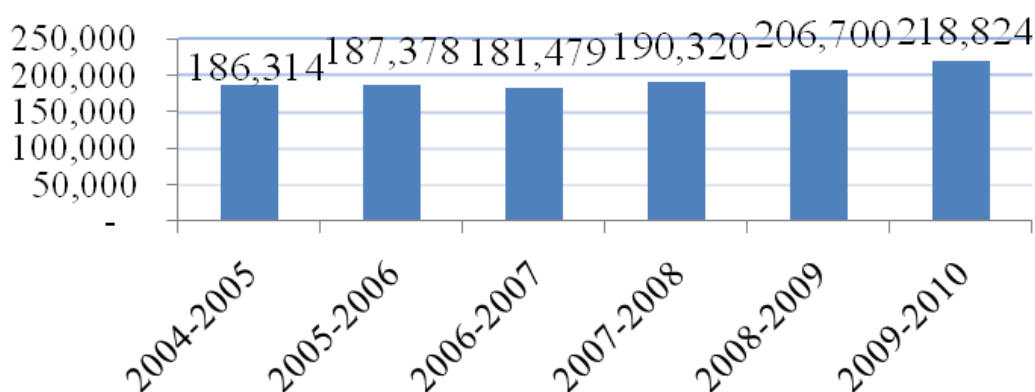
Sources: Economic Survey of Assam 2010-11, IMaCS Analysis

7.3(a) Skill mapping and gap analysis: Fisheries

Entity	Role	Expected competencies	Skill gaps
Fishermen	Fish farming and selling of fishes	• Ability to undertake fish breeding and rearing • Ability to clean the fish, which includes processes such as cleaning, removing internal organs etc. • Ability to undertake waste disposal in a hygienic manner • Ability to sort different types of fishes • Understanding of scientific methods of fish farming like integrated farming practices, water quality management etc. • Knowledge of different varieties of ornamental fishes • Ability to do marketing and packaging • Ability to do value addition to fish to make fish products like *papads*, pickles etc.	• Lack of understanding of scientific methods of fish farming • Inability to do marketing and packaging of fishes • Inability to do any value addition • Lack of awareness of potential of native ornamental fishes • Lack of awareness in techniques of fish seed raising and precautions for better survivability
Traders/ Exporters	Procurement and sale of	• Ability to sort different types of fishes	• Lack of post-harvest skills

Entity	Role	Expected competencies	Skill gaps
	fishes	• Knowledge of different varieties of ornamental fishes to determine appropriate pricing • Knowledge of Post-Harvest fish management e.g. fish refrigeration • Packaging skills • Skills for marketing of fish • Customer relationship management. • Exporters - Knowledge of fish preservation techniques e.g. canning, smoking, fish icing	mainly due to lack of post harvesting infrastructure • Lack of marketing skills • Lack of fish preservation techniques

Sources: IMaCS Survey and Analysis

7.4 Agarwood oil

Agar wood oil extraction and processing has vast potential in the state. Assam has conducive climate for growing *Sanchi* plant or Agar wood, which is used for extracting expensive aromatic Agar oil. The oil finds usage in perfumes and has very high demand especially in the Middle East. The raw material is considered one of the costliest used in the high class perfumery.

Currently, there is a restriction on commercial exploitation of the Agar wood oil as Agar wood is considered as one of the endangered species. However, the activity is undertaken in an unorganised manner in many parts of Upper Assam. It is done by many households in Nagaon and Golaghat districts. It is then sold to middle men who then take it for onward transmission to the Gulf. The state has realised

the potential of this industry in its Industrial Policy 2008. It intends to review the restrictions on this industry. This has potential for economic development of many households.

7.4(a) Skill mapping and gap analysis: Fisheries

Entity	Role	Expected competencies	Skill gaps
Grower	Agarwood Cultivation	• Knowledge about different varieties of Agarwood • Seedlings development in nursery & plantation • Visual identification of agarwood-producing trees • Understanding of cutting & splitting of trees to obtain resinous product • Using scientific approach to ensure best quality and higher production • Ability to negotiate with traders	• Lack of scientific methods of plantation leading to lower survival rate of saplings • Lack of ability to visually identify agarwood-producing trees leading to indiscriminate cutting • Lack of ability to comply with legal compulsions for the industry

Entity	Role	Expected competencies	Skill gaps
Agarwood Oil Distilleries	Conversion of Agarwood into oil	• Cutting of larger pieces into smaller chips of different grades • Scrapping of fungus infected areas of wood with batali (a tool) • Knowledge of drying, dehumifying and crushing • Knowledge of water or steam distillation • Knowledge of marketing • Ability to negotiate with traders, exporters • Knowledge of packaging	• Activity is mostly unorganised and thus lacks most of the advanced techniques of distillation • Lack of skills for chemical analysis of Agarwood items Lack of marketing and packaging skills • Lack of ability to negotiate with traders / middle men

Sources: IMaCS Survey and Analysis

7.5 Oil and Gas; Coal and Limestone

Assam is richly endowed with mineral resources. At present, exploitation of minerals in the State comprises of mainly Petroleum (Crude Oil), Natural Gas (Utilised), Coal and Limestone. Assam has over 1.3 billion tonnes of crude oil, 156 billion cubic metric tonnes of natural gas reserves, about 1,200 million metric tonnes (MT) of coal reserves and 500 million tonnes of limestone. Assam accounts for about 15 per cent of India's crude output and about 50 per cent of India's total onshore-production of natural gas. Key players are: ONGC, BRPL, IOCL, Oil India Limited, Assam Gas Company, NRL, GAIL India Limited and Coal India Limited. Assam has 4 refineries at Digboi, Guwahati, Numaligarh and Bongaigaon.

FIGURE 36: PRODUCTION OF KEY MINERAL RESOURCES IN ASSAM
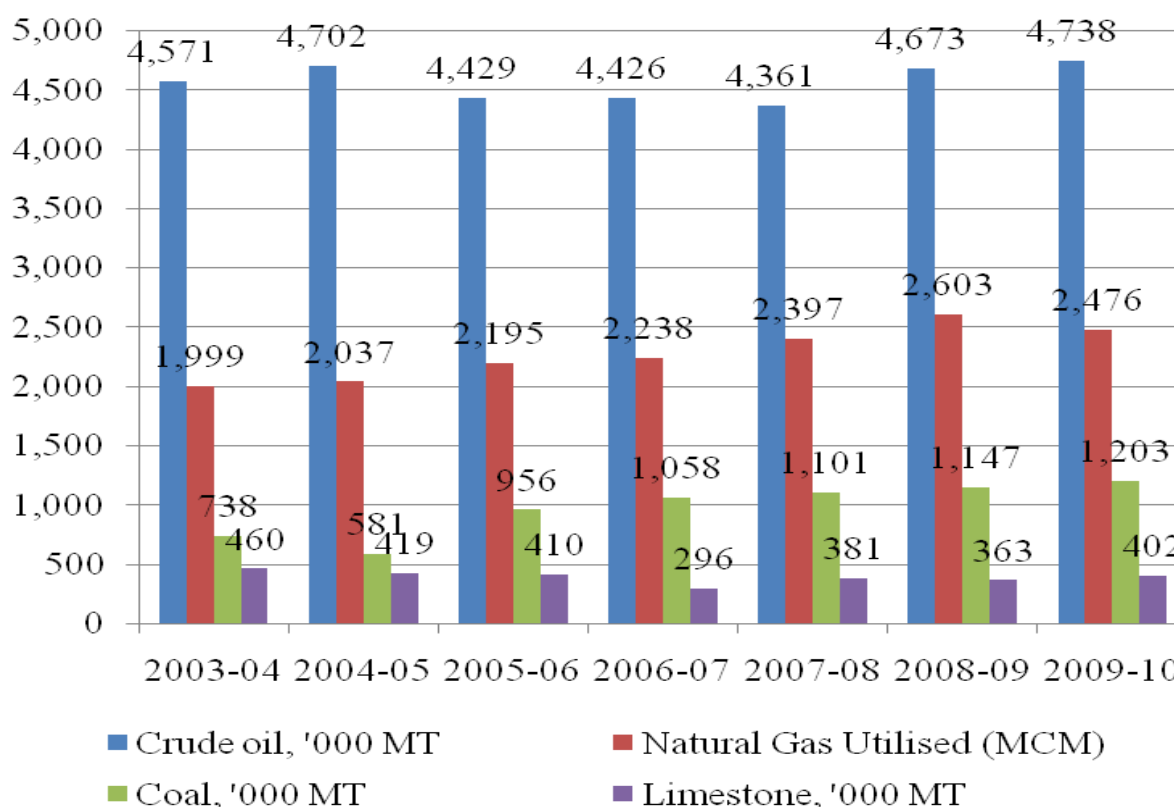
Sources: Economic survey of Assam 2010-11

Gas resources are also being harnessed in Assam. In Assam, almost all the petroleum producing areas of the Brahmaputra Valley, especially Naharkatia, Moran, Lakuwa and Rudrasagar, contains 'associated natural gas'. There are LPG bottling plants at Duliajan, North Guwahati, Silchar etc. The BRPL also uses natural gas as raw material to produce various chemicals. In addition, a gas cracking company, Brahmaputra Cracker & Polymer Limited (BCPL) is coming up in the Dibrugarh district. This is scheduled for completion by 2012-13. It is expected to pave way for many downstream industries, including plastics. The downstream industries are expected to generate employment (direct and indirect) for an estimated one lakh people. To facilitate the growth of plastic industry, the Government of Assam is planning to set up a Plastic Park, close to the gas cracker plant in the Tinsukia district. It has identified 500 acres of the land for the same. The government also organised a four day North-East International Plasto Fair in May 2010 to invite investment, and facilitate joint venture collaborations with local entrepreneurs. Reportedly, about six to seven plastic processing companies from Gujarat have decided to set up units at the upcoming Plastic Park for a total investment close to Rs 150 crore.

Assam is also rich in deposits of coal. Coal occurs mainly in Upper Assam districts of Tinsukia and Dibrugarh in the Makum and Dilli - Jeypore Coalfields. Small coal deposits occur sporadically in the Central Assam districts of Karbi Anglong and North Cachar Hills. Margherita town in Tinsukia district is also known as the "Coal Queen of Assam". Coal from Assam is also exported to Bangladesh.

Limestone is an important mineral which is used in the manufacture of cement, as flux in iron and steel production, and as raw materials for chemical industries. There are now several cement factories which have come up in Assam due to the availability of high quality limestone in the region. Good quality cement grade limestone occurs in the Central Assam districts of North Cachar Hills and Karbi Anglong. Key cement players include Adhunik Cement, Star Cement and Calcom Cement. Jai Prakash Associates Ltd. and Birla Corporation are also expected to set up cement plants in the state.

7.5(a) Skill mapping and gap analysis: Oil, gas and downstream industries

Entity	Role	Expected competencies	Skill gaps
Non-staff	On the field work and operations	• Engineering skills, including technical, mechanical, electrical, petroleum, chemical and instrumentation engineers • Technical people from ITIs having mechanical skills • Skills for fitters, fireman, process operators, field operators, instrument operators, boiler operators etc. • Skill of driving heavy vehicle and possession of license • Ability to remain	While engineers are recruited via recruitments tests held at All-India level, some workers are hired from ITIs also. Skill gaps observed in those are: • Inability to work with new technology • Inability to do maintenance work • Inability to control quality

Entity	Role	Expected competencies	Skill gaps
		physically efficient / fit • Ability to do maintenance work • Ability to control quality • Ability to work with new technology	
Miners	Extraction of limestone and coal from the mines	• Ability to operate mining machines like dumpers, loaders and excavators • Ability to drill using the drilling machine • Blasting skills • Skills for doing jobs of a foreman • Ability to break coal / limestone into smaller pieces for supplying to the industry • Knowledge of scientific methods of mining	• Inability to use new and modern techniques • Inability to use modern machines • Inability to transition from old machines to new machines • Inability to work as fitters, electricians, turners etc.

Sources: IMaCS Survey and Analysis

7.5(b) Skill mapping and gap analysis: Coal and limestone mining

Entity	Role	Expected competencies	Skill gaps
Miners	Extraction of limestone and coal from the mines	• Ability to operate mining machines like dumpers, loaders and excavators • Ability to drill using the drilling machine • Blasting skills • Skills for doing jobs of a foreman • Ability to break coal / limestone into smaller pieces for supplying to the industry • Knowledge of scientific methods of mining	• Inability to use new and modern techniques • Inability to use modern machines • Inability to transition from old machines to new machines • Inability to work as fitters, electricians, turners etc.

Sources: IMaCS Survey and Analysis

7.5(c) Skill mapping and gap analysis: Cement plants

Entity	Role	Expected competencies	Skill gaps
Cement plants	Plant processing, grinding, packing and transporting	• Knowledge of crushing and grinding • Understanding of the process of clinkerisation • Ability to maintain quality • Maintain corporate discipline and culture • Mechanical, process, chemical, electrical and instrumentation engineers • Knowledge of packaging and transportation • Knowledge of marketing • Maintenance: Fitters, welders, electricians, drivers, etc.	• Lack of maintenance skills • Lack soft skills • Lack inter-personal skills • Lack of communication skills • Inability to handle new technology • Inability to control quality

Sources: IMaCS Survey and Analysis

7.6 Tea

The Assam tea industry is170 years old. Assam tea – 50 per cent of total tea produced in India and 1/6th of the tea produced in the world. Tea was first discovered in the Upper Brahmaputra Valley in 1823. There is high demand for Assam tea in the West, particularly in Europe. Guwahati Tea Auction Centre is the World's largest CTC tea auction centre. It offers employment to more than six lakh persons in the state. The Small tea cultivation is creating vast employment opportunities in rural areas More than 52,000 small tea growers in Assam, producing about nine per cent of the state's total tea production. About 98 per cent of the cultivation is done in area less than 10 to 12 acres.

FIGURE 37: AREA UNDER TEA ('000 HECTARES)
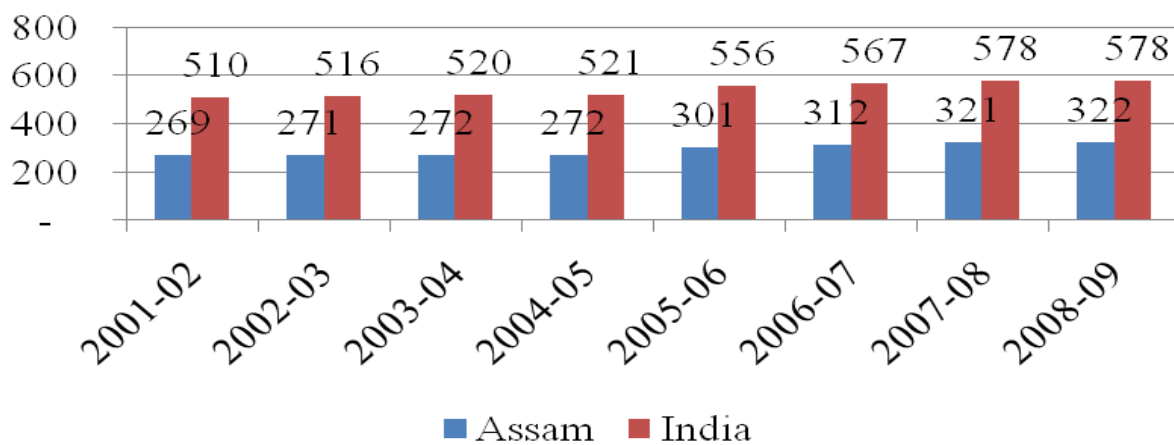
FIGURE 38: TEA PRODUCTION ('000 TONNES)
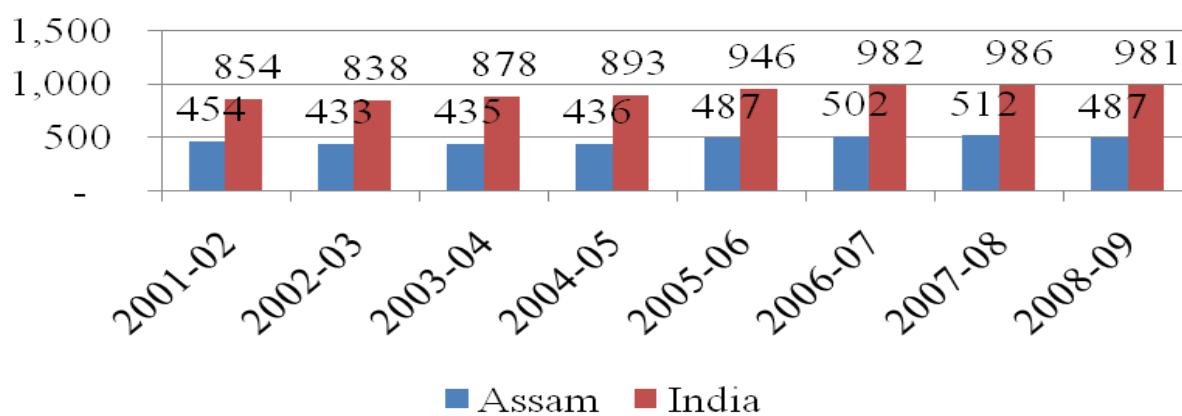
Sources: Economic Survey of Assam 2010-11, IMaCS Analysis

7.6(a) Skill mapping and gap analysis: Tea sector

Entity	Role	Expected competencies	Skill gaps
Tea growers	Plantation, plucking and leaf handling	• Understanding of the process of taking cuttings from the mother bush, growing them in plastic bags for about 18 months, treating them properly, before the leaves go for plantation • Understanding of planting in blocks and slicing of plants to bush size • Knowledge of different systems of plucking like *Janam* plucking, fish-leaf plucking and single leaf or step up plucking	• Tea plantation is mainly in Assam is mainly done by the Tea tribes, who are proficient in their jobs and don't have any skills gaps.
Tea manufacturing units	Tea manufacturing	• Understanding of the withering process, including chemical and physical wither • Understanding of rolling, where rollers are used to rupture the cell walls of the withered leaves • Understanding of	• Lack of ability to do quality check through tea tasting • Lack of modern packaging skills • Shortage of tea machinery fitters and maintenance

Entity	Role	Expected competencies	Skill gaps
		fermentation	staff
		• Understanding of drying and sorting of tea leaves	
		• Ability to do quality check by tea tasting	
		• Ability to do attractive packaging	
		• Ability to do marketing and selling	
		• Ability to do fitting and maintenance works	

Sources: IMaCS Survey and Analysis

7.7 Hospitality

Assam is a tourism destination for nature lovers, wildlife enthusiasts, leisure tourists, and photographers from all over the world. Over 99 per cent of the tourists in Assam are domestic, while remaining are foreign. Between 2002 and 2008, number of domestic tourists has increased at a CAGR of 15 per cent, while the number of foreign tourists has increased at a CAGR of 12 per cent. Assam Tourism Development Corporation has the prime responsibility for development of tourism in the state.

FIGURE 39: DOMESTIC TOURIST ARRIVAL (IN '000)
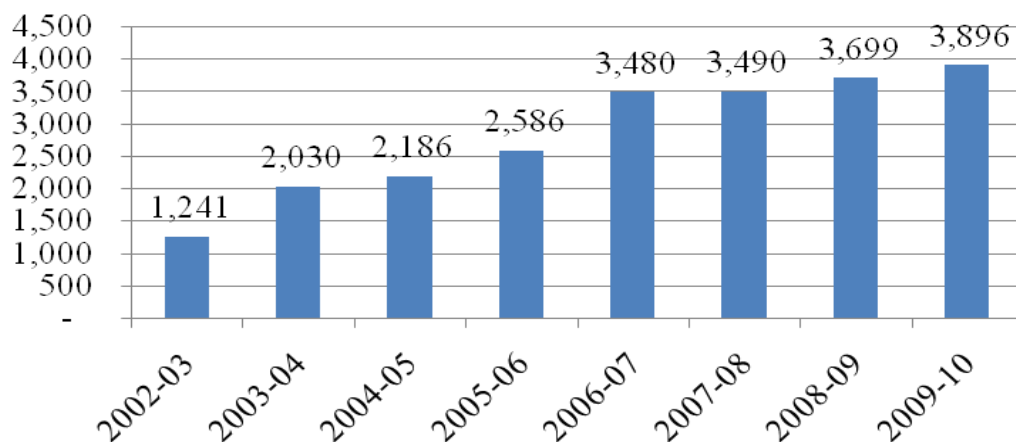
FIGURE 40: FOREIGN TOURIST ARRIVAL
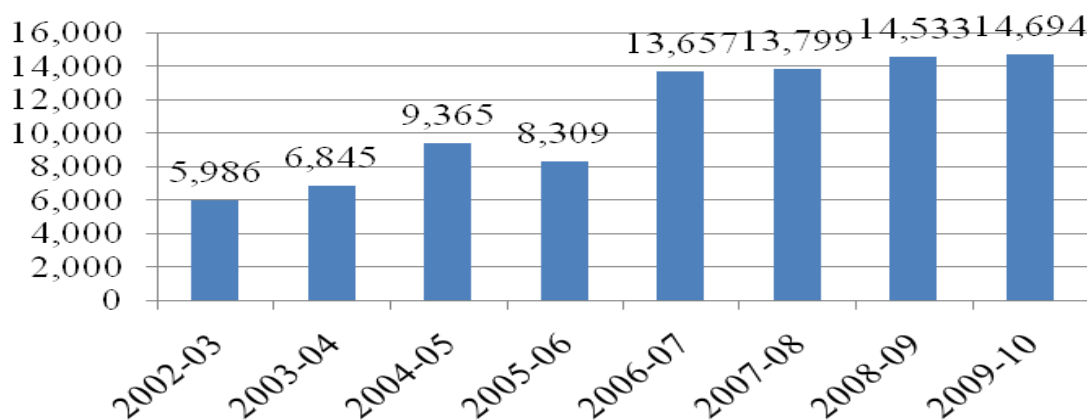
* Tourist arrivals have been calculated by summing up the number of tourists staying in tourist lodge of the Directorate and those staying in other accommodations like hotels etc.
Sources: Economic Survey of Assam 2010-11, IMaCS Analysis

To facilitate the growth of the tourism industry, Tourism Policy was formulated in 2008. Some of the salient features of the policy are:

- To facilitate Public Private Partnership in the sector.

- To provide incentives like tax benefits and cost subsidization to encourage private investment in tourism infrastructure.

- Some state circuits to be identified for comprehensive development.

- To concentrate on strengths of Assam's tourism attractions like:

    - Wildlife tourism

    - River / lake tourism and adventure tourism

    - Tea, golf and nostalgia

    - Religious tourism

    - Culture and heritage tourism

    - Rural tourism

    - MICE (Meetings, Incentives, Conventions and Exhibition) tourism

    - Theme Park – Mini Assam to be created at a suitable location.

- To facilitate properly planned growth of tourism infrastructure, areas in the vicinity of the major tourism destinations to be specified as Tourism Zones.

7.7(a) Skill mapping and gap analysis: Hospitality sector

Entity	Role	Expected competencies	Skill gaps
Tour operators / travel guides and logistic providers	• Ability to create attractive local tourist package • Ability to provide uninterrupted logistics support	• Market understanding • Ability to brand • Event management • Route planning and optimisation • Excellent sales and marketing • Ability to develop attractive pricing strategy • Ability to liaison with airline, hotels and local community • Ability to manage tourist expectations • Customer Relationship Management • Computer skills; soft skills • Understanding of local and English speaking skills	• Lack of soft skills • Inability to speak in English • Inability to plan tours • Inability to brand • No tie ups with hotels • Poor customer relationship management • Most of the tour operators for Assam are based in states outside Assam, as these services are lacking in Assam.

| Hotels | • Ability to provide customer service

• Ability to perform multi-functions | • Understanding of local language and English speaking skills

• Customer relationship management

• Excellent trouble shooting skills

• Understanding of cultural differences

• Understanding of hotel functions, including procurement of raw material, cooking etc.

• Computer skills

• Ability to maintain financial records

• Ability to maintain business etiquette | • Inability to speak in English

• Low computer literacy

• Lack trouble shooting skills

• Lack understanding of cultural differences |

Sources: IMaCS Survey and Analysis

7.8 Printing

There are over 150 printing press units in the Kamrup district of Assam. Each printing press provides employment to over 200 to 300 persons. The demand for printing material comes not just from Kamrup, but from other neighbouring districts as well. Demand is now growing due to increased number of schools and colleges. They are also doing value addition, like personalised products, like albums, notebooks, embossing logo of the schools, etc. The industry has been facing shortage of trained people. It hires manpower from the Industrial Training Institutes (ITIs). However, they have only theoretical

knowledge and practical knowledge is imparted to them on-the-job. Some of the trainers are even brought from Chennai and Bangalore.

7.8(a) Skill mapping and gap analysis: Printing

Entity	Role	Expected competencies	Skill gaps
Printing press	To print as per requirements	• Ability to do pre pressing work including graphic designing and illustration • Understanding of mechanical and IT processes related with the printing machine • Understanding of the latest printing technology • Ability to use printing machines, which includes ability to feed in the MRP, the ability to batch print consignment wise details in the machine, the ability to ensure that all such details appear in the right place and in right format, etc. • Knowledge of marketing and packaging • Ability to maintain customer relations • Ability to add value to products • Ability to maintain records	• Lack of understanding of latest technology • Inability to do marketing • Inability to add value to the products • Inability to maintain records • Inability to make products visually appealing • Inability to do graphic designing

Sources: IMaCS Survey and Analysis

7.9 Paper

Assam has abundant forest resources, including bamboo, which provides raw materials for industries like paper. It is also able to source bamboo from neighboring states like Mizoram. The state has two types of paper mills. First, those producing paper from bamboo. Second, those using waste paper to make kraft paper (recycling). Paper producing mills are owned by Hindustan Paper Corporation Limited and are located at Panchgram in Cachar district and Jagiroad, Morigaon in Nagaon district. Kraft paper units are mainly concentrated in Sonitpur district. Some of the prominent ones include Brahmputra Paper Mill and Star Paper Mill. Assam has potential for setting up more such industries.

FIGURE 41: ANNUAL PAPER PRODUCTION IN MILLS OWNED BY HINDUSTAN PAPER CORPORATION

('000 TONNES)
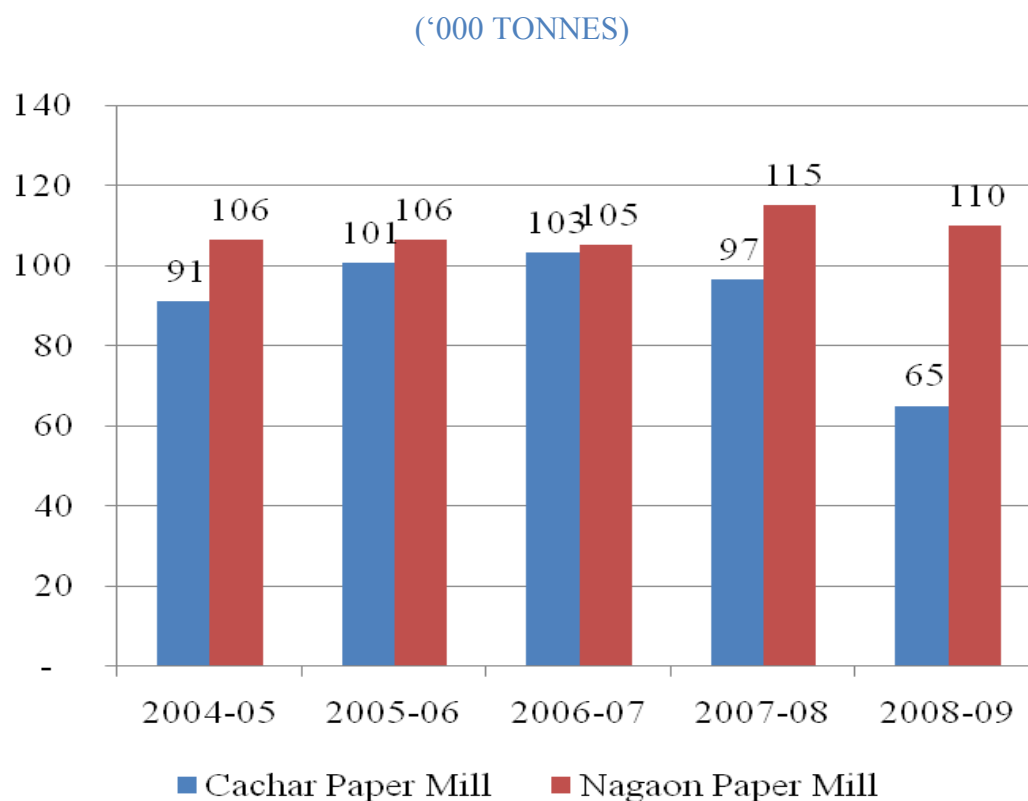
Sources: Hindustan Paper Corporation Limited, Economic Survey of Assam 2010-11, IMaCS Analysis

7.9(a) Skill mapping and gap analysis: Paper

Entity	Role	Expected competencies	Skill gaps
Paper mill	Processing bamboo into paper	• Ability to procure bamboo as raw material • Ability to convert bamboo into bamboo chips • Ability to mix chemicals and boil bamboo chips until pulp remains • Ability to filter and beat the pulp • Ability to feed the beaten pulp onto a moving belt to squeeze the pulp through a series of rollers to remove water and make paper • Ability to pass the paper over a series of steam heated cylinders to remove the remaining water • Ability to wound dried paper onto large reels • Knowledge of packaging and transportation	• For specialised jobs, mainly engineers, and other higher positions, All India recruitments are done for big industries. • For labor jobs and unskilled or semi skilled jobs, local recruitment is done. • Shortage of specialised skills, like engineers – instrumentation, paper technologist, mechanical, electrical etc.

Sources: IMaCS Survey and Analysis

7.10   Jute

Assam is the third largest jute producer in India. It is also home to Assam Co-operative Jute Mills. The products made by the mill include jute bags, hessian cloth, DWT cloth (used in tea bags) and twine. In addition, two jute parks are planned to be set up in the state: one in Silchar and the second one in Dibrugarh. These are expected to further promote the growth of jute sector in the state and generate employment.

FIGURE 42: JUTE TEXTILE PRODUCTION IN ASSAM (IN TONNES)
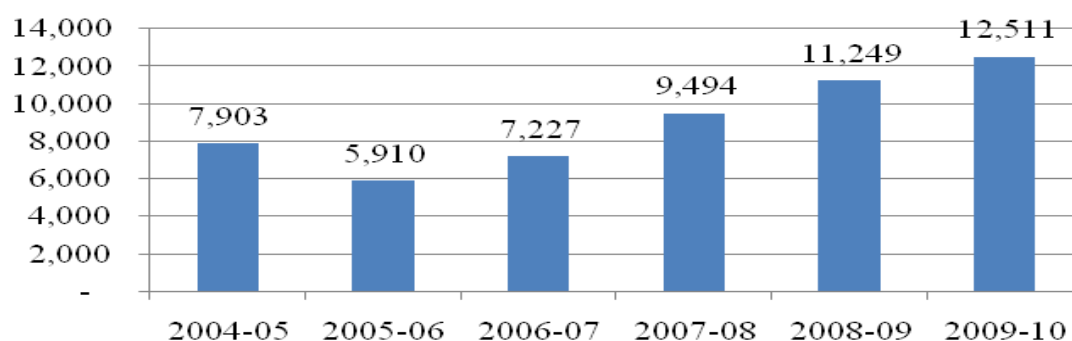
Sources: Economic Survey of Assam 2010-11

7.10(a) Skill mapping and gap analysis: Jute

Entity	Role	Expected competencies	Skill gaps
Jute mill	Use raw jute to spin and weave it into yarn or bags	• Ability to use raw jute fiber and process it by piecing up, softening and lubricating, conditioning, carding, drawing and doubling and spinning • Ability to spin raw jute into yarn • Ability to use weave yarn for making hessian cloth	• From our interactions with the Assam Co-operative Jute Mill, we have found that on the job training is provided to the workers and no skill gaps were reported.

Entity	Role	Expected competencies	Skill gaps
		etc.	
		• Ability to use woven jute for making diversified products like jute bags	
		• Ability to operate different machinery in the jute mills	
		• Ability to do mechanical work like fitting, welding, plumbing, turning and electrician	

Sources: IMaCS Survey and Analysis

7.11   Food processing

Assam has a well developed food processing industry in the field of bakeries. It has some medium to small sized units, producing cakes and biscuits for Britannia and even making Horlicks for GlaxoSmithKline. Some of the big players in this industry include Nezone, Nabisco, SRD Nutrients etc. Most of these units are concentrated in Kamrup, Sonitpur, Nalbari and Darrang. In addition, there are several flour mills, and food and fruit processing units as well. As horticulture grows in the state, it will have a potential to give further thrust to its food and fruit processing units, producing, jams, jelly, pickles etc.

7.11(a) Skill mapping and gap analysis: Food processing

Entity	Role	Expected competencies	Skill gaps
Food processing unit	Bakery	• Ability to mix different ingredients according to specified proportions • Specific knowledge of technical aspects such as temperature settings, turbulence settings, etc. and the ability to follow specifications • Ability to take special care of burner working and maintenance • Ability to cut in different shapes • Ability to package and do marketing (mostly there are tie ups) • Ability to maintain hygiene • Ability to speak in English	• Inability to follow specifications • Inability to maintain hygiene • Inability to speak in English • Lack of maintenance skills, fitters and electricians • Inability to use modern machines

Entity	Role	Expected competencies	Skill gaps
Food processing units	Processing of fruits and vegetables by adding value to them	• Ability to visually examine fruits / vegetables and separate rotten fruits / vegetables • Ability to differentiate between different quality grades based on size and other normative approaches • Ability to appropriately size / dice as well as the ability to make end produce visually appealing • Knowledge of latest preservation and processing technologies • Ability to adapt to newer storage technologies • Sensitisation to quality control • Branding knowledge • Strong negotiation skills • Packing, selling and marketing skills	• Inability to make end product visually appealing • Lack of knowledge of preservation and processing technologies • Inability to adapt to newer storage technologies • Lack branding knowledge • Lack strong negotiation skills • Lack packing, selling and marketing skills

Sources: IMaCS Survey and Analysis

PART – II (c): Forecasting of Human Resource Requirement

8.1 Human resource forecasting model

IMaCS has developed a model for estimating human resources requirement for the state based on growth of potential industries at district level. The model is depicted diagrammatically as follows:

Demand drivers	Supply drivers
Historical growth rates	Current education infrastructure: 1. Schools 2. ITI and Polytechnics 3. General colleges 3. Specialised or post graduate
Investments expected	
Employment pattern	Student drop out rates, migration and reverse migration
Changing consumer preference	Employability of human resources
Government policy thrust	

8.2 Incremental demand in Assam

Assam will have an incremental demand of human resources across various sectors 12.34 lakhs by 2021.

Retirement of persons in the 50-60 year age group may generate an additional 7% in the demand sectors.

Human Resource Requirement in Assam, Nos.   *Incremental demand, 2011-21*
In thousands

Sector	2021	2011	Incremental demand
Handloom	2,341	1,743	598
Construction	397	223	174
Horticulture	786	696	90
Handicrafts	292	217	75
Oil and Gas	54	4	50
Education	268	226	41
Healthcare	93	52	41
Hospitality	82	44	39
Motor Repair	84	52	33
IT / ITES	30	3	28
Food processing	98	71	27
Tea	480	458	22
Cement	10	1	9
Rubber	21	15	6
Coal	6	3	3
			12.34 lakh

Source: IMaCS Analysis

The demand will fall short of supply, leaving an excess supply of human resources of 80.21 lakh.

Demand for Human Resources, 2011-21	Supply of Human Resources, 2011-21	Excess Supply of Human Resources, 2011-21
12,344 — Specialised skills	2.49L	2.36L
98,786 — Skill Category Level 2	53.42L	52.43L
1.79L — Skill Category Level 1	8.16L	6.36L
9.43L — Basic Skills	28.49L	19.05 L

Total incremental demand : 12.34 lakh
Total incremental supply : 92.55 lakh
Excess Supply : 80.21 lakh
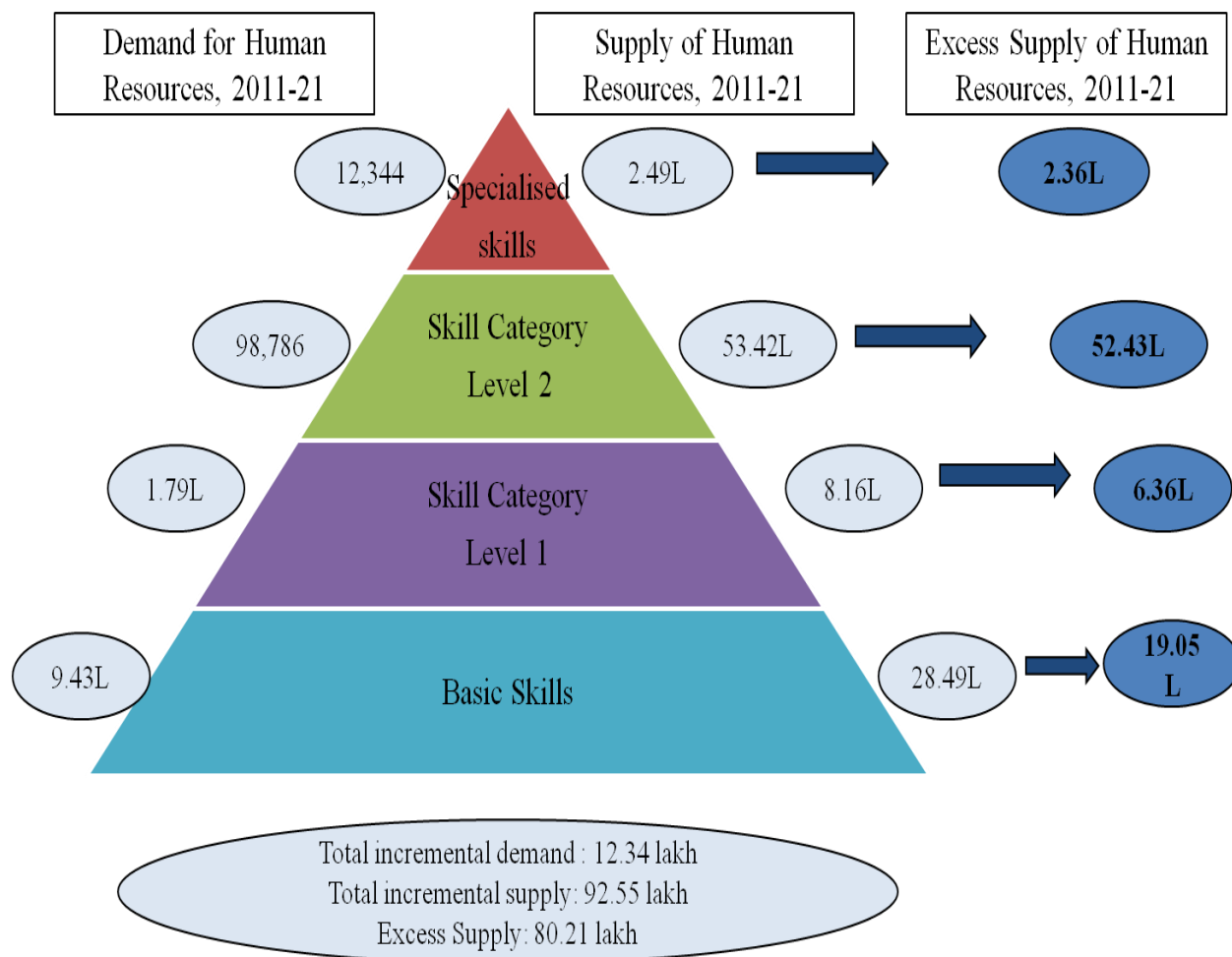
Specialised skills: Highly qualified and specialised personnel; Skill Category 1: Engineers, Arts, and Science and other professionals with experience; Skill Category Level 2: ITI and Diploma holders; Minimal Education: Minimal qualification or school drop outs.

Source: IMaCS Analysis

8.3 District-wise human resource requirement in Assam – 2011-21

District-wise human resource has been projected in Assam up to the year 2021.

TABLE 61: HUMAN RESOURCE REQUIREMENT IN ASSAM

Districts / sectors	Human Resource Requirement between 2011 and 2021															
	Handloom	Handicrafts	Horticulture	Food processing	Tea	Tourism & Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair	Total
Baksa	-	-	-	175	0	-	-	1,054	-	2,218	150	-	-	-	-	3,597
Barpeta	35,828	4,483	5,271	35	0	752	-	1,580	2,248	9,540	13	-	-	-	-	59,751
Bongaigaon	22,777	2,850	2,995	40	2	-	-	559	1,237	6,516	110	-	-	-	-	37,085
Cachar	10,641	1,331	3,069	1,496	3,392	93	-	1,290	2,074	10,813	500	-	-	-	1,486	36,185
Chirang	-	-	-	18	-	-	-	523	-	1,107	15	-	-	-	-	1,663
Darrang	27,869	3,487	5,791	384	5,719	376	-	1,098	2,228	6,789	93	-	-	-	-	53,835
Dhemaji	760	95	3,622	29	3	-	-	825	1,148	5,323	11	-	-	-	-	11,817
Dhubri	8,422	1,054	5,183	154	0	-	-	1,237	5,676	5,608	65	-	-	-	316	27,714
Dibrugarh	21,888	2,738	3,123	3,937	669	1,505	-	2,424	1,253	8,212	23	-	-	-	3,146	48,919
Goalpara	17,595	2,201	2,732	59	0	-	-	1,263	1,373	3,732	362	-	765	-	-	30,082
Golaghat	24,328	3,044	3,905	2,101	55	4,195	-	1,234	933	7,264	130	-	-	-	648	47,838
Hailakandi	11,065	1,384	1,598	432	0	-	-	732	1,365	4,051	401	-	-	-	-	21,028
Jorhat	34,538	4,321	3,415	1,790	9	2,634	3,042	2,234	1,251	8,120	10	-	-	-	3,367	64,730
Kamrup	64,464	8,066	3,582	-	0	-	3,042	1,351	693	11,195	470	-	3,014	-	-	95,877
Kamrup (M)	31,946	3,997	1,535	1,177	462	10,911	21,678	4,995	1,616	7,098	26	-	2,720	-	13,485	101,647
Karbi-Anglong	21,354	2,672	4,324	97	262	376	-	1,214	1,219	4,727	2,024	-	-	-	-	37,997
Karimganj	16,257	2,034	2,198	426	0	-	-	1,195	1,563	5,842	1,141	-	1,955	-	-	32,611
Kokrajhar	44,020	5,508	3,961	215	3	-	-	1,428	1,231	5,613	62	-	-	-	-	62,041
Lakhimpur	39,646	4,960	6,739	716	9,917	752	-	1,116	2,190	6,052	11	-	-	-	-	72,099
Morigaon	30,247	3,784	3,431	65	0	376	-	984	1,224	5,338	65	-	-	-	-	45,515
N.C. Hills	6,092	762	682	22	528	-	-	599	886	1,550	51	-	-	-	-	11,171
Nagaon	31,113	3,893	7,661	1,299	931	4,195	-	3,412	3,288	12,420	18	-	459	-	316	69,004
Nalbari	37,760	4,724	3,614	28	0	-	-	1,203	1,591	5,068	1	-	-	-	-	53,990
Sivsagar	30,015	3,755	3,292	2,992	11	3,386	-	1,936	2,342	11,032	25	-	-	-	1,281	60,068
Sonitpur	10,327	1,292	5,353	3,082	43	8,390	-	2,563	1,722	8,039	113	-	-	-	3,462	44,386
Tinsukia	18,864	2,360	3,148	5,161	12	752	-	2,074	916	8,178	45	50,000	-	3,008	5,027	99,546
Udalguri	-	-	-	-	-	-	-	-	-	2,279	35	-	-	-	-	4,161
Assam	**597,817**	**74,796**	**90,223**	**27,015**	**22,022**	**38,694**	**27,762**	**40,884**	**41,268**	**173,721**	**5,970**	**50,000**	**8,641**	**3,008**	**32,536**	**1,234,357**

Source: IMaCS Analysis

8.4 Stakeholder feedback

The various stakeholders met across Assam have given the IMaCS team qualitative responses regarding the current status in Assam, which is summarized below.

TABLE 62: STAKEHOLDER FEEDBACK

Stakeholder	Key findings
Industry specific feedback	
Handloom and Handicrafts	• Market linkage and value addition are concern areas • Younger generation not interested in working in traditional sectors
Horticulture and fruit processing	• Lack of cold storage facilities • Lack of modern knowledge about horticulture cropping cycles • Market linkage missing for most horticulture products
Hotels	• Infrastructure issues deterring investments in areas remote locations which have high tourism potential • Poor customer experience • Slow handling of customer problems
IT / ITES	• Lack of human resources with computer efficiency for IT / ITES • Accent and language gaps
Forestry / Bamboo based industry	• Skilling required for value addition to the products. • Need good finishing
Oil, Gas and Plastic	• Most of the people are not able to cope with the handling of complicated machines • Repair and maintenance personnel are less
Construction	• Construction activity undergoing in areas like roads, bridges, hydro power, building construction

Stakeholder	Key findings
Silk Weaving	• Need more tie-ups with institutes like NIFT across Assam. It is available now only in Sualkuchi • Need to marry modern and the tribal designs • Need more of newer infrastructure like the Juki machines and computers for designing
Others	• There is shortage of skilled human resources in healthcare, trainers and motor mechanics
Industry feedback (overall)	• Need to create infrastructure (like roads, electricity, telecom) to attract skilled employees • Locals are not willing to work in blue collared jobs as they have a preference for government jobs only • Educational institutions and industry need to work more closely to industry specific sets and courses to meet industry demand • Absenteeism in the workforce

Stakeholder	Key findings
Government feedback	• Focus on factor endowments and resident skills • Strengthening of existing infrastructure facilities • Industry department is conducting a ward level skill analysis to aid in capacity building of Assam
Educational Institutions feedback	• Facilitate employment market information of other states • Focus on providing good quality training • Lack of trainers, thus focus on 'training the trainers' • Need for better infrastructure • Establish linkage between industries and the institutes
Students / Unemployed youths feedback	• Open to explore opportunities outside the State, as locally opportunities are scarce • After getting exposure outside, willingness to come back if opportunities are presented • Preference for Government jobs • Lack of industrial exposure • Majority lack a placement and follow up cell

PART – III: Recommendations

9.1 Interventions for human resource Demand-Supply gap management

Demand-Supply scenario for human resources available for new skilling in Assam from 2011 to 2021
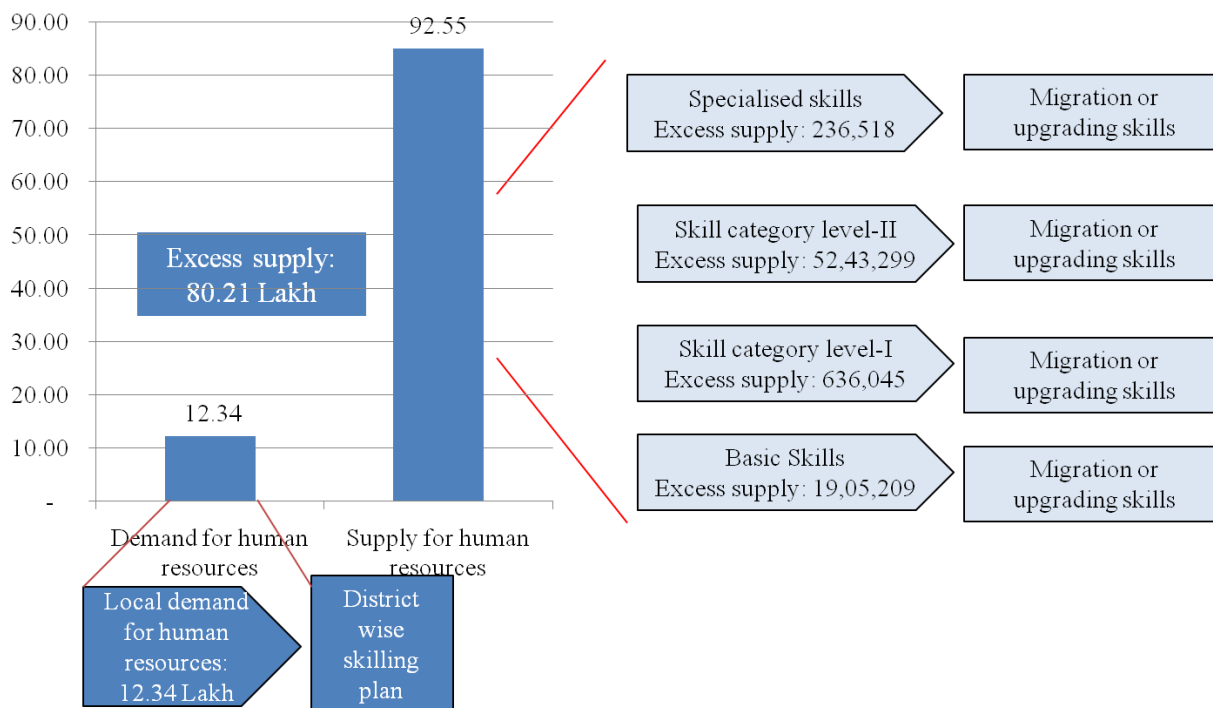
Source: IMaCS Analysis

9.2 Areas for skilling within state – 2011-21
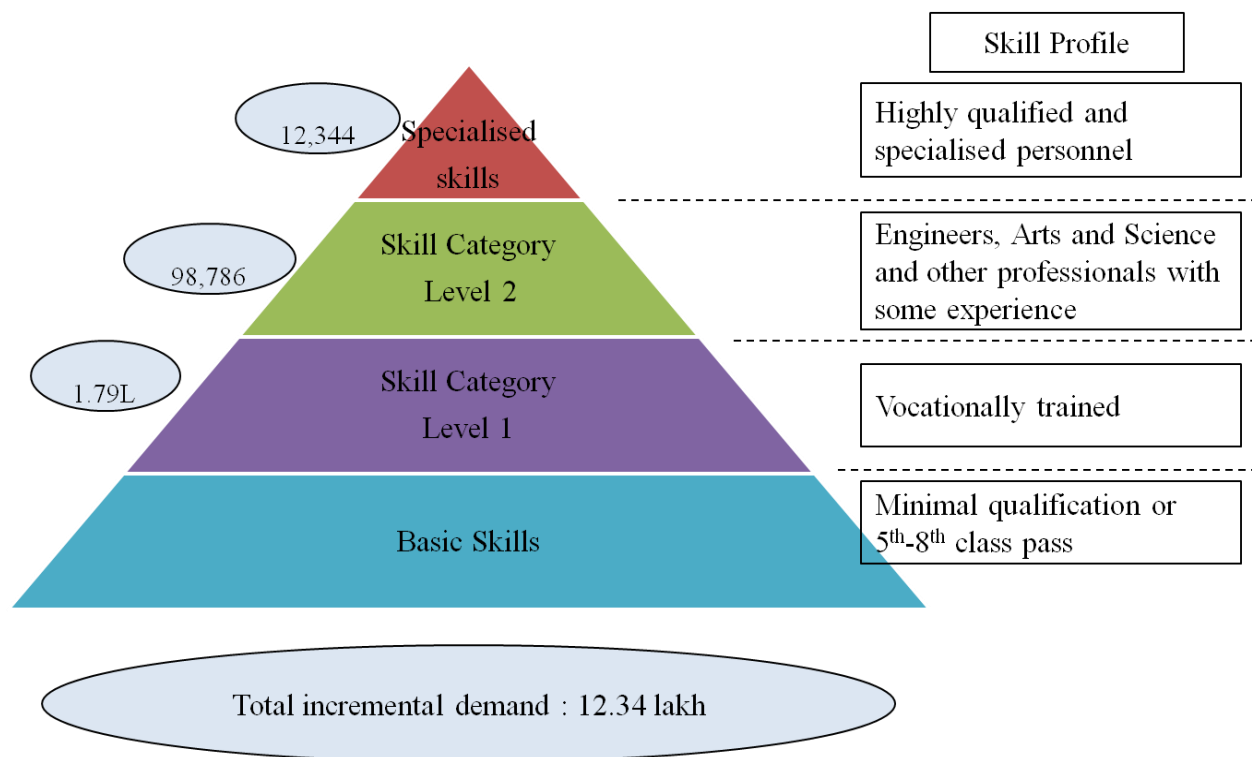
Specialised skills include: master weavers, food technologist, PhDs, Designers, etc.

Source: IMaCS Analysis

The sectors identified have the description based on which skilling has to be provided.

TABLE 63: SKILLING DESCRIPTION

Sector	Basic skills: 9.43 lakh	Skill category level-I: 1.79 lakh	Skill category level-II: 98,786	Specialised skill: 12,344
Handloom	Basic weaving	Weaving	Entrepreurial and management activities	Master, desinginig
Handicraft	Basket, furniture, bamboo	Designing	Entrepreurial and management activities	Master craft
Horticulture	Fruits and flowers	Fam extension services	Managing cooperative	Marketing

Sector	Basic skills: 9.43 lakh	Skill category level-I: 1.79 lakh	Skill category level-II: 98,786	Specialised skill: 12,344
Fruit processing	Drying and processing	Distribution, packaging	Entrepreneurial activity	Food technology
Hospitality	Housekeeping	Chef, front office management	Hotel management, entrepreneurship	Tourism package development
IT/ITeS		Data entry, call centre services	Hardware maintenance, entrepreneurial activity	Systems specialist, software design
Healthcare/ elderly care	Support services	Paramedical services	Nursing	Specialisation in medicine, etc.
Education			Teaching	Research and training
Motor repair	Basic repairs	Complex repairs	Entrepreneurship	
Oil & gas and plastics	Equipment cleaning	Equipment testing, maintenance, repairs	Shop floor management, quality control	Specialists and systems managers
Construction		Masonry, welding, machine operations, carpentry	Contracting	Project management
Tea	Growing, cutting collecting	Packaging, grading, testing	Entrepreneurship	Plantation management and marketing

Source: IMaCS Analysis

There are also livelihood opportunities in Assam which require skill up gradation.

The additional workforce that is available for skill upgradation in livelihood activities in Assam is 40.23lakhs.

TABLE 64: SKILLING DESCRIPTION FOR LIVELIHOOD OPPORTUNITIES

Activity	Description	Skill level	2011 employment
Agriculture (Cultivation)	Economy of Assam is predominantly agrarian. Rice is the most cultivated crop, with paddy cultivation occupying 91.9% of the net cropped area.	Mostly, traditional methods of cultivation used. Scientific methods are beginning to be introduced.	37,30,773
Fishery	The State has about 3.91 lakh hectare of water area in the form of rivers, beel, derelict water bodies, ponds and tanks. The State is yet to reach self-sufficiency in fish production. The State Government is running various schemes for development of fishery in the State.	Dominated by traditional capture fish only. Scientific fish farming practiced in some of the individual and community tanks.	222,707
Animal Husbandry	According to Livestock Census 2003, the livestock population in Assam was 144.55 lakh, where the cattle population constitutes the largest group, followed by goats, pigs, and buffaloes.	Scientific breeding programmes beginning to be introduced.	45,865
Apiculture	Majority of bee keeping operations are undertaken under the Khadi and Village Industries. Bee-keeping is the second biggest contributor to employment in that area.	Traditional skills used for bee-keeping.	24,391

9.3 Skilling for migration

Excess human resource pool available for skilling for outside the state is ***8.02 lakh per year*** across the following sectors:

Sectors	Areas for skilling
Hospitality	Housekeeping services, Culinary expertise, Hotel Management, Entrepreneurship, Tourism package development
IT / ITES	Data entry services in hotels, hospitals and offices (govt. and private), Call centre: customer service and helpline services, IT entrepreneurship, hardware maintenance, IT system specialisation
Retail services	Sales, customer relationship management, front desk management, entrepreneurship
Music	Entertainment services
Sports	Athletics, playing football
Tea	Tea research, plantation management
Fashion Designing	Fashion designing, fashion critiquing
Flight attendants	In flight hospitality services
Ground staff at the airports	Handling of baggage and cargo, ticketing, addressing passenger needs and queries, ground staff services
Healthcare	Hygiene services in hospitals and clinics, Paramedical services, Nursing
Trainers	Dance, Music and sports training

Source: IMaCS Analysis

9.4 Capacity creation within State

The human resource needs to be skilled across the sectors which present employment opportunities and the capacity needs to be created to achieve the same.

Capacity needs to be created for skilling the migrant workforce

Capacity creation required for vocational training in the following: Horticulture, Fruit Processing, Food Processing, Hospitality, IT / ITES, Bamboo based industry, Beauty and Wellness, Construction, Health & Education, Repair services, Handloom and Handicraft, Flight attendants, Ground Staff at the airports, Retail services, Music and Sports, Fashion Designing, and Language Skills.

Source: IMaCS Analysis

9.5 District-level Skilling Opportunities

The district level opportunities have been identified for Baksa with the demand upto the year 2021.

9.5.1 Baksa

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

TABLE 65: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - BAKSA

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	146	-	-	-	520	-	1717	135	-	-	-	-
Skill Category Level 2	-	-	-	23	-	-	-	329	-	360	9	-	-	-	-
Skill Category Level 1	-	-	-	4	-	-	-	195	-	119	4	-	-	-	-
Specialised skills	-	-	-	2	-	-	-	11	-	22	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	67	-	-	-	260	-	736	62	-	-	-	-
Skill Category Level 2	-	-	-	10	-	-	-	164	-	154	4	-	-	-	-
Skill Category Level 1	-	-	-	2	-	-	-	97	-	51	2	-	-	-	-
Specialised skills	-	-	-	1	-	-	-	5	-	10	1	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	79	-	-	-	260	-	981	73	-	-	-	-
Skill Category Level 2	-	-	-	12	-	-	-	164	-	206	5	-	-	-	-
Skill Category Level 1	-	-	-	2	-	-	-	97	-	68	2	-	-	-	-
Specialised skills	-	-	-	1	-	-	-	5	-	13	1	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.2 Barpeta

The district level opportunities have been identified for Barpeta with the demand upto the year 2021.

Bell Metal: Handicraft

- Barpetta is known for the ancient bell metal craft, especially in the town of Sarthebari

- Courses that reduce the lead time of turning out these exquisite products have to be given

- The designs and the products bear a traditional look. Short term courses that expose these artisans to modern designing technology are necessary

- Need also to offer courses that will develop agents who can do exclusive marketing and market linkages for these products.

TABLE 66: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - BARPETA

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	29997	3753	4737	30	-	572	0	780	0	7383	12	-	-	-	-
Skill Category Level 2	4648	582	325	5	-	137	0	493	0	1550	1	-	-	-	-
Skill Category Level 1	825	103	155	1	-	36	0	292	2226	511	0	-	-	-	-
Specialised skills	358	45	53	0	-	8	0	16	22	95	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	13895	1738	2296	14	-	286	0	390	0	3164	6	-	-	-	-
Skill Category Level 2	2153	269	158	2	-	68	0	246	0	664	0	-	-	-	-
Skill Category Level 1	382	48	75	0	-	18	0	146	1113	219	0	-	-	-	-
Specialised skills	166	21	26	0	-	4	0	8	11	41	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	16102	2015	2441	16	-	286	0	390	0	4219	7	-	-	-	-
Skill Category Level 2	2495	312	168	2	-	68	0	246	0	886	0	-	-	-	-
Skill Category Level 1	443	55	80	0	-	18	0	146	1113	292	0	-	-	-	-
Specialised skills	192	24	27	0	-	4	0	8	11	55	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.3 Bongaigaon

The district level opportunities have been identified for Bongaigaon with the demand upto the year 2021.

Handlooms

- Majority of the designs are tribal designs. Courses that can aid in computer aided designing where there is fusion of modern and tribal designs

- Skills to develop market linkages

- Courses that help in good finishing of the produce

TABLE 67: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - BONGAIGAON

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	19069	2386	2691	34	2	-	-	276	0	5043	99	-	-	-	-
Skill Category Level 2	2955	370	185	5	0	-	-	174	0	1059	7	-	-	-	-
Skill Category Level 1	524	66	88	1	0	-	-	103	1225	349	3	-	-	-	-
Specialised skills	228	28	30	0	0	-	-	6	12	65	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8833	1105	1305	16	1	-	-	138	0	2161	45	-	-	-	-
Skill Category Level 2	1369	171	90	2	0	-	-	87	0	454	3	-	-	-	-
Skill Category Level 1	243	30	43	0	0	-	-	52	612	149	1	-	-	-	-
Specialised skills	106	13	15	0	0	-	-	3	6	28	1	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	10236	1281	1387	18	1	-	-	138	0	2882	54	-	-	-	-
Skill Category Level 2	1586	198	95	3	0	-	-	87	0	605	4	-	-	-	-
Skill Category Level 1	281	35	46	1	0	-	-	52	612	199	2	-	-	-	-
Specialised skills	122	15	15	0	0	-	-	3	6	37	1	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.4 Cachar

The district level skilling opportunities have been identified for Cachar with the demand upto the year 2021.

Handlooms

- Majority of the designs are tribal designs. Courses that can aid in computer aided designing where there is fusion of modern and tribal designs

- Skills to develop market linkages

- Courses that help in good finishing of the produce

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

TABLE 68: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - CACHAR

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8909	1115	2758	1252	3049	71	-	636	0	8369	450	-	-	-	1086
Skill Category Level 2	1381	173	189	194	209	17	-	402	0	1757	31	-	-	-	299
Skill Category Level 1	245	31	91	34	100	4	-	238	2053	579	15	-	-	-	86
Specialised skills	106	13	31	15	34	1	-	13	21	108	5	-	-	-	15

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	4127	516	1337	576	1507	35	-	318	0	3587	206	-	-	-	477
Skill Category Level 2	639	80	92	89	104	8	-	201	0	753	14	-	-	-	131
Skill Category Level 1	113	14	44	16	49	2	-	119	1027	248	7	-	-	-	38
Specialised skills	49	6	15	7	17	0	-	6	10	46	2	-	-	-	7

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	4782	598	1421	677	1542	35	-	318	0	4782	243	-	-	-	609
Skill Category Level 2	741	93	98	105	106	8	-	201	0	1004	17	-	-	-	168
Skill Category Level 1	132	16	47	19	51	2	-	119	1027	331	8	-	-	-	48
Specialised skills	57	7	16	8	17	0	-	6	10	62	3	-	-	-	8

Source: IMaCS Survey and Analysis

9.5.5 Chirang

The district level skilling opportunities have been identified for Chirang with the demand upto the year 2021.

Healthcare

- Chirang is one of the newer districts of Assam, carved out of Bongaigaon in 2004

- Courses to skill the local population to perform support functions in healthcare

TABLE 69: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - CHIRANG

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	15	-	-	-	258	-	857	14	-	-	-	-
Skill Category Level 2	-	-	-	2	-	-	-	163	-	180	1	-	-	-	-
Skill Category Level 1	-	-	-	0	-	-	-	97	-	59	0	-	-	-	-
Specialised skills	-	-	-	0	-	-	-	5	-	11	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	7	-	-	-	129	-	367	6	-	-	-	-
Skill Category Level 2	-	-	-	1	-	-	-	82	-	77	0	-	-	-	-
Skill Category Level 1	-	-	-	0	-	-	-	48	-	25	0	-	-	-	-
Specialised skills	-	-	-	0	-	-	-	3	-	5	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	8	-	-	-	129	-	490	8	-	-	-	-
Skill Category Level 2	-	-	-	1	-	-	-	82	-	103	1	-	-	-	-
Skill Category Level 1	-	-	-	0	-	-	-	48	-	34	0	-	-	-	-
Specialised skills	-	-	-	0	-	-	-	3	-	6	0	-	-	-	-

Source: Discussions with industry, IMaCS Analysis

9.5.6 Darrang

The district level skilling opportunities have been identified for Darrang with the demand upto the year 2021.

Handlooms

- Majority of the designs are tribal designs. Courses that can aid in computer aided designing where there is fusion of modern and tribal designs

- Skills to develop market linkages

- Courses that help in good finishing of the produce

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

- Need to develop cold chain management skills

TABLE 70: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT - DARRANG

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	23333	2919	5205	322	5140	286	-	542	0	5254	83	-	-	-	-
Skill Category Level 2	3616	452	358	50	353	68	-	343	0	1103	6	-	-	-	-
Skill Category Level 1	642	80	171	9	169	18	-	203	2206	363	3	-	-	-	-
Specialised skills	279	35	58	4	57	4	-	11	22	68	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	10808	1352	2523	148	2540	143	-	271	0	2252	38	-	-	-	-
Skill Category Level 2	1675	210	173	23	174	34	-	171	0	473	3	-	-	-	-
Skill Category Level 1	297	37	83	4	83	9	-	101	1103	156	1	-	-	-	-
Specialised skills	129	16	28	2	28	2	-	5	11	29	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	12525	1567	2682	174	2600	143	-	271	0	3002	45	-	-	-	-
Skill Category Level 2	1941	243	184	27	179	34	-	171	0	630	3	-	-	-	-
Skill Category Level 1	344	43	88	5	85	9	-	101	1103	208	1	-	-	-	-
Specialised skills	150	19	30	2	29	2	-	5	11	39	1	-	-	-	-

Source: IMaCS Survey and Analysis

158

9.5.7 Dhemaji

The district level skilling opportunities have been identified for Dhemaji with the demand upto the year 2021.

Handlooms

- Majority of the designs are tribal designs. Courses that can aid in computer aided designing where there is fusion of modern and tribal designs

- Skills to develop market linkages

- Courses that help in good finishing of the produce

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

- Need to develop cold chain management skills

TABLE 71: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – DHEMAJI

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	637	80	3255	24	3	-	-	407	0	4120	10	-	-	-	-
Skill Category Level 2	99	12	224	4	0	-	-	257	0	865	1	-	-	-	-
Skill Category Level 1	18	2	107	1	0	-	-	152	1136	285	0	-	-	-	-
Specialised skills	8	1	36	0	0	-	-	8	11	53	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	295	37	1578	11	1	-	-	204	0	1766	5	-	-	-	-
Skill Category Level 2	46	6	108	2	0	-	-	129	0	371	0	-	-	-	-
Skill Category Level 1	8	1	52	0	0	-	-	76	568	122	0	-	-	-	-
Specialised skills	4	0	18	0	0	-	-	4	6	23	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	342	43	1677	13	1	-	-	204	0	2354	5	-	-	-	-
Skill Category Level 2	53	7	115	2	0	-	-	129	0	494	1	-	-	-	-
Skill Category Level 1	9	1	55	0	0	-	-	76	568	163	0	-	-	-	-
Specialised skills	4	1	19	0	0	-	-	4	6	30	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.8 Dhubri

The district level skilling opportunities have been identified for Dhubri with the demand upto the year 2021.

Wildlife Sanstuary Management

- Dhubri houses one of India's youngest wildlife sanctuaries – the Chakrashila Sanctuary.

- Locals can be given courses which will develop sanctuary management skills

- Wildlife guides from the local population can be skilled and developed

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

- Need to develop cold chain management skills

TABLE 72: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – DHUBRI

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	7051	882	4658	129	-	-	-	610	0	4340	58	-	-	-	231
Skill Category Level 2	1093	137	320	20	-	-	-	386	0	911	4	-	-	-	64
Skill Category Level 1	194	24	153	4	-	-	-	229	5620	300	2	-	-	-	18
Specialised skills	84	11	52	2	-	-	-	12	57	56	1	-	-	-	3

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	3266	409	2258	59	-	-	-	305	0	1860	27	-	-	-	102
Skill Category Level 2	506	63	155	9	-	-	-	193	0	391	2	-	-	-	28
Skill Category Level 1	90	11	74	2	-	-	-	114	2810	129	1	-	-	-	8
Specialised skills	39	5	25	1	-	-	-	6	28	24	0	-	-	-	1

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	3785	474	2400	70	-	-	-	305	0	2480	32	-	-	-	130
Skill Category Level 2	587	73	165	11	-	-	-	193	0	521	2	-	-	-	36
Skill Category Level 1	104	13	79	2	-	-	-	114	2810	171	1	-	-	-	10
Specialised skills	45	6	27	1	-	-	-	6	28	32	0	-	-	-	2

Source: IMaCS Survey and Analysis

9.5.9 Dibrugarh

The district level skilling opportunities have been identified for Dibrugarh with the demand up to the year 2021.

Tea

- Small tea growers lack knowledge about the latest technology in growing tea. Short term courses to address this gap can be provided

- The packaging of the local produce is not able to compete with the larger brands. Skills that develop packaging skills can be honed.

- Short term courses to develop tea tasters

Plastic

- Dibrugarh is the home of Brahmaputra Valley Cracker and Polymer company

- A plastic technology training institute can be setup based in Dibrugarh

- Managerial skill development training can be given via short term courses

TABLE 73: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – DIBRUGARH

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	18325	2293	2807	3296	601	1144	-	1196	0	6356	21	-	-	-	2299
Skill Category Level 2	2840	355	193	511	41	274	-	756	0	1334	1	-	-	-	633
Skill Category Level 1	504	63	92	91	20	72	-	448	1241	440	1	-	-	-	182
Specialised skills	219	27	31	39	7	15	-	24	13	82	0	-	-	-	31

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8488	1062	1361	1515	297	572	-	598	0	2724	10	-	-	-	1010
Skill Category Level 2	1315	165	93	235	20	137	-	378	0	572	1	-	-	-	278
Skill Category Level 1	233	29	45	42	10	36	-	224	620	188	0	-	-	-	80
Specialised skills	101	13	15	18	3	8	-	12	6	35	0	-	-	-	14

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	9837	1231	1446	1781	304	572	-	598	0	3632	11	-	-	-	1289
Skill Category Level 2	1524	191	99	276	21	137	-	378	0	763	1	-	-	-	355
Skill Category Level 1	271	34	47	49	10	36	-	224	620	251	0	-	-	-	102
Specialised skills	117	15	16	21	3	8	-	12	6	47	0	-	-	-	18

Source: IMaCS Survey and Analysis

9.5.10 Goalpara

The district level skilling opportunities have been identified for Goalpara with the demand upto the year 2021.

Religious Tourism

- Goalpara is home to the religious archaeological site Shri Surya Pahar

- Religious tourism circuit can be developed in Goalpara

- Guides who focus on the religious aspects of the archaeological ruins can be developed with short term courses

TABLE 74: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – GOALPARA

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	14731	1843	2455	49	-	-	-	623	0	2889	325	-	420	-	-
Skill Category Level 2	2283	286	169	8	-	-	-	394	0	606	22	-	232	-	-
Skill Category Level 1	405	51	81	1	-	-	-	233	1359	200	11	-	105	-	-
Specialised skills	176	22	27	1	-	-	-	13	14	37	4	-	8	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	6824	854	1190	23	-	-	-	312	0	1238	149	-	210	-	-
Skill Category Level 2	1057	132	82	3	-	-	-	197	0	260	10	-	116	-	-
Skill Category Level 1	188	23	39	1	-	-	-	117	679	86	5	-	53	-	-
Specialised skills	82	10	13	0	-	-	-	6	7	16	2	-	4	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	7908	990	1265	27	-	-	-	312	0	1651	176	-	210	-	-
Skill Category Level 2	1225	153	87	4	-	-	-	197	0	347	12	-	116	-	-
Skill Category Level 1	217	27	42	1	-	-	-	117	679	114	6	-	53	-	-
Specialised skills	94	12	14	0	-	-	-	6	7	21	2	-	4	-	-

Source: IMaCS Survey and Analysis

9.5.11 Golaghat

The district level skilling opportunities have been identified for Golaghat with the demand upto the year 2021.

Sports

• Golaghat is one of the sporting hubs in Assam

• A sports training institute that up-skills coaches and creates more sports trainers can be set up

• Fitness experts can also be honed by offering short term courses

TABLE 75: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – GOLAGHAT

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	20369	2548	3510	1759	50	3189	-	609	0	5622	117	-	-	-	474
Skill Category Level 2	3156	395	241	273	3	763	-	385	0	1180	8	-	-	-	131
Skill Category Level 1	560	70	115	48	2	201	-	228	924	389	4	-	-	-	37
Specialised skills	243	30	39	21	1	42	-	12	9	73	1	-	-	-	6

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	9435	1180	1701	809	25	1594	-	304	0	2409	54	-	-	-	208
Skill Category Level 2	1462	183	117	125	2	382	-	192	0	506	4	-	-	-	57
Skill Category Level 1	259	32	56	22	1	100	-	114	462	167	2	-	-	-	16
Specialised skills	113	14	19	10	0	21	-	6	5	31	1	-	-	-	3

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	10934	1368	1808	950	25	1594	-	304	0	3213	63	-	-	-	266
Skill Category Level 2	1694	212	124	147	2	382	-	192	0	674	4	-	-	-	73
Skill Category Level 1	301	38	59	26	1	100	-	114	462	222	2	-	-	-	21
Specialised skills	131	16	20	11	0	21	-	6	5	42	1	-	-	-	4

Source: IMaCS Survey and Analysis

9.5.12 Hailakhandi

The district level skilling opportunities have been identified for Hailakhandi with the demand upto the year 2021.

Handlooms

- Majority of the designs are tribal designs. Courses that can aid in computer aided designing where there is fusion of modern and tribal designs

- Skills to develop market linkages

- Courses that help in good finishing of the produce

Food Processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

- Need to develop cold chain management skills

TABLE 76: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – HAILAKHANDI

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	9264	1159	1436	362	-	-	-	361	0	3135	360	-	-	-	-
Skill Category Level 2	1436	180	99	56	-	-	-	228	0	658	25	-	-	-	-
Skill Category Level 1	255	32	47	10	-	-	-	135	1351	217	12	-	-	-	-
Specialised skills	111	14	16	4	-	-	-	7	14	41	4	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	4291	537	696	166	-	-	-	180	0	1344	165	-	-	-	-
Skill Category Level 2	665	83	48	26	-	-	-	114	0	282	11	-	-	-	-
Skill Category Level 1	118	15	23	5	-	-	-	68	676	93	5	-	-	-	-
Specialised skills	51	6	8	2	-	-	-	4	7	17	2	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	4973	622	740	195	-	-	-	180	0	1792	195	-	-	-	-
Skill Category Level 2	771	96	51	30	-	-	-	114	0	376	13	-	-	-	-
Skill Category Level 1	137	17	24	5	-	-	-	68	676	124	6	-	-	-	-
Specialised skills	59	7	8	2	-	-	-	4	7	23	2	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.13 Jorhat

The district level skilling opportunities have been identified for Jorhat with the demand upto the year 2021.

Cultural Tourism

- Near Jorhat, Majuli, one of the world's largest rivurine islands is situated.
- Majuli is a culturally significant place for neo Vaishnavism
- Skills that will hone and promote cultural tourism can be developed

Ayurveda

- Skills that will help in formulation of Ayurvedic medicines
- Short term courses that will help in the supply chain management
- Packaging and branding skills

TABLE 77: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – JORHAT

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	28916	3618	3069	1498	8	2002	1086	1102	0	6285	9	-	-	-	2461
Skill Category Level 2	4481	561	211	232	1	479	911	697	0	1319	1	-	-	-	678
Skill Category Level 1	795	99	101	41	0	126	1015	413	1238	435	0	-	-	-	194
Specialised skills	345	43	34	18	0	26	30	22	13	81	0	-	-	-	34

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	13394	1676	1488	689	4	1001	667	551	0	2693	4	-	-	-	1081
Skill Category Level 2	2076	260	102	107	0	240	559	348	0	565	0	-	-	-	298
Skill Category Level 1	368	46	49	19	0	63	623	206	619	186	0	-	-	-	85
Specialised skills	160	20	17	8	0	13	19	11	6	35	0	-	-	-	15

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	15522	1942	1581	810	4	1001	419	551	0	3591	5	-	-	-	1380
Skill Category Level 2	2405	301	109	125	0	240	351	348	0	754	0	-	-	-	380
Skill Category Level 1	427	53	52	22	0	63	391	206	619	248	0	-	-	-	109
Specialised skills	185	23	18	10	0	13	12	11	6	46	0	-	-	-	19

Source: IMaCS Survey and Analysis

9.5.14 Kamrup

The district level skilling opportunities have been identified for Kamrup with the demand upto the year 2021.

Village Tourism

- Kamrup has the village Sualkuchi, which is called as the Manchester of the East
- This is the hub for silk weaving and village/experience tourism circuits can be developed
- Skills that will prepare the hosts to welcome and create experiential tourism

IT/ITeS
- Language and accent development skills

- Basic OS operation skills

- Tally and other accounting software skills

- Animation and graphic user interface skills

- Hardware and software programming skills

- Project management and managerial skills

TABLE 78: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – KAMRUP

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	53972	6753	3219	-	-	-	1086	667	0	8665	422	-	1653	-	-
Skill Category Level 2	8363	1046	221	-	-	-	911	421	0	1819	29	-	916	-	-
Skill Category Level 1	1484	186	106	-	-	-	1015	250	686	599	14	-	415	-	-
Specialised skills	645	81	36	-	-	-	30	14	7	112	5	-	30	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	25000	3127	1560	-	-	-	667	333	0	3713	194	-	826	-	-
Skill Category Level 2	3874	485	107	-	-	-	559	211	0	780	13	-	458	-	-
Skill Category Level 1	688	86	51	-	-	-	623	125	343	257	6	-	208	-	-
Specialised skills	299	37	17	-	-	-	19	7	3	48	2	-	15	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	28972	3625	1659	-	-	-	419	333	0	4951	229	-	826	-	-
Skill Category Level 2	4489	562	114	-	-	-	351	211	0	1040	16	-	458	-	-
Skill Category Level 1	797	100	54	-	-	-	391	125	343	342	8	-	208	-	-
Specialised skills	346	43	18	-	-	-	12	7	3	64	3	-	15	-	-

Source: IMaCS Survey and Analysis

9.5.15 Kamrup (M)

The district level skilling opportunities have been identified for Kamrup(M) with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

IT/ITeS

- Language and accent development skills

- Basic OS operation skills

- Tally and other accounting software skills

- Animation and graphic user interface skills

- Hardware and software programming skills

- Project management and managerial skills

Cement

- Knowledge of latest limestone mining techniques.

- Mining machines operators like dumpers, loaders and excavators.

- Drilling & Blasting skills.

- Quality Control

- Clinkerisation

- Developing market linkages

- Maintenance: Fitters, welders

Hospitality

- Technical skills like housekeeping, front office management and data management

- Soft skills like communication skills, client relationship, time management etc.

- Indian and Continental Cuisine

- Authentic Assam cuisine preparation

TABLE 79: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – KAMRUP(M)

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	26747	3346	1380	986	415	8294	7739	2464	0	5493	24	-	1492	-	9856
Skill Category Level 2	4145	519	95	153	29	1985	6491	1558	0	1153	2	-	826	-	2715
Skill Category Level 1	736	92	45	27	14	523	7232	923	1600	380	1	-	375	-	779
Specialised skills	319	40	15	12	5	109	217	50	16	71	0	-	27	-	135

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	12389	1550	669	453	205	4147	4387	1232	0	2354	11	-	746	-	4330
Skill Category Level 2	1920	240	46	70	14	993	3680	779	0	494	1	-	413	-	1193
Skill Category Level 1	341	43	22	12	7	261	4100	461	800	163	0	-	187	-	342
Specialised skills	148	19	7	5	2	55	123	25	8	30	0	-	14	-	59

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	14357	1797	711	533	210	4147	3351	1232	0	3139	13	-	746	-	5526
Skill Category Level 2	2225	278	49	83	14	993	2811	779	0	659	1	-	413	-	1522
Skill Category Level 1	395	49	23	15	7	261	3132	461	800	217	0	-	187	-	437
Specialised skills	171	21	8	6	2	55	94	25	8	41	0	-	14	-	76

Source: IMaCS Survey and Analysis

9.5.16 Karbi Anglong

The district level skilling opportunities have been identified for Karbi Anglong with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

Rubber
- Need to have courses that throw light on modern rubber technology

- Courses on equipment maintenance

- Courses on establishment of market linkages

- Courses to help in managing the supply chain

TABLE 80: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – KARBI ANGLONG

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	17879	2237	3886	81	235	286	-	599	0	3658	1819	-	-149	-	-
Skill Category Level 2	2770	347	267	13	16	68	-	378	0	768	125	-	-83	-	-
Skill Category Level 1	492	62	128	2	8	18	-	224	1207	253	60	-	-37	-	-
Specialised skills	214	27	43	1	3	4	-	12	12	47	20	-	-3	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8282	1036	1884	37	116	143	-	299	0	1568	834	0	-75	-	-
Skill Category Level 2	1283	161	129	6	8	34	-	189	0	329	57	0	-41	-	-
Skill Category Level 1	228	28	62	1	4	9	-	112	604	108	27	0	-19	-	-
Specialised skills	99	12	21	0	1	2	-	6	6	20	9	0	-1	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	9597	1201	2002	44	119	143	-	299	0	2090	985	0	-75	-	-
Skill Category Level 2	1487	186	138	7	8	34	-	189	0	439	68	0	-41	-	-
Skill Category Level 1	264	33	66	1	4	9	-	112	604	145	32	0	-19	-	-
Specialised skills	115	14	22	1	1	2	-	6	6	27	11	0	-1	-	-

Source: IMaCS Survey Analysis

9.5.17 Karimganj

The district level skilling opportunities have been identified for Karimganj with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

Cement

- Knowledge of latest limestone mining techniques.
- Mining machines operators like dumpers, loaders and excavators.
- Drilling & Blasting skills.
- Quality Control
- Clinkerisation
- Developing market linkages
- Maintenance: Fitters, welders

TABLE 81: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – KARIMGANJ

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	13611	1703	1976	357	-	-	-	589	0	4522	1025	-	1072	-	-
Skill Category Level 2	2109	264	136	55	-	-	-	373	0	949	70	-	594	-	-
Skill Category Level 1	374	47	65	10	-	-	-	221	1547	313	34	-	269	-	-
Specialised skills	163	20	22	4	-	-	-	12	16	58	11	-	20	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	6305	789	958	164	-	-	-	295	0	1938	470	0	536	-	-
Skill Category Level 2	977	122	66	25	-	-	-	186	0	407	32	0	297	-	-
Skill Category Level 1	173	22	31	5	-	-	-	110	773	134	15	0	135	-	-
Specialised skills	75	9	11	2	-	-	-	6	8	25	5	0	10	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	7306	914	1018	193	-	-	-	295	0	2584	555	0	536	-	-
Skill Category Level 2	1132	142	70	30	-	-	-	186	0	542	38	0	297	-	-
Skill Category Level 1	201	25	33	5	-	-	-	110	773	179	18	0	135	-	-
Specialised skills	87	11	11	2	-	-	-	6	8	33	6	0	10	-	-

Source: IMaCS Survey and Analysis

9.5.18 Kokrajhar

The district level skilling opportunities have been identified for Karimganj with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

TABLE 82: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – KOKRAJHAR

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	36856	4611	3560	180	3	-	-	705	0	4344	55	-	-	-	-
Skill Category Level 2	5711	715	245	28	0	-	-	445	0	912	4	-	-	-	-
Skill Category Level 1	1014	127	117	5	0	-	-	264	1219	300	2	-	-	-	-
Specialised skills	440	55	40	2	0	-	-	14	12	56	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	17072	2136	1726	83	1	-	-	352	0	1862	25	-	-	-	-
Skill Category Level 2	2645	331	119	13	0	-	-	223	0	391	2	-	-	-	-
Skill Category Level 1	469	59	57	2	0	-	-	132	609	129	1	-	-	-	-
Specialised skills	204	26	19	1	0	-	-	7	6	24	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	19784	2476	1834	97	1	-	-	352	0	2482	30	-	-	-	-
Skill Category Level 2	3066	384	126	15	0	-	-	223	0	521	2	-	-	-	-
Skill Category Level 1	544	68	60	3	0	-	-	132	609	172	1	-	-	-	-
Specialised skills	236	30	20	1	0	-	-	7	6	32	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.19 Lakhimpur

The district level skilling opportunities have been identified for Lakhimpur with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

Forest-based Industry
- Developing diversified products like wooden mat, ply and hardy structures
- Polishing skills
- Developing market linkages

TABLE 83: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – LAKHIMPUR

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	33194	4153	6056	599	8913	572	-	550	0	4684	10	-	-	-	-
Skill Category Level 2	5144	644	416	93	612	137	-	348	0	983	1	-	-	-	-
Skill Category Level 1	913	114	199	16	293	36	-	206	2168	324	0	-	-	-	-
Specialised skills	396	50	67	7	99	8	-	11	22	61	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	15376	1923	2936	275	4404	286	-	275	0	2007	5	-	-	-	-
Skill Category Level 2	2383	298	202	43	303	68	-	174	0	421	0	-	-	-	-
Skill Category Level 1	423	53	96	8	145	18	-	103	1084	139	0	-	-	-	-
Specialised skills	184	23	33	3	49	4	-	6	11	26	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	17818	2230	3120	324	4509	286	0	275	0	2677	5	-	-	-	-
Skill Category Level 2	2761	346	214	50	310	68	0	174	0	562	1	-	-	-	-
Skill Category Level 1	490	61	102	9	148	18	0	103	1084	185	0	-	-	-	-
Specialised skills	213	27	35	4	50	4	0	6	11	35	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.20 Morigaon

The district level skilling opportunities have been identified for Morigaon with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

Occult Tourism
- Marigaon is home to Mayong, the town which is considered to be the Cradle of Black Magic in India
- Skills can be developed in the locals that will bring to fore the myths and legends that are there in Mayong
- Infrastructure boost in the form of hotels and training on hospitality management

TABLE 84: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – MARIGAON

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	25324	3168	3084	55	-	286	-	486	0	4131	58	-	-	-	-
Skill Category Level 2	3924	491	212	8	-	68	-	307	0	867	4	-	-	-	-
Skill Category Level 1	696	87	101	1	-	18	-	182	1212	286	2	-	-	-	-
Specialised skills	302	38	34	1	-	4	-	10	12	53	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	25324	3168	3084	55	-	286	-	486	0	4131	58	-	-	-	-
Skill Category Level 2	3924	491	212	8	-	68	-	307	0	867	4	-	-	-	-
Skill Category Level 1	696	87	101	1	-	18	-	182	1212	286	2	-	-	-	-
Specialised skills	302	38	34	1	-	4	-	10	12	53	1	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	13594	1701	1589	29	-	143	-	243	0	2361	32	-	-	-	-
Skill Category Level 2	2106	264	109	5	-	34	-	153	0	496	2	-	-	-	-
Skill Category Level 1	374	47	52	1	-	9	-	91	606	163	1	-	-	-	-
Specialised skills	162	20	18	0	-	2	-	5	6	31	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.21 North Cachar Hills

The district level skilling opportunities have been identified for North Cachar Hills with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

TABLE 85: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – NORTH CACHAR HILLS

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	5100	638	613	19	474	-	-	295	0	1199	45	-	-	-	-
Skill Category Level 2	790	99	42	3	33	-	-	187	0	252	3	-	-	-	-
Skill Category Level 1	140	18	20	1	16	-	-	111	877	83	1	-	-	-	-
Specialised skills	61	8	7	0	5	-	-	6	9	15	1	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	2363	296	297	9	234	-	-	148	0	514	21	-	-	-	-
Skill Category Level 2	366	46	20	1	16	-	-	93	0	108	1	-	-	-	-
Skill Category Level 1	65	8	10	0	8	-	-	55	439	36	1	-	-	-	-
Specialised skills	28	4	3	0	3	-	-	3	4	7	0	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	2738	343	316	10	240	-	-	148	0	685	25	-	-	-	-
Skill Category Level 2	424	53	22	2	16	-	-	93	0	144	2	-	-	-	-
Skill Category Level 1	75	9	10	0	8	-	-	55	439	47	1	-	-	-	-
Specialised skills	33	4	4	0	3	-	-	3	4	9	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.22 Nagaon

The district level skilling opportunities have been identified for Nagaon with the demand upto the year 2021.

Food Processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills

Agarwood Perfume Industry

- Skilling on scientific methods of plantation leading to higher survival rate of saplings
- Short term courses to impart the legal compulsions for the industry
- Skills to develop advanced techniques of distillation
- Skills for chemical analysis of Agarwood items
- Development of marketing and packaging skill
- Skills that will develop market linkages

TABLE 86: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – NAGAON

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	26049	3259	6886	1087	837	3189	-	1684	0	9613	16	-	252	-	231
Skill Category Level 2	4036	505	473	168	57	763	-	1064	0	2018	1	-	139	-	64
Skill Category Level 1	716	90	226	30	27	201	-	630	3255	665	1	-	63	-	18
Specialised skills	311	39	77	13	9	42	-	34	33	124	0	-	5	-	3

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	12066	1509	3338	500	413	1594	-	842	0	4120	7	-	126	-	102
Skill Category Level 2	1870	234	229	77	28	382	-	532	0	865	1	-	70	-	28
Skill Category Level 1	332	42	110	14	14	100	-	315	1628	285	0	-	32	-	8
Specialised skills	144	18	37	6	5	21	-	17	16	53	0	-	2	-	1

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	13983	1750	3548	587	423	1594	-	842	0	5493	9	-	126	-	130
Skill Category Level 2	2167	271	244	91	29	382	-	532	0	1153	1	-	70	-	36
Skill Category Level 1	385	48	116	16	14	100	-	315	1628	380	0	-	32	-	10
Specialised skills	167	21	39	7	5	21	-	17	16	71	0	-	2	-	2

Source: IMaCS Survey and Analysis

9.5.23 Nalbari

The district level skilling opportunities have been identified for Nalbari with the demand upto the year 2021.

Jhappi making - Handicrafts

- Nalbari is the hub for Jhappi making
- Courses that reduce the lead time of turning out these products have to be given
- The designs and the products bear a traditional look. Short term courses that expose these artisans to modern designing technology are necessary
- Need also to offer courses that will develop agents who can do exclusive marketing and market linkages for these products.
- Branding and finishing courses also have to be given

TABLE 87: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – NALBARI

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	31614	3955	3248	24	-	-	-	594	0	3923	1	-	-	-	-
Skill Category Level 2	4899	613	223	4	-	-	-	375	0	824	0	-	-	-	-
Skill Category Level 1	869	109	107	1	-	-	-	222	1575	271	0	-	-	-	-
Specialised skills	378	47	36	0	-	-	-	12	16	51	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	14644	1832	1574	11	-	-	-	297	0	1681	-	-	-	-	-
Skill Category Level 2	2269	284	108	2	-	-	-	188	0	353	-	-	-	-	-
Skill Category Level 1	403	50	52	0	-	-	-	111	788	116	-	-	-	-	-
Specialised skills	175	22	18	0	-	-	-	6	8	22	-	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	16970	2124	1673	13	-	-	-	297	0	2242	1	-	-	-	-
Skill Category Level 2	2630	329	115	2	-	-	-	188	0	471	0	-	-	-	-
Skill Category Level 1	467	58	55	0	-	-	-	111	788	155	0	-	-	-	-
Specialised skills	203	25	19	0	-	-	-	6	8	29	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.24 Sibsagar

The district level skilling opportunities have been identified for Sibsagar with the demand upto the year 2021.

Food processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills
- Making jams, jelly, pickles, juices etc.
- Drying, grading, sorting and packaging
- Creating facilities for juice and jam making co-operatives societies and units

Cultural tourism

- Sivsagar was the capital of the erstwhile Ahoms. The town is home to palaces and other Ahom structures.
- Technical skills like housekeeping, front office management and data management
- Soft skills like communication skills, client relationship, time management etc.
- Ahom cuisine preparation in hotels

TABLE 88: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – SIBSAGAR

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	31614	3955	3248	24	-	-	-	594	0	3923	1	-	-	-	-
Skill Category Level 2	4899	613	223	4	-	-	-	375	0	824	0	-	-	-	-
Skill Category Level 1	869	109	107	1	-	-	-	222	1575	271	0	-	-	-	-
Specialised skills	378	47	36	0	-	-	-	12	16	51	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	14644	1832	1574	11	-	-	-	297	0	1681	-	-	-	-	-
Skill Category Level 2	2269	284	108	2	-	-	-	188	0	353	-	-	-	-	-
Skill Category Level 1	403	50	52	0	-	-	-	111	788	116	-	-	-	-	-
Specialised skills	175	22	18	0	-	-	-	6	8	22	-	-	-	-	-

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	16970	2124	1673	13	-	-	-	297	0	2242	1	-	-	-	-
Skill Category Level 2	2630	329	115	2	-	-	-	188	0	471	0	-	-	-	-
Skill Category Level 1	467	58	55	0	-	-	-	111	788	155	0	-	-	-	-
Specialised skills	203	25	19	0	-	-	-	6	8	29	0	-	-	-	-

Source: IMaCS Survey and Analysis

9.5.25 Sonitpur

The district level skilling opportunities have been identified for Sonitpur with the demand upto the year 2021.

Food processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills
- Making jams, jelly, pickles, juices etc.

- Drying, grading, sorting and packaging
- Creating facilities for juice and jam making co-operatives societies and units

Hospitality

- Technical skills like housekeeping, front office management and data management
- Soft skills like communication skills, client relationship, time management etc.
- Quick crisis handling skills

TABLE 89: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – SONITPUR

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8646	1082	4811	2580	38	6378	-	1265	0	6222	102	-	-	-	2531
Skill Category Level 2	1340	168	331	400	3	1527	-	799	0	1306	7	-	-	-	697
Skill Category Level 1	238	30	158	71	1	402	-	473	1705	430	3	-	-	-	200
Specialised skills	103	13	54	31	0	84	-	26	17	80	1	-	-	-	35

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8646	1082	4811	2580	38	6378	-	1265	0	6222	102	-	-	-	2531
Skill Category Level 2	1340	168	331	400	3	1527	-	799	0	1306	7	-	-	-	697
Skill Category Level 1	238	30	158	71	1	402	-	473	1705	430	3	-	-	-	200
Specialised skills	103	13	54	31	0	84	-	26	17	80	1	-	-	-	35

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	4641	581	2479	1394	19	3189	-	632	0	3555	55	-	-	-	1419
Skill Category Level 2	719	90	170	216	1	763	-	400	0	746	4	-	-	-	391
Skill Category Level 1	128	16	81	38	1	201	-	237	852	246	2	-	-	-	112
Specialised skills	55	7	28	17	0	42	-	13	9	46	1	-	-	-	19

Source: IMaCS Survey and Analysis

9.5.26 Tinsukia

The district level skilling opportunities have been identified for Tinsukia with the demand upto the year 2021.

Food processing

- Courses to build awareness of latest food processing techniques
- Skills which help agents build market linkages
- Skills that hone managers who can manage the supply chain
- Packaging and branding skills
- Making jams, jelly, pickles, juices etc.
- Drying, grading, sorting and packaging
- Creating facilities for juice and jam making co-operatives societies and units

Coal
- Knowledge of latest coal mining techniques.
- Mining machines operators like dumpers, loaders and excavators.
- Drilling & Blasting skills.
- Quality Control
- Developing market linkages
- Maintenance: Fitters, welders
- Coal Beneficiation

TABLE 90: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – TINSUKIA

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	15793	1976	2830	4321	11	572	-	1023	0	6330	41	27422	-	1650	3674
Skill Category Level 2	2447	306	194	670	1	137	-	647	0	1329	3	15191	-	914	1012
Skill Category Level 1	434	54	93	119	0	36	-	383	907	438	1	6887	-	414	290
Specialised skills	189	24	31	52	0	8	-	21	9	82	0	500	-	30	50

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	7316	915	1372	1986	5	286	-	512	0	2713	19	13711	-	860	1614
Skill Category Level 2	1134	142	94	308	0	68	-	323	0	570	1	7595	-	476	445
Skill Category Level 1	201	25	45	55	0	18	-	192	454	188	1	3443	-	216	128
Specialised skills	87	11	15	24	0	4	-	10	5	35	0	250	-	16	22

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	8478	1061	1458	2335	5	286	-	512	0	3617	22	13711	-	790	2060
Skill Category Level 2	1314	164	100	362	0	68	-	323	0	759	2	7595	-	438	568
Skill Category Level 1	233	29	48	64	0	18	-	192	454	250	1	3443	-	198	163
Specialised skills	101	13	16	28	0	4	-	10	5	47	0	250	-	14	28

Source: IMaCS Survey and Analysis

9.5.27 Udalguri

The district level skilling opportunities have been identified for Udalguri with the demand upto the year 2021.

Food processing

- Courses to build awareness of latest food processing techniques

- Skills which help agents build market linkages

- Skills that hone managers who can manage the supply chain

- Packaging and branding skills

- Making jams, jelly, pickles, juices etc.

- Drying, grading, sorting and packaging

- Creating facilities for juice and jam making co-operatives societies and units

TABLE 91: DISTRICT-WISE, SKILL LEVEL-WISE HUMAN RESOURCE REQUIREMENT – UDALGURI

Incremental human resource requirement – 2011-2021

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	909	2	-	-	375	-	1764	32	-	-	-	-
Skill Category Level 2	-	-	-	141	0	-	-	237	-	370	2	-	-	-	-
Skill Category Level 1	-	-	-	25	0	-	-	140	-	122	1	-	-	-	-
Specialised skills	-	-	-	11	0	-	-	8	-	23	0	-	-	-	-

Phase I – 2011-16

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	418	1	-	-	187	-	756	15	-	-	-	
Skill Category Level 2	-	-	-	65	0	-	-	118	-	159	1	-	-	-	
Skill Category Level 1	-	-	-	11	0	-	-	70	-	52	0	-	-	-	
Specialised skills	-	-	-	5	0	-	-	4	-	10	0	-	-	-	

Phase II – 2017-21

Sectors	Handloom	Handicrafts	Horticulture	Food Processing	Tea	Hospitality	IT / ITES	Healthcare	Education	Construction	Rubber	Oil and Gas	Cement	Coal	Motor Repair
Minimal education	-	-	-	491	1	-	-	187	-	1008	17	-	-	-	
Skill Category Level 2	-	-	-	76	0	-	-	118	-	212	1	-	-	-	
Skill Category Level 1	-	-	-	14	0	-	-	70	-	70	1	-	-	-	
Specialised skills	-	-	-	6	0	-	-	4	-	13	0	-	-	-	

Source: IMaCS Survey and Analysis

9.5.28 Common sectors across all districts

Certain sectors are common that have opportunities for skilling across all districts of Assam.

Horticulture

- Awareness of latest farming techniques

- Building linkages to markets in neighbouring states and bordering countries

- Capacity building through setting up of focussed co-operatives in area like banana and pineapple

- Agri-entrepreneurial skills

- Educating farmers on export potential of horticulture crops such as fruits, vegetables, flowers, medicinal and aromatic plants

Handloom

- Knowledge of new technology (Zo loom currently)

- Building market linkage

- Basic skills like spinning, weaving, colouring and dyeing

- Specialised skills like designing for contemporary designs either taught or with support from agencies such as NIFT

Construction

- Plumbing and fitting

- Turners

- Welders

- Foreman

- Quality and Process Executives

- Supervisors

- Electricians

- Masons

- Machine Experts

Health and Education

- Para-medics

- Nurses

- Assistants

- Teachers

- Trainers for vocational education

9.6 Key interventions for Assam

- Areas of capacity creation for vocational training include weavers, artisans, farm-extension services, products distributor, packager, chefs, attendants, call centre: customer service providers, paramedics, mechanics, trader, mason, welder, machine operator, logistic providers, electric works persons, craftsman, computer operators

- Combining skill training with entrepreneurial skills depending on the level of training to ensure maximum opportunity for local population.

- Specialist skill development institutes for sports, sericulture, plastic technology and hospitality would hone the skills of local youth.

- Between 2011 and 2021, around 80 lakh persons will be for export of skills. Key opportunities include retail, call centre operator, nursing, fashion and airport ground staff.

Annexure

1. Methodology used for Demand projections

The following methodology has been adopted for making demand side projections of human resources:

❑ Identification of key economic activities in each district.

❑ Estimation of current employment numbers in each district, based on information available from Government publications and IMaCS primary survey.

❑ Forecasting of future employment requirements, using different assumptions (explained in the slide on assumptions) for each industry.

❑ Different assumptions have been used because of differences in nature, demand and growth potential, factor endowments, commercialisation status, policy thrust, past growth trends, past and expected investments, employment pattern and opportunities for migration of all economic activities.

❑ Forecasts have been done for all existing and potential industries identified by us. District wise distribution of employment in 2021 is assumed to remain same as it was in 2011.

2. List of Abbreviations

	List of Abbreviations
BRO	Border Roads Organisation
BSNL	Bharat Sanchar Nigam Limited
CAGR	Compound Annual Growth Rate
DDP	District Domestic Product
DoNER	Ministry of Development of North Eastern Region
GDP	Gross Domestic Product
GI	Geographical Indication
GSDP	Gross State Domestic Product
HEP	Hydro-electric Power
HRD	Human Resource Development
IID	Integrated Infrastructure Development
IIT	Indian Institute of Technology
IT	Information Technology
ITI	Industrial Training Institute
LMIS	Labour Market Information Systems
mn	Million
MU	Million Units
NABARD	National Bank of Agriculture and Rural Development
NEC	North Eastern Council
NEDFi	North Eastern Development Finance Corporation Limited
NER	North Eastern Region
NES	North Eastern States
NGO	Non-Governmental Organisation
NIT	National Institute of Technology
No.	Number
NSDC	National Skill Development Corporation
O&M	Operation and Maintenance
PPP	Public Private Partnership
PWD	Public Works Department
SHG	Self Help Group
SIDO	Small Industries Development Organisation

3. List of Stakeholders Met

Name	Designation	Organization	Organization-Type	Industry/Sector	Product-Type
Mr. Tapan Chandra Sarma	Deputy Commsioner	District Administration, Sonitpur	State Government	Administration	—
Mr. L.K.Bora	General Manager	DIC, Sonitpur	State Government	Administration	—
Mr.Vikash Kashyap	Partner	North Bank Tea Company	Private	Agriculture	Tea
Mr. Shiv Sankar Datta	Manager	T & I Pvt. Limited	Private	Manufacturing	Tea Machines
Mr. Mantu Hazra	Manager	Nezone Biscuits Pvt. Limited	Private	Food Processing	Bakery
Mrs. Aibhee Lata Boro	Principal	ITI, Tezpur	State Government	Education	—
Mr.K. G. Tibrewal	Manager	Sonitpur Solvex Ltd., Nebisco Industries Pvt. Ltd.	Private	Chemical, Food Processing	Solvent, Biscuits
Mr. Bajrang Bengani	Project Co-ordinator	Shri Gautam Construction Company Ltd.	Private	Construction	—
Mr. T. R. Jhawar	Accountant	The Tezpur Roller Flour Mills	Private	Food Processing	Rawa, Maida,Aata
Mr. Md. Sabir Ali	Owner	Kane Kalponik	Private	Hanidicrafts	Sofa
Mr. Biren Das	Deputy Registrar	Tezpur University	Central Government	Education	—
Mr. Manas Tibrewala	Owner	Bhramputra Paper Pvt. Limited	Private	Paper	—
Mr. Benudhar Borah	Sr. Technical Officer	The Assam Co-operative Jute Mills Ltd.	Co-operative	Jute	Bags, Twine, Tea Cloth
Mr. R.K.Kalita	General Manager	DIC, Nagaon	State Government	Administration	—
Shri. P. Das	Principal	ITI, Tezpur	State Government	Education	—
Mr. Piyush Nahata	Owner	R.J. Cements	Private	Cement	Cement
Dr. K. Kalita	Associate Dean	College of Fisheries	State Government	Education	—
Mr. Suresh Bhajanka	Authorized Signatory	Shree Raj Steel Products	Private	Steel	MS Pipes & Tubes
Mr. Manoj Kumar Mangalonia	Owner	Jai AI Textiles	Private	Textiles	Clothing

Name	Designation	Organization	Organization-Type	Industry/Sector	Product-Type
Mr. S.K. Das	ADC Development	District Admiistration, Cachar	State Government	Administration	—
Mr. A.K. Nag	Senior Principal	ITI,Srikona	State Government	Education	—
Mr. B.S. Dubey	Factory Incharge	M/S Barrack Valley Alloys	Private	Steel	TMT Bars
Mr. Kanak Kumar Goala	Prodution Incharge	M/S Surma Distilliary Pvt. Limited	Private	Distilliary	Beverages
Mr. Arvind Chakraborty	Sr. Manager (HR & ES)	Hindustan Paper Corporation Limited	Central Government	Paper	—
Mr. M.K. Sanyal	General Manager	DIC, Cachar	State Government	Administration	—
Mr Uthpalananda Sarmah	Director	Industries and Commerce	State Government	Administration	—
Dr Surojit Mitra	Addl Chief Secretary	State government	State Government	Administration	—
Mr Vishal Solanki	Chief Staff to CS	State government	State Government	Administration	—
Mr Jatinderbir Singh	Principal Secretary	Industries and Commerce	State Government	Administration	—
Mr J Balaji	Investment Cell manager	Industries and Commerce	State Government	Administration	—
Mr R T Jindal	Principal Secretary	Agriculture and fisheries	State Government	Administration	—
Mr Dilip Kumar Baruah	Secretary	Tourism	State Government	Administration	—
Mr M U Ahmed	Addl director	Industries and Commerce	State Government	Administration	—
Mr Kumar Sanjay Krishna	Principal Secretary	Planning and Development	State Government	Administration	—
Mr Arun Kumar	Principal Secretary	Rural Development	State Government	Administration	—
Ms Archana Verma	Secretary	Rural Development	State Government	Administration	—
Mr Goswami	Secretary	handloom and handicrafts	State Government	Administration	—
Ms Indira Kalita	Secretary	IT	State Government	Administration	—

Name	Designation	Organization	Organization-Type	Industry/Sector	Product-Type
Mr Ravi Shankar Prasad	Secretary	Labor and employment	State Government	Administration	—
Mr Ashutosh Agnihotri	DC	Kamrup Metro District	State Government	Administration	—
Ms Bijoya Chaudhury	ADC Development	Kamrup Metro District	State Government	Administration	—
Dr Siddharth Singh	DC	Barpetta District	State Government	Administration	—
Mr R P Mahanta	ADC Development	Nalbari District	State Government	Administration	—
Mr B B Dev	ADC Development	Kamrup District	State Government	Administration	—
Ms Kabita Das	HR Manager	NEEPCO	Power	PSU	—
Mr Lemli Loyi	GM - Credit	Nedfi	Bank	PSU	—
Mr Ashim Kumar Das	Development manager	Nedfi	Bank	PSU	—
Mr Partha sarathi Borbora	Principal	Sualkuchi Institute of Fashion Technology	State Government	Handloom (sericulture)	pillow covers, clothes, traditional sarees,designs
Mr Bijoy Chowdhury	Manager	Bhabani Offset and imaging Systems	Private	Printing	albums, books, notebooks
Mr Anjan Sharma	Manager	Bhabani Offset and imaging Systems	Private	Printing	albums, books, notebooks
Mr Arunjeet khaund	Managing Officer	Brahmaputra Cracker and polymer limited	PSU	Plastics	polymers
Fr Jayaprakash	Principal	Bosco Reach Out	NGO	NGO	—
Mr Kalita	Staff	Tri Fab	NGO	NGO	traditional handloom
Mr Prakash kolin	HR Manager	ONGC	PSU	Oil	oil
Mr Lokhi Ram Gogoi	manager	Padmanath ayurved	Private	medicine	ayurvedic medicines
Dr Hazarika	Director	Tocklai Tea Research Association	Governmant	Education and Research	—
Mr R C Jain	DC	Jorhat District	State Government	Government	—
Mr A Malik	Officer	Anchalik Gram Unnayan parishad	NGO	NGO	—

Name	Designation	Organization	Organization-Type	Industry/Sector	Product-Type
Mr A C Shekhar	DGM HR	Guwahati Refinery	PSU	Petroleum and oil	Fuels
Mr Sanjeev Baruah	Chief Engineer	NEEPCO	PSU	Power	—
Mr Nipon Goswami	Instructor	Sualkuchi institute of Fashion technology	State Government	Handloom (sericulture)	pillow covers, clothes, traditional sarees,designs
Mr Komalnath	Artisan	Sualkuchi village	Private	Handloom (sericulture)	traditional sarees, shawls
Mr Bijoy	salesman	Silkalay Shop	Private	Handloom (sericulture)	traditional sarees, shawls
Ms Swati Pujari	HR Trainee	Star Cement	Private	Cement	cement
Mr P K Mandal	Instructor	CBTC	Society	handicrafts	bamboo products
Mr Rajkumar Singh	Instructor	CBTC	Society	handicrafts	bamboo products
Mr P Das	Principal	ITI - Guwahati	State Government	Education	—
Mr P K Das	Principal	ITI - Nalbari and Barpetta	State Government	education	—
Mr Gopjit Pathak	Propreiter	Assam Fireworks	Private	firecrackers	flower pots, bombs and other fireworks
Mr Niranjan	Artisan	Sarthebari village	Private	handicrafts	bell metal
Mr H Talukdhar	Propreiter	Talukdhar bros	Private	handicrafts	bell metal
Mr D Gogoi	Officer incharge	MMB Samiti	NGO	handicrafts	bamboo Jappis
Mr Mhd dhan Ali	Artisan	Nalbari Town		handicrafts	bamboo products
Mr Arup Das	Officer incharge	Gram vikas Mancha	NGO	NGO	—
Mr Mrinmoy Kaushik	HR Manager	SRD Nutrients	Private	Food processing	Horlicks and Brittania cakes
Mr Babul nath	operations officer	Gram Vikas farmer's club	NGO	NGO	handloom, banana fiber products
Ms Gulab Deori	Course officer	ITI Jorhat	State Government	education	—
Mr U Baruah	officer	DIC	State Government	Government	—

Name	Designation	Organization	Organization-Type	Industry/Sector	Product-Type
Mr Pallav Borgohain	Estate manager	McLeod Russel India Limited	Private	Tea	Tea
Mr J N Baruah	Officer	DIC- Sivasagar	State Government	Administration	—
Mr Bhattacharya	ADC Development	Sivsagar district	State Government	Administration	—
Mr Raman	ADC Finance	Sivsagar district	State Government	Administration	—

4.   Training Capacity of Vocational Education in Assam

Type of institution	No. of institutions	Seating capacity	District
ITI	1	96	Bhergaon
ITI	1	232	Barpeta
ITI	1	396	Bongaigoan
ITI	1	80	Dhansiri
ITI	1	80	Dibrugarh
ITI	1	76	Dhemaji
ITI	1	216	Diphu
ITI	1	76	Goalpara
ITI	1	172	Gargaon
ITI	2	500	Guwahati
ITI	1	140	Haflong
ITI	1	76	Hailakhandi
ITI	1	64	Karimganj
ITI	1	704	Jorhat
ITI	1	92	Kokrajhar
ITI	1	80	Majuli
ITI	1	80	Majbat
ITI	1	80	Morigaon
ITI	1	488	Nagaon
ITI	1	128	Nalbari
ITI	1	48	Lakhimpur
ITI	1	48	Silchar
ITI	1	96	South Salamara
ITI	1	376	Srikona
ITI	1	392	Tezpur
ITI	2	392	Tinsukia
Polytechnic	1	60	Golaghat
Polytechnic	1	250	Cachar
Polytechnic	1	185	Dibrugarh
Polytechnic	3	553	Kamrup
Polytechnic	1	140	Nagaon
Polytechnic	1	250	Jorhat
Polytechnic	1	45	Bongaigoan
Engineering Colleges	2	450	Kamrup
Engineering Colleges	1	300	Jorhat
Engineering Colleges	1	2150	Cachar

Type of institution	No. of institutions	Seating capacity	District
Engineering Colleges	1	62	Dibrugarh
Engineering Colleges	1	54	Sonitpur
Medical Colleges	1	170	Dibrugarh
Medical Colleges	1	25	Nagaon
Medical Colleges	1	65	Cachar
Medical Colleges	3	205	Kamrup
Nursing Training Institutes	1	120	Dibrugarh
Nursing Training Institutes	1	128	Nagaon
Nursing Training Institutes	1	120	Cachar
Nursing Training Institutes	3	220	Kamrup
Aviation Training	4	120	Guwahati
Tourism Training	1	30	Sonitpur
NIIT	2	40	Kamrup
NIIT	1	20	Sonitpur
NIIT	1	20	Karbi anglong
Aptech	2	30	Tinsukia
Aptech	1	15	Kamrup
Aptech	2	30	Nagaon
Aptech	1	15	Lakhimpur North
Don Bosco Technical	1	40	Golaghat
Don Bosco Technical	1	160	Kamrup
Don Bosco Technical	1	180	Cachar
Don Bosco Technical	1	65	Mendal

5. Assam – List of Handicrafts Clusters

Location	District	Product	Details
	Barpeta	Horn & Bone	
Silchar	Cachar	Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Arthebari-S, Barpeta	Barpeta	Brass and Bell Metal	Kalash, Karai with or without cover, bati, dunari, tau, lota, kahi, tal, bells, shields, swords, daggers, swords, hilts pan boxes
	Barpeta	Woodwork	
	Darrang	Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Gauripur	Dhubri	Toys & Dolls	
	Dhubri	Terracotta Pottery	Vessels for storing grains, water pots, chaupatia, Handi, Surahi, Images of gods and goddesses, Dolls and Toys
	Dibrugarh	Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
	Goalpara	Terracotta Pottery	Vessels for storing grains, water pots, chaupatia, Handi, Surahi, Images of gods and goddesses, Dolls and Toys
	Golaghat	Cane & Bamboo Craft	
Devgarhia	Gopalpur	Cane Furniture	Various kinds of cane furniture items
Majuli	Jorhat	Cane Furniture & other Cane & Bamboo items	Cane furniture, Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Majuli	Jorhat	Grass, Leaf, Reed & Fibre	
Guwahati, Kamrup	Kamrup	Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
	Kamrup	Terracotta Pottery	Vessels for storing grains, water pots, chaupatia, Handi, Surahi, Images of gods and goddesses, Dolls and Toys
Guwahati, Kamrup	Kamrup	Brass and Bell Metal	Kalash, Karai with or without cover, bati, dunari, tau, lota, kahi, tal, bells, shields, swords, daggers, swords, hilts pan boxes
Guwahati	Kamrup	Applique Work craft	Panels, bags, pillow cover
Guwahati	Kamrup	Jute craft	Bags and other utility items, table clothes, mats etc.
Haflong	North Cachar Hills	Cane & Bamboo Craft	
Tajpur	Samastipur	Sitalpatti weaving	Various sizes of sitalpatti
Tajpur	Samastipur	Cane & Bamboo Craft	
Tajpur	Samastipur	Woodwork	

Location	District	Product	Details
	Sibsagar	Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Dipu		Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Nowgong		Cane and Bamboo Craft	Chalani, kula, khorahi, dukula, doon and dhol, fishing traps, bamboo walking sticks, bows and arrows, japis, colourful design and motifs, jaki
Asharkandi		Terracotta	

About ICRA Management Consulting Services Limited

IMaCS - An introduction

ICRA Management Consulting Services Limited (IMaCS) is a multi-line management consulting firm headquartered in India. It has an established track record of 17 years in management and development consulting across various sectors and countries. IMaCS has completed more than 1,200 consulting assignments with about 600 clients and has worked in over 40 countries across the globe. IMaCS is a wholly-owned subsidiary of ICRA Limited (ICRA), one of India's leading credit rating agencies. IMaCS operated as an independent division of ICRA till March 2005[1], when it was de-merged from ICRA and became a standalone company in its present form.

Through the process of carrying out several assignments over the past 17 years, IMaCS has accumulated considerable analytical and consulting expertise, backed by the following organisational capabilities:

- An extensive and organised database on several sectors.

- Knowledge of key factors of success in different projects and program.

- An ability to research emerging global trends, both in specific countries as well as in different sectors, based on primary and secondary data.

- Performance benchmarking

- Quantitative and financial modelling

- Ability to identify the various types of risks and suggest appropriate strategies to mitigate the same

- Ability to work in different geographies on its own and through affiliate partners

---

[1] Under the name "ICRA Advisory Services"