

## **CHAPTER-III**

# **Silk Production of India and Assam with Special Reference to Sualkuchi Village and Engagement of Women in Silk Industry**

### **3.1 Introduction**

There are four different varieties of silk- Muga, Eri, Mulberry and Tasar silk. Asia is the main producer of silk in the world and it produced over 95% of the total global silk. Bulk amount of silk are produced in China, India, Japan, Brazil and Korea. India is the second largest producer of silk followed by China. India contributes 18% of total raw silk of the world. Sericulture is the labour intensive industry in all its phases with employment generation of about 7.65 million persons per annum (Annual Report, Central Silk Board, 2016-17).

Assam is well-known for silk production. Silk cloth produced in Assam is famous for both domestic consumption as well as export purposes. As mentioned earlier, Assam has the unique distinction in producing four major varieties of silk- Muga silk, Eri silk, Mulberry silk and Tasar silk. Rearing of Eri, Muga and Mulberry silk worm are playing an important role and economic support to a large section of rural population in the state. In Assam, silk is practiced in more than 10, 532 villages and gives employment to more than 2.6 lakh families (Directorate of Handloom & Textiles, Govt. of Assam, 2016).

This chapter explain world silk production through section 3.2, Indian silk production through section 3.3, Assam silk production through section 3.4, Sualkuchi silk production through section 3.5, women engagement on silk and other livelihood sectors through section 3.6 and section 3.7 conclusions. The whole chapter is based on secondary information and the data are collected from various sources like news papers, magazines, journals, internet, officials like Directorate of Sericulture, Assam statistical handbooks etc.

### 3.2 World silk production

According to the history of sericulture, silk production started in China in around 3630 BC. That period was known as Chinese Neolithic Period. At that time, silk was found in the Henan Province, which is a region broadly regarded as the cradle of Chinese civilization. The woven silk cloth fragment dated to circa 2570 BC. These silk items were produced from Liangzhu culture site of Qianshanyang, in Zhejiang Province. Liangzhu was the last Neolithic jade culture in Yangtze River Delta. The oldest recognized written indication to silk is on a bronze fragment found at the Shang Dynasty site at Anyang. This Shang Dynasty existed from circa 1600 to circa 1050 BC ([www.silk-road.com](http://www.silk-road.com)).

Now a days, the silk are used is all over the world. The demand for silk increases day by day. Presently, the major silk producing countries are China, India, Uzbekistan, Brazil, Japan, Korea, Thailand, Vietnam, Iran etc. Kenya, Botswana, Nigeria, Zambia, Zimbabwe, Bangladesh, Colombia, Egypt, Japan, Nepal, Bulgaria, Turkey, Uganda, Malaysia, Romania, Bolivia etc. They are the few countries which are also engaged in cocoons and raw silk production. Silk production base is spread over almost 60 countries all over the world. Though silk producers are spread all over the world, but major silk producer countries are in Asia. Asia produces approximately 90% of Mulberry silk and 100% of non-mulberry silk. USA, France, Japan, India, China, UK, Germany, Korea, Italy, Korea, Switzerland are the main countries who consume a bulk amount of silk and silk products (International Sericulture Commission, United Nations, Reg. No. 10418).

The following table represents silk production on top 20 Silk producing countries from 2013 to 2018.

**Table 3.1****Global silk Production (in Metric Tons)**

<b>Sl No.</b>	<b>countries</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
1	Bangladesh	43	44.5	44	44	41	41
2	Brazil	550	560	600	650	600	650
3	Bulgaria	8.5	8	8	9	10	10
4	China	1,30,000	1,46,000	1,70,000	1,58,400	1,42,000	1,20,000
5	Colombia	0.6	0.5	0.5	-	-	-
6	Egypt	0.7	0.8	0.8	1.2	1.1	1.25
<b>7</b>	<b>India</b>	<b>26,480</b>	<b>28,708</b>	<b>28,823</b>	<b>30,348</b>	<b>31,906</b>	<b>35,261</b>
8	Indonesia	16	10	8	4	2.5	2.5
9	Iran	123	110	120	125	120	110
10	Japan	30	30	30	32	20	20
11	North korea	300	320	350	365	365	350
12	South Korea	1.6	1.2	1	1	1	1
13	Philippines	1	1.1	1.2	1.82	1.5	2
14	Syria	0.7	0.5	0.3	0.25	0.25	0.25
15	Thailand	680	692	698	712	680	680
16	Tunisia	4	4	3	2	2	2
17	Turkey	25	32	30	32	30	30
18	Uzbekistan	980	1,100	1,200	1,256	1,200	1,800
19	Vietnam	475	420	450	523	520	680
20	Madagascar	18	15	5	6	2	7
	<b>Total</b>	<b>159737.10</b>	<b>17,8057.62</b>	<b>202072.83</b>	<b>192512.27</b>	<b>177507.35</b>	<b>159648.00</b>

Source: International Sericulture Commission, United Nations (Combinations of Various issues)

From the table 3.1, it is seen that India's silk production is continuously increases during the years. India is the second highest producer of world silk. On the

other hand, in case of total world silk production, it is seen that the initial three years, there were a continuous increase in world silk production. But, the year 2016, 2017 and 2018, the silk productions were declined. The reason of declining world silk production was determined by the increased importance of cotton and artificial fibres in world clothing and textile industries.

### 3.3 Silk production in India

India is the only country which produces all the four varieties of silk. India's consumption of silk is highest in all over the world. India consumes 21% to 22% of total world silk. Out of India's total silk production, almost 97% of total raw silk is produced in six Indian states that are Karnataka, Andhra Pradesh, Assam, Tamil Nadu, West Bengal and Jammu and Kashmir (Central Silk Board, Ministry of Textiles and published in Statistical Year Book-2017 by MOSPI). The following table shows State wise Raw Silk production during 2012-13 to 2016-17.

**Table 3.2**

**State wise Raw Silk production in India (in MT)**

Sl.No.	State	2012-13	2013-14	2014-15	2015-16	2016-17
1	Karnakata	8219	8574	9645	9823	9571
2	Andhra Pradesh	6550	6912	6485	5086	5974
3	Telengana	-	-	101	116	119
4	Tamil Nadu	1185	1120	1602	1898	1914
5	Kerela	6	4	7	11	9
6	Maharastra	97	122	221	274	259
7	Uttar Pradesh	157	188	236	256	265
8	Madhya Pradesh	190	195	248	257	97
9	Chhattisgarh	391	391	234	263	360
10	West Bengal	2070	2079	2500	2391	2565

11	Bihar	22	52	53	67	76
12	Jharkhand	1090	2003	1946	2284	2631
13	Odisha	104	53	98	117	1125
14	Jammu and Kashmir	145	136	138	127	145
15	Himachal Pradesh	23	25	30	32	32
16	Uttarakhand	17	22	29	30	31
17	Haryana	.13	.13	.3	.06	1
18	Punjab	5	4	4	.08	2
<b>19</b>	<b>Assam</b>	<b>2068</b>	<b>2766</b>	<b>3222</b>	<b>3325</b>	<b>3811</b>
20	Arunachal Pradesh	22	15	12	37	45
21	Manipur	418	487	516	519	529
22	Meghalaya	517	644	656	857	927
23	Mizoram	40	44	50	64	76
24	Nagaland	324	606	619	631	678
25	Sikkim	3	0.20	8	6	10
26	Tripura	15	40	48	52	12
	<b>Total</b>	<b>23,679</b>	<b>26,480</b>	<b>28,708</b>	<b>28,823</b>	<b>30,263</b>

Source: Ministry of Textiles, Govt. of India (combinations of various issues)

In 2012-13, the top 10 highest raw silk producing states are- Karnataka: 8219 MT which is 34.71% of total raw silk production in India, Andhra Pradesh followed by producing 6551 MT which was 27.67% of total silk production in the country. West Bengal produced 2069 MT i.e. 8.74%, Assam has 2068 MT which consist of 8.73% of total country's silk production. Tamil Nadu produced 1185 MT (5%), Jharkhand produced 1090 MT (4.6%), Meghalaya has 517 MT production of raw silk which constitute 2.18% of total production , Manipur produced 419MT (1.77%), Chattisgarh

produced 391 MT (1.65%), Nagaland has 324 MT which is 1.37% of total Indian raw silk production.

The five top silk producing states accounted for 80.32% of the total raw silk production over the country in the year 2016-17. Production of raw silk was 3811 MT in Assam during 2016-17 which accounted 12.59% of total raw silk produced in India during the year. Meghalaya produced 927 metric tons raw silk i.e. 3.06% of the total production of the country during the year 2016-17. Nagaland produced 678 MT (2.24%), Manipur produced 529 MT (1.75%) and Tripura produced 12MT (0.04%) of raw silk during the year 2016-17. Arunachal Pradesh produced 0.15%, Mizoram and Sikkim produced 0.25% and 0.3% of total silk production of India. From the above table, it is clear that, in the year 2016-17 also, highest amount of raw silk producing state of the country was Karnataka . Andhra Pradesh stands second highest position and Assam produces third highest amount of silk among all the silk producing states of our country. It has been clearly seen that the total amount of silk production are continuously increasing by the given years, which is a very good sign for Indian silk sector. From the table, it is also noted that, Assam's silk production are also continuously increased during the given years.

### **3.3.1 India's Silk export**

India exports almost 4% to 5% of global silk. Though India exports a huge amount of silk to the global trade market but still this amount is not a significant amount of export since India is the second largest silk production country among the whole world. The main reason behind this is the domestic demand for silk. More than 85% of silk goods productions are used in domestic market and the country are able to export only approximately 15% of total domestic silk production (CSB report, 2017). The export items of Indian silk are finished goods like curtains, carpets, cushion covers, bed speeds etc.

The Indian silks are exported to the various markets of USA and almost all the European countries and some markets of Asia Region. The export earnings through the silk goods are decreased over the years due to global recession and reduction in demand for silk goods in western countries. India's main export earning can be divided in five main sub headings i.e. silk yarn, fabrics, readymade garments, silk carpet and silk

waste. India earns most of its silk earning from silk fabrics. From silk fabrics, India earns almost half of its total export earnings from silk. After fabric, the second highest earning of silk is from readymade garments. In the year 2016-17, India's export earnings from silk increases in readymade garment than fabrics. After fabric and readymade garment the third position is captured by silk waste. From silk waste India is also able to earn a portion of export. After that from silk carpet and natural silk yarn, India earns almost negligible amount of foreign exchange, though 2016-17, India's foreign exchange increases from silk carpet (Tradeingeconomics.com/Ministry of commerce and industry, India, 2017).

USE,USA, U.K, France, Italy, Germany, China, Canada, Malaysia, Spain, Australia, Japan, Hong Kong, Belgium, Saudi Arabia, Lac Region, Thailand, Poland, Switzerland, Sweden are the prime countries with which India made trade of silk. These are the countries with which 90% of silk India exports. The following table shows top 20 importing Countries of Indian silk and silk Products- Product wise analysis Value in US \$ million (2017-18).

**Table 3.3**  
**Country wise Exports of Indian Silk (US \$ million), 2017-18**

Country	Yarn and Fabric	RMG	Silk waste	Silk Carpet	Total
Russia	16.62	48.85	NIL	0.46	65.93
USA	31.45	28.88	NIL	0.67	61.00
U.K	17.73	13.66	NIL	0.11	31.50
France	5.53	14.59	NIL	0.04	20.16
Italy	7.64	9.85	1.54	0.03	19.06
Germany	11.24	7.58	NIL	0.21	19.03
China	1.04	0.56	10.85	NIL	12.45
Canada	4.12	2.15	NIL	0.02	6.29
Malaysia	3.89	5.82	NIL	NIL	9.71
Spain	2.16	7.18	NIL	NIL	9.34
Australia	2.03	5.64	NIL	0.03	7.70
Japan	1.39	5.02	NIL	0.01	6.42
Hong Kong	2.24	2.82	NIL	0.16	5.22
Belgium	2.14	2.41	NIL	0.29	4.84
Saudi Arabia	0.84	3.64	NIL	NIL	4.48
LAC Region	1.12	3.28	NIL	NIL	4.40
Thailand	0.40	1.00	1.30	NIL	2.70
Poland	0.15	2.12	NIL	NIL	2.27
Switzerland	1.02	0.69	NIL	0.04	1.75
Sweden	0.61	0.93	NIL	0.01	1.55

Source: DGCIS, Kolkata 2017-18

Note: NE: No Export; RMG: Readymade garment

The above data represents the year 2017-18, where top 20 silk exporting countries of India and their export amount are given. From the data, it is seen that India exported highest amount of silk with Russia which is 65.93 million US \$ where 16.62 million US\$ were earned from Yarn and fabric. 48.85million US\$ from readymade garments on the respective year.



### **3.3.2 Domestic Demand For silk Products in India**

The domestic demand for silk products day by day increases and as compared to the increasing demand of silk product, the production of silk product has not been increases. As a result export of the silk product reduces and the price of silk increases gradually. Continuous domestic rising demand for silk product is the basic reason for declining trend of silk export. The demand for silk product is continuously increasing and to meet this continuous increasing demand, the silk production is not sufficient, due to which it affected the export of silk. According to the data provided by Regional Development Office (Lucknow) of Central Silk Board, Union Ministry of Textiles, the total amount of raw silk production in 2016-17 was only 16,805 tonnes and on the same year the silk consumption in the country exceeds 25,000 tonnes. J.K Baweja (2017), the managing director of the National Handloom Development Corporation Ltd. shortly known as NHDC said, “There is a demand of about 28,000 tonnes of silk every year in the country while the production is only 16,000 tonnes. To fill the gap, the manufacturers have no other option but to import from China, which provides them cheaper fabric” when he was addressed an exhibition held at NHDC, a government of India undertaking, under the aegis of the Development Commission for Handlooms (DCH). Silk yarn in India is priced at Rs. 1,400 per Kg, while the imported price is Rs.1,300 per kg or sometime it even less than that from China. Chinese silk are woven on power looms, so they are even better in strength. The organization Handloom Development Corporation (NHDC) supplies dyes worth Rs 15-20 crore every year. On 2016-17 yarn worth Rs 398 crore was given to the weavers. Out of the total silk garments produced, about 90 percent of them are consumed domestically and only about 10 percent were exported to other countries.

India’s silk import bill has constant to puff up. The country paid Rs. 1,497.46 crore in 2018-19 for raw silk imports which was Rs.734.44 crore during 2007-08 (Central Silk Board, Ministry of Textiles, various issues).

**Table 3.4****India's Export and Import value of raw silk**

Year	Export (in crore)	Import (in crore)	Trade Balance(Export- Import) (in crore)
2007-08	2,727.87	734.44	1,993.43
2008-09	3,178.19	903.06	2,275.13
2009-10	2,892.44	933.7	1,958.74
2010-11	2,863.76	937.59	1,926.17
2011-12	2,353.33	1,111.53	1,241.8
2012-13	2,303.53	1,236.83	1,066.7
2013-14	2,480.89	1,357.49	807.61
2014-15	2,829.95	1,358.15	1,471.8
2015-16	2,495.98	1,389.10	1,106.88
2016-17	2,093.42	1,438.17	655.25
2017-18	1,649.48	1,652.39	-2.91
2018-19	2,031.88	1,497.46	534.42

Source: Central Silk Board, Ministry of Textiles (combinations of various issues)

The table 3.4 explains about silk exports, imports and the trade balances. It is seen that, in case of silk export, in the year 2007-08, Rs.2, 727.87 crore was the amount. The export amount increases to Rs. 3178.19 crore by 2008-09. The figure starts to decline to Rs. 2,892.44 in the financial year 2009-10. Again it decline to Rs. 2,863.76 in 2009-10. The amount of silk export again reduces on the following years except 2013-14, 2014-15 and 2018-19. It is seen that the India's silk export is initially increases due to high demand for silk cloth but after that Indian silk export are declining due to the Indian silk products are not able to compete with Chinese silk price and quality. They produce the silk through machine and able to sale it at much lower prices than the Indian silk price. As a result, the other silk importing countries like to import silk from China rather than India.

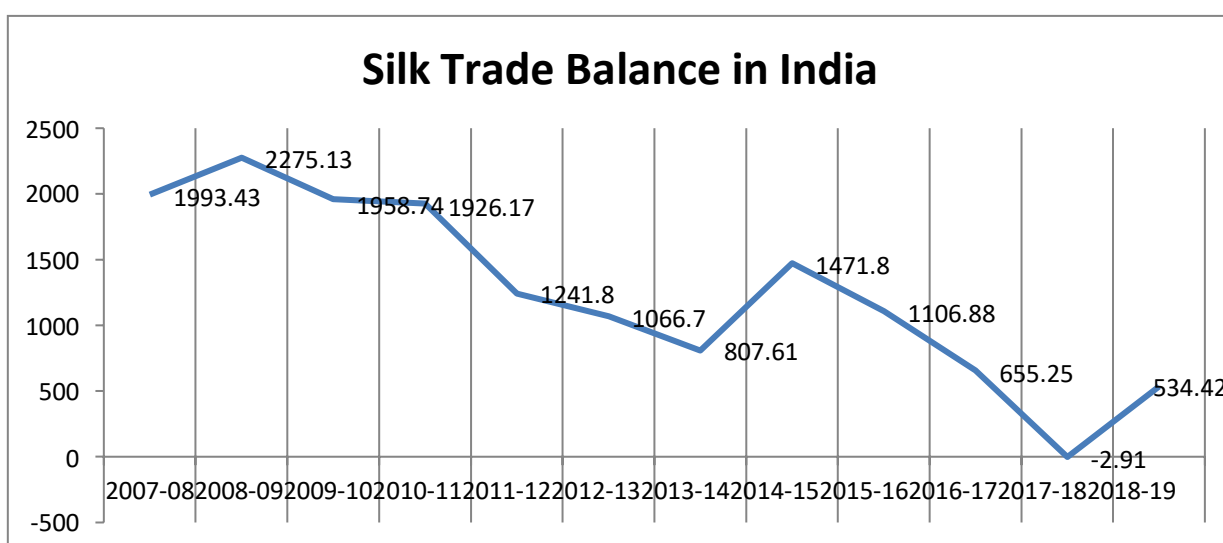
The scenario of Import of silk is that, it is gradually increasing with ups and downs. It is only the year 2017-18 where there was a negative trade balance but there was a continuous decline in trade balances from 1993.43 cr. on 2007-08 to 534.42 cr in 2018-19. So, it is clear that the amounts of silk imports are continuously increases on the given years.

The basic reasons for increasing amount of silk imports are:

- a. Continuously increasing demand for silk product.
- b. Continuously falling value of money in comparison of dollar.
- c. Cheapest price of Chinese raw material in comparison to Indian product.
- d. Cheaper price of power loom products than the handloom products.

The Trade Balance of silk products in India is shown with the help of the following diagram:

**Figure 3.1**  
**Trade Balance of silk products in India**



Source: Central Silk Board, (combinations of various issues)

So, from the above figure, we can conclude that there were always surplus trade balances on silk products except the year 2017-18. This indicates the amounts of silk export in India are higher than the import, but the significant trend is that the amounts of import of silk are continuously increasing than the amount of export of silk.

### 3.4 Silk Production in Assam

Assam has the unique distinction in producing four major varieties of silk- Muga silk, Eri silk, Mulberry silk and Tasar silk. Rearing of Eri, Muga and Mulberry silk worm are playing an important role and economic support to large sections of rural population in the state. It is practiced in more than 10,532 villages and provides employment to approximately 2.60 lakh families. Assam accounts for the highest production on Muga and Eri in the country. Assam ranked 3<sup>rd</sup> position in silk production across the country. The state by producing 94% Muga and 62% Eri silk of the total production of the country (Sericulture Department, Assam).

**Table 3.5**

**Silk Yarn Production in Assam on various years (in MT)**

Year	Production (in MT)
2010-11	1,395.66
2011-12	1,817.42
2012-13	2,068
2013-14	2,766
2014-15	3,222
2015-16	3,325
2016-17	3,811
2017-18	4,323
2018-19	4,866

Source: Statistical Handbooks, Assam (Various issues)

From table 3.5, it has been seen that Assam's silk production is continuously increasing. This is a very positive sign for Assam's silk industry. Increasing demand for silk products and the huge amount of profit margin on this business is the basic reason to the continuous increase of silk production on the state.

### 3.4.1 Share of Assam silk production on India's silk production from 2012-13 to 2016-17

**Table 3.6**

#### **Share of Assam's silk production on India's Silk Production**

<b>Year</b>	<b>India's Silk production (in MT)</b>	<b>Assam's Silk Production (in MT)</b>	<b>Share of Assam silk production on India's silk production</b>
2012-13	23,679	2,068	8.73%
2013-14	26,480	2,766	10.45%
2014-15	28,708	3,222	11.22%
2015-16	28,823	3,325	11.66%
2016-17	30,263	3,811	12.59%

Source: Ministry of Textiles, Govt. of India & Statistical Handbooks, Assam (Various issues)

From table 3.6 it is observed that in year 2012-13, Assam produces 8.73% of total silk production of India. Again in 2013-14, Assam produces 10.45% share of total silk production of India which is increased by 1.72%. In financial year 2014-15 Assam's silk production was increased by 11.22%. Again in 2015-16 Assam contributes 11.66% of India's total silk production. Assam produces 12.59% of total silk production of India in the year 2016-17. Assam produces in an average of 11% of share of India's total silk production. So, from the above data it is observed that Assam's silk production is gradually increases and it is an increasing trend.

### 3.4.2 Muga Silk Production in Assam

Muga is the golden yellow silk is the pride of Assam and the rarest silk among the whole world. It is a diversity of wild silk which is geographically tagged in the state of Assam. This silk is famous for its natural yellowish golden touch with a glossy sparkling texture. Muga is special only because they are made from the silkworms found only in Assam and it is the crown jewel in Assam's treasures.

The following table presents about the total amount of Muga Raw silk production in Assam. The data are collected from a secondary source, i.e. the Directorate of Sericulture, Assam.

**Table 3.7**  
**Production of Muga Silk Yarn (in MT)**

Year	Production (in MT)	Percentage of Muga silk production to total silk production (Assam)
2010-11	109.43	7.84 %
2011-12	113.28	6.23%
2012-13	114.56	5.54%
2013-14	125.27	4.53%
2014-15	127.20	3.95%
2015-16	126.00	3.79%
2016-17	142	3.73%
2017-18	139	3.21%
2018-19	156.96	3.22%

Source: Directorate of Sericulture, Assam

Table 3.7 indicates the amount of production of Muga silk yarn in MT. the total amount of Muga silk production was 109.43 MT in the year 2010-11. It increases to 113.28 MT in the year 2011-12. It again increases to 114.56 MT on the next year. In 2013-14, it increases to 125.27 MT. In 2014-15, a total of 127.20 MT Muga was produced in Assam as a whole. But in 2015-16, there is a slight decline in Muga production in Assam due to high Muga price and lack of interest of Muga entrepreneurs. But, the situation is control by next year and in 2016-17, the amount of Muga production increased to 142 MT. The production of Muga again increases to 139 MT and 156.96 MT on the respective years. Though the amount of Muga production increases, but the percentage of Muga silk production to total silk production is continuously declining, this is an alarming sign for the Muga lovers. Muga rearing is an outdoor sericulture activity. Therefore, it is often influenced by changes in climate, specifically rainfall and therefore the resultant outcome has been heavily dependent on

the climatic condition. If the nature is in favour of Muga-culturists, the output shots up and vice versa. Muga is a very costly venture and on the other hand it involves more risk than the other sericulture activities like Eri or Mulberry. So, the silk entrepreneurs are more interested to produce other varieties of silk than Muga. As a result, since there is a continuous increase in the amount of Muga raw silk production but its share is continuously declining on total silk production in Assam. The highest amount of Muga was produced in Kamrup districts of Assam.

### 3.4.3 Mulberry Silk Production in Assam

Mulberry raw silk is that part of silk whose uses are highest all over the world. Mulberry silk is the natural protein fibre which uses on various activities in all over the world. A brief description about the Mulberry raw silk production in Assam is given below:

**Table 3.8**  
**Production of Mulberry Silk yarn in Assam (in MT)**

Year	Production (in MT)	Percentage of Mulberry silk production to total silk production (Assam)
2010-11	10.78	0.77%
2011-12	11.40	0.63%
2012-13	11.45	0.55%
2013-14	14.45	0.52%
2014-15	27.24	0.85%
2015-16	28.40	0.85%
2016-17	40	1.05%
2017-18	52	1.20%
2018-19	59.50	1.22%

Source: Statistical Handbook Assam, (combinations of various issues)

Table: 3.8 indicate the amount of production of Mulberry silk in Assam. The amount of Mulberry silk yarn production was increased from 10.78 MT in the year 2010-11 to 59.50 MT in 2018-19. But in case of percentage share of Mulberry silk yarn production to total silk yarn production in Assam it is seen a very frequent fluctuations in the entire period. Actually, the quality of Mulberry silk yarn of Assam is inferior in comparison to the imported silk yarn from Karnataka and China. The majority of commercial weavers of Assam specifically, the weavers of Sualkuchi village do not prefer to use local silk in producing fabrics due to the lack of appropriate twisting quality. As a result, price of this indigenous silk remained at a very low level and thus Mulberry culture in Assam has always been less remunerative and unattractive. Moreover, mulberry silkworms are vulnerable to different diseases and highly sensitive to changes in temperature of climate. Therefore, it also involves high risk and the rearers are not much interested in culturing Mulberry silkworm.

### **3.5 Silk Production in Sualkuchi Village**

Sualkuchi is the centre place of Assam in Silk production. Almost 80% silk are produced in this village among the whole Kamrup districts (combining Kamrup Metro and Kamrup Rural). Apart from that, it is the village where Muga is produced. The golden yellowish Muga thread is the pride of Assam. That is why; this village is known as the “Sonali Sutar Desh” or the “country of golden Thread”. Sualkuchi is also famous by “Manchester of Assam”. The basic livelihood of this village is Sericulture. Mulberry and Muga are the main productivity of Sualkuchi. But in recent times, due to the very high cost of Muga thread, productivity of Muga becomes limited and the place of Muga is gradually taken by “Tasar Silk”.



**Table 3.9**

**Silk Yarn Production in Sualkuchi Village from 2010-2011 to 2018-2019**

<b>Year</b>	<b>Production (in MT)</b>
2010-11	943.75
2011-12	1,472.65
2012-13	1,787.5
2013-14	1,522.8
2014-15	1,467.6
2015-16	1,225.5
2016-17	1,157.7
2017-18	1,083.6
2018-19	1,074.7

Source: Directorate of Handloom & textile, Assam

Table 3.9 indicates the amount of silk yarn production in Sualkuchi village of Assam. From the table, it is observed that, the amounts of silk yarn production are continuously declining. The basic reason behind this is the use of imported yarn which is cheaper than the locally produced yarn. This also helps to produce the silk cloth in less time. Apart from that consumers increasing tendency to purchase banarasi, pali pat, mixed pat or other cheap material than the original silk material is the other reason to declining silk production in Sualkuchi village.

### 3.5.1 Muga Silk Production in Sualkuchi Village

**Table 3.10**

**Muga Yarn Production in Sualkuchi from 2010-11 to 2018-19**

<b>Year</b>	<b>Production (in MT)</b>
2010-11	13.0
2011-12	13.05
2012-13	9.90
2013-14	9.95
2014-15	9.95
2015-16	7.35
2016-17	11.07
2017-18	10.8
2018-19	11.47

Source: Directorate of Handloom & textile, Assam,  
(combinations of various issues)

The table 3.10 indicates amount of Muga silk production in Sualkuchi village. The total production of Muga silk yarn has decreased from 13 MT in 2010-11 to 11.47 MT in 2018-19 with frequent fluctuations in the entire period. Muga is a costly venture and on the other hand it involves more risk than the other sericulture activities like Eri. The Sualkuchi weavers are now a day's prefers to import Muga cocoons from other places of Assam like Sivsagar, Dhubri, Kokrajhar ect.

The price of a set of Muga saree and mekhela-sador is Rs 22,000-30,000 in Sualkuchi village and in Guwahati city it is not less than Rs 40,000. Muga is the costliest silk among all four varieties of silk.

### 3.5.2 Mulberry Silk Production on Sualkuchi Village

**Table 3.11**

#### **Mulberry silk yarn production from 2010-11 to 2018-19 in Sualkuchi Village**

<b>Year</b>	<b>Production (in MT)</b>
2010-11	0.40
2011-12	0.33
2012-13	0.37
2013-14	0.47
2014-15	0.55
2015-16	0.22
2016-17	0.30
2017-18	0.41
2018-19	0.54

Source: Directorate of Handloom & textile, Assam,

(Combinations of various issues)

Table 3.11 indicates the amount of yearly Mulberry silk production in Sualkuchi village. In 2010-11 0.40 MT of Mulberry silk were produced. This amount declined to 0.33 MT on the next year. The amount decline to 0.37 MT in the year 2012-13. The next two conjugative year's amount of Mulberry silk production was increases i.e. 0.47 MT and 0.55 MT respectively. On 2015-16, there was a decline on Mulberry production in Sualkuchi. But again in 2016-17 production increases to 0.30 MT and in 2017-18 and 2018-19 it increases to 0.41 MT and 0.54 MT respectively. It is seen that Mulberry raw silk production in Sualkuchi is a very frequent fluctuations in the entire period. Actually, the quality of Mulberry raw silk of Assam is inferior to other parts of India and Assam imported silk yarn from basically Karnataka and China. The majority of commercial weavers of Sualkuchi village do not prefer to use local silk in producing fabrics due to the lack of appropriate twisting quality. Moreover, Mulberry silkworms are vulnerable to different diseases and highly sensitive to changes in temperature of climate. Therefore, it also involves high risk and the rearers are less interested in culturing Mulberry silkworm.

### 3.6 Silk Industry and Women Involvement

Silk industry is one of the outstanding sectors since the ancient time period, which provided full time employment to the entire family, providing high income and better standard of living. This industry is a labour intensive and employment generating and low investment- high income regarding industry. Total raw silk production in India was 26,480 MT, out of which Mulberry raw silk production was 19,476 MT (73.55%) during 2013-2014 and it goes up to 30,265 MT in 2016-17. Employment generation is 8.51 million in the year 2013-14 and it increases to 9.24 million by 2016-17. Employment generation in silk industry and sericulture has increased from 6 million to 7.5 million during eleventh plan period {National Register of Labour Force, India, (combinations of various issues)}.

**Table 3.12**

**Employment Generation through Silk Industry in India**

Year	Total Employment (in '000)	Female Employment (in '000)	Male Employment (in '000)	Percentage of Female employment out of total employment
2008	8,649	5,022	3,627	58.06%
2009	7,027	4,010	3,017	57.07%
2010	7,589	4,575	3,014	60.28%
2011	8,425	4,523	3,902	53.69%
2012	8,939	4,570	4,369	51.12%
2013	8,696	4,622	4,074	53.15%
2014	8,625	4,169	4,456	48.34%
2015	8,567	4,846	3,721	56.57%
2016	9,240	5,987	3,253	64.79%

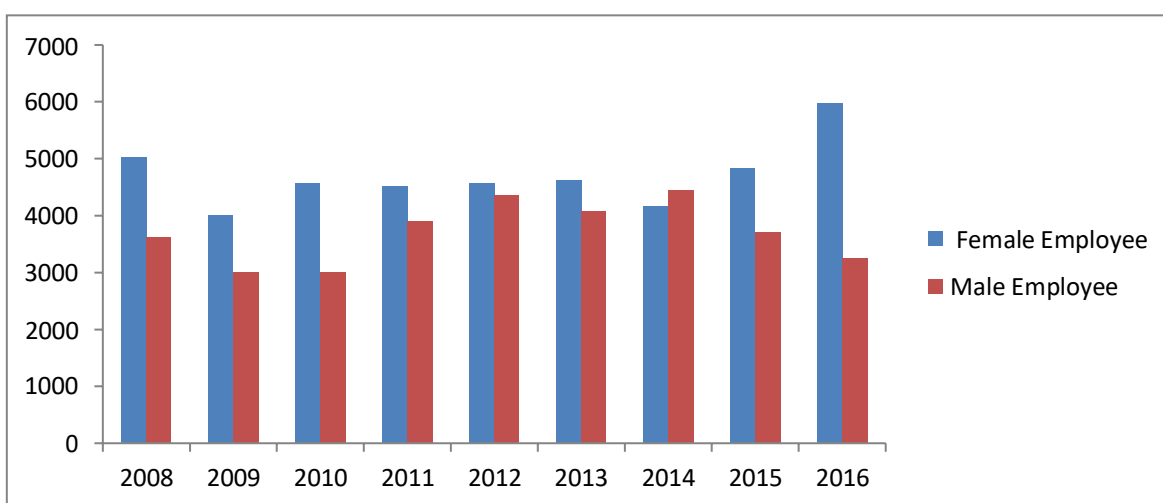
Source: National Register of Labour Force, India, (combinations of various issues)

From the above data it is observed that a huge amount of people are engaged in silk industry. Among those employed people, numbers of female engaged in this sector are more than the numbers of male employee, as an average of almost 56% are female employees.

From the table 3.12 it is seen that, only 2014 when female employees' percentage were less than 50%.

**Figure 3.2**

**Male & Female Employment Ratio in Silk Industry on Various Years**



Source: National Register of Labour Force, India, (combinations of various issues)

So, we can say that most of the workers in silk industry are female. By data and calculation, it is proved that out of every 100 employee in silk industry, as averages of 56 are female employee. So, we can conclude that, the silk industry is a female dominating industry and most of the weavers are female in this industry.

The basic advantage of this industry is for the female who lived in rural areas. In rural area, most of the female are not educationally very qualified. So, in this sector, education qualification is not required. Female can earn money from their home also. Investment cost is also very low in silk weaving. They can perform their job in their spare time after doing their routine household work. Again, in this profession workers do not require any qualification and training. They learn all these over generation. Daughters learn from their mother and grandmothers by traditionally. So, everyone can

easily learn all these silk activities from their childhood. As a result rural females can easily choose silk sector as a business career.

### 3.6.1 Female Involvement in Sualkuchi Silk Industry

In Sualkuchi village there are 13,752 looms in silk weaving industry. Among these looms, 5,532 are Muga looms and 8,220 are mulberry looms. Among 12,056 weavers 5,183 are male weavers and approximately 6,873 are female weavers. Sualkuchi had provided direct employment of more than 12,000 weavers, 6,000 helpers and also silk sector provided indirect part time employment such as yarn winders, Muga reelers, and on management. Therefore the silk industry in Sualkuchi village create employment to nearly 24,000 people out of which more than 60% are female weavers (Directorate of Handloom & Textiles, Govt. of Assam, 2016-17).

### 3.6.2 Female Engagement in Different Livelihood Sectors

**Table 3.13**

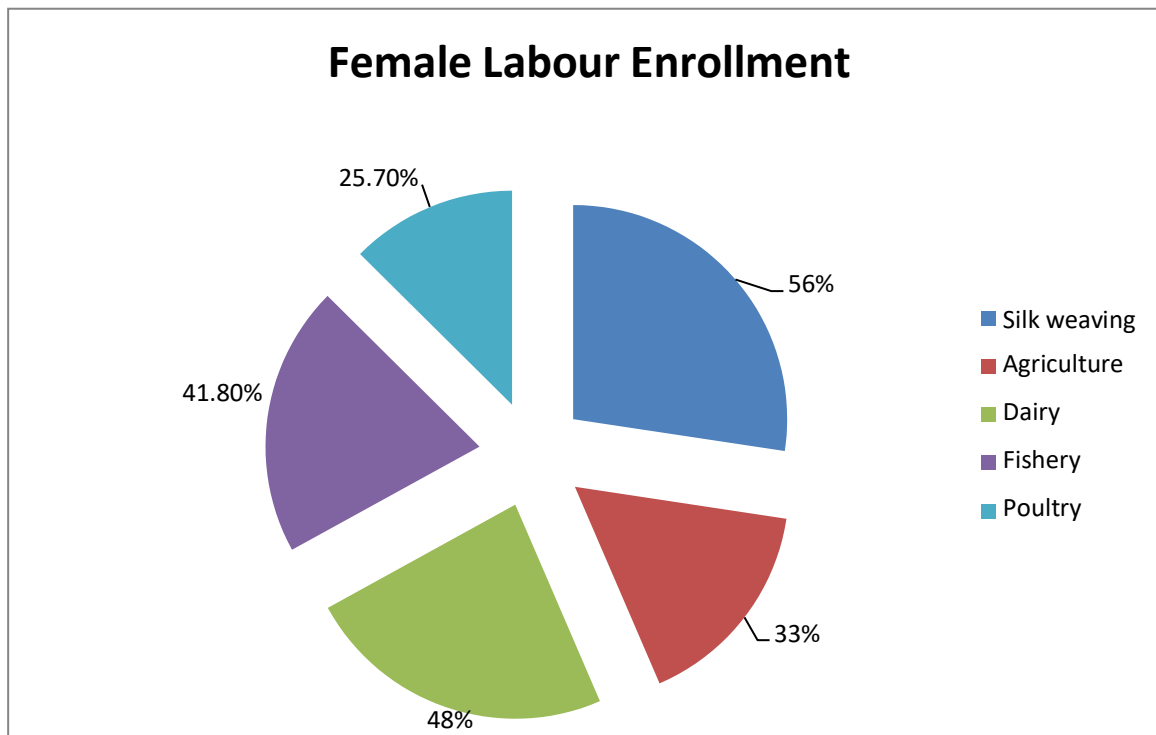
#### **Female Engaged in Different Livelihood Sectors in India**

<b>SECTOR</b>	<b>% Of Female Enrollment</b>
Silk Weaving	56%
Agriculture	33%
Dairy	48%
Fishery	41.8%
Poultry	25.7%

Source: National Register of Labour Force, India,  
(combinations of various issues)

Out of total registered female labour work force of India, it is seen that in Silk industry, more of the females are engaged. In this industry, out of total work force, 56% are the female weavers. In Agriculture, 33% are female workers, in Dairy 48% are female, in Fishery 41.8% are female worker and in Poultry sector 25.7% are female worker. So, basically, it is the silk industry where more of the female workers are absorbed. This can be diagrammatically presented as:

**Figure 3.3**  
**Female Labours Enrolment on Various Sectors**



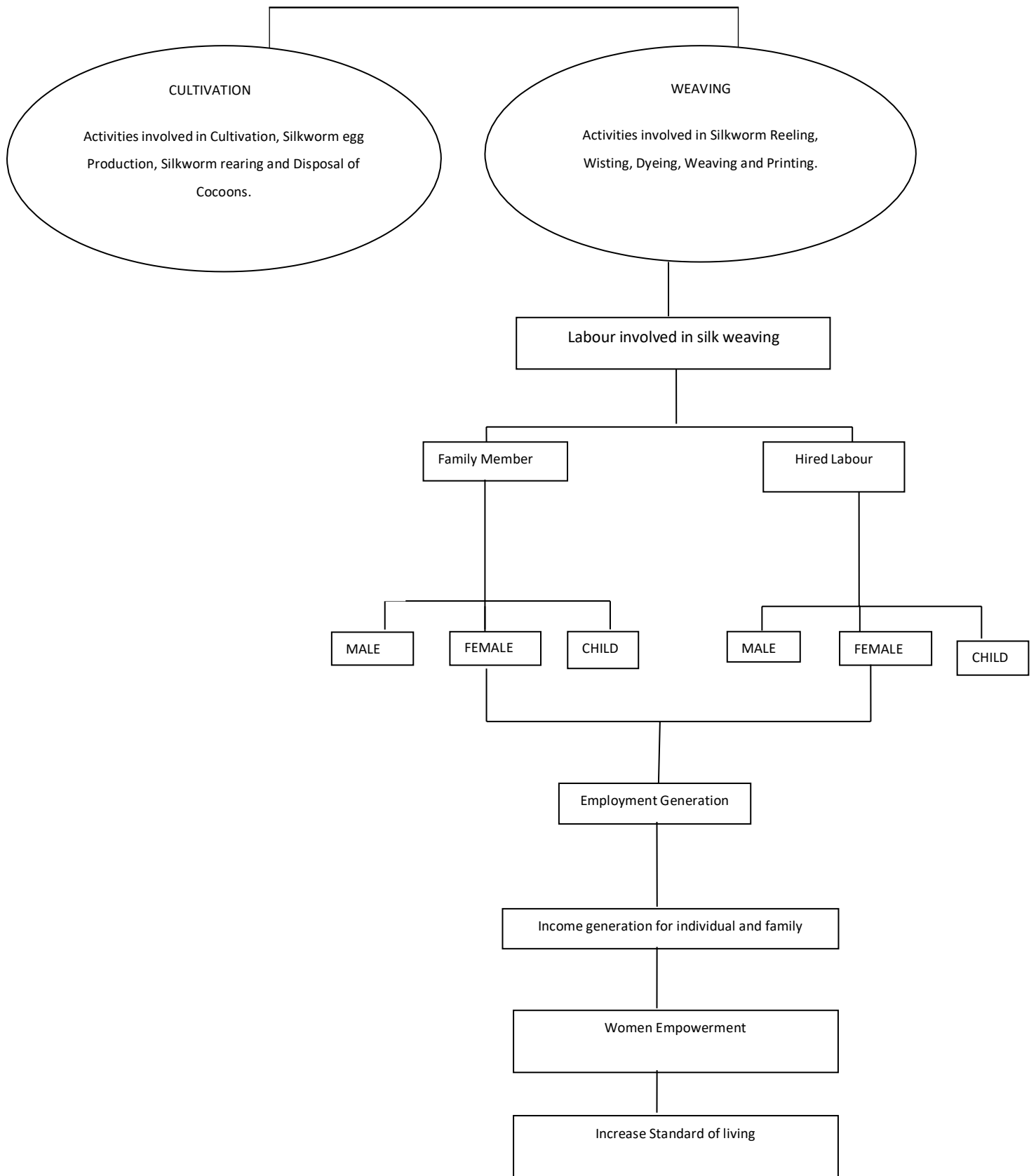
Source: National Register of Labour Force, India, (combinations of various issues)

Figure 3.3 explains about the female labour enrolment percentage on various sectors. It is observed that more than half of the female labours are enrolled as a silk weavers. The second highest position obtained by Dairy. Third and fourth positions of female labour enrolment are covered by Fishery and Agriculture.

The following model related women engagement on silk industry and their source of income. The model also explains about how the standard of living increases with female involvement in sericulture sector.

# MODEL FOR FEMALE EMPLOYMENT GENERATION IN SILK INDUSTRY

## Silk Industry





### 3.7 Conclusion

China is the country who produces highest numbers of silk. India stands for second highest position of silk products. India produces in an average of 14% of total world silk production. Karnataka is the state which produces highest silk among the country. Assam stood for third highest position for silk production. India exports almost 4% to 5% global silk. Though India exports a huge amount of silk to the global trade market but still this amount is not a sufficient amount of export since India is the second largest silk production country among the whole world. The main reason behind this is the domestic demand for silk and silk materials. More than 85% of silk goods are consumed in India's domestic market.

Assam produces in an average of 11% of India's silk production and it provides employment to approx 2.60 lakh families. Assam accounts for the highest production on Muga and Eri among the country. Assam has the monopoly power to produce Muga. The demand for Muga and Mulberry silk has also increases day by day. For the rural people, sericulture is one of the main livelihoods. Assam silk productions are also increases during the periods. Again, it is observed that out of total female enrolment on labour force, most of the female mentioned that their livelihood is silk industry and Sericulture sector. The sericulture sector needs low investment cost and low gestation period. Educational qualifications are also not mandatory in silk weaving. So, it can be concluded that silk plays a major role to provide employment and livelihood to India as well as Assamese people specially the poor people who lived in rural areas.

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