Which Silk route this?

A situational analysis of child labour
in the sericulture industry in Karnataka, India

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A situational analysis of
Child Labour in
the Sericulture Industry

Movement for Alternatives and Youth Awareness
- a Development and Training Organisation

Summary

This report addresses issues of the growing incidence of child labour in the sericulture sector in Channapatna and Ramanagaram talukas of Bangalore Rural district.

Karnataka - the largest silk producing state in the country - continues to employ children in the sericulture industry. The employment of children, ostensibly to provide employment to the poor families, has in fact benefitted only the silk reelers and filature unit owners and not the families or the children employed. Further, it has also been observed that the sericulture industry acts as an incentive for parents to send their children to work rather than to school. The Government, on its part, has failed to take any definitive action to prevent children from being employed. On the contrary, there has been an entrenchment of child labour in this sector, which includes designing child-sized reeling machines that children can work on. **More importantly, the sericulture sector is an example of gross violation of children's right to participation, survival, protection and development.**

Consequently, there is an urgent need to redefine our understanding of 'development' and highlight the ways in which social underdevelopment is sustained.

Introduction

The development experience in our country reflects the extent to which economic growth per se does not lead to improvement in the socio-economic conditions of the people. Processes which speak of improved utilisation of resources and growth patterns which give a boost to the economy have often led to increased marginalisation of people, especially children and women, in the long run. A critical area of concern in this regard should be to draw our attention to the thrust of development policies and agendas. This should largely reflect people's attitudes and responses both to an immediate and a long-term macro-economic perspective and the social implication of these policies on their lives. **Progress, if viewed from an economic and development pathway appropriate to the conditions existing in a given socio-cultural milieu, will ensure a balance between economic development and the quality of life of people.** The political priorities which maintain the social and economic order and the development agenda have ignored and pushed the poor, and more so their children, to the edge of life.

Child labour exists not because of poverty of income but mainly because of factors such as community apathy, parental negligence, hostile school environment

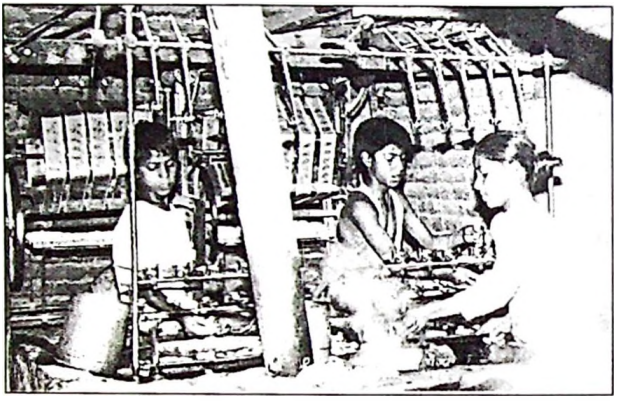
In this regard, the development of sericulture industry in India is a case in point. Sericulture is said to provide an excellent opportunity for socio-economic progress in the context of a developing country like India, due to various reasons. First and foremost, sericulture is a highly labour-intensive industry. Excluding moriculture (mulberry cultivation) which is a cottage industry, silkworm rearing itself generates 1.5-4.5 person-years of employment per year per hectare of mulberry garden, under rain-fed and irrigated conditions respectively.[1] Sericulture and related activities operate on a relatively low amount of fixed capital making it easily affordable even for economically weaker persons to invest. At the lower end, a fixed capital of less than Rs. 2000 on equipment can enable even a landless poor family to take up silkworm rearing by leasing a plot of mulberry garden and using the premises of the dwelling place itself. Similarly, a poor household needs to invest about Rs. 2500 on a charaka to take up silk reeling.

Hence, sericulture is often promoted by the Government as a low-cost, high-income scheme. Assistance from the World Bank of almost 400 million rupees has come into Karnataka for development of the sericulture industry since 1980. The bank believes that promotion of sericulture will create jobs to alleviate poverty and help the disadvantaged groups. However, in reality, this has not been achieved even after two decades. (It is estimated[1] that 56.8% of the gross income from the sale of

1 Central Silk Board, *Silk in India*, 1992

soft-silk fabrics (70g/mtr) goes to the cocoon producers, 16.6% to the trader, 10.7% to the weaver, 9.1% to the twister and only 6.8% to the reeler[2]. The recent budget (2000) of the Karnataka State Govt proposes to promote the sericulture sector as an income generating activity, especially one in which women can be integrated.

Several development agencies have added to the Government's promotion of sericulture, seeing it as a viable regional development scheme and as one in which the poor can be drawn into the development circle.



The flip side of sericulture being a cottage industry is that it depends on maximum amount of work to be carried out by children. Children are employed in all stages of the silk processing, making sericulture a child-based industry. The machines utilised are designed such that children can work on them. In the sericulture sector, the child at present grows as an 'exploitable commodity' - denied as a human potential who is entitled to the fundamental right to exist. This sector has over the past few decades been witness to a progressive and systematic marginalisation of the poor. This situation has led to a total decadence of the social and cultural life of people in this sector wherein, the children find themselves alienated from the social mainstream. The administrative structures, institutional machinery and attitude of the State continue to overlook the problems rather than enable people to comprehend, access and utilise resources for their well-being. However, sericulture and its processing are an industry that works at the cost of the health, education, and social opportunities of children. The gross violation of children's rights with regard to their health, social life, education and their lost childhood should essentially be a matter of great concern to policy makers, economists, employers, voluntary organisations and other community members.

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2 'Reeler' in this context refers to the filature unit owners and not the women and children working at the units.

Intervention by the Government and the voluntary sector

The growing incidence of child labour in almost all sectors has necessitated action from various groups - including the government and Non Government Organisations (NGOs) who have evolved different strategies to address the issue of child labour. The Government is currently sponsoring National Child Labour Projects (NCLP) throughout the country that seek to rehabilitate working children through non-formal education and financial provisions for the families. Any attempt by the Govt toward eradicating child labour in these talukas has been limited to establishing residential schools and hostels for working children (100 children per district), raiding filature units, conducting meetings with the employers etc. However, none of this has fulfilled the objective of reducing the number of working children in the sericulture sector; on the contrary, the number of children seems to be increasing with more children dropping out of school and entering the workforce every year.

....They are of the opinion that dealing with the issue of child labour would disturb the 'economy' of the industry.

The Department of Sericulture and other associated Govt bodies view their role as being limited to the technical aspects of the industry, research on the silk variety, etc. They are of the opinion that dealing with the issue of child labour in the sector would disturb the 'economy' of the industry. Prior to the intervention of the World Bank, a study conducted by the Institute for Socio-Economic Change identified the incidence of child labour in the sericulture industry as an issue that needed to be addressed and recommended that this aspect be included in the National Sericulture Project. However, subsequent intervention by either the Bank, the Swiss Development Corporation and others has been restricted to conducting studies, analyses, and reports on the issue. In reality, little has been done by them to improve the condition of the children and the families toiling in the industry.

The various approaches amongst NGOs to address the issue of child labour can be broadly classified as rehabilitative and preventive. Although most of these efforts affect only a small number of children directly, they are effective to some extent, in creating a climate that makes the employment of children difficult.

Rehabilitative efforts mostly consist of conducting non formal education classes, enrolling working children into hostels, formal schools or providing vocational training facilities for them. Many NGOs also attempt prevention through campaigns, working with parents, and organising children. Although rehabilitation and prevention can be viewed as separate approaches, some NGOs employ an integrated approach to address the complex and multi-faceted issue of eradication of child labour. But in the two talukas of Channapatna and Ramanagaram of Bangalore Rural district, there has

been no intervention even by the voluntary sector to mobilise public opinion against employing children. In the absence of quality schools and relevant education for children, sending them to work at the filature units has almost become a culture in the villages and slums in these areas.

MAYA's[3] INTERVENTION

Drawing from observations and experiences, MAYA's intervention and approach towards the eradication of child labour is based on the premise that **child labour exists not because of poverty of income but mainly because of factors such as community apathy, parental negligence, hostile school environment** etc. MAYA's role therefore is primarily to facilitate opportunities where communities are supported to bring about change through their own effort and initiative rather than as passive beneficiaries of charity. In this regard, MAYA has been addressing aspects of both rehabilitation and prevention in its goal of working toward the eradication of child labour since 1989. The organisation's multiform approach includes direct work with small children (aged 0-6 yrs), schoolgoing children and child labourers as well as working with the immediate environment of the child i.e the family, school, and community, .

The early childhood programme involves creating an environment in the area that encourages children to go to school. The local community is supported to initiate and run playschools where young children are prepared for formal schooling. To complement the stimulation and learning needs of working and schoolgoing children through games, cultural activities and other learning exercises, Child Development Centres are initiated in the areas. Resource materials for these centres are mobilised from the local community. MAYA also works with school going children, parents and the local government schools to reduce drop out rates and ensure that children receive quality education. Efforts also include direct work with child labourers to support them to explore viable alternatives such as pre-vocational education and vocational training. Over the years, MAYA's experience has shown that **communities have the inherent capacity to deal with issues faced by them and only require support to perceive such opportunities.** Experience has also shown that contrary to popular belief, poverty of income is not the primary cause of child labour. A study conducted by MAYA on the impact of wage pattern on the family and the

3 MAYA (Movement for Alternatives and Youth Awareness) is a development organisation registered as a society under the Societies' Registration Act of 1960.

child[4] indicates that poverty is not only an economic condition but also includes a culture that sometimes deprives children of their fundamental needs. A significant finding of this study is that **a child's well being is more dependent on the prioritisation of expenditure of the parents rather than on their income level.** Children of daily wage earners were found to be less likely to attend school than those of monthly wage earners despite the fact that the absolute income (per month) of the former is more than the latter.

"A child's well being is more dependent on the prioritisation of expenditure of the parents rather than on their income level."

MAYA's initiative to eradicate child labour in the sericulture sector of Bangalore Rural began in January 1998[5]. The purpose was to understand better the differences between the urban and rural setting in terms of social structure, cultural ethos, socialisation, and related factors that directly or indirectly impact the child's development. The high incidence of child labour in the sericulture industry, coupled with the complete absence of any effective intervention on the part of either the Government or the voluntary sector has also been a deciding factor in initiating this project. In the light of these conditions, MAYA initiated a research study in order to understand the factors that account for such a high incidence of child labour in the area.

Objective of the Research Study

This study is not merely an academic exercise that seeks to establish or recognise the incidence of child labour in the area. On the contrary, the study starts from the premise that the issue of child labour in the sericulture sector is a reality and MAYA is committed to addressing this issue. It highlights the need for the Government and donor agencies to recognise that the situation has become so grave that it is impossible for most people to even imagine the sector without children working. The condition calls for a concerted effort by the Government, licencing authorities, community, donor agencies and voluntary organisation to work towards the eradication of child labour.The study also seeks to caution other states in the country who view this industry as a 'success' and want to initiate it in their own state. Though sericulture has the potential to be a successful, income- generation industry, one cannot afford to ignore the plight of the people, especially the children, working in this sector and the price they are paying for the 'success' of the industry.

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4 Study on 'Wage pattern and impact on the family and child' conducted by MAYA in 1997, in its working areas in Bangalore Urban.

5 MAYA presently works in 40 villages and slums in the two talukas of Channapatna and Ramanagaram in Bangalore Rural district. (These areas have been selected on the basis of the number of child labourers and the condition of Government schools, basic amenities related to children etc).

There is a detailed description in this study of the different processes involved in the sericulture industry and the condition of the children working there(see Appendix I). The study concludes with a set of suggestions required for eradicating child labour in the sericulture industry.

METHODOLOGY [6]

Pilot Survey

A pilot survey was conducted in 20 villages and slums in the two talukas of Ramanagaram and Channapatna (Please see Appendix II for details of these areas. Through this survey, 14 areas were identified with respect to the incidence of child labour and the socio-economic conditions prevalent in the area. Finally 6 of these 14 areas were selected for an intensive study on the basis of the diverse conditions, characteristic of the particular village or slum that had contributed to the prevalence/ absence of child labour in the sericulture sector.

Size of Study

The study in the 14 areas covered a total of 5460 households, i.e. a population of 34,423 persons. The total child population surveyed was 6099, of whom the number of child labourers was 1591. The average percentage of child labourers to the total child population was found to be 20.3%. There were two areas, however, where the percentage was found to be as high as 64% and 45.5%.

Aspects of Study

Primary socio-economic data of the families in these areas was collected and analysed with regard to different indices such as monthly household income, family expenditure pattern, schooling background of children, and gender of working and school going children.

Analysis

Analysis of the data as illustrated shows that child labour is not a result of poverty of the families but one of sheer neglect and indifference on the part of the parents, community and the State. The secondary data collected also substantiates the results of the analysis and further validates the need for immediate action on the issue.

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6 This study has been conducted by MAYA in its working areas in Channapatna and Ramanagaram, with documentation support by Dr A.R.Vasavi, National Institute of Advanced Studies, Bangalore.

Sericulture in India

Though India is the second largest silk producer in the World after China, it accounts for just 5% of the global silk market, since the bulk of Indian silk thread and silk cloth are consumed domestically. Germany is the largest consumer of Indian silk. The sericulture industry is land-based as silk worm rearing involves over 700,000 farm families and is concentrated in the three Southern states of Karnataka, Tamilnadu and Andhra Pradesh. (The states of Assam and West Bengal are also involved in the industry to a certain extent).

The present market context for silk in India is one of vigorously growing internal demand for silk fabrics, with growth rates of above 10% per year. It is mostly for traditional (sari type) design and does not impose sophisticated quality requirements upon the industry. This situation is likely to continue, unless Indian sericulture is able to provide sufficient quantities of raw silk at affordable prices. The present trends represent a limitation to price increases for silk produced in India by import from other silk producing countries like China, Brazil, Korea etc., as well as by substitution with other fibres including by artificial silk. It also appears unlikely that the present demands can be met merely by expanding mulberry area in order to increase cocoon and raw silk production. Future additional output in raw silk will therefore mostly have to come from substantial productivity increases and labour productivity.

Concurrently there is an increasing demand for silk fabric among the growing Indian middle class and young urban consumers. These modern silk fabrics typically are produced by the expanding power loom weaving industry. The quality requirements imposed by this trend can only be met by bivoltine raw silk, although it is possible to produce high quality multi-bivoltine silk for conventional powerlooms. The bulk of today's world export demand is almost exclusively based on high graded quality bivoltine raw silk. If Indian sericulture is unable to generate a substantial production

of bivoltine raw silk, these important market segments will continue to be lost to outside competitors.

Hence, three main market segments offer great opportunity to India's silk industry: (i) the broadening domestic traditional demand multi bivoltine based, (ii) the domestic demand for non-traditional silk fabrics, based atleast partly on non-graded bivoltine raw silk, (iii) the vast and expanding international market for raw silk, silk fabrics and ready-mades, based on graded bivoltine silk, an export potential as yet relatively little exploited by India.

In one of the efforts of the Indian Government to promote the sericulture industry, the National Sericulture Project (NSP) was initiated as a national project operational in 17 States in India. The project funded by the Central and State Governments together with an input of foreign funds, has a credit portion from the World Bank and a grant contribution from Swiss Development Corporation. The project was started in 1989 for a period of six years with the objectives oriented toward increased production, improved productivity, quality and equity. One of the critical elements taken into consideration by the project was the dominant involvement of the Central and State Government organisations in the promotion of sericulture.

Sericulture in Karnataka

Karnataka is the premier mulberry silk producing state in India. Rearing of silkworms and commercial production of cocoons and silk in Karnataka date back to the 18th century, when sericulture was patronised by the rulers of the erstwhile Mysore State. Sericulture is practised both under rain-fed and irrigated conditions.

History of sericulture in the region[7]*:*

Pre Independence Period:

Sericulture is not new to this region – its beginning can be traced back to Tipu Sultan, the ruler of erstwhile Mysore State, who organised a silkworm rearing unit in the southern parts of his region. Channapatna is believed to be one such centre. Emissaries were sent to different parts of the world and finally procured a yellow multivoltine race, suited to the climatic conditions of the region, which is surviving till today. Sericulture did show progress between 1866-1875. There was much demand for Mysore silk in the world market and it fetched a comparatively higher price. In 1896, a new silk farm was started by JRD Tata in Bangalore, which produced healthy eggs out of its own rearings and offered training to sericulturists.

The Department of Sericulture was opened in 1913-14 and a Silk Farm established in Channapatna in 1914. By 1917, high yielding varieties, modern methods of grainage, silk farm works, and hybridisation were in operation due to the services of the Japanese expert Yonemura. He also gave the idea of establishing an isolated seed area for propagating the pure Mysore race and protecting the exotic races from European countries. Efforts were also made to introduce the subject as a two-year course under the State Education Department. The Second World War gave an impetus to the silk industry. All the cocoons produced in the state were taken to the Mysore Silk Filatures Ltd. and all the filatures were turned to war production (to produce parachutes). This increased production and the area under mulberry also increased. The technique of filature reeling was also improved. Cocoon harvesting also gained momentum.

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7 Karnataka State Gazetteer: Bangalore Rural district, 1990.

In 1921, the Government Silk Filature was established at Mysore to help the sericulturists in reeling with cottage basins. Twelve Italian basins were also imported during this period which worked continuously for 17 years. Efforts were also made to assemble these machines indigenously. In 1925-27, the domestic basin was evolved. This was a simple silk reeling device, inexpensive but adequately serving the needs of the small-scale reelers. While the Government was paying attention to the developed machines, the country 'charaka' was improving its production. In 1929, there was a crisis in the waste silk trade abroad. Large quantities of silk waste had accumulated in the State. The reelers had to face many problems- the reeling rate had to be reduced and even the wages had to be curtailed.

Post war Period :

The post-war period saw a slump in filature production. The large production at a high cost (till then paid for by the War Department) could not be sold in the open market. The filatures ran into financial difficulties. The Government took over all the filatures and continued running them even at a loss as it provided work for a large number of persons and helped establish the price of the cocoons.The slump in the post war period made the Central and State Governments think of means by which the industry could be developed as it provided work for a large number of farmers and landless labourers. At Delhi, the Government of India constituted a Silk Directorate and a Silk Panel in 1945. The report of the Panel stressed the need for an all India body to work up Five-Year Plans and provide the finances for this.

The All India body turned out to be the Central Silk Board. The Central Silk Board Act, 1948 was passed and the Board came into being on 01 April 1949.

Growth under Plans

The following data show that sericulture is a much-favoured industry in the State and has been given adequate emphasis in the Plans:

- There was an increase in mulberry production and non-mulberry raw silk during the First Plan. Though the production technique and cost of production were not significant, various developmental schemes were designed to consolidate the industry.

- The Second Plan was significant from the point of view of development of seed organisation and improvement of silk reeling. Improved cottage basins were introduced on a large scale.
- During the Third Plan, chawki rearing centres were established and cocoon markets started in the cross breed area.
- The Fourth Plan saw an increase in the number of families being covered by the sector, larger area under mulberry cultivation, increase in the number of charakas and cottage basins, and in raw silk production.
- The Fifth Plan witnessed a growth rate of 7.5% in sericulture and several special schemes were also taken up.
- The Sixth Plan had a larger budget allocation to the sector. During this period, the industry suffered due to the attack of a fly called 'Uzi' which spread from Hoskote taluk to other rearing centres in the district and other parts of the State.
- The Seventh Plan saw an increase in Karnataka's percentage share in India's total raw silk production. At the end of 1988, there were about 55,465 farmers cultivating mulberry in 41,127 acres of land in 2032 villages.
- Special emphasis was given to the development of sericulture in the Eighth Plan on account of its economic importance and employment generation. In 1992-93, the area under mulberry cultivation was 1.58 lakh hectares and nearly 6.65 lakh families were employed in the industry.
- In the Ninth Plan period, the number of chawki rearing centres in the district has increased to 219 and the cocoon production in 1995-96 was 16,051 tonnes.

Today Karnataka produces 9000 MT of mulberry silk out of a total of 14000 MT produced in the country, thus contributing to nearly 70% of the country's total mulberry silk production. It has the largest area under

mulberry cultivation in the country. As much as 1.4 lakh hectares are under mulberry cultivation in this State alone. Unlike the other States, the Department of Sericulture here has fully developed infrastructural facilities required to meet the demand of silkworm eggs not only of the State but also of some districts of the neighbouring states, through organised seed cocoon growing areas. The State is producing nearly 20 crores of silkworm eggs enabling the farmers to produce about 48,000 MT of cocoons annually.

Despite such heavy investment... little or no attention has been paid to the growing incidence of child labour in the sericulture industry in the State.

Sericulture which was earlier confined to a few districts has now spread to other areas, because of the introduction of new technologies, new varieties of mulberry and new silkworm races which have made sericulture more profitable than other crops. The Karnataka Sericulture Project was functional from 1980 to 88 and aimed at establishment of project infrastructure and services. Its performance was said to be satisfactory and it is said to have accelerated the growth of Karnataka's raw silk production from 2900 tons in 1980-1 to 4700 tons in 1986-87. Today, there are nearly 8 lakh families employed in the sericulture industry in the State. Despite such heavy investment to develop the infrastructure and other technological aspects of the industry, little or no attention has been paid to the growing incidence of child labour in the sericulture industry in the State.

There are an estimated 36 lakh child labourers in the state. According to the 1991 census, the participation rate of children aged 5-14 as full-time workers is 8.2 for boys and 6.5 for girls. It is 0.7 and 2.2 as marginal workers. The ratio of child workers to adult workers in the industry is 2:1 for reeling and twisting. In weaving, the employment of children is limited.

The Govt report 'Human Development in Karnataka-1999', cites the findings of a study by the Human Rights Watch[8] to state that 80% of the individuals involved in reeling silk in Karnataka are between the ages of 10-15 years.

Despite this observation, however, there has been no definite action by the Govt to prevent the employment of children in the industry.

The main silk regions in the State are the four talukas of Channapatna, Ramanagaram, Kanakapura and Magadi in Bangalore Rural district (See appendix III for overview of Bangalore Rural district), and Kollegal taluka of Mysore district.

8 The Small Hands of Slavery: Bonded Child Labour in Karnataka, Human Rights Watch

Sericulture in Bangalore Rural District

Sericulture is a labour-intensive agro-based industry. It includes growing of mulberry plants, rearing of silkworms, production of cocoons, and reeling of silk-yarn. While cultivation of mulberry and rearing of silkworms are agricultural in character, reeling of silk, twisting, and weaving are distinctly industrial in nature. The reeling of cocoons is done in cottage establishments or in large factories called filatures. Sericulture is a means of livelihood for over 51,700 families in Bangalore Rural district.

CHANNAPATNA

Channapatna situated on the State highway, approximately 62 km from Bangalore, forms one of the eight talukas of Bangalore Rural district. In 1873, it was a sub-taluk under Closepet (Ramanagaram) and only since 1892, it has been recorded as a full-fledged taluka. Today it is a part of Division I (the sericulture belt) of Bangalore Rural district, with a total of 145 villages.

Population:

According to the 1991 census, Channapatna taluka has a total area of 543.4 hectares and a population of 239,203. The child population (5-14 years) of the taluka is 46,200. The population density of the taluka is 400 persons per sq.km. The rural population (183,994) accounts for nearly 77% of the total population while the urban population of 50,725 for only 23%. Of the urban population, 45% are slum dwellers. There are 22 slums in Channapatna. The total working population of the taluka is 103,400. 35% of the total population are main workers. Of this, 8% are agricultural labourers, 16.1% cultivators, and 11% constitute 'other workers'. 4.7% of the total population are marginal workers while almost 60% are non-workers. Hindus and Muslims constitute a notable percentage of the population in the taluka. Scheduled Castes and Tribes also form a sizeable part of the population (16.4%).

Education and Literacy:

The literacy rate is 43% (an increase from 30% in 1981). There are a total of 245 Government primary schools in the taluka and the number of children enrolled is 30,702. There are 247 anganwadi centres in the taluka. There are 31 High schools in the taluka with 9038 children enrolled.

Economics:

There is a dam at Kanwa, 6 km from Channapatna town, after the construction of which the agricultural production has increased rapidly. The main crops grown here are paddy, ragi, mulberry, groundnut seeds, etc. The place is also famous for its wooden toys' industry. There is an agricultural market committee established due to the increase in rice and silk production. The town has trade links with 45 surrounding villages.

RAMANAGARAM

Ramanagaram situated (48 km from Bangalore) in a valley surrounded by rocky hillocks has been the sub-divisional headquarters from 1884. It became the taluka headquarters in 1928 and the place was named Ramanagaram in 1949. It is the largest cocoon marketing centre in Asia. Ramanagaram has a total of 135 villages within its taluka limits.

The total child population in the taluka is 47,411 of which 13,000 are child labourers.

Population:

According to the 1991 census, the total number of households in the taluka is 39,057 with a population of 205,956. Of this the rural population is 75.5% (155,519) and the urban population is 24.5% (50,437). The total child population in the taluka is 47,411. Of the total working population of 87,600, 13,000 are child labourers. 52% of the total population are cultivators, 16.1% are agricultural labourers, and 24.9% are 'other workers'. 5.9% are marginal workers, of whom 95% are women. Almost 60% of the total population are non-workers.

Education and Literacy:

The literacy rate of the population is 49.21%, according to the 1991 census. The total number of Government primary schools in the taluka are 256 with the total children

enrolled as 33,899. There are 7625 children enrolled in the 30 High schools in the taluka. There are 157 anganwadi centres for the (0-6years) child population of 33,508 (1991 census) in the taluka.

Sericulture in Ramanagaram

Majority of the working population in Ramanagaram taluka are employed in different stages of the sericulture process. Since Ramanagaram is the largest cocoon market in Asia, the average daily cocoon arrivals at the Ramanagaram cocoon market vary between 15-50 tonnes. Most of the reelers do this job as this is their traditional occupation. Muslims constitute about 90% of the reeling entrepreneurs. Hindus are new entrants to the field, over the last 20 years. While most of the reelers have been living there for generations, more than 50% of the workforce are migrants from Kollegal, Yelandur and Chamrajnagar who have come into town in search of work during the last two decades of expansion in the sericulture sector.

Description of issues presently faced by the people in the two talukas

There are approximately 630,000 people living in the 280 villages of Channapatna and Ramanagaram talukas in Bangalore Rural district. The urban influence of the slums on the villages is growing, creating a need for working simultaneously in slums and villages. People living in the working area belong mostly to SC/ST and minority community. The region is extremely sensitive to caste and religion problems and prone to communal tension.

There is scarcity of drinking water supply in the areas and there is a lack of proper sanitation and sewage. Basic amenities of toilets and electricity are inadequate. The educational institutions in the villages and slums do not function properly and face problems of inadequate teaching staff, lack of water and toilets, which results in low learning levels of children and drop-outs. Other institutions for children like anganwadis and balwadis also function poorly. The women and youth in the area are not adequately aware of the different Government schemes and programmes for poverty alleviation, slum / village development and income generation. Existing village and slum based institutions / facilities too are inaccessible and apathetic to the needs of the people.

The area receives poor rainfall and is sometimes drought prone. This proves a major problem for the area, as people cannot depend on agriculture as a means of livelihood. The food-grain production has been declining over the past few years. The average

size of land holdings has also been declining over the past few years, forcing people to move from agriculture to other sectors of work. Sericulture is one such sector that has grown manifold over the past few years. However even in this sector, in terms of crop development, little has been done to train and provide adequate support services to farmers in mulberry cultivation.

Some statistics regarding sericulture in Channapatna and Ramanagaram talukas:

	Ramanagaram	Channapatna
Reeling:		
Total no. of reelers	1923	433
Total no. of charakas	1065	284
No. of workers (male)	743	503
No. of workers (female)	867	832
Total no. of filature units[9]	854	149
No. of workers (male)	3280	628
No. of workers (female)	4392	711
Total no. of multi-end reeling machines	34	-
No. of workers (male)	18	-
No. of workers (female)	22	-
Twisting :		
Total no. of units	163	37
Total no. of machines	628	114
No. of workers (male)	822	386
No. of workers (female)	722	66
Weaving :		
Total no. of units	8	8
Total no. of machines	48	46
No. of workers	58	67

9 Each filature unit has between 4 and 10 basins, i.e. an average of 8 basins.

Child Labour in the Sericulture Industry[10]

Children work in the sericulture industry mostly on compulsion exerted by the parents who have taken an advance from the employers (reelers), not out of economic constraints to eke out a living but for immediate expenditure. Of the total number of families studied, nearly 80 % had taken loans for marriages, festivals, etc. The children are made to work as bonded labourers till the advance money is adjusted against the wages of the children or till it is paid back. Children work as turners and helpers, pupae pickers, and cocoon cooks in the filature units. The preference for children to work in the sericulture industry is because of the narrow space and the low height (they have to be shorter than the height of the bobbin). They stand cornered against the wall, and trapped under the machinery, as if in narrow cages, waiting for a ladleful of cocoons to be put aside by the reeler every now and then. A lot of concentration is necessary to avoid wastage and minor lapses are enough to invite reprimand.

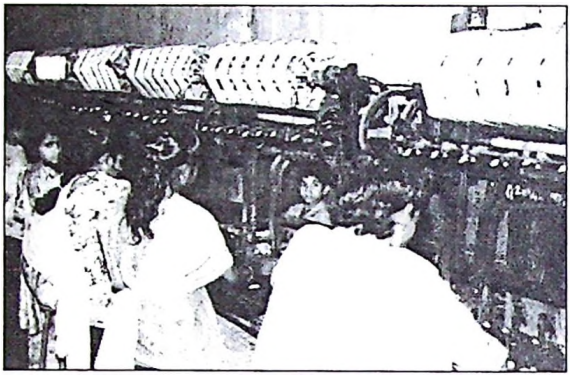
Child labour in the country is prohibited and regulated in various processes /sectors by the Child Labour (Prohibition and Regulation) Act, 1986. The Act classifies various sectors and processes as 'hazardous' or 'non-hazardous' based only on the physical-working environment.. However such a perspective fails to recognise that any process involving child labour is detrimental to the child, since it hinders the overall development and health of the child; health in this context refers to the physical, emotional and social well being of the child (as defined by the WHO).

In this study conducted by MAYA, besides a detailed survey of particular villages and slums in the two talukas, the children's health conditions and several critical factors influencing their educational opportunities were observed, analysed and documented. These areas were identified for a detailed study, due to the high incidence of child labour and the specific conditions existing in each of the areas.

10 Also refer to 'Elegalondluge eleyaru' –a study done by K S Saroja on the condition of children working in twisting units in Magadi.

Details of The Surveyed Areas[11]

Honganur



This village, 6 km from Channapatna town on the Sathnur Road is spread over an area of about 612 acres. It has a total of 1125 households with a population of 6820. The population has both Hindus and Muslims. The Hindus largely belong to the SC, Gowda, and Urs communities. The main occupation of the people there is agriculture, filature, trading and goldsmith. Honganur is the Gram Panchayat centre for the surrounding villages. There are three Government schools-1 Urdu Higher Primary School and 2 Kannada medium (1 Higher Primary and 1 High school) and four anganwadis for children. There is also a Government 'shishuvihara' for SC/ST children and a Pre- Primary Centre for children below five years. The village also has a residential Ashram school (1st-4th standard) for SC/ST children, under a scheme from the State Government. There is a private Higher Primary school in the village. Honganur also has a private Pre-University college. Honganur has a Government Lacquerware training centre to impart 1-year training to 25 persons. There is also a Government tailoring centre under the TRYSEM scheme. Being an important village, there is a Primary Health Centre as well in Honganur. Other facilities like a Fair Price Shop, post office, milk dairy etc also exist in the village. The members of the Masjid Committee in Honganur have formed a Social Welfare Association, besides which there is an Ambedkar Sangha in the village. Despite these facilities and being the Gram Panchayat centre, of a total child population of 870 in Honganur, 200 are child labourers. These children are employed in filature units mainly, though some also work in garages, shops, housework, assisting goldsmiths, etc.

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[11] For statistics regarding child population and percentage of child labourers in the studied areas, see appendix 1

Kariappanadoddi

Kariappanadoddi is a village in Channapatna taluka, 2km from Channapatna town. It is basically a wooden toy industry-based village. The village has a total of 226 households inhabited by a population of 1188. Though the entire population belong to the same caste of Bestha, there is a distinction made between the families that are economically better-off and those who are not. The main occupations of the village are mainly agriculture, toy-making, and collecting firewood. Of the total child labour population of 92 in the village, only 10 work in the sericulture sector. The remaining are engaged in cattle grazing, at home, in brick-kilns, in the agriculture sector and a few children work in the toy-making units. Kariappanadoddi has a Government primary school from 1st-7th standard and 1 anganwadi for children for children below the age of six.

Molledodi

Of a total child population almost 27% do not attend school

Molledodi is a village in Channapatna taluka with 360 households inhabited by a total population of 1700. The village population belong to a single caste of Bestha, despite which there are differences among those who are relatively better off than the others. A large percentage of the population live in thatched huts. The main occupations here are agriculture, sericulture and business. Of the total child population of 408, 110 are child labourers i.e., almost 27% of the total child population do not attend school. These children work mainly in the sericulture sector, at filature units in Channapatna town and some go to Honganur also to work. The village is devoid of any developmental activity either on the part of the local Government or by the people themselves. There is no association of women or youth in the area, unlike what is commonly found in most villages. The village faces acute water scarcity , especially during summer.The area also has high incidence of alcoholism. There is a Government Lower Primary school in Molledodi until 5th standard. There are also two Government-run anganwadis for children below the age of six.

Adi Jambava Colony

Adi Jambava Colony is a slum locality in Channapatna town, with a total of 125 households and inhabited by a population of 550. The entire population belongs to Adi Jambava (mentioned in the Scheduled Castes list). Children from this area work mainly in the sericulture industry. Adults work as daily wage labourers in the fields or are engaged in hawking. Some of the women work as bottle cleaners in distilleries situated in Bangalore. There is a Government school upto Standard 7 which is adjacent

to the colony. Though the school has adequate infrastructure, the enrolment in this school is poor. The area does not have adequate basic amenities. There are no organised groups or sanghas in the area that would undertake any developmental activities.Though the income levels of people is not very poor, compared to other slums in Channapatna, the parents prefer to send their children to work in the silk units. Even though it is a homogenous community, there are various informal groups who work against the common good of the community. A women's sangha has recently been formed to address children's issues and look into the developmental needs of the area.

Badi Gali and Choti Gali

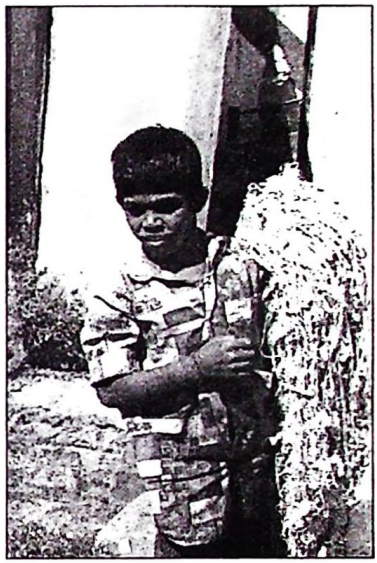
This is a slum area located in the centre of Channapatna town. It is unique in that it is a slum locality surrounded by a high income residential area. The number of child labourers working in the sericulture industry is fairly large. The total population of the area is 1300 with the number of households numbering 250. The area is so named because it is inhabited by Muslims belonging to two different belief systems. The area has a number of filature units where children from neighbouring slums and villages close to Channapatna town come to work. The total child population of the area is 410, of whom the child labourers number 94, i.e. almost 23% of the total child population.

Baalgere

Baalgere is a slum locality, situated close to the main market area in Ramanagaram town with a total population of 3300. It is one of the bigger slums in Ramanagaram and is inhabited by a mixed population of Scheduled Castes, Marathis, Tamil migrants, Muslims and Thigala. The area has one Government Higher Primary school (till 7th) and two anganwadis for children below the age of six. There is a Government run pre primary centre also in the area. Among other facilities, Baalgere has a community hall. There are two youth sanghas(groups)-the Dalitha Sangharsha Samithi and the Thigalaru Sangha in the area. People in the area are mostly occupied in the silk reeling units in and around the area. Some others work in the shops or are daily wage earners as well. Children from this area go to the reeling units in the area or to units in the surrounding slums to work. Though there is no immediate problem of water and drainage, the area lacks proper toilet facilities. There is no clear demarcation but

the houses in the area are of two kinds-those of the slightly better off families which are at the entrance to the slum and those of the SC community and Tamil migrants which form the rear part of the slum.

Yarab Nagar



Yarab Nagar is one of the biggest slums in Ramanagaram town, situated close to the railway station. It has a total population of about 5000 with a child population of about 1500. It is a Muslim locality that has grown manifold in area and population in the recent years due to migration of Muslims from other neighbouring villages after the 1991 riots. Yarab Nagar forms part of the chain of slums in the Kothipura-Ammaalikere area of Ramanagaram. This, together with the surrounding slums, houses the maximum number of filature units in the town limits and also employs the highest number of children. In Yarab Nagar alone , there are over 500 child labourers who work in the filature units locally / in the neighbouring slums. Of the total child population of 1100, almost 50% are child labourers who work in the sericulture industry alone. The area thrives on a workforce of adults, youth and children alike, in the sericulture sector. A handful of individuals of the total population also work in garages, tailor shops, butcheries, and bakeries. Some of the women and young girls in Yarab Nagar are engaged in beedi-rolling within their homes. There are two Government lower primary schools (from 1st-4th and from 1st-2nd). and a Government-run anganwadi in the area. There is also a private crèche in the slum run by a local person. The problem of water and drainage in the area is not as critical as that of toilet facilities. There is absolutely no proper facility for toilets in Yarab Nagar. The children, young girls and women especially are the worst affected by this condition. The schools also do not have adequate toilet facility for the children. With regard to water, while some parts of the slum get water in an adequate quantity, others who are at a height do not. The water that is available is also very hard and affects the health of the people, if not boiled/ treated properly.

The correlation of factors influencing the educational opportunities of children in the studied areas are summarised below:

i Monthly Household Income Level and children's Educational Opportunities

A correlation between the monthly household income of the families to the condition of the child/children (school going or in child labour) indicated that there is no direct link between income and education opportunity. **In the studied areas, almost 25 % of the households with income below Rs 1000 per month were sending children to school. In contrast, households with income above Rs 3000 per month sent their children to work**

Areas	Family Income Level							
	< Rs 1000		Rs 1000-2000		Rs 2000-3000		Rs >3000	
	Child labourers	School goers	Child labourers	School goers	Child labourers	School goers	Child labourers	School goers
Honganur	7.20%	24.70%	9.50%	36.00%	3.50%	12.00%	2.80%	4.30%
Karlappandodi	8.50%	10.70%	8.90%	27.70%	9.40%	17.40%	4.50%	2.90%
Molledodi	3.30%	11.60%	15.30%	40.00%	7.60%	15.30%	2.80%	3.20%
Adi Jambava Colony	7.80%	26.50%	4.00%	33.00%	2.20%	10.50%	3.50%	12.50%
Badi Gali	3.10%	8.50%	4.40%	15.60%	4.90%	9.00%	2.00%	4.40%
Baalgeri	3.40%	50.30%	10.10%	25.20%	3.00%	5.00%	1.00%	2.00%

As illustrated, almost half the child population (50.3 %) at Baalgeri attends school despite coming from families that earn a monthly income below Rs 1000/-. This is primarily due to the presence of a Government higher primary school in the vicinity of the slum, where the environment in terms of physical infrastructure, basic facilities and teaching is supportive of children's learning. In contrast, the presence of a Govt school in Kariappandodi has not ensured similar high attendance to school from families of the same income level, as the school is ill-equipped and not supportive of children's learning needs.

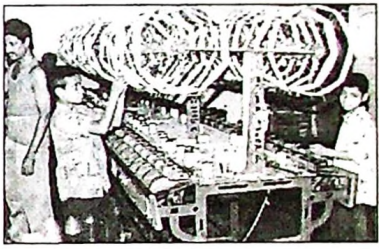
This clearly indicates that **despite low-income levels, parents are willing to send their children to school, provided they find the schools meeting the children's educational needs.** Secondly, the mere physical presence of a school does not suffice

Children involved in various processes of the sericulture industry

[1] Transporting cocoons from the market to the filature units.

[2] Cooking the cocoons to kill the silkworms by dipping their hands directly in boiling water and pulsating the cocoons - one of the most unhygienic processes.

[3] Reeling at the machines designed at the height of children.



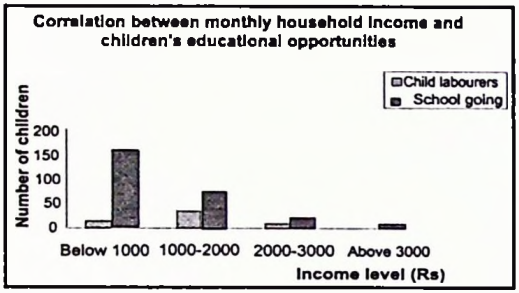
[4] Twisting the silk threads into strong multi-ply threads.

[5] Sorting out the silk threads.

[6] Disposing the dead worms and other waste.

to ensure that children attend school. The school must provide an educational environment that meets the learning needs of the children and the local community.

In further substantiation of this, it was found that in Kariappandodi 4.5 % of the families sent their children to work, despite earning a monthly income of over Rs 3000/-. These families though in an economically better position, preferred to make



their children work in their own toy units rather than send them to the local Govt school, where they did not see the use of the education received. In Molledodi also, 2.8 % of the families did not send their children to school inspite of a monthly income above Rs 3000/-; however the main reason here was apathy and neglect of the parents and community, rather than an economic one.

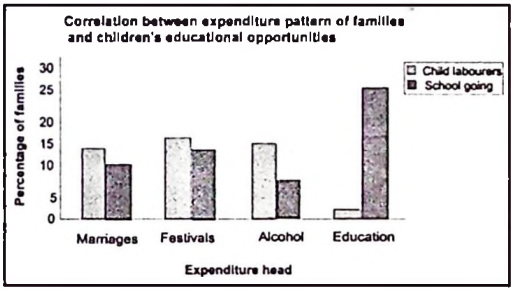
These observations dispel the myth of poverty of income being the primary cause of child labour. **Factors such as the condition of local Govt schools, parental and community participation and support were found to be more crucial in determining the children's educational opportunities.**

ii Expenditure Pattern of Families and Children's Educational Opportunities

On studying the relationship between the expenditure pattern of the families and the condition of children, it was found that in a majority of families of child labourers, the expenditure on marriages, festivals and alcohol was much higher vis-a vis the families of school going children. This is a clear indication that rather than the lack of income, it is the lack of prioritisation of expenditure that determines the children's educational opportunities.

Areas	Marriages		Festivals		Alcohol		Education	
	Child labourers	School goers	Child labourers	School goers	Child labourers	School goers	Child labourers	School goers
Honganur	16.70%	24.70%	9.50%	36.00%	3.50%	12.00%	2.80%	4.30%
Kariappandodi	19.00%	11.90%	11.90%	8.70%	15.90%	4.80%	3.90%	23.80%
Molledodi	7.40%	4.40%	20.60%	17.70%	26.50%	7.40%	2.70%	13.30%
Adi Jambava Colony	11.80%	7.60%	9.90%	7.50%	13.90%	9.60%	1.00%	38.70%
Badi Gali	10.00%	8.90%	14.20%	16.60%	6.60%	6.60%	0.00%	37.00%
Baalgeri	15.10%	12.80%	19.30%	12.40%	7.40%	4.60%	1.00%	27.40%

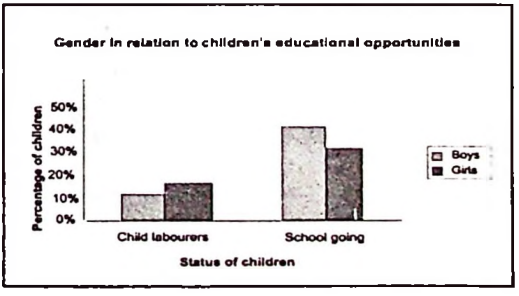
In Molledodi it was observed that the expenditure on alcohol among families of child labourers was as high as 26.5 %, when compared to 7.4 % in families of school going children. Likewise, the high expenditure on festivals among families of working children in Baalgeri was seen to be responsible for a large number of children going



to work. Similar observations in the other areas also revealed that the lack of prioritisation of expenditure strongly influences the condition of children, determining whether they attend school or go to work. A study of the expenditure on education showed that only less than 2 % of the families of child labourers spent money on education as compared to 25.9 % of the families of school going children.

iii Gender of Children in Relation to the Child Population in the Area

In all the studied areas, it was observed that the percentage of girl children not attending school was higher than that of boys. It was found that the percentage of girls attending work was 15.8 % as compared to 12.6 % of boys.



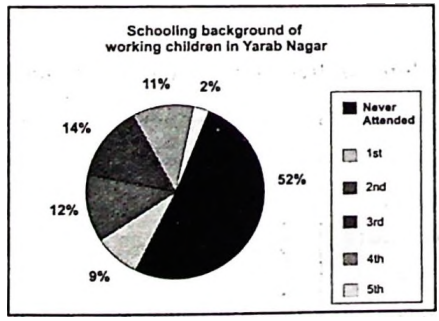
Area	Child Labourers		School Goers	
	Boys	Girls	Boys	Girls
Honganur	19.20%	23.90%	32.00%	25.00%
Kariappandodi	13.70%	42.40%	11.60%	32.20%
Molledodi	14.00%	45.30%	13.20%	27.70%
Adi Jambava Colony	7.40%	39.20%	10.00%	43.40%
Badi Gali	10.70%	40.10%	16.30%	32.90%
Baalgeri	13.80%	39.60%	9.50%	37.20%

...though these girls are not directly working in any formal sector, they are child labourers

In Honganur and Badi Gali, the percentage of girls not attending school was much higher (32% and 16.3 % respectively) than that of boys (19.2% and 10.7 % respectively). An important feature to be noted is that, though these girls are not directly working in any formal sector, they are child labourers. They are forced to stay away from school to look after younger siblings, maintain the house and /or be engaged in rolling incense sticks, beedis, etc at home. Consequently, these girl children lose out on educational opportunities to a much greater extent than the boys do.

iv Schooling background of the working children in the studied areas

In all the areas studied, there was a high percentage of working children who had never been to school at all, thereby clearly indicating that the availability of employment serves as an incentive for parents to send their children to work.



	Never Attended School	2nd	3rd	4th	5th	6th	7th	8th
Honganur	23.60%	6.60%	7.70%	16.50%	17.60%	6.60%	12.60%	4.40%
Kariappandodi	29.10%	7.60%	8.90%	14.00%	6.30%	5.10%	15.20%	5.10%
Molledodi	45.00%	8.00%	5.00%	5.00%	4.00%	19.00%	11.00%	3.00%
Adi Jambava Colony	28.60%	37.10%	17.10%	2.80%	5.70%	2.80%	5.70%	
Badi Gali	15.00%	17.50%	8.80%	3.30%	30.00%	15.60%	3.30%	
Baalgeri	16.90%	13.60%	20.30%	13.60%	10.20%	10.20%	25.40%	6.80%
Yarab Nagar	51.80%	8.70%	11.90%	13.50%	10.30%	1.60%		

In Molledodi, 45% of the working children had never attended school, largely because this village does not have a culture of sending children to school and the school that exists, has been established only recently. Proximity to Honganur, one of the few villages where silk units are based, is also a significant reason for the large percentage of children not attending school in Molledodi. Almost half the number of working children (51.8%) in Yarab Nagar have never been to school at all. The reason for this is the mushrooming silk filature units, coupled with the lack of any intervention by the authorities. Consequently, sending children to work at the filature units has become almost a custom in the area, for the past several decades.

In Baalgeri, the high dropout rate seen in Std 7 can be explained by the fact that the slum has only a Govt Higher Primary School (upto 7th std) and the children have to go a long distance to attend the Govt High School (the only one in Ramanagaram). This is true, particularly for girl children in the area.

The correlation studied between these different factors and the **educational opportunities of children in the areas clearly indicates that child labour is primarily caused by factors such as ineffective functioning of Govt schools, community apathy, parental neglect, and the lack of prioritisation of expenditure rather than poverty of income.** Child labour enhances the possibility of retaining a family in poverty. Children who work during their childhood in the silk units are devoid of any skills or education on reaching adulthood; thereby leaving them unemployed, economically disadvantaged and ill-equipped to earn a livelihood.

Reflections of Adolescents Previously Employed in the Silk Filature Units

As a part of the research study, we also spoke to a group of adolescents who had spent their entire childhood working at the silk units. On the one hand, these youth were now no longer required to work at the filature units, and on the other, they were ill equipped to take up any skilled work. Consequently, they were forced to work in the informal, unorganised sector as coolies in the cocoon market, as daily wage labourers, mechanics, etc. Almost all the youth had been sent to work by their parents so as to repay loans taken for marriages, festivals, and other immediate expenditure. These loans were to be repaid by deduction from their wages, but this did not usually happen since the wages they received was minimal. Further, their work was dependent on the availability of cocoons. In the absence of adequate or good quality cocoons, children did not have any work. During this time, the parents once again took petty loans from the employers, thereby increasing the amount of money to be repaid by the children. The youth also felt that besides losing out on education in their childhood, they had spent the most productive years of their lives doing work that did not teach them any skill. This proved a disadvantage for their future in that without even a basic education they did not feel confident to learn a new skill /vocation at this age and earn a stable livelihood.

Child labour enhances the possibility of retaining a family in poverty.

Health Conditions of Children in the Sericulture Industry in the Studied Areas

Children are employed in almost all processes of the sericulture industry making it almost a child–based economy. They work in mulberry cultivation, cocoon rearing, reeling, winding, doubling, twisting, and re-reeling, all of which adversely affect the health of the child. They are required to work in filature units that are cramped, damp, dark, poorly ventilated, and have loud, deafening music playing in the background. The handling of dead worms with bare hands, and the unbearable stench is also a cause for spreading infection and illness. Standing for 12-16 hours a day with hardly any break, concentrating on reeling the fine threads, leads to other health disorders. Vapours from the boiling cocoons and the diesel fumes from the machines also contribute to the poor condition in the units. These conditions have been found responsible for retardation of the child's normal growth and development. Though there have been other studies conducted on the health aspects of this sector, practically nothing has been done to ameliorate the working environment in the units as a result of the studies. There is therefore an urgent need for health professionals to come together and work out possible solutions in this regard.

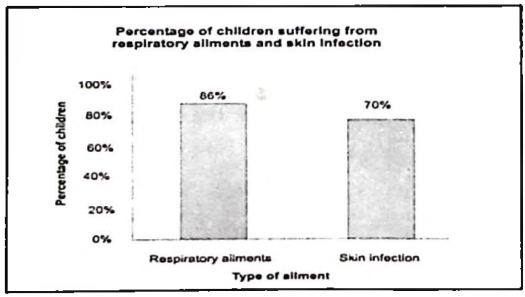
The following is a report of these conditions on the health of children working in the sericulture industry, in Channapatna and Ramanagaram talukas of Bangalore Rural district. To represent the existing situation in the talukas, a detailed health survey and

- a medical check-up was conducted for a sample size of 200 children between the ages of 6-14 years in the studied areas.

Respiratory Diseases

This is one of the most commonly observed ailments among children working in the silk units. Inhalation of vapours arising from cocoons undergoing steaming, cooking and reeling invariably produces breathing problems, asthma and other bronchial ailments among the children. During the process of cooking, the silkworms emit a protein called sericin in the form of foul-smelling vapours that pervade not only the silk units but also the entire region surrounding the units. These protein vapours have been found to be the primary cause for chronic bronchitis, asthma and other related disorders among the children that are difficult to treat. In many areas, sawdust (used as fuel for cooking the worms) was found in ample quantities in and around the units, which also causes chronic irritation of the bronchioles leading to asthma. Difficulty in breathing is also caused by other allergens present in the silk filament and poor ventilation in the working environment. The children work in highly damp and dirty conditions of this process, throughout the day. The units are cramped, dark, wet and poorly ventilated and sometimes have small generators running inside the rooms that generate carbon monoxide and other noxious fumes. Most of the machines are run on diesel, which also acts as an irritant during working. The smoke generated by the cocoons being cooked and also by the firewood used causes difficulty in breathing and leads to related ailments.

In the sample studied, 86% of the children were found to be suffering from respiratory ailments..



Scabies and Other Skin Infections

The first step in reeling is where the cocoons are boiled in water to kill the worms and to loosen the sericin, a natural substance that holds the filaments together. The child dips her/his hands into the scalding water and palpates the cocoons, judging by touch

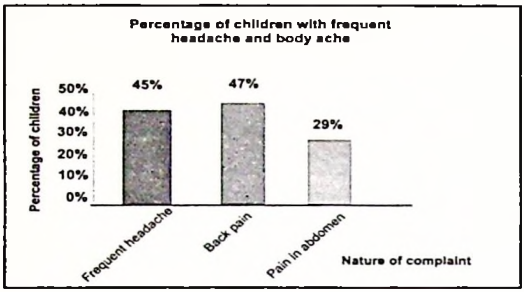
whether the fine threads of silk have loosened enough to be wound. This causes blisters and open wounds/injuries, which leads to secondary infection. The cocoons are transported to the reeling units in 'ganis' (each gani measures 25-30 kg). After every half gani of cocoons is reeled, the children have to dip their hands in the reeling basin to remove the pupae from the basement of the water. At the end of the day, the bottom plugs of the reeling basins are opened up to flush out the left over pupae with the dirty water. The children who work as pupae pickers have to bend down under the basin and clean up the place. They also have to clean up the entire premises before the day is over. As a result of constant immersion in scalding water, with no protection for their hands or feet, the skin of the children becomes raw, blistered, resulting in peeling of the skin and leading to severe infection of their hands and feet. This also causes the skin to roughen up. Children complain of difficulty while eating spicy food, touching hot stuff and difficulty in handling things while they have blisters in their hands. As they grow older, most of the children are not able to do complex and intricate work using their hands. Working in damp conditions also causes the soles of their feet to peel off leaving them unable to go out to play. *78% of the children studied were found to be suffering from skin infection as described above.*

Injuries

The raw silk is processed in winding units that employ children aged 6-9 years to wind the silk into strands, which has the hazard of cutting the already soaked and damp hands and causing injury that does not heal in those conditions. The children also suffer occasional injuries-mainly cuts-from the machines, particularly to their hands and fingers. Often this kind of injuries forces the children to absent themselves from work which then increases their "period of bondedness". Non-treatment of ulcers and exposure to unhealthy environment leads to secondary infection. The slippery floors and poor draining conditions in the units are also responsible for injuries caused to children.

Other Commonly Observed Health Disorders

Children complain of severe headache and fever during all seasons. They spend almost their entire waking period in an atmosphere with a strong stench, caused by the killing of the worms, and poor ventilation. Concentration on the thread to avoid breaking coupled with the smell of diesel, the loud noise of the machines and inhalation of the noxious fumes leads to secondary infection of common cold and bronchitis. Since children are exposed to work in such conditions on an everyday basis, it results in



stunted physical growth and leads to overall poor development of the child. In the filature units, children are forced to work as cocoon cooks. They put the stifled cocoons into the boiling water in the cooking basin, remove the floss, collect the ends of the threads and supply them in ladles on to reeling basins. In that process, they have to cover a distance of 15-20 feet each time, 76 times an hour and about 10-12 hours a day. This adds upto a distance of about 4km, carrying a ladle of hot cocoons, weighing about 700 gms.

In that process, they have to cover a distance of 15-20 feet each time, 76 times an hour and about 10-12 hours a day.

Complaints of neck pain, low back pain, and general body ache is a regular feature for most children as they have to lift heavy material. Due to irregular eating habits some of the children also complained of pain abdomen, and were diagnosed to be suffering from *gastritis*. The children in the silk twisting factories suffer pain in their legs and backs from standing for more than 10 hrs a day without rest. Some of them develop *leg deformities* over the years, including bow-leggedness. Having to stand throughout the day leads to *menstrual disorders* in girl children and could also cause *loss of a child during pregnancy*. Many girl children in this sector reach puberty by the time they are 8-9 years.In the process of doubling the strands of silk, children aged 6-14 years are employed. As in the case of winding, children here are required to stand continuously and keenly concentrate on the yarn constantly to avoid breaking or knotting of the yarn, often leading to related health problems of *back ache and severe problems of vision*. The children who work as pupae pickers are exposed to the worst condition of all. It involves working continuously in a constrained position in the narrow space of just about two feet width between the wall and machinery, throughout the day. Their hands and feet are exposed to the most unhygienic conditions of dead worms, dirty water and slippery floors.

Hearing Disorders

Children are forced to listen to loud music ostensibly to prevent them from hearing the deafening noise of the machines; however this often causes problems related to hearing. This also leads to loss of balance on occasions and lack of concentration in the work, which results in minor mistakes that incurs abuse from employers.

Abuse

Abuses common to other industries are found in silk production as well. Verbal and physical abuse including threats, harsh language and beatings for arriving late, working slowly or annoying the employer was commonly observed in the silk units. In many cases when children are unwell or are severely sick, they are denied adequate rest and time to recuperate and often the employers come to their houses and the children are dragged to work.Girl workers also suffer sexual abuse at the hands of the employers. By and large, most children in this sector work under bonded conditions. Parents take an advance from their employers and bond their children to their employers for several years until the loans are paid back with exharbitant interest. Most of the children are malnourished and have long working hours leading to chronic illnesses such as Tuberculosis, Chronic Bronchitis, Asthma, non healing Ulcers etc.

The Approach of the State

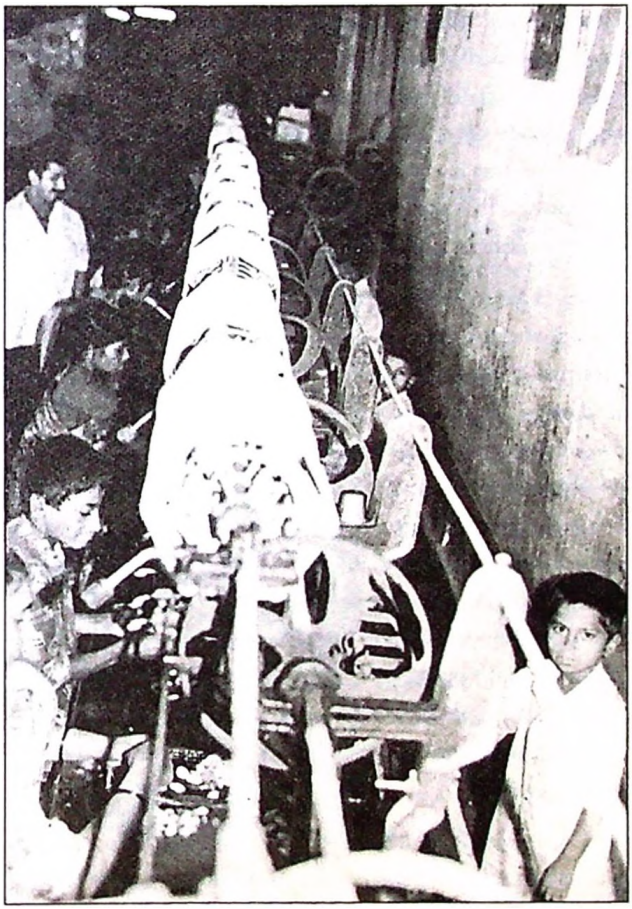
One of the biggest drawbacks on the part of the Indian Government is that there is no blanket prohibition on the employment of children, nor any universal minimum age set for child workers under the Indian law. The Child Labour (Prohibition and Regulation) Act, 1986, the Minimum Wages Act, 1948, The Plantation Labour Act, 1951, The Apprentices Act, 1961, and Article 24 of the Constitution define "child" as any person below the age of 14. The Shops and Establishments Act, 1961, allows the definition to be set by the states, and in thirteen states the minimum age is 12 yrs and in eleven states, it is 14 yrs. The Children (Pledging of Labour) Act, 1933 defines a child as any person below fifteen years of age. The Juvenile Justice Act, 1986, defines "juveniles" as any male under sixteen and any female under eighteen. However, the large number of 'protective' legislations and legal safeguards for checking the incidence of child labour mean little in the absence of a conscious political will to implement them. All of the labour laws are routinely flouted, with virtually no risk of punishment to the offender. Whether flouted due to indifference or corruption, the fact remains that these laws are simply not enforced.

The entire approach itself has a transient basis and does not take into consideration the fact that the children can go to work in other establishments ....

According to vast and deeply entrenched set of myths regarding child labour, child labour (bonded or otherwise) in India is inevitable; it is caused by poverty and represents the natural order of things. It is also said that working to eradicate child labour is a 'Western' concept. The truth is that the Indian Government and the people have failed to protect children.

Any effort by the Government so far has been very short-lived in nature. The setting up of residential schools for 100 child labourers, or the raiding of shops, units, and other establishments that employ children has not served to eradicate child labour. These efforts have very often been political gimmicks that last for a short period and are forgotten once the benefit from the same is derived. There is no method of follow-up of the children who have been enrolled in the residential schools; one is not even certain if the children have gone back to working, loitering, etc. Raiding of the establishments employing child labour also does not help in the process of eradicating child labour for the same reason. The entire approach itself has a transient basis and does not take into consideration the fact that the children can go to work in other establishments or can return to the same, once the risk of the raid is over.

Recently (in August 1998) the Government of Karnataka issued a notification authorising officers from Departments other than the Labour Department to check the incidence of child labour. The notification also included the formation of a committee of these officials at the taluka level to meet periodically and discuss the work being done in this regard. However, the committees in the two talukas under study have not met and no definite action has been taken.



Conclusion and Suggestions

It is ironical that the success story of Karnataka as the country's largest silk producer is in reality interwoven with abuse of children, disregard for their rights and crippling of their potential. The promotion of the sericulture industry is based on the presupposition that in the absence of the use of any toxic chemicals, heavy machinery and other conditions, as defined by the Child Labour (Prohibition and Regulation) Act, it cannot be considered 'hazardous'. Our study, however, highlights that in the name of development, children are exposed to hazardous conditions that damage not only their childhood but also their adult life. Little attention is paid to the issue of child labour in these extremely appalling and abysmal conditions. Children spend their entire childhood in silk factories and find themselves uneducated, unskilled and unemployed as they enter adulthood.

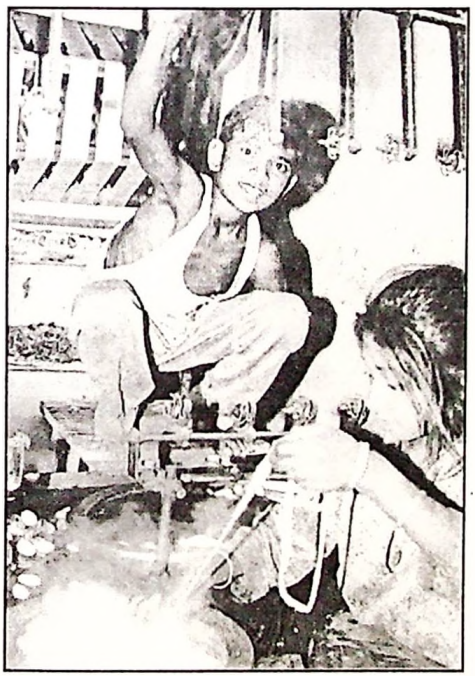
The abysmal condition of the Govt schools is one of the most important factors responsible for causing and perpetuating child labour.

The well being of children should be an important indicator of development. **In this context it is important for a re-orientation of attitude especially one that will emphasise an investment in the child rather than the utilisation of the child for further capital growth.** Apart from economic indicators, any industry should have social, educational and other indicators to determine the progress of the industry. This would imply, primarily, a child-centred approach in the process of development. In re-orienting development, there is a need to base development agendas on people, their participation, contribution and interest. This is especially important since the people engaged in this industry have not been exposed to concepts of people's representation, participatory human resource development, and the ability to assert their rights. The more the people in this economy and their children are encouraged to initiate, manage and monitor their own understanding of situations, the deeper will be the impact on community growth, which has remained below sub-human levels for decades together.

Processes have to be initiated in the community that would gradually set the terms among parents and children to participate in the identification of their individual and collective needs and to articulate and respond to them as members of a developing society. The Government should have a co-ordinated effort toward the eradication of child labour. All the different departments in the Govt should converge to evolve and implement definite policies for the overall development of children.

Another critical aspect to be taken into consideration is reform in the elementary education system. The State, community members and voluntary organisations should take immediate steps towards strengthening the Govt schools and ensuring that the education received meets the needs of the children and the community. The abysmal condition of the Govt schools is one of the most important factors responsible for causing and perpetuating child labour.

The existence of child labour in the sericulture sector is not new to the Government, the donor agencies or the voluntary organisations. Taking into account that the sector has a large market on both the export and domestic front, the State should not wait for other countries to impose trade related sanctions/ bans, as in the case of the carpet industry. Instead the State should take definitive action that involves the local community, employers, Education department and voluntary organisations.



The links between development, sericulture and child labour are tenuous. It is a well- known fact that sericulture is an industry where nothing goes waste and where there is hundred percent utilisation and recycling of all that goes into or comes out of the silk production system. The left-over mulberry stems along with the worm droppings form cattle fodder and the cocoons are spun into reels of silk. But for the many tiny hands that labour in this supposedly non-hazardous, remunerative industry, the end of their productive years sees them being rejected and treated as waste.

Appendix

I Processes involved in the Sericulture Industry

Mulberry Cultivation:
Mulberry is a deep-rooted hardy plant that can withstand drought and its water requirement is 26-45 inches per annum. Mulberry sericulture consists of rearing the silkworms in a domesticated environment using harvested mulberry leaves. When the leaves in the mulberry garden reach the required level of maturity, the farmer buys the required quantity of silkworm seeds (eggs) or what are commonly known as DFLs (Disease Free Layings) either from a Government grainage or from a licensed seed preparer.

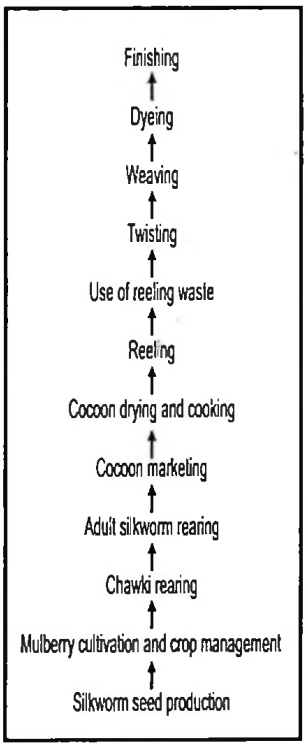
Rearing of Silkworms:
The rearing of silk worms requires a specific environmental condition, particularly proper temperature and humidity. Therefore the rearing spaces (mostly in the homes of the small-time farmers) are planned and constructed to provide and maintain proper environmental conditions to get good quality cocoons. The main principles considered while constructing are that the rearing areas are to avoid dampness, stagnation of air, direct or very strong current of air, and exposure to bright sunlight and radiation and also to ensure equable temperature and humidity and good ventilation.

Before the rearing cycle begins, the rearing space and equipment is thoroughly disinfected by using diluted formalin mixed with cowdung paste. This is to prevent the worms from being infected by diseases, flies, or from being eaten away by lizards.

In addition, the farmer has also to ensure nutritious mulberry leaves, a well organised and timed schedule of feeding the worms, and cleaning the bed, maintaining an adequate spacing for the worms in the tray, adequate ventilation in the rearing space and measures to control the temperature and humidity of the rearing environment according to the stage of development of the worms. The important rearing equipment employed are rearing stands, rearing trays/boxes, mountages (*chandrikes)* etc. The harvesting of cocoons is usually done manually.

For rearing the silkworms under hygienic conditions and to feed the worms with succulent mulberry leaves, *chawki rearing centres* have been set up. In these centres, young age silk worms are to be reared for 9-10 days under technical supervision and distributed to sericulturists for further rearing. Though there are 26 Technical servicecentres and 219 chawki rearing centres in Bangalore Rural district, little has been done to improve the quality of silkworm rearing in the district. Technical guidance is to be provided to the sericulturists from the Technical Services centres and the Sericultural Training School at Channapatna. In a few cases, farmers buy chawki –worms (young silkworms, about 10 days old) instead of eggs or get their eggs reared in a Government /private chawki rearing centre. This gives them a

certain period of rest after the rearing cycle to get their place and equipment thoroughly disinfected. The life cycle of the silkworm ranges from 25-30 days through which the eggs reach the stage of cocoons. In between, the worms, being voracious eaters, expand more than 10,000 times consuming a lot of mulberry leaves, labour and care. (*the mulberry yield of half an acre of irrigated land could be used to rear about 100 DFLs per batch with the family labour of a small household of five members).* Finally the cocoons are auctioned in a Government regulated cocoon market.



Cocoon Markets:

Cocoon markets facilitate the securing of good prices for cocoons produced in the district. The cocoon market in Ramanagaram is the largest in Asia; here the average transaction is 30 tonnes per day. Cocoons from AP, Tamilnadu and Maharashtra are also brought here. In the organised cocoon markets, the cocoon sellers meet the buyers in the form of reelers who bid for the cocoon lots, spread out on huge tables for auctioning. Rearers from all over the country would prefer their cocoons to be sold at the market in Ramanagaram, as they expect to get the best offer for their products.

From the markets, the cocoons travel on the heads of porters to the reeling sheds, where they are sorted, stifled, cooked and reeled. The reeling equipment could be of various types, processing different qualities of cocoons and producing different grades

of raw silk-starting from the simple charakha to a cottage basin /filature (either of them could be hand or power driven)

Reeling of Cocoons:

Reeling of cocoons to produce the raw silk is the ultimate industrial destiny for the products. The silkworm spins the cocoon by spitting out the silk fluid through a spinnerel at its mouth and this fluid hardens to form a fine silk filament (*bave*) on coming into contact with the air. This bave comprises of two distinct filaments or brins composed of fibroin and stuck together and covered by silk gum or sericin. The bave is a continuos filament of lengths from 350-600 mt in multivoltines to around 1500 mt in uni/bivoltines. When the cocoons are treated with hot water the gum (sericin) being readily soluble in hot water readily facilitates the unwinding process.This operation of unwinding the bave (silk filament) from the cocoon is called reeling. The process of reeling cocoons comprises of cocoon drying/stifling , boiling, brushing, reeling, re-reeling, finishing and testing. The raw silk is subjected to a series of standard tests to assess its standard size, winding quality, evenness, cleanliness, tenacity, cohesion, etc., and to determine its grade. The silk-reeling consists of essentially two operations, i.e. cooking the cocoons to separate the thread from the cocoon and combining 8-12 single threads into a single yarn on to a reel. Silk reeling is predominantly a cottage industry.

The three techniques in this small-scale industry are :

i The *Traditional Manual Charaka Method* existing in the state since 200 years.

In the charaka process, cocoons are cooked in a simple kettle over charcoal and the cocoons fed manually to a large manually operated charakas connected to cycle wheels fitted with ball bearings, driven by a chain and a manual turning mechanism. Sometimes, the charakas are directly driven through a large wheel operated by hand with/without ball bearings. Reelers are known by the variety and quality of silk produced by them; the number of cocoons fed to an 'end' judges the thickness of the silk yarn.

ii The *Semi-Mechanised Technique of using Cottage Basins:*

Cottage basin reeling enables better control over the uniformity of the yarn. It involves reeling the cocoons in hand operated cottage basins, mostly of smaller size and with one or two tables (i.e. two to four basins) operated by a single turner.
In Bangalore Rural district, the commonly used reeling units have the cooking unit physically at a distance from the basin where the cooked basin has to be shifted from the cooking vessel to the reeling basin from time to time, an activity done mostly by children. In addition, there is a more mechanised form of reeling employed in reeling plants called 'filature' which is a common feature in the two talukas studied in Bangalore Rural district. In 1988, there were over 1924 persons engaged in cocoon reeling in Bangalore Rural district.

iii The *Multi-end Reeling Machine:*

The multi-end reeling machine (using 10 ends per basin) has been introduced for about three to four years now. The price of the multi-end machine is exorbitantly

high and the machine requires a large shed area. It is difficult to reel lower quality cocoons (available especially during the rainy seasons) using the multi-end machine. The wastage is much higher and therefore it is more uneconomical.

Winding

The next stage of processing the silk yarn is winding. Here the cocoons are dropped in boiling water. At this stage, the cocoons are stirred with a twig and then a few cocoons that are well-soaked in water are grouped manually. The thin thread of silk is then picked and linked to a draw pin. The thread passing through the pin is linked to a wheel that winds the thread as long as it is drawn from the cocoon. It is common to find children employed in this process too.

Doubling

The yarn obtained after winding is then to be doubled. The yarn is attached to fourspindles and then made from two strands to four strands and this process is also usually carried out by children.

Twisting

This is the process whereby individual silk threads obtained after doubling are twisted into a strong multi-ply thread. Twisting usually takes place in small factories with between fifty and a few hundred spindles that utilise bonded child labour.

Silk Farms

These farms perform several functions such as maintenance and propagation of breeder stock of silk worm races, propagation of high yielding variety of mulberry, maintaining the mulberry garden, preservation of mulberry leaves, rearing of silk worms, mounting and harvesting of cocoons, control of diseases and imparting training to the farmers. According to 1988 data, there are 13 Government silk farms in the district; but there is no private silk farm in the district.

Co-operative Societies:

Several silk co-operative societies have been working for promoting the silk industry in the state. These co-operatives are broadly of two types: the Sericulturists cum Farmers Co-operative Societies and the Silk Reelers Industrial Co-operative Societies; their number in the district is 7 and 5 respectively.

II Village Case Studies – a Brief Report

The following is a brief on 14 villages and slums in Channapatna and Ramanagaram talukas of Bangalore Rural district. After a pilot survey of 20 villages and slums in the two talukas, these 14 areas were identified with respect to the incidence of child labour and the socio-economic conditions prevalent in the area. Finally 6 areas were selected for an intensive study on the basis of the diverse conditions characteristic of the particular village or slum that had contributed to the prevalence/absence of child labour in sericulture.

Honganur is a village six-km from Channapatna town. It is the Gram Panchayat centre for 7-8 surrounding villages in Channapatna taluka. Honganur can in fact be referred to as a 'mini town', by itself. The village has 35 filature units owned by Muslims, where Hindu children from the area and other children from neighbouring villages also come to work.

Molledodi is also a village in Channapatna taluka that has a population that belongs to one community. However only a small percentage of the population are well off while the others live in thatched houses. The women are mostly engaged in coolie (daily wage) work. Children from Molledodi go to work at the filature units in Honganur. The village has seen no developmental activity in the recent past and alcoholism is a common problem in majority of the families.

Kannidodi is another village in Channapatna taluka that has a total population of 1139 in 220 households. The village is made up mainly of the Thigala community. The main occupations in the village are agriculture and sericulture. Children also work as coolie workers and in the sericulture process. The village has a Government lower primary school and an anganwadi for children below 6 years.

Ammaalidodi is a small village in Channapatna taluka. Inhabited by a mixed population of Kuruba and Vokkaliga community, the village has a total population of 226. The main occupations are agriculture and sericulture. There are 45 working children in this village who work mainly in the sericulture sector. Ammaalidodi has a Government lower primary school and a Government run anganwadi.

Kariappanadoddi is another village in Channapatna taluka. It is basically a toy industry-based village, though only a handful of children work in the toy units. Only 10 of the 90 child labourers in this village work in the sericulture industry, at reeling and twisting units in the slums of Channapatna town. The other children are engaged in grazing animals, agriculture, brick-kilns, and toy making.

Adi Jambava is a slum in Channapatna town. The entire population belongs to Adi Jambava (mentioned in the Scheduled Castes list). Almost all the working children from this slum work in the sericulture sector. Children from this area work mainly in the sericulture industry.

Badi andChoti Gali is a slum locality in the heart of Channapatna town. It is unique in that it is a slum surrounded by a high-income residential area, but has a large number of child labourers working in the sericulture industry. Further, it has a number of filature units where children from neighbouring slums and villages close to Channapatna town come to work. The area has a predominantly Muslim population that belongs to two different belief systems of Islam.

Tippu Nagar is a slum in Channapatna town that forms the nucleus of the Beedi industry in Channapatna taluka. Inhabited only by the Muslim community, the slum was formed after the migration of Muslim families from neighbouring villages during the 1991 riots. Men in the area work in the beedi factories and as coolie (daily wage) workers, while women are involved in beedi-rolling at their homes. Children from

Tippu Nagar work in the sericulture industry, beedi industry, and in garages. The area has ten filature units where children from the area and from neighbouring slums come to work.

Syed wadi is a high income area in Channapatna which attracts atleast about 250-300 children from neighbouring slums and villages to the 20 odd filature units in the area. A majority of the children from the area attend school. This is also a Muslim locality. Recently two textile spun mills have been started in the area, keeping in view the 'future' of the silk industry.

Makaan is another slum area in Channapatna town from where children(approximately 50 in number) go to work at the filature units at Tippu Nagar and Syed wadi. Children from Makaan are also employed in different processes of the toy-making units in and around the area.

Baalgere is a slum in Ramanagaram that has a mixed population of SCs, Thigalaru, Marathis, Muslims and Tamil migrants. There are a large number of children working in this area, who are mainly from the SC community. The area also has a sizeable number of small filature units that employ children. There are 650 households in the area with a total population of 3300.

Chanmaanahalli is a village, 2 km from Ramanagaram town, off the Kanakapura Road. It has 252 households with a total population of 2000. The area is made up of a mixed population of SCs, Gowdas, Vokkaliga, Thigalaru, Kuruba, etc. a large number of children go to work at the filature units in Ramanagaram town from this village. Some also work in the units situated locally. The village has a Government Higher Primary school upto 7th standard which children from the neighbouring villages also attend. There is a Government run anganwadis also in the village. A number of houses in the village are engaged in different stages of the sericulture process, within their houses itself. There is a Government chawki rearing centre in the village but it is not active.

Nalbandwadi is a middle income area in Ramanagaram town, very close to the main market area. It houses a very large number of the total filature units in Ramanagaram town. The total population of the area is 4000 with a child population of 515. In this locality the children working in the filature units come from the surrounding slums and low income areas in contrast to the children from Nalbandwadi, majority of whom attend school/anganwadi. The area survives to large extent on the income brought in by the filature units.

Yarab Nagar is a slum in Ramanagaram taluka which can be said to support a sericulture-based economy. It has one of the highest number of child labourers who work in the sericulture industry, both in the slum and in the neighbouring slums. It also has close to 200 filature units (mostly small). Almost 50% of the total child population in this slum are child labourers. The slum is only inhabited by Muslims and has grown in the recent years after the migration of Muslims from neighbouring villages during the 1991 riots.

Some details of the villages and slums selected for the study

Area name	No. of households	Total population	Child population	No. of child labourers
Makaan	178	1200	280	48
Tippu Nagar	261	2000	374	78
Syed Wadi	263	3000	310	32
Adi Jambava Colony	125	550	230	40
Badi and Choti Gali	250	1300	410	94
Kariappanadoddi	226	1188	363	92
Honganur	1125	6820	870	200
Molledodi	360	1700	408	110
Kanidoddi	220	1139	350	60
Ammaalidodi	30	226	70	45
Chanmaanahalli	252	2000	354	54
Baalgere	650	3300	465	108
Yarab Nagar	860	6000	1100	500
Nalbandwadi	660	4000	515	130

III An Overview of Bangalore Rural District

Bangalore Rural district is one of the 25 districts in Karnataka. It was formed in 1986, when Bangalore district was divided into Bangalore Rural and Bangalore (Urban). Presently in Bangalore Rural district, there are 2 divisions, 8 Talukas, 35 Hoblis (cluster of villages), 1713 inhabited and 177 uninhabited villages, 9 towns, and 229 Gram Panchayats.

Population

Proximity to the city of Bangalore has its own impact on the district, with a considerable daily floating population. The rural people are mostly agriculturists with their other occupations serving only as subsidiary to agriculture. The eastern borders of the district are largely influenced by the neighbouring states of Andhra Pradesh and Tamilnadu. According to the 1991 census, the total population of the district is, 1,673,194 i.e. 860,231 males and 812,963 females with a population density of 309 persons per sq. km. Bangalore Rural district has 22.5% of its population belonging to the Scheduled Caste and Scheduled Tribe. Common among these are Adi Dravida, Adi Karnataka, Kuruba, Bestaru, Lambani, Bovi, Adi Jambava, Thigala, Vokkaliga, and Lingayat. Hinduism, Islam and Christianity are the three main religions in the district with a sizeable population following each of these religions.

Education and Literacy

As per the 1991 census, only 50.17% of the total population in the district is literate, (of whom 61.5% are males, and only 38.5% are females). Prior to the establishment of the British system of education, primary education was imparted in indigenous schools called the Grama Pathashalas or village elementary schools. The Education Department was made a separate unit as early as 1866, and placed under the Director of Public Instruction. Though Primary Education was transferred in 1931 to the local bodies like District Boards and Municipalities, it was resumed by the Government in 1941. After the States Reorganisation in 1956, the term primary education underwent a change in its connotation, to mean four years of primary and four years of middle school. However in the current scenario, it refers to an integrated course of seven years. There are 1462 primary schools in Bangalore Rural district, with 64,979 children between the age of 0-14 enrolled to the schools. As against the existing number of primary schools, there are only 162 high schools in the district.

Occupation

Though agricultural activities have largely predominated the district, the current trend includes more daily wage occupations, as a result of the increasing influence of Bangalore city. Proximity to the city has provided easy access to a daily market for milk, eggs, vegetables, and fruits. The district is not industrially very well developed, though there is ample scope for the development of middle and large-scale industries. Majority of the people living in this region are small farmers who grow mainly vegetables and pulses. Of the total population, 37% are main workers, 5% are marginal workers while approximately 57% are non-workers. Close to 28% of the working population are women, majority of whom are marginal workers.

Women today are employed as cleaners (safai karmacharees), for agarbathi/ beedi-rolling, filature units, dairy farms, construction work, domestic work, etc. besides working as agricultural labourers. There are a total of 55,000 child labourers in the four talukas of Ramanagaram, Channapatna, Magadi and Kanakapura talukas of Bangalore Rural district, employed in different sectors such as sericulture, agriculture, beedi-rolling, garages, hotels, some processes of toy making, rag picking, coir factories, sheep breeding, tile factories, brick-kilns, tailor shops, tea shops and at construction sites.

Industries

As mentioned earlier, Bangalore Rural district is essentially an agricultural district but it has sufficient scope for industrialisation, dairy development and sericulture. The district is endowed with agricultural and horticultural crops such as ragi, rice, groundnut, sugarcane, castor, grapes, mulberry, etc. There are adequate infrastructural facilities such as transport and communications, banking , credit, and marketing. Though the region is not rich in mineral resources, its non-metallic mineral resources are utilised for bricks, tiles, and stoneware manufacture. For many years now, weaving has also been a major occupation for a large section of the population. The soil and such climatic conditions are congenial for the cultivation of mulberry, rearing of silkworms, and production of silk, besides other agro-based industries.

Some statistics regarding sericulture in Bangalore Rural District [12]

Area under mulberry (Ha)	21292
Chawki Rearing centres	219
Cocoon Production (tonnes)	1605
Total Cocoon production(MT)	19,997
New Mulberry varieties	111
Sericulture talukas	8
Sericulture villages	2,118
Sericulture families (SC)	6,260
Sericulture families (ST)	1,288
Sericulture families (others)	44,152
Govt silk farms	10
Govt cocoon markets	8
Govt silk filatures	nil
Reelers	4,618
Charaka units	2,698
Cottag basin units	110
Filature basin units	10,994

[12] Commissioner for Sericultural Development and Director of Sericulture, Department of Sericulture (1997-98)

IV Applicable Legislations and Recent Court Directive

Bonded Labour System (Abolition) Act and Children (Pledging of Labour) Act, 1933

All of the practices involved in the silk industry-reeling, twisting, and weaving constitute debt bondage and violate the Bonded Labour System (Abolition) Act and Children (Pledging of Labour) Act. This is true even of the rare cases where children are working without advances having been taken against them; the Bonded Labour System (Abolition) Act includes within its ambit work for "nominal wages" defined by the Supreme Court as wages less than the minimum wage. Despite this and the widespread knowledge of the use of advances, there have been no prosecutions under the Bonded Labour System (Abolition) Act, much less convictions.

Child labour (Prohibition and Regulation) Act, 1986

Cloth weaving is a hazardous industry under the Child labour (Prohibition and Regulation) Act, and the employment of any child below fourteen in this industry is illegal. Till recently employment of children as silk reelers and twisters was not similarly forbidden, even though the conditions under which they work violate the regulatory provisions of the Child labour (Prohibition and Regulation) Act.

However a recent Gazette notification [Extraordinary, Part II, Section 3, Sub-Section (ii)] from the Ministry of Labour dated 23 July 1998, includes 36 other processes as hazardous as an amendment to the Child labour (Prohibition and Regulation) Act. Sericulture (only the processing section) has also been included in this amendment, thereby providing ample legal sanction for checking the incidence of child labour.

Factories Act, 1948

The Factories Act forbids the employment of children under fourteen in all factories, defined as premises employing ten or more people where power is used or twenty or more people where power is not used. Applying this definition, child labour is prohibited in all the silk reeling and twisting units.

V Some commonly used terms in Indian Sericulture

Mulberry Sericulture :

Mulberry is the plant on which the mulberry silkworm *Bombyx mori* is dependent as exclusive feed during the larval stage as the leafs have a high sugar and protein content. Mulberry is multiplied by cuttings in tropical climate where rooting is satisfactory, and by saplings in temperate conditions. Well managed, one ha of mulberry produces more than 40MT of fresh leaves per year. A key characteristic of *Bombyx mori* is its voltinism.

Bivoltine races hatch twice a year and follow a hibernation which can however be broken. Multivoltine races hatch all the year round, and its eggs cannot be stored for more than some weeks. Bivoltine races produce white, long and even silk filaments with desirable characteristics for dress materials made on powerlooms. The cocoons of multi-bivoltine hybrids or pure multivoltines are yellowish and have shorter filaments than bivoltines. Silk yarn produced from multi-bivoltine hybrid cocoons is

suitable for handlooms and constitutes more than 99% of the raw silk produced in India.

Bivoltine cocoons	Cocoons built by a silkworm race or hybrid with only two generations (life cycles) in a year.
Cocoon	Silken shell spun by the silkworm larvae that serves as a protective covering to the insect during its pupal stage of existence
DFLs	Disease free laying(s) of silkworm eggs, with an average of 400 eggs per laying for multivoltine, upto 600 eggs per laying for bivoltine
Filament	Thread spun by the silkworm, ranging from 300 to 1800 mts.
Multivoltine cocoons	Cocoons built by a silkworm race or hybrid with more than two generations per year.
Raw silk	Silk reeled by drawing together the required number of filament form the cocoons and containing the original gum or sericin
Sericin	Natural gummy coating on raw silk filaments, a protein soluble in boiling water. The amount of sericin in raw silk is 20%

MAYA (Movement for Alternatives and Youth Awareness) is a development and training organisation working to address the rights and responsibilities of children with a particular focus on the eradication of child labour.

The book is a situational analysis of child labour in the sericulture sector based on MAYA's experience in the talukas of Ramanagaram and Channapatna. It highlights the prevalence of child labour in the sericulture industry, which was intended to improve economic & social growth in the regions where it was promoted. It also exposes the myth that child labour exists as a result of economic poverty and shows that it is perpetuated because of several social factors that have a direct bearing on life-processes of people.

Apart from being material for discussion, the book seeks to become a campaign tool to create an opportunity for people to look at their role as responsible citizens.