

Availability of Wood for Handicrafts in Karnataka

Strengthening livelihoods and job creation





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The contents of this report are prepared based on the information collated from questionnaire survey, interviews, and Handicrafts Centers and other online and offline sources. Some information is based on personal communications to the Study Team. The data submitted in this report is factually correct to the best of our knowledge. Any typographical errors in this report may be brought to the notice of EMPRI for rectification.

Foreword

Handicrafts are a medium of expression for cultures, and take shape from how cultural practices are undertaken by its practitioners. Cultures are diverse owing to the natural resources and materials found and the climate in a region. Richness of cultures is expressed through different materials, colour combinations, dimensions, and imagination used in the handicrafts. Karnataka state is endowed with a varied geography and climate that hosts a variety of cultures and cultural practices. This diversity is particularly seen in the wood-based handicraft products from the state that have global recognition and markets.

The present study has originated from the effort of the Karnataka Forest Department to assess the availability of wood in this state for different end uses. Several art forms in the state such as sandalwood figurines from Sagar and Sirsi, rosewood carving and inlay works of Mysore, and softwood toys of Channapatna depend on the availability of wood. Availability of wood for handicrafts has not been consistent, and this has contributed to fluctuating fortunes of the artisans, and sometimes even the art itself.

The wood-based handicrafts sector has remained largely unorganised and family-based venture. The challenge of procurement of wood has only grown for artisans and there is a need to grow wood where the artisans are located. Through agro-forestry and social forestry programs Karnataka Forest Department can potentially address the wood availability and access issues to promote this sector.

The EMPRI study team has undertaken significant fieldwork and generated important insights by directly interacting with the artisans, associations, officials, and traders in wood-based handicrafts. Effort has also been made to document the role of government agencies at national and state level involved in organising and supporting handicrafts sector. A useful analysis and discourse is presented in the report, which is concluded with suggesting the policy and other measures that can unlock the potential of wood-based handicraft sector for further development of the art forms, and job creation and livelihoods of the artisans.

I congratulate the study team for undertaking first-of-its-kind study in the state that is focused on wood-based handicrafts sector. This work is likely to contribute to policy evolution for the sector.

Jagmohan Sharma IFS PhD
Director General

Executive Summary

This study primarily aims at understanding and assessing the type of woods used in the handicrafts sector in Karnataka state, and their quantities and sources. For this purpose it focuses on the artisan numbers and profiles, public and private wood sources, and challenges in wood sourcing. As the type and quantity of wood-based handicraft (WBH) products and marketing opportunities have implications for the demand for wood as raw material, the study considers issues pertaining to the training of artisans, product development, manufacturing facilities, and marketing linkages.

This report is presented in seven chapters. **First chapter** provides a brief history on wood-based handicrafts industry in Karnataka, and its role in culture, livelihoods and the economy, and ends with listing of the objectives of the study. **Second chapter** presents a review of literature on the major art forms, crafts, source, and quantities of wood used. **Third chapter** discusses the methods and tools adopted for sourcing information. **Fourth chapter** presents the results of the study and discussion. **Fifth chapter** presents the major conclusions of the study. **Sixth chapter** lists the 'issues of immediate policy relevance'. **Seventh chapter** suggests 'the way forward' respectively.

To meet the objectives of the study, information and data is collected through questionnaire survey, face-to-face and online interviews, and data acquisition through field visits. For stakeholder consultation and data collection and validation, a total number of 5 webinars, 8 field visits and 20 meetings have been undertaken. The resultant data sets are statistically analysed in terms of proportions (percentages) and using non-parametric Chi-square test.

There are four GOI Handicrafts Service Centres in the state - Bengaluru, Mysuru, Mangaluru, and Dharwad. About 4,800 artisans are registered in these Centres; 530 artisans were interviewed through questionnaire survey.

About 57.4, 16.6, 14.1, 2.5, 1.9 and 7.5% of artisans depend on rosewood, aale, teak, sandalwood, polkhi and other species (*Haldina cordifolia*, *Lannea coromandelica*, *Alangium salviifolium*, *Syzygium cumini* etc), respectively. Major wood source for artisans in the state are private, and government sources contribute about 10% of the wood utilised. About 78.3 and 90.7% respondents in 21-50 and 51-80 age groups mention about the scarcity of wood as raw material. Among the surveyed artisans about 40.4, 33.6 and 26% worked from factories, home and crafts Parks/shops, respectively.

About 58% of the female and 64% of male artisans are engaged in other than decorative handicrafts, dolls, and daily use artifacts. Such other items include carpentry, carvings, patch work, garland making, polishing, wall panels, furniture, and such other works. About 37% of the female as well as male artisans adopted WBH tradition hereditarily. And, 37.6 and 25.8% of female artisans have adopted handicrafts vocation after training and for other reasons, respectively. Most of the artisans (90.6%) are members of self-help groups. For 98.5% of the surveyed artisans, crafting of WBH is the primary source income.

The total annual requirement of wood for handicrafts in the state is about 1,69,571 cum for other woods, and 850 kgs for sandalwood. Further, keeping in view of the present status of wood consumption and requirement of each of the Centres, annual demand is projected @ 5% per annum (2,50,534 cum other woods and 1,256 kg sandalwood) and @ 10% per annum (3,63,490 cum other woods and 1,822 kg sandalwood).

The major challenges faced by the artisans pertain to the following: lack of quality and diversified wood raw materials; high cost of raw material; lack of well networked marketing opportunities for wood handicrafts; few promotional events for sale of WBH products; and, lack of awareness about opportunities for upgrading skills of artisans.

The issues of immediate policy significance identified include: allocation of woods to artisans from forest depots based on the availability, and at a price equal to last three-year average auction price for the concerned quality class; exempting from permissions for felling and transportation of felled material to sawmill and artisan common-work locations for the trees grown in private lands used for WBH except reserve trees excluding teak - KSHDC to identify tree species and common-work locations; Karnataka Forest Department can promote WBH species through Village Forest Committee (VFC) program for growing such species in farmers lands and further promote manufacture and marketing of WBH products using the self-help group mechanism in VFC villages; and, VFCs are statutory bodies under the Karnataka Forest Act 1963, and can be authorised for certifying the source of material as - grown by farmers in private farms.

The following PRIORITY measures are identified as the way forward for sustenance and promotion of crafts and crafters in the state:

- a) The foremost requirement of handicrafts industry in general, and particularly of the WBH sector is to collect and organise the data pertaining to present and past artisans, arts, place of work, gender and age groups, trainings, and markets.
- b) WBH is a labour intensive industry with only a moderate reward for handwork. Thus there is a need to promote machine-friendliness that would enhance the fineness and appeal of the products for an average buyer, and enable production of higher volumes at a lower cost.
- c) The four service centres in the state may be considered for strengthening for issuing necessary certification on toxicity, child labour, sustainably-produced raw material, and artisan welfare.

* * * * *

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Dr K H Vinaya Kumar IFS (R)
Director Research (I/c)

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List of Abbreviations

| | |
|---------|---------------------------------------------------------------------------------|
| BCC | Bengaluru Crafts Centre |
| CCI | Crafts Council of India |
| CCK | Crafts Council of Karnataka |
| CCK | Crafts Council of Karnataka |
| CCP | Channapatna Crafts Park |
| CFT | Cubic feet |
| CIT | Chamaraja Institute of Technology, Mysore |
| CITES | Convention on International Trade in Endangered Species of Wild Fauna and Flora |
| CoC | Chain of Custody |
| CSR | Corporate Social Responsibility |
| CUM | Cubic meter |
| DAP | Dutch Action Plan |
| DC(H) | Development Commissioner (Handicrafts) |
| EMPRI | Environmental Management and Policy Research Institute |
| EPCH | Export Promotion Council for Handicrafts |
| GI | Geographical Indications |
| HSC | Handicraft Service Centres |
| IPIRTI | Indian Plywood Industries Research and Training Institute |
| KFD | Karnataka Forest Department |
| KHAWA | Karnataka Handicrafts Artisans Welfare Association |
| KSBM | Karnataka State Bamboo Mission |
| KSHDC | Karnataka State Handicraft Development Corporation Ltd. |
| LBL | Laminated Bamboo Lumber |
| M & Sec | Manager and Secretary |
| MSMEs | Ministry of Micro, Small, and Medium Enterprises |
| NGOs | Non-Governmental Organisations |
| NID | National Institute of Design |
| RFID | Radio Frequency Identification |
| SC | Supreme Court |
| SKKK | Sandur Kushala Kala Kendra |
| SWOC | Strength Weakness Opportunity Challenges |
| UNCTAD | United Nations Conference on Trade and Development |
| UNESCO | The United Nations Educational, Scientific and Cultural Organization |
| USD | United States Dollar |
| VFC | Village Forest Committee |
| WBH | Wood-based Handicrafts |
| WTO | World Trade Organisation |

1 Introduction

Karnataka has an adored history of being the pioneer of the traditional skills of wood-based handicrafts. Karnataka handicrafts reflect the skilful craftsmanship of the artisans. Historically, the temples of the state and their architecture showcase the most impressive works of wood in Karnataka. This art finds its legacy in the intricate designs done on ancient wooden ceilings, doors, etc., which showcase the best of such works. Idols of deities are part of beautiful wooden handicrafts industry in the state.

In Karnataka, most wood arts and crafts are done using traditional methods handed over from generation to generation and adapted over a period of time, which has become the hallmark of excellence in craftsmanship. The temples and monuments in Karnataka are living examples of wood work and the perfected art of the craftsmen in the state. Traditional paintings, ivory carving, sandalwood crafts, Mysore silk, etc. are some of the many interesting crafts seen in Karnataka patronized by the royal families of the State.

Importantly, the wood-based handicrafts have an important position in the arts and crafts industry of Karnataka. The art is diverse and rich in culture. While Kinhal in the north boasts of large idol to toy making, Bengaluru in the south brings in chariot making. Mysore presents gleaming rosewood furniture and engravings, and Sagar and Sirsi craft small sandalwood carvings. Most of these art forms are centuries old (Brinda 2013). The rich wood based handicrafts are diverse in the locations they are situated in and the type of wood used for the craft. For example, the wood-type varies from most valued and unique wood like sandalwood to a completely overlooked wood like Polki (*Givotia rottleriformis*).

According to Karnataka State Handicrafts Development Corporation (KSHDC), several art forms are centuries old and were nurtured by the rulers of the state. Thus, Karnataka has a congregation of legacy and royalty catering to it that is best experienced in different arts and crafts. Karnataka's crafts are exhibited in various places and the royal homes rendering them and other decorative timelessness and a perpetuating tradition. Some handicraft arts such as ivory carving and inlaying works are currently not pursued as government has banned the trade in ivory. The government has also undertaken steps to retain the charms of these handicrafts, which has resulted in the up-gradation of several craft traditions (Pal, 1972).

Wooden handicrafts receive appreciation and are valued by the art lovers and consumers across the global. Such value rises from the traditional skills harboured by the artisans that are expressed through novelty and frequent innovation. Karnataka's handicrafts industry is an important supplier of handicrafts to the markets around the world. Handicrafts hold high prospect as a major source for employment. Aside this, handicraft sector is economically important, for a low capital investment can yield significant benefits for job creation and livelihoods.

1.1 Art and artisans in independent India

Traditionally, the artisan communities used various items like elephant ivory, deer antlers, and fire wood available in timber depots as raw material for carving artifacts, and the next generation artisans learnt the art by observing their parents. In a rapidly evolving global order after the Second World War, and nationally after 1947 with regard to dependence on natural resources to deal with hunger and to support the industry, a number of law and policy reforms were undertaken that had implications for availability of raw materials and workers in the handicrafts industry in general. Considering the context of WBH, such changes include enactment of the Karnataka Forest Act 1963, the Wild Life (Protection) Act 1972, the Child Labour (Prohibition and Regulation) Act 1986 and the Liquefied Petroleum Gas (Regulation of Supply and Distribution) Order 2000. Major implications of such legal provisions and changes have been the following: one, crafters involved in arts & crafts making using elephant ivory and deer antlers had to shift to wood species; two, children who observed and helped their parents in work sheds were not allowed to work and as they got educated they moved on to different avenues; and three, increased usage of LPG resulted in winding-up of timber depots which earlier supplied firewood to the artisans. In the recent years, timber e-auction has affected the artisans, as the wood required by them is very less in quantity and they have to compete with timber merchants. All these factors have directly and indirectly impacted the artisans. The dwindling artisans' spectrum, especially in rural sections raises concern, and there is a need to strengthen the handicraft traditions in the state by ensuring supply of raw materials and market linkages.

1.2 Status of handicrafts

Different agencies, forums, international organizations, national associations, researchers, scholars, and dictionaries articulate crafts in a variety of ways in different contexts. Handicraft products are largely produced by manual effort (with minimum or no input from machines) using substantial level of skill or expertise and a significant level of tradition, largely characterizing the legacy of survival.

"Items made by hand, often using simple tools, and generally artistic and/or traditional in nature. They include objects of utility and/or objects of decoration".

Government of India (1989)

"a skilled activity in which something is made traditionally with the hands rather than being produced by machines in a factory, or an object made by such an activity".

Cambridge Dictionary

"it must be predominantly made by hand. It does not matter if some machinery is also used in the process. It must be graced with visual appeal in the matter of ornamentation or inlay work or some similar work lending it an element of artistic improvement. Such orientation must be of a substantial nature and not a mere pretence".

Hon. SC in Louis Shoppe Judgement (1995)

Handicrafts are not only unique expression of cultures and the environment in which such cultures exist but also preserve history significantly through various products. Handicraft products demonstrate the socio economic changes occurring in the society. For example, crafters of Mysore (Mysuru) who used ivory for inlaying shifted to deer horns after the banning of ivory and later shifted to plastic acrylic polystyrene indicating the shift of materials from an art stand point.

According to the Livelihood Creation Project conducted by the South Asian Institute of Harvard University, Handicrafts Centres play a significant and prominent role in the economy employing crafters in rural and semi-urban areas. It generates substantial foreign exchange for the country while preserving cultural heritage. They estimated that around 11.65 million Indians were engaged in craft production in 2013, and projected 13.93 million in 2017 and 17.79 million in 2022. They assess a growing demand for handicraft and consciousness around toxicity in raw materials organic and fair-trade practices (<https://mittalsouthasiainstitute.harvard.edu/livelihood-creation-project-publications/>).

Chamikutty (2013) in the article *Crafting a livelihood, a snapshot of the Indian artifacts sector* states that, the global market for handicrafts is US\$ 400 billion, of which India's share is below 2%, representing a tremendous growth opportunity and a competitive advantage. Bhat and Yadav (2016) have reported that "Indian handicrafts are famous and competitive in the world market in two ways. Firstly, Indian handicrafts are rich and can be supplied in various transformations, and mixtures, i.e., in smaller sizes, and variety, which is the greatest strength compared to the neighbouring countries. Secondly, inherent craftsmanship is another major advantage of Indian handicrafts". Nandisha (2021) undertook a study on Strength-Weakness-Opportunity-Challenges (SWOC) analysis of the toy industries in Channapatna through a questionnaire survey of artisans and concludes that the international market is taking interest in the toys of Channapatna. But the younger generation needs to be trained in handicrafts as the work force is reducing.

1.3 Need for the study

The handicraft industry in Karnataka has a long history and there are several handicraft clusters in the state. However, wood-based handicrafts sector is one of the least organised sectors, and arriving at the total number of artisans involved in the craft, the persons/entities involved in providing/supplying the raw material, quantification of raw material used/demanded, and marketing details, with accuracy, is very difficult. Wood is an important raw material for the handicraft industry. However, the availability of wood has not been consistent and this has had implications for the traditional crafters involved in the handicrafts industry. A more serious implication of this has been the lesser number of crafters depending on handicrafts for their livelihood, which affects maintaining the tradition and the availability of the knowledge and skill to promote and sustain the handicraft industry, particularly at the cottage industry level.

Karnataka Forest Department (KFD) has been the major provider of wood material of appropriate tree species to the crafters. Over time, the supply of wood to crafters could not be maintained. Nonetheless, KFD continues to maintain the target of providing wood to crafters from government forests or through privately grown trees under social/agroforestry schemes.

Further, the dwindling supply of wood raw material for the handicraft industry can potentially lead to loss of livelihoods and art forms. Moreover, there is an increasing need for the creation of jobs, and the handicraft sector has great potential for creating jobs. Disappearing unique art forms, and valuable traditional knowledge and skills that are an output of culture evolved over centuries, cannot be allowed to be lost. As per the statistical analysis of Export Promotion Council for Handicrafts (EPCH), 2022 19% of export economy is through wooden handicrafts.

“This is the first time in last 30 years that a research organization is concerned about wood crafts and Miniatures”.

Sri Murgesh, Secretary KHAWA

It is essential that handicrafts sector is revived and boosted through appropriate policy initiatives. The first step in this direction is to collate all relevant information that enables the decision/policy makers to appreciate the need for development of an ecosystem for WBH sector to flourish.

The present study is undertaken to fulfil the above identified need for developing information about the crafters involved in handicrafts, the changing availability of wood for handicrafts, the prevailing perception among the crafters about the future of the industry, and to evolve the options for the future in the terms of availability wood as raw material. Such information can help in evolving fresh policy initiatives those can support the livelihoods of traditional crafters and promote entrepreneurship among them through MSMEs.

1.4 Objectives of the study

The following are the specific objectives of the present study.

1. To understand the current status of the wood-based handicrafts sector and the artisans involved in Karnataka state.
2. To access the current species-wise demand for wood and the sources from where such demand is met.
3. To suggest the way forward for promoting the wood-based handicrafts industry through wood provisioning for enhancing livelihood opportunities and fresh job creation.

* * * * *

2 Review of Literature: woods, crafts & craft hubs

Documented and publicly available information on wood-based handicrafts in Karnataka is limited and scattered. Besides it is mostly found in locally published literatures viz., folders, souvenirs, reports, magazines, and newspaper articles, monographs that are not easily accessible and found in libraries. Moreover, the literature available is mostly focused on regional handicrafts, and does not normally comprehensive cover the wood-based handicrafts in entire Karnataka state. This necessitated collecting information from libraries, internet, available peer-reviewed journals, personal interactions and interviews, visits to cottage industries and handicraft hubs. The information so collected is presented under different thematic sections

The artisan community at Karakushala Nagar, Mysore having 600 to 800 artisan families specializing in different art forms but mainly comprising wood inlay works have reached a point, where securing even two square meals-a-day is difficult and nobody is rendering them any assistance as orders have dried-up and there is no work. At least 15% to 20% of artisans have been selling vegetables or entered the construction centres to work as daily wagers.

“Uncertainty haunts Karnataka’s artisan community during lockdown” *The Hindu* (2020)

2.1 Source, supply and type of wood

In Karnataka, wood supply for handicrafts is obtained from different sources like the Karnataka Forest Department (KFD), private farmlands, and import from other states and countries. Over period of time, private farmlands have substituted Karnataka forest department supplies and are now the majority supply source of wood for handicrafts. According to Ray and Joshi (2021) the major species used traditionally in the handicraft Centres in Karnataka are *Adina cardifolia* (Haldu), *Ailanthus excelsa* (Maharukh), *Albizia lebbek* (Kokko), *Artocarpus heterophyllus* (Kathal), *Artocarpus hirsutus* (Aini), *Alstonia scholaris* (Chatian), *Anogeissus pendula* (Kardahi), *Azadirachta indica* (Neem), *Chloroxylon swietenia* (Satinwood), *Cinnamomum zeylanicum* (Cinnamon), *Diospyros ebenum* (Ebony), *Dysoxylum malabaricum* (White cedar), *Gmelina arborea* (Gamarai), *Hardwickia pinnata* (Piney), *Juglans regia* (Walnut), *Lagerstromia microcarpa* (Benteak), *Pterocarpus marsupium* (Bijasal), *Sterculia urens* (Gular and Tapsi), *Toona ciliata* (Toon), *Wrightia tinctoria*, *Pterocarpus santalinus* (Red sanders), *Givotia rottleriformis* (Polki) and *Gyrocarpus jacquini* (Helicopter tree).

While important handicrafts woods like *Wrightia tinctoria*, *Melia dubia*, *Adina cardifolia*, etc. are almost solely from private sources; rosewood and sandalwood are mainly supplied by KFD. Over the years, the supply of rosewood and sandalwood for artisans from KFD has reduced drastically. This is possibly because of lack of quality wood material aside other reasons (Dipak Sarmah 2018). Commenting on the changing supply of woods for handicrafts, Balasubramanyam (1965) mentions

that the dwindling supply of 'Aale' wood from the forests has made artisans import wood and this has pushed the prices of the toys of Channapatna. Dhan et.al. (2010) observe that depletion of sandal resources has also become a major concern for the Gudigars (sandalwood carvers of Uttara Kannada district) whose livelihoods are dependent on this resource. He reviewed the policy on sandalwood and discussed the constraints in sandalwood cultivation in private lands, felling, transportation and its use in major producer states of southern India viz. Karnataka, Tamil Nadu, and Kerala and opined that there is a need for liberalization of the existing policy regime.

An article in *The Economic Times* (2013) reported that Karnataka is famous for sandalwood carvings, and other handicraft items. The scarcity of raw materials and high prices are making the lives of artisans increasingly difficult. The total requirement of 1,000 sandalwood craftsmen is around 100 tonnes a year, but the Karnataka State Handicrafts Development Corporation (KSHDC) can meet barely 10% of the demand.

Ray and Joshi (2021) stated that while overexploitation of woods made the handicrafts species scarce, the Karnataka Tree Preservation Act, 1976 has made timber procurement difficult. This dwindling supply accompanied by high costs forces the artisans to renounce their profession.

The assessment of wood availability in Karnataka by Environmental Management and Policy Research Institute, Bengaluru (2022) has revealed that Handicraft Centers in the state require wood of particular style and demand the raw materials from the most valued sandalwood to the most overlooked Polki (*Givotia rottleriformis*). The study documents that in toy-making industry *Wrightia tinctoria* is widely used, and other preferred species are *Melia dubia*, *Millingtonia hortensis*, *Mangifera indica*, *Tectona grandis*, and *Swietenia mahagoni*. It assesses a total demand of wood by the handicrafts industry in the state as 1,42,120 cum and about 850 kgs of sandalwood.

2.2 Major art forms and crafts

Compendium of Indian Handicrafts and Handlooms (2017) mentions that encouraged by the erstwhile Maharaja, the meticulous process of carving on rich dark rosewood is a traditional craft of Karnataka practiced mainly in the royal city of Mysore. Dating back to the beginning of the 20th Century the world-famous wooden toys and carvings are produced at Channapatna, a town near Bangalore. Discussing the Kinnhal Craft from the town of Kinnhal, Gomathi et.al. (2019) describe it as a culturally rich craft of hand-painted wooden articles. The craft flourished under the royal patronage of the Vijayanagara Empire and received support from the Nawab of Koppal, Desais of Kinnhal, and from the Nawab Salar Jang of Hyderabad. The entire town of Kinnhal is famous for its Chowkis (Peeta) and religious idols.

KSHDC rates sandalwood carving as one of the most exquisite arts associated with Karnataka, as sandalwood carvings have an illustrious thousand-year history. Elegantly carved and scented sandalwood figurines, tables, boxes, caskets, stationary and even furniture find art-lovers and devotees around the world. The community of Gudigars of Shivmoggla and Mysore specialize in this craft and makes idols, statues, fancy souvenirs and mementos from Sandalwood (Ray and Joshi 2021).

2.3 Owners, Artisans and Workers

The owners conduct the handicrafts business established in handicraft units of different sizes through artisans and workers. An artisan is a skilled craft worker who makes or creates a piece of handicraft solely or partly by hand. Handicraft workers prepare material and carve, mould, assemble, weave, paint and decorate various articles. Most often, owners are also crafters. Crafters are often divided into two major categories viz owners-cum-workers and workers alone.

In Karnataka, nearly 5% of the artisans own the craft emporium. Such owners apart from themselves being crafters employ other crafters who assemble at a common place and execute the work daily. Such employed crafters are paid daily wages. In Mysore alone, of 1,270 artisans who belong mainly to the Viswakarma community, about 20 artisans have proprietorship. There are nearly 300 artisans who work at the workman sheds provided by the Government on a turn-key basis. These artisans sell handicraft products to the KSHDC.

These workers belong to different communities. Balasubramanyam K (1965) in *Handicrafts Survey Monographs* mentions that the Gudigar community of Goa are migrants to Mysore. They are settled in the districts of North Kanara and Shivamogga. Those settled in Shivamogga carried on with the craft of sandalwood carving under the patronage of the Royal family of Mysore. The rosewood carvers in the city of Mysore mostly belong to the Viswakarma caste. This community pursues the crafts of making articles in gold, brass, copper, iron and wood and locally they are called Akkasale, Kanchugara, Badagi, Shilpi and Kammaras, respectively. They claim descent from Viswakarma, the celestial architect. The Chitragars of Kinnal engaged in the craft of toy making belong to the same class as the Jingers in Gokak. They are migrants from Kushtagi, a neighbouring taluk headquarters. Their customs and habits are the same as those of the Jingers of Gokak.

2.4 Crafting skills

Influenced by the raw material availability and communities practicing them in their unique style, handicrafts in Karnataka are hubbed in different regions of the state. Handicraft hubs are centres where significant populations of artisans work to make handicraft products particular to the area of the artisans. The main wood-based handicrafts hubs in Karnataka include the following.

- a. Rosewood carving and Inlay of Mysore
- b. Channapatna Lacquerware
- c. Sandalwood carving
- d. Kinnhal toys
- e. Cane and Bamboo crafts

Rosewood Carving and Inlay of Mysore The ancient craft of rosewood carving is known for its elaborate rosewood inlay work. The art is under practice in Mysore for centuries just like sandalwood carving, however official documentations show its presence since 1870 and is said to have enjoyed the patronage of Mysore Maharajas. The wood even-cut and prepared for etching designs. This art gained GI tag in 2006. The Inlay work involves inserting pieces of coloured materials like ivory shells, pearl, horns, and sandalwood.

Channapatna Lacquerware This art form from Channapatna, known as the 'Gombegala Nadu' (toy town), has GI tag. Colourful Lacquerware are produced and used on primarily *Wrightia tinctoria* wood Rosewood and sandalwood raw material is also used occasionally. The crafted products include wooden toys, games and puzzles, jewellery, coasters, napkin rings etc. Channapatna toys has been the theme of Karnataka Tableau during 2015 Republic Day parade. To suit the evolving markets and tastes, several entrepreneurs are Channapatna craft. An organisation - Bharath Arts and Crafts - endeavours to promotes lacquerware artisans with product innovation.

Channapatna Crafts Park is India's first crafts park and is located at Channapatna in Karnataka. Channapatna is a crafts cluster of over 3000 traditional artisans engaged in the production of lacquerware. The Park was established to help preserve, nurture and grow skills by providing artisans with employment opportunities. This has been done through the provision of infrastructure and manufacturing facilities to exporters engaged in the production of wood craft, lacquerware and natural fibre products synonymous with the region. The infrastructure and facilities of the Park are also available to Architects, Designers and Companies for crafting and manufacturing of wooden products and lacquerware.

Spread over 14 acres of land, the Park has a sophisticated Common Facility Service Centre with state-of-the-art wood working machines. Also being set up is a Common Facility Service Centre for natural fibres. Manufacturer/Exporters are establishing their individual manufacturing centres within the Park. These companies are engaged in the production of fashion accessories, corporate gifts, kitchen accessories, lifestyle products, wooden furniture, toys & dolls, educational equipment, accessories for perfumed products, natural fibre products, cane & bamboo articles, and furniture.

Channapatna Crafts Park is a registered society with representation from the Department of Industries & Commerce, Government of Karnataka, Karnataka State Small Industries Development Corporation Limited, Visveswaraya Trade Promotion Centre, Karnataka State Handicrafts Development Corporation Limited, and six manufacturer exporters.

Channapatna Crafts Park website

Sandalwood (*Santalum album*) Carving Practiced primarily by the Gudigars of Sirsi, Sagara, Kumta, Soraba, Honnavar, Siddapur, and Mysore, sandalwood carving has established itself as a sought-after art. Female members of the Gudigars pursue sandalwood garland-making. Sandal carvings have gained appreciation all over the world and sandalwood articles are presented to the distinguished visitors to India.

Kinhal toys This culturally rich craft of hand-painted articles are easily differentiated owing to vibrant colours and intricate designs. Alongside traditional items like Vahanas, Palanquins, and Chowkis, Kinhal artisans now work on more popular items like wooden cradles, flowers, fruits, vegetables, decorative planks, and the Kama-Rati idols.

Cane and Bamboo Crafts Cane and bamboo based craft items are primarily a household industry and largely free from the use of any mechanical devise. This craft largely provides parttime

engagement to cultivators and forest dwellers. Practiced almost all over Karnataka, every district has its own characteristic style of bamboo products. Furniture items are also made from cane and bamboo with modern innovation. These materials are alternate material for wood-based handicraft industries.

Figure 2.1 A collection of bamboo and natural fibre crafts



A sample of Japi handicrafts

A sample of bamboo handicrafts

2.5 Handicrafts complexes and services

A cluster is a group of artisans ranging from 50 to 500 numbers. The chief objective of creating a cluster is to support and strengthen the existing organizational infrastructure that serves to improve the livelihoods of the rural population in a socially, culturally, and economically sustainable manner. The rich and varied craft tradition practiced by skilled rural artisans has strong market potential. Over some time, such objects are placed to enable the artisans to obtain the optimum market prices.

Historically, toy making is a rich legacy in India and dates back to over 5,000 years with rich cultural storytelling related to toys preserved by our ancestors. In India, every state has a toys related story. In earlier times, handicraft marketing was limited to small gatherings, local exhibitions, etc. Most of the time the artisans were not getting the optimum price. In this context, initially, a group of artisans joined together to organize a bigger exhibition like the Dussehra exhibition of Mysore.

To illustrate how the hubs in the handicrafts industry in India developed, an example of the Channapatna toy industry is briefly explained.

Channapatna is a town in the Ramangara district of Karnataka. It is known for handcrafted wooden toys and has a legacy of 200 years. The toys are made from local woods. The crafted toys are unique, tough, and eco-friendly making them safe and child-friendly. But the Channapatna toys industry faced a lot of challenges. The toy-making craft could not sustain their livelihoods. Some of the artisans left toy-making and migrated to nearby cities. The women folks got into bidi rolling, incense sticks making, and sericulture which was low paying. To tackle this situation, women were mobilized and were provided with skill training in toy making, lacquer, embroidery, and garment making which provided them a sustainable income and dignified livelihoods. Some women started their own tailoring business, picked up in garment industries but continued toy making. Finally, the artisans came together and started a company known as Artisans Pride Producer Company, run by themselves with trade and improvements.

Handicraft Service Centres Handicrafts sector in the country is organised under the Ministry of Textile through the office of its nodal agency - Development Commissioner (Handicrafts) - who is mandated to promote handicrafts and trade in handicrafts including exports through its Regional Offices and Handicraft Service Centres (HSC). At the state level, handicrafts are promoted by State Handicraft Corporations. HSCs function under the Regional Offices of Government of India and maintain a close liaison with the artisans and strive to provide services to artisans pertaining to tools, techniques and designs, and marketing opportunities.

In Karnataka, there are four handicraft centres under HSC infrastructure. They are:

- a. Bengaluru Handicraft Service Centre
- b. Dharwad Handicraft Service Centre
- c. Mangalore Handicraft Service Centre
- d. Mysore Handicraft Service Centre

The Bengaluru service centre acts as a regional design and technical development centre while the remaining three are marketing service and extension centres. The roles and duties of the above-mentioned Centres are available at the website of development commissioner handicrafts.

Further, the Karnataka Handicraft Industries Development Corporation Limited (KHIDC) has established infrastructure facilities for the artisans including residential-cum-work sheds at the following eight locations in the state.

1. Multi-crafts Complex, Mysore
2. Multi-crafts Complex, Bengaluru
3. Sandalwood crafts Complex, Sirsi
4. Sandalwood crafts Complex, Kumta
5. Lacquerware crafts Complex, Channapatna

6. Kinnhal crafts Complex, Kinnhal
7. Sandalwood crafts Complex, Sagar
8. Sandalwood crafts Complex, Soraba

Figure 2.2 Artisans work shed and training program in progress at Mysore



Figure 2.3 Artisans work shed and artifact at Sirsi



Figure 2.4 Artisans work shed and a sample artifact at Channapatna



Figure 2.5 Sandalwood crafts complex and guidgars at work in Sagara

Office building Sandalwood crafts complex

Guidgars

2.6 Substitute Woods

Due to reduced availability of woods used classically for in handicrafts sector certain new woods have been considered and found as good substitutes. Details of the same are presented in table 2.1.

Table 2.1 Selected alternate species of wood for wood-handicrafts

| | Common name | Scientific name |
|----|----------------------------------|---------------------------------|
| 1 | Earpod wattle | <i>Acacia auriculiformis</i> |
| 2 | River red gum | <i>Eucalyptus camaldulensis</i> |
| 3 | Sheesham/Sissoo/ Indian Rosewood | <i>Dalbergia sissoo</i> |
| 4 | Oil tree/ paradise tree | <i>Simarouba glauca</i> |
| 5 | Aini | <i>Artocarpus hirsutus</i> |
| 6 | Neem | <i>Azadirachta indica</i> |
| 7 | Genthi | <i>Boehmeria rugulosa</i> |
| 8 | Cinnmon | <i>Cinnamomum zeylanicum</i> |
| 9 | Persian lilac | <i>Melia azedarach</i> |
| 10 | Bijasal | <i>Pterocarpus marsupium</i> |

2.7 Future of wood-based handicrafts

Employing over 5 million artisans wood handicrafts sector offers major opportunity for employment in rural India. The economic potency of this sector is high, as it entails low capital investment, high ratio of value addition, and high potential for export (Dhamodaran 2021). Further, promoting rural tourism has the potential to encourage the artisans and boost the associated local economy (Manish et al 2022).

However, mechanization of handicrafts industry has had an impact on the classical artisans. Mechanisation has made it possible to produce imitation handicraft items within a short time and in a cost efficient manner in large numbers. As such locally made and imported products are available at a lower cost, they offer customers the choice to substitute classical handicraft products. The impact on the sales of handicrafts is compounded by the availability of machine-made products through online platforms as they become conveniently available. Artisans are

not competitively organised to promote their products over online platforms. A survey of 340 artisans in Kashmir has revealed that about 60% produce is sold through middlemen, 32% is sold directly to the customers and about 1% through digital platforms including social media (Ruheela et al. 2021). Marketing support by organising handicrafts melas and exhibitions and granting tax relaxations can promote handicrafts sector.

Lately, another factor impacting the businesses of artisans is construction of new roads for movement of tourist between destinations. Such new roads pass through city outskirts precluding the opportunity of availability of ready market for handmade craft products.

This scenario has further being impacted by occurrence of COVID-19 lockdowns that have disrupted supply chains of raw materials, working by artisans at common places, and organising dispatches and sales of handicrafts products. Inadequate infrastructure facilities, lack of emphasis on improving designs, and limited training opportunities is impacting the growth of wood-based handicrafts sector.

Generally, the sale of handmade products by the crafters has witnessed a downward trend. More structured intervention and assistance from the government, and through private funding including CSR opportunities, become necessary to maintain and conserve the art and exploit its potential as a source of livelihood and to earn foreign exchange through exports. However, lack of forest certification, sourcing Chain-of-Custody (CoC) certified timber, and toxicity certificate constitute major risk in wooden handicrafts exports.

* * * * *

3 Methodology

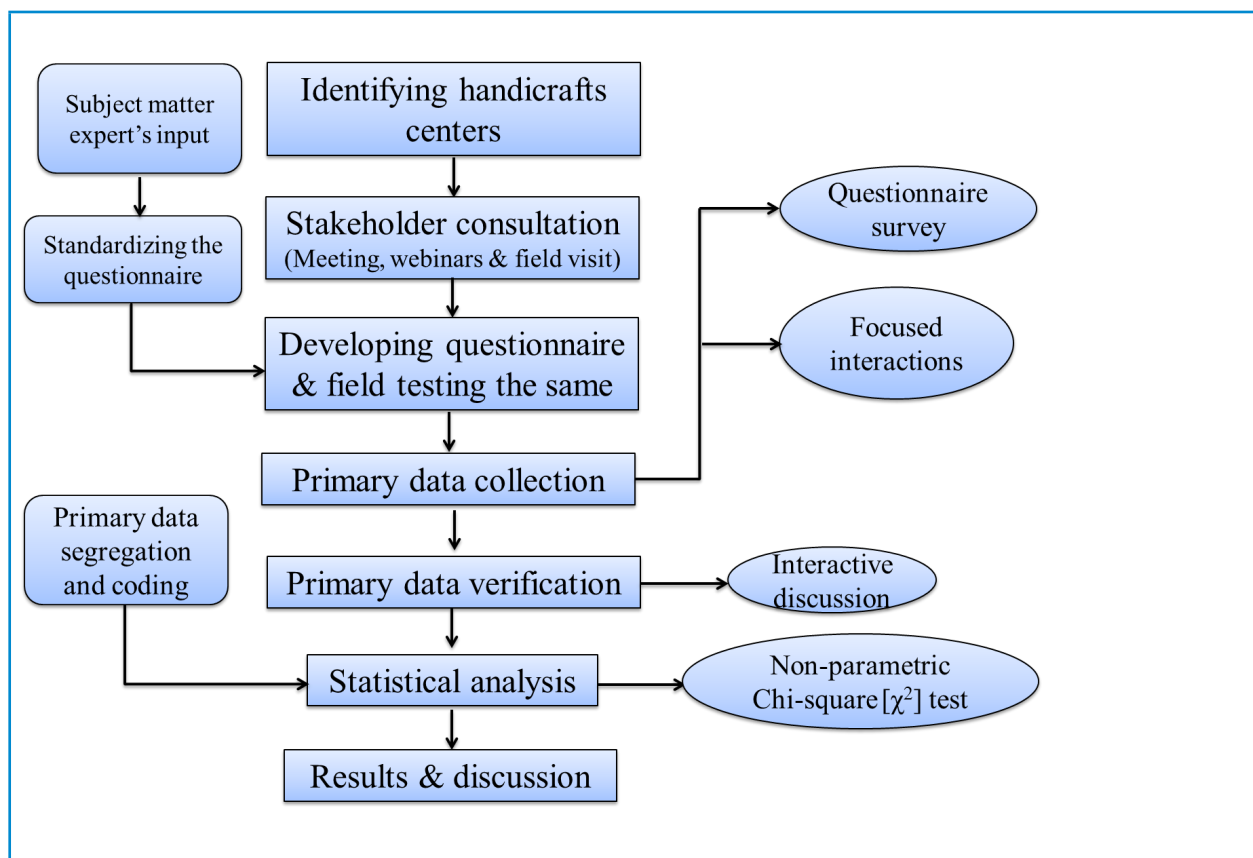
Several methods, tools, and techniques, have been adopted in the present study to access, collect, organise, analyse, and interpret the data from primary and secondary sources on the status of wood-based handicrafts, livelihoods of artisans, job creation, challenges in practicing handicrafts, and identification of policy needs in the state. The information in this regard being scarcely available and dispersed, we collaborated with major stakeholders for information sharing and developing analysis. A brief on such three stakeholders is as under.

- i. Karnataka Handicrafts Artisans Welfare Association – KHAWA
- ii. Karnataka State Handicrafts Development Corporation limited – KSHDC
- iii. Karnataka Forest Department - KFD

KHAWA They aim at providing training and organising skill development programmes for the artisans. Nationwide exhibitions are organised by the association to support the marketing of handicrafts. They also organise educational programs for the kids of artisans. More information about them is available at: https://www.ngofoundation.in/ngo-s-india/karnataka-handicrafts-artisans-welfare-association-contact-number-contact-details_i57055. **KSHDC** Karnataka State Handicrafts Development Corporation Limited, a Government of Karnataka undertaking, was established in 1964 under The Companies Act 1956. The objective of the corporation is to preserve, develop and promote handicrafts. KSHDC shared the information on crafters, assistance provided to artisans, handicraft hubs, schemes for the promotion of wood-based handicrafts, and data on wood provided to artisans (<https://cauverycrafts.com/>). **KFD** Karnataka Forest Department is a major supplier of woods for handicrafts such as sandalwood and rosewood through e-auction, and has shared data on wood sold and demand for wood by artisan.

3.1 Methodological approach

Primarily, the present study adopts the approach of direct interaction with the persons and their associations involved in the development of handicraft products and their marketing. Such an approach is useful because wood-based handicrafts sector has remained loosely organised and inadequately documented. Further, gathering information directly from the stakeholders ensures authenticity of information and credibility to the results. Towards this purpose, tools and techniques like structured questionnaire, focused group discussion, visits to centres of production, individual interviews, and webinars are employed. A schematic of the methodological approach followed in the present study is presented in Figure 3.1.

Figure 3.1 Methodological approach adopted for the study

Further, several meetings were conducted with handicrafts associations and members. Details of meeting conducted are given in the Table 3.1.

Table 3.1 Details of focussed interaction and consultation meetings

| | Particulars | Location | Date |
|----|---------------------------------------------------------------------------|------------------------------------------------------------|------------|
| 1 | Ms Sreekala Kadidal Independent Director/ CEO, Channapatna Crafts Park | Malleshwaram Project Office, EMPRI | 29.03.2022 |
| 2 | Channapatna Handicrafts Artisans Welfare Association. | Channapatna Crafts Park, Channapatna | 17.04.2022 |
| 3 | Karnataka Handicrafts Artisans Welfare Association (KHAWA). | Arun Fine arts, Mandi Moholla, Mysore | 27.05.2022 |
| 4 | Sri Devaramani, Deputy Director (Handicrafts) (R) | Malleshwaram Project Office, EMPRI | 01.06.2022 |
| 5 | Sri Puttswamy, Project Officer, KSHDC | Karakushala Nagara, Mysore | 27.06.2022 |
| 6 | Sri Ravindranath, Indraprastha Interiors and exteriors | Indraprastha interiors and exteriors, Ramohalli, Bengaluru | 18.06.2022 |
| 7 | Shri Girish S, Gudigar | Swadi arts and Crafts, Devanahalli, Bengaluru | 18.06.2022 |
| 8 | Sri Srinivas Shetty, Project Officer, KSHDC | Cauvery emporium office, Sagara, Shivamogga | 21.06.2022 |
| 9 | Sri Adarsh G Gudigar | Sandalwood Craft Complex, Sagara, Shivamogga | 21.06.2022 |
| 10 | Sri Ganesh Singh | Cauvery Emporium Office, Sirsi | 22.06.2022 |

| | Particulars | Location | Date |
|----|--------------------------------------------------------------------------|-----------------------------------------------------------------------|------------|
| 11 | Sri Mahesh V, Gudigar | Cauvery Emporium Office, Sirsi | 22.06.2022 |
| 12 | Sri Arun Shetty | The Sandalwood Producer Co-operative Association, Gudigargalli, Kumta | 23.06.2022 |
| 13 | Sri Santosh Kumar Chitragar | Chitragar Colony, Kinhal, Koppla | 25.06.2022 |
| 14 | Sri Kishor N Chitragar | Kinhal, Koppla | 25.06.2022 |
| 15 | Sri Ashok Kumar, President KHAWA and proprietor Arun fine arts, Mysore | Malleshwaram Project Office, EMPRI | 15.09.2022 |
| 16 | Sri Murgesh, Secretary KHAWA and proprietor Mysore Miniatures, Mysore | Malleshwaram Project Office, EMPRI | 15.09.2022 |
| 17 | Sri Devaramani, Deputy Director (Handicrafts) (R) | Malleshwaram Project Office, EMPRI | 16.09.2022 |
| 18 | Sri Arun Shet, District secretary KHAWA, Uttar Kannada | Malleshwaram Project Office, EMPRI | 16.09.2022 |
| 19 | Dr S R Shukla, Scientist – G Institute of Wood Science and Technology | Institute of Wood Science and Technology | 15.10.2022 |
| 20 | Sri Vishwanath R Nayak, Owner Mahalsa designer doors | Mahalsa Design Doors, St. Marks' Road, Bengaluru | 20.10.2022 |

Details of the webinars, stakeholder consultation meetings, and field visits are given in **Annexure 1**. Field visits and consultations have been useful for data collection and verification.

3.2 Questionnaire survey

The questionnaire used in the present study has evolved in several steps. The initially prepared questionnaire was first field-tested in Channapatna Crafts Park (CCP) for clarity, comprehensibility and validation. After the field test, the questionnaire was translated from English to Kannada for better communication with the artisans, and questions regarding the procurement of the wood were added. The questionnaire was finalised after consulting various experts in the Handicraft Centres.

The purpose of the questionnaire is to assess the availability of wood as raw material for crafters practicing handicrafts in the state of Karnataka, including to understand the issues being faced by crafters, impact of reduced availability of wood for handicrafts, the disappearing skills pertaining to handicrafts, the scope for job creation through promotion of handicrafts, and the possible options to address these issues. To undertake the (questionnaire) survey, the details of artisans were collected from four Handicrafts Service Centres viz., Mysore, Bengaluru, Mangalore and Dharwad. List of artisans was taken and validated through field surveys. Questionnaire survey was administered through Google platform and the collected information was downloaded in excel format for analysis. The respondents were explained the purpose of undertaking the survey and their informed consent was obtained. The responses recorded were informed to the subjects. Questionnaire administrator ensured that a respondent has correctly understood the questions. Residual ambiguities in responses were settled by collecting information from other stakeholders.

The questionnaire used in the present study is presented as **Annexure 2**. Questionnaire has 4 sections and a total of 24 open and multiple-option questions. Section 1, 2 and 3 contain 3,

1 and 4 questions, respectively about contact and identification details of the respondent, and interview location. Section 4 has 16 questions on artefacts, artisans, wood requirement, wood availability, challenges faced *et cetera*. The responses recorded in the questionnaire survey are coded as quantified values for analysis, and the details of same are given in **Annexure 3**.

3.3 Focused Discussions

Focused discussions with the business owners and the authorities involved in the promotion of wood-based handicrafts in the state were conducted either through meeting with the associations of handicraft industries or one-to-one interviews with association heads and business owners. Subsequent to the discussion, the challenges and way-outs for artisans, small- and large-scale industries were analysed.

3.4 Data verification and sample size

The list of artisans from registered handicraft service centres was collected and the data in it was cross-verified with artisans who were randomly selected in the respective centres. As indicated in the Table 3.2 the sample size varied from 9.50% to 100%. The artisans were sampled to represent stratified age, gender, educational qualification and economic status. This ensured that the sample size represented the population well, and the sample size is adequate.

Table 3.2 Registered and surveyed artisans from select handicrafts centres

| Handicrafts Centre 1 | Number of registered artisans 2 | Number of surveyed artisans 3 | Percentage 4 |
|---------------------------------------------------------|------------------------------------|----------------------------------|-----------------|
| Mysore | 4,637 | 442 | 9.50 |
| Bengaluru | 139 | 29 | 20.86 |
| Mangaluru | 40 | 46* | 100 |
| Dharwad | 46 | 13 | 28.26 |
| Total | 4,862 | 530 | 10.92 |
| *Additionally, 6 unregistered artisans were interviewed | | | |

* * * * *

4 Results and Discussion

Results from the questionnaire survey, focused group discussions, and interactions with individuals are presented in this chapter based on the data organised handicrafts centre-wise. There are four handicraft centres in the state, namely Bengaluru, Mysuru, Mangaluru and Dharwad. The respondents to the questionnaire survey have been identified on random basis from among those available on the day of visit to a service centre. Date of visit to a service centre was decided in advance and communicated to the centres. The sample of the respondents studied is assumed to be the representative of the total population.

To our knowledge this is the first of its kind attempt to understand the wood handicrafts sector focusing on the availability of raw material covering the entire state of Karnataka. Accordingly, we have discussed the results in terms of the present requirement, actual availability, and demand projections for wood raw materials in the state, as the requirement and availability depend on several factors including marketing opportunities, the study presents and discusses results based on social parameters such as gender, age classes, and caste of artisans. Whenever helpful, the survey results are presented in terms of percentages for ready comprehension of different factors studied.

Further, on-site visits, one-to-one interactions, and questionnaires administration have exposed the study team to several challenges, solutions, ideas, and suggestions, which have been identified and articulated in the sections on major conclusions, policy proposals, and the way forward.

4.1 Questionnaire Survey

Questionnaire survey was administered with 530 respondents. Of these, 524 are registered and 6 are unregistered artisans with Handicraft Service Centres. This constitutes about 11% of the total number of registered artisans in the state.

4.1.1 Gender and wood crafts

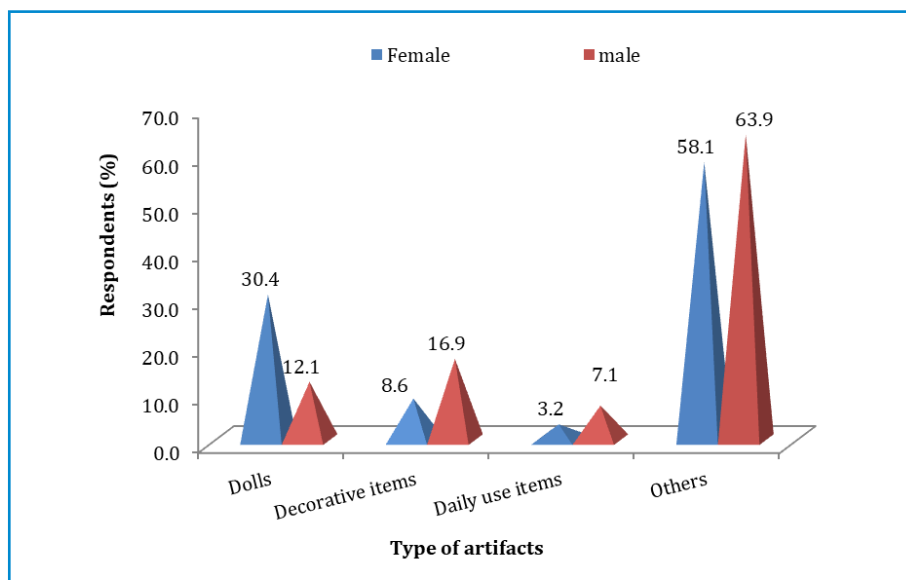
The information on the number of male and female participant artisans in the questionnaire survey is presented in Table 4.1.

Table 4.1 Gender of the surveyed respondents

| | Gender | Total number of artisans registered | Artisan surveyed | |
|------------------------------------------|--------|-------------------------------------|------------------|------------|
| | | | Number | Percentage |
| 1 | Female | 1045 | 93 | 17.5 |
| 2 | Male | 3817 | 437 | 82.5 |
| | Total | 4862 | 530* | 100 |
| *six unregistered artisans were surveyed | | | | |

Among the artisans surveyed, about 58% of the female and 64% of male artisans are engaged in other than decorative handicrafts, dolls, and daily use artifacts. Such other items include carpentry, carvings, patch work, garland making, polishing, wall panels, furniture, and such other works. Gender-wise proportion of female and male artisans engaged in different wood-handicrafts is presented in Fig 4.1.

Figure 4.1 Types of artifacts manufactured by female and male artisans



About 37% of the female as well as male artisans adopted WBH tradition hereditarily. 37.6 and 25.8% of female artisans have adopted handicrafts vocation after training and for other reasons, respectively (Fig 4.3). Such percentage in case of male artisans is 7.8 and 55.4%. Other reasons include through friends, as workers, self-interest *et cetera*. Further, from Table 4.2, it is seen that the average experience of female and male artisans is 17.5 and 25 years, respectively. Pertaining to the place of work, female artisans prefer to work from home (52.7%) than from factory (17.2%) or crafts shops (30.1%). However, 45.3, 29.5 and 25.2% of male artisans work from factories, home, and craft shops, respectively (Table 4.3).

Figure 4.2 Adoption to wood-based handicrafts by male and female artisans

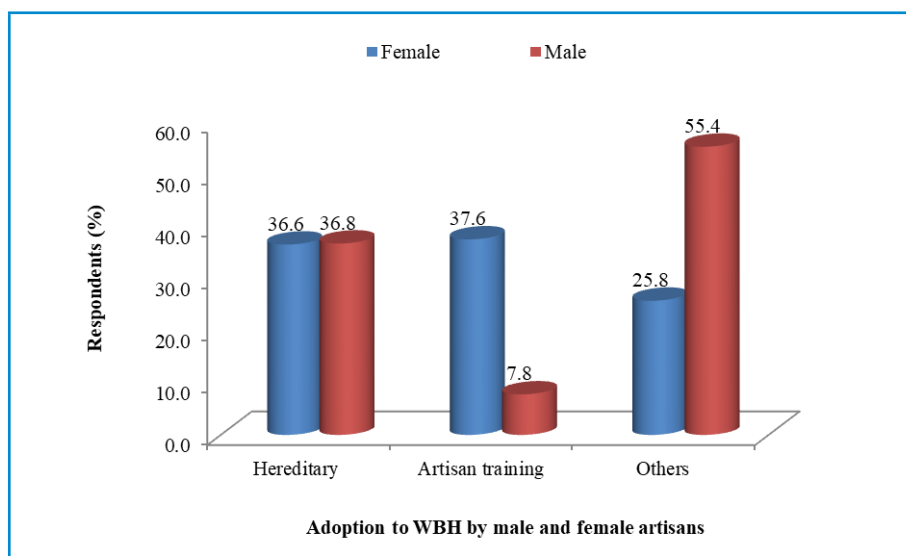


Table 4.2 Artisans years-of-practice with the wood-based handicrafts

| | Years of practice | Female | | Male | |
|--------------|-------------------|-----------|------------|------------|------------|
| | | Numbers | Percentage | Numbers | Percentage |
| 1 | <12 | 38 | 40.9 | 78 | 17.9 |
| 2 | 12-22 | 16 | 17.2 | 81 | 18.5 |
| 3 | 23-32 | 29 | 31.2 | 153 | 35.0 |
| 4 | 33-42 | 8 | 8.6 | 80 | 18.3 |
| 5 | 43-52 | 2 | 2.1 | 34 | 7.8 |
| 6 | 53-62 | 0 | 0.0 | 11 | 2.5 |
| Total | | 93 | 100 | 437 | 100 |

Table 4.3 Place of crafting WBH by artisans

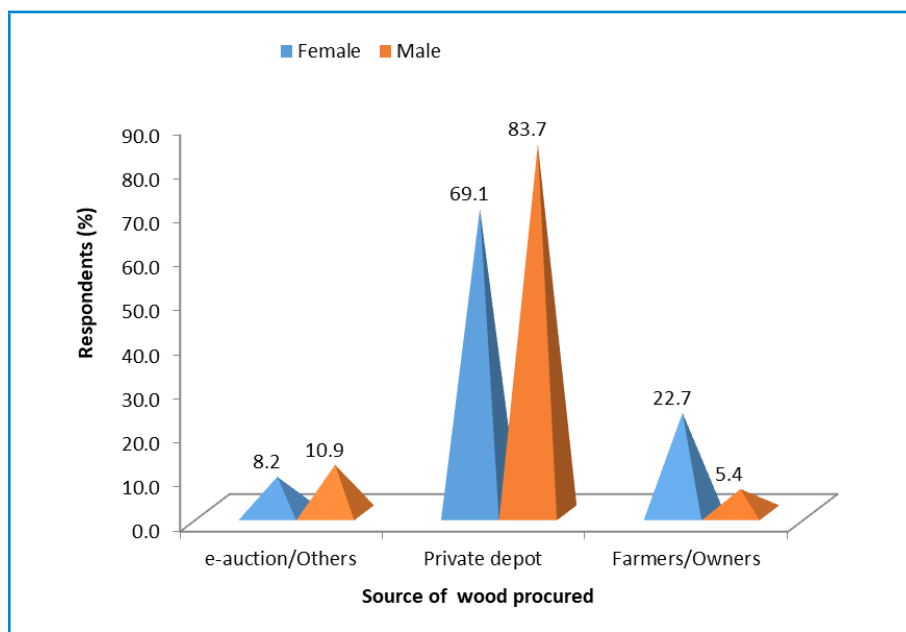
| | Workplace | Gender | | | |
|--------------|------------------|-----------|------------|------------|------------|
| | | Female | | Male | |
| | | Nos. | % | Nos. | % |
| 1 | Factory | 16 | 17.2 | 198 | 45.3 |
| 2 | Home | 49 | 52.7 | 129 | 29.5 |
| 3 | Crafts shop/park | 28 | 30.1 | 110 | 25.2 |
| Total | | 93 | 100 | 437 | 100 |

Information on the contribution of income from handicrafts activity to the families of artisans is presented in Table 4.4. It is seen that income from handicraft activity is the major source for such families.

Table 4.4 Contribution of income from handicraft activity to the artisan families

| | Contribution to family Income | Female | | Male | |
|--------------|-------------------------------|-----------|------------|------------|------------|
| | | Number | % | Number | % |
| 1 | < 50 % | 32 | 34.4 | 24 | 5.5 |
| 2 | 50-75 % | 4 | 4.3 | 42 | 9.6 |
| 3 | 76-100 % | 57 | 61.3 | 371 | 84.9 |
| Total | | 93 | 100 | 437 | 100 |

Private depots are the major sources for wood for WBHs, while government sources provide for less than 10% (Fig 4.3). About 79.9% female and 88.2% male artisans expressed that difficulties are faced in obtaining wood raw materials.

Figure 4.3 Source of wood for artisans

4.1.2 Age-groups and wood craft

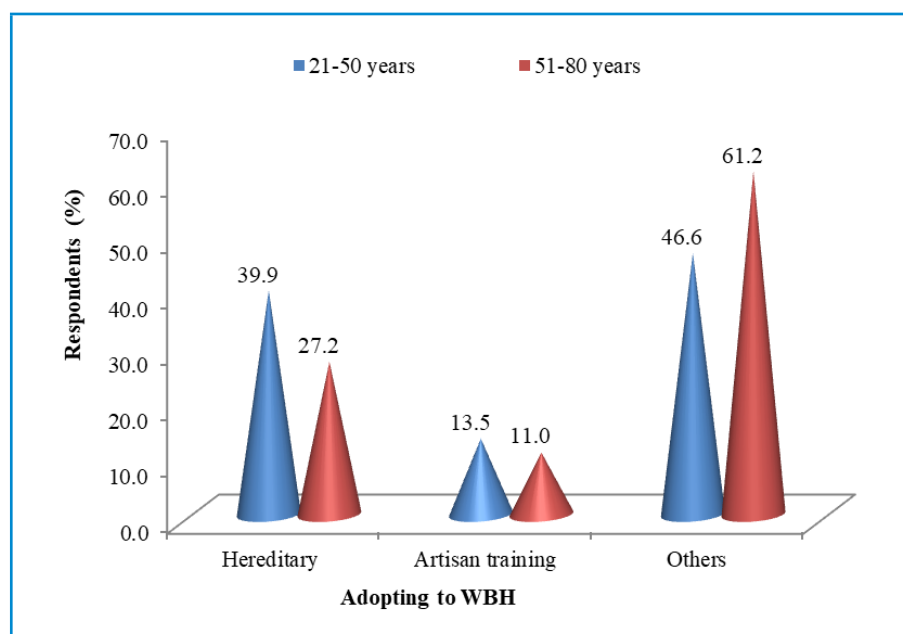
The age-group wise segregation of the respondents in two age-groups - 21 to 50 and 51 to 80 years - is presented in table 4.5. Three-fourth of the artisans fall under 21-50 years age-groups. It is seen that both the age-groups have similar proportion-trend of production of different category wood handicrafts (Table 4.6). Noticeably, artisans in 51-80 age-group produce less of daily-use items and significantly higher proportion of other items, which include carvings, patch work and furniture. Adoption to WBH in the age-groups studied is presented in Fig 4.4.

Table 4.5 Classification of respondents by age group

| | Age-group (years) | Respondents | |
|--------------|-------------------|-------------|------------|
| | | Nos. | % |
| 1 | 21-50 | 401 | 75.7 |
| 2 | 51-80 | 129 | 24.3 |
| Total | | 530 | 100 |

Table 4.6 Type of handicraft Preparation by age group

| | Type of handicraft | Age-group (years) | | | |
|--------------|--------------------|-------------------|------------|------------|------------|
| | | 21-50 | | 51-80 | |
| | | Numbers | % | Numbers | % |
| 1 | Dolls | 66 | 16.5 | 15 | 11.6 |
| 2 | Decorative items | 65 | 16.2 | 17 | 13.2 |
| 3 | Daily-use items | 29 | 7.2 | 5 | 3.9 |
| 4 | Others | 241 | 60.1 | 92 | 71.3 |
| Total | | 401 | 100 | 129 | 100 |

Figure 4.4 Adopting to WBH in the two age-groups.

To understand which age-group of the population has involved in WBH, the analysis revealed that about 41.9% of the population are into WBH making for about 33-42 years and are in age-group 51-80 years, while 37.9% of population of age group 21-50 years are into WBH making for 23-32 years. This was statistically significant with other categories as given in Table 4.7 at 5% level by Chi-square test.

Table 4.7 Years of practice with WBH in the two age-groups

| | Years of practice | Age group (years) | | | | χ^2 Test |
|-------|-------------------|-------------------|------|-------|------|---------------|
| | | 21-50 | | 51-80 | | |
| | | Nos. | % | Nos. | % | |
| 1 | < 12 | 115 | 28.7 | 1 | 0.8 | 213.47* |
| 2 | 12-22 | 92 | 22.9 | 5 | 3.9 | |
| 3 | 23-32 | 152 | 37.9 | 30 | 23.2 | |
| 4 | 33-42 | 34 | 8.5 | 54 | 41.9 | |
| 5 | 43-52 | 6 | 1.5 | 30 | 23.2 | |
| 6 | 53-62 | 2 | 0.5 | 9 | 7.0 | |
| Total | | 401 | 100 | 129 | 100 | |

N=530, *Significant at 5% level, χ^2 (0.05,5 df) =11.070

Information about the place of practicing the craft is provided in Table 4.8. The percentage of artisans in the two age-groups practicing the craft from factory, home, and crafts shop are comparable. Similar are the results for contribution to family income in the two age-groups (Table 4.9). Similarity on these grounds between the two age-groups is also confirmed by the chi square test.

Table 4.8 The place of crafting WBH by different age-groups

| | Workplace | Age group (years) | | | | χ^2 Test |
|-------|-------------------|-------------------|------|-------|------|--------------------------|
| | | 21-50 | | 51-80 | | |
| | | Nos. | % | Nos. | % | |
| 1 | Factory | 165 | 41.1 | 49 | 38.0 | 2.87^{NS} |
| 2 | Home | 127 | 31.7 | 51 | 39.5 | |
| 3 | Crafts shop/ park | 109 | 27.2 | 29 | 22.5 | |
| Total | | 401 | 100 | 129 | 100 | |

N=530, NS - Non-significant, χ^2 (0.05,2 df) =5.991

Table 4.9 Contribution to family Income by various age groups

| | Contribution to family Income | Age group (years) | | | | χ ² Test |
|-------|-------------------------------|-------------------|------|-------|------|---------------------|
| | | 21-50 | | 51-80 | | |
| | | Nos. | % | Nos. | % | |
| 1 | Less than 50 % | 46 | 11.5 | 10 | 7.8 | 2.22 ^{NS} |
| 2 | 50-75 % | 32 | 8.0 | 14 | 10.8 | |
| 3 | 76-100 % | 323 | 80.5 | 105 | 81.4 | |
| Total | | 401 | 100 | 129 | 100 | |

N = 530, NS - Non-significant, χ² (0.05,2 df) =5.991

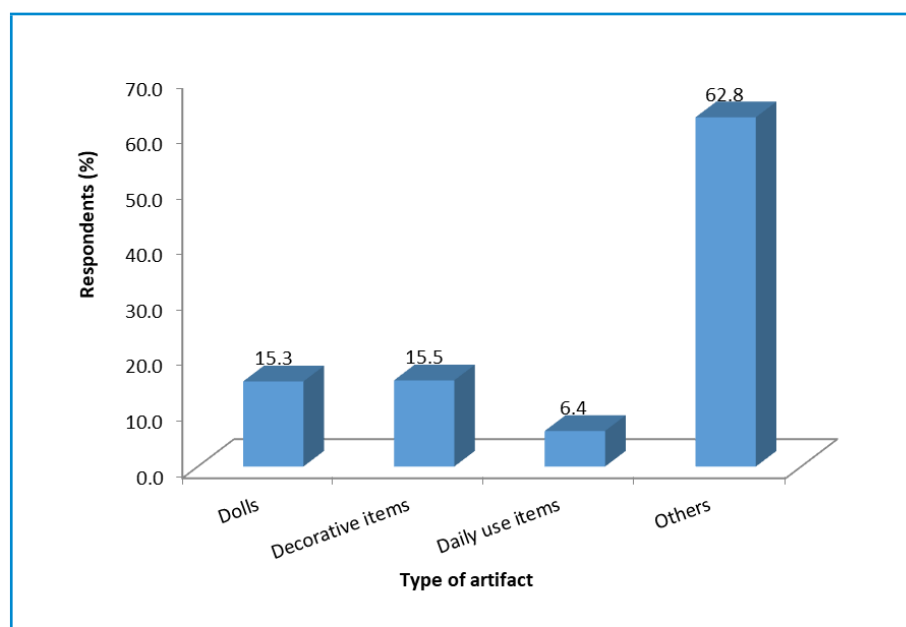
In both the age groups major wood source were private sources and government sources provide about 10% of the wood utilised (Table 4.10). About 78.3 and 90.7% respondents in 21-50 and 51-80 age groups mention about the scarcity of wood raw material. Rest did not face such scarcity, as 21-50 age-group artisans work in factories where owners provide the wood and about 10% artisans in 51-80 age-group manage large units and are able to arrange wood.

Table 4.10 Source of wood procured by different age-groups

| | Source of wood procured | Age group (years) | | | |
|--------------|--------------------------------|-------------------|------------|------------|------------|
| | | 21-50 | | 51-80 | |
| | | Nos. | % | Nos. | % |
| 1 | e-auction/KFD/Cauvery emporium | 33 | 8.2 | 14 | 10.9 |
| 2 | Private sources | 277 | 69.1 | 108 | 83.7 |
| 3 | Owners | 91 | 22.7 | 7 | 5.4 |
| Total | | 401 | 100 | 129 | 100 |

4.1.3 Artisans and artifact types

Artisans in the state produce different types of artifacts that are broadly categorised under four main groups - doll making, decorative items, daily-use items, and other items (e.g., carpentry, carvings, patch work, garland making, polishing, wall panels, furniture *et cetera*). The ratio in which these artifact types are produced is presented in Fig 4.7.

Figure 4.5 Types of artifacts produced by the artisans in the state

4.1.4 Adopting the present occupation

In the present study, three major channels have been identified adopting which the surveyed artisans have taken to wood handicraft-making as occupation for livelihood. They are - hereditary, artisan training, and others (through friends, as workers, interest *et cetera*). The survey results reveal that about 50.2, 36.8 and 13% of surveyed artisans entered the profession through others, hereditary and trainings channels, respectively (Table 4.11).

Table 4.11 Channels for adopting to WBH profession

| | Channel for adopting WBH | Respondents | |
|-------|--------------------------|-------------|------|
| | | Numbers | %age |
| 1 | Hereditary | 195 | 36.8 |
| 2 | Training | 69 | 13.0 |
| 3 | Others | 266 | 50.2 |
| Total | | 530 | 100 |

4.1.5 Artifacts manufacturing venue

The WBH manufacturing is done either in factories/work sheds, home or in Crafts Park/ shops. Among the surveyed artisans about 40.4, 33.6 and 26% worked in factories, home and crafts Parks/shops, respectively (Table 4.12).

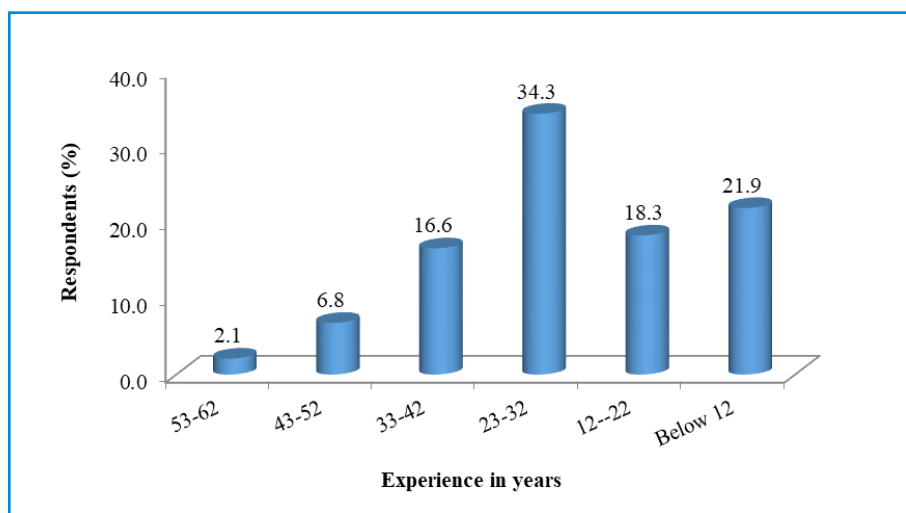
Table 4.12 Response on handicraft manufacture venue

| | Venue | Respondents | |
|-------|-------------------|-------------|------------|
| | | Number | Percentage |
| 1 | Factory | 214 | 40.4 |
| 2 | Home | 178 | 33.6 |
| 3 | Crafts shop/ park | 138 | 26.0 |
| Total | | 530 | 100 |

4.1.6 Experience in WBH-making

Survey data on respondent percentage and years of continued engagement with wood-based handicrafts is shown in Figure 4.8. Only 21.9 and 2.1% of the respondents had less than 12 years and between 53 and 62 years of engagement in the sector, respectively. A majority (182 of 530 i.e., 34.3%) of respondents have been engaged in this sector for 23 and 32 years. The data shows that only about 2% artisans continue to craft beyond 52 years of work life. While the survey reveals that about 36.8% of the artisans practice the crafts as hereditary engagement, the total percent of artisans with more than 32 years of engagement adds to only 25.5%. This may be an indication that hereditary artisans are shifting to other professions.

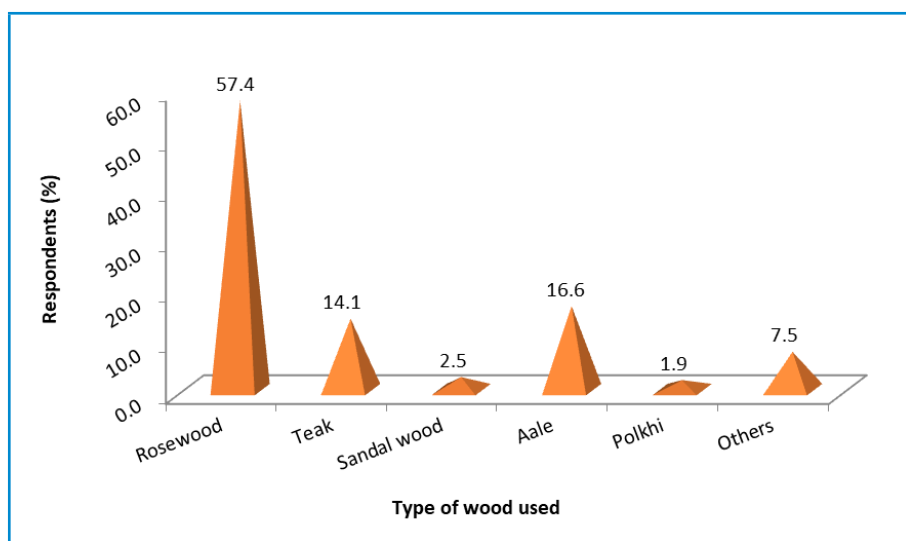
Figure 4.6 Period of engagement and experience with the WBH



4.1.7 Wood for handicrafts

Information collected during the survey on the species of wood used in wood handicrafts reveals that about 57.4, 16.6, 14.1, 2.5, 1.9 and 7.5% of artisans depend on rosewood, aale, teak, sandalwood, polkhi and other species (*Haldina cordifolia*, *Lannea coromandelica*, *Alangium salviifolium*, *Syzygium cumini* etc), respectively (Fig 4.10).

Figure 4.7 Tree species woods used in crafts making



Regarding the quantity of wood consumed by artisans per month, majority of the artisans (49.2%) informed that they use <10cft/month. Among the remaining, 33.4, 14.7, and 2.7% of artisans use 10-50cft/month, 51-100cft/month and >200cft/month (Fig. 4.11). Sources of wood to artisans are presented in Table 4.13.

Figure 4.8 Quantity of wood used per month by the artisans

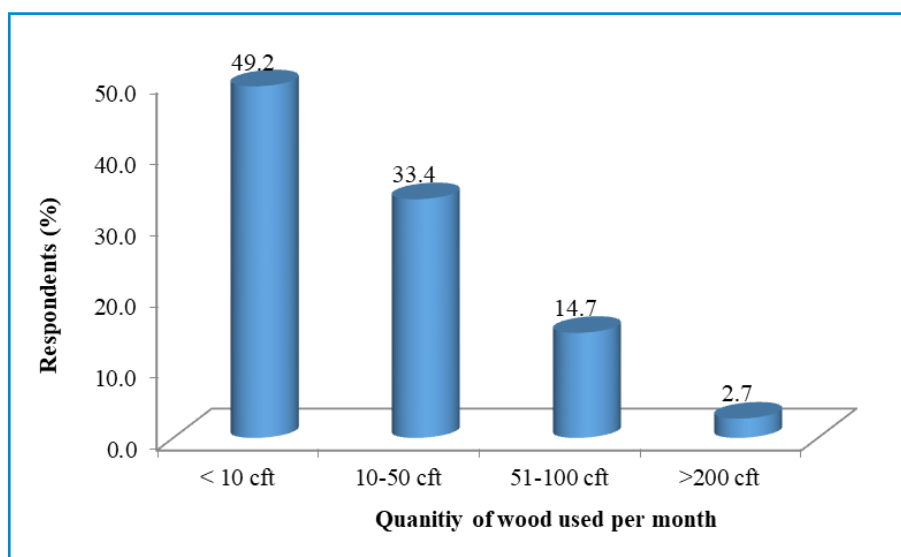


Table 4.13 Details of wood source

| | Source of procured wood | Respondents | |
|-------|--------------------------------|-------------|------|
| | | Numbers | % |
| 1 | e-auction/KFD/Cauvery emporium | 47 | 8.9 |
| 2 | Private depot | 385 | 72.6 |
| 3 | Farmers/Owners | 98 | 18.5 |
| Total | | 530 | 100 |

4.1.8 Sources of income

Most of the artisans (90.6%) are members of self-help groups. For 98.5% of the surveyed artisans, crafting of WBH is the primary source income. The data on proportion of family income from WBH is presented in Table 4.14.

Table 4.14 Proportion of artisan family income from WBH crafts

| | Proportion of Family Income | Respondents | |
|-------|-----------------------------|-------------|------|
| | | Number | % |
| 1 | < 50 % | 56 | 10.6 |
| 2 | 50-75 % | 46 | 8.7 |
| 3 | 76-100 % | 428 | 80.7 |
| Total | | 530 | 100 |

4.1.9 Wood species and quantities

The wood used by artisans registered at different centers was recorded and the results reveal that about 68.6 and 19.9% of artisans use rosewood and aalewood, respectively. At Bengaluru Center, only teak (96.6%) and rosewood (3.4%) are used. At Mangalore Center a majority (69.69%) use teak followed by 23.9% using sandalwood and 6.5% other species i.e., *Haldina cordifolia*, *Lannea coromandelica*, *Alangium salviifolium*, *Syzygium cumini* etc. At Dharwad Center, 76.9% of artisans use Polkhi, while 15.4% use Teak and 7.7% use other species. Details of the same are presented in Figure 4.12. The quantity of wood used by artisans varies among the service centers and the same is presented in Table 4.15.

Figure 4.9 Type of woods used by artisans at different handicraft centres

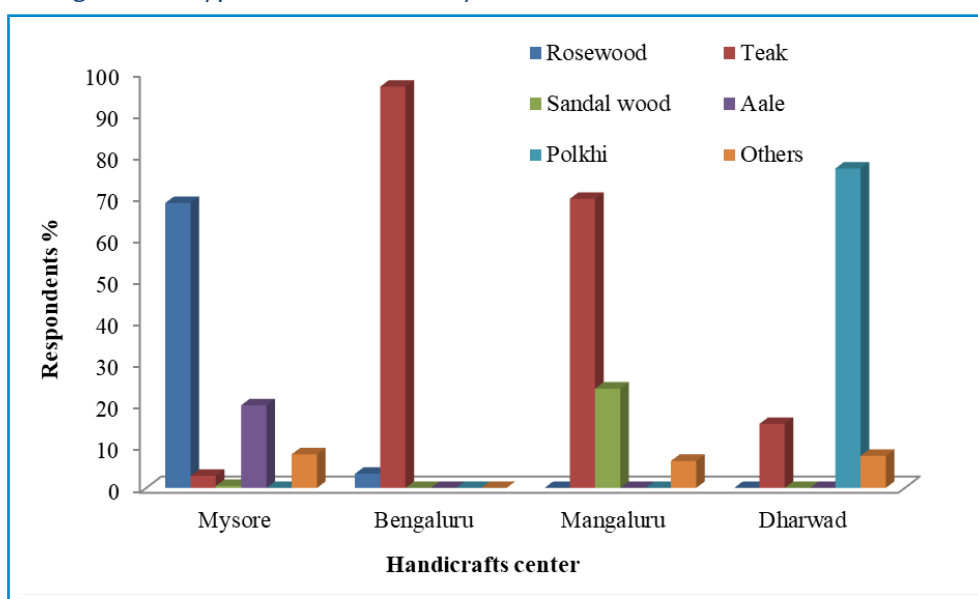


Table 4.15 Centre-wise response on total wood used per month for handicrafts

| Wood used / month | Centre | | | | | | | |
|-------------------|------------|------------|-----------|------------|-----------|------------|-----------|------------|
| | Mysore | | Bengaluru | | Mangalore | | Dharwad | |
| | Nos. | % | Nos. | % | Nos. | % | Nos. | % |
| < 10 cft | 248 | 56.1 | 0 | 0 | 13 | 28.3 | 0 | 0 |
| 10-50 cft | 164 | 37.1 | 0 | 0 | 0 | 0.0 | 13 | 100 |
| 51-100 cft | 28 | 6.3 | 27 | 93.1 | 23 | 50.0 | 0 | 0 |
| >200 cft | 2 | 0.5 | 2 | 6.9 | 10 | 21.7 | 0 | 0 |
| Total | 442 | 100 | 29 | 100 | 46 | 100 | 13 | 100 |

4.2 Demand for wood

The annual demand for wood and its availability as recorded during questionnaire survey for the participants is presented in Table 4.15. Further, such demand and availability is extrapolated over all the artisans at a centre and the total demand and availability gap is represented in Table 4.16.

Table 4.16 Annual wood demand and availability (cum) at different service centres

| | Service Centre | Artisan numbers | Demand* | Availability | Shortage |
|-------|----------------|-----------------|---------|--------------|----------|
| 1 | Mysore | 442 | 2,864 | 2,143 | 721 |
| 3 | Bengaluru | 29 | 349 | 279 | 70 |
| 4 | Mangaluru | 46 | 821 | 788 | 33 |
| 5 | Dharwad | 13 | 86 | 19 | 67 |
| Total | | 530 | 4,120 | 3,229 | 891 |

* Channapatana crafts park requirement is assessed separately as 1,38,000 cum/annum

Table 4.17 Extrapolated quantities (cum) for wood demand and availability

| | Service Centres | Artisan numbers | Demand | Availability | Shortage |
|-------|-----------------|-----------------|--------|--------------|----------|
| 1 | Mysore | 4,637 | 29,396 | 22,482 | 6,914 |
| 2 | Bengaluru | 139 | 1,376 | 1,337 | 39 |
| 3 | Mangaluru | 40 | 714 | 685 | 29 |
| 4 | Dharwad | 46 | 85 | 67 | 18 |
| Total | | 4,862 | 31,571 | 24,571 | 7,000 |

The total annual requirement of wood for handicrafts in the state is about ^{1*}1,69,571 cum for other woods, and 850 kgs for sandalwood. Further, keeping in view of the present status of wood consumption and requirement of each of the centres, annual demand is projected @ 5 and 10% per annum (Table 4.17).

Table 4.18 Projected annual wood requirement

| Year | Growth in demand @5% | | Growth in demand @10% | |
|------|----------------------|------------|-----------------------|------------|
| | Other woods | Sandalwood | Other woods | Sandalwood |
| | (cum) | (kg) | (cum) | (kg) |
| 2022 | 1,69,571 | 850 | 1,69,571 | 850 |
| 2023 | 1,78,050 | 893 | 1,86,528 | 935 |
| 2024 | 1,86,952 | 937 | 2,05,181 | 1,029 |
| 2025 | 1,96,300 | 984 | 2,25,699 | 1,131 |
| 2026 | 2,06,115 | 1,033 | 2,48,269 | 1,244 |
| 2027 | 2,16,420 | 1,085 | 2,73,096 | 1,369 |
| 2028 | 2,27,241 | 1,139 | 3,00,405 | 1,506 |
| 2029 | 2,38,603 | 1,196 | 3,30,446 | 1,656 |
| 2030 | 2,50,534 | 1,256 | 3,63,490 | 1,822 |

^{1*} the total annual requirement of wood for handicrafts in the state is mentioned as 1,42,120 cum per annum in the EMPRI report on wood availability in the state published in the year 2022. The said figure includes the requirement by Channapatna artisans @1,38,000 cum and that estimated for only the population points surveyed @ 4,120 cum. The total requirement assessed in this report @ 1,69,571 cum is after extrapolating the requirement over total population of artisans at the four service centres excluding Channapatna artisans, to which then, requirement by Channapatna artisans @ 1,42,000 cum is added.

4.3 Potential for job creation

Karnataka state has a rich portfolio of handicrafts of reputation, which includes wood handicrafts. Moreover, there are a number of handicrafts products from Karnataka that have the distinction of grant of GI tags. These are: Mysore silk, Badriware, Channapatna toys and dolls, Mysore Rosewood Inlay, Kasuti Embroidery, Mysore traditional paintings, Ilkal Sarees, Ganjifa cards of Mysore, Navalgund durries, Karnataka Bronzeware, and Malakalamuru Sarees (<http://www.handicrafts.nic.in/pdf/GIList.pdf>). Further, as per the Export Promotion Council of Handicrafts, the rate of growth of wood handicraft export has been 19% year-on-year in 2020-21. Furthermore, there are four Handicrafts Service Centres in Karnataka that provide working infrastructure, product development, training, and marketing support to artisans. These factors can cumulatively contribute to high potential for promotion of wood-based handicrafts in Karnataka and to the potential for job creation in this sector.

The handicrafts corporation officials inform that the state of Karnataka has partnered with an e-commerce company to organise various webinars, training, and on-board workshops. The workshops will focus on sharing knowledge and imparting training about Business to Consumer (B2C) e-commerce worldwide. Traders opine that the government should promote WBH via online mode which can help in boosting the sales.

The results of the present study suggest that about 37% of entrant artisans practice wood handicrafts as family hereditary tradition. The focused discussions reveal that artisans are diverting from handicrafts to other avenues of livelihood. Internet based sources suggest that number of artisans has reduced by 30% during the past three decades. However, the demand for handicrafts remains and is likely to increase within the country as the proportion of middle class swells from about 32 to 46% by 2030. Technology enabled access to wider market, and induction of fresh artisans and innovative products is likely to boost the demand for wood based handicrafts and new jobs in the sector. The measures that can help in realising the potential of this sector for job creation are listed in chapter seven on 'the way forward'.

4.4 Focused interactions

Focused interactions with artisans in groups at various centres and individual interviews with persons involved in handicrafts activities including trade, are a vital source of information, as the sector remains unorganised and much information remains undocumented. Such information, which is a mix of facts and figures, and the way facts are perceived by different stakeholders and thereby determine the overall of synergy of conducting handicrafts activities and business, has the potential to provide important insights particularly for policy evaluation and evolution. Effort is made through this study to record such information with an objective of identifying sectoral needs and priorities, and the enabling measures to address them. An account of the discussions held is presented in the succeeding text. Persons and locations have been identified, as besides adding transparency and authenticity, it is likely to help the users of this study to further build on the results and conclusions presented by us.

Artisans at CCP, Channapatna explain about the importance and need of Forest Stewardship certificate (FSC) and requested to make provision of the same. Artisans mentioned that major

woods used in the handicrafts sector is *Melia dubia*, *Pinus*, *Millingtonia hortensis*, *Wrightia tinctoria* and *Mangifera indica*. They expressed that annually about 5,000 tons of *Melia Dubia*, and 18 kg/person/month of sandalwood is needed. For antique-look handicrafts, *Mangifera indica* is required. Out of all species used, Aale wood is most preferred (approximately 10,000 tons/year). Most of the wood is imported from Indonesia region and the species are beech, ash wood and pine, as these species give good texture to handicrafts. About 5,000 to 20,000 tonnes/year of wood is needed for furniture and 5,000 tons of imported wood is needed for toys making. The summary of wood consumed by CCP is given in Table 4.18.

Table 4.19 Details of wood required by the artisans of Channapatna Crafts Park

| | Species | Scientific name | Quantity/ annum (tons) |
|--------------|---------------|-------------------------------|------------------------|
| 1 | Aale | <i>Wrightia tinctoria</i> | 10,000 |
| 2 | Hebbevu | <i>Melia dubia</i> | 10,000 |
| 3 | Akash mallige | <i>Millingtonia hortensis</i> | 10,000 |
| 4 | Mavu | <i>Mangifera indica</i> | 5,000 |
| 5 | Saguvani | <i>Tectona grandis</i> | 10,000 |
| 6 | Shivani | <i>Gmelina arborea</i> | 5,000 |
| 7 | Mahagoni | <i>Swietenia mahagoni</i> | 10,000 |
| Total | | | 60,000 |

In CCP the major art form is painted wood put to lac turnery. While in Mysore crafts inlay/ patch work marquetry, designing is adopted.

Artisans at Mandi Mohalla & Karakushala Nagara, Mysore The project team visited Karkushala nagara and interacted with the artisans and manufacturers, in the presence of KHAWA President Sri Ashok Kumar S and Secretary Sri J. Murgesh. It was pointed out that there is a shortage of wood to the artisans and the wood that is used to impart color to crafts is now replaced with dyes. They mentioned that the export of rosewood items to other countries has drastically reduced due to inclusion of *Dalbergia latifolia* (rosewood) in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), which has enforced a ban on export of handicrafts made of rosewood occurring in wild. It was opined that rosewood should be exempted from Appendix II of CITES to promote exports. They requested to extend the payment of auction money duration and to provide wood at subsidised rates to the artisans. They also expressed that many artisans are interested in planting the wood species used in handicrafts sectors in their own private lands.

Artisans of Bengaluru Crafts Centres Bengaluru being the capital city of Karnataka has attracted artisans from different parts of the state due to good market demand. The owners and artisans voiced concern about increased price of wood in sawmill, and emphasised that small and medium scale industries cannot afford to buy wood from e-auction either, as they require small quantities. Handicrafts industries cannot compete with construction companies in e-auction, as construction companies purchase wood in bulk. They also mentioned that BCC was established in 2015 with only one employee and today the same centres has about 17 employees of which two employees work from other states too. They opined that small and medium scale manufacturers have to be educated on the policies and benefits provided by the government, which encourages the young generation to take up craftsmanship as a profession.

Artisans of Sagara Sandalwood Craft Complex Sagara is among one of the oldest wood-based handicraft centres in the state with about 240 registered artisans. The artisans mentioned that the availability of sandalwood raw material is drastically reduced and allocation by Cauvery Handicrafts Corporation has decreased from 9.5 Kg/month to 2-3 kg per year per artisan. The price of the wood even at subsidised prices is very high and unaffordable. They also mentioned that many sandalwood carvers have shifted from sandalwood carving to other carvings such as Shivani, Teak etc. Currently there are only 15-17 artisans working with sandalwood out of 240 artisans. They opined that providing health benefits and retirement plans for the registered artisans will be helpful and permission to carry finished goods by artisans would help small scale industries.

Artisans of Sirsi Sandalwood Craft Complex Sirsi, which is in Uttar Kannada district, is famous for sandalwood carvings made by Guidgar communities. The study team had a focused discussion with Sri Mahesh V Gudigar, Union President, Sandalwood Crafts Complex, and Sri Ganesh R Gudigar, artisan. They expressed that most of the sandalwood artisan has shifted to other crafts using other wood such as Shivani, Rosewood, Teak, Yellow Teak (Hedi) and Jack (Halasu) because the sandalwood procurement is too expensive. Wood procurement through e-auctions is too expensive and artisans cannot afford it. Increased competition with North Indian and Chinese crafts makes sandal crafts marketing more challenging. They also mentioned that apart from sandalwood, the artisans of Sirsi also use billets and firewood material for the manufacturing of idols and KFD need to facilitate the same.

Artisans of Kumta Handicrafts Centres The study team visited Kumta Handicrafts Centre and interacted with Sri Arun Shetty, a member of the Sandalwood Producer Cooperative Association Ltd. He raised concern about the reduced availability of sandalwood for artisans from 9.5 Kg/month to 2-3 Kg/year. He expressed that most of the artisans have already shifted to *mantap* making and door carving with teak, yellow teak and Shivani. Women artisans involved in sandalwood garland making are now unemployed due to inadequate supply of sandalwood. Reduced availability of sandalwood has prompted the use of *Nai-gandha* and Shivani for garland and idols preparation, respectively (Fig 4.15).

Figure 4.10 Photographs showing fine crafts of Kumta handicrafts



Artisans of Kinhal Chitrakar families of Kinhal in Koppal district have a rich tradition of toys and idol (Gramadevathas) making. The study team interacted with Sri Anjaneya Chitrakar, Santosh Kumar Chitrakar and Kishore N Chitrakar. They inform that *Polkhi* (*Givotia rottleriformis*) wood is suitable, as it is light weight and easy to work with wood. This specie is mostly found in the forests of Koppal and Gangavathi and is neither harvested by KFD nor exempted from Karnataka Tree Preservation Act, 1976; this impacts the availability and procurement of this wood. *Polkhi* is not sold in e-auction of KFD. Artisans have thus switched to other trees species viz. Neem (*Azadirachta indica*), Teak (*Tectona grandis*), Atthi (*Ficus carica*) and other light weight woods. These artisans opined that the marketing for Kinhal artifacts is very poor since it requires more time and manpower compared to other crafts. They also mention that Kinhal artifacts have high demand, which can be met only by providing trainings to the artisans and promoting the craft among younger generation. Only 25 of 67 chitrakar families at Kinhal are actively pursuing the craft at present (<https://www.deccanherald.com/spectrum/spectrum-statescan/kinnal-art-goes-global-1180372.html>).

Sri Ashok Kumar is President KHAWA, and is in handicrafts profession himself for the past 32 years. Handicrafts is part of his family tradition and ancestral work. They produce daily-use items like wall clocks, comb, table stand, floor mats, shirt buttons, table tops, etc. as well as wall-panels. He mentions that even foreigners approach him and get trained in crafts-making out of passion during their visit to Mysore. Interested students from colleges across Karnataka also seek training from him. He expressed that the artisan population has decreased from about 15,000 to 1,270 in Mysore Centre catchment over time. He informed that each artisan has a unique ID and is issued with an Artisan Card or *Pehchan Card*, this card is linked to their Aadhar Card. This enables participation of artisans in Expos, Exhibitions and other events in India.

Sri Ashok Kumar is an artisan as well as the owner and proprietor of Arun Fine Arts. He mentions that about 20% artisans are owners-cum-artisans and the rest 80% of the crafters are worker artisans. He shared that earlier there were many structured courses on artistry, and Chamaraja Institute of Technology (C.I.T) was a renowned institute for handcraft courses. Shilpa Trust at Channapatna was also one such group imparting skills and training to beginners and artisans.

He opined that there are several tourism activities in Mysore viz. Skills tourism, Royal walk Mysore, Heritage tourism, etc. that integrate well with handicrafts sector and tourists participating in these tours visit handicrafts centres and get exposure to handicraft manufacturing. He is concerned that participation of artisans has reduced in Crafts Bazars, Gandhi Expos, Shilpa Bazars, Fairs and Festivals, etc organised across the country. Only two artisans from Mysore are permitted in each event, and prime shops, plots, etc. for exhibiting the wooden crafts are often denied. The representation of wooden craftsmen from the south in national events is relatively low. After the Covid pandemic, most of these have been shelved by the Government of India. The support to artisans has been next to nothing during Covid period.

He expressed that major hubs for wood craftsmen and marketing of wood crafts are located in North India e.g., Jaipur/Udaipur in Rajasthan and Saharanpur in Uttar Pradesh, and that Mysore Elephants made of wood are now marketed through Jaipur/Udaipur markets. Hubs are also the places where auctioning of woods is done. He mentioned that earlier natural woods

were available at firewood and timber depots and no dyeing was needed. But now-a-days the availability and quality of raw material is too low and requires artificial dyeing of wood. The most common varieties of colour woods used in the inlay craft are given in Table 4.19.

Sri Murgesh is Secretary KHAWA and is in the profession of handicrafts for the past 30 years. He is the owner of Mysore Miniatures, and manufactures dolls, decorative items, miniatures of monuments etc. He mentioned that there are two groups viz. self-employed and self-help groups. While the self-employed hire artisans on daily wage basis, the self-help group is a group of artisans who collect and invest their personal savings (e.g., Shri Shakthi Sanghas), and mutually benefit from collaborative working.

“The craftsman is the unbroken link in the tradition that embraces both the producer and the consumer within the social and religious fabric. Art and aesthetics are deeply rooted in function”

Kamala Devi Chattopadhyaya

He mentioned about the Crafts Council of Karnataka (CCK) under the patronage of Smt. Kamaladevi Chattopadhyay, Mother of Handicrafts in India. The Council started in 1967 at Bengaluru and constituted as a society in 1982. The mission of CCK is promotion and support to the crafts in Karnataka and sustainable livelihoods of craft persons. CCK and Chitrakala Parishat are currently facilitating marketing of only select items excluding wood handicrafts. Chitrakala Parishat charges Rs. 30,000/- for a week for exhibiting and selling wood handicrafts. In Mumbai, there is a private agency named *Kalaghoda* and participation in this fare costs around Rs. 1,00,000/- for ten days. Value-added wood products are sold there in large numbers. Support infrastructure for marketing of wood-based handicraft products is lacking. In Karnataka, only KSHDC is marketing wood handicrafts, especially the sandalwood items. Earlier South Zone Cultural Centre with five other centres was conducting cultural activities with folk artists, exhibition and sale of wood handicrafts but, now-a-days it is reduced. He also opined that crafts are done using different materials, viz. stone, wood, etc. and a separate recognition is required for wooden handicrafts and artisans. He expressed that in national crafts bazars/expos only 2 or 3 artisans are identified from entire Southern zone and the shop allocated for southern zone artisans are usually in remote corners of the bazar, which hinders the marketing of products. The rent to be paid to market the products in private expos and exhibitions is too high, which artisans cannot afford. Hence, alternatives must be thought of for marketing the handicrafts.

Table 4.20 List of common varieties of colour wood used in inlay crafts

| | Common name | Scientific name | Colour |
|---|-------------------|--------------------------------|--------------------------|
| 1 | Jackfruit | <i>Artocarpus integrifolia</i> | Yellow and bright yellow |
| 2 | Indian gooseberry | <i>Emblic myrobalam</i> | Rose and light red |
| 3 | Red cedar | <i>Cedrela toona</i> | Light brown |
| 4 | Indian ebony | <i>Diospyros ebenum</i> | Jet black |
| 5 | Silver oak | <i>Grevillea robusta</i> | Pink and glaring effects |
| 6 | Sandalwood | <i>Santalum album</i> | Dark brown. |
| 7 | Aale | <i>Wrightia tinctoria</i> | Light yellow |

| | Common name | Scientific name | Colour |
|----|---------------|----------------------------|---------------|
| 8 | Tamarind | <i>Tamarindus indica</i> | Blue, grey |
| 9 | Sappanwood | <i>Biancaea sappan</i> | Dark red |
| 10 | Shameplant | <i>Mimosa abstergens</i> | Amber |
| 11 | Krishna agaru | <i>Aquilaria agallocha</i> | Green |
| 12 | Kanagale | <i>Nerium Oleander</i> | Brown |
| 13 | Guava | <i>Psidium guajava</i> | Ash and Cream |
| 14 | Mango | <i>Mangifera indica</i> | Dull grey |

Sri Devaramani is former Deputy Director Handicrafts. He has worked in handicrafts sector in various capacities for over three decades and has deep understanding and knowledge of handicrafts industry in the state.

He shared information about handicraft industry in the immediate post-independence period, present status of industry, and his vision for developing the industry in future. He has helped and encouraged artisans at different centres for continuation of the craft through government schemes and initiatives. He explains the history and evolution of handicrafts from the late 1960s to-date. In the 1960s handicrafts evolved at the rural household's level. Later in the 1980s, inlay cutting came into being and led to higher engagement of women. Children in the age group 10 to 12 years were learning crafts as art from their parents. After the Labour Law in 1986, young population stayed away from these crafts. Earlier, the wood required by the artisans was available in firewood depots/ sawmills. But the same has come down since LPG came into existence. All these factors have impacted artisans both directly and indirectly. Sri Devarmani also explained that in the 1980s about 18 kg of sandalwood was given per turning artisan per month and 9.50 kg for carvers with a buy-back system from KSHDC. Sandalwood was made available by KFD and was distributed to the artisans by Cauvery Emporium. Major consumption of sandalwood is by soap factory and temples.

In Channapatana, there were Artisans' Training Schools, and they manufactured toys, beads, curtain rings, wooden jewels, pens, and gift articles. In the late 1980s, a person named Bhavasmiayah explored different technologies in handicraft making viz., hand-held machines, diesel engines, and later electric gadgets. Many artisans migrated to Bengaluru for marketing purposes and formed a cluster in this region. In the Kinhal region, soft wood of *Polkhi* species is used, the artifacts of this region are Kamadhenu, Gramadevate, and dolls. Kalghatgi taluk of the Dharwad region is popular in cradle created by Sawkar community carvings and Holealooru village, Ron taluk, Gadag district is famous for Door making. Koteshwara in Udipi is known for chariot carving using Teak wood.

The Ministry of Textiles handles 10 different sectors/industries out of which handicrafts is one sector. The details of sectors registered under Ministry of Textiles are given in figure 4.16.

Figure 4.11 Sectors/ industries under Ministry of Textiles, GOI

The Export Promotion Council for handicrafts organizes three fairs yearly viz. Gift fair, Autumn fair, and Jewellery fair, and these fairs primarily focus on export of Indian handicrafts. To help the artisans, there have been policy changes at the Government level. He felt that the raw material provisioning at subsidised rate on continuous basis shall be helpful to the artisans. KFD should encourage the farmers to grow species required in WBH industries.

District secretary, Uttar Kannada, KHAWA Sri Arun Shet is the District Secretary. He has 40-year experience in sandalwood artifacts. He has acquired it as ancestral and hereditary tradition through his father Sri V R Shetty Gudigar. Currently, the artisans are diversifying their products in view of the paucity of sandalwood raw material. Sandalwood import should be encouraged, as it will help artisans in getting sufficient raw material. He mentions that during the 1980s subsidized rates for sandalwood was Rs. 150/- per kg and today it is Rs. 10,000/- per kg. He mentions that KSHDC purchases sandalwood through e-auction and supplies to registered artisans at a subsidized rate with taxes and has a buy-back policy. However, while purchasing the finished goods tax is excluded, which is dis-advantageous to the artisans. About 9.05 kg of the sandal/month is given to craftsmen involved in sculpture making and 18kgs/month to turners. The registered artisans get 50% subsidy on raw wood. There are Crafts Complexes based on Lease-cum-Sale policy with an agreement for 27 years at Mysuru, Sagara, Soraba, and Kumta. Due to the non-availability of the sandal, no new artisan cards are issued for 20 years, though skilled artisans are available. The major problems faced by artisans are: non-availability of raw materials;

high price of raw material; high demand for raw material but less supply; and low quality of raw material.

The sandal products are primarily exported to Germany, Japan and Middle-east countries. Skilled workers are paid @ Rs.300-500/day, while unskilled workers are paid @ Rs. 200-250/day. Lifting ban on import of sandal and facilitating marketing within and outside the country is necessary. KSHDC may exempt tax on raw material while selling it to artisans and also on purchase of finished goods from artisans.

Institute of Wood Science and Technology (IWST) Dr S R Shukla, Scientist G at IWST, mentions that research is undertaken on development of wood-substitutes in the institute keeping in view the anatomical, mechanical, structural, colors and working suitability of alternate woods. The Aale or Dhudi wood is yellow in color and is in great demand in Karnataka. The paradise tree, *Simarouba glauca* is another wood substitute of great demand in Karnataka. Wood composites (combination of several species of woods compressed) are also in great demand because the fungus infection and beetles damage on woods can be avoided. Vegetable oils and borax can be used to color the woods. The Indian Plywood Industries Research and Training Institute (IPIRTI), Bengaluru has developed bamboo-based bio-composite material (Chawla, Kushawaha and Chauhan, 2021). The North-Eastern region of India comprising eight states is a home of many tribes and sub-tribes associate with bamboo craft tradition from time immemorial. Bamboo craft provides livelihood to the tribal and other socially and economically backward classes of people in the region (Borah 2021).

Mahals Designer Doors Sri Viswanath R Nayak is the owner of Mahals Designer Doors. They have a shop at St. Marks Road, Bengaluru. He has over 30 years of experience and has acquired the proficiency from his father. Hailing from Karkala town in Udupi district, Karnataka, Mahals are a private firm and mainly dependent on imported teak wood from Burma. They trade with clients that look for doors, mantaps, idols of gods, peetas and other wooden accessories required for temples across India and abroad. Earlier they used rosewood, and its shortage has forced them to shift to Teak. They have two work sheds located in Chinnappanahalli, White field, Bengaluru and Hoskote.

Sri Viswanath mentioned that during the pandemic sales were completely wiped out, due to which neither new orders came nor could the existing stock be sold. He mentions that handicrafts is a risky profession and is very uncertain. Hence, most of the young population either choose IT jobs, banking, real estate or cab services, which give them a better and more stable livelihood. He is concerned that the quality of wood supplied by local farmers or sold through e-auction does not satisfy the need of hand-carving, as they are poor in quality. He mentioned that Canara bank under Corporate Social Responsibility (CSR) activity has started carving school in Karkala and this school is providing training through paid internship to youngsters. He opined that starting schools like this would encourage young generation to take up handicrafts for their livelihood and also mentioned that various schemes can be initiated for teak and rosewood like subsidised sandalwood scheme.

Divine Handicrafts, Bengaluru Sri Girish is the owner of Divine Handicrafts located at Malleshwaram 8th cross, and has about seven years of experience in this field. He has taken over

his father's business. He holds MBA degree and has completed visual arts course too. Their work shed is situated in Devanahalli on the outskirts of Bengaluru. They are primarily involved in heritage carving works viz., pooja items, mandir, idols of god, etc. They initially were using sandalwood, however, due to non-availability and inadequate supply of raw material they have switched to Teak, Shivani and Rosewood. Currently there are 18 in-house workers (all are male) but there are many female workers working from home and are involved in piece work. Door carvings are done by the Gudigars located in Sirsi, and other piece work carvings are done in Devanahalli work shed. Approximately 150 to 200 cft of Teak wood, 20cft of Shivani and 20–25 cft of Rosewood is being used per month. About 80% of their artifacts are sold in domestic market (all over India) and 20% is international market, largely the United States of America. Earlier supplies were also made to Canada and Australia but currently there is ban from their government hence the supply is completely stopped. Mr. Girish mentioned that supply of Teak, Shivani and Rosewood at subsidised rates, an exemption on export fee by Central Board of Indirect Taxes and Customs (CBIC) are few helpful solutions that can boost the artisans. Encouraging heritage carving artisans shall be helpful so that the future generations will continue in this profession and the art will survive.

Kidken Edu Solutions Smt. Sirisha Rani is a woman entrepreneur and founder of Kidken Edu Solutions at Bengaluru. She has employed about 70 persons, of which 10% are localities and 90% are from North India. They mainly use Beech, Rubber, Ply and Ivory wood in manufacturing Educational toys. The wood used is procured from Kerala and Malaysia, and about 3% of the finished goods are exported to the United States, the United Kingdom, Germany and Dubai. Rest is supplied to domestic market viz., schools, play homes, Montessori, day care, etc. Toxicity test is done by the Bureau of Indian Standards (BIS), which is a lengthy process and time consuming. However, the same toxicity test is done by private labs in less number of days. She mentioned that procuring ivory wood from local suppliers is very difficult and importing it is very difficult. She also mentioned that due to Russia-Ukraine war import of MDF has become very difficult and the local suppliers are taking advantage by charging higher cost. She observes that several clients deny giving orders since import activities increase carbon emissions. Similar to procurement construction plywood, provision has to be made by concerned department to procure plywood for educational toy making since the plywood for toys/children furniture is not to same as that used in the construction industry.

Toy making industries has an association name Toy Association of India and they encourage entrepreneurs by organising trainings and exhibitions. She is concerned that entrepreneurs and toy makers are not consulted while formulating rules and setting norms; this creates a gap between manufacturers and decision makers.

She opines that KFD should provide seedlings to farmers so that the species required in toy making can be grown locally, and institutes like IWSST and IPIRTI could focus on exploring alternative to plywood used by toy makers. Such support is vital for wood-based handicrafts industry, and has potential to reduce the import of wood considerably.

* * * * *

5 Study Conclusions

The following are the major conclusions of the study.

1. Karnataka has a rich and varied tradition of wood-based handicrafts hosting unique art forms at traditionally Channapatna, Mysore, Sirsi, Sagar, kinhal, and at several other locations. The variety of products include: wooden toys, games and puzzles, jewellery, beads, carved doors, mantaps, idols of gods, peetas, hand-painted wooden articles, carved and scented sandalwood figurines, tables and boxes, and rosewood inlay works, and items of furniture.
2. The total annual requirement of wood for handicrafts in the state is about 1,69,571 cum for other woods, and 850 kgs for sandalwood. Further, keeping in view of the present status of wood consumption and requirement of each of the Centres, annual demand is projected @ 5% per annum (2,50,534 cum other woods and 1,256 kg sandalwood) and @ 10% per annum (3,63,490 cum other woods and 1,822 kg sandalwood) for each year from 2022 to 2030.
3. The major woods used include: Sandalwood (*Santalum album*), Rosewood (*Dalbergia latifolia*), Shivani (*Gmelina arborea*), Aale (*Wrightia tinctoria*), Polkhi (*Givotia rottleriformis*), Akashmallige (*Millingtonia hortensis*), Mavu (*Mangifera indica*), Teak (*Tectona grandis*), Hebbevu (*Melia dubia*), Mahagoni (*Swietenia mahagoni*) and imported Pinewood, Birchwood and Ashwood.
4. Over period of time, the quantity and quality of wood available for handicrafts sector has been declining, which has had implications for sustenance of the crafts themselves, as the crafters shift to other woods and avenues for livelihood. For example, less than 20 of the 240 artisans now work with sandalwood at Sagar, only 25 of 67 chitragar families are actively pursuing kinnal craft, and the number of artisans in Mysore catchment has reduced to less than half from about 15,000.
5. Sandalwood artisan have shifted to other crafts using other wood such as Shivani, Rosewood, Teak, Yellow Teak (Hedi) and Jack (Halasu), and other artisans have adopted to working with woods like *Ficus carica*, *Artocarpus hirsutus*, *Pterocarpus marsupium*, *Dalbergia sissoo*, *Azadirachta indica*, *Boehmeria rugulosa*, *Cinnamomum zeylanicum*, *Acacia auriculiformis*, *Eucalyptus camaldulensis*, *Simarouba glauca*, and *Melia azedarachta*.

The **major challenges** faced by the industry include: lack of quality and diversified wood raw materials; high cost of raw material; lack of market openings and platforms for wood handicrafts; lack of events for sale of wood products; lack of government support for wood handicraft artisans; and, training and technology centres for upgrading skills of artisans.

Sri Murgesh, Secretary KHAWA

6. About 80% of the crafters are worker artisans, and only 20% are owners-cum-artisans.
7. Participation of crafters in Gandhi Bazars & expos, craft bazaars, shilpa bazaars, fairs and festivals is low. Artisans demand support for their participation in such events for better marketing of their products.

“It is not possible to take bulk orders for lack of skilled artisans. The government should plan for allotting residence-cum-work sheds for wood artisans”.

Sri Murgesh, Secretary KHAWA

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6 Issues of immediate policy significance

The following issues of policy significance are identified based on the present study. These are likely to promote WBH arts, artisans, their livelihoods, and revamp the WBH ecosystem in the state.

1. Allocation of woods to artisans from forest depots based on the availability, and at a price equal to last three-year average auction price for the concerned quality class.
2. Exempting from permissions for felling and transportation of felled material to sawmill and artisan common-work locations for the trees grown in private lands used for WBH except reserve trees excluding teak. KSHDC to identify tree species and common-work locations.
3. Karnataka Forest Department can promote WBH species through village forest committee (VFC) program for growing such species in farmer's lands and further promote manufacture and marketing of WBH products using the self-help group mechanism in VFC villages.
4. VFCs are statutory bodies under the Karnataka Forest Act 1963, and can be authorised for certifying the source of material as - grown by farmers in private farms.
5. KSHDC and the service centres of Government of India may undertake interface development between manufacturing hubs and internet-based marketing platforms.
6. To export the handicrafts, Forest Stewardship Certificate is preferred by the exporters. Institutions like IWST may consider issuing appropriate export-acceptable wood certificate.

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7 The way forward

Based on the current study, and the trends and issues available in the literature about the handicraft sector that have applicability for wood-based handicrafts (WBH) also, the following measures are identified as the way forward for sustenance and promotion of crafts and crafters in the state.

1. The foremost requirement of handicrafts industry in general, and particularly of the WBH sector is to collect and organise the data pertaining to present and past artisans, arts, place of work, gender and age groups, trainings, and markets. Lack of it is a big hindrance in organising the sector and its promotion and policy formulation. The Handicrafts Development Corporation in the state will do well by undertaking location-wise and gender-based census in this regard.
2. The underlying reason for a low enthusiasm in WBH sector in Karnataka appears to rest on the fact that this sector has failed to transform from 'an individual's-based labour-intensive cottage-level unorganised enterprise model' to 'collaborative mechanisation-assisted innovation-driven enterprise connected to the modern ways of marketing'. Given that the middle class in India is expected to constitute about 46% of the population by the year 2030 from about 32% at present, a huge market for handicrafts products that are affordable and often times have functionality beyond their charm as a decorative item is due to unfurl. WBH sector can benefit in this regard in the state from the dual potential of start-ups and web-based technologies.
3. The government program for promotion of unique identified products for different districts can contribute immensely for bringing the focus on WBH products in several districts in the state.
4. WBH is a labour intensive industry with only a moderate reward for handwork. Thus there is a need to promote machine friendliness that would enhance the fineness and appeal of the products for an average buyer, and enable production of higher volumes at a lower cost.
5. The four service centres in the state may be considered for strengthening for issuing necessary certification on toxicity, child labour, sustainably-produced raw material, and artisan welfare.
6. Innovation in thinking and design of artifacts from 'an item of decoration' to 'an item with functionality' can greatly boost the scope and business in WBH sector.
7. The State Handicrafts Development Corporation could consider investing in promotion of WBH through the medium of internet to reach a wider national and global market through visuals, stories, legends, and GI tag recognitions. This is likely to expand the marketing opportunity beyond presently accessed by the visitors and tourist to the places where handicrafts are produced.

8. Promoting the values of environmental-friendliness, responsible production, circularity and nothing-for-landfill supported by utility (functionality) beyond beauty of a product and buyer affordability can boost sales.
9. The idea of 'whole product experience' through Radio Frequency Identification RFID tags can potentially flip the way handicraft items are perceived and valued, and can deepen association of a buyer with the product.
10. The local universities in the state can offer fine arts courses that promote WBH by networking new entrants, new trends, experienced artisans, manufacturers, market associations, business promotion channels, and policymakers.
11. The Export Promotion Council for Handicrafts (EPCH) can have a local facilitation centre housed in the GOI handicrafts service centres in the state for promoting exports of handicrafts from Karnataka.
12. The companies headquartered at various places in Karnataka could be prompted to include promoting woodcrafts by providing training and working facilities to strengthen livelihoods of crafters under the corporate social responsibility.
13. Artisans and their association should come forward to get GI tag. This is likely to enhance the uniqueness quotient and marketability of WBH products.

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Annexure 1 Webinars and Field Visits

Webinar was conducted on 22 March 2022 to gather information on “*Availability of data on Wood production and utilization in Karnataka*”. 3 talks in their webinar pertained to WBH industry. Further, other stakeholders were also interacted with.

| | Name | Focus | Date |
|-----------------------------------------------|---------------------------------------------------------------------------|-------------------------------------------------------|------------|
| 1 | Ms Sreekala Kadidal Independent Director/ CEO, Channapatna Crafts Park | Availability and demand of wood in handicraft sectors | 22.03.2020 |
| 2 | Sri Parameshwar Iyer Director- Bamboo pecker lifestyle crafts Pvt Ltd | Demand of bamboo in the state of Karnataka | 22.03.2020 |
| 3 | Sri Ramesh Karupakala All India Agarbatti Association | Demand of wood in agarbatti sector | 22.03.2020 |
| Other prominent stakeholders consulted | | | |
| 4 | Sri. Joseph, Wood supplier for WBH industries | Demand of wood for Mysore inlay works | 23.09.2020 |
| 5 | Sri Girish, Divine handicrafts | Demand of wood in Heritage carving works | 21.10.2020 |
| 6 | Sri Sirisha Rani, Entrepreneur, Kidken Edu solutions | Demand of wood in educational toys sector | 21.10.2020 |

Details of Field visits

| | Handicraft Centre | Place | Date |
|---|------------------------------|----------------------------------------------------------------------|-------------|
| 1 | Channapatna Crafts Park | Channapatna Crafts Park, Channapatna | 07.04.2022 |
| 2 | Mysore Handicrafts Centre | Arun Fine arts, Mandi Moholla, Mysore | 27.05.2022 |
| 3 | Mysore Handicrafts Centre | Arun Fine arts, Mandi Moholla, Mysore | 04.06.2022 |
| 4 | Bengaluru Handicrafts Centre | Swadi arts and Crafts, Indraprast Interiors and Exteriors, Bengaluru | 18.06.2022 |
| 5 | Sagara Handicraft Centre | Cauvery emporium office, Sagar | 21..06.2022 |
| 6 | Sirsi Handicraft Centre | Cauvery emporium office, Sirsi | 22.06.2022 |
| 7 | Kumta Handicraft Centr | The Sandalwood Producer Co-operative Association, Kumta | 23.06.2022 |
| 8 | Kinhal Handicraft Centre | Chitragar Colony, Koppal | 25.06.2022 |

Annexure 2 Survey questionnaire

ಕರ್ನಾಟಕ ರಾಜ್ಯದ ಕರಕುಶಲಕರ್ಮಿಗಳ ಪರಿಸ್ಥಿತಿ ಅವಲೋಕನಕ್ಕಾಗಿ ಸಮೀಕ್ಷೆ

ಕರ್ನಾಟಕ ರಾಜ್ಯದಲ್ಲಿ ಕರಕುಶಲ ಉದ್ಯೋಗವನ್ನು ಆಧರಿಸಿರುವ ಕರಕುಶಲಕರ್ಮಿಗಳಿಗೆ ಕಚ್ಚಾವಸ್ತುವಾಗಿ ಮರದ ಲಭ್ಯತೆಯನ್ನು ತಿಳಿಯುವ ಸಲುವಾಗಿ ಈ ಪ್ರಶ್ನಾವಳಿಯನ್ನು ರಚಿಸಿದೆ. ಕರಕುಶಲಕರ್ಮಿಗಳು ಎದುರಿಸುತ್ತಿರುವ ಸಮಸ್ಯೆಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವ, ಕಚ್ಚಾ ವಸ್ತುವಾದ ಮರದ ದೊರೆಯುವಿಕೆ ಕಡಿಮೆಯಾದಲ್ಲಿ ಕರಕುಶಲ ವಲಯದ ಮೇಲೆ ಉಂಟಾಗಬಹುದಾದ ಪರಿಣಾಮಗಳು, ಕರಕುಶಲ ಉದ್ಯೋಗಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಕಣ್ಮರೆಯಾಗುತ್ತಿರುವ ಕೌಶಲಗಳು, ಕರಕುಶಲತೆಯ ಪ್ರಚಾರದ ಮೂಲಕ ಉದ್ಯೋಗ ಸೃಷ್ಟಿಯ ವ್ಯಾಪ್ತಿ ಮತ್ತು ಸಮಸ್ಯೆಗಳನ್ನು ಪರಿಹರಿಸಲು ಇರುವ ಸಾಧ್ಯತೆಗಳ ಕುರಿತಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವ ಪ್ರಯತ್ನವನ್ನು ಈ ಮೂಲಕ ಮಾಡಲಾಗುತ್ತಿದೆ.

ಈ ಪ್ರಶ್ನಾವಳಿಯ ಮೂಲಕ ಸಂಗ್ರಹಿಸಿದ ಮಾಹಿತಿ ಅಥವಾ ದತ್ತಾಂಶವನ್ನು ಪರಿಸರ ನಿರ್ವಹಣೆ ಮತ್ತು ನೀತಿ ಸಂಶೋಧನಾ ಸಂಸ್ಥೆ (ಪ.ನಿ.ನೀ.ಸಂ.ಸA)ಯು ಈ ಕುರಿತಂತೆ ನೀತಿ ರಚನೆಗಳಿಗಾಗಿ ಬಳಸಬಹುದು, ಸಮೀಕ್ಷೆಯ ದತ್ತಾಂಶವನ್ನು ಶೈಕ್ಷಣಿಕ ಉದ್ದೇಶಗಳಿಗಾಗಿ ಇತರ ವ್ಯಕ್ತಿ ಅಥವಾ ಸಂಸ್ಥೆಗಳೊಂದಿಗೆ ಹಂಚಿಕೊಳ್ಳಬಹುದು. ಈ ಸಮೀಕ್ಷೆಯಲ್ಲಿ ಯಾವುದೇ ವ್ಯಕ್ತಿಯಿಂದ ಸ್ವೀಕರಿಸಲಾದ ಆತನ ಗುರುತನ್ನು ಬಹಿರಂಗಪಡಿಸಬಹುದಾದ ವೈಯಕ್ತಿಕ ಮಾಹಿತಿಯನ್ನು ಯಾವುದೇ ಉದ್ದೇಶಕ್ಕಾಗಿಯೂ ಯಾರೊಂದಿಗೂ ಹಂಚಿಕೊಳ್ಳಲಾಗುವುದಿಲ್ಲ.

ಪರಿಸರ ನಿರ್ವಹಣೆ ಮತ್ತು ನೀತಿ ಸಂಶೋಧನಾ ಸಂಸ್ಥೆಯ ಸಿಬ್ಬಂದಿ, ಸಮೀಕ್ಷೆ ನಡೆಸುವ ವ್ಯಕ್ತಿಗೆ ಇದರ ಉದ್ದೇಶವನ್ನು ತಿಳಿಸಿ ಅವರ ಅನುಮತಿ ಪಡೆದ ನಂತರವೇ ಸಮೀಕ್ಷೆ ನಡೆಸಲಾಗುತ್ತದೆ. ಸಮೀಕ್ಷೆ ನಡೆಸುವ ಮೊದಲು, ಸಮೀಕ್ಷೆ ನಡೆಸುವಾಗ ಹಾಗೂ ನಂತರವೂ ನೈತಿಕ ಮಾನದಂಡಗಳನ್ನು ಅನುಸರಿಸಲಾಗುತ್ತದೆ. - ಸಮೀಕ್ಷೆ ನಡೆಸುವ ವ್ಯಕ್ತಿಯ ವೈಯಕ್ತಿಕ ಆಯ್ಕೆ ಮತ್ತು ಗೌಪ್ಯತೆಯನ್ನು ಗೌರವಿಸಲಾಗುವುದು, ಸಮೀಕ್ಷೆ ನಡೆಸಿ ಸಂಗ್ರಹಿಸಿದ ಮಾಹಿತಿಯನ್ನು ಅವರಿಗೆ/ವ್ಯಕ್ತಿಗೆ ತಿಳಿಸುವುದು, ಪ್ರಶ್ನೆ ಕೇಳುವ/ಸಮೀಕ್ಷೆ ನಡೆಸುವ ಸಿಬ್ಬಂದಿಯು ಸಾಕಷ್ಟು ತಾಳ್ಮೆಯಿಂದಿರಬೇಕು ಹಾಗೂ ಮಾಹಿತಿಯನ್ನು ದಾಖಲಿಸಿಕೊಳ್ಳುವ ಮೊದಲು ಆ ವ್ಯಕ್ತಿಯು ಪ್ರಶ್ನೆಯನ್ನು ಸರಿಯಾಗಿ ಅರ್ಥ ಮಾಡಿಕೊಂಡಿರುವುದರ ಬಗ್ಗೆ ಖಾತ್ರಿಪಡಿಸಿಕೊಳ್ಳಬೇಕು ಹಾಗೂ ಅದರ ನಿಖರತೆಯ ಬಗ್ಗೆ ಸ್ವತಃ ಮನವರಿಕೆ ಮಾಡಿಕೊಳ್ಳಬೇಕು.

ಈ ಪ್ರಶ್ನಾವಳಿಯು ನಾಲ್ಕು ಭಾಗಗಳನ್ನು ಹೊಂದಿದ್ದು ಭಾಗ ೧ ಮತ್ತು ೨ನ್ನು, ಸಮೀಕ್ಷೆ ನಡೆಸುತ್ತಿರುವ ಸಿಬ್ಬಂದಿಯು, ಭಾಗ ೩ ಮತ್ತು ೪ ನ್ನು ದಾಖಲಿಸುವುದಕ್ಕೂ ಮೊದಲೇ ಭರ್ತಿ ಮಾಡಬೇಕಾಗುತ್ತದೆ.

ಭಾಗ ೩ ರಲ್ಲಿ, ಸಮೀಕ್ಷೆ ನಡೆಸುವ ವ್ಯಕ್ತಿಯಮಾಹಿತಿ ಭರ್ತಿ ಮಾಡಬೇಕು

ಭಾಗ ೪ ರಲ್ಲಿ ೧೬ ಬಹು ಆಯ್ಕೆಯುಳ್ಳ ಮುಕ್ತ ಪ್ರಶ್ನೆಗಳಿವೆ.

*** Required**

ಭಾಗ ೧ :

1. ಸಮೀಕ್ಷೆ ನಡೆಸುತ್ತಿರುವ ವ್ಯಕ್ತಿಯ ಹೆಸರು *

2. ಸಮೀಕ್ಷೆ ನಡೆಸುತ್ತಿರುವ ವ್ಯಕ್ತಿಯ ಸಂಪರ್ಕ ಸಂಖ್ಯೆ *

3. ಸಮೀಕ್ಷೆ ನಡೆಸುತ್ತಿರುವ ವ್ಯಕ್ತಿಯ ಸ್ಥಳ *

ಭಾಗ ೨

4. ನಾನು ಈ ಸಮೀಕ್ಷೆಯ ಉದ್ದೇಶವನ್ನು ಪ್ರಶ್ನೆ ಕೇಳಲಾಗುತ್ತಿರುವ ವ್ಯಕ್ತಿಗೆ ವಿವರಿಸಿದ್ದೇನೆ. ಹಾಗೂ ಇವರು ಒಪ್ಪಿಗೆ ನೀಡಿ ಸಮೀಕ್ಷೆಯಲ್ಲಿ ಭಾಗವಹಿಸಿ ಮಾಹಿತಿಯನ್ನು ನೀಡಿರುತ್ತಾರೆ. ವ್ಯಕ್ತಿಯು ನಿರ್ದಿಷ್ಟವಾಗಿ ಯಾವುದಾದರೂ ವಿಷಯದ ಕುರಿತು ಸೂಕ್ಷ್ಮವಾಗಿದ್ದಲ್ಲಿ ನಾನು ಅವರ ಪ್ರತಿಕ್ರಿಯೆಗೆ ಒತ್ತಾಯಿಸುವುದಿಲ್ಲ ಹಾಗೂ ಸಮೀಕ್ಷೆಯ ಕೊನೆಯಲ್ಲಿ ಅವರಿಂದ ಮಾಹಿತಿ ಸ್ವೀಕರಿಸಿ ದಾಖಲು ಮಾಡಿರುವ ಪ್ರತಿಕ್ರಿಯೆಗಳನ್ನು ಓದಿ ತಿಳಿಸುತ್ತೇನೆ.

ಈ ಷರತ್ತುಗಳಿಗೆ ಸಮ್ಮತಿಯಿದ್ದಲ್ಲಿ ನಿಮ್ಮ ಡಿಜಿಟಲ್ ಸಹಿ (ಪೂರ್ಣ ಹೆಸರು) ನಮೂದಿಸಿ

ಭಾಗ ೩

5. ವ್ಯಕ್ತಿಯ ಪೂರ್ಣ ಹೆಸರು *

6. ವ್ಯಕ್ತಿಯ ವಿಳಾಸ *

7. ಲಿಂಗ *

Mark only one oval.

☐ ಸ್ತ್ರೀ

☐ ಪುರುಷ

☐ ಹೇಳಲಿಚ್ಛಿಸುವುದಿಲ್ಲ

8. ವ್ಯಕ್ತಿಯ ವಯಸ್ಸು *

ಭಾಗ ೪

9. ನೀವು ಯಾವ ಕರಕುಶಲ ವಸ್ತುಗಳನ್ನು ತಯಾರಿಸುತ್ತೀರಿ? *

Mark only one oval.

- ☐ ಗೊಂಬೆಗಳು
- ☐ ಅಲಂಕಾರಿಕ ವಸ್ತುಗಳು
- ☐ ದಿನಬಳಕೆ ವಸ್ತುಗಳು
- ☐ ಇತರೆ (ನಿರ್ದಿಷ್ಟಪಡಿಸಿ)

10. ನೀವು ಈ ಉದ್ಯೋಗಕ್ಕೆ ಬಂದದ್ದು ಹೇಗೆ *

Mark only one oval.

- ☐ ಅನುವಂಶೀಯವಾದ ಉದ್ಯೋಗ
- ☐ ಜೀವನ ಕೌಶಲ/ ಕೌಶಲಾಭಿವೃದ್ಧಿ ತರಬೇತಿ ಪಡೆದ ನಂತರ
- ☐ ಇತರೆ (ನಿರ್ದಿಷ್ಟ ಪಡಿಸಿ)
- ☐ Other: _____

11. ನೀವು ಯಾವಾಗಿನಿಂದ ಈ ಕರಕುಶಲ ಉದ್ಯೋಗವನ್ನು ಮಾಡುತ್ತಿದ್ದೀರಿ *
(ವರ್ಷವನ್ನು ನಮೂದಿಸಿ)

12. ಕರಕುಶಲ ವಸ್ತುಗಳ ತಯಾರಿಕೆಯನ್ನು ನೀವು ಎಲ್ಲಿ ಮಾಡುತ್ತೀರಿ *
ಸ್ಥಳವನ್ನು ನಮೂದಿಸಿ

13. ನೀವು ಕರಕುಶಲತೆಗೆ ಸಂಬಂಧಿಸಿದ ಸ್ವ-ಸಹಾಯ ಗುಂಪು ಅಥವಾ ಯಾವುದಾದರೂ ಸಂಸ್ಥೆಯ ಸದಸ್ಯರಾಗಿರುವಿರೇ ? *

Mark only one oval.

- ☐ ಹೌದು
☐ ಇಲ್ಲ

14. ಕರಕುಶಲ ಉದ್ಯೋಗವು ನಿಮ್ಮ ಜೀವನೋಪಾಯದ ಪ್ರಾಥಮಿಕ ಆದಾಯವೇ ? *

Mark only one oval.

- ☐ Yes
☐ No

15. ನಿಮ್ಮ ಕುಟುಂಬದ ಎಷ್ಟು ಪ್ರತಿಶತ ಆದಾಯವು ಕರಕುಶಲ ಉದ್ಯೋಗದಿಂದ ಬರುತ್ತಿದೆ ? *
 % ನಮೂದಿಸಿ

16. ನೀವು ಯಾವ ಮರವನ್ನು ಬಳಸುತ್ತೀರಿ ? *
 ವಿವಿಧ ಮರಗಳನ್ನು ಹೆಸರಿಸಿ

17. ಒಂದು ತಿಂಗಳಿನಲ್ಲಿ ಎಷ್ಟು ಪ್ರಮಾಣದ ಮರವನ್ನು ಬಳಸುತ್ತೀರಿ ? *
- ಮರದ ಜಾತಿ ಮತ್ತು ಪ್ರಮಾಣವನ್ನು ನಮೂದಿಸಿ

18. ಇಷ್ಟು ಮರವನ್ನು ನೀವು ಎಲ್ಲಿಂದ ಪಡೆಯುತ್ತೀರಿ ? *
- ಮರದ ಜಾತಿ ಮತ್ತು ಅದನ್ನು ಸಂಗ್ರಹಿಸಿದ ಮೂಲ ನಮೂದಿಸಿ

19. ಕಚ್ಚಾ ಮರದ ದೊರೆಯುವಿಕೆಯಲ್ಲಿ ಕೊರತೆ ಉಂಟಾಗಿದೆಯೇ *
- ಹೌದು ಎಂದಾದಲ್ಲಿ ಮುಂದಿನ ಪ್ರಶ್ನೆಯನ್ನು ಕೇಳಿ

Mark only one oval.

☐ Yes

☐ No

20. ಕಚ್ಚಾ ಮರದ ಕೊರತೆ ಉಂಟಾಗಿದ್ದಲ್ಲಿ ಯಾವ ಜಾತಿಯ ಮರದ ದೊರೆಯುವಿಕೆಯ ಕೊರತೆ ಉಂಟಾಗಿದೆ ನಮೂದಿಸಿ

21. ಸರಿಸುಮಾರು, ಪ್ರತೀ ತಿಂಗಳು ಎಷ್ಟು ಕಚ್ಚಾ ಮರದ ಅಗತ್ಯವಿರುತ್ತದೆ ? *

ಮರದ ಜಾತಿ ಮತ್ತು ಪ್ರಮಾಣವನ್ನು ನಮೂದಿಸಿ

22. ಕರ್ನಾಟಕ ಅರಣ್ಯ ಇಲಾಖೆಯಿಂದ ಎಷ್ಟು ಪ್ರಮಾಣದ ಮರ ದೊರೆಯುತ್ತದೆ ? *

ಮರದ ಜಾತಿ ಅನುಸಾರ ಪಟ್ಟಿ ಮಾಡಿ

23. ಕರಕುಶಲ ಉದ್ಯೋಗಕ್ಕೆ ಕಚ್ಚಾ ಮರದ ಸಂಗ್ರಹಣೆಗೆ ಇರುವ ಪ್ರಮುಖ ಸಮಸ್ಯೆಗಳೇನು ? *

ಗರಿಷ್ಠ ೫ ಸಮಸ್ಯೆಗಳನ್ನು ಪ್ರಾಮುಖ್ಯತೆಯಾಧರಿಸಿ ಪಟ್ಟಿ ಮಾಡಿ

24. ಕರಕುಶಲ ವಲಯಕ್ಕೆ ಮರದ ಪೂರೈಕೆ ಸುಗಮವಾಗುವಂತೆ ಮಾಡಲು ತಾವು ಏನು ಸಲಹೆ ನೀಡುತ್ತೀರಿ ? *

ವ್ಯಕ್ತಿಯು ನೀಡಿದ ಸಲಹೆಯು ನಿಮಗೆ ಅರ್ಥವಾಗಿರುವುದನ್ನು ಖಾತ್ರಿಪಡಿಸಿಕೊಂಡು ನಂತರ ದಾಖಲಿಸಿ, ಸಮೀಕ್ಷೆಯಲ್ಲಿ ಭಾಗವಹಿಸಿದ್ದಕ್ಕಾಗಿ ಅವರಿಗೆ ಅಭಿನಂದಿಸಿ ಹಾಗೂ ಸಮೀಕ್ಷೆಗೆ ಮುಂದುವರೆಯಿರಿ

Annexure 3 Data coding for statistical analysis

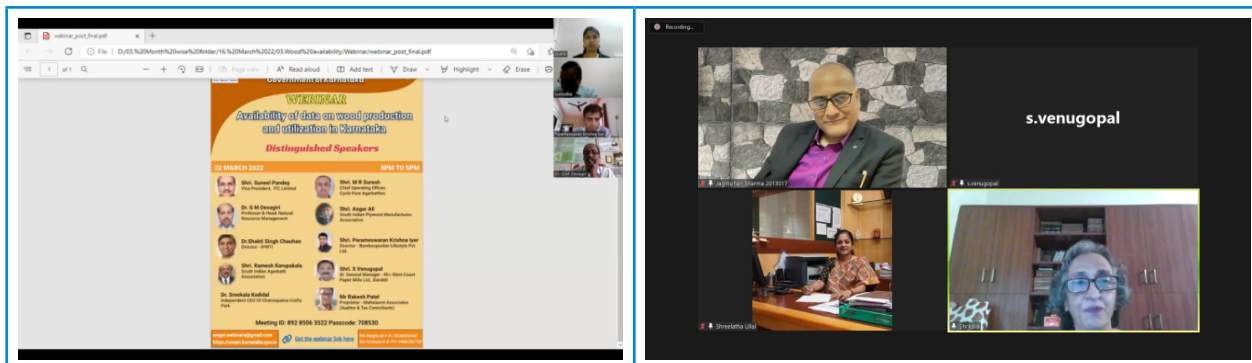
CODES USED FOR STATISTICAL ANALYSIS

1. Centers name
 1. Mysore
 2. Bengaluru
 3. Mangalore
 4. Dharwad
2. ಲಿಂಗ
 1. Female
 2. Male
 3. Not interested to tell
3. ವ್ಯಕ್ತಿಯ ವಯಸ್ಸು
 1. <20 years
 2. 21 – 50 years
 3. 51 – 80 years
 4. >80 years
4. ನೀವು ಯಾವ ಕರಕುಶಲ ವಸ್ತುಗಳನ್ನು ತಯಾರಿಸುತ್ತೀರಿ
 1. Dolls
 2. Decorative items
 3. Daily use items
 4. Others (carpentry, carvings, patch work, garland, polishing, wall panels, furniture's etc.)
5. ನೀವು ಈ ಉದ್ಯೋಗಕ್ಕೆ ಬಂದದ್ದು ಹೇಗೆ
 1. Hereditary
 2. Artisan training
 3. Others (through friends, as workers, interest etc.)
6. ನೀವು ಯಾವಾಗಿನಿಂದ ಈ ಕರಕುಶಲ ಉದ್ಯೋಗವನ್ನು ಮಾಡುತ್ತಿದ್ದೀರಿ
 1. Actuals
7. ಕರಕುಶಲ ವಸ್ತುಗಳ ತಯಾರಿಕೆಯನ್ನು ನೀವು ಎಲ್ಲಿ ಮಾಡುತ್ತೀರಿ
 1. Factory
 2. Home
 3. Government allotted place
 4. Crafts shop/ park

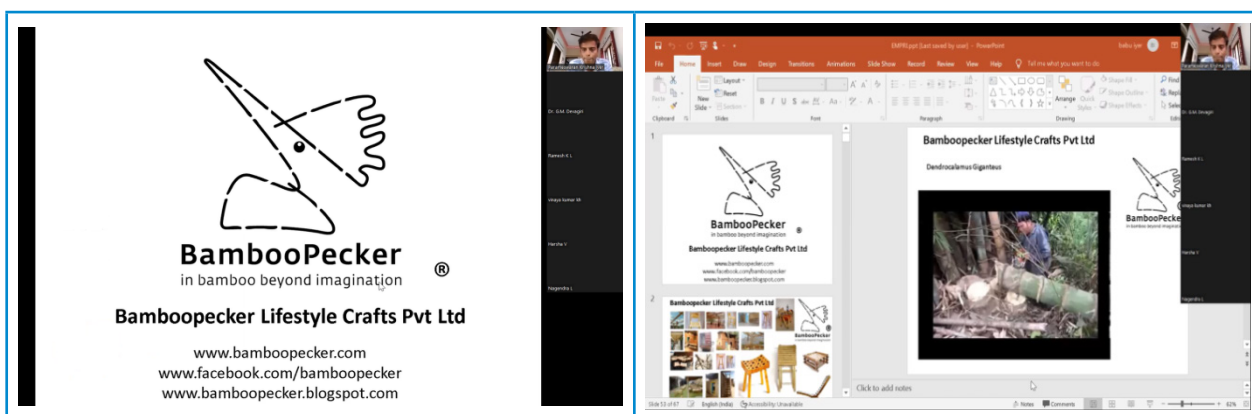
8. ನೀವು ಕರಕುಶಲತೆಗೆ ಸಂಬಂಧಿಸಿದ ಸ್ವ-ಸಹಾಯ ಗುಂಪು ಅಥವಾ ಯಾವುದಾದರೂ ಸಂಸ್ಥೆಯ ಸದಸ್ಯರಾಗಿರುವಿರೇ
 1. Yes
 2. No
9. ಕರಕುಶಲ ಉದ್ಯೋಗವು ನಿಮ್ಮ ಜೀವನೋಪಾಯದ ಪ್ರಾಥಮಿಕ ಆದಾಯವೇ
 1. Yes
 2. No
10. ನಿಮ್ಮ ಕುಟುಂಬದ ಎಷ್ಟು ಪ್ರತಿಶತ: ಆದಾಯವು ಕರಕುಶಲ ಉದ್ಯೋಗದಿಂದ ಬರುತ್ತಿದೆ
 1. Actuals
11. ನೀವು ಯಾವ ಮರವನ್ನು ಬಳಸುತ್ತೀರಿ
 1. Rosewood
 2. Teak
 3. Sandalwood
 4. Aale
 5. Polkhi
 6. Others (Heddi, Udaya, ankale, Nerale etc.)
12. ಒಂದು ತಿಂಗಳಲ್ಲಿ ಎಷ್ಟು ಪ್ರಮಾಣದ ಮರವನ್ನು ಬಳಸುತ್ತೀರಿ
 1. <10 cft
 2. 10 – 50 cft
 3. 51 – 100 cft
 4. 101 – 150 cft
 5. 151 - 200 cft
 6. >200 cft
13. ಇಷ್ಟು ಮರವನ್ನು ನೀವು ಎಲ್ಲಿಂದ ಪಡೆಯುತ್ತೀರಿ
 1. e-auction/ KFD/ Cauvery emporium
 2. Private depot
 3. Farmers/owners
14. ಕಚ್ಚಾ ಮರದ ದೊರೆಯುವಿಕೆಯಲ್ಲಿ ಕೊರತೆ ಉಂಟಾಗಿದೆಯೇ
 1. Yes
 2. No
15. ಕಚ್ಚಾ ಮರದ ಕೊರತೆ ಉಂಟಾಗಿದ್ದಲ್ಲಿ ಯಾವ ಜಾತಿಯ ಮರದ ದೊರೆಯುವಿಕೆಯ ಕೊರತೆ ಉಂಟಾಗಿದೆ ನಮೂದಿಸಿ

1. Rosewood
 2. Teak
 3. Sandalwood
 4. Aale
 5. Polkhi
 6. Others (Heddi, Udaya, ankale, Nerale etc.)
16. ಸರಿಸುಮಾರು, ಪ್ರತಿ ತಿಂಗಳು ಎಷ್ಟು ಕಚ್ಚಾ ಮರದ ಅಗತ್ಯವಿರುತ್ತದೆ
1. <10 cft
 2. 10 – 50 cft
 3. 51 – 100 cft
 4. 101 – 150 cft
 5. 151 - 200 cft
 6. >200 cft
17. ಕರ್ನಾಟಕ ಅರಣ್ಯ ಇಲಾಖೆಯಿಂದ ಎಷ್ಟು ಪ್ರಮಾಣದ ಮರ ದೊರೆಯುತ್ತದೆ
1. 0 cft
 2. 1 – 50 cft
 3. >50cft

Annexure 4 Photographs of Stakeholder Consultations and Field Visits



Webinar on availability and demand of wood by handicrafts sector of Karnataka – 22.03.2022



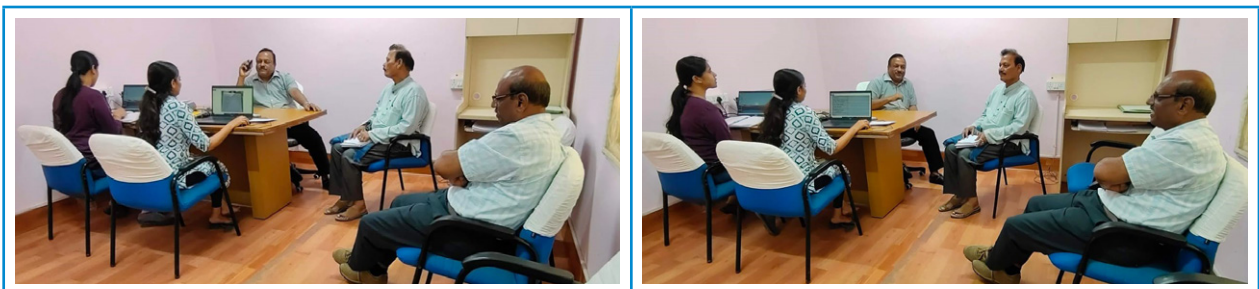
Webinar on availability and demand of wood by Bamboo industries of Karnataka – 22.03.2022



Discussion with Ms Srikala Kadidal, Independent Director/CEO, Channapatna Crafts Park, and Sri Devaramani, Deputy Director (Handicrafts) (R) – 29.03.2022



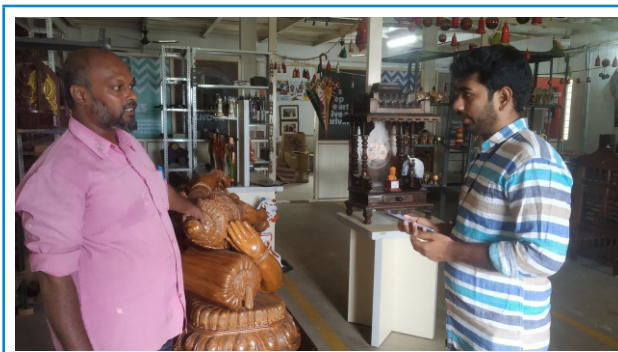
Discussion with artisans of Channapatna Crafts Park, Channapatna – 07.04.2022



Discussion with Shri Devaramani, Deputy Director Handicrafts (R) – 01.04.2022



Discussion with artisans of Mandi Mohalla, Mysuru – 27.05.2022



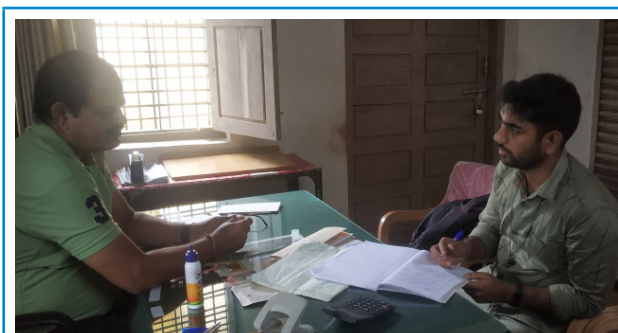
Discussion with artisans of Channapatna Crafts Park – 08.06.2022



Discussion with artisans of Ramohalli and Devanahalli, Bengaluru – 18.06.2022



Discussion with artisans of Sandalwood Complex, Keladi Road, Sagar – 21.06.2022



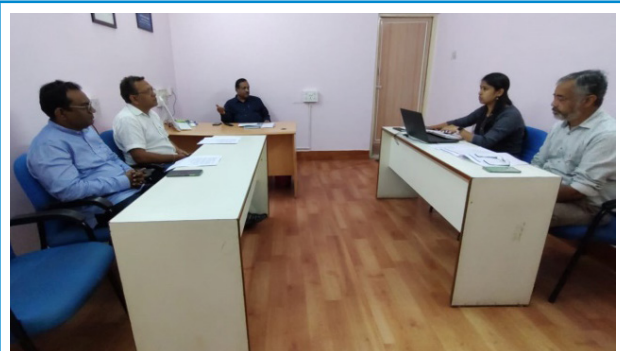
Discussion with artisans of Sandalwood Complex and Lions Club, Sirsi – 22.06.2022



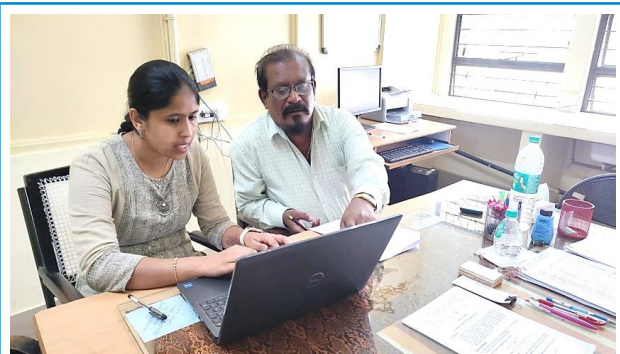
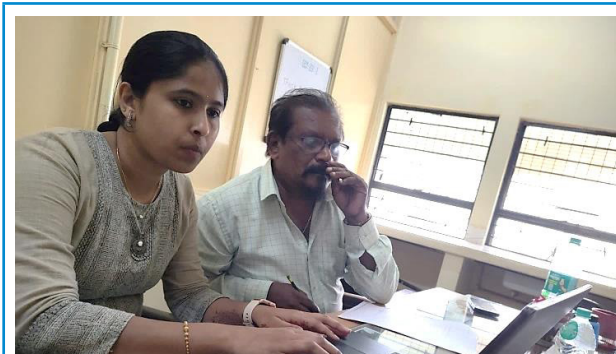
Discussion with artisans of Gudigargali, Kumta – 23.06.2022



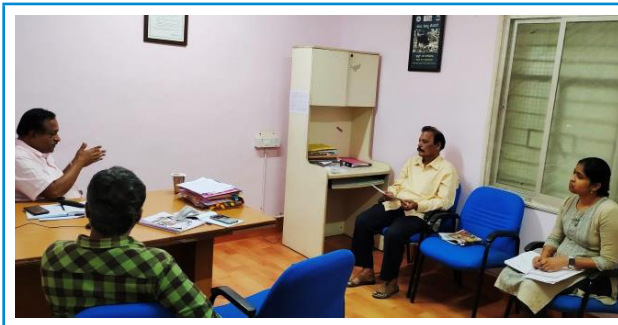
Discussion with artisans of Kinhal at Chitragar colony, Koppal – 25.06.2022



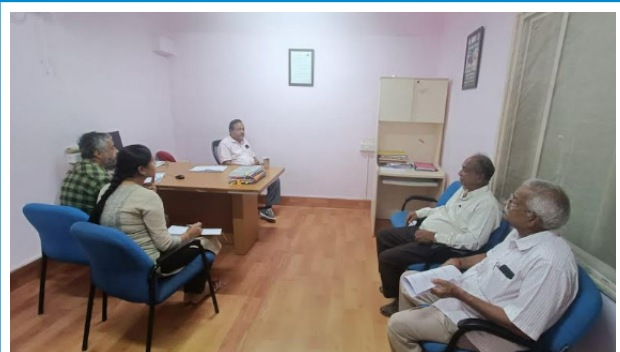
Discussion with President and Secretary of KHAWA at Malleshwaram office, EMPRI – 15.09.2022



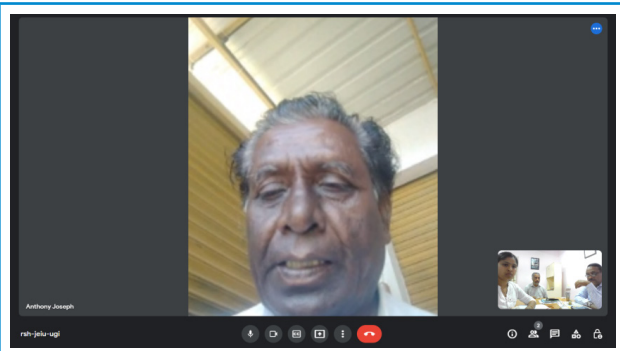
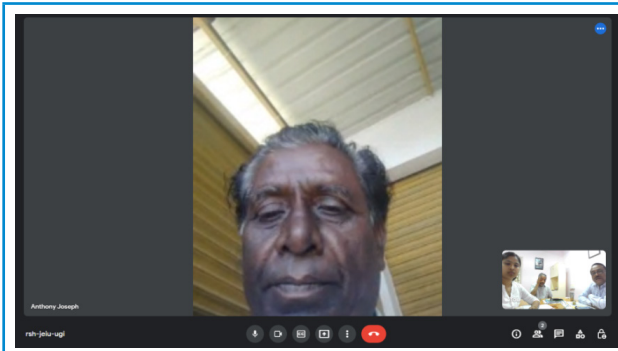
Discussion with Dr Surendra H S, Assistant Professor (R) – 16.09.2022



Discussion with Deputy Director Handicraft (R) at Malleshwaram office, EMPRI – 16.09.2022



Discussion with District secretary KHAWA, UK at Malleshwaram office EMPRI - 16.09.2022



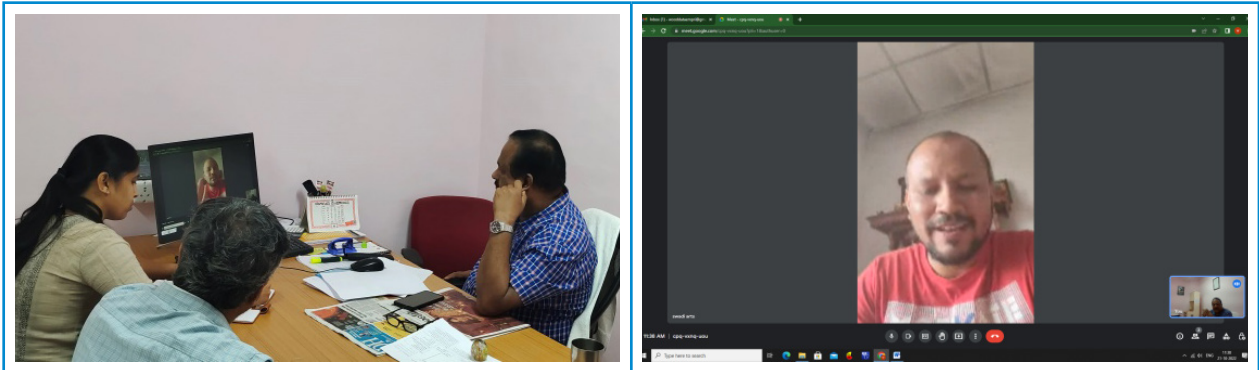
Interaction with Sri Joseph, Wood supplier for WBH industries – 23.09.2022



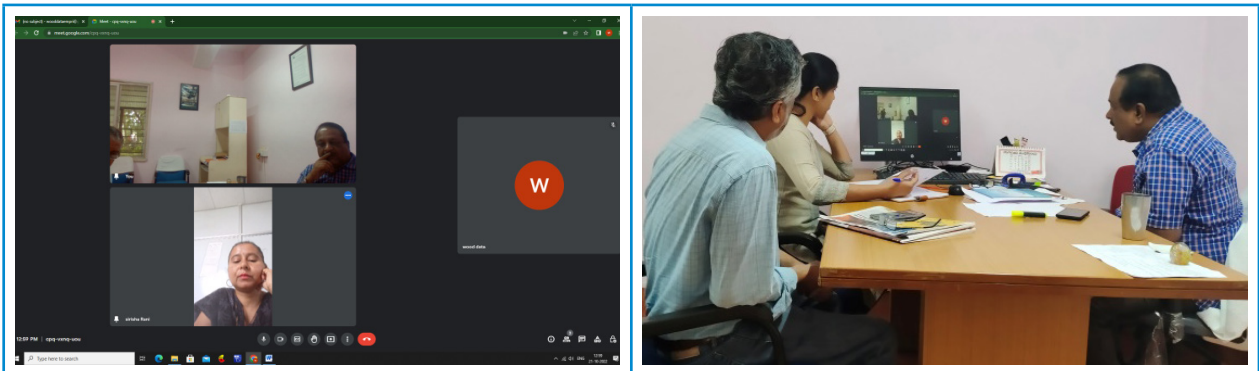
Discussion with Sri Vishwanath R Nayak, Mahalsa Designer Doors – 20.10.2022



Visit to Divine Handicrafts, Malleshwaram 8th cross – 20.10.2022



Discussion with Sri Girish, Divine handicrafts - 20.10.2022



Discussion with Sri Sirisha Rani, Entrepreneur, Kidken Edu Solutions – 21.10.2022



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