

Landscapes of Unique Vernacular Communities: Changing Social Geography and Cultural Practices of the Kodagu Community, Karnataka, India

Surekha Ramineni¹, Monalisa Bhardwaj² & Sudha Kumari G³

^{1&3} Research Scholar, Department of Architecture, Ramaiah Institute of Technology, Visvesvaraya Technological University, Belagavi 590018,

² Research Supervisor, Department of Architecture, Ramaiah Institute of Technology, Visvesvaraya Technological University, Belagavi 590018,

Email: surekha.ramineni@msrit.edu, monalisa@msrit.edu, sudhakumari@msrit.edu

Received	Accepted	Published
07.03.2024	29.07.2024	30.07.2024

<https://doi.org/10.61275/ISVSej-2024-11-07-04>

Abstract

Kodagu is a distinctly recognizable bioregion in the southern region of Karnataka. It has three wildlife sanctuaries: the Brahmagiri, Talakaveri, and Pushpagiri, and one national park: the Nagarhole National Park. It is dominated by the coffee-forest landscapes and is home to Kodava speaking communities. Kodava cultural traditions and practices have been transmitted orally from generation to generation. The people of Kodagu (Coorg) worship Nature, their ancestors, river Kaveri and 'Devarakadu' (sacred groves). Talakaveri, Triveni Sangama, Iruppu falls, Rameshwara temple are principal heritage sites and focal points of various cultural practices and festivals. 'Kailpodh', 'Puthari', Kaveri Sankramana are distinctive festivals celebrated around the seasons for rice cultivation. Traditional attire and food practices are unique to the region and strongly tied to the mythological anecdotes with Kaveri River.

To understand the human-environment relationship shaping the unique vernacular community of Kodavas, this study includes- understanding the changes in the cultural practices and social geography of Kodagu community. Mixed Method approach has been adopted to understand the intangible cultural practices, history and traditions of the people through literature study and interviews with members of Kodava community. For understanding the changing social geography- urban morphological changes have been reviewed that reveal the many drivers of change including- climate change, tourism, urbanization, policies and demography shifts.

This paper concludes the different aspects where mitigation is required to support and manage the distinctive human-Nature relationship conserved in the vernacular community of Kodavas.

Keywords: Kodagu, Coorg, Heritage, Landscape, Kaveri, Conservation

Introduction

Heritage landscapes also known as cultural landscapes are the result of human interactions with nature over a long period of time and vary in complexity, scale and significance (Centre, 2012). Cultural heritage landscapes (CHLs) encompass the tangible and intangible values. The CHLs mold and render an identity to the local communities as they are valued and revered by the locals due to their material, cultural, religious, ancestral or non-material associations (Rössler & Lin, 2018). In order to conserve the CHLs and pass on the integral memory to the future generations, it is imperative to understand the challenges faced by them. Unabated tourism, uncontrolled urbanization, infrastructure development, resource modification and climate change are some of the vulnerabilities faced by CHLs (UNESCO World Heritage Centre, 2002)

In India, CHLs are closely associated with water which is perceived as the source of origin and existence. Waterbodies have been revered as Gods and Goddesses and as a symbol of fertility (Ramineni & Bharadwaj, 2021). The birth places of rivers like Gangotri (Ganges), Yamunotri (Yamuna), Tala Kaveri (Cauvery), etc., and confluence of rivers known as Sangam (Prayagraj, Triveni Sangam, etc.) hold spiritual significance as places of rituals and festivities (Singh, Rana & Kumar, 2021). The CHLs assets especially the ones related to water attract tourists due to their uniqueness. Tourism is a complex socioeconomic activity with an intricate relationship between cultural and natural heritage (Coccossis, 2016). Tourism's association with CHLs can be described as two-pronged, while it constructively provides a base for economic development and cultural exchange it also results in local cultural erosion, social disruption, and resource restraint. Tourism is dependent on the natural resources to a great extent and exerts immense pressure on the environmental base (Baulhamam, 2009) especially in mountainous terrains (Atik, Altan & Artar, 2010). Unsustainable tourism practices in eco-sensitive zones cause significant ecological alterations and loss of visual integrity in the CHLs. Tourism is closely associated with land use changes and infrastructure development particularly in environmentally and culturally rich areas. Infrastructure development including hospitality facilities and transport services result in land use changes. These urban morphological transformations in land use alter the CHL fabric immensely. The unmindful development of infrastructure with less to no regard for the visual integrity result in defacing and scarring of the CHLs. This results in alteration or loss of the associative values between CHLs and local communities.

Kodagu/Coorg is one such distinct recognizable bioregion to the South of Karnataka, India. Kodagu is known for its rich cultural heritage landscapes including national parks, wildlife sanctuaries, coffee plantations, local traditions of Kodava speaking communities including Kodavas, Amma Kodavas, Kodava Peggade, Jamma Mappille among others. Traditional attire and food practices are unique to the region and strongly tied to the mythological anecdotes with Kaveri River. The people of Kodagu (Coorg) worship nature, their ancestors, river Kaveri and 'Devarakadu' (sacred groves). Talakaveri and Triveni Sangama are principal heritage sites of reverence and focal points of various cultural practices and festivals. Kaveri Sankramana is a distinctive festival celebrated to mark the birth of river Cauvery. Locals and tourists throng the Talakaveri region during the festival and otherwise. Infrastructure development like flyover around this region has less regard towards the sanctity and sacrality of Talakaveri.

This study aims to review the impacts of unabated tourism, urbanization and land use changes on the visual integrity of cultural/heritage landscapes of Kodagu bioregion. The objectives are

- To understand various distinctive layers of CHLs and people of Kodagu district
- To identify the vulnerabilities of CHLs of Kodagu district including tourism, urban morphological transformations, infrastructure development
- To examine the shifts in local character and culture in the heritage landscape of Kodagu

Theoretical Framework

Symbolic Perception: The architects, urban designers, planners, researchers, sociologists, theorists and geographers express their concern of towns/cities deprived of their unique characteristics/local identity of a town. Hayden (1997) states that “‘place’ is one of the trickiest words in the English language, a suitcase so overfilled one can never shut the lid” (Carr & Servon, 2009). The local identity of the place indicates its cultural heritage i.e. union of tangible (mostly physical built environment) and intangible (people-centric, experience, safety, etc.) Gieryn (2000) asserts that region has 3 characteristics “A place is a unique spot in the universe;” “place has physicality;” and “without naming, identification, or representation by ordinary people, a place is not a place” (Carr & Servon, 2009). The people value and belief system blend the symbolic meaning and built form, amalgam the natural and topographic conditions. The notion of culture keeps changing overtime with layers of intrinsic activities with modified lifestyle which in turn demanding myriad occupation, different usage of space and belief system within the society.

Cultural Identity: Teitz in the year 1989 debates that locale is “problematic as targets of economic development strategy” are influenced by economic development. The development also has positive outcome, especially for the underrated assets. The tourism or investment increases the regional economy but also simultaneously endangers the native business and affects especially the low-income group of societies. The renewal or upscaling of the project in the rural areas brings in its own stress associated with it. The identity of the local community, vernacular culture and commerce needs unique and participatory approach with a methodology which should be integrated in nature. Cultural Sustainability has to be integrated with environment, social and economic sustainability, especially culture and social sustainability has to be even more harmonious (Memmott & Keys, 2015).

Memory of a Place: The human and environment relationship have a cognition cultural value, different religious background sometimes feels similar relationship with environment, hence culture shapes architecture and public spaces. Rapoport (1969, 2005) states the importance of places to be designed for people understanding their cultural practices and indigenous occupation they are involved in. The socio spatial behavior which is culturally specific. Kevin Lynch in the year (1960) states that use of human mind and cognition in the movement of space creates mental map navigating the place and user experiences, leisure of the space whether quiet/threatening, safety of the place, feelings of the region as a memory which is an idyllic view of urban design (Montgomery, 1998). Singh R.P.B defines “Sacred landscapes characterized with some unique feature of nature that attracted human beings in the past for understanding and experiencing something beyond the earthly spirit, and over time they became sacral loc” (Rana P.B. Singh & Olimpia Niglio, 2022) such is the landscape of the case study in the paper “Tala Kaveri” Kannadigas come worship and practice the rituals for the river Kaveri, their belief of supernatural qualities in the water to heal attracts thousands of tourists. The mental image or the memory and values associated with this place makes it sacredscapes.

Research Methodology

This research employed a mixed method approach: To understand the human-environment relationship shaping the unique vernacular community of Kodavas, the study includes, understanding the changes in the following aspects of the Kodagu Community:

1. Cultural Practices
2. Social Geography

The first section of the paper outlines the unique character of the vernacular community of Kodavas. This section draws from study of existing literature, informal interviews with Kodava people, to outline a memory and perception based identity of the Kodava community in terms of natural heritage, history and people, cultural heritage, the settlement patterns and vernacular built forms.

It also employs mapping transformations in urban morphology, understanding impact of climate change and the urban planning measures leading spatial- morphology changes. This

study reflects the shifting character of demography, local economic activities – mainly tourism and threat to the unique natural- cultural heritage of the region.

Study Area Site: Kodagu also known as Coorg is a picturesque mountainous district in Karnataka located between $11^{\circ} 56'$ and $12^{\circ} 15'N$ latitude and $75^{\circ} 22'$ and $76^{\circ} 11'E$ longitude. It has varying elevations ranging from 900 to 1750 m above mean sea level. The district occupies a geographical area of 4,102 sq.km. (1,584 sq mi) and houses a population of 5.6 lakhs as per census which makes it the least populous district in Karnataka. The highest peak, Tadiandamol, rises to 1,750m (5,740 ft), with Pushpagiri, the second highest, at 1,715 meters (5,627 ft).

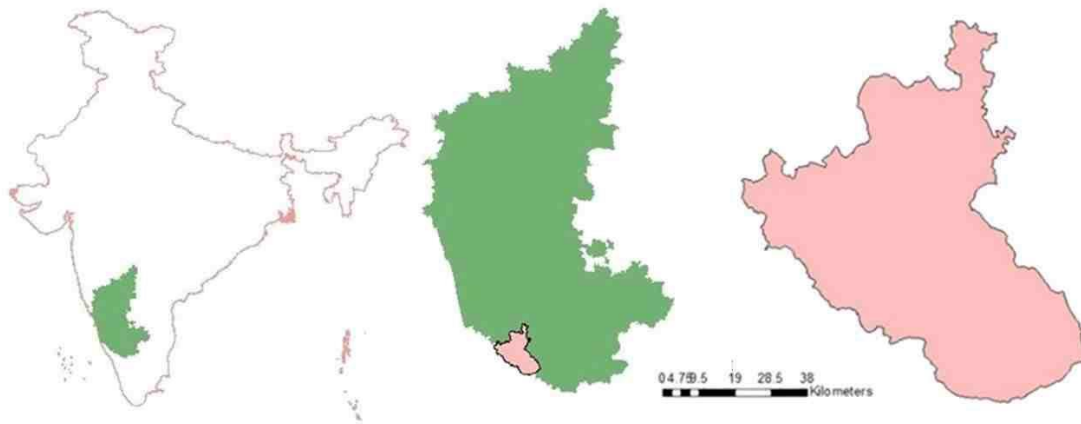


Fig 1: Geographical map of Kodagu,
Source: Author

Data Collection: The study undertakes data collection in two stages- the qualitative aspect explores the cultural practices of the vernacular community of Kodagu. To gather data for this, unstructured telephone interviews were conducted with community members including Ms. Kitty Subbaiah, Ms. Shubra Aiyappa, and Ms. Meenakshi Raju. These primary contacts connected the authors to approximately 12 families in Coorg/Kodagu and Bangalore through a snowball sampling method. The outline of discussions included themes of rituals, attires, jewelries, food, traditional occupations which are agrarian and estate management. The discussion also revealed issues pertaining to changing land use, unprecedented rainfall leading to landslides and disruption of agricultural produce, compelling shift in occupation driving people towards tourism.

The second part required morphological studies for which spatial mapping was carried out using Survey of India map. Basemap was generated using satellite images and digitized using AutoCAD to prepare scaled drawings. The purpose of the mapping was to document the changing figure ground built and unbuilt around socio-geographical region of Kodagu. Observational studies also include sketching the upcoming the physical infrastructure projects in the cultural areas disrupting the visual image of the CHLs. The summary of this process has been illustrated in Fig. 10 and Fig. 11.

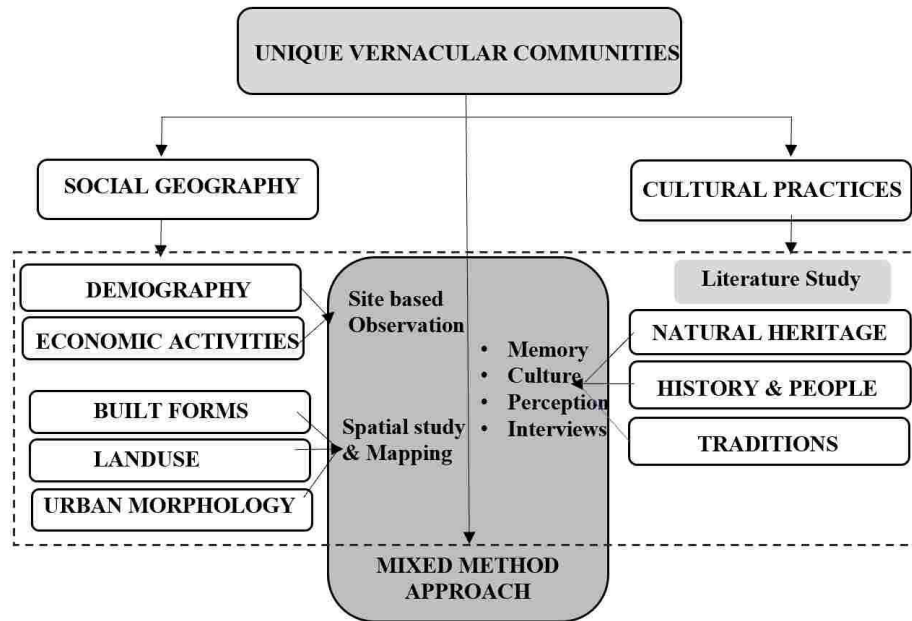


Fig 2: Methodology adopted for the study,
Source: Author 3

Layers of Cultural Heritage Landscape of Kodagu

Cultural heritage constitutes the fabric, culture and narrative distinctive to the place. Fabric relates to the artefacts, archeological remains, structures, monuments, cemeteries, streets, settlement patterns, aboriginal landscapes, etc. Culture landscape encompasses beliefs, traditions, rituals, lifestyle, ceremonies, agricultural practices, code of conduct, behavior, skills, experiences, identity, connection, art, pilgrimage value, symbols, etc. Narrative includes the memories passed on orally, visual records showcasing the glimpses of the past, or written records aiding in uncovering the history. Oral narrations like stories, beliefs, myths and legends of a community passed on from generation to generation are as important as the built memories.

Natural Heritage of Kodagu

Kodagu is located at a geographic nerve point between central and southern Western Ghats which forms an important ecological section (Ramachandra, Bharath & Vinay, 2019). Devarakadu or sacred groves, endemic species, wildlife, biodiversity, racing rivers, mountains, valleys, lakes, mesmerizing waterfalls, lush green paddy fields form the natural heritage of Kodagu. The three formal regions of protection in the district are Brahmagiri, Talakaveri, and Pushpagiri wildlife sanctuaries. Nagarahole national park, a tiger reserve, stretching between Kodagu and Mysuru districts covering an area of 643 sq.km. is under process of consideration as UNESCO world heritage site. River Cauvery (Kaveri) arising at the Talakaveri located on Brahmagiri hills near Bhagamandala in Kodagu forms the lifeline of South India. The greater part of the district drains into the tributaries of river Cauvery (Harangi, Lakshmanathirtha, Taraka, Cauvery, Hemavathi, and Kabini), Aralampuzha, Kuppanam, Payaswini, Valappattanam, Netravathi (Kumaradhara), etc., (WRIS, 2014; Ramachandra, Bharath & Vinay, 2019). The rivers and native forests of Kodagu have high diversity and endemism (Molur *et al.*, 2011) and house a number of critically endangered and vulnerable species like *Syzygium travancoricum*, *Ichthyophis kodaguensis*, etc.



Fig 3: Picturesque mountains of Kodagu,
Source – Pashupuleti Hemanth Kumar

The concept of Nature worship has prevailed from time immemorial, and this tradition is evident in Kodagu in the form of Devarakadu or forests of the God or sacred groves, the biocultural heritage sites. Kodagu is a land with highest number of dense sacred forests with every village having one or more sacred groves and reflects the nature friendly Kodava culture. There are many taboos against poaching and felling of trees in the sacred groves. Devarakadus are dedicated to many deities like Aiyappa (Hunter God), Bhadrakali, Bhagavathi, Madeva, Chamundi, Vishnumurthi, Bhagavathi, etc. and worshipped by local communities (Kushalappa & Raghavendra, 2012). The network of these sacred groves ranging from a cluster of trees in coffee plantation or paddy fields to extending over many square hectares on land offer diverse ecosystem services, microclimatic conditions, and aid in maintaining habitat and species diversity. The uniqueness of these Devarakadus lies in the fact that though they lie under the ownership of Forest Department and are declared as protected areas, they are jointly managed by communities including Muslims hence upholds communal unity (Chandrakanth, MG. Bhatt, MG. Nagaraja, MG. & Huylenbroeck, 2014).

History and People

The earliest reference of Kodagu can be found in Sangam literature. The name Kodagu or Coorg (anglicized version) seems to have been derived from the word Kodimalenad meaning dense forest land with steep mountains. There are various mythical stories about the ethnography of the people of Kodagu, yet it remains an unsolved puzzle. A popular myth goes that Chandravana, a king of Matya Desha is the progenitor of the Coorg race; however, Col. Marks Wilks opines that he may have been the Kadamba prince reigning over northwestern Mysore from where the first colonists migrated into Coorg (Richter, 1870). During the pre-historic period, region of Kodagu was inhabited by uncivilized wild tribes. In the historic period, different parts of the land were ruled by various kingdoms like Gangas, Kadambas, Cholas, Changalvas, Hoysalas, Kongalvas. During the 14th century, Kodagu was under the dominion of Nayakas, Vijayanagar empire, and Haleri Rajas, Wodeyars for several years followed by the rule of Haider Ali and Tippu Sultan. Kodagu was a province of British India since 1834 to 1947 (K P, 2015).

Historians believe that Yerawas, Kembatti Holeyas, Kudiya Poleyas, Jenu Kurubas, Betta Kurubas, Irulas, Gonds, Iris, Kavadis, Thodas etc. are the aboriginal tribes of Kodagu before Kodavas set foot on the land. Other immigrant communities like Gowdas, Malayalis, Jamma Mappille (Muslims), Jains, Lingayats, Airi, Meda, Hajama, Madivala, Koleya, Koyava, Marangi, Brahmin, Bunt, Golla, Kumbara, Kapala, Kaniya, etc., (Sujatha, 2017) are found in the region. Each of these communities are unique in their lifestyle, language, culture, and occupation. The Jenu Kurubas are the nomadic hill tribe who traditionally collected wild

honey from the dense forests (Demps *et al.*, 2012). Yerawas like the Holeyas are the mulanivasis and are mostly the laborers working in coffee plantations whereas Kembattis are the agricultural laborers. Ammas or the Amma Kodavas are believed to be the indigenous Brahmin clan and the earlier priests. Kodavas are the dominant inhabitants of Kodagu who formed aristocracy under the rule of Lingayat Rajas (Richter, 1870). They identify themselves as Kauverammada Makka or children of River Kaveri (Subbayya, 1978). They are worshippers of ancestors, weapons, and nature. Kodavas view river Kaveri with utmost reverence. They are a community of warfare, hunters, martial arts like that of Kshatriya clan and differ from the other communities in the region.

Settlement Patterns

Historically, settlement patterns developed based on the communities' cultural background, available natural resources, geography, environment, and their occupation. Both clustered and scattered settlements can be noted in Kodagu. The indigenous inhabitants of Kodagu lived in Ur (village) to ensure security and sharing of resources. The Ur Guppe (settlements) and mostly a central marketplace for community activities together formed the village. The settlements contained multiple clusters of thatched mud huts called Gudde Manes each belonging to different communities. These Gudde Manes are located close to the arable lands. The nomadic tribes Jenu Kurubas (honey collectors) and Kudiyas lived close to or within the dense forests (Chinnappa & Nanjamma, 2014). Scattered settlements can be noted in the areas where significant number of coffee plantations can be found. House of the property owner is located on the plantation along with houses for worker families that are scattered across the plantation. Characteristically, agriculture is practiced in the valleys of Kodagu and the hills are dotted with hill houses.

The traditional nuclear unit of Coorg society is the Okka or patrilineal joint family (Mysore Narasimhachar, 1978). All okkas lived harmoniously in Ur Guppe until some of the Okkas built larger isolated houses on their cultivable land and moved out. Members of these Okkas lived in large ancestral houses called Ainmanes. Each Ainmane belongs to an Okka (Naveen, 2016) and is identifiable by mane peda. These houses were simple structures with wooden pillars and thatched sloping roof and openings for doors and windows. These Ainmanes and the attached jamma land (hereditary lands) are an embodiment of identity and belonging to the members of the Okka and symbolize their lineage. Each Ainmane that the stood the test time has not less than 150 to 250 years of history. Currently Kodavas and Gowdas own about 1720 Ainmanes. Unfortunately, about 60% no longer own their traditional ancestral houses (Chinnappa & Nanjamma, 2014).

Culture

Kodagu cultural heritage centers around their belief system, festivals, weddings, traditions, rituals, lifestyle, symbols, agricultural practices, martial arts, folklore, etc. The mulanivasis of Kodagu have a rich repository of folk songs and ballads called as Balo Pat which literally translates to "live-long song" (Chinnappa & Nanjamma, 2014). There are Balo Pats for every occasion in the life of Kodagu people of all communities. Balo Pats are accompanied by the dudi drums. Singing and dancing is common and integral part most of the native communities of Kodagu. Folk dances accompanied by various musical instruments like dudi drums, pare, drone-pipe, cymbals and horns. Women perform Ummathat and dance in circles during festivals and in temple yards, village grounds or in Ainmanes.

Primarily worshippers of nature and ancestors, inhabitants of Kodagu venerate panchabutras as part of their daily life. They pay homage to their ancestors and offer prayer to water. Kodava festivals are identifiable with Hindu festivals but are unique in rituals and traditions. Puthari, Kailpodh and Kaveri Sankramana are the important Kodava festivals (Chinnappa & Nanjamma, 2014). Puthari or Huttari is a harvest festival like Sankranti of South India and Bihu or Lodi of North India. It is celebrated during November and December when men and women are dressed in traditional attires and young boys dress as Kodichi or the dancing girl. Kailpodh, similar to Ayudha Puja, is festival to worship weapons including guns

at the time of naati (sowing). It marks the beginning of hunting seasons. Kodavas are the only community permitted to carry guns without license under section 41 of the Arms Act (Vijaya, 1993).

Kaveri Sankramana or Tula Sankramana is celebrated in the month of October to mark the birth of river Kaveri. It is believed that Lord Brahma performed a celestial ritual at Talakaveri leading to the birth of the river. Lakhs of pilgrims throng the region each year to watch Theerthodbhava, emergence of river Kaveri, from a dry spring. The river goes underground and resurfaces at Triveni Sangama, Bhagamandala, a conflux of three rivers similar to Prayagraj in Allahabad. On this day, Kodava men and women are clad in their traditional attire perform puja. Holy water from Talakaveri is brought back to the household with reverence similar to Gangajal (Jayaprakash, 2018). Talakaveri, in its pristine setting, holds both sacred significance and cultural identity for the Kodava clan.



Fig 4: Tula Sankramana/Kaveri Sankramana celebration

Source- Courtesy <https://starofmysore.com/thousands-witness-cauvery-theerthodbhava-2/>; Pasupuleti Hemanth Kumar

The culture of weddings in Kodagu varies among the communities. The tribal weddings are simple arranged marriages or marriages by eloping as is the case with Jenu Kurubas (Mutharayappa, 1996). Contrary to this, the Kodava weddings are a spectacle to watch. The marriage celebration is a joyous occasion full of fun, frolic and food. Kodava bride's ceremonial attire includes kala kupya (full sleeve blouse), red pattupodiya (silk saree), vastra (red silk scarf) and adorned with traditional jewelry. The saree pleats are tucked from behind and the short pallu is pinned on the right shoulder. The groom is dressed in white Kupaya, a red silk sash at the waist and the head is covered with Coorg turban. Along with traditional jewelry, the groom is adorned with ornamental peechekathi tucked into the sash and odikathi hanging on the back (Heidari, 2015). Ballads and Mangala pat are sung at the event. Unlike other weddings, pandi curry (pork) and alcohol are served along with other traditional delicacies like Kadambuttu (steamed rice dumplings), Papattu, Noolputtu, Akki Otti and more (Kamicheril, 2012).



Fig 5: Traditional Attire and Jewelry of Kodava Community,

Source: Ms. Shubra Aiyappa



Fig 6: Typical Kodava Attire Bearing Traditional Weapons,
Source: Ms. Kitty Devaiah

Agriculture as a reflection of cultural heritage showcases Kodagu as a coffee lovers' paradise. The tryst between coffee and Kodagu dates back to 400 years. Legend says that Baba Budan, a Sufi saint, smuggled a few coffee beans from Yemen port on his way from Mecca pilgrimage. It was he who introduced coffee to Kodagu region somewhere in 17th century. For over 150 years, coffee was a homestead backyard crop for the peasants until planters started exporting coffee to far off countries. In the mid-19th century, the British set their first coffee plantation in Kodagu, since then there has been a tremendous increase in the number of coffee estates in the region. The conducive microclimate of Kodagu region favors coffee cultivation. Today, Kodagu is the second largest coffee producer in the country after Baba Budangiri of Chikmagalur district. Coffee plantations continue to be the hallmark of the region, covering vast expanses of the hills. Characteristically and historically, paddy was cultivated for subsistence along the valleys with Coffee grown along the hill slopes. Black pepper, cardamom, Coorg oranges, ginger, banana, arecanut, timber are the other regional commercial crops along with coffee. Coffee has boosted the socioeconomic development of the region.



Fig 7: Coffee drying terraces in coffee plantation of Kodagu,
Source: Author

Key Drivers Leading to Change in the Character of Kodagu Cultural Heritage Landscapes

A critical review of the available literature reveals that Kodagu's natural and cultural heritage landscapes are vulnerable to several factors. Anthropogenic changes like unabated tourism, land use transformation, infrastructure development, climate change, loss of sacred

groves, rapid deforestation, lack of awareness among locals and tourists are some of the key drivers leading to change in character of Kodagu CHLs.

Unabated Tourism: Kodagu is a little green jewel tucked into the Western Ghats and is often referred to as “Kashmir of the South” and “Scotland of India” (Rice, 1878). It is primarily an agrarian economy, yet tourism has proved to be one of the major contributors to GDP of Kodagu (K.C, 2014). People from far and wide flock Kodagu for its dense natural forests, national parks, racing rivers, serene lakes, a galore of waterfalls, beautiful coffee estates, monuments, unique culture, folklore and much more. Its strategic location and well-connected road network to with Bengaluru and Mysuru district, Kodagu a quick weekend getaway into the lap of nature. Residency Tourism (homestays and resorts), Eco tourism, Medical Tourism, Rural tourism, Agri tourism are some of the types of tourisms popular in Kodagu. Tourism-related businesses is adding to the income of the natives. As per Google year in search 2023, Kodagu (Coorg) is one of top ten most searched travel destinations in India (India, 2023). Kodagu received about 25 lakh tourists on an average over the last decade. News reports based on statements issued by the Department of Tourism, Kodagu district, Government of Karnataka, have pointed that there was setback in the number of tourists between 2018 and 2020 due to natural calamities and Covid-19, footfall of tourists has risen to about 44 lakhs in the year 2023, a 38% surge from 2022 (Express, 2024). To savor the local flavors and experience the authentic culture of Kodagu, many tourists prefer staying in homestays and tent stays nestled in the rural landscapes or the lush green coffee estates. Number of resorts are estimated at 1000 whereas the registered home stays are only 850 in number but about 3000 unregistered homestays operate illegally too (K. A. & DHNS, 2021). State Government has undertaken many tourism development projects including infrastructure facilities like road network, construction of airstrips, ropeways. etc., to facilitate tourism.



Fig 8: Tourism Destinations in Kodagu District, Karnataka,
Source: Government of Karnataka, Kodagu District <https://kodagu.nic.in/>

The question of whether tourism in Kodagu is a boon or a bane elicits diverse responses. While it's clear that tourism boosts Kodagu's economy and increases the income of local residents, it also contributes to ecological and cultural degradation. With increasing tourists, resorts, jungle lodges and homestays are springing up in the most pristine and serene ecosystems resulting in clearing of forests. There are no penal codes or clauses to direct who can run a homestay or to abate the illegally operations (Express, 2023). Abundant tourist activities like river rafting, fire camps, boating, disco, increased tourist vehicular traffic, pollution, dumping of plastic and solid waste are destructing the ecology. Tourism establishments are contaminating the water resources (H. P. & K. M., 2015) and a steep decline in the ground water table has been reported. A sociocultural and economic impact analysis of tourism on Kodagu reflects the engagement of locals in tourism-related businesses to make quick money. Many of the homestay owners are youngsters under the age of 30 which indicates a cultural shift from farming. Interactions with people of varying ethnicities, cultural

background, and ideologies, disrupts their day-to-day traditional practices and in some cases even influences to imitate the frequent tourists.

Climate Change: Kodagu has an extremely complex topography. Though the average rainfall is about 4000 mm, the rainfall gradient varies from 5000 mm in the Evergreen Western part to 1200 mm in the Moist Deciduous eastern part (Ravishankar & Nagaraja, 2021). For millennia, the hill slopes were kept stable by the dense native forests. In 2018, Kodagu district faced environmental catastrophes in the form of flash floods and landslides causing loss of life and property and a dent to the cultural heritage. Though torrential rainfall was the trigger for this devastation, the aftermath analysis carried out by environmentalists corroborated the fact that deforestation; cutting and altering the mountain of slopes for coffee plantation, road construction to boost tourism, construction of jungle lodges and homestays; ill-planned infrastructure development; unhealthy land use policies; soil erosion; illegal sand mining along river beds; loss of biomass; etc., resulted in the mayhem (Poonacha, 2019).



Fig 9: Landslide in Kodagu in 2018,

Source: <https://www.indiatoday.in/india/story/karnataka-floods-4-killed-in-kodagu-district-landslide-1316439-2018-08-16>

Urban morphological transformations and infrastructure development: As the climate change lead situations aggravate the risks and costs related to cultivation, the government policies are unable to support the rising costs and insurance. This factor along with easier land use conversion process is leading to tourism related occupation, which can be seen in the approximately 30% rise in tourist influx. There is a rising inconsonance between the policies that are proposed at central (e.g. NHAI) and state level (e.g. infrastructure projects like airstrip and land use policies) and the need of the local people and their ecology. News agencies have reported that the erection of a 400KV high power line in 2014 resulted in a loss of 50,000 trees in an ecologically fragile zone. Spatial analyses carried out by IISc of the proposed linear development projects of road widening and railway projects and their impact on the fragile ecosystem reveals large scale land use changes posing threats to ecology, biodiversity and hydrological processes (Ramachandra, Bharath & Vinay, 2019). Indiscriminate development activities carried out without a comprehensive heritage impact assessments can result in the loss of visual integrity of CHLs. Urban growth occurs along these development corridors leading to urban morphological transformations. This impact is evident with the construction of a flyover near the sacred Talakaveri, which has marred the heritage landscape, one of the most significant cultural reflections of Kodagu. This could potentially alter its associative values to the local communities to the holy site.

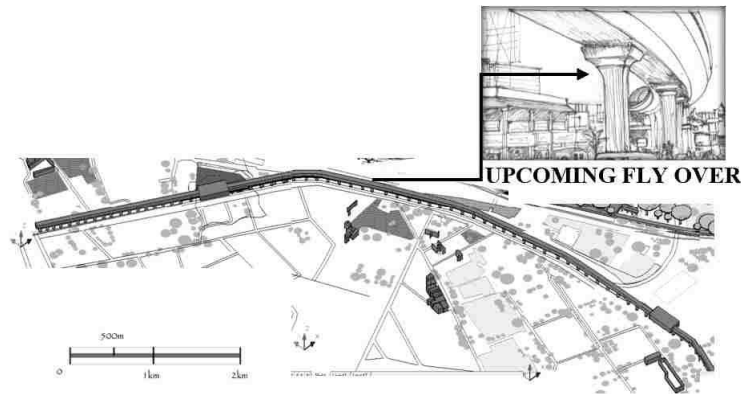


Fig 10: Flyover near Talakaveri, birthplace of River Kaveri,
Source: Author 3

Similar to the global trend, urbanization is causing youth of Kodagu are migrate to urban areas for better education and job opportunities (Ponnappa, 2013). This movement is resulting in rapid expansion of district centers and lack of second-generation farmers and labor in the rural areas (Naveen, 2016). To accommodate the influx of population into district centre, about 2800 acres of plantation and paddy fields have been converted for commercial purposes and development of new layout outside the current city limits (Ram, 2018). Riparian forest zones and Myristica swamps, a powerhouse of biodiversity, are being converted to areca nut plantation or utilized for agricultural development. The comprehensive development plan for 2030 aims to expand Madikeri town to three times its current size. This expansion will come at the expense of hectares of fertile land and forest, leading to numerous changes in the landscape mosaic of the Kodagu district. Urbanization may fragment the traditional lifestyle centered around rural okkas and keris, leading to the individualization of urban households. This could result in a complete sociocultural shift from traditional lifestyles and occupational practices, along with a loss of reverence for ancestral practices.

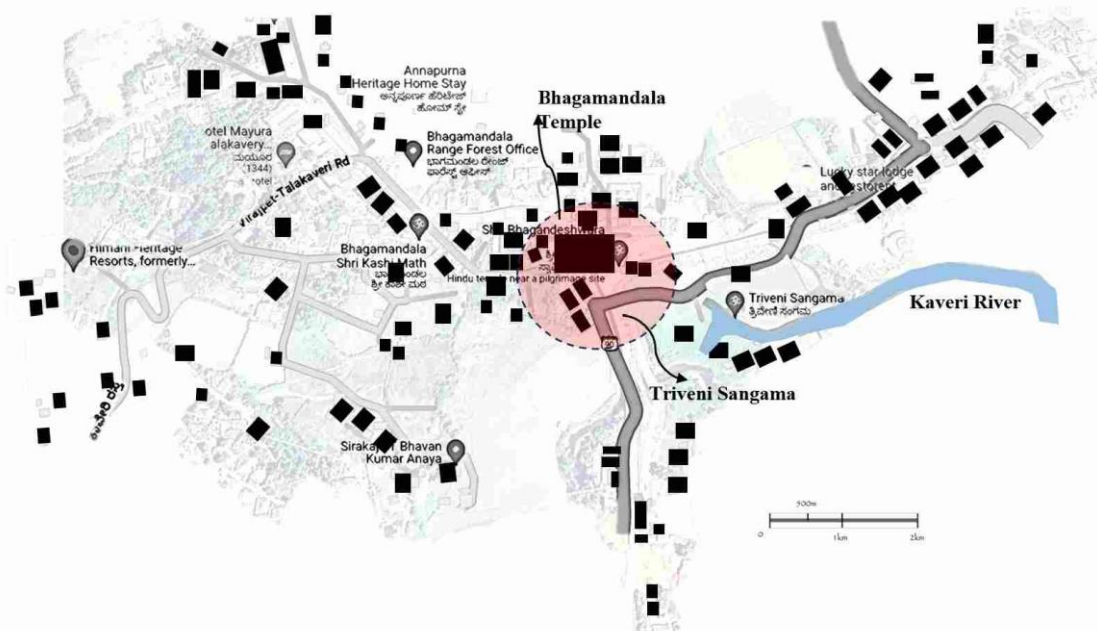


Fig 11: Urban morphological transformations around Bhagamandala temple,
Source: Author 3

Deforestation and loss of sacred groves: There has been a sharp decline in the native forest cover between 1920 and 2019 from 88% to 21.17% (Menon & Bawa, 1997;

Ramachandra, Bharath & Vinay, 2019; Ravishankar & Nagaraja, 2021) due to expansion of coffee plantations, infrastructure, residential and tourism developments like home stays. A survey carried out by British in 1905 recorded 1873 sacred groves covering an area of 6277 ha as against the study carried out by Forest Department in 1991 which recorded 1214 sacred groves over an area of 2550 ha. This indicates a huge loss of 3727 ha of sacred groves. The increase in number of sacred groves can be attributed to fragmentation and is a statement of apathy, lack of clarity in ownership, encroachment, expansion of coffee plantations, etc., (Kushalappa & Raghavendra, 2012). An irreversible disturbance to the forests due to the land use changes along the forest fringes highlights lack of forest management strategies. Loss of habitat is increasing the man-animal encounters. In many cases, worship has reduced to mere deities and the surrounding temple, and the prominence of the forest is lost. Urbanization and change in the way of worship are a threat to Devarakadus and comprise the status of Kodagu as the land of sacred groves.

People's Perception: During discussion through unstructured interviews, localities expressed awareness about the importance of environment and the ecosystem services. The principal issues raised by the them were human-wildlife confrontation, land use changes, extension of coffee plantation territories into the fringes of the forests and destruction of Devarakadus. They highlighted the dilution of the Karnataka Land Reforms Act, 1961, enabling investors and industrialists to directly purchase land from farmers. Land use changes and construction of illegal homestays in the eco-sensitive zones were pointed upon by the locals. While, the educated and aware residents stressed upon the insensitive planning, unregulated mass tourism, unchecked immigrant population leading to ecological disaster and cultural shift, some members of the local communities were inclined in favor of tourism development and expressed positive attitude towards the economic and sociocultural benefits, particularly considering floods and landslides which interrupt the traditional agricultural occupations.

Conclusion

The Kodavas are a unique vernacular community in the Western Ghat region of South Karnataka, India. This distinctive heritage landscape is witnessing change in context of its social geography, morphology and cultural practices. The prominent vernacular communities such as Kodavas among many others in the region have protected the traditions of their people - practices, food, ceremonies, attire, language, and occupations. The diverse communities of Kodagu region, including the Kodavas are a significant example of sustainable 'human – nature relationship' and are significant in protecting the traditional knowledge systems of this region.

The Kodagu region has faced complex geo-climatic disturbances in recent years due to climate change induced floods and landslides, which has forced people and governance to look for alternate solutions for protecting livelihoods and habitats. Many of the planning policies recently introduced in the region are myopic in character and effective in short spells. The sustainable future of the region can be achieved if nature-centric cultural landscape heritage is protected, and the urban planning approach is ecology centric. There is a need to review the urban planning approach from landscape planning strategies and watershed management perspective to provide long-term sustainable and resilient solutions.

Acknowledgements

We sincerely thank the families of Ms. Kitty Deviah and Ms. Shubra Aiyappa and all the people who have contributed towards better understanding of the cultural heritage landscape of Kodagu. We also thank our Principal Dr. NVR Naidu and Ramaiah Institute of Technology Research Centre for providing necessary infrastructure support and guidance.

References

- Atik, M., Altan, T. & Artar, M. (2010) 'Land use changes in relation to coastal tourism developments in Turkish Mediterranean', *Polish Journal of Environmental Studies*, 19(1), pp. 21–33.
- Baulhamam, M. R. (2009) 'The study of urban growth impact in tourism area using remote sensing and GIS technique for north part of the UAE', *Journal of Geography and Regional Planning*, 2(6), pp. 166–175.
- Carr, J. H. & Servon, L. (2009) 'Vernacular culture and urban economic development', *Journal of the American Planning Association*, 75(1), pp. 28–40. doi: 10.1080/01944360802539226.
- Centre, W. H. (2012) 'Operational Guidelines for the Implementation of the World Heritage Convention UNITED', *Operational Guidelines for the Implementation of the World Heritage Convention*, (July), pp. 1–175.
- Chandrakanth, MG. Bhatt, MG. Nagaraja, MG. & Huylbroeck, G. (2014) 'Existence Value of Kodagu Devara Kadu, Sacred Groves', 3(January), pp. 1–12.
- Chinnappa, B. & Nanjamma, B. (2014) 'Ainmanes_of_Kodagu'. New Delhi: Niyogi Books.
- Coccosis, H. (2016) 'Sustainable development and tourism: Opportunities and threats to cultural heritage from tourism', in *Cultural tourism and sustainable local development*. Routledge, pp. 65–74.
- Demps, K. et al. (2012) 'The Selective Persistence of Local Ecological Knowledge: Honey Collecting with the Jenu Kuruba in South India', *Human Ecology*, 40(3), pp. 427–434. Available at: <http://www.jstor.org/stable/41474672>.
- Express, T. N. I. (2023) 'Mass tourism in Kodagu: A disaster in making, experts say', *The New Indian Express*, 16 August. Available at: <https://www.newindianexpress.com/states/karnataka/2023/Aug/16/mass-tourism-in-kodagu-adisaster-in-making-experts-say-2605834.html>.
- Express, T. N. I. (2024) 'Tourists to Kodagu up by 30% in 2023', *The New Indian Express*, 15 January. Available at: <https://www.newindianexpress.com/states/karnataka/2024/Jan/15/tourists-to-kodagu-up-by-30-in-2023>.
- H. P., S. & K. M., A. K. (2015) 'Socio-Economic and Environmental Impact of Tourism in Kodagu District Abstract': (January).
- Heidari, A. (2015) 'Anthropological study of customs and dress patterns in traditional clothing of the Kodavas of Kodagu Department of Studies in Anthropology ??? University of Mysore , Manasagangothri Mysore – 570 006 , Karnataka , DECLARATION', (April).
- India, T. of (2023) 'Karnataka : Kodagu is the 7th most searched travel destination of the year', *Times of India*, 29 December, pp. 2–5. Available at: <https://timesofindia.indiatimes.com/travel/travel-news/karnataka-kodagu-is-the-7th-most-searched-travel-destination-of-the-year/articleshow/106371768.cms>.
- Jayaprakash, J. (2018) 'Myths and Motives: Kodagu and the Story of the Kaveri Purana', *Journal of Indian Anthropological Society*, 53(2), pp. 112–131. Available at: <https://www.indiananthropologicalsociety.org/wp-content/uploads/2024/06/JIAS-Vol.53-No.-2-2018.pdf>, pp. 6.
- K. A., A. & DHNS (2021) 'Organisations raise voice against illegal homestays in Kodagu', *Deccan Herald*, 30 October. Available at: <https://www.deccanherald.com/india/karnataka/organisations-raise-voice-against-illegal-homestays-in-kodagu-1045457.html>.
- K.C, D. (2014) 'Tourism and Employment: Opportunities and Challenges in Karnataka-Special Reference To Kodagu District', *IOSR Journal of Humanities and Social Science*, 19(11), pp. 01–11. doi: 10.9790/0837-191140111.
- K P, L. (2015) 'Unique Tribes of Coorg', *International Journal of Research in Humanities and Social Studies*, 2(10), pp. 61.

- Kamicheril, R. (2012) 'A Kodava Wedding', *Gastronomica*, 12(4), pp. 55–60. doi: 10.1525/GFC.2012.12.4.55.
- Kushalappa, C. G. & Raghavendra, S. (2012) 'Community-linked conservation using devakad (sacred groves) in the kodagu model forest, India', *Forestry Chronicle*, 88(3), pp. 266–273. doi: 10.5558/tfc2012-053.
- Memmott, P. & Keys, C. (2015) 'Redefining architecture to accommodate cultural difference: Designing for cultural sustainability', *Architectural Science Review*, 58(4), pp. 278–289. doi: 10.1080/00038628.2015.1032210.
- Menon, S. & Bawa, K. S. (1997) 'Applications of geographic information systems, remote-sensing, and a landscape ecology approach to biodiversity conservation in the Western Ghats', *Current Science*, 73(2), pp. 134–145. Available at: <http://www.jstor.org/stable/24098267>.
- Molur, S. et al. (2011) *The Status and Distribution of Freshwater Biodiversity in the Western Ghats, India The IUCN Red List of Threatened Species™*, Cambridge, UK and Gland, Switzerland: IUCN, and Coimbatore, India: Zoo Outreach Organisation. Available at: www.iucn.org/species.
- Montgomery, J. (1998) 'Making a city: urbanity, vitality and urban design', *Journal of Urban Design*, 3(1), pp. 93–116. doi: 10.1080/13574809808724418.
- Mutharayappa, R. (1996) 'Structure and marriage patterns among tribals in Karnataka', *Indian Journal of Social Work*, 57(4), pp. 528–529.
- Mysore Narasimhachar, S. (1978) *Religion and Society Among the Coorgs*. J.K. Publishers.
- Naveen, A. S. (2016) 'Investigating the role of PĒS in reviving the social and ecological fabric of Kodagu', *Procedia Technology*, 24, pp. 1758–1765. doi: 10.1016/j.protcy.2016.05.212.
- Ponnappa, K. (2013) *The Vanishing Kodavas*. Mumbai: Eminence Designs Pvt. Limited.
- Poonacha, V. (2019) 'When Mountains Disappear and the Rivers Run Dry, Can People Survive? Ecological Crisis in Kodagu', pp. 20.
- Ram, T. (2018) 'Kodagu in distress: How rampant deforestation and tourism led to landslides and floods', *The News Minute*, 20 August. Available at: <https://www.thenewsminute.com/karnataka/kodagu-distress-how-rampant-deforestation-and-tourism-led-landslides-and-floods-86924>.
- Ramachandra, T. V., Bharath, S. and Vinay, S. (2019) 'Visualisation of impacts due to the proposed developmental projects in the ecologically fragile regions- Kodagu district, Karnataka', *Progress in Disaster Science*, 3. doi: 10.1016/j.pdisas.2019.100038.
- Ramineni, S. & Bharadwaj, M. (2021) 'Integrated Water Systems in Vernacular Settlements: Temple City of Melukote, Karnataka, India', *ISVS e-journal*, 8(3), pp. 34–54.
- Rana P.B. Singh & Olimpia Niglio (2022) 'INTRODUCTION. Historic Cities & Cultural-Religious Heritage : Preservation & Regeneration RANA P . B . S INGH and OLIMPIA N IGLIO I I : Marching towards the overview', 9, pp. 5–14.
- Ravishankar, S. S. & Nagaraja, B. C. (2021) 'Two decadeal land use land cover of Kodagu district of Western Ghats, South India', 27(2), pp. 855–859.
- Rice, B. L. (1878) *Mysore and Coorg: Coorg Vol. 3*. Mysore: Mysore Government Press.
- Richter, G. (1870) *Coorg 1965 Chapter (2).pdf*.
- Rössler, M. & Lin, R. C. H. (2018) 'Cultural Landscape in World Heritage Conservation and Cultural Landscape Conservation Challenges in Asia', *Built Heritage*, 2(3), pp. 3–26. doi: 10.1186/BF03545707.
- Singh, R. P. B., Rana, P. S. & Kumar, S. (2021) 'Sacred Water Pools of Hindu Sacredscapes in North India', *Etnoloska Tribina*, 51(44), pp. 12–33. doi: 10.15378/1848-9540.2021.44.01.
- Subbayya, K. K. (1978) 'Archaeology on Coorg with Special Reference to Megaliths'. Delhi: Geetha Book House.
- Sujatha, N. C. (2017) 'Archaeology on Coorg with Special Reference to Megaliths', VI(23).
- UNESCO World Heritage Centre (2002) 'Papers 7', (November), p. 189. Available at: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.674.5925&rep=rep1&type=pdf>.

- Vijaya, T. P. (1993) 'THE JAMMA LAND HOLDERS OF COORG AND THE POLITICS OF INDIAN ARMS ACT', Proceedings of the Indian History Congress, 54, pp. 526–537. Available at: <http://www.jstor.org/stable/44143025>.
- WRIS (2014) 'Cauvery Basin Report: Gov. of India - MoWR', pp. 141.