Participatory Forest Management in Sri Lanka: Is it a Myth or Reality?

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Abstract

Participatory Forest Management (PFM) has gained attention as a potential solution for sustainable forest conservation and community empowerment. However, its implementation often faces challenges and criticism. This study aims to critically examine the concept of PFM in the context of Sri Lanka, exploring whether it represents a myth or a reality on the ground. Using a secondary qualitative study method including review of literature, published government documents, and community organization reports, in addition to thematic analysis, this research evaluates the genesis of PFM, the role of community in PFM, and ways and means of improving PFM in the Sri Lankan context.

The findings reveal the complexities and nuances of PFM implementation in Sri Lanka. While there are instances of successful community involvement and positive outcomes, challenges such as inadequate stakeholder engagement, unequal power dynamics, limited resource allocation, lack of community consultation and engagement, and lack of tenure security persist. The research uncovered inconsistencies between the policies regarding PFM and the practical implementation of these initiatives. This disparity raises questions regarding the efficiency and sustainability of PFM strategies in Sri Lanka. By acknowledging and addressing these challenges, policymakers and stakeholders can work toward enhancing the effectiveness and sustainability of PFM initiatives, ultimately contributing to more resilient and equitable forest ecosystems in Sri Lanka.

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Chapter 1: Introduction

1.1 Background

The recognition and development of decentralized forest management systems gained momentum during the 1970s and 1980s as an answer to the perceived failures of centralized, government-controlled approaches to forest management (Colchester et al., 2004). These initiatives aimed at enhancing the rights of communities in accessing and overseeing forests with the goal of improving livelihoods and conditions of the resources (Mahanty et al., 2009). As a result, policy makers around the world developed decentralized reforms toward improved equity, efficiency, and participatory governance in forestry systems, and began to transfer the management and authority rights associated with natural resources from national governments to local communities (Poffenberger, 1999).

Participatory Forest Management (PFM) and Community-Based Forest Management (CBFM) are two of the popular decentralized forest governance models that have been encouraged and implemented to achieve sustainable resource management (Charnley & Poe, 2007). CBFM is a decentralized approach that places local communities at the center of forest management. It emphasizes the empowerment of community members to take primary responsibility and authority for managing forest resources (Mahanty et al., 2009). The core principle of CBFM is local autonomy, granting communities significant decision-making power and management rights (Bullock & Hanna, 2012).

Participatory Forest Management (PFM) is a broader concept that involves the active participation of various stakeholders, including central and local government agencies, local communities, research institutions and academia, non-governmental organizations (NGOs), and the private sector (Rasul et al., 2011). The emphasis in PFM is on collaborative processes and

shared responsibilities. This approach seeks to balance the interests and objectives of different stakeholders to ensure that conservation, development, and community needs are all addressed (Friedman et al., 2020).

CBFM and PFM, while often used interchangeably, have differences in their scope, decision-making authority, management objectives, and institutional support. In Sri Lanka, CBFM and PFM are often used interchangeably, as both approaches focus on including local communities in the stewardship and preservation of forest resources. While there can be slight differences between the two terms in broader contexts, in Sri Lanka's context, they are generally seen as overlapping concepts with similar goals and methods. As an example, The Sri Lankan Forest Department has implemented various projects that embody the principles of both CBFM and PFM, such as the Participatory Forestry Program (PFP) and the Community Forestry Project (CFP) (De Zoysa, 2020). These projects involve local communities in reforestation, forest protection, and sustainable use practices (De Zoysa & Inoue, 2008). In policy documents and legislative frameworks, the terms may be used based on the particular context or the focus of the initiative. However, the underlying principles of community engagement and sustainable management remain consistent.

Presently, approximately 28% of the forests in the world, totaling about 732 million hectares, are administered through CBFM systems and have become a significant method of worldwide forest management (Hajjar et al., 2012). While PFM is acknowledged worldwide as a promising strategy for sustainable forest use and conservation, inadequately planned or executed PFM initiatives can lead to conflicts and environmental injustices (Ballard et al., 2008).

Sri Lanka is one of such cases where the concept of PFM was adopted and implemented since the 1980s. Conflicts over land and resource access are on the rise due to these laws and the

centralized nature of the management, particularly leading to conflicts between forest fringe communities as well as among different levels of government throughout the country (Wickramasinghe, 1997). Sri Lanka's Forest cover comprises roughly 29% of the country's land area, amounting to about 1.95 million hectares (Bradley, et al., 2016). Sri Lanka's existing forest conservation initiatives are struggling due to escalating encroachment, which causes deforestation and the degradation of natural ecosystems (Bradley, et al., 2016). Population growth and unplanned rural settlements have been a burden on Sri Lanka's natural ecosystems. Between 1900 and 2020, the number of people per km^2 grew from 54 to 341, with natural forest cover falling from 70% to only 34% of the land area (Herath et al., 2022).

Though the population growth rate has declined in the past few years, poverty and landlessness in forest-adjacent communities and continue to negatively affect land use patterns, contributing to high levels of forest encroachment and clearing of natural forests. The current forest loss rate is 1.14% per year (Herath et al., 2022). The main causes of forest loss in Sri Lanka are industrial development projects, commercial agriculture practices, and encroachment (Bradley, et al., 2016). The forest area per capita has decreased due to forest fragmentation and degradation. Although a minimum of 0.5 hectares of forest per person is deemed necessary, most South Asian countries have forest coverage levels ranging from 0.1 to 0.05 hectares per person (Poffenberger, 1999).

Involving different stakeholders in PFM is essential for creating inclusive, balanced, and sustainable forest management practices. By incorporating the perspectives, needs, and expertise of local communities, government agencies, NGOs, and the private sector, PFM ensures that decision-making is comprehensive and informed (Peras et al., 2015). This collaborative approach cultivates a feeling of ownership and responsibility within local communities, creating better

stewardship of forest resources—and involving diverse stakeholders enhances transparency, accountability, and conflict resolution, thereby promoting equitable distribution of benefits and long-term resilience in forest management (Schusser et al., 2015).

Local communities near forests are among the most marginalized sectors of society, greatly dependent on the forests for food, forage, medications, materials for shelter, fuelwood, and raw material for small-scale industries (Colchester et al., 2004). Most of Sri Lanka's population depends on livelihoods based on the natural environment. The rural population of Sri Lanka was estimated at 81.14 % in 2020, and they remain strongly reliant on natural resources for their livelihood (Herath et al.,2022). Therefore, local forest-adjacent communities must be integrated into forest management as primary stakeholders, empowering more meaningful participation in resource management.

However, collective management in Sri Lanka's forestry sector has faced difficulties due to the top-down methods used in decision-making and administration (Bradley, et al., 2016). This approach adopted by the national government of Sri Lanka to manage forests is not consistent with forest-adjacent communities' views of rights of access and forest ownership (Ekanayake & Murindahabi, 2017). This approach has also diminished the roles of local communities living near forests, overlooked traditional knowledge of forest management practices, and treated these communities as if they were detrimental to forest resources (Chokkalingam & Vanniarachchy, 2011). By engaging forest adjacent communities in the stewardship of forest resources, PFM boosts biodiversity conservation and encourages the sustainable utilization of these resources, ensuring they remain available for future generations.. This approach empowers communities, improves livelihoods, and fosters better governance and accountability in forest management.

Local practices and traditional understanding of the natural ecosystems and its elements are essential for forest governance and management (Geekiyanage et al., 2015). This can be beneficial in developing and planning forest regulations. National Forest Policy of Sri Lanka, which was developed in 1995, identified the significance of local engagement in managing and governing forest resources since local communities possess invaluable knowledge and practices (Ekanayake & Murindahabi, 2017). PFM helps preserve traditional knowledge and cultural practices and addresses ethical responsibilities toward indigenous populations.

Sri Lanka faces challenges in securing support from NGOs and the private sector for PFM due to several factors. Institutional barriers, such as centralized decision-making and unclear policies, create obstacles that discourage engagement and collaboration (Badenoch, 2009). Additionally, there are limited economic incentives for private sector involvement, as PFM practices do not offer immediate financial returns compared to other land uses, such as agriculture or commercial forestry (Colchester et al., 2004). NGOs often face funding shortages, making it difficult to support PFM initiatives effectively (Ekanayake & Murindahabi, 2017).

Several studies (Chowdhary et al., 2017; Lin et al., 2019; Pandey et al., 2016) have cited that CBFM significantly contributes to climate change mitigation through a variety of mechanisms, including carbon sequestration, emission reduction, and enhanced ecosystem resilience. Forests managed under CBFM practices function as crucial carbon sinks, capturing carbon dioxide from the air and storing it in plant biomass and soil (Timilsina-Parajuli et al., 2013). By preventing deforestation and promoting reforestation and afforestation, CBFM enhances the carbon storage capacity of forests, and this is crucial for reducing greenhouse gas concentrations in the atmosphere and mitigating global warming (Pandey et al., 2016).

CBFM encourages sustainable land use practices, which are essential for lowering emissions. Practices such as controlled logging, agroforestry, and sustainable agriculture minimize the need for deforestation and the use of slash-and-burn techniques, which are major sources of carbon emissions (Timilsina-Parajuli et al., 2013). CBFM is also essential for climate change adaptation. It helps build the resilience of local communities and ecosystems to the impacts of climate change. By promoting diverse and sustainable livelihoods, CBFM reduces dependency on vulnerable resources and enhances the ability of communities to adapt to evolving natural conditions (Chowdhary et al., 2017).

CBFM directly contributes to achieving Sustainable Development Goal (SDG) 15 by promoting sustainable forest management and conservation practices. CBFM also supports other SDGs, such as poverty reduction (SDG 1), zero hunger (SDG 2), and climate action (SDG 13) (Baumgartner, 2019). By providing sustainable livelihoods and enhancing food security, CBFM helps reduce poverty and hunger while promoting climate resilience (Lin et al., 2019). The interconnected nature of the SDGs means that successful CBFM practices can contribute to multiple development goals, creating a holistic approach to sustainable development (Baumgartner, 2019).

Examining these aspects has the potential to enhance the comprehension of the authentic objectives of PFM. This comprehensive examination allows for a deeper understanding of whether PFM effectively aligns with its intended aims of promoting sustainability, empowering local communities, and contributing to environmental conservation.

1.2 Research Purpose and Objectives

PFM has become a significant method of forest management worldwide. However, studies show that the success of these programs depends on various factors (Bullock & Hanna, 2012 Hajjar et

al., 2012; Pujo et al., 2018). It does not solely depend on achieving conservation goals—it also depends on income and livelihood benefits, local autonomy, genuine high-level government support, and secure land rights. As a result, PFM initiatives and programs have experienced varying degrees of success worldwide (Baynes et al., 2015). In the context of this backdrop, the purpose of this study was to critically examine the effectiveness and implementation of PFM in Sri Lanka. By investigating whether PFM initiatives have been successfully integrated and maintained, this study aims to determine if these efforts are achieving their intended goals of sustainable forest management, and community empowerment, or if they remain largely theoretical and unattained. The specific objectives of my study are to:

1. Analyze how the forest management policies and strategies changed over time and identify the drivers that instigated such changes;

2. Examine the role of local communities in the PFM; and

3. Identify the ways and means of improving PFM in Sri Lanka.

1.3 Summary of Methods

The research included a review and an analysis of secondary data which was obtained from official records and documents of the Forest Department; Department of Foreign Affairs, and Trade; and two local community-based organizations in Sri Lanka. The data was analyzed thematically with the help of NVivo qualitative data analysis software, which was employed to identify and categorize key themes from the sources and to examine and report on similarities, differences, and patterns within those themes. Indeed, relying solely on secondary data poses limitations because the initial data may have been gathered with a different research objective, and this may raise concerns about its accuracy, reliability, and comprehensiveness. Additionally, secondary data

frequently lack essential contextual details necessary for a thorough comprehension of the research subject. Further challenges and measures taken to address them are described in Chapter 3.

1.4 Significance of the Study

This study aims to construct a contextual narrative surrounding the planning and implementation of PFM in Sri Lanka, with a focus on local communities. The research seeks to inquire about the local perspectives, acceptability, and active engagement of communities in forest management within the specific context of Sri Lanka. Through this exploration, the study aims to understand whether PFM is perceived as a myth or a tangible reality in the Sri Lankan context, enriching understanding of community involvement in sustainable forest conservation practices.

This study holds importance due to the growing global emphasis on sustainable resource management and community involvement (Charnley & Poe, 2007). The findings of this research can contribute valuable insights to policymakers, conservationists, and local communities, informing the development of effective strategies for sustainable forest management. Furthermore, clarifying the actual implementation and impact of participatory approaches in Sri Lanka can guide future conservation efforts and enhance the overall understanding of community engagement in natural resource management.

1.5 Organization of the Thesis

The thesis is organized into seven chapters. After this introductory chapter, Chapter Two provides a review of the existing literature on the topics discussed above. The literature review starts with an overview of PFM and is further divided into an examination of existing CFM approaches in South Asia. The next section introduces the legal framework of PFM in Sri Lanka followed by a discussion on community forest rights and tenure. Chapter Three offers a comprehensive

description of the study area, along with a detailed description of the data collection and data analysis techniques used. In Chapter Four, the results dealing with the genesis and the evolution of PFM in Sri Lanka are presented. In Chapter Five, the results on the role of community in PFM are discussed and in Chapter Six the results dealing with the way forward in PFM in Sri Lanka is discussed. Chapter Seven provides a thorough discussion and presents the conclusions of my research as well as puts forward recommendations for policy implementation.

Chapter 2: Participatory Forest Management, Legal Frameworks, and Stakeholders—A Review of the Literature

2.1 Introduction

In recent years, decentralized forest governance models have been promoted and applied for sustainable resource management, conservation of biodiversity, and better livelihood for forest adjacent communities in the Low-and-Middle Income Countries (LMIC) (De Zoysa & Inoue, 2008). Those governance models allow decentralization of forest management responsibilities to local communities and encourage the participation of stakeholders in decision-making and management processes (Friedman et al., 2020). Examples of decentralized forest models include Participatory Forest Management (PFM), Joint Forest Management (JFM), Community-Based Forest Management (CBFM), Community Forest Enterprises, and Indigenous and Tribal Governance Systems.

Participatory Forest Management (PFM) refers to "processes and mechanisms that enable those who have a direct stake in forest resources to be part of the decision-making in all aspects of forest management, from managing resources to formulating and implementing institutional frameworks" (Schreckenberg et al.,2006). PFM actively includes local communities and other stakeholders in managing state-owned forest lands, and has benefits such as improved local administration and empowerment, better conservation of forests, poverty reduction, better livelihood security for local people, and a sense of ownership amidst local forest-adjacent communities (Carter et al., 1994).

To understand PFM, it is crucial to examine the legal frameworks that support PFM. This examination helps in understanding the responsibilities and rights of local residents, ensuring tenure security, and assessing how PFM practices align with relevant laws, regulations, and

policies (Friedman et al., 2020). Knowing about stakeholders is important in PFM because it ensures transparency, accountability, and inclusive decision-making (Peras et al., 2015). Understanding the requirements and interests of all parties involved helps minimize conflicts and promotes effective collaboration and engagement (Schusser et al., 2015). Additionally, involving stakeholders improves compliance with rules and regulations, leading to increased sustainability and the overall success of PFM programs (Joshi et al., 2018).

Based on the exiting literature, this chapter explores the history of PFM and community forestry in South Asia. It delves into the origins, evolution, and key milestones of these approaches, focusing on their implementation and impact in the region. The chapter's second section describes the legal frameworks of the Sri Lanka that support the PFM followed by the community and tenure rights of the forest-adjacent communities. The final part of this chapter clarifies the types of the stakeholders in the PFM in Sri Lanka and their role and the importance in the PFM.

2.2 Community Forest Management

2.2.1 History of Participatory Forest Management

Communities have relied on forest ecosystems for tens of thousands of years around the world. Archeological evidence suggests that communities have been managing forests by rotational harvesting and selective tree trimming to get sustainable timber harvest for more than six thousand years (Colchester et al., 2004). Local communities relied on their own rules to attain locally set priorities to achieve long-term ecological sustainability (Nath et al., 2016). However, due to forest depletion caused by agriculture, timber harvesting, and the requirement for fuelwood by industries, the scientific study of forestry developed in Europe in the initial period of the Industrial Era (Bullock & Hanna, 2012).

Early scientific forestry disciplines focused on transferring control of forest resources from local communities to bureaucratic agencies (Friedman et al., 2020). With colonization, these disciplines were imposed in colonized countries, and local communities were often portrayed as destroyers of the forests (Pulhin, 2010). Local communities were subjected to fines, forced removals, and even jail time for engaging in certain forest-based activities (Carter & Gronow, 2005). However, in the 1970s, the evidence of forest depletion and degradation—despite the implementation of scientific forestry disciplines—resulted in the rise of a new type of forestry, called social forestry (Nath et al., 2016).

The 8th World Forestry Congress, convened in Jakarta, Indonesia in 1978, centered around the theme 'Forests for People" and is considered a milestone in recognizing the importance of local communities in managing forests. During this congress, policymakers and bureaucrats acknowledged the significance of forest adjacent communities in the sustainable stewardship of forests (Colchester et al., 2004).

As a result, in the early 1980s, organizations such as the World Bank, Asian Development Bank (ADB), and Food and Agriculture Organization (FAO) offered significant aid and grants, particularly to developing countries, to support social forestry initiatives (Dahal & Chapagain, 2012). However, it's crucial to recognize that although these developments provided support for social forestry, they were primarily donor-driven and did not necessarily originate from community demands (Colchester et al., 2004). In many cases, the funding and implementation of social forestry projects were influenced by external actors, such as donor organizations and government agencies (Bullock & Hanna, 2012). This top-down approach sometimes resulted in a mismatch between the objectives of the initiatives and the actual needs and aspirations of the local communities. It emphasized the significance of fostering genuine community participation and

responsibility for the formulation and implementation of social forestry strategies to maintain their long-term effectiveness and sustainability.

As a result of these insights, at the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro, the focus was on the importance of participatory strategies in the management of natural resources such as forestry. This led to the development of the forest principles which emphasized the rights, participation, and capacity building of local communities in forest management.

The history of PFM has thus witnessed a significant shift in forest governance and community involvement. From the initial centralized control and exclusionary practices there has been a growing appreciation for the role of local communities in making forest management decisions (Carter & Gronow, 2005). This shift is driven by the understanding that forest adjacent communities possess valuable traditional knowledge and practices, a stake in forest resources, and a vested interest in sustainable forest management (Colchester et al., 2004). Through the implementation of participatory approaches, communities have been empowered to actively engage in decision-making, access forest resources, and contribute to conservation efforts (Rasul et al., 2011). While challenges and limitations exist, the evolution of PFM reflects a positive step toward achieving sustainable forest management, biodiversity conservation, and improved livelihoods for forest-dependent communities (De Zoysa & Inoue, 2008).

2.2.2 Community Forestry in South Asia

Local communities in South Asian countries rely on nearby forest lands for their subsistence needs, and see them as a fundamental element of their traditional farming methods (Nath et al., 2016). These rural resource management systems encompass stationary agriculture, shifting cultivation, forest hunting and gathering, coastal fishing, and migratory and sedentary pastoralists

(Poffenberger, 1999). About 75% of South Asians live in rural areas and rely extensively on natural resources for their daily needs. (Poffenberger, 1999).

In South Asia, India has an extensive history of community involvement in forest management, dating back to the period before colonial rule. Various indigenous communities and local societies managed forests through traditional systems that emphasized sustainable use and conservation (Gupta & Gupta, 2008). The "sacred groves" are one of the most notable examples of community-managed forests. Certain forest patches (sacred groves) were devoted to local gods or ancestral spirits and were protected and preserved by the community for religious and cultural reasons (Nagendra & Gokhale, 2008). Traditional systems such as the "village commons" allowed local communities to manage and utilize forest resources collectively, ensuring equitable access and sustainable use (Bhattacharya Prodyut et al., 2010).

In Nepal, the tradition of community forestry is deeply rooted in the socio-cultural aspects of rural life (Dahal & Chapagain, 2012). The pre-colonial period saw various indigenous and local communities managing forests through customary practices. The concept of "kipat" was prevalent among the Limbu and other indigenous communities in eastern Nepal. Under this system, land, including forest land, was held collectively by the community, and managed according to customary laws (Nagendra & Gokhale, 2008). This ensured sustainable use of forest resources, with strict rules governing the harvesting timber and non-timber resources. The "guthi" system, a traditional form of social organization, also played a role in managing communal lands and forests in the Kathmandu Valley and other parts of Nepal, and these traditional practices emphasized conservation, sustainable use, and the equitable distribution of resources (Manandhar & Shin, 2013).

Across South Asia, several common themes and practices characterized community-led forestry management during the pre-colonial period, emphasizing the lasting sustainability of forest resources. These practices included rotational grazing, selective logging, and controlled harvesting of non-timber forest products (NTFP) (Poffenberger, 1999). Forests held significant cultural and religious importance, often preserved as sacred groves that served both spiritual and conservation purposes, supporting rich biodiversity (Wickramasinghe, 1997).

Local communities managed forests collectively, enforcing rules and regulations through social norms and customary laws. This collective management ensured equitable and lasting resource management (Colchester et al., 2004). Various forms of local governance structures, such as village councils, *gamsabhas,* and community assemblies, played a crucial role in forest management. These institutions enforced rules, resolved disputes, and ensured fair resource distribution (Poffenberger, 1999).

Additionally, traditional ecological knowledge, transferred across generations, informed sustainable forest management practices. This knowledge included understanding seasonal patterns, species-specific characteristics, and ecological relationships (Parrotta et al., 2016).

British colonial administration heavily influenced the notions of forest management across South Asia during the nineteenth century. A significant aspect of the colonial era was the seizure of forests that were formerly managed by indigenous methods (Carter & Gronow, 2005). The scientific forestry management approach in South Asia saw governments presuming full control over forest ownership and access, with a focus on maximizing timber production for the crown and the state (Poffenberger,1999). They included these rights in new laws and regulations, often separating local forest-adjacent communities from their traditional lands (Balooni, 2002).

British colonial forestry was characterized by a comprehensive model with legal and policy frameworks, tightly controlled administrative systems, and conservation protocols that were foreign to the local context (Nath et al., 2016). The independence from the British administration in the twentieth century created a path for a whole new set of forest management policies in South Asia.

2.2.2.1 Joint Forest Management in India

India implemented an inclusive approach to forest management in the 1970s using community-based institutions. A Joint Forest Management (JFM) strategy in 1990 was established as a direct outcome of the National Forest Policy, 1988 to extend the authority to local groups. These local groups acted as the custodians of the forest lands (Lele, 2014). The state forest departments in India designed JFM programs to motivate local communities to manage and protect the public forests (Balooni, 2002).

All 28 Indian states have introduced standards to encourage the incorporation of local communities in the management of forests. JFM's strategy was implemented in some 106,482 villages and 22 million ha of forest land and JFM's concept is based on a hybrid property right regime, combining state property and common property (Vijge & Gupta, 2014). It is based on co-management and a compromise between the forest department and village communities, and is mainly mediated by a non-governmental organization (Lele, 2014). The State retains the ownership rights and holds the power to prohibit activities like cultivation and controlling timber cutting. Simultaneously, local residents have the right to prohibit access of the individuals from surrounding villages and to share the forest's resources and benefits (Suresh, 2017).

JFM initiatives in India have demonstrated varying degrees of success. In some regions, as in Andhra Pradesh, active community participation in JFM programs has resulted in a remarkable

expansion in forest cover and a positive shift in biodiversity (Bhattacharya et al., 2010). In the meantime, JFM programs have contributed to a reduction in forest offenses by implementing enhanced protective measures through community engagement. In Karnataka, the JFM initiative has effectively removed encroachers from forest lands, especially in the Western Ghats region (Bhattacharya et al., 2010). Additionally, JFM programs have boosted the economic prospects and livelihood opportunities for numerous communities actively involved in the initiative. As an example, a total of 21.58 million person-days of employment were created in only six states during the fiscal year 2000-01 (Nagendra & Gokhale, 2008). While the JFM initiative has expanded opportunities for community involvement in forest management, it has also facilitated increased engagement from various stakeholders, including non-governmental organizations (NGOs) and local governing bodies (*panchayats*) (Dahal & Chapagain, 2012).

2.2.2.2 Community Forest Management in Nepal

Nepal initiated the community forestry program in 1978. The Forest Act, 2049, established in 1993, authorized significant government decentralization and permitted local communities' direct access and management over the forests (Carter & Gronow, 2005). This Act acknowledged the role of local people in CBFM and led to the formation of forest user groups (Carter & Gronow, 2005). The primary goals of the community forestry initiatives in Nepal are to reduce poverty, improve the livelihood of the local people, minimize environmental degradation, and enhance the conditions in the forests (Dahal & Chapagain, 2012).

The Government of Nepal has delegated forest lands to community control based on a pre-agreed forest management plan between the local community forest user groups and the district forest office (Nagendra & Gokhale, 2008). Over 22,000 community forest user groups are

associated with about 2.9 million households, managing 2.3 million ha of forest lands in Nepal Dahal & Chapagain, 2012).

CFM has led to substantial positive changes in the living standards of the forest adjacent communities. In eastern Nepal, the tangible success of CFM is evident through the proactive initiatives taken by forest user groups. Over the span of ten years, these groups have successfully invested a substantial amount of US$327,000, generated through sustainable forest utilization, in various community welfare programs (Koirala et al., 2010). Notably, a significant portion of these funds has been directed toward formal school education, supporting the establishment and improvement of educational infrastructure. Additionally, CFM in Nepal has proven particularly effective in the conservation of forests. Comparative analyses of forests before and after the implementation of CFM have indicated positive outcomes in terms of plantation establishment, regeneration, and accelerated tree growth (Dhungana et al., 2017).

2.2.2.3 Social Forestry in Bangladesh

In Bangladesh, social forestry embraced a community-focused strategy that encourages active participation of local communities in managing and preserving forests. It aims to address deforestation, promote sustainable land use, and elevate the standard of living in rural areas (Nath,et al., 2016).

The government of Bangladesh enacted the first national forest policy in 1979, establishing a participatory approach to managing state-owned forests and plantations on marginal lands (Nath,et al., 2016). The Government developed the 2004 social forestry rules to incorporate community forestry concepts into forest management practices. This policy emphasized the conservation of biodiversity, the safeguarding of ecosystems, and the enhancement of living

standards (Mollick , 2018). This emphasized the involvement of marginalized local populations in management roles and the active participation of women (Nath,et al., 2016).

Finally, local forest management systems in South Asia historically were mainly focused on sustainable resource management and environment conservation (Poffenberger, 1999). The centralized authority by colonial rulers altered these systems by creating a gap between forest users and the people who manage the resources (Balooni, 2002). The incompatible management practices have affected local forest users, leading to forest degradation and deforestation (Nath et al.,2016). Forest resources are essential to local communities, and the loss of access to forest resources puts their livelihoods and quality of life in danger (Lele, 2014). Most South Asian countries emphasized economic growth and industrial development by exploiting their natural resources, especially forests, after the independence from colonial rulers (Inoue & Shivakoti, 2015). Consequently, various community forestry programs and strategies emerged to address forest degradation, and these programs were backed by external development agencies and international organizations (Poffenberger, 1999).

2.3 Legal Framework of Participatory Forest Management in Sri Lanka

A well-established legal framework is crucial for the success of PFM initiatives. It provides legitimacy and recognition, clarity, empowerment, and ensures compliance and enforcement, enabling involvement of local communities in forest management (Rasul et al., 2011). The legal framework serves as the foundation for accountability, transparency, compliance, and responsible use of forest resources (Agrawal & Ostrom, 2001).

A well-defined legal framework gives legitimacy to PFM initiatives by acknowledging the rights of local communities in forest management and providing formal recognition of their engagement (Rasul et al., 2011). Adherence to rules and regulations is essential for responsible and

sustainable forest management in PFM, and a legal framework establishes necessary enforcement mechanisms to ensure compliance. Although Sri Lanka does not have a specific legal framework exclusively dedicated to PFM, there are several legal provisions and policies in place that facilitate PFM efforts in the country.

2.3.1 Forest Legislation in Sri Lanka

Forest Management in Sri Lanka has a long history of about two thousand years. The ancient historical record "Mahawamsa" and "Raajawali" mention that local communities had a harmonious relationship with the forests even during the period of King Vijaya in 543 BC ((Ekanayake & Theodore, 2017). Kings were the official rulers of the forests, and local communities had well-defined rights to use the resources. Kings appointed the members of the local forest-adjacent community members to supervise the forest administration (De Zoysa & Inoue, 2008). These rules and regulations continued until the British colonials conquered the country.

The British fully occupied the country in 1815, and bureaucratic agencies assumed control of the administration of forests from the regional groups, who formerly had well-defined usage rights (Hewage & Mallika, 2011). They viewed forests as a place to exploit and generate revenues. At the beginning of the 1800s, it was calculated that 80 percent of the entire territory (5.56 million hectares) was blanketed with forest (De Zoysa, 2001). During the British administration, nearly 50 percent of the woodland area (2.7 million hectares) was depleted within 100 years due to clearing and opening forests for coffee, tea, and rubber plantations (De Zoysa, 2001). However, the British appointed the first conservator of forests in 1887 and established administrative control over the country's primary forests.

The Forest Ordinance (No. 16 of 1885) was the principal legislation governing forest management in Sri Lanka. It established the legal framework for the conservation, management, and protection of state forest lands in the country. The Forest Ordinance authorized the government to declare forest reserves and forest plantations and the processes of forest protection, demarcation, and administration (Sri Lanka, 1982). The Forest Ordinance also provided provisions on legal consequences and punishments for forest encroachment without authorization; setting fire to forests; unauthorized felling or cutting of trees in state forests; allowing grazing livestock in state forests; unauthorized clearing of forest land and cultivation; unauthorized extraction or possession of both timber and NTFP; and damaging or destroying forest resources (Sri Lanka, 1982).

The Forest Department, responsible for enforcing and administering the provisions, was established in 1887 and it was started as the Office of the Conservator of Forests, under this ordinance (De Zoysa & Inoue, 2008). The Forest Department operates under the purview of the Ministry of Environment. This ordinance grants authority to the Forest Department to regulate activities related to forests and the forest officers to issue licenses and permits and enforce regulations (Hewage & Mallika, 2011).

The National Environmental Act (No. 47 of 1980) is another significant piece of environmental legislation in Sri Lanka. The objectives of the National Environmental Act (No. 47 of 1980) are to conserve natural resources; control, prevent, and alleviate environmental pollution; and promote sustainable development (Central Environmental Authority, 1980). The Central Environmental Authority (CEA) was created in 1981 under this legislation, and it is responsible for implementing and imposing environmental policies and regulations. CEA Sri Lanka operates under the Ministry of Environment (Mudiyanselage & Theodore, 2017). This Act also covers a range of offenses related to forests, such as destruction, damage, or pollution of protected areas

(including forests, wetlands, or coastal zones); unauthorized extraction of forest resources (such as minerals, timber, or wildlife); and non-compliance with regulations related to the protection of biodiversity, endangered species, or habitats (Central Environmental Authority, 1980).

The Forest Conservation (Amendment) Act (No. 47 of 1988) is pivotal amendment to the Forest Conservation Act of Sri Lanka. The objective of this amended act was to protect and the conserve the forest in Sri Lanka. This Act authorizes the government to declare forest reserves to protect and conserve their ecological value (Central Environmental Authority, 1980). The amendment of this act increased the penalties for illegal logging, encroachment of the forests, illegal exploitation of forest resources, conversion of forest lands to non forest purposes and shifting cultivation in selected areas (Central Environmental Authority, 1980).

The Forest Conservation Department was established in 1988 under this act. It is responsible for implementing and enforcing the provisions of the act. The legislation confers specific powers to forest officers in the Forest Conservation Department, which include the ability to enter and examine forest regions, confiscate illicit forest resources, and commence legal proceedings against violators (De Zoysa, 2001).

This amendment provides provisions for establishment of the Forest Conservation Fund. The objective of it is to generate proceeds for forest-related activities, as reforestation, forest protection, wildlife conservation, and community development projects in forest areas. The fund is typically financed through various sources, including government allocations, contributions from industries involved in forest-related activities, grants, donations, and revenue generated from sustainable forest management practices (Central Environmental Authority, 1980).

The National Forest Policy of Sri Lanka, introduced in 1995, is a comprehensive framework that outlines the principles, objectives, and strategies for the sustainable management and conservation of the country's forest resources. The policy aims to ensure the long-term ecological, social, and economic benefits derived from forests while safeguarding their environmental integrity (Annandal, et al., 2016)

The National Forest Policy of 1995 introduced community participation to Sri Lanka. The policy acknowledges local communities as a key component in the conservation and sustainable management of forest resources (De Zoysa & Inoue, 2008). It aims to enable communities and engage them in decision-making processes, ensuring their active participation and benefit-sharing in forest-related activities (Annandal, et al., 2016).

The policy encourages the establishment of CBFM systems, where local communities are engaged in the planning, implementation, and monitoring of forest activities (De Zoysa, 2001). The policy promotes collaborative partnerships between government institutions, local communities, and stakeholders in forest management; the formation and strengthening of community forest organizations; equitable benefit-sharing mechanisms between communities and the government or private entities involved in forest management tasks; and the entitlements of local communities to access and derive economic, social, and cultural benefits from forest resources, ensuring that they have a stake in the conservation efforts (Annandal, et al., 2016).

Flora and Fauna Protection Ordinance (No. 2 of 1937) in Sri Lanka is a key piece of law that addresses the conservation and protection of the country's flora and fauna. This ordinance serves as a legal framework to safeguard the diverse plant and animal species found in Sri Lanka, including their habitats and ecosystems (SRI LANKA, 1993). The Ordinance allows for the creation of protected areas, including national parks, wildlife sanctuaries, nature reserves, and

forest reserves. These protected areas are designated to conserve specific ecosystems, habitats, and species, and the Ordinance outlines regulations for their management and protection (SRI LANKA, 1993). The Flora and Fauna Protection Department and The Department of Wildlife Conservation, under the purview of the Ministry of Wildlife and Forest Conservation, are responsible for enforcing the Ordinance (SRI LANKA, 1993).

2.3.2 Community Forest Rights and Tenure

The central governance and management failure of forests sparked a re-evaluation of forest management and tenure policies in Asia since the 1980s. Policymakers identified that prohibiting management and access rights to local communities increased encroachment, forest degradation, poverty, and conflicts (Dahal & Chapagain, 2012). It is evident that countries with higher community rights and tenure security show better results in forest protection. However, according to Luintel et al. (2008), strong tenure rights alone are not enough, and tenure rights should be backed up by firm institutional frameworks to derive the benefits of devolved tenure models.

The total land area of Sri Lanka is 6,570,134 hectares, with the State owning 5,403,899 hectares (82.25%) and 1,166,235 hectares (17.75%) being privately owned, indicating centralized control over land (Bradley, et al., 2016). Approximately 1,767,000 hectares (about 26.5%) of the entire land area of Sri Lanka are natural forests, which are managed and owned by the Forest Department (FD) or the Department of Wildlife Conservation (DWC) (Bradley, et al., 2016).

The government-owned forest land managed by the FD is divided into the following subcategories: National heritage and wilderness areas (11,127 hectares); International biosphere reserves (41,823 hectares); Protected forests, including 20 mangrove regions (136,587 hectares); and Reserved forests (1,095,050 hectares) (Bradley, et al., 2016). The government-owned forest land owned and managed by DWC is categorized into the following subcategories: National parks

(475,495 hectares), Sanctuaries (277,953.46 hectares), Nature reserves (57,056 hectares), and Strict natural reserves (31,575 hectares) (Bradley, et al., 2016). Additionally, a new category of protected areas known as Environmental Protection Areas (EPAs) is administered by the Central Environmental Authority (CEA). There are currently eight EPAs covering a land area of 12,214.5 hectares (Bradley, et al., 2016).

Community forest rights and tenure refer to the legal recognition and safeguarding of the local communities' access to forest resources and land (Larson et al., 2010). It acknowledges the historical or traditional connections that communities have with forests and empowers them to access, utilize, and oversee these resources sustainably (Grundy, 2010).

Community forest rights and tenure consist of use rights, management rights, access and exclusion rights, and benefit-sharing (Aggarwal et al., 2021). Communities with use rights have the right to access and utilize natural resources for their means of living and they are granted the right to hunt, fish, collect NTFP, and practice traditional agriculture (Luintel et al., 2008).

Communities with management rights can take part in decision-making and management-related activities in forests, such as setting conservation measures and establishing rules and regulations (Dahal & Chapagain, 2012). Access and exclusion rights mean that communities have the authority to control access to their forests, including regulating entry and use by outsiders or external actors (Luintel et al., 2008). Benefit-sharing indicates that communities should receive fair and equitable benefits from utilizing forest resources, which can include financial incentives, employment opportunities, and capacity-building support (Larson et al., 2010).

Local forest-adjacent communities in Sri Lanka have certain rights and privileges that recognize their historical, cultural, and traditional connections to the forests. While the specific

rights may vary depending on the context and specific forest areas, some common rights that local forest-adjacent communities possess are the access to gather NTFP such as medicinal plants, fruits, nuts, honey, and other forest resources essential for their livelihoods (Fernando, 2017). Forest-adjacent communities may have customary or traditional rights to engage in sustainable agricultural practices, livestock grazing, and other land-use activities within or near forested areas (Bradley, et al., 2016). Forest-adjacent communities may also have cultural and spiritual rights associated with forest areas, including practicing traditional rituals, ceremonies, and cultural activities that are significant to their heritage and beliefs (Wickramasinghe, 1997).

The specific rights and tenure arrangements for local forest-adjacent communities in Sri Lanka can change depending on the situation and the specific agreements or arrangements in place (Bradley, et al., 2016). The rights of local forest-adjacent communities in Sri Lanka are generally subject to regulation and may require coordination and collaboration with relevant government agencies, such as the FD or other local authorities (De Zoysa & Inoue, 2016).

2.4 Stakeholders in Participatory Forest Management in Sri Lanka

Various stakeholders play crucial roles in shaping and implementing participatory forest practices. These stakeholders encompass individuals, organizations, and institutions that have an interest in the management, conservation, and utilization of forest resources (Peras et al., 2015). Their involvement is essential for creating collaboration, ensuring effective decision-making processes, and achieving the goals of PFM (Schusser et al., 2015). There are several stakeholders in PFM in Sri Lanka. The main stakeholders include the FD, local communities, non-governmental organizations (NGOs), and the private sector.

2.4.1 Forest Department

The Forest Department (FD) began as the Office of the Conservator of Forests in 1887 by the British, symbolizing the beginning of forest conservation and a scientific forestry management approach in Sri Lanka (Bradley, et al., 2016). The FD is headed by the "Conservator General of Forests" (CGF), a designation appointed by the Cabinet (Wickramasinghe, K., 2012). The Conservator General of Forests is supported by three Additional Conservator Generals of Forests (Ad. CGF) responsible for three main thematic areas: i) Forest Protection; ii) Operations and Management, Research; and iii) Education and Human Resource Management, Administration, and Institutional Development (Ranagalage et al., 2020)

Four Regional Forest Offices led by four Regional Deputy Conservators of Forests manage field-level administration under the supervision of the headquarters (Nuggehalli & Prokopy., 2009). The four Regional Forest Offices have 20 forest divisions based on administrative districts in Sri Lanka, and are administrated by the Divisional Forest Offices that are managed by Divisional Forest Officers (Wickramasinghe, 2012). The forest divisions have sub-divisions such as forest ranges, forest beats, and forest field assistant units.

The FD has a wide range of responsibilities, including the conservation and protection of forests, ensuring their sustainable use and management; as well as formulating and implementing forest management plans and strategies to promote sustainable forestry practices, including timber extraction, reforestation, and biodiversity conservation (Ekanayake & Theodore, 2017). FD is also involved in preventing and controlling illegal activities such as poaching, illegal logging, encroachment, and wildlife trafficking within forest areas (De Zoysa & Inoue, 2008). Also, The FD works in close collaboration with the Department of Wildlife Conservation to protect and manage wildlife habitats within forest areas.

Additionally, it oversees efforts to restore degraded forests, including reforestation and afforestation initiatives, and promotes community participation in forest management through approaches like PFM, community-based conservation, and livelihood development programs (Wickramasinghe, 1997).

2.4.2 Local Communities

Local communities are vital stakeholders in PFM. Their inclusion and active participation are important for ensuring the sustainable management and conservation of forest resources. They rely on forest resources and heavily depend on the natural environment for collecting food, medicines, energy, shelter materials, and livestock. The rural population of Sri Lanka was estimated at 81.14 % in 2020, and they remain heavily rely on natural resources for their livelihoods (Bradley, et al., 2016).

Local communities engage in sustainable forest-based livelihood activities such as gathering NTFPs. They collect a range of products including edible fruits, nuts, honey, medicinal plants, and fibers for crafting—and the knowledge of identifying, harvesting, and processing these products is passed down through generations (Illukpitiya & Yanagida, 2008).

Local communities possess extensive knowledge of the forest ecosystem, including traditional insights and practices associated with forest management (De Zoysa & Inoue, 2008). This knowledge, accumulated over generations, is invaluable for sustainable resource use, biodiversity conservation, and maintaining ecosystem balance (Peras et al., 2015). Local communities in Sri Lanka have strong cultural and spiritual connections to the forests. Traditional rituals, ceremonies, and festivals are held to honor and seek blessings from forest deities or guardian spirits

2.4.3 Non-profit Organizations

Since the 1970s, non-governmental organizations (NGOs) in Sri Lanka have significantly influenced civil rights, community-based development, and environmental issues (Akurugoda, 2017). NGOs have been crucial globally in managing forests (Fernando, 2011). NGOs work at the international, regional, and national levels. NGOs that work at the international level identify the gaps in present-day policies or regulatory frameworks and collect information to educate the public, private sector, and the Government (Wright & Andersson, 2013). At the national and regional level, NGOs focus on creating interactions within communities and between the stakeholders.

NGOs create community interactions by building awareness, empowering marginalized sectors, and carrying out skill development (training programs) and capacity-building programs in PFM (van der Maesen & Cadman, 2015). NGOs help to build equitable relationships among power hierarchies and can facilitate bottom-up approaches for forest management and governance in current top-down policy and practice frameworks (Barnes & van Laerhoven, 2015).

2.4.4 Private Sector

In South Asian countries, there is currently very little private sector participation the protection, restoration, or management of forests (Badenoch, 2009). The most significant disadvantage is that these countries lack the financial resources to implement forest management effectively (Carter & Gronow, 2005). Development assistance and international donations are usually inadequate and not a source that can be solely depended on (Balooni, 2002). The private sector helps local communities to efficiently market and add value to their forest goods and services. Incorporating the private sector in participatory forestry is essential to get more benefits.

Private plantation companies involved in tea, rubber, and coconut cultivation, often have extensive land holdings that include forested areas in Sri Lanka (Bradley, et al., 2016). They contribute to participatory forestry by implementing sustainable land-use practices, protecting and conserving forests within their plantations, and supporting initiatives for biodiversity conservation and agroforestry (De Zoysa & Inoue, 2016).

Private sector companies often collaborate with local communities in participatory forestry initiatives. For instance, partnerships between private companies and community-based organizations can be established to support sustainable livelihoods, such as community-managed forest enterprises, where the private sector provides technical support, market access, and training to local communities (Badenoch, 2009).

2.5 Summary

In recent times, globally there has been a push to advocate and implement decentralized models of forest governance, such as PFM, aimed at ensuring sustainable resource management, biodiversity conservation, and improved livelihoods for local communities (Dahal & Chapagain, 2012). Understanding history and how PFM has evolved is important for making today's PFM programs successful. Lessons from the past serves as a foundation for planning sustainable, resilient systems that can adjust to evolving conditions and contribute to the long-term success of forest management initiatives. Understanding PFM involves taking a close look at the laws that support it. This analysis is important for figuring out the rights and responsibilities given to local communities, making sure they have secure land rights, and checking if PFM practices follow the relevant laws and policies. In PFM, being aware of the stakeholders is crucial as it ensures transparency, accountability, and inclusive decision-making. Knowing the needs and interests of all involved parties helps reduce conflicts and encourages successful collaboration and

engagement—and including stakeholders enhances adherence to rules and regulations, ultimately contributing to the sustainability and overall success of PFM programs.

Chapter 3: Research Design and Methods

3.1 Introduction

This research used a secondary qualitative research design, which facilitated comprehension of the personal significance of human experiences within the communities situated near the forests in Sri Lanka. In pursuit of my objectives, I carried out a comprehensive review, examining various official and unofficial documents, and community reports during my research. Qualitative data analysis software, NVivo, was used to present the research findings during the analysis of the data. This chapter provides a more detailed explanation of the research approach, beginning with a comprehensive description of the study area.

3.2 Study Area

Sri Lanka is an island situated in the Indian Ocean, known for its rich biodiversity because of the considerable differenced in climate and altitude. Sri Lanka's Forest cover accounts for approximately 29% of the land area, totaling about 1.95 million hectares (Bradley, et al., 2016). Of this, only 167,000 hectares are classified as primary forests, while the remainder is known as regenerated forests. Additionally, around 79,941 hectares are designated as plantation forests, predominantly consisting of rubber and coconut plantations (Bradley, et al., 2016).

Despite its small land area of 65,610 km^2, Sri Lanka exhibits a high degree of biological diversity, encompassing diverse ecosystems and a rich variety of species (Ekanayake & Theodore, 2017). Sri Lanka is among the most ecologically diverse countries in the Asian region, having high species diversity per unit area, including mammals, fish, amphibians, reptiles, and plants (Bradley, et al., 2016). The area that includes the Western Ghats of India and Sri Lanka is identified as one of the 34 global biodiversity 'hotspots' (Rupasinghe et al., 2017). The forests of Sri Lanka,

particularly in the wet and intermediate zones of the southwest, harbor a substantial portion of the country's biodiversity (Bradley, et al., 2016).

Up to the present, Sri Lanka has documented approximately 3,350 species of flowering plants, with around 23% being endemic. Additionally, over half of the invertebrates and vertebrates, including fish and frogs, are endemic (Wijesundara, 2022). The country has been categorized into three bioclimatic zones—wet, intermediate, and dry—based on the average annual precipitation. Roughly two-thirds of the island falls within the dry zone, home to Sri Lanka's most extensive forests, covering 76% of the island's overall forest area (Rupasinghe et al., 2017).

The Knuckles Forest in Sri Lanka covers approximately 160 km² and is geologically part of the central hills of the country (Weerawardhena & Russell, 2012; see Figure 3.1). Nevertheless, it is geographically separated from the main mountain regions by the Dumbara Valley to the south and east, as well as the Matale Valley to the west (Amarasinghe, 2013). The forest is characterized by its rugged landscape, consisting of deep valleys and high peaks, with over 35 peaks exceeding 300 meters in elevation; the highest point within the forest reaches 1,900 meters (Dhakal et al., 2012) .

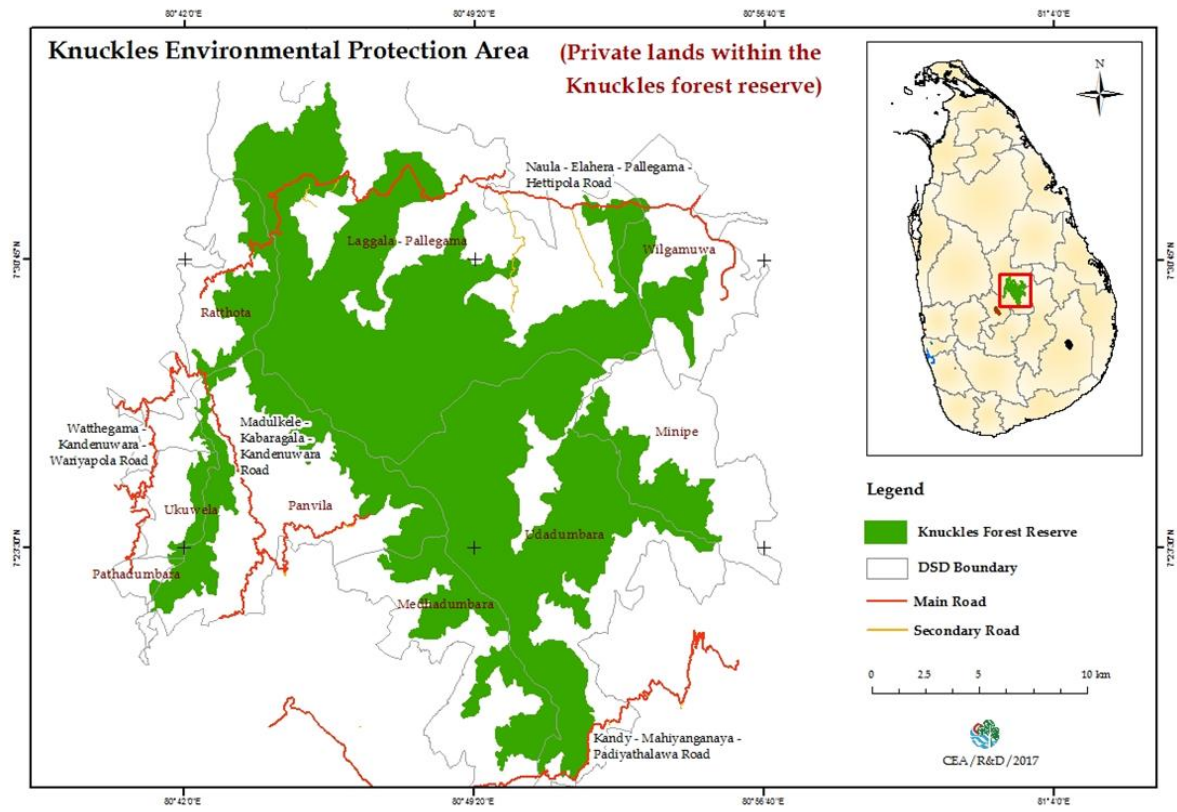

Figure 3.1 Knuckles Environmental Protection Area (Source: Map produced by Central Environmental Authority, Sri Lanka. Retrieved from https://www.cea.lk/web)

Positioned on the border between Sri Lanka's wet and dry zones, the Knuckles Forest encounters a diverse climate. The higher elevations of the forest areas have a cool, highland climate, while the other regions experience a dry and humid climate (Weerawardhena & Russell, 2012). The forest receives rainfall during both the northeast and southwest monsoons, with an annual precipitation range of 2,500 to 5,000 mm (Medawatte et al., 2011). As the headwater forest for the Mahaweli River, which is the longest river in Sri Lanka, the Knuckles Forest is essential for providing watershed services (Subasinghe et al., 2014). The forest serves as the source of several important tributaries that contribute to the Mahaweli River's flow and these watershed

services are essential for social and economic advancement in the Plains region of Sri Lanka (Amarasinghe, 2013).

The Knuckles region comprises three primary forest types: (i) montane tropical wet-evergreen forest, (ii) lower montane wet semi-evergreen forest, and (iii) lowland tropical wet semi-evergreen forest (Medawatte et al., 2011). A distinctive feature of the area is the presence of a thick, shrubby vegetation type referred to as the "pygmy" forest (Gunatilake, 1995). Despite covering only approximately 0.3% of Sri Lanka's land area, the Knuckles Forest is incredibly rich in biodiversity as it is home to 1/3rd of the country's flowering plant species, with 85 of the recorded 288 woody plant species being endemic; additionally, 11 species are nationally threatened, and 26 are globally threatened (Edirisinghe, 2021). Notably, the Sri Lanka leopard (*Panthera pardus kotiya*) finds refuge within the Knuckles Forest. Overall, the area boasts 20 amphibian species, 25 freshwater fish species, 31 mammal species, 128 bird species, and 53 reptile species (Weerawardhena & Russell, 2012).

The Knuckles area has a long history of human habitation spanning over two millennia and, presently, around 80 villages are situated within and around the protected forest (Badenoch, 2009). Forests in the area were managed under collective ownership and access and subjected to community rules and restrictions. Until the 1960s, the area remained relatively isolated and unspoiled. Nevertheless, since then, introducing cardamom (*Elettaria cardamomum*) through underplanting in the forest was initiated for commercial objectives (Amarasinghe, 2013).

For centuries, the livelihoods of local communities in the Knuckles region were closely tied to the forests. Most residents relied on the forests for essential resources such as firewood, medicinal plants, and non-timber forest products (NTFP) (Badenoch, 2009). However, as forest management policies often impose strict limitations on access to these resources, the livelihood

security of the locals have been undermined. For example, bans on collecting firewood or medicinal plants forced communities to seek alternatives, often leading them to rely on more expensive sources (Gunatilake, 1995). These increased their living costs and economic burdens, making it difficult for them to preserve their traditional lifestyles.

Before the colonial era, the communities living around Knuckles, Sri Lanka, had developed intricate and sustainable practices to manage their livelihoods and the forest resources. These practices were rooted in deep ecological knowledge and a harmonious relationship with the natural environment (Thennakoon & Gamachchige, 2021). One of the primary livelihood activities was shifting cultivation, also known as *chena* farming. Farmers would clear small patches of forest land to grow crops such as millet, yams, and vegetables (Gunatilake, 1995). After a few harvests, the land would be left fallow for several years, allowing the forest to regenerate and restore soil fertility (Amarasinghe, 2013). This rotational system ensured that the soil remained productive, and biodiversity was maintained, demonstrating an effective method of sustainable agriculture (Thennakoon & Gamachchige, 2021).

Local communities also relied heavily on the forest for a selection of NTFPs. They collected resources such as honey, resins, medicinal herbs, and fruits in a manner that ensured the sustainability of these resources. For example, honey was harvested from wild bee hives in a way that left enough honey for the bees to survive and continue their pollination activities (Gunatilake,1995). Similarly, medicinal plants were gathered with knowledge of their growth cycles and regeneration needs, ensuring that these valuable resources were not depleted (Amarasinghe, 2013). This careful and respectful approach to resource collection was integral to maintaining the vitality and functionality of the forest ecosystem.

Hunting and gathering were supplementary activities that provided additional food and resources for the communities. Traditional hunting methods, such as using traps and bows, were employed with an understanding of the local wildlife populations (Gunatilake, 1995). Hunting was regulated by community norms and often aligned with specific seasons to avoid overhunting and ensure that animal populations could sustain themselves (Badenoch, 2009). This sustainable approach to hunting helped maintain the balance between human needs and wildlife conservation, preventing the depletion of animal species in the area.

Ritigala is distinguished by its setting as an isolated mountain forest, enveloped by an extensive landscape predominantly used for paddy cultivation and Chena (slash-and-burn) dryland agriculture in the dry zone (Wickramasinghe, 1997; see Figure 3.2). The average annual rainfall for the region, according to available data, is 1,483 mm, with a notable wet season from October to November and a dry season from June to September (Gunawardene & Wijeyaratne, 2020). About 100 species of birds, about 50 species of colorful butterflies, 20 species of fish, 16 species of reptiles, and 16 species of snails have been recorded here, and 10% of the total plant species found in Sri Lanka is spread over this land (which is 0.0237% of the total area of the country) (Gunawardene & Wijeyaratne, 2020).

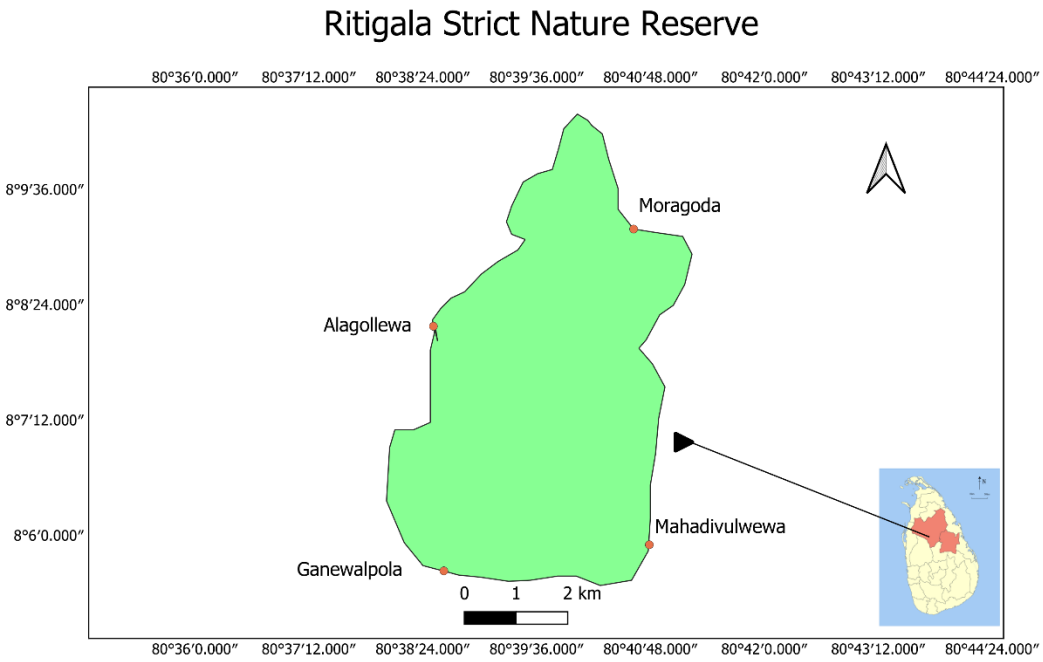

Figure 3.2 Ritigala Nature Reserve (Source: Map created by free and open source QGIS)

For residents, the Ritigala forest is crucial for their sustenance and is deeply embedded in their cultural heritage. It functions as a site of religious and spiritual importance, provides essential resources such as food, water and medicinal plants, and holds historical and religious value (Wijayawardene & Madurapperuma, 2011). The forest was viewed as a communal resource, accessible and shared by all the communities living on its fringes. Their main source of livelihood was agriculture, while forest resources served as a secondary source (Wickramasinghe, 1997). The proportion of income derived from forest products differs among communities and gathering groups, yet the forest is regarded as a major source of revenue (Wickramasinghe et al., 1996). Because of deep mutual exchange and strong social connections, there are no strict class divisions among the communities (Wickramasinghe, 1997).

The forest products commonly harvested included gal-siyambala (*Dialium ovoideum*), bee honey, bin-kohomba (*Munronia pumila*), goraka (*Garcinia cambogia*), as well as fuelwood and binding materials. Additionally, products like divul (*Feronia limoni*), damba (*Syzygium gardneri*), mee (*Madhuca longifolia*), kohomba (*Azadirachta indica*), and small timber were collected near the boundary areas adjacent to non-forest village lands (Wijayawardene & Madurapperuma, 2011). Mora (*Dimocarpus longana*) and himbutu (*Salacia reticulata*) were also gathered in smaller quantities (Wickramasinghe et al., 1996). Forest products served various purposes, including medicinal, food, and energy needs. All households depended on the forest for fuelwood, binding materials, medicinal products, edible wild foliage, and timber for fencing and tool grips (Wickramasinghe et al., 1996).

All surrounding communities had access to the forest with no specific resource restrictions or designated areas. Group harvesting was a common practice, and members received equal shares of the products or cash, a rule set by the gatherers. These groups, consisting of male, female, and kids, were typically organized for different tasks. For example, small groups were formed for gathering honey and bin-kohomba, as bigger groups were responsible for harvesting gal-siyambala (Thakkali Samithiya, 2012). Large groups, including both experienced and skilled harvesters along with children, were organized for harvesting gal-siyambala fruits (Thakkali Samithiya, 2010). The amount of trees harvested daily depended on the group's size and the yield from each tree. Harvesting activities included climbing, pruning, picking fruits, and collecting fallen fruits (Thakkali Samithiya, 2010). Despite task differences, the harvest was evenly distributed among the elderly, with children receiving at least 3-4 kg of fruits (Thakkali Samithiya, 2010).

Small groups collected fuelwood, honey, and bin-kohomba. The fuelwood gathered by these groups was stacked together and then distributed among the members, with each person

receiving a share based on the weight they could carry as a headload (Thakkali Samithiya, 2010). Groups collecting honey and bin-kohomba (medicinal plant) typically consisted of no more than five individuals. Although these groups move together to collect bin-kohomba, the harvest has not been distributed equally; instead, each individual filled their own sacks (Thakkali Samithiya, 2010).

Areas around Ritigala were often considered sacred, such as the forest around the ancient Ritigala monastery. These groves were protected by religious and cultural taboos that prohibited cutting down trees or hunting animals within their boundaries (Wickramasinghe, 1997). The presence of ancient Buddhist civilization is evident through the remnants of a palace and chaittiya (stupa) (Wickramasinghe, 1997).

3.3 Secondary Data Research

“Secondary data-based research is a particular research strategy that adopts pre-existing quantitative data or pre-existing qualitative research data to examine new questions or verify previous studies" (Heaton, 2008). These data can be naturalistic (collected with limited interference by researchers) or non-naturalistic (requested for research studies) (Heaton, 2008). These can consist of tools such as questionnaires, semi-structured interviews, statistical databases, official documents, and research diaries (McCulloch, 2004). Secondary data can be public or restricted, and can be direct or indirect (Heaton, 2008). The essential advantage of using secondary data is that it saves time and cost (Chatfield, 2020).

3.3.1 Research Design

The objective of my research was to explore how community members living in forest-adjacent areas of Sri Lanka, as well as other stakeholders in forest management, have generated social

reality through experience with forest management, co-sharing, observations, reflections from others, and socio-historical context. This research contextualized the constraints and possibilities of Participatory Forest Management (PFM) while examining the status of PFM in Sri Lanka. In doing this, it relied on multiple perspectives of various stakeholders either impacted by the policy implementation (local communities), or involved with it (FD, NGOs).

My research used a secondary qualitative research design. Qualitative research includes gathering and analyzing data to understand beliefs, opinions, concepts, and experiences (Greenwood, 2020). It is used to get an accurate understanding of a problem or to originate novel ideas for research. Qualitative research was appropriate because my research explored social or human dimensions, behaviours, and specific aspects of the social world (Creswell, 2014). A qualitative research approach focuses on a broader understanding of social phenomena and personal experience (Heaton, 2008). According to qualitative research epistemology, reality is considered socially constructed and thus permits various understandings and interpretations of the world (Creswell, 2014). Qualitative research does not generalize—it tries to present the particular through analysis, observation, and insight (Mogalakwe, 2006).

I selected two forest-adjacent communities, Knuckles and Ritigala, using purposive sampling principles to investigate the contemporary issues of PFM in Sri Lanka. Knuckles and Ritigala forest-adjacent communities relied on forest resources that have been the conventional foundation for people's livelihoods for centuries. However, Sri Lanka's Forest department's declaration of Knuckles conservation forest and the Ritigala strict natural reserve has been a significant setback in those communities. For this secondary qualitative research, the secondary data were collected from official records and documents of the Forest Department; Department of

Foreign Affairs, and Trade; and two local community-based organizations (Dumbara Surakinno and Thakkali Samithiya).

3.4 Methods of Data Collection

3.4.1 Document Review

Documents produced by organizations and institutes have been the primary source of information in qualitative research for decades. The number of journal articles and research reports using document reviews as a part of their methodology has increased latterly. (Greenwood, 2020). Document review is "a systematic procedure for reviewing or evaluating documents—both printed and electronic (computer-based and Internet-transmitted) material" (Bowen, 2009, p. 27). Document reviews require data to be analyzed and interpreted to obtain insights just as with other analytical methods.

A document review method was used to study PFM in Sri Lanka. According to Merriam (2018), "documents of all types can help the researcher uncover meaning, develop understanding, and discover insights relevant to the research problem" (p. 118). The review concentrated on collecting administrative documents of government and non-government offices, meeting minutes of forest management committees and community-based organizations, and official reports of NGOs. Reviewing these documents revealed information about PFM practices in Sri Lanka.

For this study, I selected some major sources containing data about PFM in Sri Lanka. I selected project performance audit reports on the participatory forestry projects that were finalized by the Forestry Department from 1993–2019; Sri Lanka community forestry programs (independent completion reports) conducted by the Department of Foreign Affairs and Trade from 2007–2017; and performance reports of the Forest Department from 1993–2019. These reports

provided valuable insights on different stakeholders in the forest management, processes and methods used in forest management, frameworks and policies that support forest management, and monitoring and evaluation of forest management.

Furthermore, I selected two local community-based organizations set up in forest-fringe villages in Knuckles and Ritigala forest-adjacent communities—"Dumbara Surakinno" and "Thakkali Samithiya"—and I used their reports from 2010 to 2019. These reports offered insights into the effects of forest management on the well-being and livelihoods of local communities, as well as the participation of these communities in forest management practices.

3.5 Methods of Data Analysis

Qualitative data analysis entails arranging, examining, and interpreting qualitative data in notes, interview transcripts, images, documents, and audio and video recordings to identify themes and patterns and answer research questions (Greenwood, 2020). The qualitative data analyzing process includes classifying the data and reducing the quantity of raw information by recognizing important patterns, ultimately getting meaning from data and creating a logical chain of evidence (Greenwood, 2020). A thematic approach allows the researcher to arrange the analysis in a meaningful way that facilitates the discussion of complex realities and meanings (Sherif, 2018). The thematic analysis emphasizes what is said rather than how it is said (Mcculloch, 2004). This approach, therefore, allows exploring important secondary data themes that may have gone unnoticed before (Dargentas, 2006).

In my research, I categorized data based on key themes relating to the study's objectives. To organize the data, NVivo software was used to develop a detailed picture and themes for data analysis. NVivo software was used to code for major themes. The analysis was guided by certain themes that were identified in the literature. For example, from the literature on PFM major themes

include community involvement and empowerment, forest resource management, policy and governance, livelihoods and well being, knowledge and education and monitoring and evaluation.

Chapter 4: Genesis and the Evolution of Participatory Forest Management in Sri Lanka

4.1 Introduction

Participatory Forest Management (PFM) promotes the rights of individuals residing around forests by enabling their involvement in the decision-making processes (Poffenberger,1999). It also allows equitable benefit-sharing deliberations. Therefore, PFM promotes involvement in forest management by local people, whose livelihood depends mainly on forest resources. It acknowledges the significance of engaging local communities who have cultural connection, traditional knowledge, and livelihood dependencies on forest resources (Rasul & Karki, 2007).

The concept of PFM was adopted and implemented in Sri Lanka since the 1980s. Its purpose was to conserve state-owned forest lands, prevent their degradation and depletion, and alleviate poverty among local communities residing in forest-adjacent areas (Ekanayake & Theodore, 2017). This chapter offers an overview of the historical development of forest management in Sri Lanka. The following section delves into the evolution of PFM in the country and offers a review of the early initiatives and pilot projects initiated under the PFM programs in Sri Lanka.

4.2 Historical Context of Forest Management in Sri Lanka

4.2.1 Traditional Forest Management Practices

Traditional forest management practices refer to the methods, techniques, and approaches used by the local communities to sustainably manage and utilize forest resources. These practices have evolved over generations and are based on traditional knowledge, cultural values, and a deep understanding of forest ecosystems. With these practices, local communities in Sri Lanka have

developed sophisticated systems of governance, resource allocation, and land-use planning, which have a significant role in maintaining sustainability in forest ecosystems.

Traditional forest management in Sri Lanka has a historical root that spans approximately two thousand years, as documented in historical scriptures such as the "Mahawamsa" and "Raajawali" (De Zoysa & Inoue, 2008). These records show that even during the reign of King Vijaya in 543 BC, local communities maintained a harmonious relationship with the forests (Ekanayake & Theodore, 2017). Even though forests were under the formal jurisdiction of the kings, local communities enjoyed specific rights and self-administration (Wickramasinghe, 1997).

As De Zoysa and Inoue (2008) noted, the establishment of social obligations for the management of the forests could be dated back to the King Dutugemunu period of 161 BC–137 BC. The King was considered the nominal ruler of the forest land while the communities had clear usufruct rights and were supervised by the locally appointed members (De Zoysa, 2001). Simultaneously, there were well established social obligations which prevented misuse or overuse of the forest resources (Ekanayake & Theodore, 2017). There were forest lands reserved for royalty (gabada gam), monasteries (devala gam), and temples (ninda gam) (Poffenberger, 1999). During the Kandyan Kingdom (1587–1815), kings prohibited the felling of certain trees from the lands reserved for the royalty, and forest stewards known as “Kele Koorala” were appointed to regulate the use of the lands (De Zoysa, 2001).

In Sri Lanka, rituals and community members’ perceptions have played significant roles in traditional forest management practices for thousands of years. Local communities often have had deep spiritual, cultural, and traditional connections to the forests, which influenced their understanding of the natural environment and guided their management practices. The protection of the forests was thus ensured by the combination of ecological and religious rituals.

Local communities regard forests with immense respect and have a sense of gratitude and deep feeling toward them. As cited by Thakkali Samithiya (2010, p.12), a community member expressed it in the following words:

> "*When our family faces times of hunger and our pots are empty, I turn to the forest and offer prayers to the divine, seeking assistance in keeping my family alive. Every time I have ventured into the forest with this plea, I have never come back empty-handed"*.

Similarly, another community member commented that,*"The forest has always provided sustenance, ensuring that my family's needs are met*, *it never let us starve"* (cited in Dumbara Surakinno, 2013, p.4).

The community members hold a stronger belief in protecting the forest and practice this by means of rituals and actions. For the local population, these forests are not just a physical forest—they hold deep spiritual significance as a sacred place where gods and spirits reside, and the forests are similarly vital for their own sustenance and livelihood in the region (Wickramasinghe, 1997).

People make promises and offer prayers by hanging a tree branch as an act of reverence to the gods, to ensure their safety and well-being in the forest. This ritual is a way to seek divine protection and blessings, trusting that the gods will watch over them during their time spent in the forest. They believe that these trees are the resting places of spirits and gods. For example, a community member explained, "*We don't harm Neem, tamarind, mee, Kumbuk, Bo, Nuga and Na. Even if we try to harm by a mistake, the spirits will not forgive us. They hide the paths, and we will be lost"* (cited in Thakkali Samithiya, 2010, p. 11).

Members of local communities thus avoid harming certain species such as neem (*Azadirachtu Indica*), tamarind (*Tumarindus Zndica*), mee (*Madhuca long~foliolia*), kumbuk

(*Terminulia arjuna*), bo (*Ficus religiosa*), nuga (*Ficus ultissima*) and na (*Mesuu ferrerr*). They see these species associated with supernatural powers. The species including neem, kumbuk, na, and nuga are large trees and usually grow along the riverbanks and help to restore soil fertility and reduce erosion. Therefore, local practices to protect these species help to conserve the natural environment.

The belief systems and rituals of the local communities hence relate to the concept of sustainability of the forest resources. The harvesting practices reflect the application of the sustainability concept. Cited in Thakkali Samithiya (2015, p. 21), explaining this, a community member has stated,

> "*When we go into the forest to collect honey and wax from beehives, we make promises. We promise to extract what we only need and not take out everything, so there will still be enough left for the bees. Even if we find many beehives, we only collect about 5-7 pints of honey from each hive per day. We never disturb or take honey from small hives"*.

Another community member added, *"When pruning the branches for gal siyambala and mora, we leave few branches and leading shoots. We don't take them all"* (cited in Dumbara Surakinno, 2012, p. 14). In addition, "*When harvesting bin kohomba, which grows in shade and cool places, we never pick small plants; otherwise, there will not be enough plants for the next season"* (cited in Thakkali Samithiya, 2018, p.17). Communities use this knowledge passed down through generations to become skilled guardians and to understand and care for their natural surroundings.

4.2.2 Colonial Influences on Forest Management

The British colonial administration heavily influenced the notions of forest management across South Asia during the nineteenth century. A notable characteristic of the colonial era was the appropriation of forests that had once been governed by traditional indigenous methods (Carter & Gronow, 2005). Forest management in most South Asian countries under the colonial regimes was marked by the scientific forestry management approach, where the governments presumed they have all rights over forest ownership and access and authority to optimize timber yield for the crown and the State (Poffenberger,1999) They included these rights in new laws and regulations, often separating local forest-adjacent communities from their traditional lands (Balooni, 2002). Colonial forestry consisted of a complicated model that involved rigid administrative infrastructures, legal and policy frameworks, and non-indigenous conservation management practices (Nath et al., 2016).

Under Dutch rule, it was estimated in 1794 that about 80% of the land area was forested (Poffenberger, 1999). However, significant quantities of timber, particularly valuable species, like ebony, were exported to Holland and other European nations. This extensive logging activity led to the near extinction of this species within Sri Lanka.

The British fully occupied Sri Lanka in 1815, and the bureaucratic agencies took over the management of forests from the local communities (Hewage & Mallika, 2011). They viewed forests as a place to exploit and generate revenues. During British rule, forests in the wet-zone hills were cut to cultivate export crops such as coffee and tea. Similarly, forests in the dry zone were removed to enable the export of valuable timber. These actions had profound impacts upon the natural forest cover. At the beginning of the 1800s, it was estimated that 80% of the total land area (5.56 million hectares) was forested (De Zoysa, 2001).

During the British administration, nearly half of the forest cover (2.7 million hectares) was depleted over a period of 100 years due to clearing and opening forests for coffee, tea, and rubber plantations (De Zoysa, 2001). Cited by Poffenberger (1999), Mr. Saunders, a colonial district administrator, observed and wrote in 1867,

> "*In the Kukul Korale district, there is a large area of forest land that is suitable for growing coffee. I plan to have this district opened up soon. I believe that if some plots of land are surveyed and a basic road is constructed to access them, the land will be in high demand and sell quickly".*

However, some colonial foresters were not in favour of these forest revenue generation forest policies. Some were concerned about the conservation aspect of the forests. In this regard, Poffenberger (1999) cited that one British official wrote in the late nineteenth century,

> *"The complete denudation of the forests for the purposes of coffee planting has become a serious evil. As a result of planting (tea), large areas of virgin forests have been cleared and erosion on an immense scale has taken place, resulting in silting and consequent periodic flooding of the low country wet zone rivers".*

The first forest-related policy that was authorized in Sri Lanka was the Timber Ordinance in 1848. This solely permitted the reservation of forests for the state's commercial needs. Subsequently, the Forest Ordinance was introduced in 1855 to regulate shifting cultivation and forest reservation. In 1873, English forester, Mr. Hooker, promoted the protection of natural forests above 5,000 feet as climatic reserves. Some institutional interventions were followed. The British appointed the first conservator of forests in 1887 and established administrative control over the country's primary forests in 1899 after establishing the Forest Department (Geekiyanage et al.,

2015). This new institutional arrangement placed ownership, management, and oversight of forest resources under the colonial administration, and strictly regulated forest use and prohibited unauthorized entrance of the public to the forests.

The initial nation-wide forest policy in Sri Lanka was established in the late 1920s, considering that the country still had an abundant amount of forest land. The primary goal of the policy was to make Sri Lanka self-sufficient in timber and essential forest products by responsibly using existing resources and planting new trees; exporting timber and forest products to the global market; protecting water sources and preventing soil erosion through proper forest management; as well as ensuring that forest operations support the preservation of indigenous wildlife and plants.

Nearing the independence from the British in 1948, the office of the Forest Department administrated the forest management in Sri Lanka. The personnel were not properly trained in identifying local community rights, acknowledging traditional knowledge, and understanding the livelihood dependency of the local communities on the forest resources. As a result, traditional ways of forest management were ignored, and local communities were omitted from all aspects of forest resource use and management.

4.3 Emergence of Participatory Forest Management Concepts

4.3.1 Global and Regional Influences on the Development of PFM

Participatory Forest Management (PFM) has been influenced by multiple global and regional factors. PFM involves engaging local communities in the management and decision-making of forests, acknowledging their rights and roles in preserving these ecosystems (Rasul et al., 2011). To comprehend the development of PFM and the different approaches adopted in various regions, it is essential to consider the diverse influences that have shaped its development. These include

shifting paradigms in forest management, global agreements and conventions, and emergence of environmental movements from local communities.

The PFM concept gained momentum in the 1970s and 1980s. Shifting paradigms in forest management occurred as the shortcomings of traditional top-down approaches became increasingly apparent. These approaches, which were characterized by centralized decision-making and limited engagement of local communities, often resulted in negative environmental consequences such as deforestation and ecosystem degradation (Pulhin, 2010). Additionally, they failed to consider the traditional knowledge, needs, and aspirations of local communities who have a strong connection to, and reliance on, forest resources (Peras et al., 2015).

Prior to the 1980s, economic growth was often equated with development, with industrialization seen as the primary driver of such growth. Policies aimed at promoting industrialization were not efficiently addressing the issues of rural poverty and forest loss; therefore, the community forestry model emerged as a promising alternative to industrial forestry, offering a more suitable approach to address the challenges related to rural poverty and forest degradation.

As an example, in Sri Lanka, after achieving independence from the British in 1948, 2.9 million hectares (44% of the entire land area)) were still covered by forests (De Zoysa & Inoue, 2008). However, by 1981, the forest cover had dwindled to 1.63 million hectares (25% of the total land area). The annual rate of decrease was approximately 50,000 hectares per year (De Zoysa, 2001). This decline in forest cover was primarily due to development projects, extensive agricultural land settlements, and illegal logging (Badenoch, 2009).

Table 4.1 Comparison of forest cover changes over time.

Time Period	Forested Area Coverage	Outcome
Pre-Colonial Era (beginning of 1800s)	5.56 million ha	Forest cover remained stable.
British Colonial Period	2.9 million ha	Forest cover decreased over time.
Post-Independence (1980s)	1.63 million ha	Forest cover decreased over time.
2016	1.95 million ha	Forest cover increased over time.

Until recently, Sri Lanka implemented policies that aimed to boost economic growth through industrialization and export-oriented agriculture. These policies led to the expansion of certain sectors such as tea, rubber, and coconut, which required the clearing of forests and conversion of land for cultivation (De Zoysa, 2001). Forests were often regarded as assets to be exploited for economic gains, resulting in deforestation and loss of biodiversity. After recognizing the ineffectiveness of policies aimed at promoting industrialization in addressing the issues at hand, it became evident that alternative approaches were necessary.

Global agreements and conventions have been instrumental in influencing the development of PFM. This involved the acknowledgment of indigenous entitlements, the establishment of community forest management institutions, and involving forest adjacent communities in decision-making processes (Pulhin, 2010). In 1974, Geneva-based International Labour Organisation (ILO) endorsed the concept of 'basic needs' as a fundamental framework for development. The basic needs approach as a development strategy was seen as an opportunity to

incorporate and build upon the 'new development strategies' of the 1970s, which encompassed concepts such as redistribution with growth (Colchester et al., 2004).

In the forestry sector, a parallel approach emerged during the 1970s, spurred by increasing acknowledgment of the significance of forests in rural development. The attention shifted toward understanding the strong reliance of rural communities on forests and the various benefits derived from them. These benefits included fulfilling basic needs such as food, firewood, animal feed, pasture and construction materials, raw materials and income generation through the sale of forest products (Pulhin, 2010). Additionally, it emphasized the importance of preserving tree cover to ensure environmental stability and promote sustainable practices. As a result, a new strategy focused on three primary functions of forestry in rural development, alongside its industrial role: role in reducing poverty, role in promoting social equity and role in ensuring resource sustainability (Carter & Gronow, 2005).

Following the publication of the Food and Agriculture Organization's (FAO) influential report from 1978, titled "Forestry for Local Community Development", it introduced the term 'community forestry' to define the new approach to forestry development (Dahal & Chapagain, 2012). Since then, numerous definitions and related terms have emerged in the literature. These terms encompass community-focused forestry, social forestry, and forestry for rural areas, among others.

The concept of 'community forestry' gained further legitimacy through various events and publications. One significant boost was the adoption of "Forestry for People" as the theme for the Eighth World Forestry Congress held in Jakarta in 1978. This highlighted the growing recognition of the importance of incorporating local communities in forestry management and decision-making processes.

Furthermore, the publication of the World Bank's Forestry Sector Policy Paper in 1978 was crucial in strengthening the concept of community forestry. The policy paper indicated a shift in the World Bank's lending program, highlighting environmental conservation and community-centered projects over industry-driven forestry initiatives (Pulhin, 2010). This signaled a commitment to supporting projects that prioritized the well-being of local communities and sustainable forest management practices.

These developments, including the adoption of "Forestry for People" as a congress theme and the World Bank's policy shift, contributed to the legitimization and acceptance of community forestry as an approach that acknowledged the significance of both environmental conservation and the needs of local communities. Natural resource management and environmental decision-making often excluded the voices and perspectives of local communities who directly rely on, and have a deep connection to, the natural resources in their regions. This approach often led to environmental degradation, loss of biodiversity, and social injustices. The emergence of environmental movements and the push for inclusive and sustainable methods of managing natural resources have had a notable impact. These movements emphasized the necessity of engaging local communities in the decision-making processes.

In the early 1970s, the decision to selectively log the only low and mid-country rainforest (Sinharaja Forest) that had remained pristine, to supply logs to the woodworking complex built nearby, drew protests from local communities and environmental organizations in Sri Lanka (Hewage & Mallika, 2011). The government had to halt the logging operations in 1978 due to the growing protests and pressure from the international community. However, by the late 1970s, 2,025 hectares, out of the total extent of 11,331 hectares, had been selectively logged. As a result

of collective efforts by the concerned organizations, in 1990, the entire Sinharaja Forest was declared a UNESCO World Heritage Site (De Zoysa, 2001).

In 1980, a new National Forest Policy advocated a ‘community forestry’ approach (De Zoysa & Inoue, 2008). Community forestry is known for helping to achieve sustainable rural development by creating control over forest lands and providing non-monetary and monetary benefits to the local communities. (Poffenberger, 1999). The 1980 National Forest Policy authorized a temporary prohibition of extraction of timber, which was implemented in 1990; as a result, no timber extraction in natural forests has been authorized since 1990.

Table 4.2 Changes in Forest Management Policies and Practices In Sri Lanka Since the British Colonial Period.

Period	**Policies and Practices**
British Colonial Period	• Emphasis on commercial use, logging for timber. • Deforestation for economic gains.
Post-Independence (1970s)	• Recognition of the need for conservation. • Efforts to rehabilitate degraded forests
1980s	• Shift toward community-based management. • Involvement of local communities.

4.3.2 PFM as a Response to Challenges in Forest Management

Forest management plays a critical part in preserving the ecological integrity and responsible utilization of forest resources (Amarasinghe, 2013). However, it faces numerous challenges that require careful attention and effective strategies for mitigation. A few of these challenges can be listed as forest degradation and deforestation, illegal logging, and lack of community involvement.

PFM aims to address the forest degradation and deforestation by actively engaging local communities in conservation and restoration initiatives. Through their participation, communities become guardians of the forests, implementing measures to prevent unauthorized logging, trespassing, and irresponsible land-use practices (De Zoysa, 2001). PFM was introduced to Sri

Lanka to deal with the issues of forest degradation and deforestation, unsustainable logging practices, and promoting community participation.

As an example, the allocation of 0.2–1.0 hectares of adjacent degraded forest lands to individual farmers (known as farmers woodlots) in 13 districts out of 26 districts—in collaboration with the Forest Department—offered a significant advantage to communities by generating additional income, thereby helping them overcome poverty (De Zoysa & Inoue, 2008). Under this arrangement, farmers are permitted to plant recommended tree species with high timber value and cultivate cash crops as intercrops during the initial three years. These lands were allocated on a 25-year lease agreement.

At the end of the agreement period, farmers own approximately 80% of the timber value, whereby they can fully benefit from the harvests of the cash crops; and, in return, these farmers have the responsibility of safeguarding the forests from illegal timber cutting by external parties, and volunteering for other forest protection measures such as mitigating forest fires and participating in enrichment activities (De Zoysa & Inoue, 2008). However, according to the data from the FD, only 15,000 farmers were given these woodlots from the entire country of Sri Lanka, and the total amount of land given was 34,000 ha. There were several farmers from the Knuckles Forest-adjacent community who were chosen for this program. In their own words, one of them explained,

> *"FD insisted we must grow teak in the woodlot because it has a high timber value, but it is not a native tree in Knuckles, we knew its not a good crop to this climate. But no one listened to us*". (cited in Dumbara Surakinno, 2015, p. 15)

Another said, *"Our teak trees are so thin. I went to Kurunegala (Dry Zone) to visit my cousin; their teak trees were huge. This tree is not going to grow here. This one is good for dry zone"* (cited in Dumbara Surakinno, 2015, p. 16).

However, a few community members were happy with the cash crops:

"*I cultivated kurakkan (a type of grain) and vegetables, I was able to get Rs. 15000.00 (USD $50) for three months and I am happy with that"* and *"cash crop program was good. We were able to select what to grow".* (cited in Dumbara Surakinno, 2015, p. 17)

Meanwhile, a few of the community members were not happy with the selection process for handing over the woodlot. As cited by Dumbara Surakinno (2016, p. 11), the community members expressed,

"I don't know how FD selected the people. My ancestors lived in this area for hundreds of years but didn't get a land for a woodlot" and *"there is no point of asking FD, I don't trust them. They purposefully removed people who question them".*

PFM encouraged active engagement of local communities in forest stewardship activities. It involved them in planning, decision-making, and implementation processes, enabling them to have a voice in the use and conservation of forest resources. This participatory approach aimed to cultivate a feeling of ownership, responsibility, and stewardship amidst community members.

According to the FD they helped to start 40 community-based organizations (CBO). These CBOs needed to register with the divisional secretariat of the respective districts as village societies. Local officials of the Forest Department were linked with the CBOs. The average number of meetings of CBOs were in the range of 6–12 meetings per annum.

‘Dumbara Surakinno’ (Guardians of Knuckles) is a community-based organization in the Knuckles region. The FD helped to set it up in 1991, to establish a channel of interaction between the local people and the government. Although, according to villagers they were not engaged in consultations before establishing Dumbara Surakinno and they were not informed about its functions. Local community members stated,

> “*None of the villagers from our village were consulted before the establishment of this organization. We were summoned to the temple hall, where the forest education and extension officer informed us that we now had a community organization of our own*”. (cited in Dumbara Surakinno, 2010, p.14)

They added, “*FD takes all the decisions at a high level, and we are simply informed about what needs to be done*” (cited in Dumbara Surakinno, 2017, p. 06).

Nevertheless, villagers speak highly of the forest education and extension officers who contributed to the establishment of the Dumbara Surakinno. According to them, the officers genuinely cared about both the local community and the environment. Prior to the formation of the community organization, local people had to visit the district forest office to obtain authorization for various forest uses, including non-timber forest product collection, timber extraction, guided nature walks, and wildlife watching. However, after the organization was established, local community members could instead consult with the forest education and extension officer stationed in their village.

It is notable that the FD utilized the community organization to gather details about forest offenses in the region. As a result, some villagers perceived the Dumbara Surakinno as an

extension of the FD. However, in the late 1990s, support from the FD came to an end and the forest education and extension officer was transferred to a different division.

Another purpose of establishing CBOs was to implement various training and awareness programs aimed at enhancing the soft skills of communities, with a particular focus on youth and women. A series of training sessions were organized to support the sustainability of CBO activities, and these sessions covered leadership development, accounting, communication skill development, financial management, planning, and record keeping. In Sri Lanka, the training sessions reached a total of 1,385 participants in 15 districts for leadership development, 486 participants in 8 districts for accounting, 190 participants in 3 districts for communication skill development, 238 participants in 7 districts for financial management, 60 participants in 2 districts for planning, and 70 participants in 3 districts for record keeping (De Zoysa & Inoue, 2008).

Through targeted training programs, CBO members were able to enhance their capabilities in project management, leadership, and advocacy, make informed decisions, and carry out their roles effectively. Additionally, this helped in building a solid organizational structure within CBOs, in ensuring clear roles and responsibilities. Through these programs, governance practices were also strengthened.

4.4 Early PFM Initiatives in Sri Lanka

In the 1980s, Sri Lanka's National Forest Policy statements were intentionally expanded to include social forestry. This aimed to involve forest adjacent communities in creating private woodlots and forestry farms through a specific initiative called Social Forestry. Nevertheless, during that period, no revisions were made in the forest legislation to align with this statement. Similarly, there were no structural changes within the Forest Department to establish a dedicated Social Forestry Section. Instead, social goals were tackled through separate sections, such as the National Forestry

Extension Programme and the Silviculture section. Additionally, donor-supported projects were implemented independently, without direct integration into the existing framework. The Community Forestry Project (CEP) started community forestry schemes in 1982 to engage local communities to grow, oversee, and collect fuelwood on Government owned lands (De Zoysa, 2001). This project aimed at engaging the local forest-adjacent communities and creating positive impacts on their livelihood. The Community Forestry Program (CFP) activities included fuelwood plantations, pilot woodlots, and communal woodlots (Ekanayake & Theodore, 2017).

However, it is now acknowledged that the program was built on several flawed assumptions, with the primary misconception being the existence of a fuelwood shortage. The program sought to mobilize local communities to address this perceived issue. In reference to this, as cited by Carter et al. (1994), a Deputy Chief Conservator at the time wrote that:

> "*The government couldn't plant enough fuelwood for all the rural communities on its own. So, they decided to involve the local communities in Community Forestry programs. The idea was to use the manpower and resources within the community to plant, take care of, and harvest fuelwood on government-owned lands".*

The implied message is that community forestry was viewed primarily as a way to acquire free labor, rather than fostering genuine community involvement in establishment and management of plantations. The actual concerns and perceptions of the people in the project area regarding fuelwood supply were not considered. In reality, the local communities did not perceive a significant fuelwood shortage. On the contrary, due to the clearance of vast forest areas within the expedited Mahaweli Development Programme, fuelwood was abundantly available locally throughout the 1980s (Carter et al., 1994).

Another significant obstacle that hindered the development of woodlots was the issue of insecure land tenure. Although farmers were given government land for tree planting through a lease agreement, delays in issuing official lease documents forced them to plant trees according to recommendations from Forest Department staff, without any legal guarantee of land ownership. (Carter et al., 1994). This situation was not practical, particularly considering the mistrust between the local communities and the FD.

As a follow-up to the CFP, the Government initiated the Participatory Forestry Program (PFP) in 1993 to improve community livelihoods and reduce deforestation. This Program endorsed the farmers' woodlots, home gardens, protective woodlots, and village reforestation programs (Hewage & Mallika, 2011). The PFP also incorporated a significant training element. A notable improvement in the PFP compared to its predecessor was the intentional inclusion of a "gender component."

4.5 Discussion and Conclusion

During the post-Independence (post-1948 period), community programs in Sri Lanka generally exhibited a top-down approach, where decision-making and implementation processes have primarily been driven by government agencies or external organizations, without meaningful involvement or participation of local communities. This top-down approach resulted in limited effectiveness and sustainability of such programs. Under a top-down approach, decisions regarding program objectives, activities, and resource allocation were made at higher levels of authority, often without taking into account the specific needs, aspirations, and expertise of the local communities. This lack of community input led to a disconnect between program objectives and the actual needs and priorities of the communities (Dahal & Chapagain, 2012).

Additionally, the top-down approach has overlooked the valuable knowledge and expertise that local communities possess about their own natural resources and traditional practices (Agrawal & Ostrom, 2001). By disregarding these insights, the programs failed to capitalize on the communities' potential contributions to effective and sustainable resource management (Varughese, 2001). The top-down approach also undermined the sense of ownership, empowerment, and active participation of the local communities (Luintel et al., 2008). When decisions are imposed on communities without their meaningful involvement, it can lead to a lack of motivation and commitment, hindering the long-term success and sustainability of the programs (Joshi et al., 2018).

In Sri Lanka, community forestry was initially perceived as a means to obtain free labor rather than fostering authentic community involvement in establishing and managing plantations. The primary focus was on mobilizing local communities to address perceived fuelwood shortages, with the assumption that people would willingly contribute their labor for plantation activities. This approach overlooked the importance of genuine community participation, engagement, and ownership in decision-making processes.

Furthermore, the emphasis on free labor overshadowed the need to establish a framework that ensured fair distribution of benefits, secure land tenure, and meaningful engagement of forest adjacent communities in the governance and decision-making process (Carter et al., 1994). The lack of legal assurances and delayed provision of official lease papers further reduced community participation. The long lasting of mistrust between forest adjacent communities and the FD further complicated the situation, making it challenging to establish a sense of ownership and commitment among the communities. Consequently, overall, the early approaches to community forestry in Sri Lanka fell short in fostering genuine community involvement. It failed to recognize the importance

of trust-building, empowering local communities, and addressing their specific needs and priorities.

Chapter 5: Peoples Participation—The Role of Community

5.1 Introduction

The role of community in Participatory Forest Management (PFM) is multifaceted and crucial for its effective and sustainable management. Communities must be not just passive recipients, but active participants, in shaping the sustainable management of their forest resources (Parrotta et al., 2016). They can bring useful insights in the decision-making processes with their deep connection to the environment and traditional knowledge (Thennakoon and Gamachchige, 2021). With their active involvement in decision-making and governance, community members can ensure that management plans are aligned with local priorities and needs. Livelihood activities relating to forest resources not only provide economic benefits to the community but also act as a powerful incentive for conservation and the sustainable management of forests (Matsvange et al., 2016). This chapter discusses the themes identified in the traditional knowledge and practices of forest-adjacent communities, development and implementation of PFM plans and practices of forest-adjacent communities, and livelihood enhancement and income generation of forest-adjacent communities in Sri Lanka.

Our dataset is compiled from an extensive review of previously published documents, including reports of the community organizations, government reports, and literature related to PFM in Sri Lanka. These documents served as an important source of existing knowledge, shaping the analysis. By building upon the insights provided in these publications, we aim to contribute to the ongoing discussion on the role of communities in PFM.

5.2 Traditional Knowledge and Practices of Local Communities

Traditional knowledge and practices are connected to customs, folklore, religious beliefs, land management methods, and community-based decision-making systems (Gupta & Gupta, 2008). It

is a body of knowledge that has developed gradually over many years and is deeply embedded within the communities. It encompasses practical understanding of the forest and its resources, and the spiritual and social dimensions associated with forest ecosystems (Rist et al., 2010). Such knowledge is passed down through generations and plays a crucial role in shaping community interactions with forests and their sustainable management.

In both the Knuckles and Ritigala regions, local communities generally have similar views and priorities when it comes to forest resources. They tend to agree on the importance of using the forest sustainably and conserving it for future generations. In Knuckles, this shared interest is rooted in their understanding of the forest's ecological value and its significance to their agriculture practices (Badenoch, 2009); in Ritigala, this interest is mainly based on an understanding of the forest's ecological importance and its cultural significance to the community (Wickramasinghe et al., 1996).

As the data I gathered shows, community members widely observed that the local communities have continuously been marginalized and were at risk of information loss associated with their indigenous knowledge and customs. The major themes identified in the dataset concerning traditional knowledge and practices by the local communities are shown in Table 5.1, which is then elaborated by each theme.

Table 5.1 Themes Concerning Traditional Knowledge and Practices by the Local Communities as Identified in the Dataset.

Themes	**Results**
Limited recognition and support	Marginalization and under-representation
Youth migration and urbanization	Loss of inter-generational transmission
Lack of documentation and archiving	Loss of knowledge and information

5.2.1 Limited Recognition and Support

Traditional knowledge and customs of local communities have systematically been neglected, which was accompanied by an inadequate representation in PFM (Rist et al., 2010). Community members expressed that they did not feel like their knowledge was valued and supported by the institutions. In their words:

> "*It's frustrating to see outsiders come in and implement forest management practices that don't align with our traditional methods. Our voices and expertise are ignored"* (cited in Dumbara Surakinno, 2012, p. 19); "*We've been living in harmony with these forests for centuries, but our ideas and suggestions for conservation and sustainable use are rarely taken into account"* (cited in Thakkali Samithiya, 2011, p. 5); "*We told FD officer let us choose the species to plant in our woodlot. But he insisted we should plant species government wants us to plant it*" (cited in Dumbara Surakinno, 2014, p. 11); and *"Our traditional forest management knowledge has been passed down through generations, but when we at CBO meetings it feels like nobody really values or appreciates it anymore".* (cited in Thakkali Samithiya, 2011, p. 21)

Recognizing the importance of indigenous knowledge and methods in forest management is essential for the success of PFM as traditional knowledge often holds valuable insights into the local ecosystem, and communities that have coexisted with forests for generations possess a deep understanding of plant and animal behavior, weather patterns, and sustainable resource management practices—therefore integrating this knowledge into forest management ensures a more ecologically sustainable approach (Sierra-Huelsz et al., 2020). However, the data reveals that limited recognition for traditional knowledge and practices has resulted in undervaluing their significance.

5.2.2 Youth Migration and Urbanization

Traditional knowledge and practices in local communities are passed down through generations. However, as young people migrate to urban areas, there is a risk of disconnect between the younger generation and traditional knowledge. This disconnection raises concerns about the potential loss of traditional knowledge and practices. Cited by Thakkali Samithiya (2012, p. 09), in the words of community members, "*With so many young people leaving our community for town areas, there's a real concern about who will carry forward our traditional forest management knowledge. It's a loss for both our culture and the management of our forests".*

They further expressed to Dumbara Surakinno (2010, p. 25) that,

"*It's sad to see our youth leaving our community, as they take with them valuable knowledge about our forests, without them how can we pass our knowledge. There are only a handful of youth who know the traditional practices we carry out inside the forest, and even they don't like to stay in the villages. They want to go to big towns".*

Thakkali Samithiya (2012, p. 15) noted that the community members commented,

"We need to find ways to engage and involve our youth in forest management. If they understand the value of our traditional knowledge and its relevance in the face of environmental challenges, they may be more inclined to stay and contribute to the well-being of our forests".

The physical separation resulting from youth migration to urban areas disrupts the direct inter-generational transfer of traditional knowledge, creating a challenge for its continuity (Sierra-Huelsz et al., 2020). As urban lifestyles and priorities are different from traditional ways, there is often a shifting focus away from traditional values and practices, leading to a potential decline in

the relevance and transmission of traditional knowledge (Kosoe et al., 2020). According to the data, local communities see youth migration and urbanization as significant issues impacting the transmission of knowledge, expressing deep concern over the potential loss of traditional knowledge and practices.

5.2.3 Lack of Documentation and Archiving

The lack of documentation and archiving of traditional knowledge practices in forest management creates a significant challenge to its continuity and preservation. Most traditional knowledge systems are passed down verbally from one generation to the next (Thennakoon & Gamachchige, 2021). However, local communities were increasingly concerned about the potential loss of their knowledge due to the lack of documentation and archiving efforts. They expressed that,

> *"Our traditional forest management practices have been passed down through generations, but without proper documentation, there's a risk of losing valuable knowledge. We need to ensure that our practices are recorded for future generations*" (cited in Thakkali Samithiya, 2015, p. 04) and *"I just want to ask the FD officer, can you provide us with a way to document and preserve the knowledge of our elders? The lifestyle of our younger generation is different, and they don't want to go to the forest or engage in traditional practices. So, how can we ensure the preservation of this valuable knowledge".* (cited in Dumbara Surakinno, 2014, p. 29)

5.3 Development and Implementation of Participatory Forest Management Plans and Practices

Community forest management plans and practices are important for the sustainable management of the natural resources. In Sri Lanka, The FD creates and implements community forest management plans. Formulation of forest management plans is a mandatory requirement for the

transfer of forest management rights to local communities worldwide. Community forest management plans establish a structured framework for collaboration, decision-making, and sustainable resource utilization, prioritizing the lasting well-being of both forests and the communities reliant on them (Baral et al., 2019). These plans facilitate the incorporation of local knowledge, traditional practices, and scientific expertise, empowering communities to assume responsibility for their natural resource use and its sustainability (Pujo et al., 2018).

The forest management plans enable the local communities to tailor strategies to their specific circumstances, fostering a sense of ownership and offering opportunities for livelihood creation (Baral et al., 2019). Community members have expressed widespread concerns about the challenges they face in taking part in the community forest management plan formulation efforts. The major themes and sub-themes identified in the dataset are shown in Table 5.2 followed by their elaboration in separate sub sections.

Table 5.2 Major Themes and Sub-themes Identified in the Dataset Concerning Views of Community Members on the Development and the Implementation of Community Forest Management Plans and Practices.

Major Themes	**Sub-themes**
Consultation and Engagement	• Lack of early consultation • Local involvement in management • Lack of information
Resources and Capacity	• Financial Resources • Knowledge and Skills

5.3.1 Consultation and Engagement

Early consultation among different stakeholders is essential for the successful development and execution of management plans (Baral et al., 2019). However, it appears that such consultation is lacking in Sri Lanka. In the case of the Ritigala and Knuckles communities, it was conveyed by nearly all local members that they have not been consulted by the Forest Department thus far. They elicited that,

> "*No one consulted us, we asked from the village FD officer, he said the decisions regarding the development and implementation of community forest management plans are currently being made exclusively by higher-level officials in the FD*" (cited in Dumbara Surakinno, 2012, p. 11) and *"We were asked to gather at the temple hall, where FD and government officials explained their forest plan. They mentioned that if their plan is implemented, it could bring benefits to us as well. We have a deep connection to our forests, and our livelihoods depend on them, shouldn't we be included in those discussions".* (cited in Thakkali Samithiya, 2012, p. 17)

According to the minutes of the annual reports of Dumbara Surakinno, local community members posed the above questions to a local forest education and extension officer, who acknowledged the need for early consultation with the community. Furthermore, he revealed that even regional officers, (i.e., high-ranking personnel) have limited influence in the development of these plans.

Another sub-theme that emerged from examination of the dataset is local participation in management. Many participants in the study community stated that they had either not engaged in any activities connected to the management or implementation of community forest management plans or, if they have had, the engagement had not been consistent. They noted,

"I was involved in the group that chose to participate in patrolling activities, but it only lasted a few months" (cited in Dumbara Surakinno, 2015, p. 10); *"None of our community members went for patrolling. It's possible that villagers from the other side of the forest are the ones who engage in patrolling*" (cited in Thakkali Samithiya, 2014, p.31); and "*A few of us women worked in the plant nursery of the Forest Department, but after a few months, they informed us that they would be bringing seedlings from Kandy*". (cited in Dumbara Surakinno, 2015, p. 11)

While proper awareness enables community members to make well-informed decisions, empowering them to actively participate and share their perspectives, it was found that the villagers were not aware of the particular details of plan, including restricted activities, boundary locations, and the allocation of responsibilities. Understanding the objectives, benefits, and potential risks of the management plans allows local communities to undertake ownership of the process, cultivating a sense of empowerment and responsibility. Specifically, when the government declared a portion of the Knuckles Forest as a conservation forest in 2000, the new management plan recommended the cessation of shifting cultivation activities and the establishment of the buffer zones with limited entry to the forest. However, that information was nor properly communicated to the communities,

However, during the implementation of the Strengthening Voices for Better Choices project in 2007, which selected the Knuckles area as a pilot site, an assessment survey revealed that the villagers were not aware of the management plan. As a result, during the second project committee meeting, engaging the Forest Department with the Knuckles communities regarding the management plan was proposed. Subsequently, the first Knuckles Forum took place in 2007, titled "Tripartite Meeting to Review the Management Plan for the Conservation of Knuckles Forest." The primary objective of this forum was to address the communication and information gaps; for

example, the important documents neither translated into the local language (Sinhala) nor were they presented to the local stakeholders. During the meeting in 2007, the District Forest Officer presented the Management Plan, and participants were deeply engaged in discussions to seek clarification on various points. According to the villagers, they felt they were engaged and informed. The local community members commented:

> "*We don't want to just criticize the government; we want to stay informed about what is happening and ensure that our opinions and concerns are taken into account"* (cited in Dumbara Surakinno, 2018, p.14) and *"We are not seeking permission to exploit the forest without consequence. Instead, we are looking for an opportunity to suggest specific improvements and get information to enhance our lives within the framework of the Management Plan". (*cited in Dumbara Surakinno, 2018, p. 23)

5.3.2 Resources and Capacity

The successful implementation of community forest management plans relies heavily on the availability of resources and the ability of communities to efficiently manage their natural resources. These include financial resources, technical expertise, and the skills necessary to carry out various management activities (Pujo et al., 2018). However, according to local communities, they were not satisfied with the financial resources available for the community forest management plans. Some commented:

> *"We have started growing seed nurseries for woodlots with the help of the FD, but the amount they provide us is not enough*" (cited in Thakkali Samithiya, 2010, p. 07) and "*For the people who have been involved in patrolling, it's just 10-15 days work, not regular full time work*". (cited in Dumbara Surakinno, 2013, p.19)

The local communities expressed a need for structured training programs and more effective knowledge dissemination methods to enhance their skills and understanding. In elaborating their needs, community members said,

> *"We only received a few hours of training on seedling nursery, and it was conducted by a professional from Colombo, the capital city. As a result, whenever we have questions about seedlings, we must contact the regional FD (Forest Department) officer, which is a time-consuming process. If we had received sufficient training, we might have been able to figure out what to do on our own*". (cited in Dumbara Surakinno, 2012, p. 20)

5.4 Livelihood Enhancement and Income Generation

Forests make a remarkable and extensive contribution to the overall well-being of humanity as well as their users. They play a fundamental role in alleviating rural poverty, ensuring food security, and enabling people to have sustainable and satisfactory livelihoods (Barnes et al., 2017). For example, the collection and utilization of non-timber forest products (NTFPs) such as medicinal herbs, honey, and spices are essential to the livelihoods of the local communities. In this regard, PFM has the potential to create a beneficial impact on the livelihood assets of local communities. Livelihood enhancement and income generation for local communities are vital aspects of PFM initiatives. The major themes that emerged from the dataset relating to the livelihood enhancement and income generation are shown in Table 5.3; each major theme is elaborated in separate sub-sections.

Table 5.3 Challenges Relating to the Livelihood Enhancement and Income Generation.

Themes	**Results**
Limited access to resources	Limited economic opportunities
Market access and value chains	Dependence on middlemen
Lack of technical skills and knowledge	Difficulty in adapting to changing demands,

5.4.1 Limited Access to Resources

Limited access to resources presents considerable challenges to the livelihoods of local communities engaged in PFM. Access to forest resources, including timber, NTFPs, grazing lands, and other natural assets, plays a crucial role in sustaining the economic activities and quality of life for communities (Mazur & Stakhanov, 2008). However, when access to these resources is constrained or restricted, it creates a negative effect on the livelihoods of forest adjacent communities. In expressing their concerns regarding limiting availability of forest resources to forest adjacent communities, they elicited:

> *"We are not asking for a free ticket to exploit the forest, we just want to continue our livelihoods without unfair restrictions"* (cited in Dumbara Surakinno, 2013, p. 11); *"After government restricted our access to the forest, we have been unable to collect enough honey and beeswax, resulting in a decline in our income"* (cited in Dumbara Surakinno, 2012, p. 20); *"Bin kohomba (Medicinal plant) thrive in the heart of the forest, but the Forest Department has imposed restrictions on our access to that area. Now, we face the challenge of how to harvest those plants?"* (cited in Thakkali Samithiya, 2012, p. 09); and

"As I can think of, we lose about half of our income because of these restrictions to Bin kohomba medicinal plant and honey". (cited in Thakkali Samithiya, 2012, p.17)

In Knuckles Village, loss of shifting cultivation fields created a major issue. The FD prohibited shifting cultivation in certain forest areas. Consequently, despite the efforts of government outreach programs and initial self-employment training, villagers were not able to meet their basic needs. Cash income reduction led to a decline in overall livelihood standard. According to Dumbara Surakinno, approximately 62 % of the villager's income was estimated to originate from forest-related activities. This income primarily came from cardamom cultivation (26 %), shifting cultivation (20 %), and the collection of various NTFPs (16 %). These income-generating activities declined drastically due to restrictions on accessing forest resources.

5.4.2 Market Access and Value Chains

Limited market access and weak value chains pose significant challenges to the livelihoods of local communities engaged in various economic activities. Access to markets and the existence of robust value chains are crucial for communities to generate sustainable incomes and improve their overall well-being (Manandhar & Shin, 2013). However, when communities face limitations in accessing markets or encounter weaknesses in value chains, it can have negative implications for their livelihoods (Ekanayake et al., 2022).

The villagers residing in the Dumbara Valley, where the pilot site village is situated, have long been facing challenges regarding price and market access. As land use restrictions became stricter in the 1990s, the Forest Department began offering limited extension services to the villagers. In 1997, the villagers initiated the cultivation of tomatoes with the intention of selling them at the district capital of Matale. However, they had to go through middlemen and thus could not benefit much from such extension activities. They stated that, *"The main challenge we faced*

was the issue of pricing, and we have been dependent on mudalali (middlemen)" (cited in Dumbara Surakinno, 2018, p. 13).

The tomato marketing in the Dumbara Valley experienced three separate phases. Initially, a wholesaler from Matale purchased tomatoes at very low prices, leaving farmers with minimal profits. By 2004, middlemen and trucks from the commercial center in Dambulla city became involved. These middlemen further exploited the farmers, intensifying their dependency on external actors. In response to these external middlemen, village traders emerged, but their presence worsened the farmers' situation by utilizing existing local family networks. This is because these traders were able to create a monopoly and initiated the provision for loans for agricultural inputs such as seeds, fertilizer, and pesticides. This led to a rapid spread of the debt trap, and prices remained suppressed. In explaining the situation, local producers stated,

> *"Some well-off families in the village began behaving like middlemen. Initially, they promised to protect us from the middlemen in Dambulla. However, when we attempted to sell our crops, they would claim that tomato prices were currently low in Dambulla, implying that they were doing us a favor by buying from us".* (cited in Dumbara Surakinno, 2018, p. 16)

Once this narrative became evident through the assessment surveys, the National Project Coordinator of the Strengthening Voices for Better Choices project initiated a dialog with the Merrill J. Fernando Charitable Foundation (MJF), the philanthropic division of Dilmah, which acted as the private sector stakeholder for the project. The MJF had already initiated Small Entrepreneur Programs (SEP) across the island, and they informed the villagers about the potential opportunity to receive funding to address the middlemen issue. They encouraged the villagers to submit a proposal for financial support. The villagers submitted a budget of just US$200 to cover

the initial transportation costs for delivering tomatoes to the market. Thus, the farmers received a price that was more than double what the middlemen paid, even after deducting the expenses. This allowed them to save some funds for operating the society. Members of the Dumbara Surakinno joined the lorries to the market to ensure transparency in the transactions. In addition to traditional capacity-building efforts, MJF engaged experts from Dilmah to deliver training sessions on fundamental bookkeeping and accounting principles.

In Ritigala, absence of consistent public transportation services contributed to varying levels of collection. This situation discourages the gathering of products such as gal-siyambala, which required their immediate sale. In explaining the challenges, local gatherers commented, "*We cannot store gal-siyambala even for hours as it quickly turns sour. Therefore, we must transport it to the roadside within 2-3 hours of harvesting"* (cited in Thakkali Samithiya, 2014, p.11). On the other hand, honey can be stored in containers, either for traders or until enough stock is accumulated. As a result, gatherers often prioritize spending more time collecting honey rather than gathering other products.

5.4.3 Lack of Technical Skills and Knowledge

The lack of technical skills and knowledge can significantly impact the livelihoods and development prospects of communities. When communities lack the necessary technical skills and knowledge, they encounter various challenges that hinder their economic progress (Matiku et al., 2013). In this regard, the community members elicited,

> *"The lack of technical skills and knowledge in marketing and entrepreneurship prevents us from effectively promoting and selling our locally produced goods, limiting our income*" (cited in Dumbara Surakinno, 2018, p. 17) and *"If we possessed the technical skills to preserve Gal Siyambala for a few days, we wouldn't have to discard the quantity that*

remains unsold. Instead, we could utilize it to create candies or other products". (cited in Thakkali Samithiya, 2014, p.21)

5.5 Discussion and Conclusion

For generations, forest adjacent communities have utilized traditional knowledge (TK) and practices to manage forest resources in a sustainable manner. However, with the top-down approaches from the governments, local communities were deprived from using traditional knowledge for forest management. As a result, the individuals who rely on forest resources were pushed to poverty (Nath, et al. 2016). TK is a vital element within a network of connections and relationships, underpinned by a broader framework of symbols and interpretations. It frequently stems from extensive historical experiences and profound understanding of forest ecosystems, along with the characteristics and behaviors of animal and plant species that have economic, social, cultural, and spiritual significance for communities (Rist et al., 2010).

According to our dataset, local communities expressed their concerns over the limited recognition and support from the government institutes for TK. Several authors (Yinghe and Yeo-Chang, 2021; Youn et al., 2011) have observed that the rapid social transformation and external interventions create vulnerability to TK, and the direct government interventions in local governance are the primary driver of changes in knowledge systems. According to the UN Forum on Forests, TK is transmitted from one generation to the next through cultural transfer. This process involves the communication and perpetuation of knowledge traits, behavior patterns, ideas, practices, values, and beliefs within a particular culture (Cohen, 2010).

In Sri Lanka, local communities raised concern regarding youth migration and urbanization and lack of archiving and documentation in TK. Literature (e.g., Cohen, 2010; Yinghe & Yeo-Chang, 2021) indicates that the combination of rapid social changes and increased interactions

with the outside world has contributed to significant transformations in the traditional way of life, leading to a decrease in interest and preservation of traditional knowledge, particularly among younger generations. Therefore, both schools and community members in forest-adjacent areas must be making attempts to educate the younger generation about traditional knowledge. However, these local efforts face limitations in the lack of direction and assistance from the government. Finally, it is important to understand that in the long term, the revival and preservation of traditional knowledge require not only a top-down approach but also the empowerment and autonomy of local communities.

A majority of the local communities have expressed their dissatisfaction with the absence of consultation, participation, and involvement in planning and management activities related to forest management plans. Several studies, such as those conducted by Harshaw et al. (2009) and Jeakins et al. (2006), emphasize the importance of public participation in forest management strategies, plans, and monitoring efforts. Tuler and Webler (1999) have suggested that to overcome the adverse effects of the top-down approaches to forest resource management, individuals directly impacted by forest management plans should be identified, and their concerns should be integrated into the management process.

According to Hunt and Haider (2001), it is essential to engage local communities in decision-making processes, aiming to redistribute power and to provide opportunities for the public to contribute their information, knowledge, and ideas for driving change. Harshaw et al. (2009) argue that more comprehensive participatory approaches are more likely to be effective in facilitating meaningful dialogue among participants and generating practical solutions for forest management. Incorporating public involvement in decision-making and execution offers several benefits, including increased acceptance of decisions by the public, better connections between

management agencies and the public, and fewer disputes related to resource management (Baral et al., 2019).

Improving livelihoods and generating income for local communities are essential components of PFM initiatives. Local communities identified limited access to resources as a challenge to the livelihoods of local communities engaged in PFM. When communities have limited access to forest resources, it can impede their capacity to maintain their livelihoods and generate income. Access to forest resources, such as timber, NTFPs, and grazing land, plays an essential part in supporting various livelihood activities, including agriculture, food gathering, handicraft production, and small-scale businesses (Manandhar & Shin, 2013). When access to these resources is restricted or controlled, it can result in substantial losses of income and reduced opportunities for economic growth within and around the communities.

Additionally, limited access to resources can lead to increased competition and conflicts among community members, as they fight for the limited available resources (Ming'ate et al., 2014). This can further worsen the challenges faced by the local communities in maintaining sustainable livelihoods. Therefore, ensuring equitable access to forest resources and promoting inclusive participation in CFM initiatives is vital in sustaining the well-being of local communities (Barnes et al., 2017). It involves empowering communities with the necessary rights and opportunities to utilize and manage forest resources sustainably, enabling them to improve their economic well-being and enhance their overall quality of life (Baral et al., 2019).

It was further observed that, in Sri Lanka, the lack of technical skills and knowledge among local communities engaged in PFM initiatives have had significant implications for their livelihoods. Insufficient expertise resulted in low productivity levels, as community members struggled with effective forest and land management practices and sustainable harvesting

techniques (Pujo et al., 2018). These led to reduced yields and lower-quality forest products, limiting income-generating opportunities for the communities (Ming'ate et al., 2014).

Moreover, without the necessary technical skills, communities face numerous challenges in processing, value addition, and marketing of their products (Ekanayake et al., 2022). Such limitations restricted their ability to access higher-value markets and capture better prices for their goods (Manandhar & Shin, 2013). Therefore, investing in capacity building and providing training programs that enhance technical skills and knowledge can empower local communities to improve their productivity, product quality, and market competitiveness, ultimately leading to enhanced livelihoods and sustainable economic growth.

Chapter 6: Enhancing Participatory Forest Management in Sri Lanka—A Possible Path Forward

6.1 Introduction

In Sri Lanka, a country blessed with rich biodiversity and significant forest cover, Participatory Forest Management (PFM) has emerged as a promising framework for fostering community engagement, addressing deforestation, and ensuring the long-term well-being of forests (Gunatilake, 1995). To enhance the effectiveness of PFM in Sri Lanka it is vital to strengthen the policy and legal frameworks related to PFM while empowering local communities (De Zoysa & Inoue, 2008). A successful PFM requires a genuine commitment to the inclusion of local communities and other stakeholders in decision-making, transparent and accountable governance, and a focus on community and tenure rights (Luintel et al., 2008). Considering a full implementation of PFM and according to the data obtained through my documents and literature review, this chapter highlights three themes identified in relation to enhancing PFM: 1) strengthening policy and legal frameworks; 2) collaborative governance and stakeholder coordination; and 3) community engagement and empowerment, and community rights and tenure security in Sri Lanka.

6.2 Strengthening Policy and Legal Frameworks

Strengthening policy and legal frameworks is essential to ensure the long-term protection and sustainable management of the country's forests (Rashida et al., 2013). The major themes identified in the dataset concerning strengthening policy and legal frameworks are shown in Table 6.1 which are then elaborated by each sub-theme that emerged.

Table 6.1 Themes Concerning Strengthening Policy and Legal Frameworks in the Dataset.

Themes	**Sub-themes**
Institutional arrangements and coordination	• Centralized decision-making • Institutional inefficiencies • Coordination and collaboration
Monitoring, reporting, and learning	• Reporting and monitoring • Adaptive management and learning

6.2.1 Institutional Arrangements and Coordination

Effective governance structures and well-defined institutional frameworks are essential for ensuring the engaged participation of diverse stakeholders in decision-making and the oversight of forest resources (Dahal & Chapagain, 2012). The 2005 Commonwealth Forestry Conference in Sri Lanka acknowledged that traditional top-down and centralized approaches to forest governance in many developing nations frequently fell short in achieving both social justice and sustainable forest management (De Zoysa, 2001). There was a call for new institutional arrangements to address these issues.

At present, Sri Lanka is divided into nine provinces, each governed by a Provincial Council, consisting of 25 districts. However, the Forest Department remains centralized and hierarchical, operating under the authority of the Central Government (De Zoysa & Inoue, 2016). Even though land management has been transferred to provincial and local authorities, the central government and its various agencies retain power and control over forest land management. Bandaratillake (2002), the head of the Forest Department (FD), acknowledged that the

government's exclusive control over most of the forest land (over 98%) has negative consequences for PFM and the equitable distribution of benefits among local communities.

Because of this centralized approach, major decisions regarding forest management policies, regulations, and resource allocation are primarily made by the central government. This centralized decision-making approach restricts the participation of forest adjacent communities and other stakeholders. A community member explains*, "Someone from Colombo (capital city in Sri Lanka) is making the rules and the regulations, why can't they come and see how we live"* (cited in Dumbara Surakinno, 2017, p. 23).

Another community member indicated,*"When we make suggestions or ask questions at the CBO meeting, the only answer the FD officer gives is, I can't do much. I will contact Colombo and ask them"* (cited in Thakkali Samithiya, 2015, p. 14).

In the context of Sri Lankan bureaucracy, the customary practice is that the validity and suitability of "message transfer" are upheld through feedback received from individuals holding higher positions. This means that information is considered credible only if it originates from someone of higher status (Carter et al., 1994). Typically, officers at the decision-making level do not make an effort to gather feedback from local FD officers in the field.

The FD operates within a hierarchical structure, with a clear hierarchical structure from the top level officials down to field-level staff. This structure emphasizes top-down communication, where directions, policies, and guidelines are passed down from higher authorities to lower-level staff for implementation (Wickramasinghe, 1997). Under this centralized hierarchy, local offices of the FD have limited autonomy and decision-making power. Community members alleged that,

"*When we report illegal logging, it takes a long time for actions to be taken because the final decision has to come from higher authorities*" (cited in Dumbara Surakinno, 2016, p. 19) and *"When there is problem, FD officer always have to get in touch with higher-level officers, and we have to wait until that happens".* (cited in Thakkali Samithiya, 2015, p. 24)

Moreover, according to the minutes of the annual reports of Dumbara Surakinno, the local forest education and extension officer acknowledged that even as regional officers, they have limited influence in the decision-making and planning.

At the meantime, FD staff often perceive themselves as superior to village people, and this perception is reinforced by the deferential treatment they receive in their interactions (Dissanayake, 2010). The department's attitude toward village people is typically paternalistic, viewing them as individuals who need to be controlled and taught the importance of forests (Hewage & Mallika, 2011). Villagers are often regarded as potential lawbreakers, and the department may resort to using force if necessary to prevent them from destroying the forest (De Zoysa & Inoue, 2008).

Another sub-theme identified is the prevalence of institutional inefficiencies in forest management practices. As an example, inadequate species selection, substandard seeds, unsuitable planting techniques, and insufficient knowledge for deteriorated lands, inadequate care and management, and insufficient protection of trees in the initial stages after planting have been identified as the primary reasons for the low productivity of forests in Sri Lanka (De Zoysa, 2001). The Forest Department has often chosen to plant pine trees in degraded high land forest lands as part of community forestry programs, mainly considering only their silvicultural adaptability.

However, this choice has not benefitted the communities significantly. They have experienced the loss of previously used grazing land, while the planted tree species have provided limited benefits, primarily as a source of fuelwood. The environmental impact of pine trees has been seen as detrimental (Carter et al., 1994). (De Zoysa, 2001) pointed out that operational inefficiencies in government bodies, specifically delays in administrative actions, significant operational costs, fund mismanagement, and lack of accountability, contribute to the increased costs of growing forest trees for energy in the community forestry regime.

Another sub-theme identified is the need for close coordination and collaboration among the concerned government departments. Ensuring effective collaboration between various government organizations participated in forest management is essential. This includes coordination between the Forest Department, Environment Ministry, Department of Forest Conservation, and other relevant ministries and departments. As coordinated efforts help align policies, share information, and promote synergies in implementing forest management strategies, close coordination among the government departments is required.

According to the FD, they, along with the Department of Forest Conservation, form task forces to address issues such as forest protection and conservation. They collaborate to develop strategies for combating illegal logging, encroachment, and poaching, ensuring the incorporating of forest adjacent communities in safeguarding forest resources (Wickramasinghe, 1997). The Forest Department and Department of Agriculture share valuable information. They provide guidance on sustainable forest management practices, tree species selection, agroforestry techniques, and capacity building to enhance community skills and knowledge (De Zoysa & Inoue, 2008).

6.2.2 Monitoring, Reporting, and Learning

Monitoring, reporting, and assessment are vital elements of PFM programs, playing a multifaceted role in ensuring the success and sustainability of such initiatives (Fernandez-Gimenez et al., 2008). Through these processes, PFM programs maintain transparency and accountability by holding all stakeholders responsible for their roles in forest management (Ojha et al., 2003). One of the sub-themes identified under this is reporting and monitoring. The Forest Department publish forest condition reports on forest conditions, management activities, and resource allocation in specific regions in Sri Lanka. Some of these reports are available to the public, providing them with insights into the state of the forests and how they are being managed. However, in Sri Lanka the majority of these reports are published in English and the English literacy is about 20%–25% among Sri Lanka's population above 15 years of age (Institute of Policy Studies, 2018). In this regard, Colchester et al. (2004) stated that using language understood by the locals is pivotal in community forest management. Therefore, it is evident that there is a language barrier problem related to having access to most of these reports.

Wulandari and Inoue (2018) mentioned that having proper documentation creates transparency and accountability within the community, offering a clear record of decisions, actions, and resource utilization. The community-based organizations—Dumbara Surakinno in Knuckles Forest Range and Thakkali Samithiya in Ritigala—document their activities on tree planting and nursery management, as well as issues and conflicts with the FD and the local authorities, thus demonstrating their commitment to forest management and their accountability to the local community. They document minutes for their monthly committee meetings and bi-annual assemblies. The records are documented in Sinhala language and these two organizations have documents dated back to about a decade.

Another sub-theme emerged from examination of the dataset is adaptive management and learning. Through assessments, it helps to identify gaps, strengths and weaknesses, and opportunities in current policy and legal frameworks (Fernandez-Gimenez et al., 2008). It guarantees that various viewpoints and expertise are included from a broad array of stakeholders, such as government bodies, local communities, non-governmental organizations, and research institutions.

Presently, the Government of Sri Lanka is planning to introduce a new forest policy in 2025 aimed at sustainable management and conservation of its forest resources. This policy is part of a broader initiative to transition toward a green economy and address climate change challenges. The upcoming policy is expected to focus on sustainable forest management, conservation of natural forests, reforestation, and enhancing the benefits for local communities (Climate Change Secretariat et al., 2016). This initiative aligns with the country's long-term goal of achieving a green economy by 2050, significantly lowering carbon emissions and boosting the adoption of renewable energy sources. To support these initiatives, the Government plans to introduce a new Climate Change Act and an updated Environment Act, replacing outdated legislation from the early 1980s (Climate Change Secretariat et al., 2016). These reforms will establish a more robust legal framework for forest management and environmental protection.

6.3 Collaborative Governance and Stakeholder Coordination

Collaborative governance and stakeholder coordination aims at the active involvement of a diverse set of stakeholders such as local communities, government bodies, non-governmental organizations, and private sector entities (Petheram et al., 2004). This ensures that PFM includes a different set of perspectives, expertise, and interests into decision-making processes, planning, and implementing forest management practices, resulting in comprehensive and sustainable forest

management (Tamara et al., 2021). Table 6.2 is structured around two themes, each with a brief explanation provided. Detailed descriptions of the themes follow the table.

Table 6.2 Themes Concerning Collaborative Governance and Stakeholder Coordination in the Dataset.

Theme	**Explanation**
Multi-stakeholder platforms	Platform establishment for governance and coordination.
Conflict resolution	Learning from the conflicts and timely response.

6.3.1 Multi-stakeholder Platforms

To address the problems related to the forests, collaboration among governments, civil society, and the private sector is necessary. This collaborative approach requires working across various levels, including local, regional, and national levels, as decisions made at one level can have consequences for stakeholders at different levels (Joshi et al., 2018).

In the Knuckles region, IUCN initiated the Strengthening Voices for Better Choices Project as an approach to forest governance. The initial vision of the National Project Coordinator, who oversees the planning and execution of the Sri Lankan segment of the Governance Project, encompassed a two-fold strategy: (a) establishing a local platform for stakeholders to engage in dialogues about addressing issues arising from the conservation of forests, and (b) creating a national platform where a diverse group of stakeholders would extract insights from the pilot site and utilize them to influence policy decisions (Badenoch, 2009).

In June 2006, a Project Steering Committee was established to facilitate a bi-directional exchange of information to serve as a forum where data and field experiences are presented to its members. The discussions within the committee thus produced ideas and recommendations for the project. The committee, chaired by the Conservator General of Forests, includes representatives from diverse sectors such as the private sector, academic institutions, local government, non-governmental organizations (NGOs), and other pertinent agencies. (Badenoch, 2009).

According to the records of Dumbara Surakinno, the inaugural step at the pilot site involved the establishment of the project office, which was initiated in May 2006. The National Project Coordinator recognized from the outset that the project's success depended on its strong connection with the local communities in the Knuckles region. Even prior to the commencement of project activities, villagers expressed their gratitude for the commitment demonstrated by the project through the setting up of the local office. The presence of the project office served as more than just a symbol and it acted as an important hub through which people, information, and ideas continually circulate, fostering a dynamic exchange of resources and knowledge (Badenoch, 2009).

6.3.2 Conflict Resolution

As various stakeholders, including local communities, government agencies, and NGOs, work together to manage forest resources, conflicts may arise due to differing interests, priorities, or historical grievances (Schusser et al., 2015). In Knuckles, skepticism about the project existed within the local community. Furthermore, the decision to collaborate with the Dumbara Surakinno raised concerns because it was widely perceived as closely aligned with the Forest Department. Within the Project Steering Committee, the provision of transparent and trustworthy information

regarding livelihoods contributed to the development of a shared comprehension of the underlying issue between the government and the local communities.

The National Project Coordinator managed to convey the project's goals, with a particular emphasis on its governance aspects and the aim of assisting villagers in effectively communicating their concerns to the government. Following an initial intense debate, the dialogue continued for three days, allowing for a thorough exchange of ideas and perspectives. The Project Coordinator successfully earned the trust and confidence of the younger generation within the community.

According to Dumbara Surakinno's records, the Village Government Officer (Grama Sewaka), who were not extensively consulted during the project's development, conveyed dissatisfaction with the project's direction. During the assessment survey activities, the role of the local government had not emerged as a major issue. It was widely believed that the he was satisfied with his role and not particularly focused on the project's activities. Furthermore, he had doubts about the project's connection with the FD and remained unsure about its objectives.

After identifying these issues, a meeting was arranged between Dumbara Surakinno and the Village Government Officer, facilitated by the National Project Coordinator. During the meeting, he expressed two primary concerns. First, he pointed out that he had not approved the project or the resumption of community organizations activities. Second, he stressed that the villagers had neither been notified about nor provided with consent for these activities. The meeting acknowledged these concerns, and the younger members of the Dumbara Surakinno had already been advised to show restraint.

He proposed that the organization's membership be restructured through an election process. The National Project Coordinator, considering that they were already halfway through the

year and had been collaborating, suggested reappointing the current members and conducting elections in the new year. This proposal received unanimous agreement, effectively reversing a potential conflict situation, and strengthening confidence among the groups involved.

6.4 Community Engagement and Empowerment

Forest communities are recognized as pivotal stakeholders in protection forest management, primarily because their livelihoods are intricately linked to the well-being and preservation of these forested areas (Larson et al., 2010). The sustainability of their lives is connected to the conservation and responsible management of protection forests (Peras et al., 2015). Therefore, it is essential to empower them with knowledge and skills related to forest management. Two themes were identified from the dataset (Table 6.3) below.

Table 6.3 Themes Concerning Community Engagement and Empowerment in the Dataset.

Themes	**Explanation**
Capacity building and training	Creating awareness and providing required training to enhance the skills.
Livelihood improvement	Ensuring local communities have sustainable livelihood practices.

6.4.1 Capacity Building and Training

Capacity building and training empower local communities with the knowledge and skills needed to effectively oversee and safeguard their forest resources (Wulandari & Inoue, 2018). Through targeted capacity-building programs, community members gain a comprehensive understanding of sustainable forestry practices, legal obligations, conflict resolution strategies, and the

importance of biodiversity conservation (Enukwa et al., 2022). Training modules focusing on entrepreneurship and livelihood development enable communities to explore sustainable income-generating activities, ensuring the long-term viability of their forest management endeavors (Santika et al., 2019).

In Sri Lanka, members of community organizations, with more than 50% being female, have received training in leadership, accounting, and communication skills and these capacity-building programs are expected to bring significant benefits to local communities (De Zoysa & Inoue, 2008). In total, 61 training sessions on "Leadership Development" were carried out, involving 1,385 participants across 15 divisions. Furthermore, 23 training programs on "Accounting" were successfully conducted in 8 divisions, with 486 participants (Bandaratillake et al., 2014). Additionally, 10 training programs focusing on "Communication Skill Development" took place in three divisions, benefiting 190 participants; 11 training sessions on "Financial Management" were held in seven divisions, engaging 238 participants; 3 training programs on "Planning" were organized in two divisions, involving 60 participants; and finally, 10 training programs on "Record Keeping" were carried out in three divisions, with the participation of 70 individuals (Bandaratillake et al., 2014).

In Knuckles, young individuals played a pivotal role in carrying out assessment surveys under the initiative of Dumbara Surakinno. These survey activities were instrumental in introducing the project's objectives and principles to a group of young villagers. The involvement of these young individuals in conducting a substantial portion of the surveys significantly improved both the quality and quantity of the information collected. Additionally, their participation ensured that most villagers received explanations about the project from their own community members. This effort marked the first step in the revival of Dumbara Surakinno,

starting with addressing the core issues identified by the villagers themselves. Importantly, the proactive role of the young participants in the assessment activities helped in identifying the individuals who would make up the new leadership of the community organization.

6.4.2 Livelihood Improvement

The connections between forests and the livelihoods of community members vary significantly, depending on their individual needs and interests (Barnes et al., 2017). Community forestry initiatives aim to reduce poverty by ensuring access to resources for local communities, as it helps to expand the availability of diverse resources and create opportunities for income-generating activities (Manandhar & Shin, 2013). In Sri Lanka, training programs encompassing a wide range of skills and activities were conducted to benefit a diverse group of participants. For instance, "Livestock and Poultry Management" training was provided in 58 sessions, benefiting 887 participants across 14 districts; "Bee Keeping," was offered 40 times and engaged 649 participants from eight divisions; "Agriculture" training programs, totaling 45, were made available to 1,150 participants across 14 divisions; "Food Processing" training, in 42 sessions, catered to 750 participants in 11 divisions; "Nursery Management" saw 17 training sessions conducted for 326 individuals across ten divisions; "Mushroom Cultivation" was covered in 20 training programs, with 386 participants; and 25 training programs focusing on "Tailoring" were completed, involving 400 participants (Bandaratillake et al., 2014).

It is recognized that the presence of Dilmah in the Knuckles region has played a pivotal role in empowering local communities within the existing market framework. Dilmah has extended support to individual entrepreneurs, thereby diversifying opportunities for enhancing their livelihoods. To guarantee the creation of ecologically sensitive alternative income sources, Sustainable Environment and Poverty (SEP) funds were channeled through the Governance

Project. The concept received a warm welcome from the villagers, and the Dilmah MJF Foundation collaborated with IUCN to establish the criteria for granting SEP funds (Badenoch, 2009). The first call for grant proposals was initiated, resulting in the submission of 81 proposals and with some assistance from the Project Assistant in the proposal-writing process, 41 proposals, totaling approximately US$13,600, were selected for funding (Badenoch, 2009). These proposals encompassed a range of ideas, including tomato-box production, the acquisition of hand tractors to enhance rice production, and the local production of clothing using sewing machines.

The Governance Project played a key role in assisting the development of the "Conservation of Knuckles through Informed Eco-Tourism" project in collaboration with the Forest Department (Badenoch, 2009). This proposal constituted materials from the original 2001 Knuckles Eco-Tourism Plan, facilitating its approval by the FD. As part of the project, the Dumbara Surakinno established an information center and began collecting data on tourist arrivals in the Knuckles region, which was subsequently shared with the Forest Department. Simultaneously, the FD started initial steps to provide the Dumbara Surakinno organization with separate agreements, enabling them to set up and operate food service and supply shops for tourists. This initiative aimed to enhance the involvement of local communities in the ecotourism sector.

6.5 Community Rights and Tenure Security

The strengthening of community rights and tenure security is a critical component in the management of community forest management plans within the context of PFM in Sri Lanka. Recognizing the significance of local communities' rights to access and control forest resources, securing tenure rights becomes essential for empowering communities and fostering sustainable forest management practices (Luintel et al., 2008).

Customary tenure refers to land and resource rights that are established and maintained by the community itself, rather than by the state or state law (Bradley, et al., 2016). In Sri Lanka, customary tenure rights have been relatively weak and have faced erosion over time. The Waste Land Act of 1887 during British rule, as well as subsequent amendments to the Fauna and Flora Protection Ordinance, have contributed to the weakening of customary tenure rights (Bradley, et al., 2016). The Waste Land Ordinance allowed the British colonial government to classify lands not under private ownership as "waste lands". This classification often included lands traditionally used by local communities for agriculture, grazing, and gathering of forest resources—though once classified as waste lands, these areas could be subject to state control and alienation (De Zoysa & Inoue, 2008).

The Waste Land Ordinance effectively transferred ownership of these lands to the colonial state, stripping local communities of their customary land rights. The process of declaring waste lands often led to the enclosure of common lands, restricting access for local communities (De Zoysa, 2001). This enclosure resulted in the displacement of indigenous and local populations who relied on these lands for their livelihoods (Ekanayake & Theodore, 2017). Subsequent amendments to the Fauna and Flora Protection Ordinance further strengthened the state's control over forested areas. These amendments restricted access to forests, and imposed regulations on activities like logging and hunting, impacting the customary rights of communities that depended on forest resources (Wickramasinghe, 1997). The colonial government often used the land acquired through these ordinances for commercial purposes, such as establishing plantations of crops like tea, rubber, and coffee. This led to further dispossession of local communities and the conversion of their traditional lands for economic gain and the impacts of these laws persisted even after Sri Lanka gained independence in 1948 (De Zoysa & Inoue, 2008). The state continued to exercise

control over large tracts of land and forests, often at the expense of customary land users (Hewage & Mallika, 2011).

However, some efforts have been made to improve land tenure security through land title registration and documentation. The government has encouraged the registration of land to provide legal recognition and protection of property rights (Bradley, et al., 2016). In the past, involuntary displacement due to development projects, conflict, and land acquisition has been a significant issue in Sri Lanka, affecting the land tenure security (Bradley, et al., 2016). To address this issue, the country established legal frameworks such as the Land Acquisition Act, which provides guidelines for land acquisition and ensures compensation for affected individuals; compensation packages and resettlement programs are implemented to mitigate the adverse impacts on livelihoods and living conditions (Bradley, et al., 2016).

Previously, a licensing system was utilized to identify land parcels under customary use, but this system has since been terminated. In some cases, collective land management based on traditional norms still occurs within forest reserves in Sri Lanka. For instance, in isolated regions, communities oversee water resources for filling tanks, and restricted grazing of livestock might be allowed in certain state forest areas (De Zoysa & Inoue., 2008). However, customary access and use rights are not officially recognized through legal documents or arrangements. Currently, the government tends to overlook these practices without providing formal recognition.

6.6 Discussion and Conclusion

Generally, PFM can be considered as a decentralized form of forest governance (Hajjar et al., 2012). Decentralized management improves equity, efficiency, and resource management while increasing natural resources quality (Sahide et al., 2016). It has been promoted as a means to promote sustainable forest utilization, secure rights to ancestral lands and resources, and mitigate

rural poverty (Bhattacharya & Basnyat, 2005). Efficient decentralization strategies enhance the capabilities of local communities, create multiple mechanisms for accountability, and establish local government associations, creating greater interaction and responsiveness. However, according to many case studies, communities have been granted statutory rights, but these rights do not always translate into practical benefits (Agrawal & Ostrom, 2001; Khanal, 1970; and Larson et al., 2010). Communities often struggle to realize the advantages associated with these rights. Central governments also frequently impede the decentralization process and maintain control over resource management (Hajjar et al., 2012).

Similarly, it was observed in Sri Lanka that the central government primarily dictates crucial decisions concerning forest management policies, regulations, and resource distribution. This centralized decision-making model restricts the participation of local communities and other interested parties. The centralized approach adopted by the State of Sri Lanka to manage forests is not acceptable with forest-adjacent communities' view of access rights and forest ownership (Ekanayake & Theodore 2017). This approach also has reduced the roles of local forest-adjacent communities, neglected traditional knowledge of forest management practices, and considered forest-adjacent communities as people who destroy the forest resources (Chokkalingam & Vanniarachchy, 2011).

According to our dataset, it was evident that institutional inefficiencies, and coordination and collaboration between government agencies, are major issues regarding PFM in Sri Lanka. Institutional inefficiencies can pose significant challenges to the effective management of forest resources and the realization of its socio-economic and environmental benefits. Hajjar et al. (2012) argued that institutional inefficiencies such as selecting the wrong species for reforestation, and

insufficient care for seedlings in the beginning stages of the reforestation, can negatively impact the growth of the trees.

It was further observed that, in Sri Lanka, monitoring, assessments, and learning must be improved. For a successful completion of PFM, comprehensive documentation is needed to store valuable information, capturing the various facts of forest management, from planning and implementation to monitoring and assessment (Ojha et al., 2003). A well-maintained documentation is crucial for building credibility and fostering collaboration with other stakeholders, and can enhance their adaptive capacity, ability to learn from past experiences, and contribute to the broader body of knowledge on sustainable forest management.

Collaborative governance and stakeholder coordination provide a structured and inclusive platform for addressing conflicts. They offer a space for open dialogue, negotiation, and consensus-building, where conflicting parties can voice their concerns and work toward mutually acceptable solutions (Schusser et al., 2015). By actively involving all stakeholders in the decision-making process and providing a mechanism for resolving disputes, collaborative governance and stakeholder coordination contribute to more harmonious and effective forest management, thereby reducing the potential for conflicts that could disrupt sustainable resource use and conservation efforts (Poudyal et al., 2020).

The efforts in capacity building and training serve as a key component in the success of the PFM. Collaboration between government agencies and various stakeholders further strengthens the success of PFM (Uddin et al., 2019), creating a holistic and community-driven approach to safeguarding Sri Lanka's invaluable forest ecosystems.

Several studies have explored the impacts of community forestry programs on poverty and livelihoods by examining the positive effects on livelihoods through the enhancements in natural, social, human, and financial capital (Barnes et al., 2017). The establishment of community property rights has led to increased availability of forest land and products (natural capital), coupled with improvements in the condition of forest resources (Manandhar & Shin, 2013). Participation in community forest groups and decision-making has contributed to the growth of social capital, fostering social inclusion and representation, particularly among disadvantaged groups (Dhruba Bijaya et al., 2016). Community forest groups and their members have gained access to financial assets through group funds (financial capital) (Ming'ate et al., 2014). Forest-dependent households have experienced improved access to basic services like education and information, often indicating enhanced political capital as community forest groups elevate their status and influence decision-makers (Ekanayake et al., 2022). There is evidence of physical infrastructure development at the community level and an increased sense of community awareness and ownership in policymaking processes and community development activities (Enukwa et al., 2022).

Finally, according to our dataset, Sri Lanka's legal framework for land tenure has faced challenges, including issues related to registration and documentation. Bradley, et al. (2016) asserted that customary land tenure arrangements are rarely documented in formal legal records or land titles. Instead, they rely on oral traditions, community consensus, and shared knowledge of land boundaries and usage patterns (Grundy, 2010). Land allocation and access in customary systems are typically based on community needs, family ties, and historical connections to the land, and these systems prioritize the equitable distribution of resources within the community (Larson et al., 2010). Customary systems often have mechanisms for resolving land-related

conflicts and disputes as elders or community leaders play a role in mediating and resolving disagreements among community members (Ginsburg & Keene, 2020). Therefore, it is essential to consider these aspects when developing new strategies for land tenure security.

Chapter 7: Conclusions

7.1 Introduction

While Participatory Forest Management (PFM) is acknowledged worldwide as a promising strategy for sustainable forest use and conservation, inadequately planned or executed PFM initiatives can lead to conflicts and environmental injustices. When community participation is not genuine or when there is a lack of effective collaboration and communication, tensions may arise among different stakeholders (De Zoysa, 2001). This can result in disputes over resource access and utilization, negatively impacting the local communities that depent on forest resources for their sustenance (Mustalahti & Lund, 2009). Sri Lanka implemented PFM as an approach to address various environmental and socio-economic challenges in late 1980s and early 1990s. The idea of PFM in Sri Lanka is a complex and developing phenomenon. There are commendable efforts by the government and various stakeholders to involve forest adjacent communities in the decision-making procedures regarding forest management (De Zoysa, 2001). However, there are significant challenges, such as rigid structure and the centralized nature of forest management and decision-making institutions (Hewage & Mallika, 2011), land tenure insecurities (Lanka & Programme, 2016), and mistrust of the communities (Wickramasinghe, 1997).

The purpose of the study was to examine whether PFM initiatives have been successfully integrated and maintained, and to determine if these efforts are achieving their intended goals of sustainable forest management and community empowerment—or if they remain largely theoretical and unattained. The specific objectives were to: i) examine the genesis and the evolvement of PFM in Sri Lanka; ii) assess the role of community in PFM in Sri Lanka; and iii) identify the ways and means of improving PFM in Sri Lanka. This research was a secondary data-based study, and the document review was the primary method of secondary data collection,

followed by a qualitative thematic analysis of the data. In this chapter, I formulate the major conclusions concerning the objectives of my research; they are systematically presented below.

7.2 Policy Failure of Post-colonial Government and the Development of Participatory Forest Management in Sri Lanka

When assessing the origin and development of PFM in Sri Lanka, it is evident that large-scale deforestation in the 1970s, alleged fuel wood shortage, and international pressure influenced the emergence of the PFM concept. According to Colchester et al. (2004), in the 1970s and 1980s, community-based forestry gained momentum worldwide as a response to the identified limitations of the forest industry development model in fostering socio-economic progress, and this shift was also driven by the increasing rates of deforestation and degradation of forest lands in developing nations. There was a widespread recognition that governmental initiatives alone were insufficient to tackle the deforestation and therefore the involvement of the public in government-led reforestation programs was introduced (Lynch & Talbott, 1995).

Initially, enhancing rural livelihoods was considered a secondary objective in community-based forestry; however, with time, it evolved into a main goal, forming the basis for sustained assistance from both national governments and the international community (Colchester et al., 2004). However, in Sri Lanka the conservation aspects still tend to be the priority.

In this context, Poffenberger (1999) noted that in numerous developing nations, Community-Based Forestry (CBF) initiatives initially began with external agencies providing crucial resources such as technical expertise and funding, and later incorporated into national development programs endorsed by governmental institutions. Sri Lanka followed the same sequence.

However, according to Schusser et al. (2015), there is a cautionary note that Community-Based Forest Management (CBFM) might engage individuals in forest management solely as passive contributors. In such instances, it is suggested that this approach primarily serves the interests of governments, aiming to consolidate control over remote rural areas rather than responding to communities' demands for rights (Peras et al., 2015). Similarly, in Sri Lanka, the initial perception of community forestry was more about acquiring free labor than genuinely encouraging community engagement in the establishment and management of plantations.

In summary, although PFM was originally designed to combat forest degradation and deforestation, it has since evolved to aim at a broader range of conservation, social, economic, and political goals. Consequently, it is important to consider these diverse objectives, rather than focusing solely on forest conservation.

7.3 Community Involvement as a Result of Improved Understanding of the Significance of People's Participation

When evaluating the role of the community in PFM in Sri Lanka, it was evident that traditional knowledge and the practices of the local communities were marginalized and underrepresented. This exclusion had several consequences, impacting not only the preservation of traditional knowledge but also negatively affecting the effectiveness of resource management strategies. The oversight of traditional knowledge diminished the holistic understanding of ecosystems, leading to flawed decision-making processes (Parrotta et al., 2016). Furthermore, the underrepresentation of local practices prevents the potential integration of sustainable approaches, contributing to a gap between community expertise and formal management initiatives (Rist et al., 2010). Addressing this disparity is critical to a more inclusive and effective framework for resource management and conservation (Kim et al., 2017).

The research results indicate that local communities felt that they were left out, especially when the management plans were developing. They lacked awareness of the specific details of the management plan, which includes information about prohibited activities, boundary locations, and the allocation of responsibilities. According to Baral et al. (2019), it is crucial for communities to be well-informed about the details of the management plan in community forest management—for understanding the rules, regulations, and goals allows them to contribute meaningfully to the sustainable management of the community forests. Baral et al. (2019), in this regard, noted that the awareness of prohibited activities and regulations helps villagers adhere to guidelines, promoting responsible and sustainable use of forest resources and establishing a sense of accountability within the community for the preservation of the forest. Clear communication of boundaries and resource allocations helps prevent conflicts within the community. When everyone is aware of the designated areas and responsibilities, it reduces the likelihood of disputes over resource use and management decisions, as well as the likelihood that local communities will express dissatisfaction with the available financial and technical resources allocated for the implementation of community forest management plans.

The results of the study reveal that local communities had to face challenges as access to the resources were restricted. The loss of shifting cultivation fields created a negative impact on their income because it is a major income source in their livelihood. They were not compensated properly, and they expressed their dissatisfaction with this. In the meantime, the study shows that with proper funding and guidance, community-based organizations can overcome challenges such as lack of technical skills, knowledge, and market access.

7.4 Improving Participatory Forest Management in Sri Lanka: A Forward Strategy

The thesis research revealed the issue of centralized decision-making when contemplating the future of PFM in Sri Lanka. Centralized decision-making negatively affects effective participation and collaboration, as decisions may not adequately address the diverse needs, knowledge, and preferences of local communities (Bhattacharya & Basnyat, 2005). To enhance the prospects of PFM in Sri Lanka, there is a need to strike a balance that allows for local participation and autonomy in decision-making, while ensuring coordination with broader national goals and policies. This may involve decentralizing decision-making processes and fostering partnerships between local stakeholders and government entities to create a more inclusive and responsive approach to managing forest resources.

It has been recognized that governments often use decentralization as just an act to satisfy international organizations and donor agencies (Colchester et al., 2004). Therefore, when implementing decentralization, it is important to consider three main elements of decentralization: i) administrative, ii) fiscal, and iii) political dimensions (Charnley & Poe, 2007).

The thesis results also reveal that the strengthening of community rights and tenure security is an important issue for the future of the PFM in Sri Lanka. Though some efforts have been made to improve land tenure security through land title registration and documentation, there is still much more to do. When community members possess clear and secure rights to the land they manage, it fosters a sense of responsibility and encourages sustainable resource management practices, and this is crucial for the long-term health and productivity of the forests (Luintel et al., 2008). With tenure security, communities are more likely to invest time and effort in planning for the future, implementing conservation measures, and ensuring that the forest resources remain abundant for generations to come (Larson et al., 2010).

Additionally, land tenure security plays a crucial role in preventing conflicts. Disputes over land ownership and resource use can lead to internal conflicts within the community, conflicts with neighboring communities, and even disputes with external actors (Aggarwal et al., 2021). Clearly defined and secure land tenure helps in minimizing such conflicts, providing a foundation for sustainable and harmonious community forestry management (Ginsburg & Keene, 2020). Therefore, land tenure security is not just a legal formality; it is an important part for the success, sustainability, and holistic development of community forestry initiatives (Larson et al., 2010).

Finally, the thesis results also show the significance of involving and empowering local communities for the future of PFM in Sri Lanka. Various positive impacts on livelihoods resulting from community forestry have been documented, including enhancements in natural, social, human, and financial capital (Ming'ate et al., 2014). The expansion of forest land and the availability of forest products (natural capital) are attributed to community property rights, leading to an improvement in the condition of forest resources (Hajjar et al., 2012). Participation in community-based organizations (CBO) management and decision-making has increased social capital, particularly in terms of social inclusion and representation for disadvantaged groups (Mazur & Stakhanov, 2008). Moreover, CBOs and their members can have greater access to financial assets through group funds (financial capital) (Schusser et al., 2015). Meanwhile, forest-dependent households can experience heightened access to essential services such as education and information, often indicating improved political capital as CBOs gain recognition and the ability to influence decision-makers and the development of physical infrastructure at the community level, accompanied by increased community awareness and ownership of policymaking processes and community development activities (Peras et al., 2015). Therefore, it is important to improve existing CBOs by enhancing their capacity through training and education,

fostering stronger partnerships between other stakeholders, and conducting continuous monitoring and evaluation.

7.5 Limitations

My study focused on one wet zone forest-adjacent community and one dry zone forest-adjacent community in Sri Lanka. Focusing exclusively on these two factors limits the ability to generalize the research findings to other areas in Sri Lanka or to neighboring countries. However, by offering contextual details, readers can assess whether certain elements of the study might be relevant to other regions. Additionally, this research still offers valuable insights into the development of PFM, the role of communities in PFM, and future directions for shaping PFM strategies.

Only using secondary data is a cause of limitation. The original data may have been collected for a different purpose and there is a potential issue of accuracy, reliability, and completeness. Secondary data often lack the contextual details that are crucial for a comprehensive understanding of the research topic. Without a clear understanding of the conditions under which the data was collected, its applicability and relevance to the current study may be compromised. However, to verify the accuracy and reliability of the secondary data I cross-referenced it with multiple sources and combined data from multiple sources to enhance the richness of the dataset. Additionally, I tried to understand and add the context of data. This has helped to compensate for limitations in a single dataset and to provide a more holistic perspective.

7.6 Future Research

Future research on the topic of PFM in Sri Lanka holds significant potential for advancing our understanding of the dynamic relationship between community engagement and forest conservation. Investigating the socio-cultural aspects and historical contexts that shape community

perceptions and involvement in PFM initiatives could provide valuable insights into the effectiveness and challenges of such programs. Additionally, expanding the research scope to include diverse ecological and socio-economic contexts within Sri Lanka would enhance the generalizability of findings. Furthermore, a comprehensive examination of the impact of PFM on biodiversity conservation outcomes and the socio-economic well-being of local communities can shed light on the tangible benefits and potential drawbacks of these initiatives.

7.7 Concluding Comments

Based on my research results, the following planning and policy measures are suggested steps for the Government of Sri Lanka to create more successful PFM initiatives:

- Initiating and maintaining regular discussions with all parties concerned, engaged, or affected by PFM and incorporating local feedback into the management strategies. Facilitate effective communication between stakeholders by establishing easily accessible communication forums and platforms.
- Recognize power imbalances in planning and management in PFM activities and involve NGOs and the private sector.
- Facilitate collaborative knowledge exchange between stakeholders in site selection for PFM initiatives and ongoing management activities.
- Acknowledge the importance of local communities and traditional livelihoods to conservation efforts and empower them to oversee their own activities.

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