

AN ASSESSMENT OF NON-TIMBER FOREST PRODUCTS CERTIFICATION IN WESTERN
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DEDICATION PAGE

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ABSTRACT

The Kerala region of South Western Ghats has been declared a bio-diversity heritage site by the UN for its rich endemism. It is an important source of non-timber forest products (NTFPs) to indigenous communities for their livelihood and subsistence. There is also a major market for NTFPs due to the presence of the Ayurvedic (a traditional system of medicine in India) industry, valued at USD 5.5 billion annually. Market pressures and institutional inefficiencies are rendering the NTFP sector weak, with increasing concerns of bio-diversity loss and poor livelihood returns. International experiences (e.g. Latin America), recent studies on NTFP and related sectors in India and policy provisions emphasize certification of NTFP as a market strategy to meet sustainable outcomes. Thus the goal of this study is to assess the potential of implementing NTFP certification in Kerala, focusing on one of its five indigenous communities-the Kadars, categorized as a particularly vulnerable tribal group by the Government of India. Study results are discussed in the context of the ongoing implementation of the Forest Rights Act 2006. This study has 3 objectives. 1) An overall assessment of the socio-economic and political status of the Kadar respondents, their preference for NTFP certification, and under what conditions they are likely to adopt certification; 2) Evaluate the “instrumental benefit” from adopting NTFP certification by the Kadars using an economic model and identify conditions under which compliance to certification standards can occur; 3) Employ the certification framework developed by Bhattacharya et al. (2008) as a model and assess the “legitimacy” of the NTFP certification standards and the three “external contextual factors” that motivate stakeholders’ compliance to certification standards. Stakeholder reactions indicated a preference for certification. Key variables such as gender, market knowledge, private trade partnerships and income influence these preferences. Compliance assessments indicated positive outcomes provided institutional support in the form of collaborative partnerships with an emphasis on accountability are in

place. Stakeholder feedback expected to contribute “legitimacy” to the certification framework is also gathered and recommendations are provided to enhance likelihood of compliance.

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LIST OF ABBREVIATIONS

CBD	Convention of Biological Diversity
CBNRM	Community Based Natural Resource Management
FRA	Forest Rights Act
JFM	Joint Forest Management
PFM	Participatory Forest Management
MPs	Medicinal Plants
NTFP	Non Timber Forest Product
PVTG	Particularly Vulnerable Tribal Group
ST	Scheduled Tribe
VSS	Van Samrakshana Samiti (Forest Protection Council)
IR	Individual Rights
CR	Community Rights
FRC	Forest Rights Committee
TD	Tribal Department
FD	Forest Department
RD	Revenue Department
MoEF	Ministry of Environment and Forest
GOI	Government of India
FDA	Forest Development Agency
SLIMF	Small and Intensely Managed Forest

CHAPTER 1. INTRODUCTION

Abstract: This paper has attempted to explore if synergistic opportunities for NTFP livelihoods and conservation is possible for India in the context of increasing demand for these resources at the local, regional and international markets. The evolution of NTFP management at a broader scale in terms of policies and institutional arrangements, the dilemmas, challenges and complexities associated with the resource, and identification of potential strategies to overcome them are discussed. In this regard, a thorough analysis of existing, relevant literature, with examples drawn from parts of the developing world along with experiences from India has been presented. Using a specific case of the wild harvested medicinal plant sector in Kerala, certification as a potential strategy to achieve a win-win scenario is hypothesized. Important lessons gathered from studies reporting successful implementation of NTFP certification is provided along with research gaps and future directions.

Key words: NTFPs, Synergistic opportunities, Certification, Institutional arrangements, India, Kerala, Medicinal plant sector.

Introduction

Forest resources have always been an important part of subsistence as well as livelihoods for forest dwellers and rural communities. Evidently the positive outcomes in terms of livelihoods and conservation for NTFPs remain elusive (Cunningham 2011; Fagerberg et al. 2007; Gubbi and MacMillan 2008) and as remedies, new policies and institutional arrangements are being recommended (Campbell et al. 2002). However, there is increasing scepticism linked to these arrangements thus raising the question if scope for synergistic opportunities exists? Since the original discussion on this more than a decade ago by Wunder (2001), the paper attempts to re-examine and re-explore it mainly from a NTFP markets and trade perspective through review of relevant literature. This question continues to be pertinent due to increasing market demand for wild harvested NTFPs, especially medicinal plants (MP) catering to a growing alternative medicine industry (e.g. Ayurveda) with tremendous economic potential to both primary and secondary stakeholders embedded within the MP supply chain. Simultaneously harvest pressures are escalating conservation concerns as well. In this context, the paper discusses how natural resource management paradigms evolved, the corresponding institutional changes, the challenges encountered and new emerging ideas.

The discussion begins at a broader scale, looking at natural resource management and the shift in focus from timber to non-timber, change in paradigm from centralized to decentralized management, the corresponding policy changes, and systematically narrows down to discussions on the dilemmas encountered in the context of NTFPs, its socio-cultural and political dimensions, suggestions for a new “middle ground” approach (see Sills et al. 2011) to overcome failures linked with NTFPs and new strategies such as certification that can potentially incorporate the key aspects prescribed within the “middle ground” approach. The paper is largely written from an Indian context, but key lessons are also drawn from a global context where relevant. The discussion narrows down to state level, with a focus on Kerala, and the wild harvested medicinal plant sector. Certification as a strategy to improve the challenges facing the sector is hypothesized and lists suggestions or lessons learnt from previous experiences on NTFP certification from other parts of the developing world. Following conclusion, ongoing as well as future research needs are identified.

Natural resource management- Timber to Non-Timber

Historically, communities have always been using and extracting resources from the forests based on indigenous/ traditional management practices such as slash and burn agriculture, grazing, fires and sacred groves to ensure continued availability of diverse resources. Following colonization and post colonization, the states attempted to restrict the use of these resources by the communities mainly through establishment of protected areas, the argument being “humans would destabilize forest ecosystems by their unsustainable and destructive use” (Saberwal et al. 2001). This was the case with India as well as many parts of the resource rich developing world. For example, after Cameroon became a republic, all vacant lands were declared state lands (Laird et al. 2010b) and in Bolivia, poor guidance and regulations by the state lead to claiming of large tracts of forest lands by immigrant, non-indigenous groups during the rubber boom period, further marginalizing and excluding the indigenous communities (Cronkleton and Pacheco, 2010). Eventually, efforts to re-instate inclusive arrangements were pursued and succeeded by the users and their advocates (Gadgil & Guha 1992; Pimbert and Pretty 1995). Following this there was recognition of other forest products & services and ecosystem management emerged as the new paradigm (Salwasser et al. 1993), and emphasis moved from only timber to include non-timber as well.

New strategies emphasizing a participatory approach were initiated. This led to a series of scholarly work on participation in natural resource management including role of local institutions, property rights, the nature of power relations between the state and the local

institutions, between the rich and the poor resource users, the heterogeneous nature of communities and the multiple stakeholder rights over resources and corresponding challenges (see Borrini–Feyerabend and Tarnowski 2005; Ostrom 1990, 1999; Agrawal and Gibson 1999; Li 2002; Ribot, Agrawal and Larson 2006). There were corresponding shifts in policy as well.

For example, in India, the National Forest Policy was amended in 1988 (Léle et al. 2010) followed by the establishment of Joint Forest Management in the 1990s (Gadgil, 2001). Community based natural resource management (CBNRM) became the new paradigm and role of communities in resource management was recognized (Agrawal and Gibson 2001; Agrawal 2005) along with the market potential of biodiversity, capitalizing on indigenous knowledge. Later, with increasing market demand for biological resources, when issues with equity, fairness and bio-piracy became apparent (Rausser 2000), India responded by ratifying the CBD in 1992 (UN Report 1997) and the Biodiversity Act was implemented in 2002 (Enviro News, 2003 (<http://envfor.nic.in/news/>); Vasan 2005). However, even with NTFPs, priority over high value resources remained with the state (Léle et al. 2010, pp.107). More recently, in response to indigenous rights to property and access, the Forest Rights Act 2006, was implemented (MoEF, GOI) and is an ongoing activity. Similar policy changes were simultaneously happening in other parts of the world as well- partially in Indonesia post Suharto regime, in Philippines through the Certificate of Ancestral Domain (see Li 2002) and Brazil through establishment of extractive reserves (see Klüppel et al 2010).

In conjunction with these new policy trends, a number of institutional arrangements linking NTFPs, conservation and development was being experimented and reported. Salafsky and Wollenberg (2000) called it the “linked incentive mechanism” that emphasised the commercial use of forest resources not restricted to buffer zones with greater devolution of power to local users to use and manage the resources; the argument being this would not only improve income and push people out of poverty but also act as an incentive to conserve resource and use it sustainably (Nepstad and Schwartzman 1992; Durst et al. 2005 and Salafsky and Wollenberg 2000; Rangarajan and Shahabuddin 2006; Laird et al. 2010a). In this context, although cooperative market arrangements and institutions for decentralised governance were established, in practice various dilemmas were encountered.

CBNRM for Conservation and Livelihood Goals- NTFPs and Associated Dilemmas

It was the ground breaking work of Peters et al. in 1989 that originally brought NTFPs to the limelight, its role in achieving livelihood and conservation goals mainly by linking it to

markets. Salafsky and Wollenberg (2000:1435) tried to assess the effectiveness of this “linked incentive mechanism” and their study concluded that “NTFPs have weak linkages”. There are studies that have illustrated the complex nature of NTFPs, and the challenge in quantifying its true value to the local users (Godoy et al. 2000; Sheil and Wunder 2002). Even the more recent studies looking at the potential of NTFPs to meet livelihood and conservation goals indicate challenges (Shackleton et al. 2011a; Sunderland et al. 2011), raising the question why despite new incentive oriented mechanisms, there is a continued state of degradation of forests and increasing poverty? Some arguments suggest that NTFPs can support rural livelihoods only if alternative options are not available (Gubbi and MacMillan 2008) and/or when market access and basic infrastructure are missing (Sunderland et al. 2011). A study on forest resource value conducted in Sub-Saharan Africa by Lucrezia Tincani (in Shackleton et al. 2011a:74) illustrates why “incentive” based mechanisms using NTFPs fail, as non-tangible costs such as opportunity costs and transaction costs are absent from the equation. In addition, NTFPs have subsistence value, protecting communities from extreme poverty along with cultural value thus affirming the complex and multi-use values associated with NTFPs (Shiel and Wunder 2011).

Last but not the least, from a conservation perspective, continued harvesting of NTFPs, and especially on a long term basis is not feasible as it may cause depletion (Ticktin 2004) unless the scale of monitoring and check is manageable and effective, although depletion would also depend on the ecological characteristics of the NTFP species. There are evidences that show how intensive harvesting of NTFPs has an influence on biodiversity and forest cover loss as in the case of India (Gadgil and Rao 1994; Shanker et al. 1998; Shahabuddin and Prasad 2004; Arjunan et al. 2006). Also the changing lifestyle trends, with a greater demand for NTFPs that has changed the “traditional economic characterization” of NTFPs (Shanley et al. 2008c) and, due to poorly evolved co-management structures (Rai 2007) and oversimplification (Li 2002) or as Ostrom (1999) calls it “single prescription policies” has had negative impacts on conservation of these resources. These dilemmas become more complex when the socio, cultural and political contexts that these resources are embedded in are considered.

NTFPs- Its Socio-Cultural and Political Dimensions

Studies by Borrini –Feyerabend and Tarnowski 2005; Ostrom 1990,1999; Agrawal 1998; Li 2002; Ribot et al. 2006; Dove 1993 have all highlighted how socio-political constraints restrict the marginalized communities from achieving optimal returns despite various

“participatory” arrangements. Quoting Dove (1993:21) - “Forest people are impoverished by the degradation of the resources by external actors. Instead, due to their proximity to the resources they are often blamed and as they lack the political capital they find it hard to refute these charges”.

Consequently, benefits from market arrangements never trickle down to the primary harvesters, increasing pessimism manifested in the form of boom-bust cycles and poverty traps. Studies have also emphasized the socio-cultural significance of these resources (Posey 1999). As remedy, a “middle ground” approach is suggested (Sills et al. 2011) where importance on- i. The centrality of culture; ii. Role of local and regional markets; iii. Value of diversity in itself and iv. Greater inclusiveness in resource management is stressed.

NTFPs and “The Middle Ground”

Previous discussions all indicate the complexities associated with NTFPs with stakeholder consultation and decentralized management limited to rhetoric. What can be inferred from these discussions is absence of participation and a clear departure from some of the recommended conditions for “middle ground”. To begin with, the cultural importance of NTFPs is often not given enough weightage despite its significance. For example, traditional ecological knowledge (TEK) and the usefulness of combining it with scientific knowledge to develop effective management plans has been suggested (Posey 1999; Ticktin 2004). Next is the neglect shown in developing the local and regional markets where cost of entry, risk and barriers are low (Shanley et al. 2002) compared to international markets. A good example is the Ayurvedic medicine industry in Kerala, which will be discussed later in some detail. Also the importance of tapping into the diversified value of NTFPs, not only as cash source but also its subsistence value is not emphasized. Diversity is a significant quality from a socio-economic-ecological perspective where shifting from a single NTFP to a suite of species can act as a “safety net” from unexpected setbacks (Neumann and Hirsch 2000; Marshall et al. 2006). Finally, a greater inclusiveness in managing these resources is important. Local users who have been traditionally managing them must be consulted “integrating production with social arrangements” that makes access and regulations easy (Michon 2005). However, this is often missing and examples of weak integration and its repercussions are illustrated through case studies across the Western Ghats, particularly Kerala and Karnataka (Léle et al. 2010; Amruth et al. 2007)

The challenge is in identifying strategies that incorporate this “middle ground” to realize a win-win situation. One such strategy that seems to fit the bill is certification of NTFPs with some amount of success reported from countries of Latin America and Africa; successful attempts include certification of natural Chicle harvest in Mexico, the Brazil nut and Palm hearts in Bolivia and the Palm hearts in Brazil (see Shanley et al. 2008a).

Certification-Opportunities and Challenges

In the 1990s, in response to issues with over extraction of forest resources particularly timber, “sustained yield forestry” gained importance followed by the recognition of other forest products. A number of principles and guidelines have emerged over the past decade to ensure sustainable harvest and use of these forest products which came to be known as the certification guidelines with the common goals of maintaining ecological integrity; social equity and; economic viability (Pierce 2008). The three established ones are 1. Forest Stewardship Council (FSC); 2. The International Federation of Organic Agriculture Movement (IFOAM); and 3. Fair-trade Labelling Organization (FLO). Although originally intended for timber, organic products and improving trade conditions respectively, they were later extended to include NTFPs (Pierce 2008; Erwin and Mallet 2008). Certification is expected to benefit markets for value added products with a potential for niche markets. The advantage NTFPs have is the opportunity for diversified markets considering the variety of products available and tapping into existing markets as well. The challenge lies with the associated cost and with the three levels of certification possible- self; second party; and independent, third party certification, the cost increases respectively. And considering the economic and political vulnerability of the primary stakeholders, the added burden of costs of certification renders itself a challenge rather than an opportunity. Options to address this are being explored, as demonstrated by Chicle in Mexico gaining all three certification by partnering with a private company catering to green market consumers, which is a growing market segment (see Guillén 2008). Attempts to develop common principles and standards exclusively for NTFPs, that addresses its socio-economic and ecological dimensions necessary for sustainability and simplifying the certification process for ease of implementation and reduce cost for primary collectors is being explored. Simultaneously its potential is being explored in other parts of the developing world such as India.

NTFPS in India- Scope for Certification

In India, NTFPs are integral to the livelihoods as well as for subsistence use by communities near or in the forests, broadly referred to as the “forest-dwelling tribal communities” (Léle et al. 2010, pp.87) and a significant source of revenue to the state government as well (Tewari and Campbell 1995; Mitchell et al. 2003; MOEF 2001). Commercial value of NTFPs in India is currently estimated at an average of \$11 billion but NTFP trade distortions and poor marketing account for 70% average loss in returns to these communities (Choudhury 2007). Medicinal Plants (MPs) are NTFPs that are of particular importance to the rural poor, who harvest these from the wild to meet their primary health care needs as well as their livelihood needs. According to WHO, 80% of the world’s population relies on traditional medicine for health and other needs and the value of medicinal plants related trade in India is in the order of US \$5.5 billion and is growing rapidly (Aromatic and Herbal Plantations,http://business.gov.in/agriculture/aromaticherbal_plantation.php). Increasing market demand has impacted the availability and quality of these resources, as well as livelihoods.

Experts claim “certification standards can ridge the environmental, economic, and social pitfalls that have impeded the success of commercialisation efforts of NTFPs” (Wilsey and Hiderband 2010: 68). It is considered a “voluntary market tool that encourages ‘green consumerism’ by ensuring principles of sustainable forest management (SFM)” (Bhattacharya et al. 2009:1).

With this growing interest in NTFP certification, some preliminary attempts have been carried out in India. Marketing of wild honey from the Nilgiris Biosphere Range, Western Ghats India, sold with an “eco-mark”, called “PGS Wild”, based on the principles of Participatory Guarantee System (Nath 2010) drawing parallels to the Brazil nut production and quality assessment in Bolivia is an example of a successful attempt. These attempts are indeed very encouraging but how viable are these considering larger international markets that adhere to stricter quality standards and third party assessments (Ervin and Mallet 2008) remain to be explored. Such requirements may be too costly for small producers to meet unless there is a consumer demand and willingness to pay premium price for the products. Recently a fully-fledged certification framework was brought out based on participatory approach, drawing on stakeholder feedbacks from four states in India (Bhattacharya et al. 2008, 2009). However its feasibility when factoring in the local and regional markets, the existing policy and institutional arrangements which often differ across states, and

stakeholder reactions and/or preferences remains to be explored. Finally, new strategies are viewed with scepticism mainly due to weak socio-political conditions such as lack of tenure security, elite capture, insufficient monitoring capacity, poor management capacity and poor organization among users impacting effective management of these resources as previously seen in the case of India, Brazil or Cameroon. The following section briefly discusses this through a specific case from the Kerala region of the South Western Ghats in India.

NTFP challenges- A Kerala Perspective

The Kerala region of the Southern Western Ghats is rich in biodiversity with many species endemic to the region. The forest dwelling communities of this region depend on NTFP collection as a major source of livelihood; in fact 56% of their total income is from NTFPs (Thomas 1996). 120 items of NTFPs, mainly medicinal plants (MPs) are permitted to be collected from the forests by the tribal people and 96 species by tribal cooperatives. The largest consumer of the forest products is the State's Ayurvedic Industry (a form of Indian traditional medicine) (Ramesh et al. 2007; Menon, 2003), 80% of which is situated in Kerala with a predicted growth rate increase of 35% annually (Nath 2010; Samraj 2010). This poses a threat as well as an opportunity for sustainable NTFP extraction in South India, especially in Kerala.

Within the NTFP sector in Kerala, recent studies have pointed out the need for appropriate support policies; market research & analysis and efficient stock management strategies. The MP sector is best depicted as having 3 core scenarios: private sector dominance; market force dominance and a growing informal sector (Jayaraman and Anitha 2010). There is also concern on the gaps between the payment received by the collectors and the retail price of the commodities and absence of pricing policy does not help the matter. Weakening of the formal economy and a growing dependency on the informal sector has resulted in unsustainable extraction of the resources impacting its environmental as well as social values. As a result availability and quality concerns are impacting the resource, its trade and ultimately the Ayurvedic (industry) sector (Madhavan 2008). A need for identifying alternative source for key medicinal plants, especially those that are vulnerable is felt, however quality parameters and assessment standards appear vague and absent.

In response, based on experiences elsewhere in Mexico, Brazil and Bolivia as previously discussed, it is hypothesized that certification of NTFPs may prove to be an effective strategy to meet conservation and livelihood goals. However, there is also the realization that for new strategies such as certification to be successful: 1. expert and detailed

scientific knowledge on the resource is available; 2. demand for certified product exists; 3. external funding and other resource support is available for developing and monitoring certification guidelines; and 4. expanding markets are available for specific products (Shanley et al. 2008b; Ross-Tonen and Kusters 2011). Also, in India there is a need to explore its feasibility on a state specific basis as state policies on forest resource access and use differs, along with stakeholder consultation (Agrawal 2005, pp.18) and how the cost of certification can be addressed (Bhattacharya et al. 2009). Understanding the socio-economic implications is also emphasized (Agrawal 2005, pp.119) as they are often overlooked. In summary, reverting to the original question of synergistic possibilities and based on lessons learnt on NTFP certification and other incentive based strategies in India and elsewhere, following suggestions for a win-win situation are given:

1. NTFP Management Plan for Single Species

Most studies report lack of management plan for NTFPs as a reason for it's over harvest and increasing threat. With a clear and a well laid out management plan that engages a participatory adaptive approaches, sustainable harvests of resources can be maintained ensuring long-term benefits. A good example is the Mexico Chicle harvest where management plan is integrated with timber and set by the government. The harvesting is however done the traditional way with a fairly successful certification effort in place. Two key points are highlighted as important and they are- chain of custody and management and monitoring of forest (Alcorn 2008). Another example is with Brazil nuts in Bolivia where after many repeated attempts an acceptable standard for Brazil nut management was put in place. Certification efforts in the form of Fair Trade Arrangements brought in some success due to direct linkages to local processors who had connections with the Europeans fair trade brokers. This direct, comparatively shorter value added chain brought in better returns to the harvesters/producers. A self-regulation mechanism (much like the Participatory Guarantee Scheme in India, see Nath 2010), to ensure quality and quantity standards not only ensures quality but is also cost-effective (Cronkleton and Pacheco 2010). On the flip side there are risks associated with focusing on single species and hence diversification and prioritisation are recommended (see Cunningham 2011; Ticktin and Shackleton 2011).

2. NTFP management for multiple species.

NTFPs comprise of multitude species, with varying ecological, social, cultural and economic functions and this can both be an advantage and a disadvantage. Multi-species dependency increases diverse economic opportunities, simultaneously reducing harvest pressures and also act as “safety nets” from unexpected setbacks. However, designing management plans factoring in the diversity of species can be difficult. Limited information regarding its availability, spatial distribution and other ecological functions add to the challenge. Some suggest exemption from the designing of management plans for NTFPs that are of subsistence use only (Klüppel et al. 2010). The role of Traditional Ecological Knowledge (TEK) in developing sustainable management plans for NTFPs is also highlighted (Ticktin and Shackleton 2011). The advantage of TEK is that they factor in the ecological knowledge and the social institutions that govern these resources and these include- taboos, legends, stories, customs, land tenure, rate, timing and location of harvest (Ticktin 2004). Even though TEK may not be fully considered a sophisticated management plan, what is suggested is combining it with scientific research (Ticktin and Shackleton, 2011, pp.161). There are also studies that have highlighted the cultural and social significance of NTFPs.

All this may be of particular significance to Kerala due to the diversity of medicinal plant species harvested in the state to cater to the local Ayurvedic industry. Many species that are key ingredients to specific, culturally significant Ayurvedic formulations (e.g. Dashamoola) with growing market demand are in the vulnerable or the endangered list. Substitution of species and as a result adulteration is a major problem facing the industry. The challenge however, for most forest communities is finding the resources to undertake these recommended activities.

3. Collective Action and Donor Support

The initial investment and continuous resource support needed for preparation of management plans, implement certification, carry out adaptive management, and ensure monitoring and enforcement is a difficult prospect. Suggestions include forming producer organizations (successful examples of these include the Mexican ejidatarios (see Granich et al. 2010), the tribal cooperatives in India – LAMPS to some extent (see Léle et al. 2010, and the indigenous groups of Bolivia organizing against the *barraqueros* (see Cronkleton and Pacheco 2010)). In fact NTFP trade is more likely to be viable when producers (especially the small producers) are organized, participation of good entrepreneurs & involvement of women

are encouraged, and there is transparency in the value chain (Schreckenberg et al. 2006; te Velde et al. 2006) and adaptive resource management is in place. The advantage of collective action is many. There is the economies of scale, where many producers can come together and meet market demand rather than tackling at an individual producer level bringing the cost down as well. Politically there is an advantage by finding strength in numbers and increased bargaining capacity (Agrawal 1998). The problem that is anticipated here is the heterogeneous nature of the groups involved and how the dynamics among the group members may influence various decisions (Agrawal and Gibson 1999: 638-639; Wunder 2001). However, studies also suggest that if groups are formed with a specific objective in mind, they are more likely to succeed (Agrawal 1998). As much as local community cooperation is a must, facilitation from outside is also equally important. This may be through private partnership or government partnership or non-government partnership. Outside funding is vital with donor support for local and national research, support for small producers and for efforts to increase consumer awareness. Funds and support is also needed to establish additional livelihood schemes so that the dependency on resource extraction is decreased (Wunder, 2001, Gubbi and MacMillan 2008). This could be in the form of payment of ecosystem services (PES), where conservation goals are met and resource dependent communities are not made worse off (Chhatre and Agrawal 2009). Donor support for other welfare activities such as health, education and employment training and opportunities are also recommended. Last but not the least there is an increasing trend among companies to support environmental and other socially relevant causes as part of “Corporate Social Responsibility” (Shanley et al. 2008a: 6). NGOs and local producer organizations can play a significant role in tapping this resource.

4. Appropriate Policy Measures

No matter what plans are made or what new strategies are suggested, none would work or be effective without having enabling policies in place. In case of NTFPs, formal policies are fairly in their nascent stages with challenges encountered due to their complex nature. Overlap between statutory and customary laws was the most limiting. For example, in Cameroon (Laird et al. 2010b: 56), customary laws were followed in terms of use of NTFPs. When statutory rules were put in place, restricting the use or harvest of certain species, they were either ignored due to lack of awareness or because it was considered illegal by the local communities. One reason for all this overlaps and confusion is that most of these policies are put in place and implemented without stakeholder participation. The

needs of the local communities are rarely sought and even if they are, eventually those with stronger political clout or lobbying capacity have their ways, who are usually not the traditional, indigenous users. Therefore it is recommended that before any rules are changed or created, active participation of stakeholders be sought. The purpose of the participation can range from prioritising species of commercial importance to preparing management plans and formulating and implementing legislations that support them. In case of first world countries such as British Columbia, traditional connections to NTFPs is only limited to its use. The rest of the traditional knowledge is “lost due to acculturation” and yet stakeholder consultation is maintained (Mitchell et al 2010). But, in case of developing countries, resources continue to be socially as well as culturally linked and consultation and collaboration becomes all the more important yet rarely practiced. In India’s resource rich regions like Kerala, such participation and consultations appear to be absent (Amruth et al. 2007) and this needs to be addressed.

5. Property Rights and Tenure

Policy arrangements incorporating property rights and tenurial arrangements continue to evolve especially within the common’s sector. Examples from India and Brazil all illustrate the importance of clear property rights and tenure arrangements regarding forest access and rights to harvest specific resources. There are proof (as in the case of Brazil nuts in parts of Bolivia e.g. Acre) where clear rights have helped in sustainable management and use of Brazil nut, an important resource traded nationally and internationally and a source of high income to the locals. Regions where such arrangements are lacking and where government support is poor, the resource are faced with unsustainable extraction and even thefts (Moss 2011). What is suggested is, depending on the traditional access and use arrangements of these resources(or customary rules), statutory rules be put in place such that feeling of ownership is felt which in turn will ensure better management, enforcement of rules and protection of resources, simultaneously maximizing benefits from trade. The recently passed Forest Rights Act (2006) in India indicates steps in the right direction but its implications on different stakeholders are still under scrutiny.

6. Alternative Source: Domestication and Cultivation of NTFP

Attempts are being made to encourage cultivation or domestication of NTFP species of importance, especially those with high market demand. This is expected to ease harvest pressures from the forests. Examples are Agave in Mexico, or some of the medicinal plant

species in India. The problem with this approach is varied. First of all cultivation would require additional land and other resources along with additional economic and physical burden on the marginalized communities (Gubbi, 2006). It may increase vulnerability to elite capture, increasing the chances of falling into a debt trap, depending on its commercial value. There is also the concern from unknown environmental impacts associated with such land use changes that include: deforestation, loss of diversity of species, ecosystem degradation and loss of genetic variability, and soil & water degradation and loss (Granich et al. 2010). It can also be argued that cultivation of NTFPs may not be a viable option for many due to the poor economic status of the collectors and the fact that majority are landless. Also, for keeping the species in the forest, given its economic value, cultivation is more likely to push people to clear forest for more economically productive uses, especially by those who have clear property rights and tenure over the resources. Last but not the least there are quality issues associated with the species, especially between wild harvested and its cultivated substitutes. This is particularly important in the case of medicinal plant species. Recently a ban has been placed on Ayurvedic products in the European Union starting May 2011 and all future trade will be permitted only after a licensed authorization from EU (Indian Express Report, February 03, 2011). These are clearly additional burden on the primary collectors and traders and add to the management challenges. Therefore before such efforts are put in place a thorough analysis is a must and information gaps must be filled.

Conclusions

This paper has attempted to explore if synergistic opportunities for NTFP livelihoods and conservation is possible or not for India, specifically for Kerala and based on past and present, global and local experiences the answer is a yes and no. It would depend on the kind of relationship that is in place, which is influenced by the nature of policies and external support system in place. This reflects Barrett et al.'s (2005:193) opinion that "synergies between livelihoods and conservation do not automatically occur simply because they are related". Despite the suggestions given, it is important to note that the use of NTFPs and its potential to meet the expected goals of improved livelihoods and conservation is contextual therefore room for flexibility while applying some of the previously listed points is important.

Purely from a market and trade perspective, rather than expanding markets, or exposing them to mass markets, exploring specialized, diversified, high end niche markets may offer improved, long term sustainable returns. There is an increasing demand for certified "green" or "fair-trade" products obtained from the wild. Thus further research is

needed to identify niche market segments; willingness to pay by consumers, the various costs associated with NTFP production and marketing, and design appropriate campaign strategies for effective sales. In this context, policy arrangements for effective trade and compensation must also be placed such that industries and other “elite” bodies that is primarily responsible for pushing local harvesters into over harvesting is persuaded to be more sustainable which may simultaneously improve primary harvester returns. Prioritising species, incorporating TEK and working out collaborative management plans with local users can ensure better accountability and a higher incentive to conserve. Finally, expanding citizens’ awareness on the importance of natural resources, pushing for more ethical business practices and keeping consumers informed on the origin and “real” value of these resources, perhaps through chain of custody arrangements, a win-win scenario can be achieved.

With this in mind, a certification framework for NTFPs has been designed for India drawing from stakeholder feedbacks and consultations from four central and western forest regions of India. It was also deduced that management strategies need to remain flexible and more importantly must be context specific. Based on this argument, the goal of this study is to assess the potential of certification of NTFPs in Kerala, using the certification framework by Bhattacharya et al. (2008). This study intends to find what is the contribution of NTFPs to household income, how has existing institutional arrangements impacted the socio-economic status of primary harvesters, what are the socio-economic determinants that influence their choices and reactions to new strategies such as certification and compliance to the certification standards from a multi-stakeholder perspective. It is expected to throw light on the implementation challenges of certification if any, in a place like Kerala, identify gaps to be addressed, are there alternative approaches otherwise and does it have synergistic potential. So far no such studies have been undertaken within the NTFP sector in Kerala. Therefore the study is expected to will provide as an excellent case study to not only design practical strategies to improve the local situation but also gain new theoretical insights on the broader question of synergy raised initially.

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CHAPTER 2. CERTIFICATION OF NON-TIMBER FOREST PRODUCTS IN THE CONTEXT OF THE FOREST RIGHTS ACT 2006- REACTIONS AND IMPLICATIONS AMONG THE KADARS OF SOUTH WESTERN GHATS, KERALA.

Abstract: Certification of non timber forest products (NTFPs) is gaining much interest in India due to the growing market demand and conservation concerns over these resources. This is specifically relevant to the Kerala region of South Western Ghats, due to the presence of the traditional medicine industry (Ayurveda) and resource dependent indigenous populations. Experts claim, due to the social-economic-ecological complexity of NTFPs, context specific assessments are needed prior to its implementation. Focusing on the Kadar community of Kerala, preferences for NTFP certification, factors influencing these preferences and the challenges and opportunities to enable successful NTFP certification in the region are discussed. It is argued that information gaps pertaining to policy provisions need to be addressed and participation and consultation are emphasized as the best approaches to ensure clarity on both certification rules and policy provisions. Key recommendations are also provided to ensure a successful implementation of NTFP certification engaging indigenous communities.

Keywords: Ayurvedic sector, certification, Forest Rights Act 2006, Kerala, Kadars, non-timber Forest Products.

1. Introduction

India's Western Ghats (WG) stretches along the western side of peninsular India, starting from the southern end of Kerala and extending upto Gujarat. It is a United Nations declared bio-diversity hotspot and recently declared a heritage site for its rich endemism. The non-timber forest products (NTFPs) that contribute to the biodiversity and endemism in the region are under threat due to market and trade pressures combined with the livelihood dependency of indigenous groups residing in the region. The Kerala region of the South Western Ghats offers the best example of such competing situations. This is mainly due to the presence of the Ayurvedic industry. The Ayurvedic Industry (a form of Indian traditional medicine system) is one of the largest sectors (85%) within the Indian herbal industry comprising of Ayurveda, Unani, Sidha and Homeopathy (Saini et al. 2011). 80% of the industry is located in Kerala (Samraj 2010), a State in the south-western tip of India. The Ayurvedic industry is also one of the largest consumers of NTFPs, mostly plant based materials (Saini et al. 2011;

Ramesh et al. 2007; Menon 2003)). Examples of NTFPs locally extracted that cater to the Ayurvedic industry include *Curcuma zedoria*, *Canarium strictum*, and *Elletria cardamomom*. Besides these medicinal plants, honey is also an important NTFP collected from the region. With the Ayurvedic industry's predicted 30% increase in growth (Samraj 2010; Nath 2010), and the Indian herbal domestic market expected to double from the current value of 1.2 billion dollar to 2.4 billion dollars by 2015 (ASSOCHAM 2010), the demand for these raw materials are also expected to increase. In addition, with indigenous communities (approximately 2 percent of the total population of Kerala) and other rural communities residing in the region that depend on NTFP collection for their livelihoods (Census India 2011) the escalating market demand is expected to increase harvest pressure over these resources. In fact these trends are already being reported in (Menon 2003, Madhavan 2008) impacting both the NTFP and the Ayurvedic sector mainly in the form of resource depletion, inconsistent supplies and adulteration using poor substitutes. According to (Amruth et al. 2007) the broader impact of all this are likely to be endemic species loss and poor livelihood returns . Therefore new market tools are needed to improve the existing situation. (Shanley et al. 2002) recommends certification of NTFPs as one such tool, defined as a “forest policy tool that attempts to foster responsible stewardship” engaging the collectors, producers and the consumers. According to Bhattacharya et al, (2009) it is a “market based incentive for good management practices involving all key stakeholders” and as stated by Pierce et al. (2008) it ensures sustainable management goals through third party verification. It has been successfully attempted and reported from other parts of the developing world such as Latin America. Certification of wild harvested Chicles from Mexico; and Brazil Nuts from Bolivia are a few examples of certified NTFPs (see Shanley et al. 2002; Marshall et al. 2006; Alcorn 2002; Cronkleton and Pacheco 2010). These are particularly note worthy because they involved indigenous community participation. There are also examples of NTFP certification where forest areas managed by indigenous communities are certified ensuring the products are managed, harvested and marketed sustainably. As indicated in Nath (2010); Bhattacharya et al. (2009); Bhattacharya et al. (2008); CGCERT Website; INDOCERT website; Krishnakumar et al. (2012); Yadav and Dugaya (2013); and Gough (2013), similar strategies are being suggested for India.

As reported in Planning Commission Report –India (2011), with 70% of the forest export revenue generated from NTFPs, its sustainable management through mechanisms such as certification is being considered a priority. For example, a sub-committee for NTFPs under India's twelfth five year plan (for the years 2012 to 2017) was created with special budget

allocation for NTFP markets and certification. It is evident from the special emphasis given to it by the policy makers and various provisions extended to adopt these strategies. Last but not the least, recent debates on demarcating the WG into different “ecologically sensitive zones” (see WGEP Report 2012; HLWG Report 2013) highlights certification and similar sustainable market strategies for NTFP, catering to the local traditional medicine and herbal sectors.

However, as evident from international experiences reported in Shanley et al. (2002); Alcorn (2002); Cashore et al. (2005); Marshall et al. (2006); and Cronkleton and Pacheco (2010), NTFP certification is more complex than timber certification. This is because of the complex nature of NTFPs, due to its socio, economic, cultural and ecological significance, which varies from region to region. Therefore, context specific studies are recommended prior to implementing NTFP certification. This enables certification approaches and standards to be tailored to suit the targeted region or products, ensuring success.

2. Review of Literature and Problem Statement

According to Uniyal et al. (2000); and Ved et al. (2008), of the more than 400 plant species used for production of medicines by the Indian herbal industry, 80% are from the wild and the rest 20% is cultivated in the country. Studies by Cunningham (1994); Uniyal et al. (2000); Pierce et al. (2002); Schippmann et al. (2002); and Krishnamurthy (2009) all indicate both advantages and disadvantages of cultivated NTFPs (particularly medicinal plants) compared to wild harvested. Although cultivated NTFPs can reduce the demand pressure on wild harvested NTFPS, according to Schippmann et al.(2002), limitations in cultivated NTFPs are mainly associated with biological and ecological requirements and most importantly the economical feasibility. Krishnamurthy (2009), reports some quality issues associated with cultivated NTFPs as well, suggesting a preference for wild harvested NTFPs. Therefore the need to explore strategies like certification of wild harvested NTFPs is essential to ensure its sustainable use.

In India, with 70% of the forest export revenue generated from NTFPs, its sustainable management through mechanisms such as certification is being considered a priority. According to the Planning Commission Report (2011), NTFPs are to be considered in the National Forest Working Plan Code, with a sizeable budget assigned for NTFPs under India’s 12th five-year plan. NTFP certification is fairly in its infancy in India. Some recent attempts related to NTFP certification as reported in Bhattacharya et al. (2008), have been extending the National Organic Certification Standards to wild harvested species, assessing FSC

standards to three medicinal plant species from North India, and initiatives to develop species specific standards. As reported in Nath (2010), certification of NTFPs based on fair trade principles are being implemented in some parts of the South Western Ghats which according to Shanley et al. (2002), focuses only on “trade equity and community well being” and does not incorporate the three goals of certification- ecological soundness, economic viability and social equity.

A recent attempt in this direction has been the development of a set of national standards for certifying NTFPs, particularly medicinal plants developed by Bhattacharya et al. 2008.

2. 1 NTFP Certification Framework for India

Under the initiative of the International Centre for Community Forestry (ICCF) through a participatory approach, soliciting inputs from stakeholders covering four states in India-Madhya Pradesh, Chhattisgarh, Orissa and Uttarakhand a certification framework for NTFPs, particularly medicinal plants was developed by Bhattacharya et al.(2008). The framework comprises of a set of principles and criteria that serve as benchmarks for getting certified. These standards could be used to certify both the products that were being sustainably harvested as well as the area from where they were harvested. Certification could be carried out by external agencies or by local communities. The framework has “four tiers” consisting of four principles and related criteria. The four key principles are as follows (see Appendix 1 for the detailed certification framework developed by Bhattacharya et al. 2008):-

1. Legal and policy framework: According to Bhattacharya et al. 2008, an overarching legal and policy framework for NTFPs is lacking in India. The economic and developmental significance of NTFPs, especially medicinal plants is recognized but policies associated with NTFPs vary from state to state and is not very efficient. With the recent implementation of the Forest Rights Act, these gaps are expected to be overcome to a large extent.

2. Wild area conservation and management: The emphasis here is to create area specific management plans based on the NTFPs collected. Participatory approaches (for e.g. Participatory rural appraisal (PRA) techniques) engaging primary stakeholder, mapping and remote sensing are suggested for such strategic planning. The current arrangements under the participatory institutions such as the VSS are not effectively utilized. Also, according to Bhattacharya et al. 2008 development of people’s awareness, incentives and market linkages need to be strengthened and management deficiencies must be addressed.

3. Responsible collection and use practices: Market demand is forcing collectors to adopt destructive harvesting practices and even collect prematurely as there is a price value for inferior quality products and also because there are no specific quality checks in place. Documentation related to collection and poor storage facilities add to the issue. These deficiencies need to be overcome.

4. Benefit sharing and livelihood securities of NTFP collectors are in place: Importance of effective marketing strategies and pricing policies are emphasized here. Market information and documentation need to be given attention. State support to curb the growth of private illegal traders also needs to be given priority.

In order to meet the goals embedded within these principles a set of 15 related criteria are provided that serve as measurable standards to assess the sustainable use and management of NTFPs along with sustainable livelihoods. In other words the criteria act as measurable standards which if met qualifies for certification (see Appendix 1 for the detailed certification framework developed by Bhattacharya et al. 2008). But, according to Bhattacharya et al. (2009), wide stakeholder consultation and feedbacks on the negatives and positives of NTFP certification and issues dealing with the implementation and high cost of certification needs to be explored prior to its formal implementation. With no published reports focusing on implementing NTFP certification and identifying the various opportunities and challenges that may exist in the Indian context, this study attempts to address some of these gaps.

The Latin American experiences on NTFP certification as discussed in (Shanley et al 2002), have all highlighted the significant role of primary stakeholders in enabling its effective implementation. This is primarily through their participation via local institutions and through consultations that are both important components to effective NTFP certification. According to Pierce (2002), certification of NTFP is also expected to be influenced by the socio-economic, political and cultural aspects of NTFP management which is closely linked to the primary stakeholders especially the diverse indigenous communities with traditional linkage to the forest. This is especially relevant to the Indian context due to the fairly large indigenous people residing in the region as indicated in the Planning Commission Report (2011). Last but not the least, as suggested by Pierce (2002) supporting policies is required in the form of property rights or tenure, especially when indigenous communities are involved in certification. In this context the ongoing implementation of the Forest Rights Act 2006 in India, is expected to provide an ideal environment for NTFP certification.

2.2. The Forest Rights Act 2006

As reported in Chemmencheri (2013); and Rao (1996), until the implementation of FRA 2006, indigenous communities in India were subjected to many years of social and political marginalization. As a result they have been disempowered and displaced rendering them landless resulting in many conflicts (some violent) between them and the State. The indigenous rights struggle in Kerala, reported in Bijoy and Raman (2003) is particularly noteworthy in this regard. The implementation of FRA 2006 has been in response to these many years of struggle for rights and compensation for the injustices meted out to the tribal communities in India. It is a landmark policy, and according to the Ministry and Environment and Forest (2010), ensures clearer property rights in terms of ownership, access and use of forests and its resources, to all tribal as well as “other traditional dwellers” of India, based on historical evidence of association or use. The Act mainly emphasizes two rights: 1. “Individual rights”; and 2. “Community rights”. The individual rights provides “land rights” to each tribal or “other traditional dweller” household who have occupied and cultivated the land prior to the date of December 13, 2005 and with historical evidence of cultivation, can seek up to four hectares of forest land. The community rights on the other hand provide right over forest area, mapped and given to the community, again based on historical evidence of use. It includes the right to use and collect NTFP, the use of grazing grounds and water bodies and other traditional areas. Also as reported in Satyapalan (2010), the FRA “allocates powers to the local government to divert forest land for common uses such as school, dispensary, *anganwadies* (*children’s nursery*), fair price shops, electric and telecommunication lines, and access to drinking water etc”.

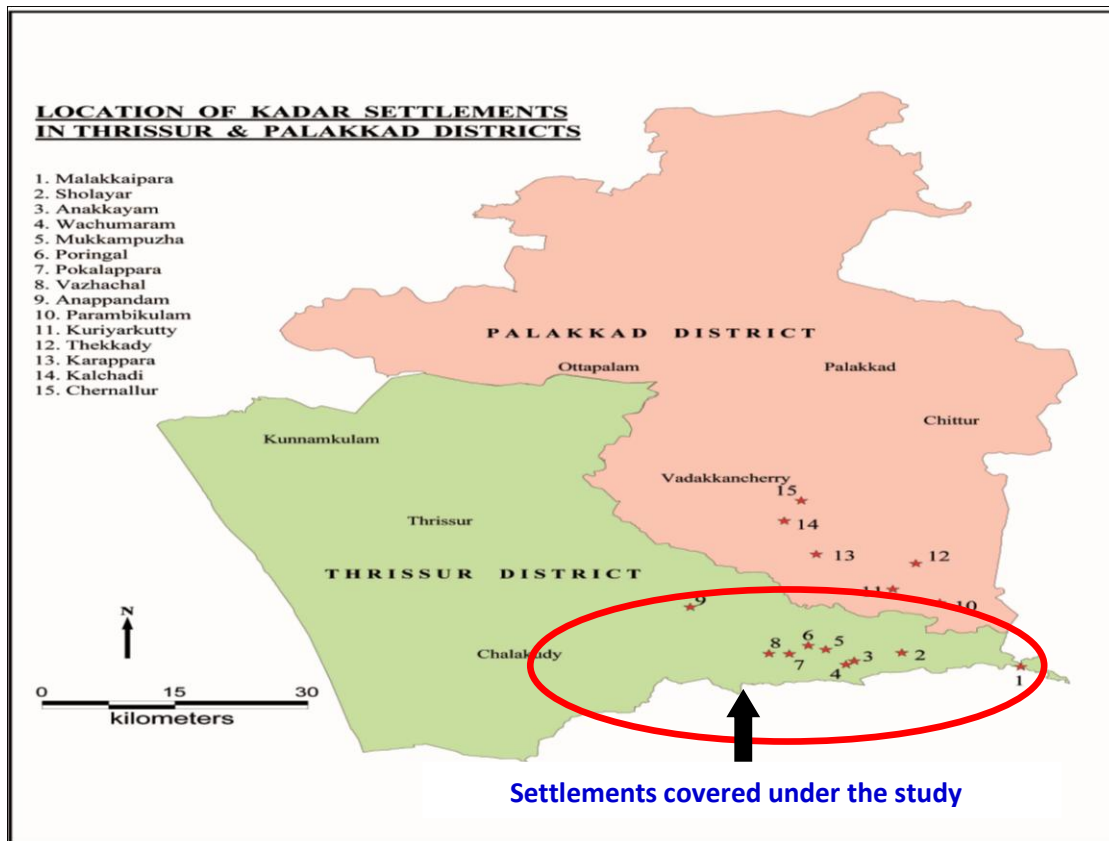
Under these circumstances, the goal of the study was to assess the scope for effectively implementing NTFP certification, engaging the local, indigenous communities given the current NTFP policy environment. This was done by determining primary stakeholder reactions to NTFP certification, identifying key factors that are likely to influence their preference for NTFP certification, and how the current property rights and tenure arrangements through FRA 2006 offer opportunities or challenges towards its implementation. In the study, NTFP is defined as any plant based materials and honey, collected from the forest that has significant economic value to the community and are also key raw materials for the local Ayurvedic industries. I employed the certification framework developed by Bhattacharya et al. for the purpose of this study. The full framework can be seen in Appendix 1. As previously mentioned it comprises of four principles, each with a set

of criteria. They combine to form the standards to be met to get certified. It is applicable for both product or area based certification. The insights drawn are expected to have broader applicability in terms of understanding and identifying key ingredients for effective NTFP certification under similar socio-political circumstances involving indigenous communities.

3. The Study Site and the Respondents

The State of Kerala is located on the windward side of South Western Ghats of India and according to Nayar (1996); and the UNESCO Website, a significant region in terms of biodiversity and endemism. It is also considered the seat of the Ayurvedic industry. With an abundance of NTFPs collected and traded, these resources are a significant source of livelihood for its dependent population especially the particularly vulnerable tribal groups (PVTGs). As reported in Kakkoth (2005), among the thirty-six indigenous communities (also referred to as Scheduled Tribes) in Kerala five are categorized as PVTG, by the Government of India. According to Kakkoth (2005); and the KILA Report (2011), despite various concessions and institutional arrangements provided in the Indian constitution, the desired developmental goals for the PVTGs have not been achieved and they are often exploited and marginalized. The Kadar community is one such PVTG located in Thrissur and Palakkad districts. To limit the scope of study, I focus on the nine Kadar settlements of Thrissur district- -1. Malakkapara; 2. Sholayar; 3. Anakkayam; 4. Wachumaram; 5. Mukkampuzha (a.k.a Siddhan Pocket); 6. Poringal; 7. Pokalappara; 8. Vazhachal; and 9. Anappandam (See Figure 2.1). Historically the Kadars have engaged in the traditional occupation of collection and trade of NTFPs and with the new forest policies (e.g. FRA2006) that place special emphasis on PVTGs, direct implications on Kadar livelihood as well as resource use is expected. As per the tribal cooperative federation, Thrissur district is one of the major centers of NTFP collection and ranks second in terms of the value of NTFP sales. It also has the largest Kadar population, comprising of nine settlements and according to Menon (2003), contains the major NTFP market of the Stat, including the largest Ayurvedic industry outlets that are the major buyers of NTFPs.

Figure 2.1: Map Showing Kadar Settlements in Kerala



4. Data Collection and Analysis

I used a random sampling design for the study and data was collected using a survey questionnaire (see Appendix 2 for the sample questionnaire). The survey comprised of both closed and open ended questions and was carried out over a period of approximately three months (June, July and August) in 2012. Since certification of NTFPs has never been implemented, it was important that the respondents be given information on what certification entails prior to asking their preferences to adopt certification and what they perceive as implementation challenges. A set of questions that focused on understanding how the respondents perceived their relationship with the forest and its resources, current nature of resource use, sales and market were asked prior to soliciting their responses to questions on new market strategies and their preferences for certification. With formal market arrangements in place such as the Vanasree² units (the name given to the marketing channel under the *Vana Samrakshana Samitis (VSS)*)¹ the respondents are familiar with the idea of local quality control, processing, labelling and packaging. Using this current arrangement as an example, certification was explained to them as a strategy that follows stricter quality

checks in terms of collection and processing, involving third party verification (usually an outsider). It was also explained how certified products can fetch a premium price, almost 35% to 60 % more than what they are receiving now and other long term advantages of the strategy. These interactions and survey were carried out in the local language. A translated version of the certification framework employed for the study was also used as a reference while interacting with the Kadar respondents (see Appendix 3 for the translated framework in the local language Malayalam)

I collected data from 107 households across nine settlements of the Kadar community. The nine settlements comprised a total of 275 families, and based on the sample calculator (<http://www.surveysystem.com/sscalc.htm>), a representative sample size was determined with a 95% confidence interval. The recommended sample size of 100 was targeted and a total of 101 completed household surveys were used for the assessments. The unit of study is the household and the data was collected from an adult member living in the household.

The key areas covered in the survey included socio-economic, political characteristics, household income, forest dependency, collection and marketing of NTFPs, a set of questions that explored their reactions and feedbacks to existing NTFP management and market related institutional arrangements, preference for certification and last but not least, questions on the recently enacted FRA 2006. Both quantitative and qualitative assessments were carried out to analyze the data. Besides this, direct field observations, interactions with tribal and forest department officials and secondary sources of information, mainly-peer reviewed articles, books, government documents and reports published on key government websites were also used to discuss and explain the results of the data analysis. Quantitative analysis mainly comprised of descriptive statistics and logistic regression, performed using SPSS vr.21. Qualitative analysis comprised of identifying recurring themes and ideas and compiling them to draw inferences.

The discussions based on data collected and analyzed are presented next and includes the current socio-economic and political status of the Kadar community; the current NTFP resource status in the region, market arrangements, preference for certification as indicated by the Kadar respondents and the factors that influence these preferences; and the opportunities and challenges to certification in the region, in the context of new forest use and management policies (FRA 2006). The discussions draws from previous theoretical insights on community based natural resource management and provides recommendations that have broader applicability in terms of effectively implementing NTFP certification, involving indigenous communities.

5. Results and Discussions

5.1. The Current Socio-Economic and Political Status of the Kadar Respondents

As a community traditionally engaged in NTFP collection, prior to implementing new strategies such as NTFP certification, which is expected to have a direct impact on their livelihoods, it is important to understand the current socio-economic and political status of the Kadars. The majority of the survey respondents are males (62.38%). Table 2.1 provides an overall picture on the current status of the Kadar community in the nine settlements.

In terms of literacy, the statistics remains consistent with the population statistic with almost 51.49% having never been to school. In terms of overall income dependency, majority of respondents are engaged in NTFP collection (89%) followed by 84.16% in government supported and VSS related employment programs. The “Other” employment sources (30%) include working as teachers at community level crèches, sweepers or watchers at forest department or other quasi-government occupations. The least linkage is to agriculture (only 2%). As a tribal community categorized as PVTG, they have traditionally always depended on the forest for livelihood and sustenance. Further analysis showed that a larger percentage of forest income came from direct use of forest resources, which involves collection and selling of NTFPs (53.90%) and the remaining (46.10%) from indirect use of forests, which includes VSS activities pertaining to fire-line work, timber management, and eco-tourism related work mostly assigned through the Forest Department.

In terms of their political status, the Kadars continue to be categorized as PVTG as per Government of India classification. According to 37, despite various institutional provisions and programs specifically designed for the upliftment and improvement of the PVTGs, they continue to remain marginalized. With the recent implementation of the FRA 2006, that emphasizes clearer property rights to all tribal and “other traditional dwellers”, improvements to their weak socio-political status is expected. However, direct interactions with the respondents suggested a rather disappointing scenario along with government website reports that indicated a rather slow progress in terms of its implementation. As per the statistics presented in the Ministry of Tribal Affairs Website, 74% of claims for “Individual Rights” (IR) submitted have been passed and issued but the status on the CR claims for the Kadars has not been reported yet. Primary interactions with the respondents also revealed poor knowledge associated with the rights. Primary data indicated only 64% of the respondents having heard of the Act. The implementation of the rights as envisaged within the Act requires the creation of an elected FRA committee at the local village or

panchayath level (the local body of governance also referred to as the *oorukoottam*) and only 54% having knowledge of the FRA committee formed within their *oorukoottam*.

Inefficiencies pertaining to the implementation of the individual rights has been reported in detail in Münster and Vishnudas (2012); and Anitha et al. (2013) and in terms of community rights, an overall slow progress in Kerala has been reported by the Ministry of Tribal Affairs. (see Table 2.1). In fact, the community rights were yet to be implemented among the Kadars at the time of this survey. Both, Münster and Vishnudas (2012); and Anitha et al. (2013), report poor knowledge regarding the rights and its provisions among those responsible for initiating the policy implementation as well as the beneficiaries (in this case the Kadars). My interactions with the Kadar respondents as well as key officials of the forest and tribal department revealed lack of resources among the implementing agencies and lack of training imparted to the key implementing officials as two of the major reasons for the policy implementation set back. My discussions with the local, tribal and forest department officials as well as the local NGO active in the region indicated that a systematic and collaborative approach are being considered to implement the community rights. According to Agrawal and Chhatre (2006); Ostrom (2007); and Liu et al. (2007), in the context of natural resource management, such socio-economic and political status of the resource dependent communities holds relevance due to its significant influence on resource management decisions. The next section attempts to explain and discusses these relationships in the context of the Kadar respondents.

5.2. NTFP Resource Status, Institutional Arrangements, and Preference for Certification

According to Varghese and Ticktin (2008); Muraleedharan et al. (2005); and Marshall et al. (2006) increasing market demand has resulted in overharvesting and exploitation of NTFPs. As discussed earlier, the Ayurvedic industry is a major procurer of the raw materials harvested from the wild. With Kerala being the seat of the Ayurvedic industry and the presence of some of the major Ayurvedic processing centres located in Thrissur not to mention its proximity to the main trade port of Kochi, the market pressures on the resources from and around the region is high.

Table 2.1: Descriptive Statistics- Socio Economic, Political Status of the Respondents Based on Data Collected in 2012.

a.	Gender	Male Female	62.38% 37.62%
b.	Education	No Schooling Primary School Middle School High School 11 th and 17 th Grade Above 12 th Grade	51.49% 21.78% 10.89% 13.86% 1.98% 0%
c.	Income Dependency: Different Livelihood Sources:	NTFP Govt. Employment Fishing Private Labor Agriculture Others	89% 84.16% 29% 26% 2% 30%
d.	Forest Income Only:	Direct Use (NTFP) Indirect Use (VSS)	53.90% 46.10%
e.	Average Household Income/year		\$1285
f.	Are you in Debt	Yes No	75% 25%
g.	Average no: of year living near forest		42 Years
h.	FAR 2006 Implementation		
	h.1. Kadar Status:	**Total No: of Individual Claims submitted **Total No: of Individual Claims issued	198 158
	h.2. Overall Kerala Status:	*Community Claims Submitted *Community Claims Accepted	487 72

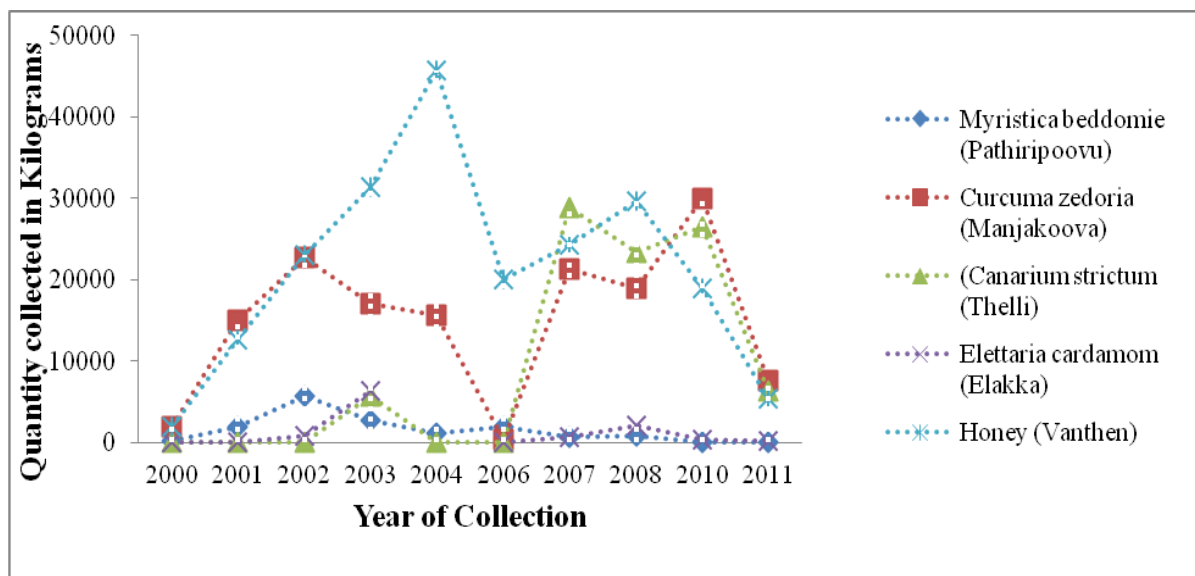
*Data Sources: *Ministry of Tribal Affairs, Government of India; **Local Tribal Office, Thrissur District (2012)*

This makes it important to understand what the current status of the resources is as perceived by its collectors (in this case, by the Kadar), what are some of the current market and trade practices of the collectors, what are the institutional mechanisms in place for curbing unsustainable practices, its effectiveness, if there is a preference for new market mechanism by the collectors and what variables influence their preferences.

Descriptive analysis showed that majority large percentage of the Kadar respondents perceived forest density (45.50%) and resource availability (86.10%) as “less than before”. Further discussions brought out various opinions and reasons for these perceived changes. Some of the typical responses included– having to walk longer distances in search of products compared to before and either low availability or complete absence of resources compared to before. In fact, based on NTFP collection data from the State marketing federation, the quantity of key NTFPs collected for Thrissur district from 2000 to 2011 (data for 2005 and 2009 were not available) is indeed showing a decreasing trend over the years (Figure 2.2).

With regard to perception of forest density, the responses indicated how access has become easier than before. Previously it was difficult to move around and come out of the forest. Presence of roads along forest boundaries and technological advances (for e.g. cell phone coverage) has also made the forest much more accessible. Perhaps the major challenge to forest access as perceived by the collectors was the increased presence of wildlife (98%), particularly elephants. Wildlife encounters are frequently a cause of distress due to potential personal injuries rendering collectors incapable of continuing with NTFP collection or the destruction of their homes and home gardens all of which have financial repercussions.

Figure 2.2: Trend for Item Wise Quantity of NTFP Collected From 2005-2011



It can be argued that these perceptions on the state of the forests and NTFP availability in the region are likely the result of management ineffectiveness based on the following evidences. In terms of institutional provisions, various forest management strategies involving people's participation are in place yet deficiencies in its implementation are reported (see Amruth et al. 2007). They include institutions such as the VSS and eco development committee (EDC) that are participatory management bodies established at the local governance level, following the joint forest management (JFM) initiatives in India. Despite shifts in resource management from state managed to people managed, these participatory process has not been enthusiastically implemented. For example, as reported in Amruth et al. (2007), the preparation of the micro plan for forest management does not involve any "meaningful participation" by the members of the local institutions (e.g. VSS/EDC members). This was also evident from the reactions of the Kadar respondents. When asked if they are aware of any management plan and /or have been involved in the preparation of a management plan through the VSS, majority (71%) indicated "No"; 7% "Not sure"; and only 22% responded "Yes". Further probing produced comments such as-

"we simply follow the forest department's instructions;" or "we don't know of any plans or documents. We tell the forest department what resources are available where and how much and then we go and collect;" or "we are called for meetings by the forest department where we are given classes on forest conservation and what to collect and what not to collect."

Those who responded "yes" mostly commented -*"VSS meetings is where we get the necessary instructions,"* where again the idea of participation is not very evident.

With regard to marketing of collected goods, despite formalized marketing channels, where collectors are expected to receive better returns and be safe from exploitation, the survey data indicated that although a larger percentage of the respondents (63%) marketed the resources via the cooperative society- a government approved marketing channel, an almost equal percentage marketed the products directly at the local markets and/or informally to private traders (62%). About 28% of the respondents also marketed via Vanasree, the government approved marketing channel under the VSS. Furthermore, our price assessments comparing key NTFPs sold through different marketing channels showed that when selling informally, the collectors received almost double of what they received selling via formal market channels, especially through the tribal cooperative. For e.g., for Curucuma zedoaria,

collectors receive \$0.45/kg, which the Federation auctions off at approximately \$1.13/kg and at the retail market receives \$2.18/kg. On the other hand direct sales of the product, the collectors receive approximately \$1.5/kg. Similarly in the case of *Canarium Strictum*, collectors receive \$0.64/kg from the cooperative as collection price, which is auctioned by the federation at \$1.25/kg and at the retail end at \$3.25. Finally in the case of *Myristica beddomei* although no direct sales were reported, collectors there was a fairly large difference in terms of what the collectors received (\$2.54/kg) versus what the federation received at auction (\$4.36/kg) and finally at the retail end (\$18.20/kg). Therefore, as reported in Menon (2003); Madhavan (2008); and Bhaskaran (2006), the informal sector is present and growing among the Kadars and marketing through the tribal cooperatives are also not meeting expectations. Unfortunately growing dependency on the informal trade is also causing indebtedness among the collectors and also impacting resource base as market pressures force collectors to engage in quick short term benefits. Under these situations, certification is expected to benefit as they will not only maintain the market linkage but also simultaneously curtail unsustainable resource harvest and supply and enable better returns for quality products. But prior to implementation, stakeholder preferences are necessary because certification can succeed only under conditions of compliance; cooperation and collaboration (see case studies in Shanely et al 2002). With this in mind, and following a detailed face-to-face discussion with each respondent on current market arrangements (see section 4), what certification entails, and their preference for certification was collected. The majority (82.29%) responded “yes” but also stated the need for implementation support (84.54%).

Certification experiences from Latin America with examples on Chile and Brazil nuts have all indicated a significant role by the primary stakeholders and as indicated in Guillén et al. (2002) the socio-economic and political variables and conditions of those adopting certification can influence its effective implementation. Thus the next step was to identify what socio-economic variables influenced the Kadar decisions pertaining to certification to enable a targeted approach for its implementation, ensuring a higher chance of success. This is also a way to acknowledge and address the internal differences that exist within communities, which according to Agrawal and Gibson (1999) can influence preferences for community based strategies.

Using the primary data from the Kadar respondents, I carried out a logistic regression analysis and the results (see Table 2.2) indicated that males are more likely to prefer certification and this is expected considering that the Kadar society is patrilineal. As indicated in Kakkoth (2005), most decisions within each Kadar settlement are made by men and each

settlement has a headman called *Moopan*, chosen by the community who controls the socio-political decisions within the respective settlement. Market knowledge also indicated a significant influence where those with market knowledge are less likely to prefer certification. Market knowledge could be an indication of education or access to information due to greater mobility and/or alternative employment opportunities. It is a known fact that information enhances bargaining power and a desire to make own decisions and function independently. Statistical analysis indicated significant correlation between education and market knowledge ($p < .01$, Pearson's r coefficient = .29), yet within the regression model market knowledge appeared to be the decisive variable and not education. In terms of trade links, those who sell to private traders are more likely to prefer certification and this may be because both previous studies (Menon 2003; Madhavan 2008) as well as primary data from the Kadar respondents that showed selling to private traders ensured higher returns. With the added cost associated with certification selling to private traders may help offset these costs as reported in Shanley et al. (2002). However when asked whose support they preferred for certification, the majority indicated government support. Although this may appear contradictory, it can be converted to an ideal arrangement since successful NTFP certification engaging indigenous communities have involved some form of government-private partnership (see case studies in Shanley et al. 2002). Finally, net income is also shown to influence preference for certification and this holds true based on previous studies (see Hegde and Enters 2000; Gubbi and MacMillan 2008). It can be argued that those with lower income are more likely to be interested in adopting strategies that may help improve their economic situation. Alternately, as reported in Gubbi and MacMillan (2008), if income increases from other sources, community members have shown to be less dependent on income from forest resources.

Clearly the results of the data analysis indicate a continued dependency on forest resources by the Kadar community for their livelihood (in particular 89% of the surveyed respondents are dependent on NTFP collected as a source of income) and the need for certification. According to Shanley et al. (2002) certification is expected to act as a “buffer between communities and the market” and “internalize some of the social and environmental costs”. The study results also indicate a preference for certification and who are more likely to adopt certification. However, as indicated in Shanley et al. (2002); Cronkleton and Pacheco (2010); and Hussain (1999), NTFP certification involving indigenous communities also require that land tenure and access rights are in place, along with community participation and their taking responsibility for effective implementation.

5.3. Adopting Certification in the Context of Forest Rights Act 2006: Challenges and Opportunities

As mentioned previously, the certification framework proposed for India by Bhattacharya et al. (2008) and employed for the study comprises of a set of four principles. The first principle embedded within the framework emphasizes that use-rights and responsibilities including tenure are clearly laid out. In this context, the newly implemented FRA 2006 in India (see Ministry of Tribal Affairs Website) offers a tremendous opportunity. However, the question is how conducive is the new policy to enable successful NTFP certification among the primary stakeholders?

My interactions with the respondents and key FRA implementing officials revealed the opportunities as well as the limitations to the new policy. As discussed previously the FRA includes “individual rights” and “community rights”. Traditionally, since the Kadars have never engaged in agriculture, the land rights they can claim under the ‘individual rights’ are very limited. This is because rights are provided on the basis of historical evidence of use. As a result the Kadars have only received very limited land area under the individual rights (a minimum of 1 cent of land to a maximum of 50 cents in some cases) and therefore is of no particular use to them other than the security it provides against eviction.

On the other hand, since traditionally they have depended on NTFP collection for their livelihood, the “community rights” hold much more significance within the Kadar context. However, implementation of community rights has been extremely slow and whether provisions stated within the rights are ultimately going to reach the beneficiaries and provide benefits is still largely unknown.

As per the provisions stated within the community rights, greater autonomy in terms of access, use and trade of NTFPs is extended to the rights holders. These rights include some of the high value NTFPs (e.g. tendu, bamboo), which, until recently were under government control. According to Planning Commission Report (2011); and the Ministry of Tribal Affairs, the provisions also include the freedom to decide whom to trade NTFPs with and under what conditions. Based on discussions pertaining to governance of common property resources reported in Hussain (1999); and Ostrom (1999), secure tenure and rights is expected to increase the tendency to protect and preserve the resources. But it is also reported in Ostrom (1999) how secure rights have further marginalized vulnerable, indigenous communities, primarily due to lack of clarity. Having “clarity” is an important aspect of

property rights, where it is argued that with greater variations in the perception regarding the rights, the lesser is the clarity, which in turn influences “benefit streams”.

Table 2.2: Result of Logistic Regression Analysis Showing Relationship Between Socio-Economic Variables, NTFP Dependency and Preference for Adopting NTFP Certification

Parameter	B	Std. Error	Hypothesis Test			Exp(B)	Probability Odds/(1+Odds) For Sig. variables only
			Wald Chi-Square	df	Sig.		
(Intercept)	.887	1.424	.388	1	.53	2.429	
Males	1.504	.633	5.639	1	.01	*4.498	0.91
Income Dependence on NTFPs	.172	1.040	.027	1	.86	1.187	
Mrket Knowledge	- 2.087	.649	10.325	1	.00	** .124	0.23
Selling to Pvt. Traders	1.113	.590	3.560	1	.05	*3.044	0.88
ZNet Income	-.515	.242	4.517	1	.03	*.598	0.59
Cultural linkage	.122	.236	.266	1	.60	1.130	
ZYrs stay in or near forest	.007	.313	.000	1	.98	1.007	
Social linkage	-.049	.192	.065	1	.79	.952	

* $p \leq .05$; ** $p < .01$. *Dependent Variable: Preference for Certification*

¹Note: The probability coefficients in the last column are calculated by multiplying the intercept odds ratio to the predictor odds ratio and then the probability is calculated by using the formula $[odds/(1+odds)]$. For example, to calculate the probability of males preferring certification, multiply the intercept odds ratio 2.429 by the odds ratio for gender, 4.498, to obtain 10.925. The probability is calculated as $10.925/11.925$ which is 0.91.

In this context, data analysis on the progress and awareness among the Kadar respondents on the FRA and its provisions, revealed a disappointing scenario (see Section 2). Information gap was the major issue where beneficiaries were not even aware of the Forest Rights Committee- the primary institution created at each settlement level, that ensures a participatory approach towards initiating the policy implementation process. Critical assessments on the FRA implementation process in Kerala has also been reported in

Chemmencheri (2013); Satyapalan (2010); Anitha et al. (2013) where set-backs in its implementation has been mainly attributed to lack of information both among the right holders as well as the officials engaged in its implementation. Besides the lack of clarity, lack of participatory approach, poor accountability and lack of collaboration has also been identified as the key causes for these set-backs.

As stated by Chemmencheri (2013), ineffective implementation of rights “deprives the right holders from shaping their space”. It can render the right holder more vulnerable to outside influences further increasing the chances of unsustainable outcomes for NTFP resources. According to Ostrom (2007); and Liu et al. (2007), for effective forest governance, clearer definition of rights, greater participation among the right holders and greater investment in institutional capacities at the local level is important. My assessments indicated that none of these conditions are met in the Kadar context. Under the circumstances, despite new policy arrangements, its capacity to enable effective outcomes for new institutional strategies such as certification is uncertain unless such information based challenges are overcome.

Besides the requirement of clear property rights and/or tenure arrangements in place, successful NTFP certification requires the adherence of three additional principles previously listed (see section 2 or Appendix 1). Considering the vulnerable and marginalized socio-economic and political status of the Kadar community, meeting the remaining certification requirements brings additional challenges. However, opportunities exist in the form of new and emerging ideas (see FSC Technical Report 2009; FSC Technical Report 2013,) that can be tapped to satisfy these prescribed standards. There are examples of NTFP certification carried out by small-holder groups as reported in FSC Technical Report (2009); Ramcilovi-Souminen and Epstein (2012); and Gough (2013) which I consider are perhaps better suited for in the Kadar context. These focus on forest area based certification, rather than specific product based certification, where the certified area are intensely managed by small holder groups that ensures the NTFPs collected from these regions are sustainably harvested. Under such circumstances, improving and utilizing existing marketing facilities are key. The participatory based marketing arrangements under the VSS that engages community members at every stage of the market chain including collection, processing and retailing through the local eco-shops, established with the support of the forest department can help meet the remaining key principles within the certification framework. Management and technical training related to certification also need to be extended through a participatory process where traditional ecological knowledge and observations are tapped. Last but not the least,

FRA 2006's emphasis on providing support for developmental activities (see Ministry of Tribal Affairs Website) and the budgetary provisions exclusively for NTFPs under India's twelfth five-year plan (see Planning Commission Report-India 2011) all provide ample opportunities to be tapped.

6. Conclusion and Recommendations

Resource conservation and livelihood concerns have led to exploring new market mechanisms to safeguard biodiversity as well as the livelihood of dependent populations. Following successful attempts elsewhere, in India too there is a growing interest in NTFP certification with frameworks being developed to fit Indian conditions. However knowledge pertaining to its implementation is lacking.

As an attempt to address this gap, this study explored its feasibility within Kerala and more specifically the Kadar community. The results indicated a preference for NTFP certification and identified the socio-economic and contextual variables that are likely to influence these preferences to enable a more targeted approach towards its implementation. However the current policy environment presented some challenges. Despite enabling provisions within the policy, lack of participatory approaches employed towards policy implementation resulted in information gaps and hence there is lack of clarity regarding the policy provisions among the beneficiaries. Therefore, I argue that prior to implementing certification; information gaps pertaining to current policy conditions must be overcome. Existing institutional facilities need to be utilized to meet these gaps and make the process cost-effective. For example, in India the Tribal department-an institution exclusively created for tribal welfare has special provisions that focus on information dissemination by appointing "tribal promoters" from the tribal communities. These facilities need to be utilized effectively which is absent at the moment. Also, presence of multiple institutions working towards similar goals need to be streamlined or integrated to reduce resource wastage, avoid institutional overlaps and improve outcomes. For example the presence of multiple marketing channels for NTFPs (the tribal cooperative, the VSS marketing channel, the private informal sectors and now with the newly implemented FRA, creation of new market channels via the management committees formed at each settlement level) is creating a lot of overlaps and resource wastage. Streamlining these and integrating into a single market channel (perhaps by strengthening the VSS market channel since it functions on participatory framework) is recommended. Special budgetary provisions within India's twelfth five year plan for

“information and knowledge transfer” as well for improving market arrangements can be utilized for these purposes.

I also argue that ideas of participation and being informed must be extended to new strategies like NTFP certification as well, especially when engaging indigenous communities. This is because certification success is associated with compliance to certification rules. As discussed in (Ramcilovi-Souminen and Epstein 2012) compliance to rules pertaining to forests and its resources are influenced by a set of motivations and these motivations include 1. instrumental benefits, and 2. the legitimacy associated with the rules. While the former deals with the monetary benefits associated with following a specific rule or strategy, the latter emphasizes ensuring stakeholder participation and transparency in the creation and implementation of the rules. Such participatory engagements enables communities to be better informed, have better clarity as suggested by (Ostrom 1999), and thus develop a greater sense of ownership which in turn influences motivation towards compliance to the rules. In the case of certification, these “rules” would be the set of criteria, listed under each of the four principles within the certification framework that are required to be met for getting certified. Although, as an initial step towards compliance, this study explored the Kadar preferences and the factors influencing these preferences, more detailed assessments pertaining to NTFP certification compliance focusing on the “instrumental benefits” and “legitimacy” associated with NTFP certification are recommended.

Last but not the least, I also suggest that certification as a market strategy can be successful only if there is a market demand for these products. There are changing preferences seen among consumers who are becoming environmentally conscious, and increasing trends on corporate responsibility as indicated in (Shanley et al. 2002) suggest a shift in focus from purely profit driven to more sustainable approaches where some of the external costs from environmental misuse is internalized by them. Consumer preference study by (Saunders et al . 2013) focusing on Indian consumers have indicated high ratings for attributes like quality, brand, environmental quality and “fair trade” products. Also, value chain analysis of the herbal sector in India, discussed in (Booker et al. 2012) has indicated an increased preference for quality products and the need for improving quality standards. Concerns were raised on the collection impacts of raw materials on the local household economies, benefit sharing mechanisms and the product quality of the final product reaching the consumers. Based on studies (Menon 2007; Menon 2008; RANCOS Industry Research Solutions 2012) there is also an increasing consumer preference for certified products in India. However further explorations on consumer preferences for certified NTFPs or NTFPs

sustainably harvested from certified forest areas, are recommended such that niche market opportunities in the region can be explored.

Notes

1. Vana Samrakshana Samitis (VSS) are decentralized management bodies created following the implementation of decentralized forest management policies in India in the 1990s. Generally every tribal settlement has a VSS which comprises of nine elected officials, all elected from the community itself. The president of VSS is a community member elected by the people and the secretary is an ex-officio member, assigned from the forest department. The primary focus of the VSS is forest management related activities with marketing as an added component. The VSS marketing channels in Kerala are referred to as “Vanasree”.

3. Vanasree is engaged in the collection, processing, value addition and marketing of NTFPs and retailed under the “Vanasree” brand at various Vanasree outlets. Territorially forests of Kerala comprise of five circles and each circle has a number of forest divisions headed by the Divisional Forest Officers. Each division has a number of VSS units depending on the number of settlements. A processing unit where processing, value addition and packaging under the Vanasree brand is carried out and a retail outlet, also named Vanasree, the processed & packaged products are sold.

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CHAPTER 3. NON-TIMBER FOREST PRODUCTS CERTIFICATION AND MANAGEMENT –AN ECONOMIC STUDY AMONG THE KADARS

Abstract: Debates on linking livelihoods and conservation through the commercialization of non-timber forest products (NTFPs) continue to hold significance considering the increasing market demand for NTFPs, its high economic value for forest dependent communities and “enabling” neo-liberal policies that are in place. Kerala, located on the south west coast of India, flanked by the Western Ghats- a UN declared bio-diversity hot spot, on its windward side, is of particular significance due to the presence of the Ayurvedic Industry- a traditional medicine industry that procures 90% of its raw materials from the wild. In addition, the presence of a resource dependent tribal population re-affirms the economic, social and cultural significance of NTFPs. Unfortunately, unsustainable practices and poor co-management & marketing arrangements have rendered the sector ineffective in terms of meeting livelihood as well as conservation goals in the region. Although new approaches such as NTFP certification are being recommended for India not much has been reported on its feasibility and/or implementation challenges. Focusing on the Kadar community of Kerala, this study attempts to highlight some of the issues within the sector and using an “instrumental model”, present the benefits accrued from new strategies such as NTFP certification through quantitative and qualitative assessments. Last but not least, recommendations for the adoption of sustainable strategies in context with the existing policy environment are provided that may be broadly applicable to other forest dependents communities in India and elsewhere.

Keywords: NTFP; Western Ghats; NTFP Certification; Livelihoods; Conservation; Cost-Benefit

Introduction

India has great wealth from NTFPs in its forests, its wetlands, and in its marine areas containing many endemic plants and animals (Mahapatra et al. 2005). Commercialization of these resources (Gadgil and Rao 1998; Shankar et al. 1998; Shahabuddin and Prasad 2004) along with poorly evolved forest co-management structures (Rai 2007) mainly due to oversimplification (Li 2002) or as (Ostrom 2005) calls it “single prescription policies” has led to intensive harvesting of NTFPs and increased loss of biodiversity and forest cover. At the same time forest communities continue to depend on NTFPs for subsistence as well as

livelihood (Gubbi and MacMillan 2008; Lélé et al. 2010; Shylajan and Mythili 2012) with 20-40% of income derived from NTFPs (Ninan 2009; Yadav and Misra 2012).

Simultaneously, the global demand for natural products from forests is on the rise due to the increase in demand for “culturally important NTFPs” mainly used as key ingredients in the alternative medicines industry (Pierce 2002; Shanley et al. 2008). One such industry is the Ayurvedic industry, 80% of which is located in Kerala. It is valued at 5.5 billion dollars annually and 90% of raw materials to the industry is procured from the wild (Samraj 2010). With the expanding herbal and nutraceutical industry (Jayaraman and Anitha 2010; ASSOCHAM 2010; RANCOS Industry Research Solutions 2012) the demand is only expected to rise further and the repercussions from increasing demand are already being felt within the industry as well as on the resource base. Adulteration and substitution are becoming a common phenomenon and due to the ineffectiveness of existing marketing arrangements, the livelihood returns to communities are also impacted. In fact, one of the major concerns facing the sector is the growing informal sector where market chains or trade linkages are ambiguous and unaccounted for. Studies pertaining to NTFPs and livelihoods in India have suggested the need for new management and marketing arrangements for NTFPs (Ninan 2009; Jayaraman and Anitha 2010; Shylajan and Mythili 2012; Yadav and Dugaya 2013).

International experiences have highlighted the potential of NTFP certification as a marketing strategy to meet sustainable outcomes (Shanley et al. 2008). Therefore it is being suggested and explored for India as well (Bhattacharya et al. 2008; Bhattacharya et al. 2009; Nath 2010; Nath 2010; Krishnakumar et al. 2012b; Yadav and Dugaya 2013). In this context, the goal of the study is to determine the economic significance of NTFPs to the Kadar household in Kerala, highlight the issues within the sector in terms of management & trade and explore whether certification of NTFPs in Kerala is a promising strategy to meet sustainable goals.

The goal of NTFP certification is to ensure “ecologically sound, socially beneficial and economically viable forestry” (Shanley et al. 2002b, pp.8) and therefore based on the results, and the current policy scenario various context specific recommendations for adopting certification in Kerala are discussed. These recommendations can have broader implications in terms of adopting similar methods and approaches to assess the feasibility of NTFP certification in other parts of India and the developing world. But prior to this, based on existing literature, the following sections 2 and 3 discusses the advantages of certification,

one of the major certification standards extended to NTFPs and some recent developments pertaining to NTFP certification globally and in India.

Certification of NTFPs: A Global Perspective

New strategies such as value added markets through certification or eco-labeling are reported to have been successful in developing countries of Latin America and Africa resulting in increased income, land tenure security, stronger socio-economic status of forest communities and positive conservation outcomes (Grieg-Gran et al. 2005; Laird et al. 2010; Lilieholm and Weatherly 2010). Experts claim that based on the philosophy of ecosystem management (Robertson 1992; Salwasser et al. 1993) “certification standards can overcome the environmental, economic, and social pitfalls that have impeded the success of commercialization efforts of NTFPs”(Wilsey and Hildebrand 2011) by ensuring market access to responsibly produced products (Nepstad and Schwartzman 1992; Viana et al. 1996; Pierce and Ervin 1999; Shanley et al. 2002b; Shanley et al. 2008). Different certification programs are in effect, with different goals and standards, but with an overall aim in making production systems more sustainable. Among them the Forest Stewardship Council (FSC) is perhaps the most popular and widely applied to NTFPs and awarded to forest areas that comply with FSC Principles & Criteria, the most recent version being V.5 (FSC Technical Report, 2013). It is hailed as the most effective of the certification schemes operating at a global scale (Cashore et al. 2005); although, questions remain on its effectiveness when extended from timber to NTFPs. Recent developments include the creation of International Generic Indicators (IGI) that will be used to effectively apply the FSC PC V.5, at a specific country level and thus strengthen its credibility (FSC Technical Report 2013).

Certification can influence within forest management units- better working conditions, benefits, participation, property rights, and traditional knowledge (Hussain 1999). But due to the “high level of organization and technical sophistication that certification requires” (Shanley et al. 2002b pp.5), cost is a major challenge (Shanley et al. 2008). However, with ongoing research & development the certification process is being made more accessible and cost-effective (Burnside 2013). For example, the Small and Low Intensity Managed Forest (SLIMF) certification, which is designed to help smallholders defined as “woodlot owners, family forests, small non-industrial private forests, small forest enterprises, community forestry operations, and NTFP harvesters” (FSC Technical Report 2009) is a promising development in NTFP certification.

Certification of NTFPs in India and Within the Kerala Context

India's 12th five year plan highlights the importance of NTFPs particularly in terms of its significance to livelihoods of marginalized tribal communities (PlanningCommissionReport 2011). Of the many suggestions highlighted for development by the NTFP sector, of significance is market development focusing on standardization and certification.

Due to the overall sustainable outcomes it entails, NTFP certification is being explored for India (Bhattacharya et al. 2009; Nath 2010; Yadav and Dugaya 2013). A certification framework for NTFPs, specifically for Medicinal Plants (MPs) was developed through a participatory approach, soliciting inputs from stakeholders covering four states in India-Madhya Pradesh, Chhattisgarh, Orissa and Uttarakhand (Bhattacharya et al. 2008) and it continues to be evaluated and updated (Yadav and Dugaya 2013). The most recent framework encompasses four principles, 17 criteria and 54 indicators (Yadav and Dugaya 2013). Although there are agencies offering NTFP certification services, for example- CGCERT in Chattisgarh and INDOCERT in Kerala (CGCERTWebsite; INDOCERTWebsite), no formal attempt at NTFP certification has been reported from either of these regions and therefore can this strategy be cost-effective to encourage compliance?, what are the key implementation challenges? and how it may be addressed is still unknown. The study attempts to address these gaps by carrying out a context specific assessment.

Considering the significance of NTFPs in Kerala, this study is carried out in Thrissur district with a resource dependent tribal population of Malayan, Kadars, Muthuvans, Malaaryans and Mannans who occupy about 1135 hectares of evergreen forest area land (KFD Website). Thrissur district also has parts of the major Ayurvedic industry with processing outlets such as Oushadhi and Vaidyaratnam and is one of the major collection centers in the state for NTFPs with close proximity to key trade centers such as Kochi. Among the communities, the Kadars are the most vulnerable, categorized as particularly vulnerable tribal groups (PVTGs) as per Government of India directive that describes them as having a pre-agriculture system of occupation, engaged in hunting and gathering, with a declining population and illiteracy (Chaudhuri and Chaudhuri 2005). There are 275 Kadar families in Thrissur and who are traditionally engaged in NTFP collection for their livelihood and continue to do so.

The two specific objectives of the study are:

1. To assess the economic dependency of Kadar households on NTFPs, the local NTFP trade & market scenarios and its implications on livelihoods and conservation.
2. To determine the economic value of NTFPs to the Kadar household under current marketing conditions versus certification and assess compliance to certification.

Data Collection and Analysis

Data were collected in 2012 using a questionnaire based survey from a representative sample of 101 Kadar households (100 sample size was recommended by a sample size calculator with a 95 per cent confidence interval). Data on the quantity of NTFPs collected the previous year, the quantity sold, to whom and for how much, the transportation cost as well as time spent in collection were gathered from the respondents. To assess the annual income and the NTFP percentage share, detailed information on different income sources were collected (Krishnakumar et al. 2012a). Last but not the least, general socio-demographic data, the respondents' perception regarding the resource, its use and their preferences to adopt certification were also collected. The survey questionnaire comprised of both objective as well as open ended questions. Secondary data in the form of sales data from the local marketing cooperative, prices received at the retail end for key NTFPs and certification fees were also gathered. Descriptive statistics, regression as well as economic analysis were carried out to meet the objectives. One approach to assess compliance to new strategies is to rely on "instrumental models" or "economic models". The most commonly used instrumental models in natural resources are cost-benefit analysis and calculating net present value (NPV) using discount rates (Becker 1968; Ramcilovic-Suominen and Epstein 2012). Qualitative assessments of respondents' opinions and insights drawn from previous studies were used to explain and support the outcomes of the quantitative analysis. All statistical analysis was performed using SPSS vs.21.

Results & Discussions

Objective 1: To assess the economic dependency of the Kadar households on NTFPs, the local NTFP trade & market scenarios and its implications on livelihoods and conservation

Primary data analysis revealed a continued dependency of Kadar households on forest resources for income. Two types of dependencies were noted. First is the direct linkage, where income is derived from collecting resources, particularly NTFPs from the forest and

trading them in the market. Second is the income derived from forest management activities, implemented through the States' forest department and undertaken as paid labor. This study primarily focuses on the former linkage and descriptive analysis shows 85% of total households are engaged in NTFP collection. There are different variables to measure forest dependency (Bluffstone et al. 2001; Pattanayak and Sills 2001) among which, "household income generated from forest extraction" is considered an ideal indicator (Illukpitiya and Yanagida 2010). Primary data analysis indicates that 54% of total forest generated income is from collection and trade of NTFPs and the remaining 46% from forest management and conservation related activities. In terms of the overall income (including non-forest related work), income from NTFP occupies the largest share (34%). Previous studies have shown that dependency on forest resources decreases as overall household income from other sources increases (Godoy and Bawa 1993; Illukpitiya 2005) and that is not the case here.

To further understand the nature of income dependency on NTFP, regression analysis was carried out. Literature indicates how household decision making in forest resource extraction are influenced by a number of socio-economic (Godoy and Bawa 1993; Gunatilake 1998; Perez and Byron 1999; Cavendish 2000; Godoy et al. 2000; Bluffstone et al. 2001; Pattanayak and Sills 2001; Vedeld et al., 2004; Ninan 2009; Illukpitiya and Yanagida 2010; Shylajan and Mythili 2012;) "historical" (Coomes 1995) and cultural factors (Balée and Gely 1989). The regression model was also tested for multi-collinearity and no multi-collinearity was found as VIF values were found to be less than the threshold value of 3. The assumption of homoscedasticity was also confirmed using a scatter plot (Agresti and Finlay 2009).

The regression results (Table 3.1) show education has a significant negative relationship with NTFP income and descriptive statistics indicate the majority of respondents as being illiterate. Also there is a significant positive relationship between male collectors and NTFP income which is not surprising as Kadar society is patrilineal (Kakkoth 2005) where decisions are mainly made by men through an elected male leader also referred to as the *moopan*. Living in proximity to the forests also shows a significant positive relationship to NTFP

Table 3.1: Regression Analysis Showing Relationship between NTFP Income and Key Independent Variables among the Kadar Community (Based on Data from 101 Households Collected in 2012)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	28240.231	14579.413		1.937	.056
i. Gender: F= 0; M= 1	19179.411	5942.876	.308	3.227	.002*
ii. Education	-6012.176	2580.366	-.232	-2.330	.022*
iii. Age	-282.534	287.602	-.097	-.982	.328
iv. Yrs lived in or close to forest	270.958	110.074	.234	2.462	.016*
v. Cultural significance of forest	-4184.523	2085.377	-.189	-2.007	.048*

* $P < 0.05$; R Square = .19; Std. Error of the Estimate = 27985.506; $F = 4.423$; Model sig = .001

income which suggests a greater dependency on NTFPs. Last but not least, as cultural significance of forests increases, NTFP income decreases (where cultural significance of forests is defined as the use of forest resources for religious activities, traditional health care and social activities). The analysis revealed a continued socio-economic dependency on NTFPs by the Kadar community but how this translates to livelihood and conservation outcomes in the context of existing institutional arrangements is discussed next.

Assessments revealed that, in terms of returns, the collectors do not receive the government stipulated 80% returns from goods sold (Saxena 1997) at the wholesale level. This is evident from the large price gaps between the collection end and the sales end (“e”) (see Table 3.2) where products are auctioned off by the cooperative society, despite being a government approved marketing channel. The price gaps are even wider when comparing the collection rates to the retail end (“f”) (see Table 3.2). These discrepancies are perhaps due to

the collectors' lack of market knowledge, and their lack of bargaining capacity due to their comparatively weak socio-political status.

Institutional overlaps are also further complicating the process with competition and sometimes animosity among the various government recognized institutions. Field interactions and observations revealed these institutional inefficiencies and resultant outcomes (see Box 1 below)

Table 3.2: Price spread between collection price and retail price and percentage share of collection price compared to the sale price of five key NTFPs within the formal sector in Thrissur (1Kg. = 2.20lbs; Price Calculated at exchange value \$1= 55 INR).

NTFP	Collection Price by Coop. Society per Kg. (a)	Sale Price at Coop. Society per Kg.(b)	Final Consumer Price per Kg. (c)	Price Spread(d) d = (c-a)	% age Share of collection to sale price (e) e = (a*100/b)	%age Share of collection to retail price. (f) f = (a*100/c)
Myristica beddomei (Pathiripoovu)	\$2.54	\$4.36	\$18.20	\$15.64	58%	14%
Curucuma zedoaria (Manjakoova)	\$0.45	\$1.13	\$2.18	\$1.73	40%	20%
Canarium strictum (Thelli)	\$0.64	\$1.25	\$3.27	\$2.64	50%	19%
Elettaria cardamomum (Elakka)	\$2.93	\$16.18	\$23.64	\$20.71	18%	12%
Honey	\$2.05	\$2.16	\$5.45	\$3.40	94%	38%

Data Source: a & b The Kerala State Federation of SC/ST Development Cooperatives Ltd., MFP Sales Statement for the Year 2010-2011, Thrissur District; c from retail outlets in Thrissur.

“e” shows how the government stipulated 80% returns(Saxena 1997) is not met in majority of products even in the case of government approved marketing channels. The gap is even wider comparing collection to retail prices “f”

Box 1: Inconsistencies Within Institutionalized Marketing Channels- Feedbacks from Nine Kadar Settlements of Thrissur District

The nine Kadar settlements covered under the study are Malakkapara; Sholayar; Anakayam; Vatchumaram; Siddhan; Pokalappara; Poringalkuth; Vazhachal and Anapantham. There are in total four collection centers and one society as part of the marketing cooperative and six

VSS committees linked to these settlements. Among the settlements Malakkapara, Sholayar and Anakayam settlements marketed the collected products through the Malakkapara cooperative society. Vatchumaram, Siddhan and Pokalappara settlements are all linked to the Vatchumaram cooperative society but only collectors from Vatchumaram and occasionally from Siddhan colony sold their harvested goods via the society. Owing to the longer distance from Pokalappara to Vatchumaram cooperative society, collectors from Pokalappara settlements sold via the local VSS. In the case of Poringalkuth settlement, NTFP collected was sold via their cooperative society with the exception of fish which was sold via VSS. In Vazhachal colony, a different issue was encountered. Due to a shortage of manpower, the cooperative society could not sell any of the collected goods and overtime the society had gone defunct with all the previously collected goods most likely gone bad. This obviously caused monetary losses both to the cooperative society and the collectors who were forced to sell illegally to private traders the following season. Also, compensation for collected goods by approved collection outlets are given as lump sum and not at the time the collected goods are deposited. This causes a cash flow problem for the collectors who prefer being paid after each deposit. Contrary to this, money from private traders is received immediately on delivery which helps the collectors meet their immediate needs and expenses. Therefore this income lag makes private trading more attractive than government approved channels. However, these informal linkages can lead to debt traps which traders use to their advantage by forcing collectors to give up a portion of their collected goods which traders then sell at a much higher margin.

In case of communities that sold the collected goods through the cooperative society, the price received was apparently decided in consultation with community members and in consideration of the market price, although it did not meet the policy recommended levels (Saxena 1997) (see Table 3. 2). Of the collection charges received, a proportion was withheld at the society to be paid back as a bonus to collectors during festival season which the collectors viewed as a beneficial arrangement. An alternative arrangement was noted at Anapantham colony. Primarily engaged in the collection of medicinal plants, the collectors not only received the full price for collection at the time of delivery but a proportion of the sales profit was also given to them as a bonus. This is consistent with the government stipulated rule of 80% of profits (Saxena 1997) on goods sold reaching the primary collectors. Interestingly, the collected goods are marketed through the VSS to the various forest department run processing units and retailed at the local Vanashree units or Eco-shops.

A proportion of the collected raw materials are also supplied to the government run traditional medicine industry Oushadhi, thus illustrating an effective, well integrated supply chain where stakeholders received reasonable benefits. Unfortunately, such arrangements are not uniformly experienced across all the communities covered under this study. Primary data also revealed how direct sales to the market or via middle men sometimes fetched a higher rate than the cooperative society or the VSS suggesting inconsistencies in pricing which is also a crucial issue that needs attention.

Income assessments of respondents revealed that they are selling to private traders (62%) although when directly asked, the majority claimed that they do not. This is not surprising as policy provisions restrict the direct sale of these resources to private traders. But faced with uncertainties & irregularities in the formal marketing channels as well as the poor returns from the formal sector (Table 3.2), the higher price received from the informal sector (or the non-registered traders) despite being illegal, is more appealing and therefore growing. Also, deficiencies in terms of policies restricting informal traders, and the current institutional arrangements are not effective in curtailing such unaccounted resource flows and resulted in reduced forest density and resource availability. Studies have also shown that NTFP harvesting and collection decisions are price responsive (Amacher et al. 1999; Cooke 1998; Köhlin 1998) and can lead to unsustainable resource use if efficient mechanisms are not put in place. New strategies such as certification may assist in overcoming such unsustainable practices (Shanley et al. 2002b; Krishnakumar et al. 2012b; Yadav and Dugaya 2013) but compliance to these arrangements will occur only if net benefits received are greater than costs (Ramcilovic-Suominen and Epstein 2012). Therefore to assist with decision making, using “instrumental models” (Ramcilovic-Suominen and Epstein 2012) the net benefits under the current usage and under new market mechanisms are calculated and compared in the next section.

Objective 2: To determine the economic value of NTFPs to Kadar household under current marketing condition versus certification and assess compliance to certification.

The economic value of NTFP is an incentive to extract NTFPs and perhaps best measured in terms of the net income (Ninan 2009). Various studies have examined the value of NTFPs which include estimation of income generated (Shylajan and Mythili 2012), valuation from the view point of market efficiency (Chopra 1997), the estimation of income

composition among peripheral communities engaged in NTFP extraction (Gunatilake et al. 1993) and net benefits factoring in all costs including various externalities (Ninan 2009). So far there is no published study assessing the economic value of NTFPs among the Kadar community.

Primary data provided information on the key NTFPs collected the past year, the quantity collected, and the collection price based on the channel it was marketed. This includes (i). the government approved marketing channels namely the cooperative society and the VSS and (ii). the unregistered (informal) private traders.

The net income from NTFPs per household based on primary data was calculated as follows:

$$GR = \sum_i \sum_j \sum_k P_{ki} Q_{kij}$$

$$NR = GR - \sum_j C_j$$

Where GR= gross income from NTFPs collected and sold by a household

P_{ki} = The price of the product i marketed through k^{th} marketing channel.

$k= 1$ and 2 indicating government approved marketing institutions and unregistered (informal/private) traders respectively.

Q_{kij} = The quantity of NTFP product i collected by the j^{th} household and marketed through k^{th} channel for the time period

NR = Net income from NTFP collected by a household

C_j = Combined cost of extraction of all types of NTFPs by the j^{th} household.

(includes cost of transportation; cost of labor)

Under the existing marketing scenario, the analysis indicated the current net income from NTFPs per household as Rs. 22317(\$ 405.76).

Costs include transportation cost (e.g. average Rs. 500 for transporting goods (mainly bus/jeep fare) to market after spending 8 weeks average time on NTFP collection) as well as labor cost. Labor cost was calculated based on the time spent by the household in NTFP collection and imputed at the minimum wages as prescribed by the government for unskilled labor (approximately Rs 150/day (\$2.72/day) for the year 2011-12 (MNREGWebsite)). A positive value for net income after deducing the costs, indicates that benefits from the collection and sale of NTFPs is greater than costs. For a longer term value of NTFPs to the household income, the net present value (NPV) was calculated for periods of 10 years and 20 years (Ninan 2009; Shylajan and Mythili 2012). Ten years was chosen on the basis of the government “working plans” also referred to as the micro plans for resource area

management prepared and executed by the communities through the VSS linked to them, valid for 10 years and renewed thereafter. The estimated NPV would also provide a sense of forgone benefits if access to resources is restricted or impossible due to resource loss.

In order to calculate the net present value, a discount rate of 11% was used based on the published prime rates (Reuters Report 2013) by the State Bank of India (a nationalized bank in India) for 2012 and this is similar to the discount rate used in earlier studies (Ninan 2009; Shylajan and Mythili 2012). The NPV of NTFPs under the current circumstances showed a positive value which suggests that engaging in NTFP collection is beneficial to the traditional collectors.

But considering the fact that unsustainable harvest is an issue, the next step was to evaluate the economic benefits under new sustainable market arrangements such as certification. As mentioned earlier, no form of certification attempts have been carried out in Kerala so far and so there is no primary data available in terms of income and costs related to certification. The costs of certification are broadly classified as direct cost and indirect cost. Auditing services generally comes under direct cost (FSC Fact Sheet 2012) which is what the study focuses on. For the purpose of analysis, costs of certification audit as quoted by the Chhattisgarh certification society (CGCERT Website) for wild harvester groups were used assuming a resource collection area extending from 500 hectare upto 2500 hectares of forest land (CGCERT Website).

These costs were then divided among the total number of Kadar households of 275 and the cost of certifying forest area/household was estimated for 500 hectares; 1000 hectares, and 2500 hectares of forest land (Table 3.3). The NPV was calculated (Table 3.3 (e)) based on the following formula:

$$NPV = \sum_{t=0}^{end} (R - C)_t \frac{1}{(1 + r)^t}$$

NPV= Net Present Value

R = Revenue (or Gross Income/household)

C= Cost (includes cost of transportation; cost of labor and cost of certification from certification fees)

r = discount rate (11% in this case calculated based on the prime rates published by State Bank of India)

t = time period (10 years and 20 years)

The results showed a positive value for NPV at a discount rate of 11% calculated under different scenarios (Table 3.3), suggesting that despite the additional cost of adopting these strategies net benefits remain positive. However, the additional cost reduces the NPV under the different cost scenarios (Scn. No: IIa; IIIa; IV.a, see Table 3.3) compared to the current scenario (Scn. No: I – see Table 3.3). But these calculations do not take into account the potential premiums from selling certified products. Due to lack of market information on the sales value of certified wild harvested products, an additional increase of 35% price premium on the products is assumed based on price premiums received for organic certified products in India as per published studies, where it ranges between 5% to as high as 60% (Menon 2007; Menon 2008). Based on this, an average of 35% increase in benefits is also estimated per household which substantially increases the NPV of certified NTFPs (Scn. No: IIb; IIIb; IV.b, see Table 3.3). Secondary data from the local Vazhachal Divisional Forest Office indicated an average area of 1500 hectares covered by the different communities within the study area (the Vazhachal range) for NTFP collection. Based on the area the NPV for Vazhachal range can be expected to fall somewhere between the NPV value estimated for 1000 hectares to 2500 hectares.

However it should be noted that the costs considered in the study does not include indirect costs associated with policy development, management, compliance monitoring and training (FSC Fact Sheet 2012). Meeting all these costs can be challenging considering the weak socio-economic status of the primary stakeholders. International experience suggest integrated collaborative approaches where external support is sought from participating private firms, traders interested in certified products and/or government support (Shanley et al. 2008). The key is to identify existing provisions and mechanisms in place and utilize available resources in an efficient way. In India, there are already policy provisions and government supported management strategies in place that can be tapped to incorporate these new innovations. The following section discusses some of these opportunities in detail.

Recommendations: Opportunities for Integrated, Collaborative NTFP Management, Marketing and Certification

Long years of consistent struggles have paved the way for policy changes that evolved from centralized control over forest resources to decentralized arrangements involving people's participation in conservation and management of resources. From a forest management perspective, preparation of micro plans for resource area management in a participatory manner, creation of Joint Forest Management (JFM) committees such as VSS

Table 3.3 : Net Present Value of NTFP Benefits Based on Annual Household Income Among Kadar Households for the Year 2011-2012.

Scn.No: (a)	Different Cost Scenarios (b)	Annual Estimated Income (c)	Discount rate of 11% for different time periods (in years) (d)	NPV/ household (e)
I	Income under current scenario (After deducting only transportation and labor cost)	\$405.76	10	\$2389.63
			20	\$3231.24
II a.	After deducting transportation, labor and certification cost for up to 500 hectares of reserve forest = \$118.18* (\$0.42/hh)	\$405.35	10	\$2387.18
			20	\$3227.58
II b.		\$547.2 (after 35% increase on benefits)**	10	\$3222.69
			20	\$4357.67
III a.	After deducting transportation, labor and certification cost for up to 1000 hectares of reserve forest= \$178.18* (\$0.63/hh)	\$405.13	10	\$2385.89
			20	\$3226.16
III b.		\$546.90 (after 35% increase on benefits)**	10	\$3220.98
			20	\$4355.36
IV a.	After deducting transportation, labor and certification cost for up to 2500 hectares of reserve forest= \$250.90 (\$0.90/hh)	\$404.85	10	\$2384.27
			20	\$3223.98
IV b.		\$546.54 (after 35% increase on benefits)**	10	\$3218.72
			20	\$4352.31

*Assumed that cost will be shared equally among all Kadar household which is 275 families; hh=household

**an additional increase of 35% price premium on the products is assumed based on literature for price premiums received for organic certified products in India (Menon 2007; Menon 2008).

and EDC and marketing cooperatives & Scheduled Caste/Scheduled Tribe Federations are some of the key outcomes of decentralized institutional mechanisms. However field assessments reveal deficiencies in these arrangements (see Box 1). With policy provisions ensuring greater autonomy to resource use (e.g. The Forest Rights Act (FRA) 2006), such ineffective arrangements can have serious implications. Based on the ongoing developments in India with regard to NTFP certification (Bhattacharya et al. 2008; Bhattacharya et al. 2009;

Yadav and Dugaya 2013) as well as with FSC certification as mentioned earlier (FSC Technical Report 2009, 2013; Burnside 2013;), the current NTFP livelihood & trade status of the Kadar community and the various policy provisions available, the following suggestions to enable successful adoption of certification or similar sustainable market arrangements are discussed. These are also expected to be broadly applicable to forest resource dependent communities in Kerala and elsewhere in India.

1. Revamping Institutional Arrangements: The current scenario revealed presence of two competing, government approved marketing channels (the cooperatives and the VSS), unsuccessful in maximizing economic gains to collectors, not to mention a resource drain due to inefficient management and poor conservation outcomes. As a solution, various reformative actions are suggested. One possibility is to revamp the long established three tier cooperative marketing system and improve its efficiency while simultaneously withdrawing the marketing support extended by the VSS or EDC. In most communities effective functioning of the VSS has to do with a committed VSS secretary who is an employee of the FD and very rarely sustains itself once the secretary is transferred to a different region. Also FRA 2006, mandates creation of an alternative committee to overlook the administration and management of the forest land issued under the post-claim scenario. It is also expected to channel government resources intended for developmental purposes of the respective community. Under such circumstances, the role and future of existing forest management institutions such as VSS and EDCs is not clear. Interactions with local Divisional Forest Officers in and around the study area expressed the practicality of merging the various management institutions into a single unit, as it is likely to reduce redundancy, inefficiency and resource loss (Anitha et al. 2013). This post-claims management unit can then oversee the various aspects of the community including marketing of NTFP and compliance to certification standards and collaboration with other partnering agencies. The goal is to incorporate sustainable management strategies in a cost effective manner. With options like SLIMF by FSC (FSC Technical Report 2009) adopting and adhering to certification standards have also been made more accessible to small community forest holders. With the establishment of clearer community rights over forest resources under FRA2006, there is scope in supporting such community forest user groups to move towards certification.

2. NTFP Pricing Policy: Price gap analysis (Table 3.2) and primary data analysis revealed inconsistency in pricing of NTFPs and the benefits received by the collectors as one

of the reasons for inconsistent and unstable livelihoods and threats to resource availability. This makes it essential that an effective pricing policy be put in place especially for NTFPs that are high priced or high in demand or both. However, how it would translate to benefits received and to who remains uncertain. Currently, NTFPs such as *tendu* leaves and bamboo have specific policies in place which until recently were under government control. With the implementation of FRA 2006, rights over these high value products have shifted to primary stakeholders from the forest departments despite their reported reluctance in releasing these rights. This has caused strains in relationship, manifested mostly in the form of poor and slow implementation of FRA, especially community rights in many regions (Anitha and Rajeev 2012; Münster and Vishnudas 2012; Shrivastava 2012; Anitha et al. 2013) although Kerala is one of the leading States in India in terms of FRA implementation (Planning Commission Report 2011; Anitha and Rajeev 2012; Anitha et al.2013).With clear property rights in place, ensuring fair prices for products and fair returns will promote sustainable harvests. With the support provided under the 12th five year plan, corrective suggestions are not far-fetched. A budget of 2000 Crores INR has been allocated for minimum support price for key NTFP products (Planning Commission Report 2011) and they must be channeled appropriately such that those entitled receive benefits.

3. Increasing Awareness and Training to Primary Stakeholders: Although policies are being implemented with the best of interests in mind for the marginalized community, challenges persist because the beneficiaries remain unaware, incapable and untrained to utilize new and improved opportunities and policy environment. Stakeholders need to be well informed on policies and institutional provisions directly pertaining to NTFPs. Initial emphasis should be on educating the stakeholders on certification and or similar sustainable market arrangements, what it entails and its long term benefits. Facilities for imparting extension support, similar to the agriculture sector are necessary where educating the collectors along with ecological monitoring of forest resources are undertaken. Linking them to development agencies such as National Bank for Agriculture and Rural Development (NABARD) (Planning Commission Report 2011) can have positive outcomes as support can be extended to the communities for NTFP enterprise development through certification and improve market knowledge. Implementing a model certification project such as the SLIMF (FSC Technical Report 2009) at each society level, with financial support channeled through the local cooperative bank or NABARD is suggested. An earlier study with the Kadar community has indicated a preference for certification and identified

respondent group most likely to adopt certification (Krishnakumar et al. 2012a). Targeting these groups and implementing the pilot project will not only be beneficial as a learning experience, but with demonstrated success it may motivate adoption by similar groups. A continuous process of research & development will be necessary to learn and improve the process until the system becomes streamlined. Available resources, for example the budgetary allocation of Rs. 290 Crores for NTFP related R&D under the 12th five year plan (Planning Commission Report 2011) needs to be tapped in by the local research institutions where a system of adaptive management in partnership with local NGOs and primary stakeholder groups or societies or management committees is established.

4. Market Information Dissemination: Clarity on market information regarding NTFPs is crucial. This could be pertaining to identifying markets for certified wild products and understanding consumer motivations for buying these products. In India, there is a growing organic food sector and consumer studies indicate a desire for good health and avoiding chemically treated products as the primary reason for preferring organic products (Menon 2007; Menon 2008). Similarly there are shifting trends within the herbal sector as well where there is an increasing preference among consumers for ‘natural’ and ‘herbal’ products, particularly for their “bio-active ingredients that are safe for human skin” (Saini 2011; Kapoor and Garyali 2012;). But this information on market demand is currently not reaching the NTFP collectors and only to some extent to small scale processors or producers. There are programs under the Department of Tribal Welfare such as the tribal information, education and communication project, responsible for awareness building and information dissemination among tribal communities. There are also tribal promoters who are the educated men or women hired from each community and expected to serve as the link between the department and the tribal beneficiaries. They are enlisted to transfer and explain new government policies, schemes and opportunities to community members, intended for their benefit. However, direct field interactions and assessments indicated an underutilization of these facilities and in majority cases a general lack of awareness even among the promoters. Such knowledge sharing could also be incorporated within the institutionalized marketing system where regular training and market updates are made available. As per the 12th five year plan, a budget allotment of Rs. 250 Crores has been allocated for awareness generation among stakeholders (Planning Commission Report 2011). The best approach would likely be to facilitate this process by collaborating with local NGOs and local community groups or well-functioning marketing societies.

Conclusion

With a positive economic value, significant economic dependency, increasing market demand and presence of new policy arrangements, the impacts on NTFPs require careful monitoring. This monitoring is significant from a socio, economic and environmental perspective, or in other words from a long term sustainability perspective. With clearer property rights ensured through FRA 2006, a greater efficiency in resource use and management can be expected (Agrawal 2003). Yet with some of the reported issues with implementation of FRA 2006 (Sathyapalan 2010; Anitha et al. 2013), attaining efficient outcomes appears challenging unless the previously discussed recommendations are considered and put into effect. Although certification of NTFPs has been hailed as a market strategy having the potential to achieve sustainable and positive economic outcomes (see Table 3.3), many challenges are also linked to its implementation (Shanley et al. 2002a). These challenges pertain primarily to management related costs and ecological knowledge gaps associated with NTFPs. Reports of successful certification programs indicate use of collaborative approaches where partnering with the government sector, non-profit sector and the private sector have reduced costs to harvesters (Alcorn 2002; Johnson 2002; Ortiz 2002; Burnside 2013), offered chain-of-custody solutions (Guillen et al. 2002) and attained sustainable outcomes. The marketing of the chicle gum from Brazil or the certification attempt in Nepal among smallholder community forest user groups (CFUG), engaged in NTFP collection are examples of such successful attempts. In Nepal, the Asia Network for Sustainable Agriculture and Bio-resources (ANSAB) initiated the formation of the Nepal Non-timber Forest Products Public-Private Marketing Alliance through a multi-stakeholder process, adopted an interim FSC certification standard following a group certification model and invested in capacity building and awareness creation. Later, the CFUGs were awarded the FSC certification by the Rainforest Alliance certifying group after a compliance assessment. This is an excellent model of private-public partnership that not only diminishes the daunting technical aspects associated with certification standards' compliance but also some of the indirect costs associated with certification are reduced with greater efforts in terms of awareness generation and information access.

With regard to the ecological knowledge gaps, experts suggest identifying NTFPs that have significant market demand as well as traditional knowledge associated with its management, particularly its regeneration patterns and harvest schedules; this will make the certification process easier, and overcome the most challenging aspect of NTFP certification

(Shanley et al. 2002a). Also, new and simplified certification arrangements available for NTFPs (FFSC Technical Report 2009) and growing government and research interests associated with NTFP certification, the prospects are much brighter. India's 12th five year plan has listed seven goals for NTFP marketing (Planning Commission Report 2011) along with substantial budgetary provisions for NTFP management & development with special emphasis on NTFP certification, awareness & capacity building and creation of enabling institutions that can offer systematic and organized help to the sector. This is consistent with the Coir Board, Cashew and Coffee Board of India (Planning Commission Report 2011). Also, various certification arrangements are in place and being developed for NTFPs in India. Majority of the rules embedded within the certification framework are theoretically in place in the form of policies, provisions, and institutions. The challenge is to adopt a mechanism to implement them. Despite decentralized policies in place, key departments such as the State Forest Department, the Tribal Department, the Cooperative Society as well as community based JFM institutions, historically linked to forests and its people continue to hold relevance and these linkages cannot be abruptly severed. The key is to recognize that institutions do not function in isolation but are constantly interacting and are influenced by other organizations and institutions. In other words, these inter-linkages and interactions are crucial and require continuous assessment and strengthening through effective integration. With the budgetary allocation of upto Rs. 6000 Crores for NTFPs in India as per the 12th five year plan (2012-2017) (Planning Commission Report 2011), the above discussed suggestions can be considered.

Following the assessments on the instrumental motivations to compliance, the “legitimacy” aspects as well as the context specific variables that can in turn influence individual motivations also need to be addressed. The next chapter discusses these from a multi-stakeholder perspective.

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CHAPTER 4. COMPLIANCE TO NTFP CERTIFICATION STANDARDS IN THE CONTEXT OF FOREST RIGHTS ACT- MULTI-STAKEHOLDER PERSPECTIVES FROM KERALA

Abstract: Increased demand for non-timber forest products (NTFP) in Kerala is manifested in the form of resource depletion, substitution and adulteration within the Ayurvedic industry, poor livelihood returns to collectors and threats to biodiversity indicating a need for exploring new market strategies. Certification of NTFP is suggested as an effective approach to meet sustainable goals. Previous study among the Kadars of Kerala indicated preference for certification. But, compliance to certification rules (also referred to as certification standards) is important for its effective implementation. Compliance to rules is influenced by two “motivations”- 1. Instrumental benefits and; 2. Legitimacy. They in turn are influenced by “external contextual factors”. Therefore in this paper we assess compliance in two parts based on multi-stakeholder inputs. In the first part we assess the “external contextual factors” that can influence the two “motivations” to compliance and provide suggestions derived from stakeholder inputs and feedbacks that may enable compliance. These include the need for focusing on the “process” rather than the outcomes of new decentralized policies and institutional arrangements and the need for cooperation and coordinated efforts to ensure accountability, especially “horizontal accountability” among the different stakeholders. In the second part, we assess the “legitimacy” of the NTFP certification standards for India, developed by Bhattacharya et al. 2008. How different stakeholders perceive the ease of implementation or compliance to certification standards are gathered and based on the results suggestions and modifications to the certification standards are provided to assist the stakeholders, especially the Kadar collectors interested in adopting NTFP certification.

Outline: The paper comprises of the following sections: Section1 provides the background of the study, the justification for the study and introduces the two parts of the compliance assessment carried out in the study; Section 2 discusses the conceptual framework that the study is based on; Section 3 discuss the methods of data collection and analysis used in the study; Section 4 presents the certification standard by Bhattacharya et al 2008 and its “legitimacy” in the context of the region of the study is assessed. Multi-stakeholder reactions to each criteria listed within the certification standard are presented. Corresponding suggestions as a means to ensure legitimacy to the criteria are also provided. Section 5 discusses the three “external contextual factors” that are expected to influence motivations to certification compliance from a multi-stakeholder perspective. We present the overlapping

dilemmas and differences in perspectives and also identify common ideas that converge to overcoming obstacles and thus positively influence motivation to certification compliance. Section 6 is the concluding section and highlights key points brought out from the study and opportunities for future studies.

1. Introduction

Unsustainable and illegal activities have had negative impacts on forest lands including biodiversity loss, loss of revenue and livelihoods (Ramcilovic-Souminen and Epstein 2012) as seen in the case of India (Gadgil and Rao, 1998; Shanker et al. 1998; Shahabuddin and Prasad, 2004; Arjunan et al. 2005). In this context Cashore (2002) talks about how neo-liberal policies and international trade have “constrained domestic policy choices” resulting in various “downward effects” on the environment in different parts of the world. India is no exception. The Kerala region of South Western Ghats provides a good example of this “downward” phenomenon. The region is an important source and a major market for medicinal plants (MP) due to the presence of the Ayurvedic (a traditional system of medicine in India) industry. It is also a UN declared biodiversity hotspot and therefore an important conservation region.

The repercussions of this increased demand are manifested in the form of resource depletion, substitution and adulteration within the Ayurvedic industry, poor livelihood returns and threats to biodiversity indicating a need for exploring new market strategies (Bhattacharya et al., 2008, 2009; Madhavan 2008; Nath 2010; Krishnakumar et al. 2012).

Strategies such as value added markets through certification or eco-labeling are reported to have been successful in developed countries of North America (see Cahsore 2002) and in developing countries of Latin America and Africa (see Shanley et al. 2002; Grieg-Gran et al 2005; Lillieholm and Weatherly, 2010; Laird et al. 2010). These have been a result of the “internationalization process” (Bernstein and Cashore 2000) where non-state market driven governance system (NMDG), rather than traditional state authority or other co-management governance systems that have influenced the legitimization of these new strategies (Cashore 2002). Although such “internationalization processes” (e.g. Forest Stewardship Council Certification, Fair Trade (FLO) Certification) are just beginning to reach India, drawing from these international experiences, certification standards for India are being developed (see Bhattacharya et al. 2008 and Yadav and Dugaya 2013). But, compliance to these certification standards are important for its effective implementation.

Discussing forest rule compliance, Ramcilovic-Suominen and Epstein (2012) report how compliance to rules is influenced by two “motivations”- 1. Instrumental benefits and 2. Legitimacy. Compliance assessments pertaining to fisheries management have been reported before (Nielsen 2003). Also similar studies in the context of developed regions of the world have been reported. However, there have neither been any reports on compliance assessments so far, pertaining to NTFP management nor from an Indian context. With the nature of threats and challenges facing the NTFP sector, strategies such as certification are being recommended. However certification entails compliance to a set of standards which requires that those engaging in certification comply to the rules or standards of certification. Thus the goal of the project is to assess compliance to the certification standards developed by Bhattacharya et al. (2008) in the Kerala region of the South Western Ghats. (see Appendix 1 for the detailed certification framework). Our study employs a modified forest rule compliance framework by Ramcilovic-Suominen and Epstein (2012) and comprises of two steps: 1. The “legitimacy associated with the certification framework is assessed and 2. The three” external contextual variables” influencing “motivations” to certification rule compliance are assessed and discussed based on multi stakeholder feedbacks. This is because, when multi-stakeholders linked to the forest is factored in the challenges to rule compliance increases. Dentoni et al. (2012), refers to this as “wicked problems that may hold conflicting beliefs and values among different stakeholders and that cannot be solved without collective action”. Also, as reported in Shackleton, et al. (2011); and Ross- Tonen and Kusters (2011), for new strategies to work, multi-stakeholders directly linked to NTFP need to be engaged. Thus we identified the key stakeholders based on their significant stake on the resources and their traditional roles in resource management in the study region. We then gathered reactions and feedback from the different stakeholders and assessed compliance to the certification standards.

2. Conceptual Framework For Assessing Rule Compliance

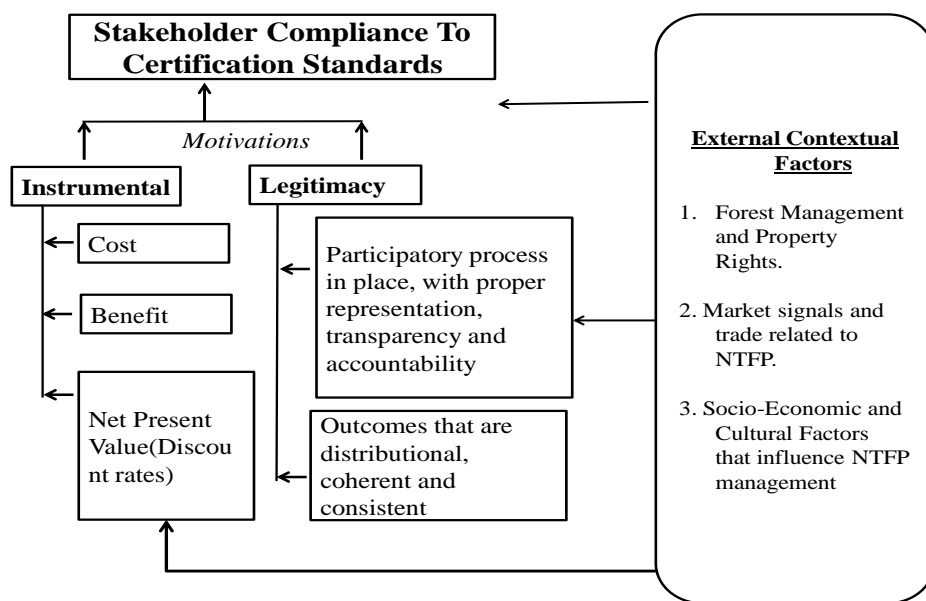
Traditional approaches to understanding compliance to rules concerning the use, trade and conservation of natural resources have always emphasized the economic gains of non-compliance versus compliance leading to creation of stricter rules, monitoring and sanctions (Sutinen et al.1990; Kuperan and Sutinen J. 1998). Nielsen (2003) and Viteri and Chávez (2007) reports that assessments on the management outcomes of strict monitoring and sanctions do not indicate any improvement rather a worsening of the resource conditions and the related externalities. In response, research on common property resource management has

highlighted some key factors that can influence compliance to rules. These factors have not only to do with economic incentives derived from the new rule or arrangement, but more importantly focuses on the type of regulations and sanctions involved, its effectiveness; the consistency between existing rules and traditional practices; and individual normative factors. Among these, the individual normative factors (also called “legitimacy”) are gaining particular significance. Tyler (1990) and Jentoft (1989) refer to legitimacy as the acceptance of the recommended rules, influenced by ensuring “procedural fairness” and also “outcomes” or “personal benefits”. Ramcilovic-Suominen and G. Epstein (2012) draws from these various studies and provides a framework to assess forest rule compliance. This framework is modified to fit our study to assess NTFP certification standards (rules) compliance. The compliance framework (see Figure 4.1 below) comprises of the “instrumental incentives” and “legitimacy”, the two “motivators” of rule compliance. Instrumental incentives refer to monetary returns such as cost-benefit, discount rates and net present value (NPV), which if found to be positive, compliance to rules is likely to occur. In the context of the study, instrumental incentives have to do with the monetary benefits of adopting certification versus the current market arrangements. Legitimacy on the other hand comprise of the “procedure” of rule creation; the “process” involved and the “outcomes”. The “procedure” emphasizes on who the participants are and how well they are represented. “Process” emphasizes how transparent, accountable and effective the rules and its implementation is. And “outcomes” emphasize how complementary the rules are to existing rules, if there is consistency between the objectives and the rules, and how clear and executable the rules are. For our study, legitimacy is based on the responses or feedbacks to the NTFP certification standards (particularly the principles and criteria), developed by Bhattacharya et al 2008, by the key stakeholders. We focus on the 4 principles and 15 criteria which form the certification standards and based on stakeholder feedback and assessments, modifications are suggested to increase its legitimacy and in turn a higher likelihood of compliance. An assessment of the instrumental benefits as “motivators” to compliance was carried out as part of a previous study and was found to be positive provided certain conditions are met (Krishnakumar et al. in review).

The next key component within the framework (see Figure 4.1) is the “external contextual factors” that can in turn influence the two “motivations”. Ramcilovic-Suominen and Epstein (2012) also refer to them as “non-compliance factors” and according to them are a set of highly interconnected variables that influence motivations to compliance and must also be taken into consideration when assessing forest rule compliance. From the list of

“external contextual factors” provided by Ramcilovic-Suominen and G. Epstein (2012), we identify three factors that are of greatest relevance to our study. They are: 1. Forest management and property rights. This includes the current institutional arrangements for forest management in the region, and the newly implemented Forest Rights Act. 2. Market signals and Trade related to NTFP. This includes the current status of NTFP markets and trade both domestic and international, issues within the major industry sector (e.g. Ayurveda), the existing nature of the market channels and the

Figure 4.1: Analytical Framework for NTFP Certification Preferences.



(Modified forest policy compliance framework in Ramcilovic-Souminen and Epstein (2012))

need and potential for alternative market arrangements in the region. And 3. Socio-Economic and Cultural factors that influence NTFP management. This has primarily to do with the primary stakeholders (the Kadars in this case) and how their socio-economic conditions and cultural linkages influence their motivations and also how they are perceived by or compete with other participating stakeholders.

In the next section (3) we discuss the methods of data collection and analysis undertaken for the study.

3. Data Collection and Analysis

I collected primary data from four categories of stakeholders. Since the study area was limited to the Kadar communities located in Thrissur district, majority of the secondary stakeholders were also limited to the area of study. Thus feedbacks were solicited from 1.

The Kadar community leaders (the primary stakeholders) from the nine Kadar settlements, located in Thrissur district. They are: Malakkapara; Sholayar; Anakayam; Vatchumaram; Siddhan; Pokalappara; Poringalkuth; Vazhachal and Anapantham. The secondary stakeholders included respondents from 2. The forest department, which included the DFO, the forest range officers, the VSS coordinators, the VSS secretaries and/or foresters. 3. The buyers or the Ayurvedic industry which included a government enterprise and a private enterprise located in the region; and 4. The local NGO.

I conducted approximately 36 in-depth interviews covering all categories of stakeholders that provided the rich qualitative data. The respondents were identified through snowball sampling (referral sampling). An inductive approach, as recommended in Bryman and Burgess (1994); Dey (1993); and Thomas (2003), to compile and analyze the qualitative data was used. Based on the qualitative data, themes or ideas on how the different stakeholder respondents perceived the contextual variables that can influence “motivations” to certification standards’ compliance were identified. A survey based questionnaire using a five point scale to quantitatively measure the ease of compliance to the certification standards for the Kadars as perceived by the different stakeholders. None of the industry representatives participated in the quantitative assessment expressing limited to no knowledge of forest laws or harvest practices. Since this study was carried out in conjunction with the ongoing study by the Kerala Forest Research Institute (KFRI) on assessing the Forest Rights Act implementation among the Kadars, the enquiries started with questions related to the current implementation status of the FRA among the Kadars, its process and expected outcomes followed by specific queries pertaining to certification. The survey contained questions for the FRA implementation assessment study by KFRI along with the questions on compliance assessment for NTFP certification (please refer Appendix 4)

Quantitative assessments included reliability assessments and also t-test to assess if the responses between the respondents are statistically different. Following this, their feedbacks on the certification standards to better fit local preferences and conditions were also solicited. These steps were expected to help in assessing and improving the “legitimacy” of the certification standards. Insights were drawn from existing literature to support and enrich our results and discussions and to provide recommendations. The next section 4 and 5 discusses the results of the data analysis.

Section 4 presents an assessment of the “legitimacy” associated with the certification framework developed by Bhattacharya et al. (2008) in the context of the region of the study. Multi-stakeholder reactions to each criteria listed within the certification standard are

presented. Corresponding suggestions as a means to ensure legitimacy to the criteria are also provided.

4. “Legitimacy” of Certification Standards- A multi-stakeholder assessment

Experts claim “certification standards can ridge the environmental, economic, and social pitfalls that have impeded the success of commercialization efforts of NTFPs” (Wilsey and Hiderband 2010: 68). With the growing interest in NTFP certification in India, a full-fledged certification framework was brought out based on participatory approach, drawing on stakeholder feedbacks from four states in India by Bhattacharya et al. (2008). Developed under the initiative of the International Center for Community Forestry (ICCF) through a participatory approach, soliciting inputs from stakeholders covering four states in India- Madhya Pradesh, Chhattisgarh, Orissa and Uttarakhand (Bhattacharya et al. 2008), the certification standard comprise of four principles-1. Legal and policy framework; 2. Wild area conservation and management; 3. Responsible collection and use practices; 4. Benefit sharing and livelihood security. This certification framework was utilized for my assessments and it contained a total of fifteen key criteria that are expected to meet the four “principles” of certification (see Appendix 1 for the full certification framework). “Legitimacy” of these criteria are assessed quantitatively and qualitatively by soliciting multi-stakeholder feedbacks. The focus is on the “criteria” as they are the broad scales to evaluate the certification process adopted by a specific group.

Viteri and Chávez (2007) reports on how fisheries management and other common property resource management highlight the importance of legitimacy in increasing compliance. The traditional approach to compliance through strict monitoring, fines, punishments and other enforcement strategies are not enough to increase compliance. Also, limiting it to instrumental benefits or monetary incentives does not necessarily ensure compliance either. More and more evidence on the role of additional social and moral factors likely to influence compliance are being reported, one of which is legitimacy. As discussed in Nielsen (2003) legitimacy can be defined as the degree of agreement a person shows to the rule or regulation. They relate to the concept of “social and moral reputation” of the individual along with perception of legitimacy attached to the rules, the institution that promotes the rule, the level of participation or belonging to the groups and their perception of the leadership within the group influenced by the high degree of downward accountability shown by the leadership.

A study by Viteri and Chávez (2007) among the fisheries community of the Galapagos islands measured legitimacy in terms of the stakeholders' response to their agreement or disagreement regarding fisheries rules. I adopted a similar approach for my study where stakeholders were asked their perceived ease or difficulty to follow or implement the rules. The rules in this case are the four principles and fifteen criteria listed within the certification standard. A survey was undertaken covering four categories of respondents comprising the key stakeholders linked to NTFPs (1. Tribal representative; 2. Forest Department official; 3. NGO sector; 4. Trader/Buyer representative). Individuals' responses were measured on a five-point scale, where compliance becomes easier as the score increases from 1 to 5. Compliance is defined as the ease with which each criterion (see Appendix 4) can be implemented by the tribal community.

The collected data was quantitatively assessed and the analysis included assessing the internal consistency in scoring the ease of compliance of the different certification criteria under each of the four principles. Internal consistency is commonly used as an estimate of the reliability of individuals' responses on Likert scales as used in the case of this assessment. The internal consistency estimate is based on the Cronbach's α coefficient, which is calculated from pairwise correlations between items. It measures how well the sum score on the selected items captures the expected score in the entire domain. As a rule of thumb, the Cronbach's α value should be at or above 0.70, with higher values indicating stronger internal consistency of the items (George and Mallery 2003). Lower scores are indicative that there is considerable error or that the items may actually measure more than one domain. As Table 4.1 indicates, all scales easily exceeded the lower boundary established for acceptable internal consistency.

Table 4.1: Ease of Compliance to Different Certification Criteria- Reliability

Assessment

Criteria Listed within Each Principle of the Certification Framework (See Appendix 1)	Cronbach's α value
Criteria 1 to Criteria 4	0.81
Criteria 5 to Criteria 8	0.91
Criteria 9 to Criteria 11	0.82
Criteria 12 to Criteria 15	0.97

Due to the small sample size no rigorous quantitative assessments could be carried out. Since the largest share of respondent categories were the Kadar representative and the Forest department (the two key stakeholders who are expected to be directly involved in the certification process) a t-test was carried out to find out if there is a significant difference between the mean scores indicating ease of implementation for each criteria between the two stakeholders. Criteria 7 ad 15 indicated significant difference in terms of ease of implementation between the two categories of stakeholders. There were no significant differences among the other criteria. The qualitative data provided additional information in terms of respondent reaction to the ease of implementation of the different certification criteria. Table 4.2 summarizes and discusses these quantitative and qualitative assessments. The ease of implementation of the criteria listed in the certification standards and challenges perceived by the different stakeholders are noted. Following this, modifications to the criteria, or under what conditions compliance to existing criteria are enabled are suggested. The results, the discussions and suggestions corresponding to each criteria of the certification framework employed for the study (Appendix 1) are incorporated and presented in Table 4.2. The additional outcome of this approach is that it allows to asses as well as ensure legitimacy to the certification standards thus increasing its chances of compliance by certification seekers or as in this case the Kadars. With increasing international pressures towards sustainable approaches such as certification, such small scale efforts is expected to provide the experience and assist in progressing towards stricter standards for compliance

Following these recommendation, section 5 highlights the three “external contextual factors” that are expected to influence motivations to certification compliance. These factors are discussed from a multi-stakeholder perspective where we look for overlapping dilemmas and differences in perspectives and also identify common ideas that converge to overcoming obstacles and thus positively influence motivation to certification compliance.

5. External Contextual Factors Influencing Motivations to NTFP Certification Compliance - Multi-stakeholder Inputs

In this section, I begin with briefly discussing each of the three external contextual factors relevant to the study context that are expected to have direct implications on compliance to certification. The three factors identified are i. Forest management and property rights; ii. Market signals and Trade related to NTFP; and iii. Socio-Economic and Cultural factors that influence NTFP (see Figure 4.1).

Table 4.2: Framework Showing Key Principles, Criteria, Alternative criteria (Alt.), Ease of Compliance by the Kadar Community and Corresponding Reasons and Suggestions towards NTFP Certification Among the Kadars in Kerala

(Compliance Scale: 1 very difficult; 2 difficult; 3 unsure or neither easy nor difficult; 4 easy and; 5 very easy to comply; Respondent Categories (RC) : 0= Kadar Leaders, 1= Forest Department

Key Principles	Certification Criteria	Ease of Compliance As per Respondents		Reasons, Issues and Suggestions
		RC	Mean Score : Compliance	
Principle 1: Legal and Policy Framework in Place	Criteria 1: Use rights/responsibilities and tenures are well established and implemented	0	3.27	<p>Issues: There is much ambiguity concerning new laws on property rights (FRA 2006). Information dissemination on the provisions of the Act has been poor Also poor literacy levels and poor organization among the right holders added to the challenge.</p> <p>Suggestion: This requires training to key resource persons by the TD and engaging NGO personnel to support with improving awareness and clarity on the rights and responsibilities of the Kadar beneficiaries.</p>
		1	3.14	

	<p>Criteria 2: Laws and regulations for conservation and development are in place.</p> <p>Alt 2: Clear information on Laws and Regulations for conservation and development are provided through training and information dissemination by FD/TD or NGO or in collaboration.</p>	0	3.27	<p>Issues: The Kadar beneficiaries are not clear on the provisions or the implication of the new law FRA and how it may influence resource use and conservation.</p> <p>According to the NGO there is no clarity on the role of the forest department and the future of VSS once the rights are implemented and passed. No discussions have been held on post-claim scenario.</p> <p>The FD considers it fairly straight forward task and feels it is all in place. Through FRA various provisions are in place but they are limited in terms of personnel and resources for training and monitoring.</p> <p>Suggestions: Cooperative and collaborative efforts involving FD, TD and NGO is emphasized. Strengthen the role of TD rather than limiting it to a “service agency” is suggested. Channeling of funds for development activities (e.g. creation of certified niche markets) and support to improve efficiency of existing or new institutional mechanisms (e.g. VSS, the post-claims committee or the <i>oorukoottam</i>) are suggested.</p>
		1	3.14	
	<p>Criteria 3: Regulation through registration of collectors, traders, intermediaries in place.</p>	0	3.27	<p>Issues: According to the FD the current regulations of restricting private trade is not as effective mainly due to lack of personnel and therefore the inability to monitor or regulate. Regulation of middle men needs to be made strict.</p>

		1	3.21	<p>According to the NGO, with the new law although greater autonomy in terms of trade of NTFP is provided, there are no clear provisions to restrict traders or buyers and other market intermediaries. How market arrangements would evolve is also unclear. More coordinated efforts in needed.</p> <p>Suggestions: We recommend that providing clarity in terms of the nature of market demand, identifying niche markets, designing appropriate market campaigns will help in establishing links with like minded partners enabling self-regulations and checks. Limiting the scale of the market at a micro scale would also make it easy to manage. NGO interventions in this regard may be beneficial.</p> <p>We also recommend that arrangements like “Vanasree” to be strengthened or assist with creation of registered bodies perhaps at each <i>oorukoottam</i> level who will be responsible for trade with other registered entities only and establishment a system of periodical monitoring by external agencies –either FD (to ensure Conservation Laws are not violated) or TD or NGO.</p>
	Criteria 4 : Control and monitoring of the NTFP market chain through transit pass	0	3.27	<p>Reasons: Some respondents considered it “very easy” perhaps because transit pass are already in place although its implementation has not been as effective.</p> <p>Issues: Similar issues as explained in the row above. FD viewed this as a logistic issue, where poor staff strength made it difficult to ensure stricter and consistent monitoring.</p>
		1	3.35	<p>Suggestions: There is a lack of ownership and responsibility towards the resource and a focus on short term, personal benefits than long term, collective benefits. Focus on building ownership feeling is recommended.</p>

				The CR is a step in that direction but clear information on the law and its provisions are also important for effective outcomes.
Principle II: Forest Area Conservation and Management Plan in Place	Criteria 5: Area management plan is in place.	0	3.45	<p>Reasons: Area management plans (micro plans) are already in place and prepared every 10 years as an important VSS activity in a participatory manner and hence majority (especially FD members and primary stakeholders) felt it was easy to comply. However the NGO were slightly skeptical about this.</p> <p>Issues: With activities of VSS inconsistent among different communities, sometimes community members are not even aware of such management plans or what it entails. Such lack of awareness can make it appear to be a rather daunting task to undertake unless there is help or support from external agencies either the FD or local NGOs. With the new law and the uncertainty of the future role of VSS/FDs, these are some cause for concern. However some FD members believe that once the CR is implemented all activities can be streamlined through existing VSS (as VSS is after all a decentralized body embedded within the <i>oorukoottam</i>) with funding support and monitoring by FD.</p> <p>Suggestion: Initial support from FD or the NGO until the process is understood so that implementation can be carried out independently is suggested. Incorporating traditional management approaches can make the task less daunting.</p>
	Alt 5: Area management plan for the entitled area under CR is prepared with FD/NGO support	1	3.21	
	Criteria 6: Inventory and monitoring of NTFP	0	3.36	Reason: They rely on their traditional knowledge along with the

	resources for effective management.	1	3.35	periodical inventory updates undertaken by the forest department.
	<p>Criteria 7: Active engagement in sensitive and red listed species protection and regeneration plan in place.</p> <p>Alt 7: Active engagement in sensitive and red listed species protection and regeneration plan in place with support from FD/NGO.</p>	0 1	3.45* 2.71*	<p>Result: There is a significant difference at 90% confidence interval with the Kadar representative score suggesting an easier compliance compared to the forest department.</p> <p>Reason: The Kadars do undertake some of it as part of their traditional practices along with activities associated with protection and regeneration of such species through VSS with FD support.</p> <p>Issue: These activities were not as obvious or consistent across all settlements.</p> <p>Suggestion: Consistent support from the FD is needed to ensure such activities stay in practice. A re-emphasis on traditional management practices is also suggested.</p>
	<p>Criteria 8: Conservation strategy and action plan is in place to maintain germplasm of NTFPs.</p> <p>Alt 8: Conservation strategy and action plan is in place to maintain germplasm of NTFPs. with support from</p>	0 1	3.45 3.21	<p>Reason: To some extent the Kadars maintain their traditional practices but mostly with focused efforts by the FD through the VSS</p> <p>Issues: But with the new law (FRA 2006) and its provisions the future of VSS and its associated activities are unclear as of yet.</p> <p>Suggestion: Coordinated efforts by TD and FD to ensure clarity of policy provision, better information dissemination to beneficiaries and support and assistance in developing management plan need to be extended.</p>

	FD/TD.			
Principle III: Responsible Collection and Use Practices	Criteria 9: Collection intensity and its regeneration rates are understood clearly prior to collection/harvest. Alt 9: Collection intensity and its regeneration rates are documented and followed as per traditional knowledge and practice.	0	3.09	Reasons: They continue their traditional practices of leaving some of the plant products not harvested to help with regeneration or leaving some of the seeds in the forest area for regeneration. But this is not always true or consistent.
		1	3.28	Issues: According to the <i>mooppa</i> n (traditional assigned tribal leaders at the settlement level) and FD officials, market demand and illegal trade have pushed some collectors to overharvesting and some species are indeed fast disappearing. Suggestions: There needs to be efforts to document their traditional ways of harvest, particularly to educate the young generation of collectors who are more susceptible to get trapped in exploitative trade arrangements and as a result engage in unsustainable practices. Hence, efforts to educate them and make them aware of the benefits of sustainable practices and complying with certification standards is important. Simultaneous focus on research towards understanding species regeneration and harvest impacts are needed. Involvement of local research institutes/NGO along with FD on collaborative research need to be encouraged.
	Criteria 10: Attention to quality prior to harvest.	0	3	Issues: As per the collectors, they paid attention to quality and never harvested immature fruits or engage in destructive harvest practice. But some of the village leaders and <i>mooppans</i> indicated otherwise. From the point of view of the FD members, harvesting practices were not always sustainable. Best examples are Cardamom and <i>Canarium strictum</i> . According to the FD and the <i>moopans</i> it had do with economic pressures and illegal trade. From the NGO perspective too it had to do with illegal
		1	3.35	

				<p>trade but also due to the lack of empowerment and therefore lack of ownership felt towards the resources by the collectors.</p> <p>Suggestion: Where the FD respondents felt a continued support and monitoring needs to be put in place, the NGO opinion was to enhance information and participation. Also FD claimed that the processing center of “Vanasree” (under VSS) is already looking into quality aspects and it would be easy to incorporate certification standards within the existing VSS arrangements and thus ensure stricter quality checks</p>
	<p>Criteria 11: Facility for proper storage and maintenance of NTFPs where standard practices are followed.</p> <p>Alt 11: Facility for proper storage and maintenance of NTFPs where standard practices are followed with support from TD or FD.</p>	<p>0</p> <p>1</p>	<p>2.72</p> <p>3.50</p>	<p>Issues: This had mostly to do with the insufficient funds available to provide for such arrangements.</p> <p>Suggestion: We believe that the TD can play a crucial role by channeling development funds through the CR post-claims committee as prescribed within the provisions in CR under (FRA).</p>
<p>Principle IV: Benefit Sharing and Livelihood Security</p>	<p>Criteria 12: Processing and value addition of NTFP to diversify and improve local economy.</p>	<p>0</p> <p>1.0</p>	<p>3.0</p> <p>3.64</p>	<p>Reason: This was felt to be easy due to the ongoing arrangements under VSS which is more or less centralized arrangement under the efficient leadership of VSS secretaries.</p> <p>Issues: However, the current functioning of the VSS versus what is envisaged under FRA are starkly different and unless a more transparent, participatory and cooperative system is not put in place these</p>

				<p>arrangements are not likely to be sustainable.</p> <p>Suggestion: Efforts to convert existing “Vanasree” units to truly decentralized institutions need to be undertaken. Initial investments for these activities are required and opportunities for the same need to be explored.</p>
	<p>Criteria 13: Market support and facilitation through establishing buyer-seller contacts.</p> <p>Alt 13: Market support and facilitation through establishing buyer-seller contacts, on a contractual basis decided at the <i>oorukoottam</i> level</p>	<p>0</p> <p>1</p>	<p>3</p> <p>3.64</p>	<p>Issues: The main concern raised was how direct linkage with private traders would shift the focus from sustainability to profit. Both FD and NGO were mostly unsure of this criterion.</p> <p>Suggestions: Suggestions by FD respondents ranged from involving the local NGO as a monitoring agency, or allowing FD officials to monitor through existing VSS arrangements and last but not the least to increase awareness and information on sustainability vs. profit driven outcomes.</p> <p>We also suggest engaging the buyers (e.g. the Ayurvedic industries) and holding discussions on the advantages of certification, concepts such as chain-of custody and explore consumer preferences.</p>
	<p>Criteria 14: Price fixing, benefit sharing based on stakeholder interest and market demand.</p> <p>Alt 14: Price fixing, benefit sharing based on stakeholder interest and</p>	<p>0</p> <p>1</p>	<p>3.00*</p> <p>3.92*</p>	<p>Result: The Kadar representative response indicate being “unsure” and this is perhaps due to the current inconsistencies they face in terms of monetary returns for sale of NTFPs. The forest department on the other hand felt it was much easier to comply with.</p> <p>Reasons and Issues: This was considered easy because of the ongoing practice, theoretically in place under the VSS or the cooperative system where prices are fixed based on market price and in consultation with the</p>

	market value for wild harvested certified products enabled with NGO/FD/TD support and decided by the <i>oorukoottam</i>			<p>collectors. However previous studies (Krishnakumar et al. in review) have shown how this is not as evident.</p> <p>Suggestions: With new provisions envisaged under FRA as well as the 13th five year plan these goals are not too difficult to achieve, provided there are efforts towards truly participatory arrangements where information dissemination and market knowledge is part of the plan.</p>
	<p>Criteria 15: Worker safety and favorable working conditions.</p> <p>Alt 15: Worker safety and favorable working conditions ensured through support from TD</p>	<p>0</p> <p>1</p>	<p>3</p> <p>3.5</p>	<p>Issues: Majority responses were from FD who claimed to have made some attempts in this direction through the VSS but were not successful. However they also felt it was an extremely important criterion.</p> <p>Suggestions: One possibility would be to attempt implementation through the tribal departments that has a long term, trustworthy relationship with its beneficiaries and through whom most of the central funds for tribal welfare are channeled.</p>

Ref: Certification Framework- The 4 Principles and 15 Criteria (Column 1 and 2)-Adapted from Bhattacharya et al. 2008

i. Forest Management and Property Rights

Studies on forest management strategies and policies point out how with different stakeholders linked to these resources having different expectations (Protected Areas Program Report, 2001), politically weak communities are the most affected (Shyamsundar and Kramer 1997) thus misplacing the confidence in these strategies and policies. Rangarajan and Shahabuddin (2006) reports how international experience suggest greater rights and responsibilities to communities to regain misplaced confidence which according to Agrawal and Ribot (1999) is a sign of effective decentralization as the emphasis is on rights based approach and where “individual and community rights” are strongly correlated to development (Johnson and Forsyth 2002). In lieu of these new recognitions, the Ministry of Tribal Affairs was mandated to formulate a comprehensive legislation to redress the historical injustice done to tribal community and help claim their legal rights on land called the Scheduled Tribes and Forest Dwellers (Recognition of Forest Rights) Bill 2005. Eventually the Forest Rights Act was implemented in 2006 which confers on the Gram sabha or the *oorukoottam* (the traditional village level governing body) the authority to initiate the process and make recommendations by constituting a democratically elected Forest Rights Committee (FRC) with implementation support from the key line departments of the forest (FD), the tribal (TD) and the revenue (RD) along with committees formed at the different levels of the implementation process. For more details on the FRA implementation process and latest updates on the implementation status see Anitha et al. (2012); and Ministry of Tribal Affairs website.

Thus in terms of regulation and property rights significant changes are seen but what is more significant is to understand how effective has been the implementation process of FRA 2006 and if and how will the Act facilitate or limit the management of NTFP towards positive livelihood and conservation outcomes. For this study, I try to explore how different stakeholders perceive their role and position in terms of the provisions within FRA, linked to NTFP use and management which in turn will influence motivations to certification compliance.

ii. Market Signals and Trade of NTFP

As indicated in Ramesh et al. (2007); and Menon (2003), NTFPs are of particular significance to the Kerala region of South Western Ghats due to the presence of the Ayurvedic industry. According to global estimates, 70-90% of demand for medicinal plants is met by uncultivated wild harvested natural resources. In India, with almost 80% of Ayurvedic industry situated in Kerala and a predicted annual growth rate of 35% (see Nath 2010) unsustainable extraction to meet increasing demand and other ripple effects such as adulteration and associated quality issues are affecting the source as well as the industry.

My field observations and primary interactions with the respondents identified tree supply chains for wild harvested NTFPs in the region. One is the informal sector where the supply chain is mostly constituted by primary collectors (in this case the Kadars), middle men, collection agents, small traders, and other private entities and the relationships are generally exploitative and unsustainable. The second is the formal sector where supply chain is mainly comprised of the tribal collectors who supply it to tribal cooperatives. It then reaches the federation (NAFED) to be auctioned to major pharmacies and/or industries. The third supply chain is the collection and sales through the local VSS (*Vana Samrakshana Samiti*), processed and/or value added by its own processing units and retailed through the “Vanasree” units and sometimes sold to major pharmacies and other industries. This third supply chain receives support from the FD. Previous study among the Kadar community by Krishnakumar et al. (*in review*) indicated how the formal supply chains especially the tribal cooperatives have failed in providing recommended share of returns to the collectors. More recently, marketing through “Vanasree” is gaining strength and have started ensuring better returns. However the question is how decentralized, self-sufficient and sustainable are they? According to Agrawal and Ribot (1999), clearer property rights and decentralized governance are expected to increase efficiency in resource use. But this may not always be the case, especially when there is such escalating market presence (see Colchester 1996; Varghese and Tickin 2008) where inclusiveness is not the norm. Markets are generally considered “exclusive” in nature, where only the fittest may survive. Therefore, new market tools are needed to address some of these issues and one such tool is certification. But with multi stakeholder linkages to these resources, for strategies to work, their inputs are needed to identify arrangements that will ensure effective implementation of certification.

iii. Socio-Economic Cultural Significance of NTFP

The following studies by Peters et al. (1989) ; Posey (1999); Sills et al.(2011); have discussed and confirmed the socio-economic and cultural significance of forests and its resources and these can influence resource use. The concept of “linked incentive mechanisms” discussed in Salafsky and Wollenberg (2000) is based on this notion. Byron and Arnold (1999) and Muhammed et al. (2010) also argue that forest dependency changes with the type and nature of users. Because of the economic and market significance of these resources, there are multiple stakeholders linked to them among which the indigenous community perhaps holds the strongest linkage. As a result, changing institutions and policies will have a direct bearing on their socio-economic and political status and vice versa (Lelé et al. 2010; Anitha et al. 2012). Kerala for instance, is home to various indigenous tribes where the Kadar community is one among the five particularly vulnerable tribal groups (PVTGS) located mostly in the Thrissur and Palakkad districts of Kerala (KILA report 2011; Kakkoth 2005). An earlier study by Krishnakumar et al. (2012) indicated their strong linkages with the forest with a major proportion of their income derived from NTFP collection.

Previous studies among the Kadars (see Krishnakumar et al 2012) also showed how socio-economic and cultural factors of primary stakeholders have a significant influence over their resource management decisions. The results indicated majority preference for NTFP certification among the Kadars and its significant linkage to key socio-economic and cultural variables. Reports and studies (see Kerala Scheduled Tribe Development website) show how despite various institutional arrangements and opportunities in terms of improved educational, health and economic development the Kadars continue to hold a marginalized status. And, according to Borrini –Feyerabend and Tarnowski (2005); Ostrom (1990,1999); Agrawal (1998); Li (2002); Ribot et al. (2006); and Dove (1993) socio-political status of participants impact participatory outcomes. With multiple stake and competing claims over these resources coupled with ineffective participatory arrangements (see Agrawal 1999) the marginalized groups are the least benefitted. Under the circumstances, it needs to be seen, how the Kadars compete with other stakeholder preferences considering the growing economic value of the resources and given the new and the improved political status of the primary stakeholders (e.g. Kadars) in the study area through the FRA. The emerging power relations will have a direct bearing on the instrumental and legitimacy factors that in turn will influence compliance to certification rules.

Next, based on my primary interactions with the respondents, a discussion on the multi-stakeholder perceptions' and reactions to these three external contextual factors are presented and points of convergence that are likely to positively influence the "motivations" to certification compliance are identified. The interactions were initiated by presenting the background and purpose of the study and were lead by these broader questions explored under each of the contextual factors.

1. Forest Management and Property Rights

How different stakeholders perceive the various provisions within the Act, its implications on NTFP use and management and their respective role/position in the context of the new rights?

2. Market Signals and Trade of NTFP

How is the current market arrangements, the nature of NTFP demand and its implications on the resource and future of the sector perceived by the different stakeholders?

3. Socio-Economic Cultural Significance of NTFP

How do the Kadars compete with other stakeholder preferences considering the growing economic value of the resources, given their new and "improved" political status?

Based on the traditional and historical roles in resource use and management in the study area the following four stakeholder groups were covered - A. The Kadars; B. The forest department; C. The NGO; and D. The Industry. Following in depth interviews with the different categories of respondents, key points were identified and noted (See Appendix 5). Inferences drawn from the stakeholder interviews are presented and discussed along with specific quotes from the respondents as supporting evidence.

A. The Kadar Perspectives:

Among the various scheduled tribes in Kerala five are categorized as PVTG, by the Government of India (Kakkoth 2005). According to Bhaskaran (2006), despite various concessions and institutional arrangements provided in the Indian constitution, the desired developmental goals for the PVTGs have not been achieved and they are often exploited and marginalized. The Kadar community is one such PVTG distributed in Thrissur and Palakkad district (KILA report 2011) and has traditionally engaged in the collection and trade of NTFPs (Kakkoth 2005). With the new forest policies (FRA2006) that lay special emphasis on PVTGs, direct implications on Kadar livelihood as well as resource availability is expected. Of the four region wise collection of NTFPs in Kerala, Thrissur district ranks second, with the latest figures indicating an increasing trend in collection and sales since 2010 (Kerala Tribal Federation Data). It also has couple of the biggest Ayurvedic Industry outlets in the

State. As reported in Thomas (1996), due to increasing market presence, unsustainable practices and population pressures in the region, forest land degradation is increasing, pushing forest dependent communities to poverty. Thus the study focuses on the Kadar community settled in Thrissur district of Kerala comprising of the following nine settlements.

Regulatory mechanisms pertaining to forest resource management have always been evolving in India. With the recent implementation of the Forest Rights Act 2006, legal entitlement over land, empowerment and improved livelihood chances to the forest dwelling scheduled tribes and other traditional dwellers in India have been granted. These rights include the individual rights (IR) and the community rights (CR). The individual rights are conferred by issuing the record of rights (ROR) that legally provides them ownership over the land if eligible. As a non-agrarian society, the one and perhaps the only advantage the ownership of land (which cannot exceed 10 acres/household) provides to the Kadars is that they cannot be evicted without consent or proper compensation. In most cases, the Kadars have only received between 1 cent to 50 cents (0.5 acres) of land. The data analysis also revealed a large majority (81%) of respondents not knowing the purpose of the ROR issued under the individual rights category. The few who are familiar refer to it as “a paper” that will ensure them a place to live without fear of eviction but otherwise of no particular use.

“We have been given this “white paper” that says a certain portion of land belongs to us. We may not be asked to leave our land and move but other than that we have no benefits with this “record of rights”. We cannot apply for a loan or engage in any transaction using the property”- A community member-Malakkapara settlement.

“My parents received 1 cent of land. We built a house on it with the help of a tribal housing fund. I live in this small house with my wife, our two kids, my parents, and my sister and her son while she visits us. The PVTG department offered me funds to build a house for myself. I declined the offer. Where do I build on a 1 cent piece of land?”-A community member – A community member Vachumaram settlement.

Under the circumstances it is the CR that is potentially significant to them but interestingly the implementation of CR has been very slow and not taken off yet in many places. The provisions under the CR envisage a decentralized arrangement to manage, utilize and market NTFP resources by the right holders. The law envisions a coordinated effort among the various agencies associated with tribal welfare and the forest-namely the TD, the FD and the RD along with the Forest Rights Committee (FRC) created at the settlement level

ensuring a democratic, decentralized arrangement towards the implementation of the rights (both IR and CR) within the Act. But primary interactions and field observations indicated an absence of such participatory efforts, particularly evident in the manner the FRCs were created with a majority (83%) having minimal to no knowledge about the law and its provisions among the members. In settlements where NGO interventions have been consistent (e.g. Malakkappara settlement) the community and FRC members had a much nuanced understanding of the new policy and how it may be utilized for their long term, sustainable benefits.

“One day officials from the tribal department came to our settlement for a meeting and randomly assigned people to serve as FRC members. Later, under the guidance of a local NGO, when we started understanding the significance of the legislation and what it entails, we decided to wake up and get involved. Since no one, including those who were assigned the role of FRC members knew they were members, we had to submit a Right to Information (RTI) to get the list of FRC members from the tribal department office”- Tribal leader, Malakkappara settlement.

This illustrates the approach that was undertaken among most settlements in the study region in terms of creation of FRC. Now the question is, has these NGO interventions truly empowered the communities to be self-sufficient and make decisions and would others follow suit? According to Agrawal and Ribot (1999, pp. 494), “acts of decentralization that rely primarily on NGOs are accountable only to a minority- their members, donors and leaders”.

A different scenario is encountered within the Vazhachal settlement, located on fringe area, close to a major eco-tourism spot and actively engaged in the eco-tourism activities through the VSS. They are aware of the Act to some extent but do not perceive it as being useful since agriculture is not an option and many are moving away from NTFP collection for livelihood due to growing opportunities from expanding eco-tourism in the area. In contrast, settlements where they spent a larger part of their time inside the forest and therefore limited contact with the external agencies, (for e.g. Siddhan Pocket) the awareness on the Act is poor. Majority has “heard” of the Act and many are in the process of receiving the ROR for the IR, with limited understanding of its purpose or benefit. The awareness is almost nil with regard to CR in all the communities.

From an overall community perspective, the fact that NTFP collection and trade is a significant source of livelihood to most, CR and its provisions will have significant

implications on the future of the resources and the beneficiaries. Currently formal NTFP trade and marketing is through two formal institutions- the tribal cooperative and the VSS. With the weakening of the tribal cooperatives and in many places the society going defunct, VSS as a marketing institution is gaining strength with relatively better returns and benefits to communities. However, the status of VSS once the community rights come fully into effect is unclear. Besides this, the informal sector is also growing. Previous study among the Kadar community by Krishnakumar et al. (2012) indicated a preference for certification and the socio-economic variables such as net income, gender, trade linkages with private traders, and market knowledge that have a significant influence over these preferences. But support is expected from external departments such as the FD and TD to undertake this new strategy. It is also important to note that the majority of the Kadars are illiterate and politically marginalized and although the new policies and market strategies offers excellent opportunities, its feasibility and advantages are limited to communities that are well informed, socially empowered and the nature of power relationship with other stakeholders. The next section discusses the Forest Department, a key stakeholder based on its historical linkage to the forest, feedback on FRA and its perceived roles post FRA implementation.

B. The Forest Department Perspectives:

The Kerala Forest Department comprises of five administrative circles of which the territorial circle is further classified into five circles. Among them, the area of study and the Kadar respondents fall within the Central or the Thrissur circle. Although recognized as traditional care takers of the forest, their weak socio-economic conditions rendered the tribals politically weak and hence despite “decentralized mechanisms” set in place for forest management, the ground realities showed a continued top-down, centralized approach by the forest department. With the recent implementation of FRA 2006, greater autonomy towards resource management has been extended to tribal communities. Although these arrangements are well laid out in theory, in practice a much more complex scenario exists. From the FRA implementation stand point, primary interaction with the forest department officials indicated a general dissatisfaction with the process. Quoting a forest official:

“Frankly all the preliminary steps as indicated within the Act-from the creation of the FRC and electing its members through a democratic process as stated in the Act were not followed. This was not intentional, but due to pressure from the top to getting things moving. Staff limitations, not to mention the challenge in organizing the beneficiaries for a meeting or

a training camp made the process very difficult and so TD had to resort to short cuts to expedite the implementation process”.

My interactions with the primary beneficiaries indicated how the role of a FRC member was often assigned to a community member rather than following an elected democratic process. Such involuntary efforts are not an unheard of phenomenon. As quoted in Ribot (2003)- referring to the US grass-roots development efforts “the pressure to “get things done” has tended to encourage appointment rather than elections” (Lewis cited by Selznick, 1984 [1949]) and this has to do with the “tension created between national and local objectives”.

Detailed discussions on FRA implementation and challenges in Kerala are reported by Satyapalan (2010); Münster and Vishnudas (2012); and Anitha et al. (2013). Besides these issues, in terms of the specifics of the Act, majority of the respondents from the forest department agreed the weak relevance of the IR particularly to the Kadars, in contrast to the CR that holds significance with varying outlooks on its purpose and its outcome. Quoting a forest official:

“With FRA and the stipulations under FRA, at least the ownership and utilization of forest resources by communities can be restricted. With a maximum of 10 acres of land under IR and a pre-determined region demarcated and mapped under CR the remaining forest area will safely remain under the FD’s jurisdiction. With full control over the remaining area the FD can implement stricter vigil and enforcement for encroachment and illegal collection and use of NTFPs and other forest resources. This also ensures protection of forest land from occupation with the expanding tribal population, albeit not in the case of certain primitive tribes (e.g. the Cholanaikans of Nilamboor) whose populations are in fact dwindling”.

Such viewpoints do not seem to be expressed from the perspective of accountability- a significant element of inclusive arrangements (see Agrawal and Ribot 1999) but rather an attitude reminiscent of earlier top down control (see Ribot et al. 2006). Although, majority of the respondents agreed CR as “significant” or “very important” right, the forest departments’ historically perceived role as managers of the forest continue to be evident. It is evident through the growing presence and role of VSS in the collection and marketing of NTFPs. My interactions with the FD officials, particularly the VSS coordinators, have indicated how the activities of the VSS has been strengthened which not only ensures competent market prices for the collected goods, but also facilitates the processing, value addition and marketing of

the final products through the numerous “Vanasree” outlets . These are retail outlets of processed products from NTFPs collected that were established by the forest department. Also, profits from NTFP are shared post sales. Although in theory VSS is a community based, decentralized arrangement with “participation” from the forest department, in practice it has been functioning as a centralized management system. My field observations and direct interactions revealed how communities where VSS are effective and running in profit, had to do with the efficiency and active engagement of the VSS secretaries (usually held by a forester). Interestingly the motivations for their active involvements are often personal interest, perceived as a private enterprise (for e.g. during interactions they discussed profits and loss incurred to the VSS in the first person). This is not to imply corruption or personal monetary gains or a lack of transparency in the system but the fact that what is to be a people centered, decentralized arrangement is currently functioning under an almost privately owned, top-down management approach. It appears to have benefited the community in terms of consistent and improved returns of benefits, not to mention additional profits after the final sales, unlike the tribal cooperatives. The cooperative arrangements are deteriorating due to corruption and inefficiencies. They have been consistently running at a loss, with poor returns despite the stipulated 80% of returns of sales to reach the collectors (see Saxena 1997). For example in Malakkapara settlement, none of the previous season’s NTFP collected was bought by the society and therefore sold to the VSS. However there are alternative viewpoints as well.

Interview with a cooperative secretary of a different settlement expressed disapproval in the way FD was running the VSS, where he claimed the collectors were threatened into selling their products to the VSS despite their long term association of marketing through the cooperative society. Finally a meeting was held to reach a compromise where it was agreed to sell a proportion of the product through both VSS and the cooperative society.

Although such conflicting situations exist, in most communities, from a sustainability aspect, VSS appears to be an effective arrangement. Unfortunately it is running on the capability of the presiding VSS secretary and often collapses once he is transferred or where senior forest officials are not as supportive of VSS activities and/or do not consider it a priority. In other words there is a clear undermining of the management capacity of the community right holders despite being a decentralized arrangement. So why is this the case?

According to FD official the tribals are reluctant or unable to take ownership and responsibility for their well being and economic empowerment. Also, majority are illiterate and disempowered despite the creation of exclusive departments (e.g. the tribal department)

for their social upliftment. There are cultural aspects as well where the Kadars as a community have never engaged in long term planning or thrift and perceive the forest as their “fixed deposit” for future needs. In other words, traditionally they take only what is required for their need. However with increasing social issues of alcoholism and therefore the need for quick money, integration with non-tribal societies through marriages and exposure to non-tribal cultures through non-forestry related employment opportunities, not to mention the significant market and trade presence, their relationship to forest and its resources are in transition. Under such circumstances, the FD perceives its involvement born out of a need to ensure tribal livelihood and resource conservation although they do agree it needs to be better institutionalized. Quoting a FD official:

“There is an urgent need to institutionalize VSS activities rather than allowing it to run as a one man show. For this there needs to be focused and consistent efforts by the government and FD in providing for systematic training and empowerment. Unfortunately we lack the manpower and resources for the same.”

Under the circumstances can new strategies such as certification help maintain a balance as envisaged within its framework? According to the FD officials certification can easily be integrated within the existing VSS structure, provided VSS evolves to a fully decentralized arrangement. With the current nature of market, growing demand and increasing number of traders and middlemen, these arrangements would restrict direct linkages with private traders and simultaneously ensure better returns, although its implementation without external support remains questionable. Most officials were opposed to the idea of a direct partnership between the tribal community and private traders (one of the criteria suggested in the certification framework) fearing exploitation and poor conservation outcomes. Quote from a VSS coordinator

“Vanasree” itself has become a brand and it is run as an individual unit within each forest division and not under a centralized organizational structure. This gives it a true decentralized spirit. Thus certifying each “Vanasree” unit would be a fairly simple and straightforward arrangement and we can expect excellent outcomes as well. Also if private traders wish to partner then they can through “Vanasree” as it is a well streamlined organized market chain”.

However provisions within CR give tribals the freedom to decide whom and how to trade resources with. According to a forest official, the caveat is that if they decide to trade independently and not through VSS then they may face restrictions under the Forest Conservation Act 1980. Since VSS runs under the directions of a management plan designed in a participatory manner with FD support and approval it does not face any restrictions under the Forest Conservation Act”.

Agrawal and Ribot (1999) in their paper talk about additional mechanisms to ensure downward accountability that can improve the functioning of decentralized institutions such as the VSS. One is the role of NGOs in information dissemination and third-party monitoring. Cooperative efforts that include various line departments (TD,FD, and RD) along with local NGOs can lead to their empowerment and effectively utilize the various opportunities available, towards sustainable outcomes. The key is consistent long term support and engagement towards training and awareness and working in partnerships.

C. The NGO perspectives:

Historically NGOs have played a significant role in “linking the goals of conservation, and resource management to that of social justice of marginalized communities” (Brosius et al. 1998). In this regard, NGOs have had a significant presence in the multi-stakeholder landscape of the region. NGO activities in the area of study are mostly dominated by two - one a national level NGO and the other a small scale regional level NGO. The latter is particularly active, with a wider recognition among the communities in the area due to their long term engagement with the community members concerning various biodiversity conservation and mapping projects and more recently for their involvement with FRA implementation. Their role in IR implementation has been particularly noteworthy, and hence collaboration with the FD to assist with the implementation of CR was proposed and approved. Unfortunately, it was later stalled due to lack of consensus at the Forest Development Agency (FDA) level, the overarching body that overlooks the functioning of the VSS. Due to their close association with the community and a clearer understanding of the Act and its provisions, interactions with the NGO representative offered a critical view of the rights, the current management and trade arrangements, what needs to change and the potential opportunities.

According to the NGO representative, although rights have been issued or are in the process of being implemented, it has not brought about the paradigm shift envisaged within the FRA- neither in terms of process nor outcomes. This is in reference to the participatory,

decentralized approach envisaged within the Act but missing in practice as evident from previous discussions.

All this has to do with the lack of emphasis given to training and empowering the community to truly participate in the process. Instead they continue to be conditioned with subsidies and free goods from the tribal department (a department in charge of their welfare) and continue to partner with FD where the relationship is evidently top-down. The best example for this is the activities of the VSS and its umbrella organization the Forest Development Agency (FDA) which is very bureaucratic in its functioning. In this sense degeneration in the traditional, cultural linkages to forest resource management is felt and simultaneously there is migration of tribal communities to a labor oriented sector, where motivation is wage based or profit or income driven. The problem with this is, if ever the FD decides to withdraw their support, community will be rendered clueless on how to manage on their own and the impacts will be worse. This becomes a bigger issue when linkages to trade and market are considered. Inherently tribal communities are not exploitative or unsustainable in their approach to use forest resources. But instances where such practices are evident, trade and market linkages is significant and collectors get trapped into financial debts by informal traders and middlemen. Quoting a NGO representative:

“Participatory ideas will remain only in theory unless there is concerted effort by all key departments- the FD, the TD, the RD as well as the NGO sector in putting emphasis and effort on the process rather than the outcome. This has not happened in the case of IR and if similar approach is undertaken for CR, then information gaps regarding CR can make matters worse in terms of livelihoods and conservation. Without understanding the provisions and long term benefits within CR, the tendency to engage in illegal trade practices will only increase for the quick, short term benefits they bring in”.

With CR, the community receives sole authority to manage the region allocated. With emphasis on the “process” which ensures “legitimacy” with the appropriate support provided by the FD, TD and RD, new market approaches like certification can bring in better returns under the current market channel of VSS, irrespective of the involvement of the VSS secretaries. Also important is to strengthen the role of TD, an agency exclusively created for tribal welfare but currently limited to a mere “service agency”.

NGOs have historically played a crucial role in building, extending and linking environmental goals to social justice. This is particularly through awareness creation,

education and that of a facilitator which is what the NGO is currently engaged in the region. The limitation is the fact that they are external funding driven. Considering the staff shortage the FD is facing, NGO partnership is perhaps the way to go for certification or any developmental activities engaging the indigenous communities. As suggested by Brosius et al. (1998), there is also the need to improve dialog between the different groups positioned as beneficiaries, NGOs, government agencies and private entities. The next section discusses the industry perspective in terms of resource use, market conditions and their relationship to forest and its people and scope for certification.

D. Industry Perspectives:

There is a growing demand for raw materials, catering to the Ayurvedic and the Nutraceutical industries in the country to meet both domestic and international demand. In Kerala one of the biggest procurers of raw materials is the Ayurvedic industry. Feedbacks were collected from two Ayurvedic industries in the study area -Oushadhi- a government industry catering only to the domestic market and Vaidyaratnam- a private enterprise also catering only to the domestic market. Neither of these industries is in competition with each other simply because of the nature and scale of the respective enterprises.

I interacted with key officials of the organization, comprising of purchase managers, marketing managers and heads of research and development of the respective organizations. Interactions revealed a rather myopic view of the sector, particularly in terms of procurement of raw materials and the ability to keep up with the domestic demand for the finished products. Currently the system of procurement practiced by these companies is availability driven, in the sense, irrespective of the source and the quantity, as long as they are available and legally tradeable they are purchased. These procurements are spread across the country and some are even imported from neighboring countries of Sri Lanka, China and Pakistan. There is no emphasis on sustainable practices for products procured from the wild. Wild harvested or commercially grown products are not differentiated in terms of quality, and neither is there a price differentiation based on the source. This was not perceived as inappropriate as availability of products were a big concern and therefore separating raw materials based on their source would affect mass production of Ayurvedic products.

The possibility of niche markets as a strategy to ensure sustainability of wild harvested raw materials, and receive the high value it can demand, was also dismissed claiming lack of consumer demand for such products in the domestic sector, which was contradicting to reports that state otherwise. With the growing health concerns and the

increasing awareness on the positivity associated with natural and organic products, there is an increasing consumer demand for herbal and Ayurvedic products (Menon 2007, 2008, RANCOS Industry Research Solutions 2012). This is not to say there are no concerns within the sector. Interaction with the head of Rand D of one of the companies revealed how over years the formula for preparation of Ayurvedic products had to be recast due to unavailability of ingredients. (A good example is the Dashamoola Arishtam that has undergone multiple revisions on its formulation). This is a clear indication of how the industry is trying to survive and keep up with the demand in light of the depleting availability of raw materials.

As solutions, policy level intervention that would restrict the manufacture of these products or inform doctors to limit or stop prescribing them so that consumer demand will automatically recede was suggested and or a concerted effort by all the major industries to decide on terminate production of specific products facing shortage of raw materials. These issues bring up the question on the sustainability of not only the raw materials but also the industry that has such tremendous cultural and traditional significance. As bluntly stated by the marketing manager of one of the firms - “the Aurvedic industry itself is going to disappear in the next few decades”. In this context the relevance of certification was also indicated and the response was that the success of such strategies rested on market demand.

“Unless consumer demand for such products rises, industries are less likely to be motivated to adopt them. We cater to the domestic market; particularly the middle class and they cannot afford to buy such certified, expensive products”.

Going by the feedbacks from industry representatives, it is obvious how the quality of the raw materials based on its source of origin is irrelevant to them. This also means there is no price differentiation based on quality. When organically grown products are demanding a price premium of up to 60% (see Menon 2007; 2008) the fact that such high quality wild harvested products, are not receiving its true economic value and in addition impacting both livelihoods and conservation loss is a fact that cannot be dismissed casually. Besides policy intervention as one of the suggested option, there is a need for greater integration (or horizontal accountability) among the resource dependent groups. A mutual knowledge on the needs, challenges, and opportunities will help streamline the supply-chain and meet sustainable outcomes.

Summary of Multi-Stakeholder Perspectives on the “External Contextual Factors”

The assessments from multi stakeholder reactions and perspectives on the three external contextual factors that are likely to affect “motivations” to NTFP certification has brought out some complex overlapping dilemmas and some obvious differences in perspectives. But, despite these differences common recurring themes to overcome obstacles and differences also emerge. They are- need for cooperation and collaboration among the different stakeholders; an emphasis on the process rather than outcome through information dissemination, education and training particularly on policies, its provisions and new strategies; strengthening of key agencies (e.g. the TD) and institutions (e.g. the VSS) to enable marginalized groups function efficiently in a participatory manner and also better integration of the NTFP supply-chain with improved flow of information from either side (supply and demand) side of the market chain.

These approaches may also reduce transaction costs . Compliance to certifications standards or any rules is influenced by transaction costs associated with planning, adopting, restocking assets and regulations and control. This can also be referred to as the indirect costs of certification (see FSC technical report- SLIMF 2009, FSC website). According to (Viteri and Chavez 2007; Nielsen 2003) internalizing TC is not the answer. Instead, by examining external institutions that are likely to have the least TC or can absorb the TC (or indirect costs) and partnering with them need to be explored.

There are already existing market chains such as the VSS run “Vanasree” units but its sustainability needs to be ensured. (Ribot 2003) reports how decentralized arrangements result in creation of committees at the local community level that showed limited downward accountability and catering to “management ideas centrally prescribed” In other words discretionary powers were lacking. With the new FRA policy this is addressed by devolving power to the grama panchayath level which in most cases is at the settlement level or the *oorukoottam* as in the case of the Kadars via an elected committee. However devolution of power does not ensure effective outcomes. This has to do with accountability, particularly downward accountability. Although elections or elected representatives is a means of ensuring downward accountability, according to Ribot (2003) it may not be sufficient and various non-electoral approaches need to be utilized as well. Among this, the role of the NGO as a monitoring body is suggested along with forging relationships among different institutions and community linked to the resources. These relationships not just emphasize downward and upward accountability but horizontal accountability as well (see O’Donnell ,

1994). Horizontal accountability includes relationships between different administrative units, political units as well as private organizations. The emphasis is on information flow and according to Collomb et al. (2008) it will help local resource management bodies to make informed decisions and other linked institutions will respond by providing support to improve benefits and reduce costs. Thus it can be suggested that, certification of “Vanasree” units through FD and TD partnership that can incorporate some of the costs with periodical monitoring by local NGO to ensure downward and horizontal accountability is a possible cost effective arrangement to support certification. These arrangements could also incorporate partnering with approved private traders which is also a way to reduce indirect costs (or TC).

6. Conclusion

Based on the discussions so far the tremendous scope and challenges for NTFP certification in the study area is obvious. There is also a unified agreement in the inevitability of growing market presence and trade and its likely impact on biodiversity and livelihoods. Clearly a centralized regulatory arrangement would be retrogressive in the context of the new law (FRA 2006). Previous studies have talked about the factors that render decentralization initiatives ineffective such as lack of decisions making capacity and discretionary powers. But with the provisions within the new law much of these limitations have been addressed. However, quoting the NGO perspective, “emphasis on improving the process is key”. This would need consistent and active encouragements and awareness creation, which would lead to greater responsibility and ownership. Certification is only a tool and in order to use this tool effectively, additional provisions are needed besides education, information dissemination and training the collectors. This includes identifying and linking with niche markets through appropriate marketing campaigns possibly with the support of local NGOs, timely revisions of the rules based on an adaptive management approach, and initiatives such as niche markets at a “micro-scale” (as suggested in Alcorn 2002) with a slow and gradual growth. This is possible only through cooperation and collaboration among the different actors that are linked to the forest and its resources in various capacities. With such interventions, and suggested recommendations, certification can function very effectively and meet sustainable outcomes that are expected to fulfill the corresponding goals of all the stakeholders involved.

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CHAPTER 5. CONCLUSION

With rich biodiversity and a high degree of endemism, the Kerala region of the Western ghats is particularly vulnerable due to the presence of resource dependent indigenous communities and an expanding industry sector that procures a large percentage of its raw materials from the wild. Under the circumstances of institutional inefficiencies, poor livelihood returns and over exploitation of resources it became necessary to explore new strategies to address these challenges. International experiences suggested NTFP certification for its ability to act as a “buffer between communities and the market” and “internalize some of the social and environmental costs” (Pierce 2002, pp. 284). NTFP certification is gaining importance in the Indian context with recent publications suggesting certification standards for NTFPs in India (Bhattacharya 2008, 2009; Yadav and Dugaya 2013). However there are no reports yet assessing its implementation potential and some of its likely challenges and opportunities. This study is an attempt in that direction, using the specific case of Kerala where livelihood linkages to NTFP, its conservation value and its market significance are all very evident and significant. Therefore the overall goal of the study was to assess the scope of NTFP certification to improve livelihood and conservation goals in Kerala, particularly focusing on the Kadar community of Thrissur district. The study is arranged as three essays (Chapters 2, 3 and 4) focussing on three different aspects of the overall goal. Primary data was collected using a survey based questionnaire with additional qualitative data collected through face to face in depth interviews. The respondents included the Kadar households (sample size=101) and also other stakeholders that comprised of the Kadar leaders, the forest department (FD), the local NGO, and the local industry (sample size = 36). Secondary data was also collected from the tribal cooperative societies, tribal department and forest department where necessary. Both quantitative and qualitative assessments were carried out. The “conclusions” chapter brings together the key findings of the studies and highlight areas for further exploration.

Chapter 2-Summary

The first essay explored the current socio-economic and political status of the Kadars, and the existing arrangements in terms of NTFP collection, use and trade. Their perception regarding resource use and availability and their preference for new market strategies such as certification and who are likely to adopt certification were also collected. The results of the data analysis indicated a continued reliance on forest resources by the Kadar community for their employment and livelihood (in particular 89% of the surveyed respondents are

dependent on NTFP collected, as a source of income). Based on their perceptions and reactions the issues with availability of NTFPs, the inefficiencies of existing marketing arrangements, threats of a growing market demand, and the need for new sustainable strategies such as certification became evident. Stakeholder reactions indicated a preference for certification and who are more likely to adopt certification was also identified.

In this context, the newly implemented Forest Rights Act 2006 in India (MOEF website, GOI), offers a tremendous opportunity, with greater autonomy in terms of access, use and trade of NTFPs. With such freedom and rights perhaps there is a greater tendency to protect and preserve the resources (Agrawal 2005) from exploitation. However information gaps, lack of “clarity” and institutional overlaps and mismanagement were identified as the major limitations to effectively utilize existing policy conditions. Under these circumstances, certification can be carried out effectively if these gaps are overcome and management related as well as technical assistance in the form of guidance and training is extended to those interested in implementing certification. A closer assessment of the existing institutional arrangements and how they can be improved and what opportunities are available to enable certification, need to be explored. Also, certification entails compliance to a set of standards and under what circumstances there is likely to be compliance need to be assessed. The next two essays address these gaps.

Chapter 3-Summary

As part of the certification standards compliance assessment, the income dependency of the primary stakeholders on NTFP is established. Following a modified forest rule compliance framework by Ramcilovic-Suominen and Epstein 2012, motivations to compliance is carried out by assessing instrumental benefits using “instrumental models”. They include estimating the net income to assess if benefits are greater than costs and also estimating the Net Present Value. NPV is suggested to be an ideal indicator to assist with resource use & project decisions. The NPV value under different scenarios was estimated and results showed positive and improved values for certification and the expected benefits from it. However, the estimations only included the direct cost of certification while it is a known fact that certification also includes indirect costs. International experiences suggest the best way to tackle indirect costs is through partnerships, either by relying on existing or developing new collaborative arrangements. With this in mind a set of recommendations and opportunities to be tapped are provided and discussed in detail. They include: 1. Revamping

institutional arrangements; 2. NTFP pricing policy provisions; 3. Increasing awareness and training to primary stakeholders; and 4. Market Information Dissemination.

Chapter 4-Summary

The final essay explores the remaining components of the compliance framework that includes “legitimacy” of the certification standards as a motivation for compliance and a set of “external contextual factors” that can influence both legitimacy and the instrumental benefits towards rule compliance. The essay has two parts. The first part, explores the “external contextual factors” relevant to the issue and how it may influence the two motivating factors (instrumental and legitimacy) to comply with the rules. The second part addresses the “legitimacy” of the “rules” (the certification standards in this case) and provides feedbacks and suggestions to improve legitimacy which in turn leads to a greater likelihood towards certification compliance. The previous essays largely focused on the Kadar community. But as a common property resource there are other “actors” who have a historical link to these resources. Therefore, assessments and decisions made excluding their inputs, especially with regard to “external variables” and “legitimacy”, would be incomplete and ineffective. These “actors”, referred to as stakeholders, include (other than the Kadar representatives), the forest department, the local NGO and two of the major Ayurvedic industries in the area and among the biggest procurers of NTFP in the region. Multi-stakeholder interactions revealed the various dilemmas and the complex relationships they share with the resource and with each other. They all hold a “particular relation of accountability” which are influenced by the “historical, social and political constitution of the powers of the different actors” (Agrawal and Ribot 1999). Under such conditions, with new decentralized policies aimed at devolving decision making powers to “actors” at the lowest rung of the power ladder (the Kadar *oorukoottam* through the Forest Rights Committee in this case), its effectiveness would depend on the “accountability relationship” among the key “actors” in the domain (Agrawal and Ribot 1999). This accountability, mainly emphasizes downward and upward accountability, but fails to consider the capacity or lack of it to carry out their respective responsibilities. In this regard, multiple stakeholder feedbacks brought out many suggestions and ideas that emphasized on the process rather than the outcome and the need for cooperative and collaborative efforts among the different stakeholders, leading to the idea of “horizontal accountability” where there is a sense of participation and sharing.

Participation and transparency are also needed to ensure legitimacy of the certification rules according to the compliance framework. This is addressed by gathering multi-stakeholder feedbacks on their perceived ease of implementation of the certification criteria. The assessment is carried out using the certification framework developed by Bhattacharya et al. 2008 that were suggested for wild harvested plants, particularly medicinal plants in India. It is also compared to the most recent certification standards for NTFPs in India (Yadav and Dugaya 2013). The reasons for the perceived ease or difficulty towards compliance, suggestions to enable compliance to the criteria and alternative criteria, where appropriate are provided.

To summarize, the study focussed on assessing the potential to implement certification of NTFPs in the Kerala region of the Western Ghats. The results and discussions clearly indicated an urgent need to implement NTFP certification. Primary data assessments highlighted how the current forest and NTFP policy environment can be conducive to adopt such sustainable strategies and identified mechanisms to enable its implementation in a cost-effective manner. A pilot project is to be undertaken such that the recommendations can be implemented and fine tuned prior to implementation at a larger scale.

Further studies on market demand for certified NTFPS, particularly consumer preference for certified NTFPs, the scope for organically grown certified products as an alternative to wild harvested NTFP, and comparisons of stakeholder preferences encompassing different tribal communities and traditional dwellers and last but not least cross-regional comparisons to learn from and fine tune the strategy are suggested.

Emerging “Issues”

As an ecologically significant area, new management approaches are constantly being explored for the Western Ghats. For example, under the directive of the then minister of environment and forest, Sri Jayaram Ramesh, the Western Ghats Ecology Expert Panel (WGEEP) was formed in an effort to safeguard and protect the rich biodiversity and endemism of India’s Western Ghats. This was to be done by designating the Western Ghats as an Ecologically Sensitive Area (ESA). A report was brought out (the Gadgil report) that designated the WG into three levels of “Ecological Sensitivity Zones” –ESZ1, ESZ 2 and ESZ3 where ESZ1 is categorized as “ecologically the most sensitive banning massive private development or change of agriculture land into non-agricultural land” (WGEEP Report 2012). The remaining three zones also limit development to some extent. Reference is also made to the Forest Rights Act and emphasizes its implementation in “its true spirit by reaching out to people to facilitate their claims” (WGEEP Report 2012).

However, it also highlights, replacing all Joint Forest Management programs with the Community Forest Resource provisions under FRA, yet “restrictions on extraction of medicinal plants from the three zones”, payment of ecosystem services to the communities engaged and or responsible for forest area protection are also included(WGEEP Report 2012).

Following the submission of the Gadgil report, the Ministry of Environment and Forest (MoEF) entrusted a new commission to evaluate the Gadgil report and a report identifying its limitations were submitted by the High Level Working Group (HLWG) under the guidance of Dr. Kasthurirangan. The HLWG, claiming a landscape approach, identified about 60,000SqKm area (approximately 37% of the total area) to be declared as conservation zone and the remaining as “cultural landscape”, rather than designating WG into different zones. Following this, objections have been raised by the WGEEP (the Gadgil group) for the non-participatory, top-down, exclusionist approach adopted by the HLWG and its possible detrimental outcomes.

Despite such competing management approaches, ongoing public debates and evolving circumstances, the future of the resources and its key stakeholders -the indigenous tribes, cannot be put on hold. Under the current policy environment and the tremendous opportunities it offers, sustainable development approaches like NTFP certification need to be considered for long term benefits.

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Appendix 1- Certification Framework by Bhattacharya et al. 2008

<p>Principle 1. Legal and Policy Framework : A scenario where use rights are clearly defined, with laws and regulations in place that ensures conservation and development with strict registration of key stakeholders such that there is clarity in the market chain (including strict adherence to transit pass)?</p>
<p>Criteria 1. Use/tenure rights are well established by appropriate government order and compliance in the field ensured</p>
<p>Criteria 2. Laws, regulation and administrative requirements for conservation and development are in place</p>
<p>Criteria 3. Registration of collectors, collection agents, intermediaries and traders are mandatory in the area</p>
<p>Criteria 4. Regulation of forest-based MAP transit (by transit pass or other means) is required.</p>
<p>Principle 2: Wild area conservation and management : A scenario where wild area conservation and management is in place with proper inventory of resources collected and sold, management of sensitive species and germ plasm is maintained.</p>
<p>Criteria 5: Area management plan is prepare</p>
<p>Criteria 6 : Inventory, assessment and monitoring of MAP resources are planned for better management</p>
<p>Criteria 7 : Sensitive species and habitat conservation plan is prepared to identify synergies</p>
<p>Criteria 8: Conservation strategy and action plan is in place to maintain germ plasm</p>
<p>Principle 3: Responsible collection and use practice : A clear understanding of species regeneration, collection, its storage and maintenance follow standardized practices.</p>
<p>Criteria 9 : Collection intensity and species regeneration are studied thoroughly before the limit is set</p>
<p>Criteria 10 : Quality assessment of the collected material</p>
<p>Criteria 11: Storage, maintenance and traceability of collected raw material follow standard practices</p>
<p>Principle 4: Benefit sharing and livelihood security : Processing and value-addition, market facilitation, price fixing, benefit sharing and worker safety and favorable working condition are in place.</p>
<p>Criteria 12 : Processing and value addition of NWFPS/MAPs are strengthened and diversified to boost local economy</p>
<p>Criteria 13 : Market facilitation for MAP resources is promoted through more diverse buyer-seller contact</p>
<p>Criteria 14 : Price fixing and benefit sharing mechanisms are based on stakeholder interests as well as market demand</p>
<p>Criteria 15 : Worker safety and favorable working atmosphere are provided</p>

Appendix 2: Kadar Survey Questionnaire

1. Name of Colony
2. House No:
3. Name of Respondent
4. Age
5. Gender M / F
6. Education 1. Nil 2. Primary 3. Middle 4. High School 5. Pre-Degree/+2 6. College Education (Includes technical and Post-Grad)
7. History of land occupation – No: of years lived in the area.....
8. Family Income Sources ad Income Details

	Income Sources	Income received last season (Feb to May)	If VSS employed state no: of days worked last year	If MNREGS employed state no: of days worked last year	If Ag-state quantity sold	Fish-Quantity sold
a	NTPP					
b	Agriculture					
c	Cattle/Fish					
d	Govt.Program					
e	Working as Pvt Labor					
f	Other (please specify and give salary)					

9. NTFP Household Economic Data

i. Forest Product (code-product)	ii. Collecte d by whom (1,2,3,4)	iii.Wh ich season (1,2,3)	iv Quant ity collect ed (kgs)	v. Use %age		vi. Market – sold to whom, quantity and price received/kg						viii. Aver age time spen t /day on colle ction	ix. Aver age cost for trans port	x. Net incom e (6*7)- (8+9)	xi. Appro ximate net income (5 years ago)	
				a.	b.	a1.	a2	a3	a4	a5	b					

10. Do you purchase household items in exchange of collected goods?

a. yes b. no

11. Have you taken a financial advance?

a. Yes b. No

12. If yes, how much and from whom? a. Rs..... b. From whom.....

13. Have you noticed change in the forest in terms of:

	Forest changes	No change	Less	Moderate	High
a	Density				
b	Availability of resources				
c	Wildlife				

14. Cultural Significance of Forest

	Cultural Activities	Less	Moderate	High	Comment on type of species used
a	Religious				
b	Maternal and Child care				
c	Other social functions				

15. Social Significance of Forest

	Social Activities	Less	Moderate	High
a	As a source of income			
b	For sake of envt.			
c	For my kids			

16. Attitudinal Questions (*semi-structured*)

	Queries	NA	No	Yes	Comments
i	Forest is an important source of income				
ii	Even if other livelihood options available I'll continue to go to forest				
iii	Would you want your kids going to forest for collection and income once they are adults?				
iv	Do you feel responsible towards saving or protecting forest and its resources?				
v	Do you prefer to sell forest products to private traders than VSS?				
vi	Do you feel you have good market knowledge regarding the product you collect and sell?				
vii	Do you harvest products only at the time specified by the Forest dept?				
viii	Do you harvest quantity specified by the forest dept only?				
ix	Is there any form of quality control being practiced among the products you collect?				
x	Would you be interested in quality control and value addition if it fetches you a higher price for the products?				
xi	Do you need support with quality control and value addition activities? If yes, from whom and what sort of support?				
xii	Are you happy with the way the different govt institutions work for your welfare?				

17. Whom do you think must take responsibility for protecting the forest?

- a. Tribals
- b. Govt
- c. Public
- d. All

18. Are you familiar with FRA ? a. yes b. no

19. Has a FRA committee been formed? a. yes b. no

20. How many meetings have been conducted? Please specify

21. What is the general agenda of these meetings?

22. Is there conflict between critical Wildlife Act and FRA?

23. Has the FRA improved your access to resources? Please elaborate

- a. Yes
- b. No

Appendix 3: Certification Framework- Translated to Malayalam

Certification Requirements	1	2	3	4	5	Comments
<p>Principle I</p> <p>NTFPയുടെ ഉപയോഗ അവകാശം വ്യക്തമായി നിർവ്വചിക്കപ്പെട്ടിരിക്കുന്നു. സംരക്ഷണത്തിനും വികസനത്തിനും വേണ്ടിയുള്ള നിയമങ്ങളും നിയന്ത്രണങ്ങളും ഉറപ്പുവരുത്തും. NTFP എടുക്കുന്ന സ്ഥാപനം/വ്യക്തി എന്നിവ വ്യക്തമായി രേഖപ്പെടുത്തുകയും ചെയ്യണം</p>						
1. NTFP യുടെ ഉപയോഗ/അധികാര അവകാശം സർക്കാർ ഉത്തരവിലൂടെ നടപ്പിലാക്കുകയും ഉറപ്പുവരുത്തുകയും ചെയ്യുക.	1	2	3	4	5	
2. NTFPയുടെ സംരക്ഷണവും വികസനവും ഉറപ്പുവരുത്തുന്നതിനു വേണ്ടി നിയമങ്ങളും നിയന്ത്രണങ്ങളും ഭരണതലത്തിൽ നടപ്പിലാക്കുക.	1	2	3	4	5	
3. NTFP ശേഖരിക്കുന്ന വ്യാപാരികൾ, ഇടനിലക്കാർ എന്നിവരുടെ രജിസ്ട്രേഷൻ നിർബന്ധമായും ചെയ്തിരിക്കണം	1	2	3	4	5	
4. NTFP സഞ്ചാരമാർഗ്ഗം കൊണ്ടുപോകുന്നതിന് നിയന്ത്രണം ഏർപ്പെടുത്തുക.	1	2	3	4	5	
<p>Principle II വനസംരക്ഷണവും നടത്തിപ്പ് /നിർവ്വഹണം വനസംരക്ഷണം നടപ്പിലാക്കുന്നത് :</p> <p>ശേഖരിക്കുന്ന വന വിഭവങ്ങളുടെ പേര് വിവര പട്ടിക ഉണ്ടാക്കുക. അവ എത്ര അളവിൽ ശേഖരിച്ചു, എത്ര വിറ്റു, വംശനാശം സംഭവിച്ചുകൊണ്ടിരിക്കുന്ന വനവിഭവങ്ങൾ പ്രത്യേകം സംരക്ഷിക്കുകയും വേണം.</p>						
5. NTFP യുള്ള സ്ഥലത്തെപ്പറ്റി വ്യക്തമായ രൂപരേഖ തയ്യാറാക്കുക	1	2	3	4	5	
6. വനവിഭവ സംരക്ഷണത്തിനു വേണ്ടി NTFP കണ്ടെത്തുകയും മൂല്യനിർണ്ണയം ചെയ്യുകയും റിപ്പോർട്ട് ചെയ്യുകയും ചെയ്യുക.	1	2	3	4	5	

7. വംശനാശം സംഭവിച്ചുകൊണ്ടിരിക്കുന്ന വന വിഭവങ്ങളെ സംരക്ഷിക്കുകയും അവ പുനർനിർമ്മിക്കുന്നതിനുള്ള കൂട്ടായ പ്രവർത്തനങ്ങളിൽ ഏർപ്പെടുകയും വേണം	1	2	3	4	5	
8. വിത്തുകോശ സംരക്ഷണത്തിന് വേണ്ടിയുള്ള പദ്ധതികൾ നടപ്പിൽവരുത്തുക	1	2	3	4	5	
Principle III ഉത്തരവാദിത്വത്തോടടുത്തുള്ള ശേഖരണവും, ഉപയോഗവും NTFP യുടെ പുനർസംരക്ഷണത്തിനു വേണ്ടിയുള്ള വ്യക്തമായ അറിവ് (ശേഖരണം, സംരക്ഷണം, പുനരുത്പാദനം) എന്നിവ വ്യവസ്ഥ ചെയ്യുക						
9. NTFP യുടെ പുനർസംരക്ഷണത്തിനു വേണ്ടിയുള്ള വ്യക്തമായ അറിവ് (ശേഖരണം, സംരക്ഷണം, പുനരുത്പാദനം) എന്നിവ വ്യവസ്ഥ ചെയ്യുക വംശനാശം സംഭവിക്കുന്നതിന് മുൻപ് തന്നെ അവയുടെ ശേഖരണം, പുനരുത്പാദനം എന്നിവയെക്കുറിച്ച് പഠനം നടത്തിയിരിക്കണം	1	2	3	4	5	
10. ശേഖരിച്ച വനവിഭവങ്ങളുടെ ഗുണനിലവാരം ഉറപ്പുവരുത്തുക	1	2	3	4	5	
11. ശേഖരിച്ച വനവിഭവങ്ങൾ സംരക്ഷിക്കുകയും പരിപാലിക്കുകയും ചെയ്യുന്നതിന് കൃത്യമായ മാർഗ്ഗനിർദ്ദേശങ്ങൾ പാലിക്കുക	1	2	3	4	5	
Principle IV വനവിഭവങ്ങളുടെ മൂല്യവർദ്ധനവ്, വിൽപന സൗകര്യം, വില നിശ്ചയിക്കൽ, ലാഭവിഹിതം പങ്കുവയ്ക്കൽ, തൊഴിലാളികളുടെ സുരക്ഷ, അനുകൂലമായ ജോലി സാഹചര്യം എന്നിവ ഉണ്ടായിരിക്കുക.						
12. പ്രാദേശിക സാമ്പത്തിക അവസ്ഥ മെച്ചപ്പെടും	1	2	3	4	5	
13. വിൽപന സൗകര്യങ്ങൾ മെച്ചപ്പെടുത്തുക	1	2	3	4	5	
14. ഉപഭോക്താക്കളുടേയും കമ്പോള അവസ്ഥയുടേയും താൽപര്യം അനുസരിച്ചാണ് വില നിശ്ചയിക്കുകയും ലാഭം പങ്കുവയ്ക്കുകയും ചെയ്യുക.	1	2	3	4	5	
15. അനുയോജ്യമായ ജോലി സാഹചര്യം ഉറപ്പുവരുത്തുക.	1	2	3	4	5	

Appendix 4: FRA 2006 APPRAISAL and NTFP Certification Assessment



**Department of Forest Economics, Forestry and Dimension Division
Kerala Forest Research Institute, Peechi, Thrissur, Kerala- 680 653**

A. Identification

1. Survey No:
2. Location (in forest/forest fringe):
3. GPS Reading:
4. Circle the respondent category you belong to
 - a. FRC member
 - b. SDLC/DLC member
 - c. Forest Department
 - d. NGO/Civil Society

B. Question to Primary stakeholder/FRC members reactions and opinions

- 5.1 Have you ever heard about the restoration of lost forest rights with certain condition as stipulated by the Forest Rights Act? a. Yes b. No
- 5.2 Are you aware of the purpose of this law and the provisions included (or what are your rights)? a. Yes b. No
- 5.3 Have you formed the FRA committee yet? a. Yes b. No
 - 5.3.1 If yes, how many members?(write in number of female and male members)
- 5.4 How was the committee formed?
- 5.5 What is your say on Individual Rights?
- 5.6 What is your opinion on Community Rights?
- 5.7 Do you think Govt .support to implement FRA is sufficient. If no what is your suggestion/opinion?

C. Questions to Block Panchayath Member/TD member on Functions of SDLC/DLC

- 6.1. Please express your opinion on the Individual rights under FRA

6.2 Please express your opinion on community rights under FRA

6.3 Please define/list your respective roles as member of the respective committee as envisaged within the ACT

6.4. In your opinion how has been the process of preparation of application, examining and verifying the claims has been?

a. Very easy b. Easy c. Neutral d. Difficult e. Very difficult

Please provide further comments on your response:

6.5 In your opinion how has been the process of coordination between the various committee levels for commons claims?

a. Very easy b. Easy c. Neutral d. Difficult e. Very difficult

Please provide further comments on your response:

6.6 In your opinion how has been the process of coordination between the various subdivisions and districts for commons claims?

a. Very easy b. Easy c. Neutral d. Difficult e. Very difficult

Please provide further comments on your response:

D. Questions to FD/TD members

7.1. Please express your opinion on the Individual rights under FRA

a. Very important b. Important c. Neutral/No opinion d. Less Important e. Not Important

Please provide further comments on your response:

7.2 Please express your opinion on community rights under FRA

a. Very important b. Important c. Neutral/No opinion d. Less Important e. Not Important

Please provide further comments on your response:

7.3 Please express your opinion on the awareness and capacity building on FRA and its provisions among the beneficiaries.

a. Very satisfied b. Satisfied c. Unsure d. Dissatisfied e. Very dissatisfied

Please provide further comments on your response:

7.3 Please express your opinion on the process and outcomes of implementing FRA

a. Very satisfied b. Satisfied c. Unsure d. Dissatisfied e. Very dissatisfied

Please provide further comments on your response:

E. Questions to NGO/Civil Society Members

8.1. Please express your opinion on the Individual rights under FRA

a. Very important b. Important c. Neutral/No opinion d. Less Important e. Not Important

Please provide further comments on your response:

8.2 Please express your opinion on community rights under FRA

a. Very important b. Important c. Neutral/No opinion d. Less Important e. Not Important

Please provide further comments on your response:

8.3 Please express your opinion on the awareness and capacity building on FRA and its provisions among the beneficiaries.

a. Very satisfied b. Satisfied c. Unsure d. Dissatisfied e. Very dissatisfied

Please provide further comments on your response:

8.4 Please express your opinion on the process and outcomes of implementing FRA

a. Very satisfied b. Satisfied c. Unsure d. Dissatisfied e. Very dissatisfied

Please provide further comments on your response

8.5 How effective has been the process of coordination among the different agencies associated with the implementation of FRA.

a. Very effective b. Effective c. Unsure d. Ineffective e. Very ineffective

Please provide further comments on your response:

F. Socio-Demographic (For all respondents)

- 4. What year were you born or your age? 19----
- 5. Gender (Circle one) a. Female; b. Male
- 6. Your average income: (tick one)
 - a. Below 10,000 ; b. 10,001- 20,000; c. 20,001- 30,000; d. 30,001- 40,000; e. 40,001- 50,000; f. 50,000 above
- 7. What is your level of education? (Circle one)
 - a. None; b. Elementary school; c. Middle School; d. High School; c. Intermediate (Pre-Degree); d. Diploma; e. Degree (Bachelors); f. Post Graduate; g. Others (Please specify)_____
- 8. Specify your employment..... (Department name and Designation if applicable)

G. Multi-stakeholder NTFP Certification Assessment in the Context of the Forest Rights Act

Interview Schedule for 1. Village leader or rep; 2. Forest Department ; 3. NGO reps (includes coop in charge); 4. Herbal industry Representatives

- 1. Respondent Category: 1 2 3 4
- 2. Location
- 3. Can harvest levels be reduced and income derived from the sale of resources be raised?
- 4. In your opinion, will the newly enacted Forest Rights Act 2008, effective in meeting conservation and livelihood goals? What do you perceive as some of the challenges?
- 5. In your opinion will Certification of NTFP be an effective mechanism to meet sustainable livelihood and conservation goals?
- 6. The following are the key criteria listed for effective implementation of certification of wild harvest NTFPs, which is expected to improve income and ensure sustainable livelihoods and conservation of biodiversity. Please indicate what you perceive as the ease of implementation for each criterion. Please circle the appropriate score As the score moves from 1 to 5, implementation becomes easier.

1. Very Difficult	2	3	4	5. Very Easy
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Certification Requirements	1	2	3	4	5	Comments if any
<p>Principle 1. Legal and Policy Framework</p> <p>A scenario where use rights are clearly defined, with laws and regulations in place that ensures conservation and development with strict registration of key stakeholders such that there is clarity in the market chain (including strict adherence to transit pass)?</p>						
1. Use/tenure rights are well established by appropriate government order and compliance in the field ensured	1	2	3	4	5	
2. Laws, regulation and administrative requirements for conservation and development are in place	1	2	3	4	5	
3. Registration of collectors, collection agents, intermediaries and traders are mandatory in the area	1	2	3	4	5	
4. Regulation of forest-based MAP transit (by transit pass or other means) is required.	1	2	3	4	5	
<p>Principle 2: Wild area conservation and management.</p> <p>A scenario where wild area conservation and management is in place with proper inventory of resources collected and sold, management of sensitive species and germ plasm is maintained.</p>						
5. Area management plan is prepared	1	2	3	4	5	
6. Inventory, assessment and monitoring of MAP resources are planned for better management	1	2	3	4	5	
7. Sensitive species and habitat conservation plan is prepared to identify synergies	1	2	3	4	5	
8. Conservation strategy and action plan is in place to maintain germ plasm	1	2	3	4	5	
<p>Principle 3: Responsible collection and use practices</p> <p>A clear understanding of species regeneration, collection, its storage and</p>						

maintenance follow standardized practices.						
9. Collection intensity and species regeneration are studied thoroughly before the limit is set	1	2	3	4	5	
10. Quality assessment of the collected material	1	2	3	4	5	
11. Storage, maintenance and traceability of collected raw material follow standard practices	1	2	3	4	5	
Principle 4: Benefit sharing and livelihood security. Processing and value-addition, market facilitation, price fixing, benefit sharing and worker safety and favorable working condition are in place						
12. Processing and value addition of NWFPS/MAPs are strengthened and diversified to boost local economy	1	2	3	4	5	
13. Market facilitation for MAP resources is promoted through more diverse buyer-seller contact	1	2	3	4	5	
14. Price fixing and benefit sharing mechanisms are based on stakeholder interests as well as market demand	1	2	3	4	5	
15. Worker safety and favorable working atmosphere are provided	1	2	3	4	5	

Appendix 5: Stakeholder Inputs for the Three Contextual Factors

Kadar	FD	NGO	Industry
1. Forest Management and Property Rights			
<p>Unclear what the new policy and its provisions stands for.</p> <p>Uses of IR vs. CR- not fully informed</p> <p>Dissatisfied by the poor implementation by TD and FD</p>	<p>FD is also not fully informed of FRA and its provisions</p> <p>Agree on implementation set backs and IR limitations.</p> <p>CR implementation slow and outcomes uncertain</p> <p>Arrangement that will encourage conservation & FD control</p> <p>Limited manpower, pressure from top, difficulty in organizing beneficiaries added to challenge.</p> <p>Partnership/collaboration useful. Proposal to implement CR through NGO support</p>	<p>Poor awareness creation on FRA by the implementing agencies except where NGO intervention.</p> <p>Participatory process has only remained in theory.</p> <p>Ambiguity in terms of the post-claims committee and the future of existing institutions</p>	<p>Unaware of the Act and its provisions.</p>

Kadar	FD	NGO	Industry
2. Market Signals and Trade of NTFP			
<p>Coop ineffective – had to suffer losses.</p> <p>Dependent on efficiency and leadership of the VSS secretary is. Constant transfers of VSS sec causes instability.</p> <p>Certification is preferred. But they prefer implementation support from the FD or TD.</p> <p>Despite CR provisions-prefer VSS arrangement but with decision making power strong at the <i>oorukoottam</i> level</p>	<p>VSS is gaining momentum in most settlements.</p> <p>“Vanasree”-brand Certification -easily incorporated into the current system.</p> <p>Direct partnering w/ pvt traders –Kadars-sceptical .Outside VSS- restrictions under Forest Conservation Act 1980</p> <p>VSS need to be institutionalized.</p> <p>Poor manpower- Explore partnership</p>	<p>Increasing market demand, poor returns and poor awareness</p> <p>Collectors also engage in informal trade</p> <p>VSS market arrangement has potential but not the way it is currently run</p> <p>Certification easy to implement if existing arrangements streamlined</p>	<p>High demand for raw materials.</p> <p>Availability concerns</p> <p>No quality or price differentiation between wild vs. Cultivated</p> <p>Strict policy intervention-manufacturing and procurement</p> <p>Pessimistic outlook</p> <p>No sustainable solutions</p> <p>Understand certification idea. Keen only if there is consumer demand</p>

Kadar	FD	NGO	Industry
3. Socio-Economic Cultural Characteristics and NTFP Management			
<p>NTFP collection major source of livelihood</p> <p>Inconsistent and expected benefits not received.</p> <p>Field observation-centralized association w/FD.</p> <p>TD is seen as a “service provider”</p> <p>New strategies better perceived by communities who are informed and socially empowered.</p> <p>NGO association shown to play a key role.</p>	<p>Tribals are reluctant to take responsibility for their well being and economic growth.</p> <p>Majority disempowered despite TD/PVTG/other support.</p> <p>Kadars do not engage in long term planning. No sense of thrift.</p> <p>Growing social issues</p> <p>Increasing indebtedness</p> <p>Justifying FD current intervention role.</p> <p>Training and education key</p>	<p>No emphasis on training or true empowerment.</p> <p>Conditioned with subsidies and free goods (TD/PVTG)</p> <p>FD relationship top-down-VSS and FDA - bureaucratic approach.</p> <p>Traditional, cultural linkages –weekening. Migration to labor sector.</p> <p>What happens when FD withdraws support?</p>	<p>Appeared to be removed from the issues of the collectors.</p>