Community Forestry in Western Indian Himalaya

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Van Panchayat in Uttarakhand, India

By

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This book is dedicated to the struggling hill people of Uttarakhand who have been continuously fighting to save their environment especially forests

CONTENTS

PREFACE

Uttarakhand is one of the small mountainous states of India located in the central Himalaya. Uttarakhand was formerly known as Uttaranchal (the official name from 2000 to 2007). It is often referred to as the "Devbhumi" (Land of the Gods) due to its religious significance and numerous Hindu temples and pilgrimage centers found throughout the state. Uttarakhand is also known for its natural environment (flora, fauna, mountains, rivers and snow packed peaks). It borders the Tibet Autonomous Region of China to the north; the Sudurpashchim Province of Nepal to the east; the Indian states of Uttar Pradesh to the south and Himachal Pradesh to the west and north-west. The state is divided into two divisions, Garhwal and Kumaon, with 13 districts(administrative units). As per the Indian Census Report of 2011, the total population of Uttarakhand was 10,086,292 with around 68% population living in the rural areas.

The geographical area of Uttarakhand is 53,566 km^2 of which 86% is mountainous and 65% is covered by forest (including alpines and snow clad peaks). Most of the northern part of the state is covered by high Himalayan peaks and glaciers. Three of the most important rivers in Hinduism originate in the glaciers of Uttarakhand: the Bhagirathi at Gangotri, the Yamuna at Yamunotri and Alaknanda at Badrinath. Bhagirathi river meets Alaknanda river at Devprayag after which it is known as Ganga. Badrinath, Kedarnath, Gangotri and Yamunotri form the Char Dham, a holy pilgrimage for the Hindus.

Uttarakhand has diverse flora and fauna. It has a recorded forest area of 38000 km^2, which constitutes 65% of the total area of the state. Uttarakhand is home to rare species of plants and animals, many of which are protected in sanctuaries and reserves. In spite of its small geographical area it has many protected areas: the Jim Corbett National Park (the oldest national park of India) in Nainital and Pauri Garhwal Districts, Valley of Flowers National Park & Nanda Devi National Park in Chamoli District, which together are UNESCO World Heritage Sites, Rajaji National Park in Haridwar, Dehradun and Pauri Garhwal Districts, Govind Pashu Vihar National Park & Gangotri National Park in Uttarkashi District.

Evergreen Oaks, Rhododendrons and Conifers predominate in the hills. Sal (*Shorea robusta*), silk cotton tree (*Bombax ciliata*), *Dalbergia sissoo*, *Mallotus philippensis*, *Acacia catechu*, *Bauhinia racemosa*, *Bauhinia*

variegata, *Pinus roxburghii* , and *Alnus nepalensis* are some other tree species of the region. *Albizia chinensis*, the sweet sticky flowers of which are favored by sloth bears, are also part of the region's flora. The region have many species of medicinal plants including *Dactylorhiza hatagirea*, *Picrorhiza kurroa*, *Aconitum violaceum*, *Polygonatum multiflorum*, *Fritillaria roylei*, and *Podophyllum hexandrum*. A number of other native plants are of medicinal values which are also commercially exploited. Local traditional healers still use medicinal herbs, in accordance with classical Ayurvedic texts for certain diseases.The state hosts the Bengal tiger in Jim Corbett National Park. The Himalayan ecosystem provides habitat for many animals (including bharal, snow leopard, leopard, musk deer, and tiger).

Uttarakhand lies on the southern slope of the Himalayan range, and the climate and vegetation vary greatly with elevation, from glaciers at the highest elevations to subtropical forests at the lower elevations. The highest elevations are covered by snow and bare rocks. Below them, between 3,000 and 5,000 meters (9,800 to 16,400 ft.) are the western Himalayan alpine shrub and meadows. The temperate western Himalayan subalpine conifer forests grow just below the tree line. At 3,000 to 2,600 meters (9,800 to 8,500 ft.) elevation they transition to the temperate western Himalayan broadleaf forests, which lie in a belt from 2,600 to 1,500 meters (8,500 to 4,900 ft.) elevation. Below 1,500 meters (4,900 ft.) elevation lie the Himalayan subtropical pine forests. The Upper Gangetic Plains moist deciduous forests and the drier Terai-Duar savanna and grasslands cover the lowlands along the Uttar Pradesh border in a belt locally known as Bhabar. These lowland forests have mostly been cleared for agriculture, but a few pockets still remain.

Uttarakhand is famous for forest/environment related mass agitation. The mass agitation of the 1970s led to the formation of the Chipko environmental movement and other related social movements. Though primarily a livelihood movement rather than a forest conservation movement, it went on to become a rallying point for many future environmentalists, environmental protests, and movements the world over and created a precedent for non-violent protest. It stirred up the existing civil society in India, which began to address the issues of tribal and marginalized people. One of Chipko's most salient feature was the mass participation of female villagers. It was largely female activists that played pivotal role in the movement. Gaura Devi was the leading activist who started this movement; other prominent participants were Comd. Govind Sing Rawat, Comd. Kamla Ram Nautiyal, Chandi Prasad Bhatt, Sunderlal Bahuguna, and Ghanshyam Raturi, the popular Chipko poet.

The socio-economic fabric in these mountains is woven around forests. Majority of rural population is still dependent on forests for fuelwood, fodder, timber, wild edible fruits, vegetables, fibers, religious rituals and recreation etc.

This book covers different aspects of Van Panchayat (Forest Council) system in Uttarakhand. The Van Panchayat system in Uttarakhand is unique community forest management system. The birth of the system was the result of struggle of local inhabitant against the control of forest resources by British colonial rule in India in the beginning of 19th century. The book covers the whole gamut of steps taken by British colonial regime for forest control at different points of time. Up to 1865 forests were abundant not only in Uttarakhand hills but all over India as also elsewhere in the world and people have free access. British colonial govt. in India established Forest Department in 1865 and this was the beginning to control forest and exploit them commercially for revenue.

The book begins (Chapter 1) with the concept, meaning, and related terms associated with community forestry and changes brought out in traditional forest management system world over during 20th century. The introductory chapter also describes in brief the trajectory of community forestry in relation to development and population increase in India.

Forest history of Uttarakhand is different from the forest history of other parts of India. It is history of consolidation of administrative control on forests and their exploitation for revenue. It describes different steps taken by colonial British regime to control forests of the region. The forest history is different in two parts of the region, Kumoan and Garhwal. All these comprises of second chapter.

The history of Van Panchayat (Chapter third) is unique in that it was the people who put pressure through agitation on then colonial British govt. in India to ease control of forests. Because of these agitations Forest Council (Van Panchayats) was created for these hills. This was the first experiment in the world where govt. and people combined to manage the forest. All these have been incorporated in chapter three. It describes the history of traditional system of managing the forests by hill people of central Himalaya (present Uttarakhand hills) and all events leading to their capture by colonial British ruler in India. The events leading to resentment in hill people and methods adapted by them to show their resentment are chronologically described leading to acceptance of demand of hill people by colonial rulers and formulation and subsequent incorporation of Van Panchayat rules in Indian Forest Act in 1931.

Chapter four provides details of rules and regulations promulgated by govt. at different points of time since 1931. The rules and regulations to

govern these vast tracts of forest promulgated at different points of time have been compared and merits and demerits of each one have been listed in the book. The root cause of decline of this unique system is the creation of these elaborate rules and regulations with passage of time. These rules and regulations have weakened the system but strengthen the control of Forest and revenue departments on these forests.

The chapter fifth explains the present status of Van Panchayats. It describes the expansion of this system during last 93 years. It also provides the number of Van Panchayats in different districts and the areas covered by them.

An analysis has also been presented in the book to show what the important policy issues are? After analyzing different aspects of Van Panchayat system many social and forest scientists have brought out certain points which pertain to policies governing this institution. These policy issues have been described in chapter sixth. These policy issues need consideration if the decline of this system is to be checked.

Forests are repositories of different plant species which co-exist and sustain the forest ecosystem. It was natural to incorporate ecological aspects in the book. Thus the seventh chapter describes the species richness, diversity and other ecological aspects of these forests.

A separate chapter captures the role of women in forest management especially in protecting the forest wealth. Women are backbone of hill economy. They have played crucial role on every aspect of hill development. They played important role in all environmental movements here. It would be biased if we do not write about their role in the book. The eighth chapter is an attempt to pay our respect to them in a very small way.

The last (ninth) chapter introduces a new concept how to evaluate the performance of a Van Panchayat. How do we say that a particular Van Panchayat is successful or not? Many people have written about this but we failed to come across any comprehensive account on this subject. We have developed a methodology to judge a particular Van Panchayat for its performance. For this many indicators were identified based on their importance and relevance to this institution. With the help of these parameters/indicators we classified seventeen Van Panchatays (which were studied by us) successful, partially successful and unsuccessful.The parameters are applicable to every Van Panchayat and can also be applied to other natural resource management regimes.

The purpose of writing this book is to provide a holistic view of the Van Panchayat institution of Uttarakhand Mountains. During the last 93 years since the rules were first promulgated in 1931, many up and down have been witnessed on the subject. People from diverse background have studied the

system but publications are rather few. We have made an attempt to compile this and related literature into a book. Further we have not come across any book written either by Indian or foreign author on this subject. This motivated us to write this book. It has chapters dealing with different aspects related to different disciplines like forestry, policy, management, environment, ecology, economics, and socio-economy which give it a unique dimension. We intend to introduce this unique system to readers' world-over.

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Nagendra Prasad Todaria
Dhanpal Singh Chauhan

GLOSSARY/ABBREVIATIONS

ACF	Assistant Conservator of Forest
ACM	Adaptive Collaboration Management
APCCF	Additional Principal Chief Conservator of Forest
Assisal bandobast	Land settlement of 1880
Bhumi bandobast	Boundaries demarcation of land
Banis	Tree singled out within village boundaries
Banj	Oak (*Quercus leucotrichophora)*
Begar, Utar, Coolie utar	Forced labour
CF	Conservator of Forest
Chir	Long-leaved pine (*Pinus roxburghii*)
Chaukidar	Watchman
Chetriya Samiti	Regional Committee
Darbar, Dirbar, Durbar	Royal court
Deodar	Cedar (*Cedrus deodara*)
Dewan, Diwan	Chief minister in Royal court
DFO	Divisional Forest officer
DM	District Magistrate
EDC	Eco-development Committee
FPO	Forest Panchayat Officer
FPI	Forest Panchayat Inspector
FD	Forest Department
FIR	First Information Report (Complaint to police)
JFM	Joint Forest Management
FSI	Forest Survey of India
FPC	Forest Protection Committee
Gaonsanjait	Common village land measured by government
Gram Sabha	Village Committee
Gram Panchayat	Village Council
Gram Vikas	Village Development

Gram Sevak	Village level government servant
Hissadars	Cultivating proprietors
Kisan	Peasant
Khasra	Maps
Khaikars	Original occupants reduced to occupancy tenants
Kharak	Cattle house inside the forests
Lath Panchayat	Stick measurable Forest council
Mauwasabaari	Each household on rotational basis
MC	Management Committee
MLA	Member of State Legislative Assembly
Nazarana	Gift
PCCF	Principal Chief Conservator of Forest
Pahari,Paharee	Hillman
Padhan, Pradhan	Head of village (headman)
Panch	Member of Van Panchayat committee (MC) elected by general body (villagers)
Panchayat	Village council
Panchayat Vanvid	Forest Specialist
Panchayat Van Up Van Rajik	Forest Panchayat Deputy Forest Ranger
Panchayat Van Vikas Adhikari	Forest Panchayat Development officer
Patwari	Lowest level revenue official for a group of villages who maintains ownership records and collects land taxes
Pargana	Sub-division of district administration
Patti	A group of villages
PSB	Public Sector Banks
RO	Range Officer
RS	Indian Rupees (Indian Currency)
Sahayak Panchayat Van Vikas Adhikari	Assistant Forest Panchayat Development officer
Sabha	Association
Sarpanch	Head of Van Panchayat/Management Committee
SDM	Sub-divisional Magistrate
SO	Statistical Officer
Thaplas	Terraced land
Tehsil	A revenue subdivision at district level

UFD	Uttarakhand Forest Department
UFS	Uttarakhand Forest Statistics
UKFD	Uttarakhand Forest Department
Up Panchayat Van Vikas Adhikari	Deputy Forest Panchayat Development officer
VP	Van Panchayat
Van Panchayat	Forest Council
Van Vikas Adhikari	Forest Development officer
VFJM	Village Forest Joint Management
VFC	Village Forest Committee
WP	Working Plan
Zamindari	Local large landownership
Zilla	District (administrative unit lower to state)
Zill Panchayat	District Council
Zill Panchayat Van Pramarsh Datri Samiti	District Forest Panchayat Consultation Committee

CHAPTER 1

INTRODUCTION

Background

In the second half of the nineteenth century, forests in Asia were nationalised and handed over to trained foresters for management. This happened first in India under British colonial rule and then in other countries. However, by the 1960s and 1970s state control was seen as ineffective as forests were rapidly degrading. The common cause for this degradation was attributed to the increasing population pressure from rural communities. This resulted in some rational thinking in the policy arena that if rural people were part of the problem, then meeting some of their needs was part of the solution, which could be achieved by involving the rural population in forestry activities. By early 1978, the FAO preselected some of the ideas behind community forestry in 'Forestry for Local Community Development' (FAO 1978). In the meantime, an experiment in community forestry was initiated in Nepal, and some other countries also started experimenting with the concept of social forestry (Fisher, Prabhu and McDougall 2007). However, well before this, the Van Panchayat (Forest Council) system was already in full operation in the Uttar Pradesh hills (present-day Uttarakhand), India.

The beginning of the 1980s witnessed people-centric approaches to forestry in the form of community forestry, community-based forest management, social forestry, and joint forest management (JFM) in Asia. The initial focus was simply to involve communities in government programmes for reforestation and forest protection which gradually evolved towards more devolution of decision-making powers, and a transfer of user rights to local communities. Protection activities were usually managed through traditional, or informal, culture-bound institutions/organisations. Under this system, communities had either the partial rights to forest use, jointly, with the Forest Department (particularly in the case of protected forests) or full usufruct rights when such forests existed on village commons or wastelands. Gradually, under community forestry programmes, decentralisation of management was initiated, focussing on real decision-

making authority at the local level, changes in forest governance, and devolution of previously denied rights and responsibilities to local communities (Fisher, Prabhu and McDougall 2007).

Community-based forest management is fundamentally a decentralised grassroots experiment initiated by forest-dependent rural communities to protect their natural forests from degradation (Sinha 2003). In community-based forest management, communities enjoy both governance and benefit-sharing rights, with the responsibility for sustainable management of forest resources. These rights may be *de-facto* or *de-jure* depending on the local conditions (Sinha 2003). Community involvement and accountability are the key factors in community-based forest management (Sarin 1996; Pimbert and Pretty 1997; Khare 1998).

Devolution of forest management is now a state policy globally. But in reality, devolution has not happened as the evidence from many countries reveals that far from devolving management authority to the people who actually use and need the forests at the local level, devolution policies have sometimes actually decreased local control of the forests (Edmunds and Wollenberg 2003). In Orissa (India), the existing local forest management systems were compelled to conform to rules under the state's JFM programme, reducing the decision-making role of communities (Sarin, Singh, Sundar et al. 2003). In many other cases, devolution has had limited effect (Fisher 1999; Colfer and Capistrano 2005; Prabhu and McDougall 2007). The main purpose of devolution policies was to meet the needs of poor and marginalised rural people and, surprisingly, even this purpose was not fully met and has even made the poor worse off in many cases (Malla 2000; Edmunds and Wollenberg 2003; Sarin, Singh, Sundar et al. 2003).

Meaning

According to the IUCN (1996), community forest management (CFM) refers to a system where a community has developed institutions, norms, rules, fines, and fees to sustain forest resources. CFM systems characteristically involve one or more communities (social groups/villages) protecting and using a specific forest. While the forest may not be under the legal jurisdiction of the community, the groups/villagers strongly identify themselves with the forest and consider that they have the right and responsibility to manage the same (Conroy 2001). Not all CFM systems in India are legally recognised. A study estimated that there are 12–15000 CFM institutions in India (Poffenberger and Singh 2002). CFM is widespread in eastern India, particularly in Orissa, and also exists in Rajasthan, Gujarat, and Andhra Pradesh (Conroy 2001).

Management of common pool resources has gained importance recently due to the pivotal role of these resources for the survival of millions of households in developing countries (White and Martin 2002). In this context, scholars have analysed the factors that promote or hinder the ability of communities to conserve resources (Agarwal and Chhatre 2006; Andersson, Clement and Crowder 2007).

Institutions

The community forest is generally controlled by local organisations/institutions. These institutions have formal as well as informal rules that govern CFM. Generally, institutions have informal constraints, formal rules, and the enforcement characteristics of both (North 1989). Institutions are governed by their intrinsic structure and the physical and social behaviour of the human beings living around them (Chakraborty 2001).

The question arises as to whether these grass-root organisations are successful or not in terms of achieving sustainable forest management. This question has been raised by many because studies on community forestry have not paid much attention to the subject. The change from centralised to decentralised forest management has resulted in tremendous changes in the overall functioning of community-based forest management. These changes have been witnessed in terms of the increased access of local communities to forest resources (Post and Snel 2003). The increased internal social mobilisation helps communities challenge the traditional state authority, enabling them to create political capital, and exposing the conflicts over resource interests (Nygren 2005; Rosyadi, Birner and Zeller 2005), paving the way for positive changes and exploring the potential for better forest management (Edmunds and Wollenberg 2003). However, all such studies do not provide concrete evidence of the impact of decentralisation on sustainable forest management (Kaimowitz, Vallejos, Pacheco et al. 1998; Rosyadi, Birner and Zeller 2005).

The answer to the above question can be found only when we analyse the time-tested/long-surviving grassroots/community institutions. This is because of the fact that the newly established community institutions go through various developmental stages and some of them may face existential crises at some point in time (Sajise, Fellizar and Saguiguit 2003). There are several factors which make these institutions vulnerable. The sustainability of these community institutions depends on five variables: socio-economy, physical, institutional, population, accessibility and market pressure, all of which impact resource use (Ostrom 1994; Agarwal and Yadama 1997). (For details see Chapter 9.)

Decentralisation

Decentralisation has been used, world-wide, as one of the tools to achieve development goals, provide public services and for environmental conservation. Decentralisation of forest resources has been considered the most important for three reasons: firstly, millions of people are affected by how governments manage forests and accept local claims; secondly, durable decentralisation in forestry may help governments to experiment similarly in other natural resource areas; thirdly, decentralisation is being seen as an important parameter of the democratic process (Agarwal and Ostrom 2001). However, the decentralisation studies do not throw light on why states attempt decentralisation, as these studies do not pay attention to the nature of the property rights that states devolve to local communities. It has not been made clear as to why powerful politicians and bureaucrats initiate actions to take away power from themselves. The relationship between property rights and political authority is complex and not well understood. It is not even clear which forms of authority are necessary for successful decentralisation (Agarwal and Ostrom 2001). The decentralisation process can be better understood if we know the roles local communities play in ensuring that property rights and decision-making are devolved, and the types of property rights that must be devolved to local communities for successful decentralisation (Agarwal and Ostrom 2001).

The aim of decentralisation is to achieve democratisation of institutions and to fulfil the people's desire to have a say in their own affairs. It also means redistribution of power, resources, and administrative capacities among different units of the government and local groups (Smith 1985). The agents/actors who are responsible for playing a role in decentralisation are: international donors, local organisations, NGOs, and different wings of the central/state government. However, each actor has their own interests in decentralisation (Agarwal and Ostrom 2001).

According to Agarwal and Ostrom (2001), decentralisation of power and decision-making happens when a central political actor, or coalition of actors, find(s) that decentralisation may reduce costs/or improve revenue, deflect blame, or extend state reach further into social processes. This also means reaching out to deprived sections of the society to get political capital in terms of votes or an increased vote share. This, however, is insufficient for the effective implementation/success of decentralisation. Local mobilisation is a critical component for successful decentralisation. As a rule, the local political/social workers are less powerful as compared to international/national political power, and their interests are generally ignored in framing the decentralisation policies and programmes. If local

leaders' interests are also taken care of, or they are mobilised in favour of decentralisation, more meaningful decentralisation of power and rights becomes possible (Ostrom 1990).

The meaning of decentralisation varies depending upon the context in which it is used. In the context of natural resource management, decentralisation is defined as an act by which a government cedes the rights of decision-making over resources to institutions/organisations at lower levels in a politico-administrative and territorial hierarchy (Mawhood 1983). Through it, new actors and institutions come to gain new powers of decision-making and enjoy different combinations of property rights (John 1968). Property rights are defined as the relationship among actors with respect to natural resources (Bromley 1992).

Extensive decentralisation reforms in forest commons in developing countries have taken place (Willis, Garman and Haggard 1999; Heller 2001; Bardhan and Mookherjee 2006). Under these reforms, more than 60 countries have devolved decision-making powers to local communities and local-level administrative bodies in resource management (Ribot and Larson 2005). Many scholars have raised the question about the level of superiority of decentralisation/decentralised management of forests compared to local-level community institutions. The question also arises as to why local-level community institutions are debarred from decentralised management of forests – in another way we can use them (in an effective manner) as the instrument of execution regarding decentralised management, where state forest officials have either a very small (or no) role (Andersson and Gibson 2007). The answer to this question is essential for three reasons: (i) to know the abilities of rural communities to organise and govern resources themselves (Ostrom, 1990), (ii) to better explain the policy of decentralisation of forest management (White and Martin 2002; Wardell and Lund 2006) and, (iii) the need to change policy in terms of more involvement of state forest officials in local management (Andersson, Gibson and Lehoucq 2006). This also raises the issue of whether the government or NGOs would have any role in (at least) the implementation or sensitisation/awareness-building, and in guiding, monitoring or guarding them from the forest mafias, as there is every possibility that the forest mafias may exploit the opportunity by disguising themselves as community people.

Decentralisation of forest management has been based on four distinct points/assumptions: (i) rural communities/villagers around forests have an inherent knowledge of the forests as compared to far-off-placed forest officials (World Bank 1997). They are in a far better position to make decisions about how much to harvest, at what times, and with what

techniques in comparison to government officials who sit in cosy places/offices (Chhatre 2007). (ii) decisions by local institutions are cost-effective because of lower overheads and operating costs as compared to central decision-makers (Ostrom, Waynne and Schroeder 1993). (iii) Local villagers/communities have high stakes in the continued existence and maintenance of forest resources because their livelihood depends on it (Dasgupta 2001). (iv) Small patches of forests are of insignificant value to centralised decision-makers; hence, they take less interest in their efficient management (Dasgupta 2001).

Decentralised management of forests has also given rise to some important problems (other natural resources included) which impact their effectiveness (Prud'-homme 1995). (i) A coordination problem – this is related to multi-scale governance processes. Settlement of disputes among individuals belonging to different local groups (encouraged by national/regional politics reaching villages) is a major problem for which some degree of external/state control is necessary for resolution of the disputes and effective management. (ii) Externalities may arise due to inappropriate forest use and management. (iii) Decentralised forest management may generate benefits or costs that cannot be allocated to users or decision-makers whose decisions generate externalities. For example, local users may have strong incentives to clear or fell a forest, or a part of it, for revenue generation. But such an act adversely impacts the biodiversity conservation/ecosystem services the forests/species generate but which have no commercial value (Dasgupta 2001).

Free-riders are one of the problems in sustainable forest management for both direct and indirect benefits (ecosystem services) and require collective action by communities to deal with them. Therefore, scholars across the globe have discussed methods to achieve internal cooperation and overcome free-rider problems in community-based forest management (Ostrom 2005a). Institutions/organisations that have a high degree of autonomy in terms of making rules and their enforcement, and/or support from higher levels of government, are better placed to have a higher level of cooperation (Fehr and Rockenbach 2003). The imposition of rules and regulations from above leads to low levels of cooperation as compared to when users devise the rules themselves (Cardenas, Stranlund and Willis 2000). Therefore, the ability of a community for sustainable forest management is enhanced to a higher level when there is significant autonomy from external interference (Ostrom 2005b). At times it does not work and, therefore, management systems set up under new decentralised policies around the globe have assigned (essentially) a significant role for state officials (Sundar 2000) to resolve disputes and solve the problem of free-riders. But this role should

be limited to solving/arbitrating disputes (inter and intra villages) and silvicultural advice.

People's Participation and Social Identity

Participation in a group, in its narrowest sense, is defined in terms of nominal membership (Chopra, Kadekodi and Murty 1990; Molinas 1998), and in its broadest sense it is defined as a dynamic process in which the disadvantaged/marginalised have a voice and influence in decision-making (Narayan 1996; White 1996). Participation is categorised in two ways (1) direct, and (2) indirect. Direct participation includes the involvement of stakeholders in activities such as attending meetings concerning forest management, taking an active part in meetings, contributing labour towards forest protection/monitoring/patrolling, etc. Indirect participation refers to individuals' obedience to rules and regulations imposed from above, motivating others as well as their own family members in forest protection, and providing moral support to their community to ensure equity, justice, and transparency in forest management (Silwal 1986; Ostrom 1990; Raju, Vaghela and Raju 1993; Sarin 1996; Singh, Ballabh and Palakudiyal 1996).

The participatory forest programmes in India fall under passive or informing participation, where 'Local people are simply told what has been decided and unilateral announcements are made by external people with information flowing to local people with neither a channel for feedback nor power to negotiation' (Inoue 2003). This is what happens in joint forest management.

Government officials either perform the role of facilitator or spoliator of local resource management and these roles are contested issues (Ostrom 2005b). Some scholars believe that a high level of local autonomy is the best mechanism to obtain the benefits of decentralised management (Ribot 2003; Andersson, Gibson and Lehoucq 2006) while others believe that some state control over local institutions is essential either to prevent these local institutions being appropriated by those with vested interests or the misuse or over-exploitation of resources (Noel 1999; Hutchcroft 2001; Platteau and Abraham 2002).

Factors responsible for peoples' participation

The success of community-based forest management primarily depends on the degree of acceptance of the social identity (group feelings) by its members (Sarin 1996; Pimbert and Pretty 1998). Social identity results in people's participation in institutional activities (Silwal 1986; Ostrom 1990;

Raju, Vaghela and Raju 1993). Favourable perceptions about institutional rules, regulations, and the level of freedom in the decision-making process all enhance social identity.

Individual participation in collective action depends on many factors: an individual's self-categorisation (one's social and personal identity) within the organisation (collective domain), psychological attachment with organisational pride and respect, and identification as an organisational citizen (Tyler 1999; Ouwerkerk, Ellemers and de Gilder 1999). The equality among members of the organisation in terms of status, access to benefits, equal opportunities and a share in the decision-making process results in the higher organisational identity of any personas compared to personal identity (Turner 1985). This social identity is high in a homogenous community/group. Social identity helps in undertaking collective action because it enhances group-based pride and respect, where individuals take pride in organisational achievement. When institutional governance takes into consideration local priorities and self-governance, members of the organisation develop group pride and respect (Pimbert and Pretty 1998). Feelings of group-based pride and respect promote (i) greater loyalty to the organisation, (ii) an enhanced compliance with organisational rules, and (iii) an increased inclination to take on extra roles i.e., supporting the organisational cause by motivating others, putting in extra labour, etc. (Taylor 1999). Effective participation depends on the democratic rights, values and freedom of choice provided to people in every decision-making process (Narayan 1996; Molinas 1998; Sinha 2003).

Institutions' stability and outcomes

Stability is defined as the optimum conditions under which existing rules generate a constant pattern of behaviour at a low transaction cost over a period of time. This results when people associated with the institution fully comply with the existing rules or an institution remains stable when compliance is high under unchanged rules over time. The institution becomes unstable for three reasons: (i) when rules are frequently changed, (ii) because of a high transaction cost due to low compliance and, (iii) a decline in compliance over time (due to an increase in the number and intensity of rule violations). Frequent changes in rules increases transaction costs because, each time, they need to be negotiated or agreed upon, which entails economic and social costs (Chakraborty 2001). In addition to stability, another factor i.e., outcomes is also an indicator of the performance of an institution. Outcomes are defined in terms of the allocation and distribution of economic resources/benefits/usufructs. Outcomes have been

categorised as: ecological sustainability and poverty alleviation. Ecological stability indicates that a forest area should remain the same (either no diversion or encroachment) and the diversity of forest products (quality and quantity) and age gradation of the forest does not decrease over time (if proper silvicultural practices are carried out). Poverty alleviation refers to an increase in per capita quantity or the range of forest products (i.e., in terms of species) available to the people (progressive yield) compared to earlier times or to an alternative forest management institution. Poverty alleviation may also be, in terms of other economic activities/opportunities, made available to the rural poor by the institution. Stability and outcomes are interdependent. On the one hand, stability is a necessary condition if outcomes are to be achieved continuously, in terms of no change in the physical and social environment of an institution. On the other hand, stability would be possible if incentives exist for the people, then the outcomes they desire will be achieved (Chakraborty 2001). Variations in institutional durability, rule enforcement efforts, and cross-scale collaboration among social agents also have important impacts on outcomes (Baland and Platteau 1996; Ostrom 1990; McKean 1992).

Stability, ecological stability, and the economic efficiency of natural resources are enhanced under common property management (Larsen and Bromley 1990; Ostrom 1990; Bromley 1992; Ostrom, Gardner and Walker 1994; Baland and Platteau 1996). A common property institution becomes unstable over time, after its establishment, if opportunities exist for individuals to defect/free-ride, especially in the case where their actions remain unnoticed by others (Chakraborty 2001) and they escape penalties. Three factors support the stability of an institution: (i) if everyone makes a commitment which is seen as credible by all other individuals associated with the institution; in the presence of opportunities to defect/free-ride this is difficult to achieve; (ii) the existence of monitoring and enforcement mechanisms are needed to detect rule breakers and punishments (penalties) for rule violation, respectively; (iii) the existence of a legal and political environment which can either support or erode the stability of the institution (Ostrom 1990).

Property rights

Successful decentralisation of resource management, allowing new actors/users to take decisions for natural resource management, results in the creation of new institutions/organisations because the transfer of rights and powers from government to new actors is seen as a positive signal. The delegation of power may be in two forms: in certain cases, the power of

decision-making is delegated to district and other lower-level officials/actors to manage locally situated resources and, in other cases, this power is delegated to village-level actors/individuals/communities (Agarwal and Ostrom 2001). There are five types of property rights with reference to common pool resources: (i) withdrawal – the right to enter a defined physical area and obtain the resources or products of a resource system (for example, cutting fodder/fuelwood or timber, harvesting minor forest products, etc.); (ii) management – the right to regulate internal use patterns and further develop the resource through silvicultural improvement (seedling, planting and thinning trees refers to silviculture practices in forestry); (iii) exclusion – the right to determine who will have the right of withdrawal and how that right may be transferred; (iv) alienation – the right to sell or lease withdrawal, management and exclusion rights; and (v) access – is the right to harvest (Schlanger and Ostrom 1992; Agarwal and Ostrom 2001).

The above-mentioned rights can be exercised at different levels. The withdrawal right can be exercised at an operational level (Ostrom, Gardner and Walker 1994). Management, exclusion, and alienation rights can be exercised only at the collective-choice level that impacts future operational decisions. The collective-choice level capability depends on possession of this authority by communities and must be delegated at constitutional level. The operation of these rights, on the one hand, can be at single level i.e., a single entity (institution/organisation/user group) can use operational rules, create them by discussion at the collective-choice level, and may have powers at the constitutional-choice level to alter them as well. On the other hand, several different levels of authority may exist i.e., village, district, division, state (province), and nation, each with specific roles and powers. Some rules affect day-to-day use, while others create/impact operational-level rules and still others at higher levels affect collective choice (Agarwal and Ostrom 2001). Thus, outcomes may be different depending upon the rights exercised at different levels.

Decentralisation of forest resources around the globe has taken place (and is still continuing) in most cases in terms of community-based conservation, where communities gain varying degrees of collective control over forests (Agarwal and Gibson 1999). This devolution of power to communities can be grouped into three categories: (i) national government relaxing control sufficiently to allow local users' rights corresponding to those of a proprietor or owner; (ii) allowing local villagers to take some decisions regarding the management domain only; (iii) permitting users to have greater rights of access and use (authorised user) but not claimant or proprietor rights (Agarwal and Ostrom 2001).

Many decentralisation programmes assign only a few operational-level rights to local actors/communities or user groups and significant operational and collective-choice rights are in the hands of the government. Even this delegation of some operational-level rights for continuous use encourages local users/communities to perceive long-term interests in a local resource. However, such limited property rights do not provide strong incentives for sustainable forest management. In the absence of the collective-choice right to manage a resource, local users/institutions cannot consider and decide on various methods of growing and planting seedlings, thinning trees for fuelwood, lopping trees for fodder, putting restrictions in place for the grazing of cattle and other activities in a forest. Without the collective-choice right to exclude others (free-riders), local users may be the losers and free-riders the beneficiaries. The absence of constitutional-choice rights may lead to the withdrawal of these rights by power-holders without consultation. Decentralisation is incomplete until government transfers property rights over resources in terms of collective- and constitutional-choice level. Decentralisation is insufficient in granting rights to undertake operational-level actions only (Agarwal and Ostrom 2001). Variations in property-rights arrangements affect resource-related outcomes because they lead to different incentives for users and others (Libecap 1989; Knight 1990).

Types of Local/Community Organisations in India

Community-based organisations exist in various forms in India and the major types are briefly described below.

1. ***Indigenous Community Forest Management (ICFM)***

Forest degradation resulting in a consistent decrease in forest-based livelihood products led to the development of this type of forest management. The local initiatives were supported by local leaders, youth groups, the Forest Department and NGOs. These community-based institutions developed in those places where communities had either strong socio-economic dependency on the forests or had a long tradition of communal resource management. In the Indian states of Jharkhand and Orissa, thousands of such organisations exist, managing more than 200,000 hectares of forest (Singh and Singh 1993). Similar organisations also exist in Rajasthan, Gujarat, and Karnataka. The extent of these organisations varies from the small (with informal arrangements) to the large (with formal, well-defined rules and regulations) (Sinha 2003).

Another example comes from Andhra Pradesh. In many villages in the Anantapur district of Andhra Pradesh a unique system exists wherein the initiative is taken by NGOs to form a village society in each village, in which all households are members. The management committee also consists of all the households of the village concerned. The management committee makes the rules (agreed by consensus) for the protection of the forest and equitable distribution of usufructs. This has led to a reduction in cases of illegal tree-felling, resulting in healthy forests and higher forest productivity in terms of fuel-fodder and the availability of minor forest products. This has also increased the supply of non-timber products and the income of the villagers.

2. *Sacred Groves*

The protection of nature (forests included) for religious purposes is an ancient practice that has recently gained attention in terms of conservation. Historical examples come from Asia, Africa, and Europe (Belief 2005). These vary from small patches to large tracts of forest which preserve biological and cultural diversity (Pandey 1998; Belief 2005). Although these sacred groves are managed by the community they differ from community forestry in the sense that, generally, there is no management at all because people are not allowed, or do not derive, any direct benefit from these forests as these are also associated with taboos. However, these do provide indirect benefits in terms of carbon sequestration, soil and water conservation, and a biological diversity and culture (aesthetic) value. Kan forest in the Western Ghats of Karnataka, the Tarkeshwar sacred grove, and the Haryali devi sacred grove of Uttarakhand are such patches, which have been protected by people since time immemorial due to their sacred importance (Gokhale 2004; Jana, Pandey, Semaraoc et al. 2021; Jana, Dasgupta and Todaria 2021).

3. *Crafted Community Forest Management (CCFM)*

Village people are motivated by many local organisations, such as Mahila Mandals (women's organisations), tree growers' co-operatives and NGOs, to develop their communal lands as community-based forests. This type of local institution has developed with the active support of local government and NGOs. The effectiveness of these organisations varies widely depending upon their common interest, functional capabilities, and leadership patterns (Sinha 2003). *Van Surksha Samiti* (VSS) – a forest protection committee – is one such example but differs from other forest protection committees as it is set up solely by the people themselves. Forest departments, or any other government departments, have no role either in its establishment or

functioning. The most talked about example of this is the Jardhargaon community conserved area, in Uttarakhand, India. It is situated in the Chamba area of the Tehri Garhwal district of Uttarakhand. The VSS comprises 10/11 members of the Jardhar Panchayat (village council). Women are also represented. The members are chosen by common consensus. The VSS meets around once a month, where decisions are taken by consensus. Rules and regulations for the management of the forest are made by committee members during their meetings, which can then be changed when the need arises. A forest guard is also appointed to enforce the rules and regulations. In addition, other community institutions such as the Mahila Mangal Dal (women's organisation), and Pan Panchayat (water council) also play a significant role in forest protection (Samdariya, Fareedi and Kothari 2008). There may be many other such organisations in Uttarakhand as well as elsewhere who may be playing a pivotal role in forest protection/conservation.

4. ***Gramdan Villages***

Vinoba Bhave, a staunch supporter of the Gandhian philosophy of the revitalisation and empowerment of Indian villages, started a movement known as Bhoodan (land gift) and urged landlords and others to donate their excess land for distribution among the landless and poor in their respective villages. This then evolved into Gramdan (village gift), the collective gifting/donation of all land in the villages to the village council (Gram Sabha) for common management (Saint 2000). In Rajasthan, the Gramdan Act was passed in 1971, which enabled villages to constitute themselves as Gramdani villages under the Act (Saint 1993). The Act authorises the Gram Sabha (a legal entity under the Panchayati Raj) to collect revenues, resolve local disputes and manage the land resources. The executive body of the Gram Sabha is comprised of all the adult members of the village.

5. ***Cooperatives***

These are legally recognised entities that communities can establish for natural resource management. Tree grower's cooperatives have been formed for the planting of trees on degraded forest lands and community pasture lands in the villages of Andhra Pradesh, Gujarat and Rajasthan. In Gujarat, Haryana, Rajasthan, and Karnataka Forest, protection committees have been established under joint forest management (JFM) but are registered under the Cooperative Society Act (Jeffery and Sundar 1999).

6. *Gram Sabhas in Scheduled Areas*

The 73rd Constitutional Amendment Act of 1993 delegated some powers to local bodies, e.g. Gram Sabhas and Panchayats. While a Gram Sabha comprises all the adults in a village, Panchayat comprise political representatives elected by the Gram Sabha. Gram Sabhas, as well as the Panchayats, have been provided with the authority in tribal areas for natural resource management. But no studies have been conducted to show if any successful resource management has come from these changes in the Indian constitution. Furthermore, these changes are fraught with serious consequences. The Panchayats are political organisations which are infected with corruption and polarisation and, hence, cannot do justice to their communities.

7. *Van Panchayat (Forest Council)*

The Van Panchayat system was enacted in the erstwhile United Provinces (which later became Uttar Pradesh) in 1931. It was also incorporated in the Indian Forest Act (1927). The creation of the Van Panchayat system was the result of continuous conflict between hill (part of present-day Uttarakhand) people and the Forest Department under colonial British rule. The main cause of this conflict was the new rules and regulations in the context of forest management, which curtailed people's access to the forest for fuelwood, fodder, grazing rights, etc. In this system, initially, people had all their powers to manage their forests slowly curtailed. However, even today, the day-to-day management decisions are taken by the Van Panchayat committee (democratically elected members), while a Revenue Department looks after administrative matters and the Forest Department intervenes in technical matters.

8. *Joint Forest Management (JFM)*

The Forest Department in independent India miserably failed to halt forest degradation, or ensure a sustainable supply of fuel-fodder to rural communities as envisaged in the Indian Forest Policy 1988, resulting in persistent conflicts and agitation against the Forest Department/state government. The result was the emergence of the concept of JFM. This system was initiated as per the circular issued by the Ministry of Environment, Forests and Climate Change, Government of India, in 1990. JFM was created to establish coordination between the people/communities living in and around the forests and the Forest Department, and empowering communities to control and manage the forest resources. It aimed to establish a symbiotic relationship between rural communities and the Forest Department wherein communities would manage the forests with their traditional knowledge and the Forest Department would provide the technical expertise. The effectiveness/success