New Paradigms for Commons*

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Summary

The paper attempts to study few village level institutional efforts, both formal institutions as well as informal institutions, where locals have taken the initiative to develop a sustainable mechanism to manage their CPRs. Cooperatives which were involved in natural resource management; in agricultural produce marketing and in developing micro level financial resource building on one side and informal village associations trying to meet community needs by developing mechanisms and methods to bring CPRs to reach of one and all are studied to understand the processes that locals adopt. Based on the study, the dynamics of community's relation to the CPR in terms of its interchanging roles, and the process of building sustainability in such an institution has been presented in the paper.

Introduction

The Long Standing Commons are available in a given community for generations and their status is directly dependent on the level of the responsibility locals have taken in using and maintaining them while state continued to intervene in these efforts to the detriment or otherwise of the Commons, depending upon the level of responsibility and accountability the local community has taken.

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Different researchers held opposing points of view that CPRs are most of the time exploited by people and state or any other external institution has to intervene in their proper management. Hardin's classical theory indicates that these CPRs are always misused and abused by the users in the absence of any regulatory mechanism built by the state or other external agencies and they are exploited to a stage of irrevocable degradation or damage[1]. Ostrom[2] observes that "(when left to themselves) at a minimum, the returns they receive from their appropriation efforts will be lower when decisions are made independently than they would have been otherwise. At worst, they can destroy the CPR itself". Olson further observed that 'unless there is coercion or some other special device to make individuals act in their own common interest, rational, self-interested individuals will not act to achieve their common or group interests[3].

Even as the debate on CPR management continues, the advent of new technologies, modernization processes, developmental initiatives in the last few decades resulted in a changed status of commons; changed status of the commons and changing needs of people and their settlements brought in new commons; changed the way communities – both rich and poor - behave towards them and changed their dynamics in a given community and posed new issues regarding their management.

In the proposed paper, it is offered to illustrate the processes through which some new sets of commons got developed and managed, by people, both due to external catalysis as well as internal recognition of common needs and solutions. Such commons, it is further observed, need not always be built on new technologies such as Internet, or Condominiums of West but also by developing a new system of using a long standing common, or by modifying the resource status to bring it to utility, or by bridging the gap between resource tapping mechanism and users cum owners. It could be

observed that even the new technologies that build a new set of commons do so on similar principles.

Objective:

The objective of the study was to examine some of the successful cases of collective efforts of communities in introducing, sustaining and improving their relation with the resource base. Specifically, the objective was to identify the collectively built resources of communities and their availability to a cross section of people of a village or community and to identify some of the salient management systems and underlying principles of those systems. It was attempted to enlist the processes people went through in each of these cases in managing CPRs and offer a model for managing CPRs in the next millennium.

Methodology:

For the purposes of this study, methodology adopted included both secondary and primary data collection and analysis. The primary data collection was taken up for a larger study taken up by the author in 1999 in pursuit of an understanding of the relation communities have with the resource base in changing times and increased urbanization and industrialization. The author also drew upon his experiences with different development organizations, cooperatives and other NGOs.

The case studies selected were those with which author was individually involved and instrumental in:

- Providing external catalysis in one such developmental intervention related to bringing the degraded wastelands into protected forests;
- Providing external catalysis in few agricultural credit and value adding cooperatives and thrift cum credit cooperatives where individuals developed and maintained common property resources in the form of finances, machinery and institutional systems; and

- Observing and understanding - as an external researcher - the dynamics of two diverse communities, who worked to develop new commons to meet the drinking water needs and burial ground needs of their villages and establish management systems to manage them.

Scope of the paper:

The paper presents three case studies of different initiatives of people in different regions of India; presents a conceptual base of salient features of management systems of each and finally concludes with a discussion of two models that would be of relevance for CPR management in the new millennium.

Case 1: Developing a new system of using a long standing common - Tree Growers Cooperative Societies – Two Percent Agreements for Sustainability:

The concept of TGCS

The Tree Growers Cooperative Societies have come up in different parts of India as an alternative for waste development programs, seeking to meet the needs of villagers with regard to fodder, firewood and small timber needs. An organization promoted by National Dairy Development Board, Anand, named National Tree growers Cooperative Federation, started working from 1987, in promoting and supporting these cooperatives, in different states, by helping interested villages adopt a stretch of around 40 hectares of degraded wasteland, mostly the village common, which was under the control and ownership of the revenue department of respective state governments, and help them plant different grasses and tree species, which would help restrict further degradation and propagate vegetation in

the land. While the issues related to obtaining control of these lands by the TGCS itself is worth attempting as a separate paper, in this article, it is tried to look at the operational issues of management and strategies adopted in trying to implement them only.

Search for sustainability

The TGCS set up and assisted by NTGCF to develop and re-vegetate common lands needed substantial amounts of financial support. (It was estimated initially[4] that each TGCS would require around Rs. 0. 5 million or USD 16,700 @ 1 USD = Rs.30/-, over a period of five years, which was later found to be an average outlay of Rs. 0.32 million) Initially support was provided through the grants received from NDDB and later through Swedish International Development Authority (SIDA) or Canadian International Development Agency (CIDA), on a time bound program of five to seven years. However, as the project progressed from 1987 to 1992, NTGCF faced uncertainties of securing long term financial support from external agencies, to pursue the project in the existing states or elsewhere, due to several reasons. NTGCF, as the parental body of these TGCS, recognized the need to find alternate sources of financial support for the project and simultaneously attempt building both NTGCF and TGCS into sustainable institutions in terms of financial and functional aspects of TGCS, even in the absence of development assistance from other agencies. It further identified the need to strengthen TGCS to continue to protect and promote the CPR of their village and help resist the pressures normally faced by CPRs from society and also from state. NTGCF also recognized that the early TGCS have developed the CPR and nurtured their plantations to a stage where they were in a position to continuously harvest and utilize the products and bye-products of the plantations for their members benefit – both in terms of quantity and also in terms of financial returns. By end of 1992-93, the early TGCS have completed their fifth year of their existence

and were to receive no further financial assistance to maintain and manage the plantation and the coop. However, as noted, they developed their internal resources in terms of natural assets and also financial assets. Saxena[5] and Balooni[6] note the performance of different TGCS in different papers indicating that they possess a potential normally unmatched in a CPR Management Unit. NTGCF further appreciated the pioneering role these TGCS have started to provide in terms of demonstrative effect on other villages in promoting cooperative way of managing CPRs. NTGCF took this opportunity to address the issues of sustainability in 1993-94. It called upon its member TGCS in the Sixth Annual General Body Meeting held in June 1993 to commit themselves to continued protection and promotion of CPRs through a unique proposal[7]. It requested the TGCS to bind themselves to a formal agreement with NTGCF, where the TGCS take the responsibility to support the development of common lands in other areas by sharing a small part of the resources generated by their collective efforts, on a long term basis.

Model of 12 year Agreements

A typical agreement proposed under this scheme[8] had three components:

a financial and technical support commitment from NTGCF to the TGCS for the first five years – with a detailed plan of action and targets and finances to be provided for development of common lands in the village;

a social commitment on the part of TGCS to manage and maintain the commons to meet the needs-present and future of the village community; and

a financially equivalent natural resources commitment on TGCS to share a small fraction of 2% of the annual harvestible plantation product/byproduct to be ploughed back to the NTGCF for use of the same to develop similar

TGCS elsewhere, to help convert the degraded commons into protected, nurtured and productive commons

Conceptual framework for the agreement:

A typical TGCS on an average required around Rs. 0.32 million on a five year term, to re-vegetate 40 hectares of degraded wasteland, raising around 100,000 to 110,000 trees in the land. The trees on the commons, by the time they are five years old, would fetch, an estimated a market value of Rs. 500 (as at the prices of 1992, when the bio-mass studies were first undertaken in some of the five year old plantations on the basis of market value of the bio-mass generated). A TGCS is free to harvest around 10% of the trees from the twelfth year onwards. At constant prices, such a harvested tree bio-mass would fetch 10,000 x 500 = Rs.5,000,000. If 2 percent of the harvested trees are to be provided to NTGCF for re-investment, it would mean 5,000,000 x 0.02 = Rs. 100,000. Even if a TGCS contributes to NTGCF under this re-investment plan for just three years, say from 12th to 15th year, it would provide Rs. 300,000, roughly equivalent to the funding needed for one more TGCS for five years, to raise plantations over a 40 hectare area. Further, the TGCS is not required to contribute in cash terms – rather it would seek the same in kind, as tree produce itself, and TGCS have no reservations in offering say, 200 trees from a lot of 10,000 trees, irrespective of the prices prevailing in the market.

Operationalization of the agreement:

The General Body of the NTGCF, which comprises of all the TGCS representatives - both elected and paid - discussed the proposal and resolved[9] to commit themselves to build sustainability into the operations of NTGCF and TGCS. The General Body noted that the objective of using such an institutional resource was to help spread the operations of NTGCF

into other geographical areas which may or may not be covered under the existing Financial assistance arrangements. It was also intended to help catalyze and motivate local communities to appreciate the role of common lands in their livelihood; and hence come together to develop them into productive lands. The pioneering TGCS, which were successful not only in regeneration of the commons but also in converting them into financial assets were willing to offer even more than 2% of their annual harvest for this purpose. The institutional models under the cooperative framework allowed each TGCS to individually take such a decision and also decide on the form and means of ploughing back the resources into NTGCF's kitty to use in their institutional development activities.

By 1995, out of 265 TGCS working, more than 172 TGCS have discussed and decided on the extent and mode of their commitment to NTGCF in this area and have entered into formal agreements. It was expected that the NTGCF would develop appropriate systems and methods for receiving the natural resource payments –in kind and monetize them and use them for further promotion of TGCS.

Intended and perceived benefits

The Two percent agreement envisages generation and distribution of financial capital among the users of CPRs, from those who have set right the CPR management to those who would like to follow their way. It further reduces the pressure on NTGCF to seek grants and finances from external sources to pursue the cooperative way of CPR management. It also brings forth a realization on the part of the communities that the financial assistance that they receive is not a free support, but they owe it to the other communities and also to the nature to develop wealth in green form.

To implement the operative part of the agreement, it would be necessary for NTGCF to develop processing and marketing facilities, warehousing and logistics and necessary physical infrastructure; which would be a totally new set of common properties, available for each of these TGCS and their members, who ultimately control and utilize them.

Case 2: Bridging the gap between resource tapping mechanism and users cum owners: Paddy Growers' Coops and Thrift Coops – Developing New Commons

Model of Paddy Coops

The Model of paddy growers' Cooperatives has evolved from the models of multipurpose cooperatives mooted in the late sixties and early seventies, where it was envisaged that a village coop would be the single source for a farmer's needs of agricultural credit, inputs and marketing of his produce. A select group of multipurpose cooperatives in Andhra Pradesh chose to reform themselves into Paddy Growers' Cooperatives, using entirely internal financial resource base. The major difference comes out from the sourcing of equity base from their members and in methodology adopted in developing and running the coop. Another difference is with regard to the management of capital, production and processing facilities; management systems and accountability systems adopted.

These cooperatives are built on the premise that the members are the owners and they control the management of their cooperative. However, in order to aspire for such a freedom in Indian context, they had to build their own resources and thereby ensure that they continue to be the decision makers for their own coop. In order to build such an institution, the coops have tried to develop their financial resource base by having an equity base internally[10]. A disciplined mechanism of continuous contribution by the members to the share capital of their coop and to support the same with voluntary savings on a regular basis made sure that the coop build an equity base to take up business activities of more than Rs. 150 million in an year[11]. Cooperatives such as Mulukanoor[12] and Gattu Duddena Palli[13] in Telangana area of Andhra Pradesh stand testimony to such an effort. These

coops organized their activities from their own resources and dependence on refinancing institutions was limited only to meet their working capital means. As the financial resource base expanded, they were in a position to establish their own agricultural credit and input supply activities, use the loan repayment methodology to ensure steady inflow of harvested produce into the coop and use it for processing and marketing of final value added produce for best possible returns. In the process, the coops were in a position to develop infrastructure, processing and marketing facilities and capitalize them to ensure that the village has a commonly held property in the form of buildings, machinery, plants, warehouses and financial assets- which are available for the entire community.

Commitment of members:

The village communities – in some cases a single village and in some others a group of 10 – 14 villages came together in a resolve to make their primary occupation of farming a remunerative one. They had the resolve to improve their status of being marginal and sub-marginal status and being dependent on agricultural labor to support their day-to-day living prompted them to accept a strict financial regimentation to regularly save, to repay their loans without defaulting and invest in their cooperative from their earnings. This resulted in the members improve their productivity, improve their living standards and finally improve their agricultural holdings by several times and finally come out of a state of being agricultural labor to full time farmers. A study by IRMA on the impact of one such cooperative in 1985 amply illustrates the dynamics that the coop had controlled and directed towards such an improvement.[14] The communities further committed themselves to continue to further build their investments in the coop even during their next generation's involvement with the coop.

Building a set of new commons:

The Paddy Cooperatives attempts were in the area of building their own paddy processing and marketing facilities. Starting from setting up a 10 TPD rice mill to construct several thousand tons capacities of warehousing facilities was possible using the members investment. These infra-structural and production and processing facilities are now permanently available to the village – not only by the existing member farmers but all the members of the village – who could at any point of time join the coop and utilize its resources for their mutual benefit. These commons, though not free in conventional terms, are available at a reasonable price, would support individuals to seek improvement in their livelihood, in their occupation and also in terms of their social requirements.

Thrift coops: Thrift coops concept evolved from the rural traditional concept of chit funds in India, where women used to pool small amounts of money in a periodic manner and provide the pool of funds to one or few needy among them to tide over a difficult situation. Initially the concept of thrift coops was promoted in the mid eighties in Andhra Pradesh and few other states, which now is promoted both by state and development organizations through NGOs under the nomenclature of micro credit and thrift groups or Self Help Groups (SHGs). In these thrift coops, a small group of women of a village or a community are helped to come together and save regularly a fixed amount, say on a daily or weekly or monthly basis. On the designated day/ time the members meet and pool together the amounts that they intend to save, record the same in a meticulously kept record. Thereafter, they discuss among themselves about the needs of members who sought funds and decide on the priorities/ criticalities of the needs and immediately provide those one or two members with the amount at a stipulated rate of interest and period by which it has to be repaid. Initially the savings are used to help meet the family consumption needs of members and gradually

they raise to a level of meeting seed capital needs of self-employed women or their larger occupational needs. The regular and strictly implemented loan recoveries along with the interest charges help grow the funds to significant levels. At such a juncture, these micro level coops join their next tier – mostly at the district or state level and start investing into the apex body by way of savings. These savings are used to set up an informal insurance fund, which is used to meet the liabilities of any deceased member of a micro level thrift coop. The financial management of the coops at micro level and at the apex level catalyzes development of financial resource, that becomes available for a large group of women to meet the refinance needs and also the liabilities due to unforeseen eventuality of death etc.

Case 3: Modifying the resource status to bring it to utility: Village Associations – New Means of managing common property resources

An overview

In Tamil Nadu, several towns and cities have expanded in the last fifty years, bringing in urbanization of all the peripheral villages into their fold. The processes of urbanization resulted in people shifting their occupations, transfer of assets and change in the use of natural resources for their sustenance. Even as these processes were manifesting on the resource-people relations at micro level, the villages continued to keep their identity of being a single community by way of their sharing the resources and managing them. As the villages changed their profile and started to shift the dependency levels from agriculture and rural occupations to urban occupations and industrial resources to sustain their societies[15], their relationship with the CPRs also started to change. Broadly speaking, their relation with CPRs was shifting from one which has lively hood value to one which has occupational value and/or social value.

Profile of the villages

The villages in the block of Madukkarai, Coimbatore district faced the pressures of industrialization and urbanization in the last five decades. For the purposes of this paper, cases of two villages – Kurumbapalayam and Sugunapuram were taken to illustrate the CPR management issues[16].

Kurumbapalayam: A closely knit village, with 650 families, a majority of 88% comprising a single community, traditionally engaged in sheep rearing and stone-cutting, shifted their occupation and pursued industrial labor as

their livelihood means in the last fifty years. The shift was catalyzed by the acquisition of wastelands by a cement factory, resulting in non-availability of common lands for sheep rearing and quarrying work. Though the availability of common lands became scarce, people of the village could sustain themselves by adopting to industrial employment. As the years gone by, besides the lack of common land, the village faced reduction in the availability of another natural resource – water. The village had a small stream, which used to flow for almost six months a year, started to decline and started to provide flow of water for three to four weeks only in a year. The shrinkage of these two resources prompted different occupationists to chose different alternatives on one side and brought the entire village to seek an alternative resource to be built.

On one side there were washer women, who depended on the water in the brook for their daily work. They changed their occupation to limit their services or to shift away from the village to another one to continue their profession. On the other side are the majority of the villagers, who depended on the stream for their daily water needs, however, did not choose the option of leaving the village but decided to explore and utilize the technological solution, in the late eighties to tap the ground water resource. A collectively built bore well and water storage and distribution system, run and maintained by the village association answered the needs of the households for a regular water supply. Even after two decades, the village water supply system continues to support the village – which is not directly supported by a village administrative system called Village Panchayat. This village is a part of a revenue unit called Madukkarai village could seek at a later date support from the village administration in terms of electricity supply for the water drawal and disbursal. Though in the mid-nineties the Coimbatore City water supply system extended its drinking water distribution facility to this village, it serves a limited need of providing drinking water on a weekly basis only.

Village 2 - Suguna Puram: A village built over the last four decades, primarily consisting of people migrated from other villages, displaced from the city of Coimbatore and others in search of a habitat. The location was on the national highway, near an industrial estate and a large cement factory, using the common lands comprising a valley and a range of hills. The village comprised of a highly heterogeneous mix of people – in terms of religion, caste, language, occupational background and nativity – unlike the earlier village. The genesis and growth of this village was accentuated by:

- Promotion of a textile mill and hollow block cement brick industry in the village;
- Development of limestone mines in the valley adjacent to the village by the nearby cement factory;
- Setting up of an industrial estate by the government in a neighboring village; and
- Development of state sponsored housing colonies in the area under slum rehabilitation program.

Soon the village became one of the major habitats for industrial labor and others who sought a cheap housing area. The search was for a piece of land to erect a hut or a semi-permanent structure or seek a roof on rental basis. All the five or six hillocks of the range were sprinkled by settlements, with the hoot-hill area being used by relatively wealthy people to construct permanent houses They viewed the common land as a base to settle down and develop a habitat. Their occupations from external resources. The village has a stream running at the outer periphery and closer to the mining area, which became a dry gorge by the time village has expanded to present size.

Needs of villagers and search for solutions

One of the primary needs that Suguna Puram faced too was with regard to water supply. They had to depend on the public water supply available in the nearby village - 3 km away, for their daily water needs. The early settlers of the village realized that they need a regular supply source to cater to their emerging water needs. A community bore well in the lines of Kurumba Palayam was built at a central point and few members were entrusted with the responsibility to upkeep the facility. This asset was created with the contributions made by all the then members of the village, in 1992 and since then is maintained to regularly supply water, catering to around 655 households as in 1999. Several enterprising youngsters took to the offering of door delivery of water using bicycles to carry water.

The village association revamped in 1992 took up the responsibility, after an unsuccessful pursuit for getting a check dam built on the stream, to take care of the water supply needs as well as any other village needs. They handled another problem of the village with regard to the shrinking space for burial ground. The ad-hoc growth of the village in the commons led to people seeking a limited space on the sides of the national highway for the purposes of using it as a burial ground. A limited space of 20 m x 60 m was earmarked by the village for the burial purposes and an arrangement among different communities was arrived at. A specific caste based community, which has a predominant presence in a neighboring village (Kurumba Palayam) would share its burial ground space with the members of that caste in Suguna Puram; people of two other religions would seek and avail the space in burial space available in two other neighboring villages. Rest of the villagers – specifically belonging to religion but not of the earlier mentioned caste - would use this space both for burial and cremation purposes. As the burial ground was maintained by the village association, people of three other villages sought access to the burial ground of Suguna

Puram, for their communities too, and since the village felt that those villages were devoid of even this limited space, agreed for the free access of the ground. As times moved from 1965 to 1999, two factors resulted in increased pressure on the burial ground: increased population pressure on Suguna Puram and also in the neighboring villages; and expansion of limestone quarries by the cement factory and resultant expansion of limestone mines dump, causing further shrinkage in the burial ground area. The village association is currently lobbying for allocation of a larger space from the wastelands under the control of the cement factory. Even as the efforts for increased space continues, the village association collects a token amount of Rs.5 for each burial and uses the same to provide small facilities such as shelter for relatives of died; water and for a watchman.

The institutional arrangement:

The village association, in both the villages, comprises of all the village elders, who continues to oversee the management CPRs in their villages. The author observed that similar associations existed in several other villages of the district, and are functional for several years. They have adopted a system of rotating the responsibilities of the Association by annual elections. The Association looks after all the social needs of the community starting from religious and social functions through village functions, festivals, liaisons with the Village Administration, the local Cement Factory administration and the district and state government, and any other related issues. The Association has a nominal fee collection system and more support comes from voluntary contributions from households during different occasions such as the annual temple celebrations, village feast or a specific effort to lay a road in one corner of the village. It indicates the level of commitment individual households show towards their community and village.

New Paradigms For CPR Management:

CPR and its Relation with communities

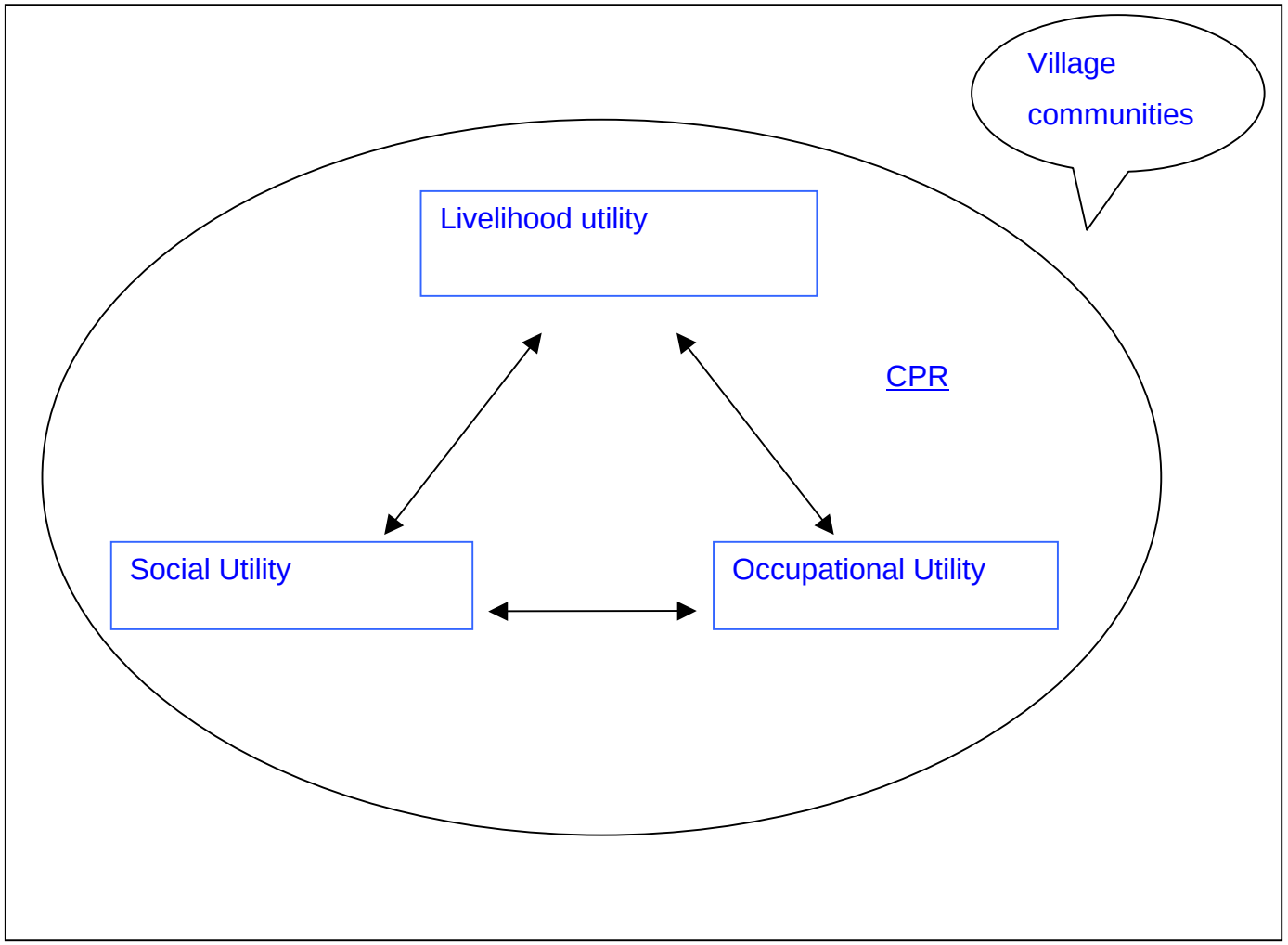

Figure 1. Utility based Roles and Relations of CPRs with a Community

CPR and its relation to the community:

A CPR is related to a community in three ways, as depicted in Fig.1 presented above:

- As a resource providing lively hood support – offering people sustenance through natural resources, essentially meeting food related requirements. Flora and fauna that are directly used as edible products, firewood and fodder requirements generally fall in this category. For the purposes of this paper, a CPR meeting these requirements of Community is described as Lively Hood Utility.
- As a resource providing occupational support – offering people a base for pursuing an occupation – such as hills and quarries supporting stone cutters in the work of stone cutting; shepherds using the CPRs as grazing lands; washerwomen using the local stream as water source to wash clothes; potters and brick makers using the soil from a CPR for pot making, brick making etc., which is basically a resource supporting people continue to pursue their occupations and only indirectly supporting lively hood. Such a role could be termed as Occupational Utility.
- As a resource providing social support for a community to live around a CPR, but using it only to meet their social needs. Locating habitats in a CPR, using it for building houses or huts, temple or a church or a mosque etc., earmarking a piece of the common land for social functions and individual needs such as burying the dead etc. fall into this category. Such a role could be termed Social Utility.

The CPR existing in a village is either used or neglected or misused depending upon the relation the community perceives with the CPR. At the basic level, a community has to recognize the existence of a CPR and depending on the extent of appreciation people have towards the CPR, their management of the resource gets developed. Once this recognition is

acknowledged, the community would be in a position to institutionalize its relation with the CPR. In a typical situation, a community institutionalizes its CPR management by working at three levels, seeking sustainability for itself. Figure 2 illustrates the various components of this process.

Layers of Sustainability and Forces operating in a CPR Institution

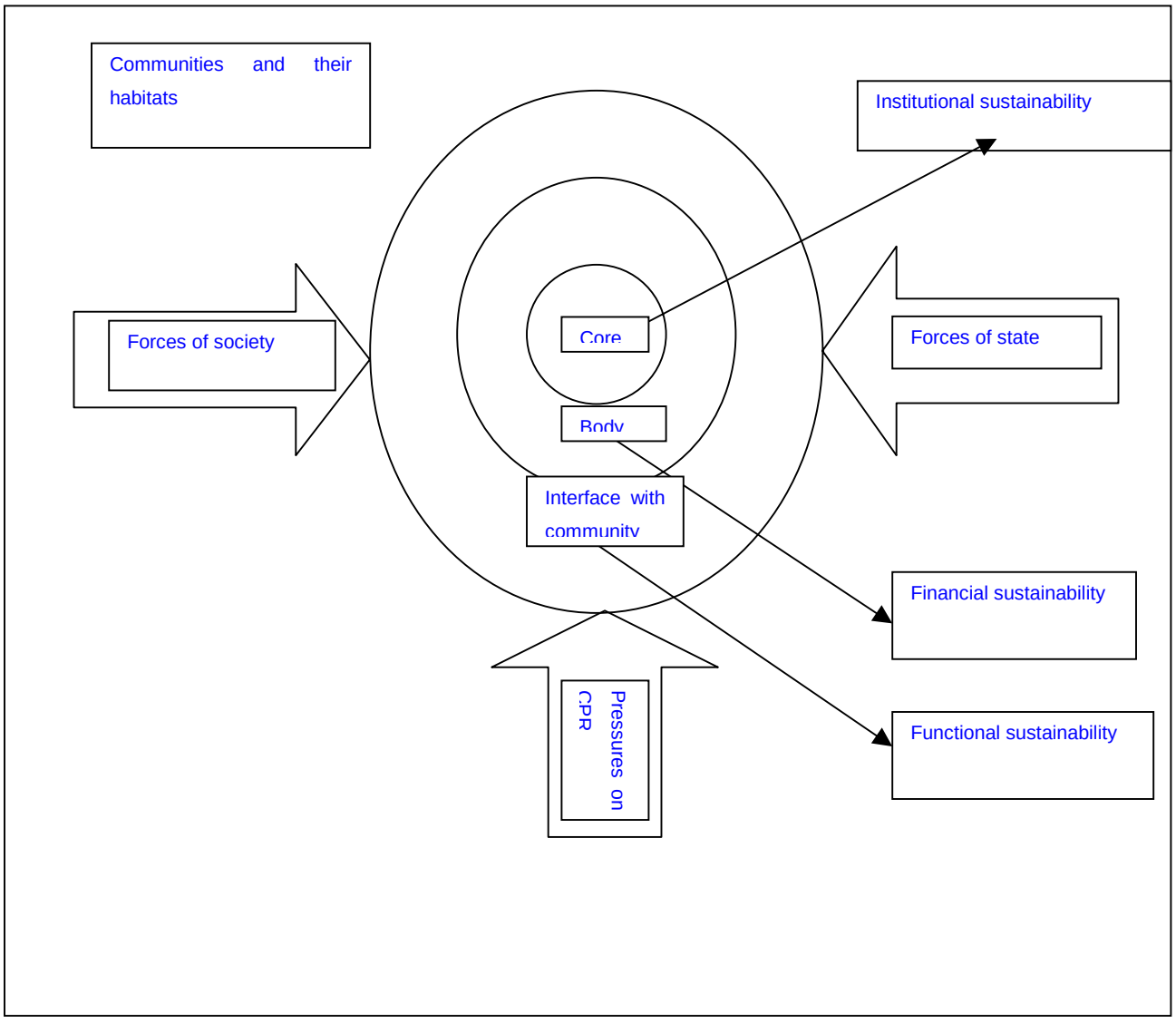

Figure 2. Institutionalization of CPR Management: External and Internal Forces

The model presented above depicts a CPR institution as one which has three layers – the core; the body; and the interface. These three layers represent three levels of sustainability it needs to develop to maintain a positive relation with the community.

Elaborated, at the core of the institution, the realization by community concerned that the CPR needs to be used, upheld and promoted to be available for its users/ members on a long term basis has to be internalized. For this purpose, the community members need to develop and honor the mechanism to manage the CPR. Whether it be a TGCS or a Paddy Coop or a Village Community Association, the initiative and responsibility demonstrated by the concerned people highlights that this exists in each of these cases. The author uses the term *Core Sustainability* to describe this phenomenon.

At the next level, the financial status and *equity* base forms the body of the a CPR institution to develop it into a sustainable institution. The volume or quantum of the financial resource is not the criteria. The source and relation of the equity base with the members brings it the strength. It may be termed as the *Financial Sustainability.*

At the outer most layer of an institution, its interface with the community exists, which provides it with the opportunity to offer itself as a resource to people and *provides* functional utility *to people.* Such an utility helps people to appreciate its role and brings forth the commitment among them to conserve it. The recognition of CPR as *a* mutually held asset which needs to be maintained and protected by them for future use – either in its original form or in a modified form, is entirely dependent on how functionally it relates itself to the community. This may be termed as the *Functional Sustainability.*

Even as a community manages to maintain the CPR, the volume or significance of its role in a community attracts different elements of the community to either exploit or misuse the resource or neglect its presence in

the village. These are termed as the *Forces of society*. The Forces of Society help CPR change its form or role or relation with the community from time to time.

The Pressures on CPR by the user community, even though it is conscious of the value CPRs have in their habitat, they tend to put pressure on the CPR, depending upon the utility relation they have with it. In the situations of CPRs' relation was imperative for a community's lively hood, the pressures would be balanced; in the remaining situations, the pressures would be fissiparous and require determined efforts on the part of managers of CPRs to develop control methods and systems to counter or withstand these pressures.

Similarly, *the forces of the state* are manifested by the level and extent of intervention it brings in the management of CPR or in development of barriers or bridges to access the CPR. This force becomes operational depending upon its recognition of the role CPR was playing in a society or the level of sustainability it has achieved in financial or institutional specters. One has to realize this force in order to understand and appreciate the status of either long standing commons or the emerging ones. The above diagram provides a perspective for the CPR management. When closely examined, each of the cases presented in this paper reflect the interplay each of the forces have in shaping the sustainability of a CPR.

Conclusion:

1. TGCS – their voluntary initiative to commit themselves for a long term give-and-take agreement on both natural and financial resources emanated from the fact that the locals of different villages realized that the revival of commons is in the larger interests of their as well as other communities; especially because they feel they are empowered based on the success of their CPR renewal efforts and the strength they derive by being the decision makers for their community. Their recognition of the impact of their

contribution would be in substituting the external support with their own productive contribution further reinforced their decision to reinforce the core and body levels of sustainability. The recognition that they are not recipients/ beneficiaries or dependants on others has come across by the sheer understanding that the degraded commons now are the productive resources; that their resolve to make these commons productive is benefiting not just their community but indirectly other communities and society at large has resulted in such a gesture. True, they had to be coerced, disciplined and put under a strict regimentation in the initial periods. But that was only till the time they are convinced of the need to come together to renew their own CPR to shift its utility role and develop an interface which is functional in its approach to the entire community.

2. In the case of Agri and thrift coops in Andhra Pradesh too the need was to find a way of survival. Especially, the need to live in the drought prone, geographically and topographically difficult area prompted people to discipline themselves to realize a larger goal of their lives – to make agriculture a sustainable occupation and in the process they tried to evolve a system that becomes a Common Property Resource for generations to come. This Common Property has resulted in developing not only local resources, but also attract the attention of bankers, public bodies and governments alike, to both the detriment and also to the support of the system. Evolution of laws and their methods of implementation gave them a shield which helps the CPR to be self renewed and become an alternate model for governance.

3. In the case of the village associations formed by the two communities in Tamil Nadu also, the dire necessity to live in their village and continue to live as a closely held community; and the self esteem with which they wanted to resolve their problems prompted them to honor the age-old tradition of living in their native villages and work under the aegis of a village

association led by the elders of the village –irrespective of political, religious and occupational differences they had. The resolve to remain in their respective villages further given rise to finding solutions to their potable water needs, or to find alternative arrangements for finding a place for their social need resulted in their establishing and maintaining a set of norms for themselves.

In the years to come by, the author observes that many communities in India and elsewhere would realize that they have to pay a basic price – financially as well as socially, in order to relate themselves to any common resource and sustain it to meet their long term needs. It would further be realized that the initiative would be increasingly from locals, who won't look for any external support or catalysis. Even in commercially oriented CPRs, for example, internet, condominiums or apartments, national highways, parking lots etc. this realization would lead to building a life centered around disciplined approach to the use and maintenance of CPRs by building appropriate institutional structures.

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